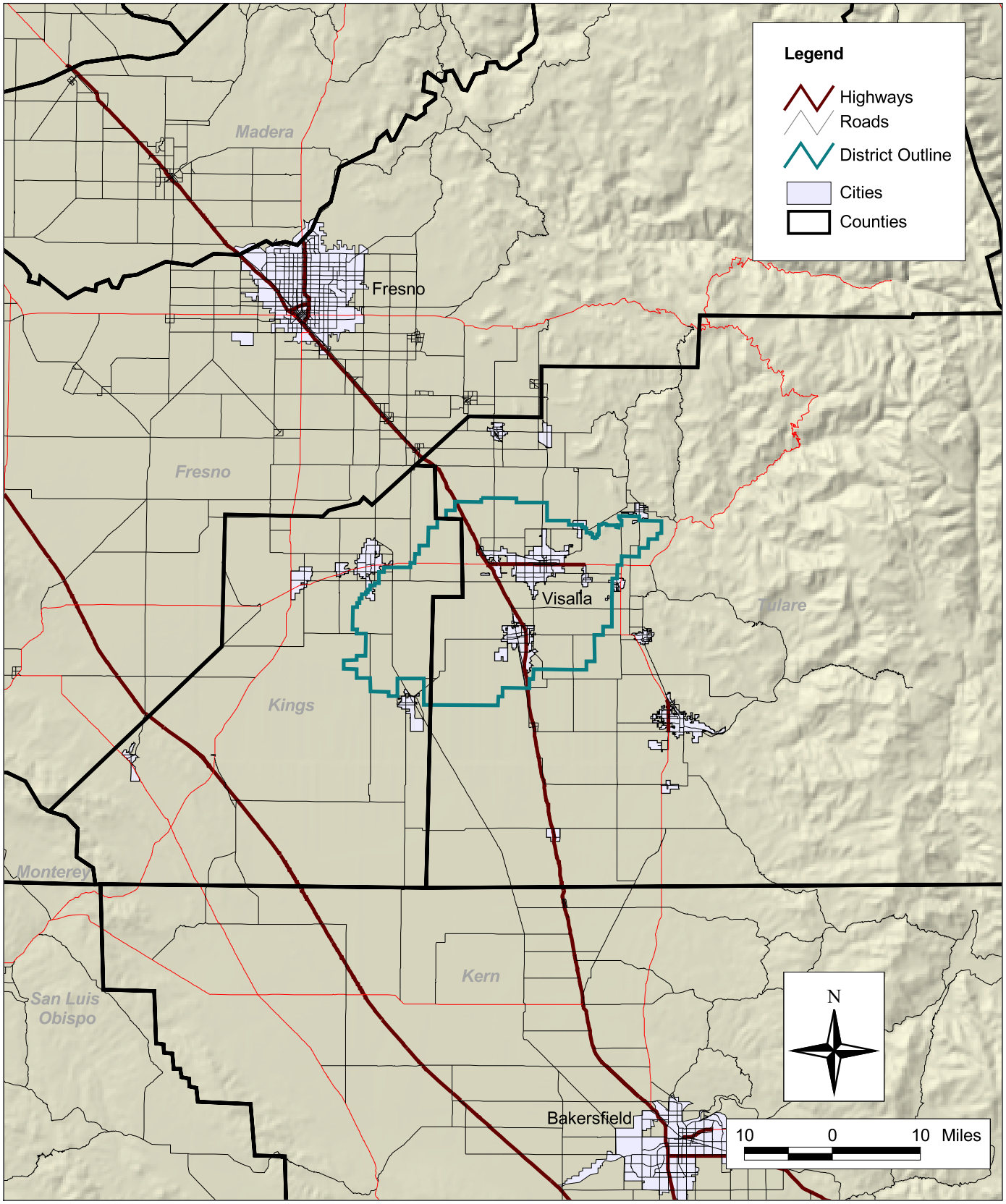
PLATES

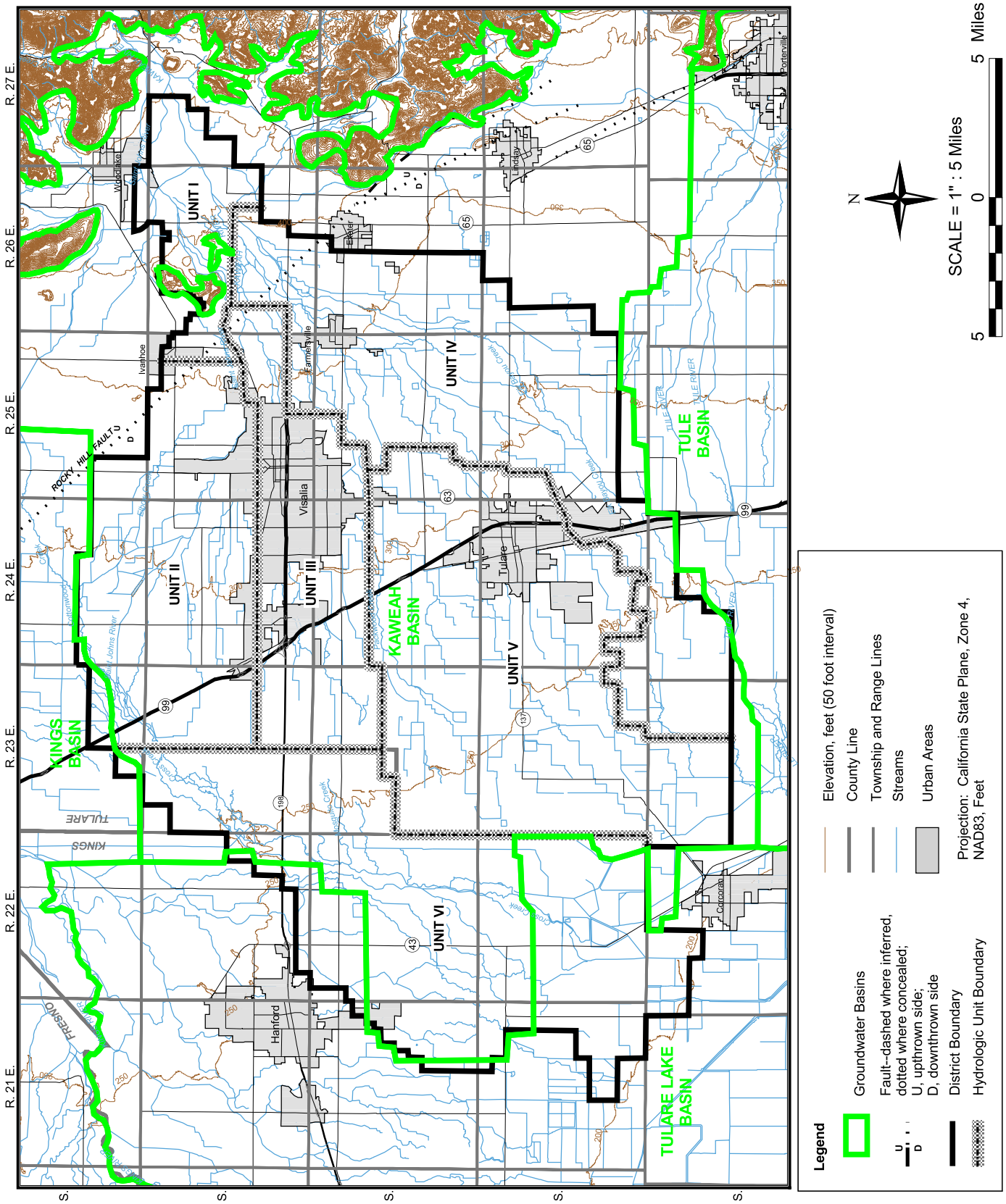


STUDY AREA LOCATION MAP

Kaweah Delta Water Conservation District

PLATE 1

