



Pit #1

California CDE - Soil and Land Evaluation
Group: 1 Contestant: 1

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
- (D) **Very Fine**
Sandy Clay, Clay, or Silty Clay

3. GRAVEL AND ROCK (3)

- (A) **None to Few**
<15% by Volume
- (B) **Moderate**
Affects Farming Operation 15-35%
- (C) **Severe**
From 36-60%
- (D) **Extreme**
Prevents Farming Operation > 60%

4. THICKNESS (3)

- (A) **Very Thick**
20 Inches or more
- (B) **Thick**
10 through 19 Inches
- (C) **Thin**
4 through 9 Inches
- (D) **Very Thin**
Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

5. COLOR (5)

- (A) **None (no Subsoil)**
- (B) **Very Dark**
Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
- (C) **Medium or Bright**
Yellowish or Reddish Brown, Brown Yellow, or Red
- (D) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (E) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale

6. TEXTURE (5)

- (A) **None (no Subsoil)**
- (B) **Coarse**
Course, Medium, Fine or Loamy San
- (C) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (D) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay Lo
- (E) **Very Fine**
Sandy Clay, Clay, or Silty Clay

7. THICKNESS (3)

- (A) **None (no Subsoil)**
- (B) **Very Thick**
20 Inches or more
- (C) **Thick**
10 through 19 Inches
- (D) **Thin**
4 through 9 Inches
- (E) **Very Thin**
Less Than 4 Inches

INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
- (B) **Bedrock**
Soft or Hard
- (C) **Hardpan**
Cemented
- (D) **Extremely Gravelly Material or high water table**

9. Parent or Underlying Material (5)

- (A) **Hard Bedrock**
- (B) **Soft Bedrock**
- (C) **Loose or Mixed Mate**
- (D) **Organic Materials**
Peat or Muck

10. Depth of Soil Favorable for Roots Water Penetration (5)

- (A) **Very Deep**
60 inches or more
- (B) **Deep**
40 through 59 inches
- (C) **Moderately Deep**
20 through 39 inches
- (D) **Shallow**
Less than 20 inches

11. Air and Water Movement (5)

- (A) **Very Rapid**
Sands (course)
- (B) **Rapid**
Loam sands, coarse sandy loam, sandy loam
- (C) **Moderate**
Fine sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam
- (D) **Slow**
Sandy clay, clay, silty clay

12. Available Water Holding Capacity to 60 Inches (5)

- (A) **High**
> 7.5 inches
- (B) **Medium**
5 to 7.5"
- (C) **Low**
3.5 to less than 5"
- (D) **Very Low**
Less Than 3.5 inches

ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
Less than or equal to 10%
- (B) **Moderate**
Less than or equal to 25%
- (C) **High or Severe**
Greater than 25%
- (D) **Evidence of Damaging Deposition**

14. Kind of Erosion (3)

- (A) **None**
- (B) **Evidence of Sheet or Rill Erosion**
- (C) **Active Gully or Streambank Erosion**
- (D) **Evidence of Wind Erosion**

TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

- (A) **Upland**
Soil Developed From Underlying Bedrock
- (B) **Terrace, Foot Slope, Dune Land, Old**
Soil From Transported Materials
- (C) **Bottomland**
Recent Alluvial Fans, Flood Plains
- (D) **Basin**
Flat, Pondered or Lake Bed Deposits, Playas

16. Steepness of Slope (5)

- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
- (C) **Moderate Sloping**
Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
- (E) **Steep**
Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

- (A) **CLASS I** No Special Problems - Very Good La
- (B) **CLASS II** Some Limitations or Problems-Good La
- (C) **CLASS III** Many Limitations or Complex Problems
- (D) **CLASS IV** Very Limited in Crop Use or Very Complex Problems

----- Land Suitable for Permanent Vegetation -----

- (E) **CLASS V** Nearly Level Grazing Land, Few Grazing Limitations
- (F) **CLASS VI** Grazing or Woodland- Some Restrictions
- (G) **CLASS VII** Range or Woodland - Severe Limitations
- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
- (G) **Woodland Management**

21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
- (D) **Gully or Streambank Stabilization**

22. Irrigation Method (3) (Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

(A) (B) (C)

24. Limitations for Shrink-Swell

(A) (B) (C)

25. Limitations for Foundations without Basement

(A) (B) (C)

26. Limitations for Local Roads and Streets

(A) (B) (C)

27. Limitations for Top Soil

(A) (B) (C)

Soil and Land Evaluation Pit #1 (Side 2)

Contestant: 1



Pit #2

California CDE - Soil and Land Evaluation
Group: 1 Contestant: 1

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Soil and Land Evaluation Pit #2 (Side 2)

Contestant: 1



Pit #3

California CDE - Soil and Land Evaluation
Group: 1 Contestant: 1

SURFACE SOIL (Fill in ONE bubble for each item).