I:\kaweah\gis\mapodb\task-7\location_map.odb, tmcadam , 01/07/2004

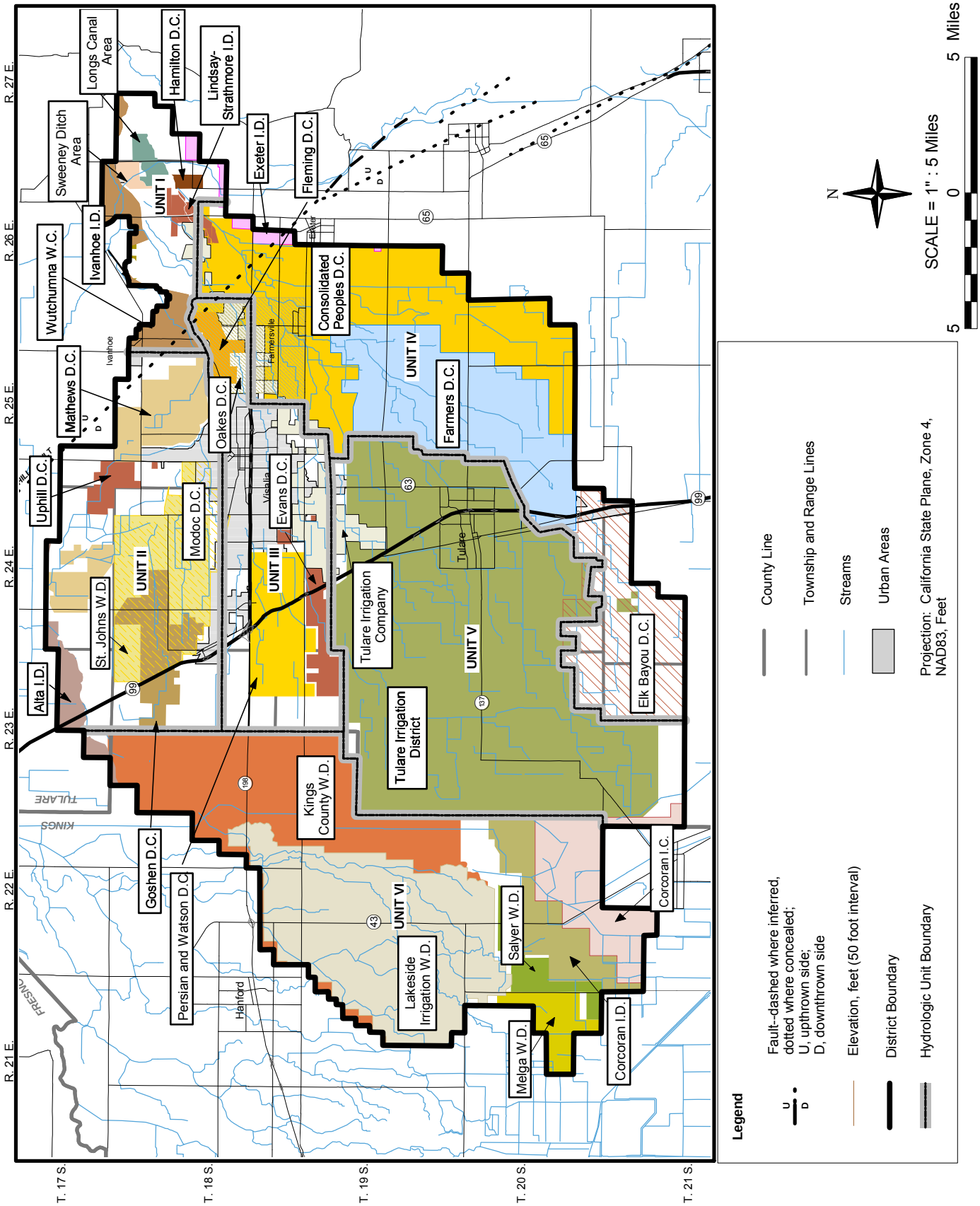


I:\kaweah\gis\mapodb\task-7\study_area_8.5x11.odb, tmcadam , 01/08/2004