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Group: 1 **Contestant: 1**

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- (A) **None (no Subsoil)**
- (B) **Very Dark**
Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
- (C) **Medium or Bright**
Yellowish or Reddish Brown, Brown Yellow, or Red
- (D) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (E) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale

6. TEXTURE (5)

- (A) **None (no Subsoil)**
- (B) **Coarse**
Course, Medium, Fine or Loamy San
- (C) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (D) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay Lo
- (E) **Very Fine**
Sandy Clay, Clay, or Silty Clay

7. THICKNESS (3)

- (A) **None (no Subsoil)**
- (B) **Very Thick**
20 Inches or more
- (C) **Thick**
10 through 19 Inches
- (D) **Thin**
4 through 9 Inches
- (E) **Very Thin**
Less Than 4 Inches

INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
- (B) **Bedrock**
Soft or Hard
- (C) **Hardpan**
Cemented
- (D) **Extremely Gravelly Material or high water table**

9. Parent or Underlying Material (5)

- (A) **Hard Bedrock**
- (B) **Soft Bedrock**
- (C) **Loose or Mixed Mate**
- (D) **Organic Materials**
Peat or Muck

10. Depth of Soil Favorable for Roots Water Penetration (5)

- (A) **Very Deep**
60 inches or more
- (B) **Deep**
40 through 59 inches
- (C) **Moderately Deep**
20 through 39 inches
- (D) **Shallow**
Less than 20 inches

11. Air and Water Movement (5)

- (A) **Very Rapid**
Sands (course)
- (B) **Rapid**
Loam sands, coarse sandy loam, sandy loam
- (C) **Moderate**
Fine sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam
- (D) **Slow**
Sandy clay, clay, silty clay

12. Available Water Holding Capacity to 60 Inches (5)

- (A) **High**
> 7.5 inches
- (B) **Medium**
5 to 7.5"
- (C) **Low**
3.5 to less than 5"
- (D) **Very Low**
Less Than 3.5 inches

ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
Less than or equal to 10%
- (B) **Moderate**
Less than or equal to 25%
- (C) **High or Severe**
Greater than 25%
- (D) **Evidence of Damaging Deposition**

14. Kind of Erosion (3)

- (A) **None**
- (B) **Evidence of Sheet or Rill Erosion**
- (C) **Active Gully or Streambank Erosion**
- (D) **Evidence of Wind Erosion**

TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

- (A) **Upland**
Soil Developed From Underlying Bedrock
- (B) **Terrace, Foot Slope, Dune Land, Old**
Soil From Transported Materials
- (C) **Bottomland**
Recent Alluvial Fans, Flood Plains
- (D) **Basin**
Flat, Pondered or Lake Bed Deposits, Playas

16. Steepness of Slope (5)

- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
- (C) **Moderate Sloping**
Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
- (E) **Steep**
Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

- (A) **CLASS I** No Special Problems - Very Good La
- (B) **CLASS II** Some Limitations or Problems-Good La
- (C) **CLASS III** Many Limitations or Complex Problems
- (D) **CLASS IV** Very Limited in Crop Use or Very Complex Problems

----- Land Suitable for Permanent Vegetation -----

- (E) **CLASS V** Nearly Level Grazing Land, Few Grazing Limitations
- (F) **CLASS VI** Grazing or Woodland- Some Restrictions
- (G) **CLASS VII** Range or Woodland - Severe Limitations
- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
- (G) **Woodland Management**

21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
- (D) **Gully or Streambank Stabilization**

22. Irrigation Method (3) (Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

- (A) (B) (C)

24. Limitations for Shrink-Swell

- (A) (B) (C)

25. Limitations for Foundations without Basement

- (A) (B) (C)

26. Limitations for Local Roads and Streets

- (A) (B) (C)

27. Limitations for Top Soil

- (A) (B) (C)

Soil and Land Evaluation Pit #4 (Side 2)

Contestant: 1



Pit #1

California CDE - Soil and Land Evaluation
Group: 2 Contestant: 2

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
- (D) **Very Fine**
Sandy Clay, Clay, or Silty Clay