STUDY AREA MAP

Kaweah Delta Water Conservation District

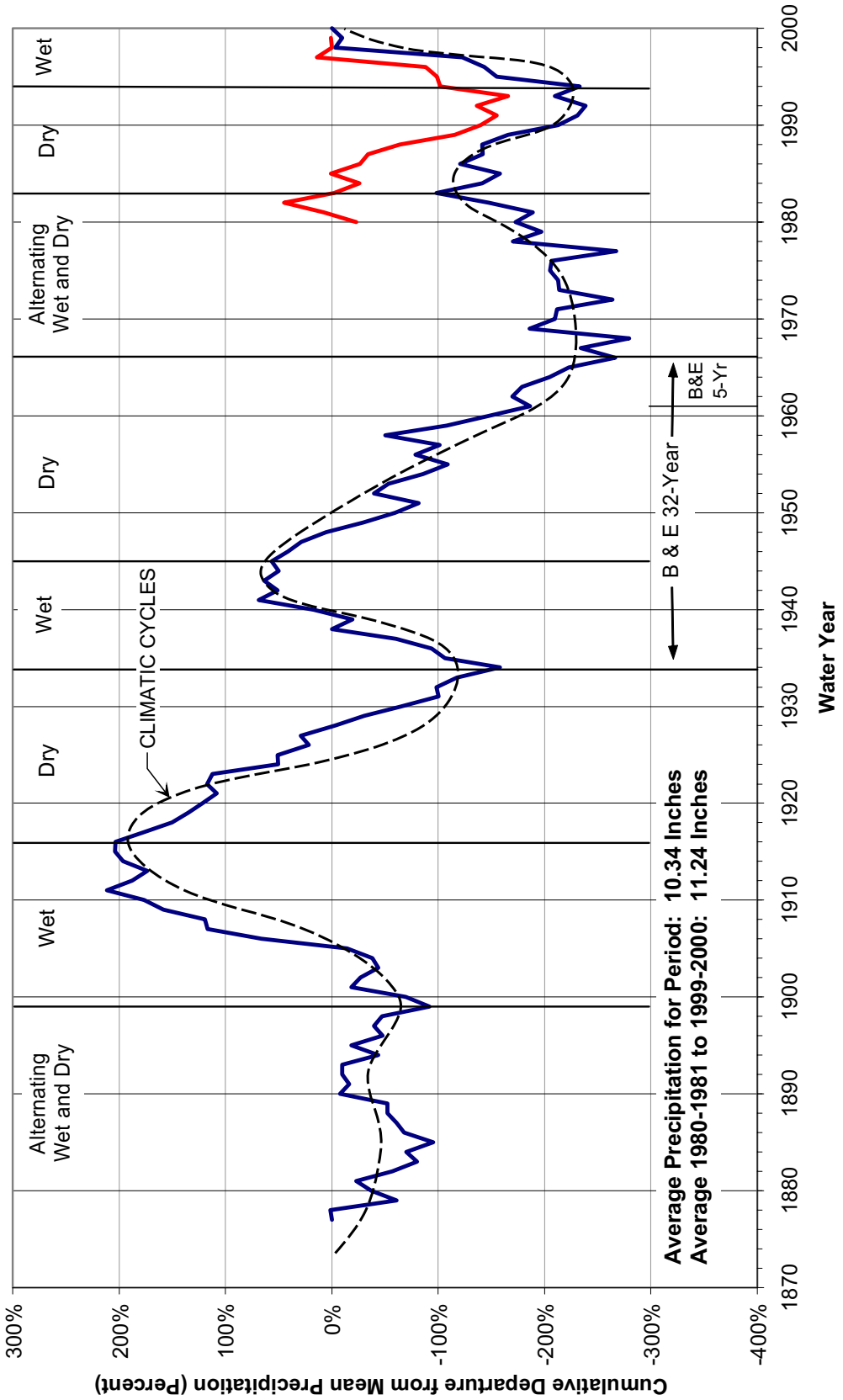
PLATE 2



i:\kaweah\gis\mapodb\task-7\entitlement