3. GRAVEL AND ROCK (3)

- (A) **None to Few**
<15% by Volume
- (B) **Moderate**
Affects Farming Operation 15-35%
- (C) **Severe**
From 36-60%
- (D) **Extreme**
Prevents Farming Operation > 60%

4. THICKNESS (3)

- (A) **Very Thick**
20 Inches or more
- (B) **Thick**
10 through 19 Inches
- (C) **Thin**
4 through 9 Inches
- (D) **Very Thin**
Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

5. COLOR (5)

- (A) **None (no Subsoil)**
- (B) **Very Dark**
Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
- (C) **Medium or Bright**
Yellowish or Reddish Brown, Brown Yellow, or Red
- (D) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (E) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale

6. TEXTURE (5)

- (A) **None (no Subsoil)**
- (B) **Coarse**
Course, Medium, Fine or Loamy San
- (C) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (D) **Fine**
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- (C) **Thick**
10 through 19 Inches
- (D) **Thin**
4 through 9 Inches
- (E) **Very Thin**
Less Than 4 Inches

INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
- (B) **Bedrock**
Soft or Hard
- (C) **Hardpan**
Cemented
- (D) **Extremely Gravelly Material or high water table**

9. Parent or Underlying Material (5)

- (A) **Hard Bedrock**
- (B) **Soft Bedrock**
- (C) **Loose or Mixed Mate**
- (D) **Organic Materials**
Peat or Muck

10. Depth of Soil Favorable for Roots Water Penetration (5)

- (A) **Very Deep**
60 inches or more
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40 through 59 inches
- (C) **Moderately Deep**
20 through 39 inches
- (D) **Shallow**
Less than 20 inches

11. Air and Water Movement (5)

- (A) **Very Rapid**
Sands (course)
- (B) **Rapid**
Loam sands, coarse sandy loam, sandy loam
- (C) **Moderate**
Fine sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam
- (D) **Slow**
Sandy clay, clay, silty clay

12. Available Water Holding Capacity to 60 Inches (5)

- (A) **High**
> 7.5 inches
- (B) **Medium**
5 to 7.5"
- (C) **Low**
3.5 to less than 5"
- (D) **Very Low**
Less Than 3.5 inches

ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
Less than or equal to 10%
- (B) **Moderate**
Less than or equal to 25%
- (C) **High or Severe**
Greater than 25%
- (D) **Evidence of Damaging Deposition**

14. Kind of Erosion (3)

- (A) **None**
- (B) **Evidence of Sheet or Rill Erosion**
- (C) **Active Gully or Streambank Erosion**
- (D) **Evidence of Wind Erosion**

TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

- (A) **Upland**
Soil Developed From Underlying Bedrock
- (B) **Terrace, Foot Slope, Dune Land, Old**
Soil From Transported Materials
- (C) **Bottomland**
Recent Alluvial Fans, Flood Plains
- (D) **Basin**
Flat, Ponded or Lake Bed Deposits, Playas

16. Steepness of Slope (5)

- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
- (C) **Moderate Sloping**
Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
- (E) **Steep**
Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

- (A) **CLASS I** No Special Problems - Very Good La
- (B) **CLASS II** Some Limitations or Problems-Good La
- (C) **CLASS III** Many Limitations or Complex Problems
- (D) **CLASS IV** Very Limited in Crop Use or Very Complex Problems

----- Land Suitable for Permanent Vegetation -----

- (E) **CLASS V** Nearly Level Grazing Land, Few Grazing Limitations
- (F) **CLASS VI** Grazing or Woodland- Some Restrictions
- (G) **CLASS VII** Range or Woodland - Severe Limitations
- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
- (G) **Woodland Management**

21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
- (D) **Gully or Streambank Stabilization**

22. Irrigation Method (3)
(Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

- (A) (B) (C)

24. Limitations for Shrink-Swell

- (A) (B) (C)

25. Limitations for Foundations without Basement

- (A) (B) (C)

26. Limitations for Local Roads and Streets

- (A) (B) (C)

27. Limitations for Top Soil

- (A) (B) (C)

Soil and Land Evaluation Pit #1 (Side 2)

Contestant: 2



Pit #2

California CDE - Soil and Land Evaluation
Group: 2 Contestant: 2

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
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From 36-60%
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4. THICKNESS (3)

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10 through 19 Inches
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Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

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- (A) **None (no Subsoil)**
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INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
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Soft or Hard
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Cemented
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----- Land Suitable for Permanent Vegetation -----

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(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
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LAND MANAGEMENT NEEDS