_holders_service.odb, task-7, 01/15/2004

ENTITLEMENT HOLDER SERVICE AREA MAP

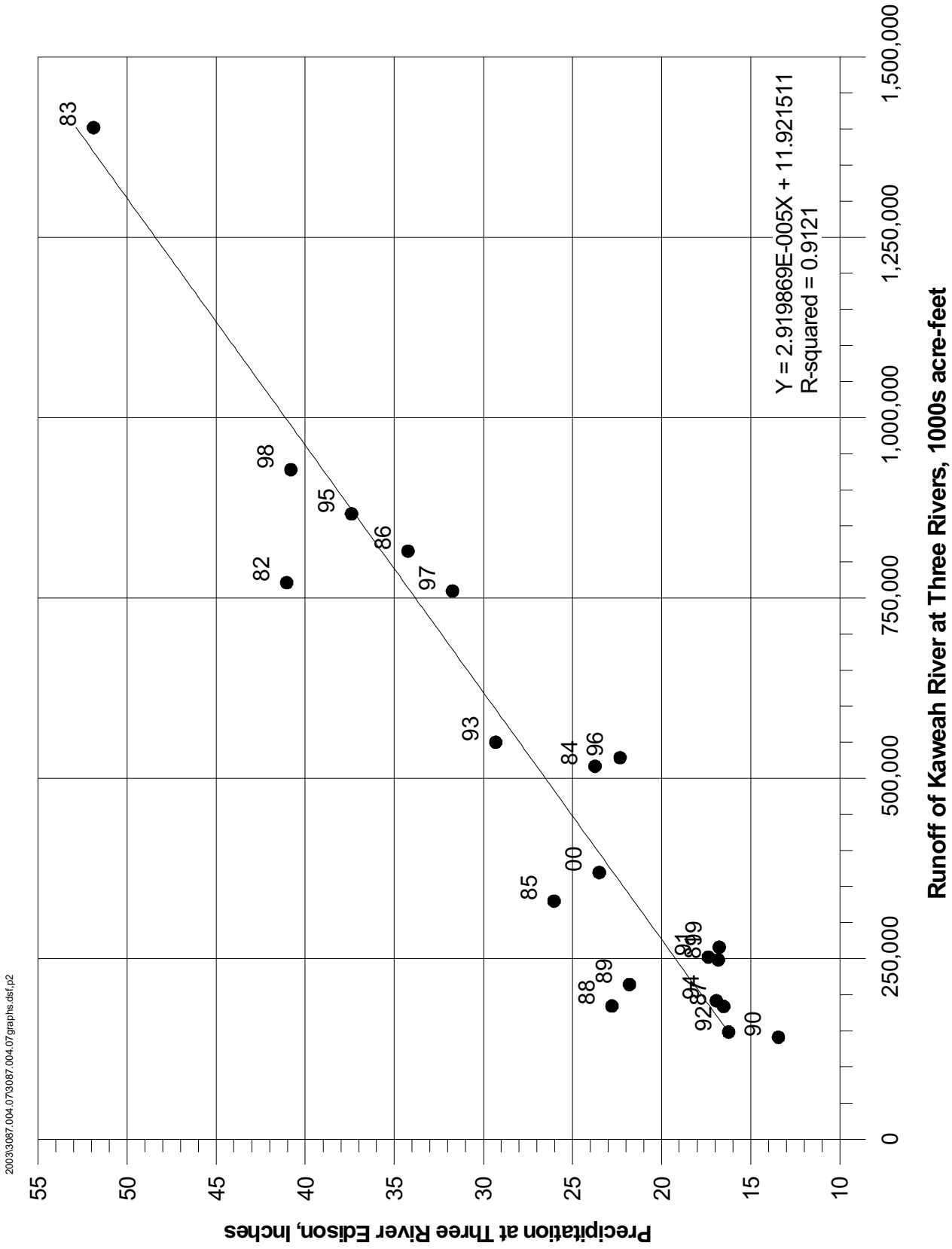
Kaweah Delta Water Conservation District



CUMULATIVE DEPARTURE FROM AVERAGE ANNUAL PRECIPITATION, VISALIA

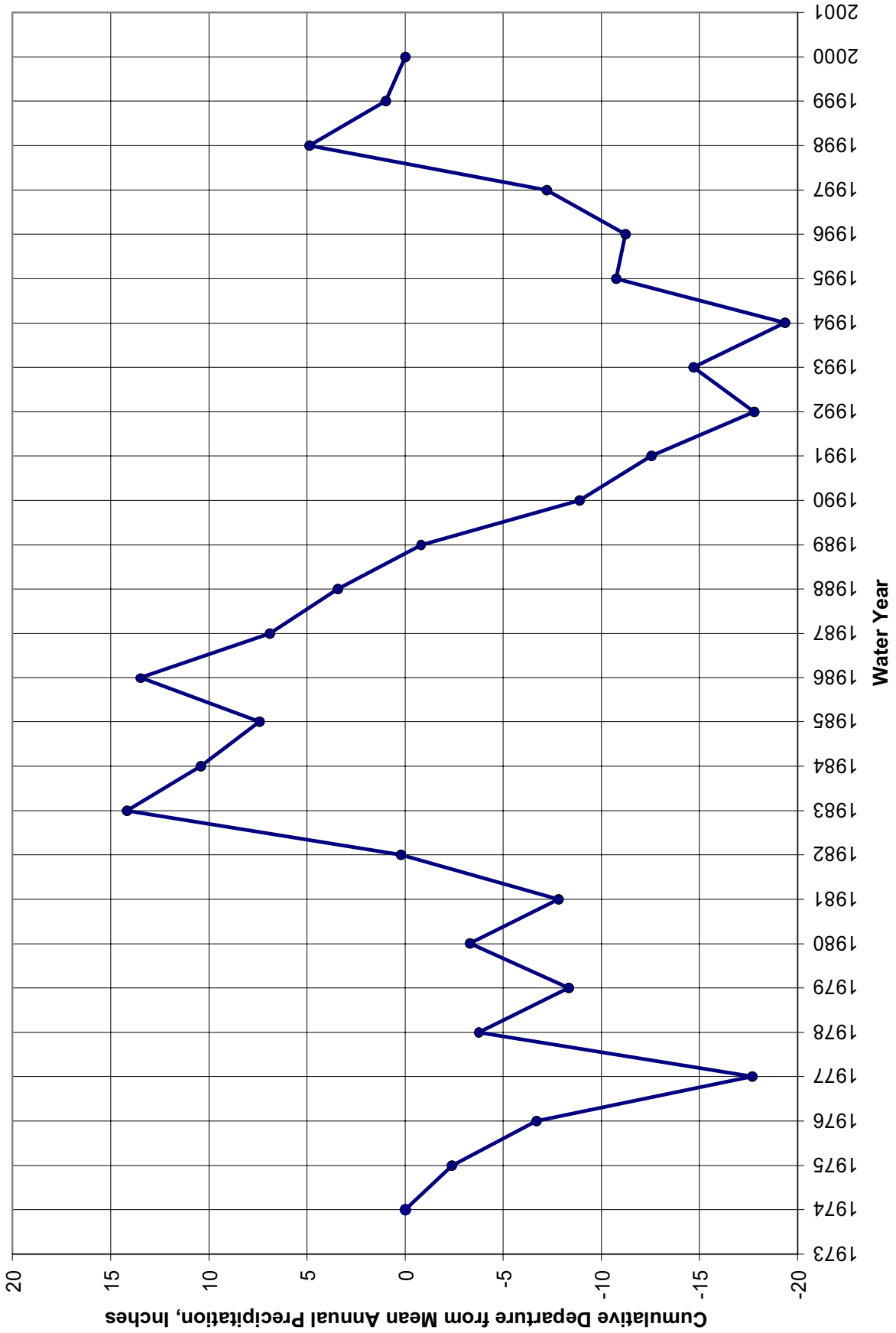
Kaweah Groundwater Basin
Water Resources Investigation
Kaweah Delta Water Conservation District