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25. Limitations for Foundations without Basement

- (A) (B) (C)

26. Limitations for Local Roads and Streets

- (A) (B) (C)

27. Limitations for Top Soil

- (A) (B) (C)

Soil and Land Evaluation Pit #2 (Side 2)

Contestant: 2



Pit #3

California CDE - Soil and Land Evaluation
Group: 2 Contestant: 2

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
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Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

5. COLOR (5)

- (A) **None (no Subsoil)**
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Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
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INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
- (B) **Bedrock**
Soft or Hard
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- (D) **Organic Materials**
Peat or Muck

10. Depth of Soil Favorable for Roots Water Penetration (5)

- (A) **Very Deep**
60 inches or more
- (B) **Deep**
40 through 59 inches
- (C) **Moderately Deep**
20 through 39 inches
- (D) **Shallow**
Less than 20 inches

11. Air and Water Movement (5)

- (A) **Very Rapid**
Sands (course)
- (B) **Rapid**
Loam sands, coarse sandy loam, sandy loam
- (C) **Moderate**
Fine sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam
- (D) **Slow**
Sandy clay, clay, silty clay

12. Available Water Holding Capacity to 60 Inches (5)

- (A) **High**
> 7.5 inches
- (B) **Medium**
5 to 7.5"
- (C) **Low**
3.5 to less than 5"
- (D) **Very Low**
Less Than 3.5 inches

ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
Less than or equal to 10%
- (B) **Moderate**
Less than or equal to 25%
- (C) **High or Severe**
Greater than 25%
- (D) **Evidence of Damaging Deposition**

14. Kind of Erosion (3)

- (A) **None**
- (B) **Evidence of Sheet or Rill Erosion**
- (C) **Active Gully or Streambank Erosion**
- (D) **Evidence of Wind Erosion**

TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

- (A) **Upland**
Soil Developed From Underlying Bedrock
- (B) **Terrace, Foot Slope, Dune Land, Old**
Soil From Transported Materials
- (C) **Bottomland**
Recent Alluvial Fans, Flood Plains
- (D) **Basin**
Flat, Pondered or Lake Bed Deposits, Playas

16. Steepness of Slope (5)

- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
- (C) **Moderate Sloping**
Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
- (E) **Steep**
Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

- (A) **CLASS I** No Special Problems - Very Good La
- (B) **CLASS II** Some Limitations or Problems-Good La
- (C) **CLASS III** Many Limitations or Complex Problems
- (D) **CLASS IV** Very Limited in Crop Use or Very Complex Problems

----- Land Suitable for Permanent Vegetation -----

- (E) **CLASS V** Nearly Level Grazing Land, Few Grazing Limitations
- (F) **CLASS VI** Grazing or Woodland- Some Restrictions
- (G) **CLASS VII** Range or Woodland - Severe Limitations
- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
- (G) **Woodland Management**

21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
- (D) **Gully or Streambank Stabilization**

22. Irrigation Method (3) (Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

(A) (B) (C)

24. Limitations for Shrink-Swell

(A) (B) (C)

25. Limitations for Foundations without Basement

(A) (B) (C)

26. Limitations for Local Roads and Streets

(A) (B) (C)

27. Limitations for Top Soil

(A) (B) (C)

Soil and Land Evaluation Pit #3 (Side 2)

Contestant: 2



Pit #4

California CDE - Soil and Land Evaluation
Group: 2 **Contestant: 2**

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
- (D) **Very Fine**
Sandy Clay, Clay, or Silty Clay

3. GRAVEL AND ROCK (3)

- (A) **None to Few**
<15% by Volume
- (B) **Moderate**
Affects Farming Operation 15-35%
- (C) **Severe**
From 36-60%
- (D) **Extreme**
Prevents Farming Operation > 60%

4. THICKNESS (3)

- (A) **Very Thick**
20 Inches or more
- (B) **Thick**
10 through 19 Inches
- (C) **Thin**
4 through 9 Inches
- (D) **Very Thin**
Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

5. COLOR (5)

- (A) **None (no Subsoil)**
- (B) **Very Dark**
Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
- (C) **Medium or Bright**
Yellowish or Reddish Brown, Brown Yellow, or Red
- (D) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (E) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale

6. TEXTURE (5)

- (A) **None (no Subsoil)**
- (B) **Coarse**
Course, Medium, Fine or Loamy San
- (C) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (D) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay Lo
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Sandy Clay, Clay, or Silty Clay

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- (D) **Thin**
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- (E) **Very Thin**
Less Than 4 Inches

INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
- (B) **Bedrock**
Soft or Hard
- (C) **Hardpan**
Cemented
- (D) **Extremely Gravelly Material or high water table**

9. Parent or Underlying Material (5)

- (A) **Hard Bedrock**
- (B) **Soft Bedrock**
- (C) **Loose or Mixed Mate**
- (D) **Organic Materials**
Peat or Muck

10. Depth of Soil Favorable for Roots Water Penetration (5)

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Sandy clay, clay, silty clay

12. Available Water Holding Capacity to 60 Inches (5)

- (A) **High**
> 7.5 inches
- (B) **Medium**
5 to 7.5"
- (C) **Low**
3.5 to less than 5"
- (D) **Very Low**
Less Than 3.5 inches

ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
Less than or equal to 10%
- (B) **Moderate**
Less than or equal to 25%
- (C) **High or Severe**
Greater than 25%
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14. Kind of Erosion (3)

- (A) **None**
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TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

- (A) **Upland**
Soil Developed From Underlying Bedrock
- (B) **Terrace, Foot Slope, Dune Land, Old**
Soil From Transported Materials
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Recent Alluvial Fans, Flood Plains
- (D) **Basin**
Flat, Ponded or Lake Bed Deposits, Playas

16. Steepness of Slope (5)

- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
- (C) **Moderate Sloping**
Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
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Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

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----- Land Suitable for Permanent Vegetation -----

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- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
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- (F) **Grazing Management**
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21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
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22. Irrigation Method (3) (Bubble all that apply)

- (A) **None**
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URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

- (A) (B) (C)

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25. Limitations for Foundations without Basement

- (A) (B) (C)

26. Limitations for Local Roads and Streets

- (A) (B) (C)

27. Limitations for Top Soil

- (A) (B) (C)

Soil and Land Evaluation Pit #4 (Side 2)

Contestant: 2



Pit #1

California CDE - Soil and Land Evaluation
Group: 3 Contestant: 3

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
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Sandy Clay Loam, Clay Loam, or Silty Clay
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INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
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Soft or Hard
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Cemented
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LAND MANAGEMENT NEEDS

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26. Limitations for Local Roads and Streets

- (A) (B) (C)

27. Limitations for Top Soil

- (A) (B) (C)

Soil and Land Evaluation Pit #1 (Side 2)

Contestant: 3



Pit #2

California CDE - Soil and Land Evaluation
Group: 3 Contestant: 3

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
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- (C) **Active Gully or Streambank Erosion**
- (D) **Evidence of Wind Erosion**

TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

- (A) **Upland**
Soil Developed From Underlying Bedrock
- (B) **Terrace, Foot Slope, Dune Land, Old**
Soil From Transported Materials
- (C) **Bottomland**
Recent Alluvial Fans, Flood Plains
- (D) **Basin**
Flat, Ponded or Lake Bed Deposits, Playas

16. Steepness of Slope (5)

- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
- (C) **Moderate Sloping**
Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
- (E) **Steep**
Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

- (A) **CLASS I** No Special Problems - Very Good La
- (B) **CLASS II** Some Limitations or Problems-Good La
- (C) **CLASS III** Many Limitations or Complex Problems
- (D) **CLASS IV** Very Limited in Crop Use or Very Complex Problems

----- Land Suitable for Permanent Vegetation -----

- (E) **CLASS V** Nearly Level Grazing Land, Few Grazing Limitations
- (F) **CLASS VI** Grazing or Woodland- Some Restrictions
- (G) **CLASS VII** Range or Woodland - Severe Limitations
- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
- (G) **Woodland Management**

21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
- (D) **Gully or Streambank Stabilization**

22. Irrigation Method (3)
(Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

- (A) (B) (C)

24. Limitations for Shrink-Swell

- (A) (B) (C)

25. Limitations for Foundations without Basement

- (A) (B) (C)

26. Limitations for Local Roads and Streets

- (A) (B) (C)

27. Limitations for Top Soil

- (A) (B) (C)

Soil and Land Evaluation Pit #2 (Side 2)

Contestant: 3



Pit #3

California CDE - Soil and Land Evaluation
Group: 3 Contestant: 3

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
- (D) **Very Fine**
Sandy Clay, Clay, or Silty Clay

3. GRAVEL AND ROCK (3)

- (A) **None to Few**
<15% by Volume
- (B) **Moderate**
Affects Farming Operation 15-35%
- (C) **Severe**
From 36-60%
- (D) **Extreme**
Prevents Farming Operation > 60%

4. THICKNESS (3)

- (A) **Very Thick**
20 Inches or more
- (B) **Thick**
10 through 19 Inches
- (C) **Thin**
4 through 9 Inches
- (D) **Very Thin**
Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

5. COLOR (5)

- (A) **None (no Subsoil)**
- (B) **Very Dark**
Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
- (C) **Medium or Bright**
Yellowish or Reddish Brown, Brown Yellow, or Red
- (D) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (E) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale

6. TEXTURE (5)

- (A) **None (no Subsoil)**
- (B) **Coarse**
Course, Medium, Fine or Loamy San
- (C) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (D) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay Lo
- (E) **Very Fine**
Sandy Clay, Clay, or Silty Clay

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- (A) **None (no Subsoil)**
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- (E) **Very Thin**
Less Than 4 Inches

INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
- (B) **Bedrock**
Soft or Hard
- (C) **Hardpan**
Cemented
- (D) **Extremely Gravelly Material or high water table**

9. Parent or Underlying Material (5)

- (A) **Hard Bedrock**
- (B) **Soft Bedrock**
- (C) **Loose or Mixed Mate**
- (D) **Organic Materials**
Peat or Muck

10. Depth of Soil Favorable for Roots Water Penetration (5)

- (A) **Very Deep**
60 inches or more
- (B) **Deep**
40 through 59 inches
- (C) **Moderately Deep**
20 through 39 inches
- (D) **Shallow**
Less than 20 inches

11. Air and Water Movement (5)

- (A) **Very Rapid**
Sands (course)
- (B) **Rapid**
Loam sands, coarse sandy loam, sandy loam
- (C) **Moderate**
Fine sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam
- (D) **Slow**
Sandy clay, clay, silty clay

12. Available Water Holding Capacity to 60 Inches (5)

- (A) **High**
> 7.5 inches
- (B) **Medium**
5 to 7.5"
- (C) **Low**
3.5 to less than 5"
- (D) **Very Low**
Less Than 3.5 inches

ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
Less than or equal to 10%
- (B) **Moderate**
Less than or equal to 25%
- (C) **High or Severe**
Greater than 25%
- (D) **Evidence of Damaging Deposition**

14. Kind of Erosion (3)

- (A) **None**
- (B) **Evidence of Sheet or Rill Erosion**
- (C) **Active Gully or Streambank Erosion**
- (D) **Evidence of Wind Erosion**

TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

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Recent Alluvial Fans, Flood Plains
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- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
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Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
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Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

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----- Land Suitable for Permanent Vegetation -----

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- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
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21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
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22. Irrigation Method (3) (Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

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(A) (B) (C)

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(A) (B) (C)

25. Limitations for Foundations without Basement

(A) (B) (C)

26. Limitations for Local Roads and Streets

(A) (B) (C)

27. Limitations for Top Soil

(A) (B) (C)

Soil and Land Evaluation Pit #3 (Side 2)

Contestant: 3



Pit #4

California CDE - Soil and Land Evaluation
Group: 3 Contestant: 3

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
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20 Inches or more
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Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

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- (A) **None (no Subsoil)**
- (B) **Very Dark**
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Soft or Hard
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ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
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Greater than 25%
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TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

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----- Land Suitable for Permanent Vegetation -----

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- (A) **Irrigated Crops**
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- (C) **Non-Irrigated Crops**
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- (E) **Woodland**
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(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
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LAND MANAGEMENT NEEDS

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Soil and Land Evaluation Pit #4 (Side 2)

Contestant: 3



Pit #1

California CDE - Soil and Land Evaluation
Group: 4 Contestant: 4

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
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Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
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Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

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Course, Medium, Fine or Loamy Sands
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INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
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18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
- (G) **Woodland Management**

21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
- (D) **Gully or Streambank Stabilization**

22. Irrigation Method (3)
(Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

- (A) (B) (C)

24. Limitations for Shrink-Swell

- (A) (B) (C)

25. Limitations for Foundations without Basement

- (A) (B) (C)

26. Limitations for Local Roads and Streets

- (A) (B) (C)

27. Limitations for Top Soil

- (A) (B) (C)

Soil and Land Evaluation Pit #1 (Side 2)

Contestant: 4



Pit #2

California CDE - Soil and Land Evaluation
Group: 4 Contestant: 4

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
- (D) **Very Fine**
Sandy Clay, Clay, or Silty Clay