2003\3087.004.07\3087.004.07graphs.dsf.p1



KAWEAH RIVER RUNOFF VERSUS MEAN PRECIPITATION AT THREE RIVERS STATION

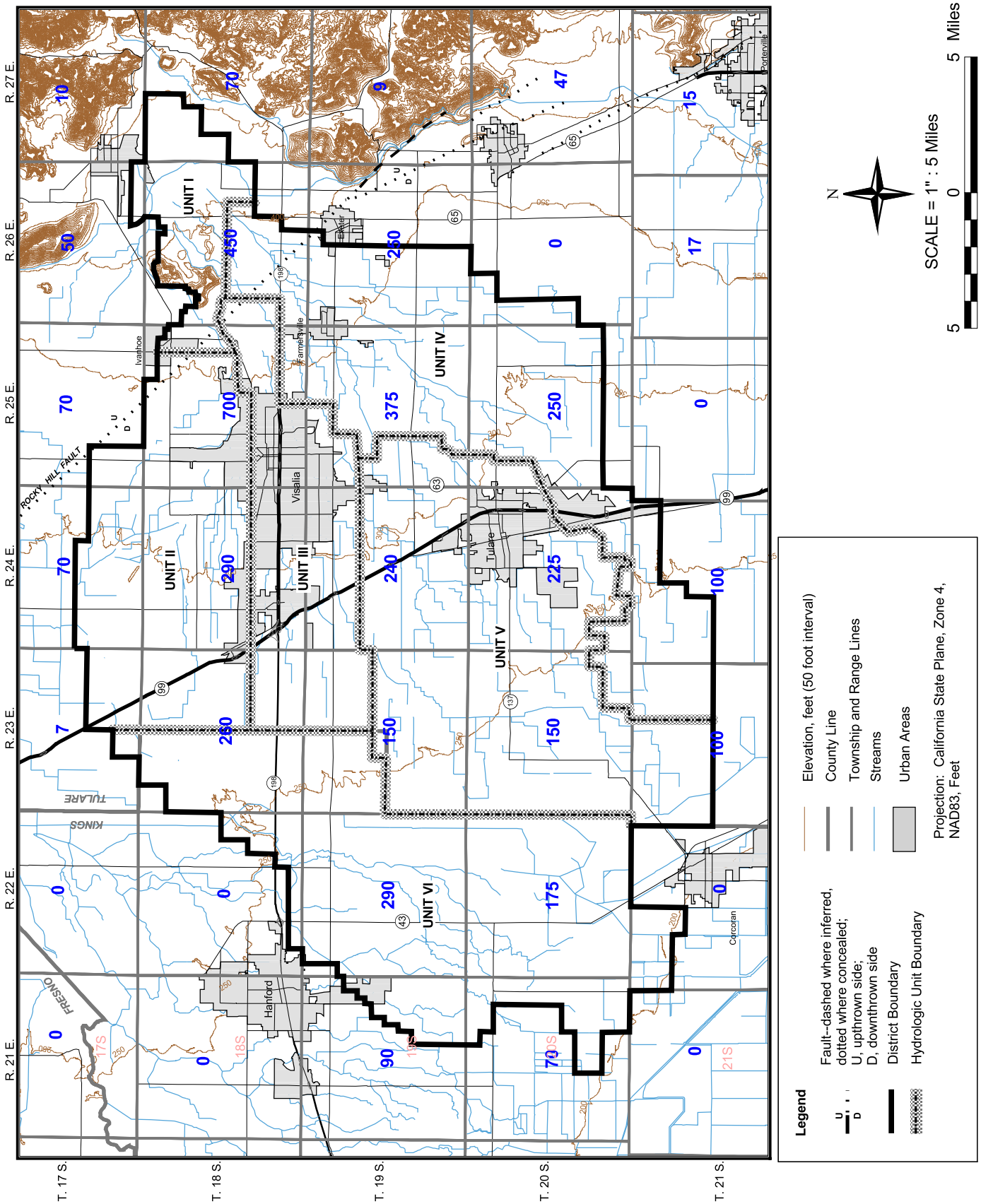
Kaweah Groundwater Basin
Water Resources Investigation
Kaweah Delta Water Conservation District



CUMULATIVE DEPARTURE FROM AVERAGE ANNUAL PRECIPITATION, COMPOSITE DATA

Kaweah Groundwater Basin
Water Resources Investigation
Kaweah Delta Water Conservation District