3. GRAVEL AND ROCK (3)

- (A) **None to Few**
<15% by Volume
- (B) **Moderate**
Affects Farming Operation 15-35%
- (C) **Severe**
From 36-60%
- (D) **Extreme**
Prevents Farming Operation > 60%

4. THICKNESS (3)

- (A) **Very Thick**
20 Inches or more
- (B) **Thick**
10 through 19 Inches
- (C) **Thin**
4 through 9 Inches
- (D) **Very Thin**
Less Than 4 Inches

SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

5. COLOR (5)

- (A) **None (no Subsoil)**
- (B) **Very Dark**
Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
- (C) **Medium or Bright**
Yellowish or Reddish Brown, Brown Yellow, or Red
- (D) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (E) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale

6. TEXTURE (5)

- (A) **None (no Subsoil)**
- (B) **Coarse**
Course, Medium, Fine or Loamy Sand
- (C) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (D) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay Lo
- (E) **Very Fine**
Sandy Clay, Clay, or Silty Clay

7. THICKNESS (3)

- (A) **None (no Subsoil)**
- (B) **Very Thick**
20 Inches or more
- (C) **Thick**
10 through 19 Inches
- (D) **Thin**
4 through 9 Inches
- (E) **Very Thin**
Less Than 4 Inches

INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
- (B) **Bedrock**
Soft or Hard
- (C) **Hardpan**
Cemented
- (D) **Extremely Gravelly Material or high water table**

9. Parent or Underlying Material (5)

- (A) **Hard Bedrock**
- (B) **Soft Bedrock**
- (C) **Loose or Mixed Mate**
- (D) **Organic Materials**
Peat or Muck

10. Depth of Soil Favorable for Roots Water Penetration (5)

- (A) **Very Deep**
60 inches or more
- (B) **Deep**
40 through 59 inches
- (C) **Moderately Deep**
20 through 39 inches
- (D) **Shallow**
Less than 20 inches

11. Air and Water Movement (5)

- (A) **Very Rapid**
Sands (course)
- (B) **Rapid**
Loam sands, coarse sandy loam, sandy loam
- (C) **Moderate**
Fine sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam
- (D) **Slow**
Sandy clay, clay, silty clay

12. Available Water Holding Capacity to 60 Inches (5)

- (A) **High**
> 7.5 inches
- (B) **Medium**
5 to 7.5"
- (C) **Low**
3.5 to less than 5"
- (D) **Very Low**
Less Than 3.5 inches

ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

- (A) **None to Slight**
Less than or equal to 10%
- (B) **Moderate**
Less than or equal to 25%
- (C) **High or Severe**
Greater than 25%
- (D) **Evidence of Damaging Deposition**

14. Kind of Erosion (3)

- (A) **None**
- (B) **Evidence of Sheet or Rill Erosion**
- (C) **Active Gully or Streambank Erosion**
- (D) **Evidence of Wind Erosion**

TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

- (A) **Upland**
Soil Developed From Underlying Bedrock
- (B) **Terrace, Foot Slope, Dune Land, Old**
Soil From Transported Materials
- (C) **Bottomland**
Recent Alluvial Fans, Flood Plains
- (D) **Basin**
Flat, Pondered or Lake Bed Deposits, Playas

16. Steepness of Slope (5)

- (A) **Nearly Level**
Less than or equal to 2%
- (B) **Gently Sloping**
Less than or equal to 5%
- (C) **Moderate Sloping**
Less than or equal to 15%
- (D) **Strongly Sloping**
Less than or equal to 25
- (E) **Steep**
Greater than 25

17. LAND CAPABILITY CLASSIFICATION (Fill in ONE bubble ONLY). (8)

-----Land Suitable for Cultivated Crops -----

- (A) **CLASS I** No Special Problems - Very Good La
- (B) **CLASS II** Some Limitations or Problems-Good La
- (C) **CLASS III** Many Limitations or Complex Problems
- (D) **CLASS IV** Very Limited in Crop Use or Very Complex Problems

----- Land Suitable for Permanent Vegetation -----

- (E) **CLASS V** Nearly Level Grazing Land, Few Grazing Limitations
- (F) **CLASS VI** Grazing or Woodland- Some Restrictions
- (G) **CLASS VII** Range or Woodland - Severe Limitations
- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
- (F) **Wildlife, Recreation, Watershed**

19. MAJOR PROBLEMS IN USE (5)

(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
- (H) **Wetness or Flooding**

LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

20. Agricultural Management Practices (3)

- (A) **None**
- (B) **Irrigation Management or Drainage**
- (C) **Erosion Control**
- (D) **Fertility Improvement Practices**
- (E) **Chiseling or Ripping**
- (F) **Grazing Management**
- (G) **Woodland Management**

21. Erosion Control Practices (3)

- (A) **None**
- (B) **Vegetative Cover and Mulches**
- (C) **Contour Farming and/or Terraces and Waterways**
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22. Irrigation Method (3) (Bubble all that apply)

- (A) **None**
- (B) **Flood**
- (C) **Furrow**
- (D) **Sprinkler**
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URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

(A) (B) (C)

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(A) (B) (C)

25. Limitations for Foundations without Basement

(A) (B) (C)

26. Limitations for Local Roads and Streets

(A) (B) (C)

27. Limitations for Top Soil

(A) (B) (C)

Soil and Land Evaluation Pit #2 (Side 2)

Contestant: 4



Pit #3

California CDE - Soil and Land Evaluation
Group: 4 Contestant: 4

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
- (B) **Medium or Bright**
Brown, Yellowish or Reddish Brown, Brown Yellow, or Red
- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

- (A) **Coarse**
Course, Medium, Fine or Loamy Sands
- (B) **Medium**
Sandy Loam, Loam, Silt Loam or Silt
- (C) **Fine**
Sandy Clay Loam, Clay Loam, or Silty Clay
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<15% by Volume
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From 36-60%
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20 Inches or more
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10 through 19 Inches
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SUB SOIL (Fill in ONE bubble for each item or if no SUBSOIL is present mark NONE for EACH item).

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Black, Very Dark Gray, Dark Brown, Very Dark Brown, or Dusky
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White, Light Grey, Pale Brown, Pale Red
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INTERPRETATION OF SOIL FEATURES (Fill in ONE bubble for each item).

8. Type of Material that Limits Depth (5)

- (A) **None**
No Limiting Material
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Soft or Hard
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Cemented
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ACCELERATED EROSION (Fill in ONE bubble for each item).**13. Amount of Erosion or Evidence of Deposition (3)**

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TOPOGRAPHY or LAY OF LAND (Fill in ONE bubble for each item).**15. Landscape Position (3)**

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16. Steepness of Slope (5)

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Less than or equal to 5%
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----- Land Suitable for Permanent Vegetation -----

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- (H) **CLASS VIII** Wildlife, Recreation, or Watershed

18. LAND USE (5) (Fill in bubbles for all the land uses that apply)

- (A) **Irrigated Crops**
- (B) **Building Sites**
- (C) **Non-Irrigated Crops**
- (D) **Range**
- (E) **Woodland**
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(Fill in ONE to THREE bubbles for identifying the MOST IMPORTANT PROBLEMS(S)).

- (A) **None**
- (B) **Erosion**
- (C) **Slope**
- (D) **Shallow Soil Problems**
- (E) **Fineness or Compaction**
- (F) **Dense or Hard Pan**
- (G) **Courseness or Dryness**
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LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

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(A) (B) (C)

Soil and Land Evaluation Pit #3 (Side 2)

Contestant: 4



Pit #4

California CDE - Soil and Land Evaluation
Group: 4 **Contestant: 4**

SURFACE SOIL (Fill in ONE bubble for each item).

1. COLOR (5)

- (A) **Very Dark**
Black, Very Dark Gray, Very Dark Brown, or Dusky Red
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- (C) **Very Light**
White, Light Grey, Pale Brown, Pale Red
- (D) **Drab or Mottled**
Light Gray, Olive, Bluish Gray, Olive Grey, Yellow Spotted, Pale Yellow

2. TEXTURE (5)

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----- Land Suitable for Permanent Vegetation -----

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LAND MANAGEMENT NEEDS

Fill in 1-3 bubbles for each item Indicating the PRIORITY for the Practice(s) Needed

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(Bubble all that apply)

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- (C) **Furrow**
- (D) **Sprinkler**
- (E) **Drip**

URBAN LAND LIMITATION (5) Fill in one bubble on each line for Slight, Moderate, or Severe

SLIGHT MODERATE SEVERE

23. Limitation for Septic Tank Filter Fields

(A) (B) (C)

24. Limitations for Shrink-Swell

(A) (B) (C)

25. Limitations for Foundations without Basement

(A) (B) (C)

26. Limitations for Local Roads and Streets

(A) (B) (C)

27. Limitations for Top Soil

(A) (B) (C)

Soil and Land Evaluation Pit #4 (Side 2)

Contestant: 4