2003\3087.004.07\3087.004.07graphs.dsf.p3

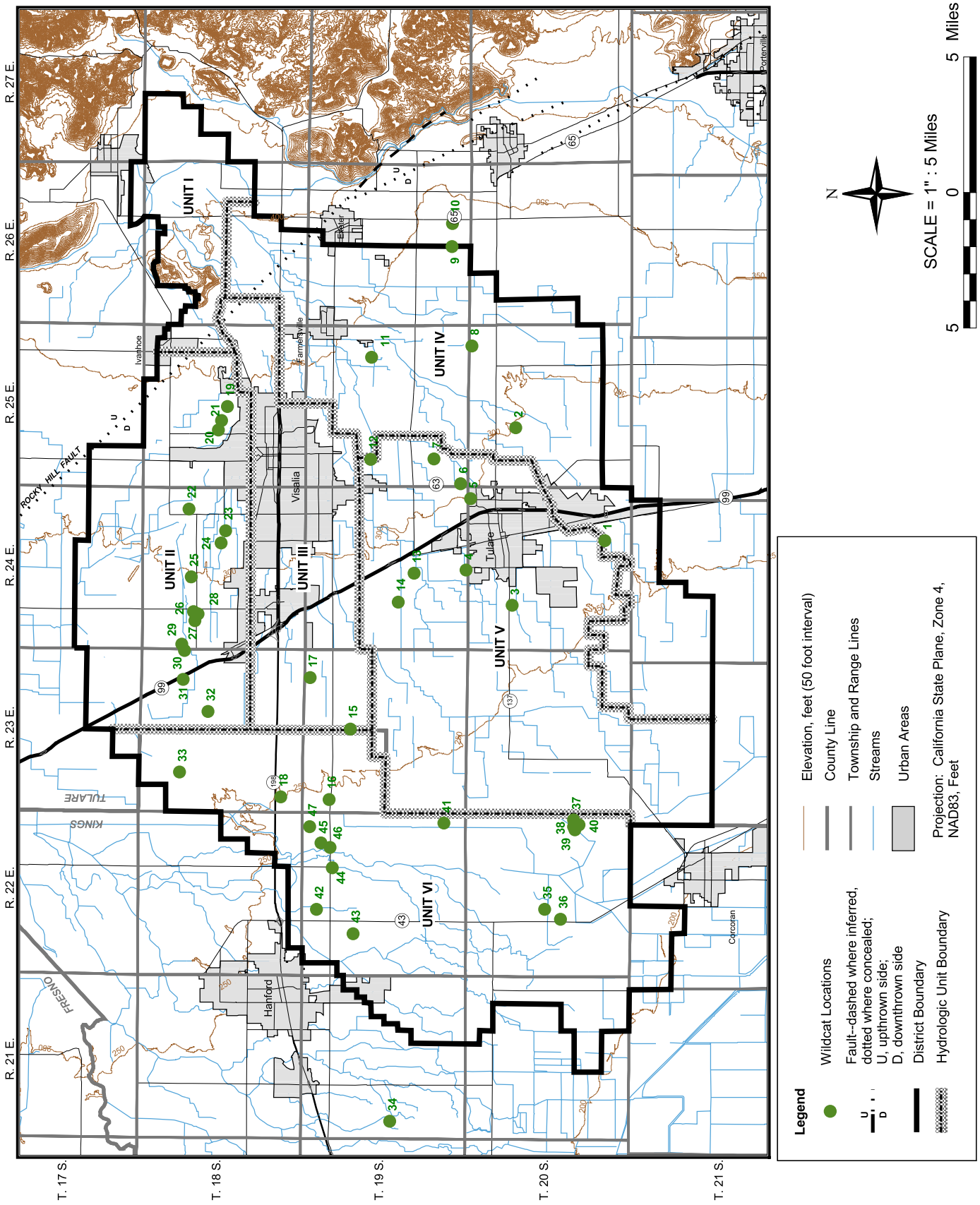


DISTRIBUTION OF WATER WELL DATA SETS

Kaweah Delta Water Conservation District

PLATE 7

I:\kaweah\gis\mapodb\task-7\distribution_of_waterwell_data_8.5x11.odb, task-7, 02/04/2003

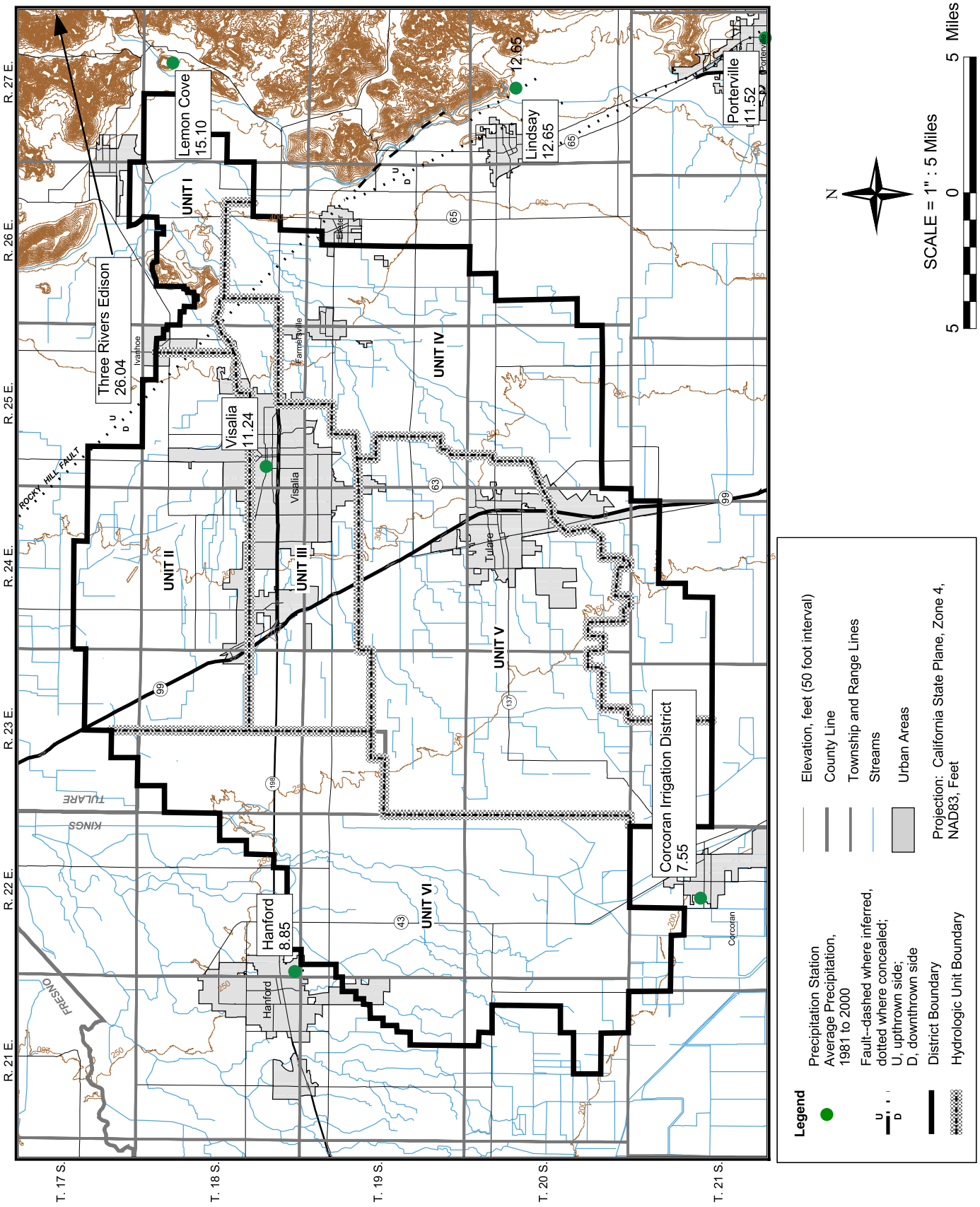


I:\kaweah\gis\mapodb\task-7\wildcat_borehole_locations_8.5x11.odb, task-7, 01/31/2003

WILDCAT BOREHOLE / WELL LOCATIONS

Kaweah Delta Water Conservation District

PLATE 8

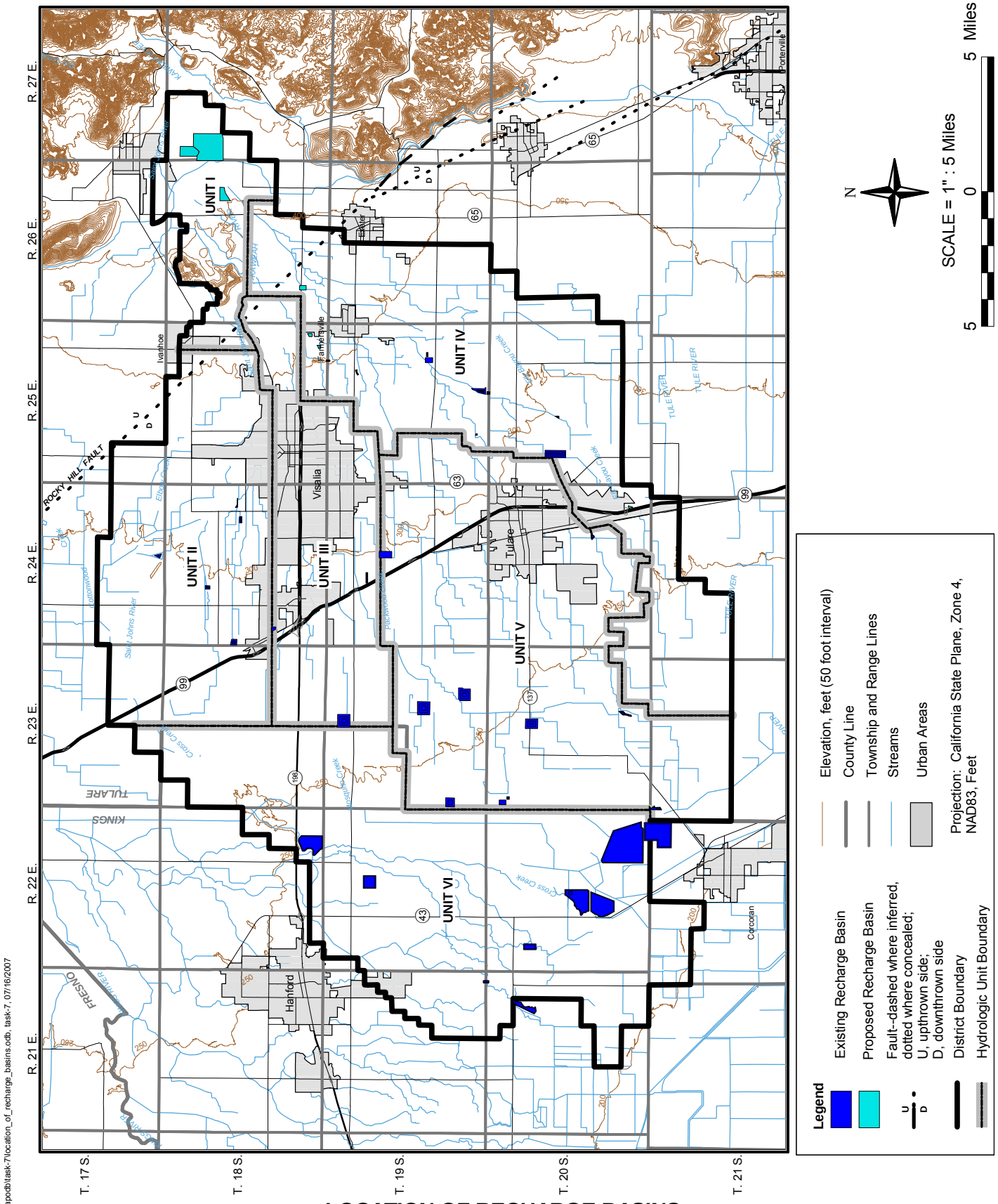


I:\kaweah\gis\mapodb\task-7\precipitation_station_location.odb, task-7, 01/31/2003

PRECIPITATION STATION LOCATION MAP

Kaweah Delta Water Conservation District

PLATE 9

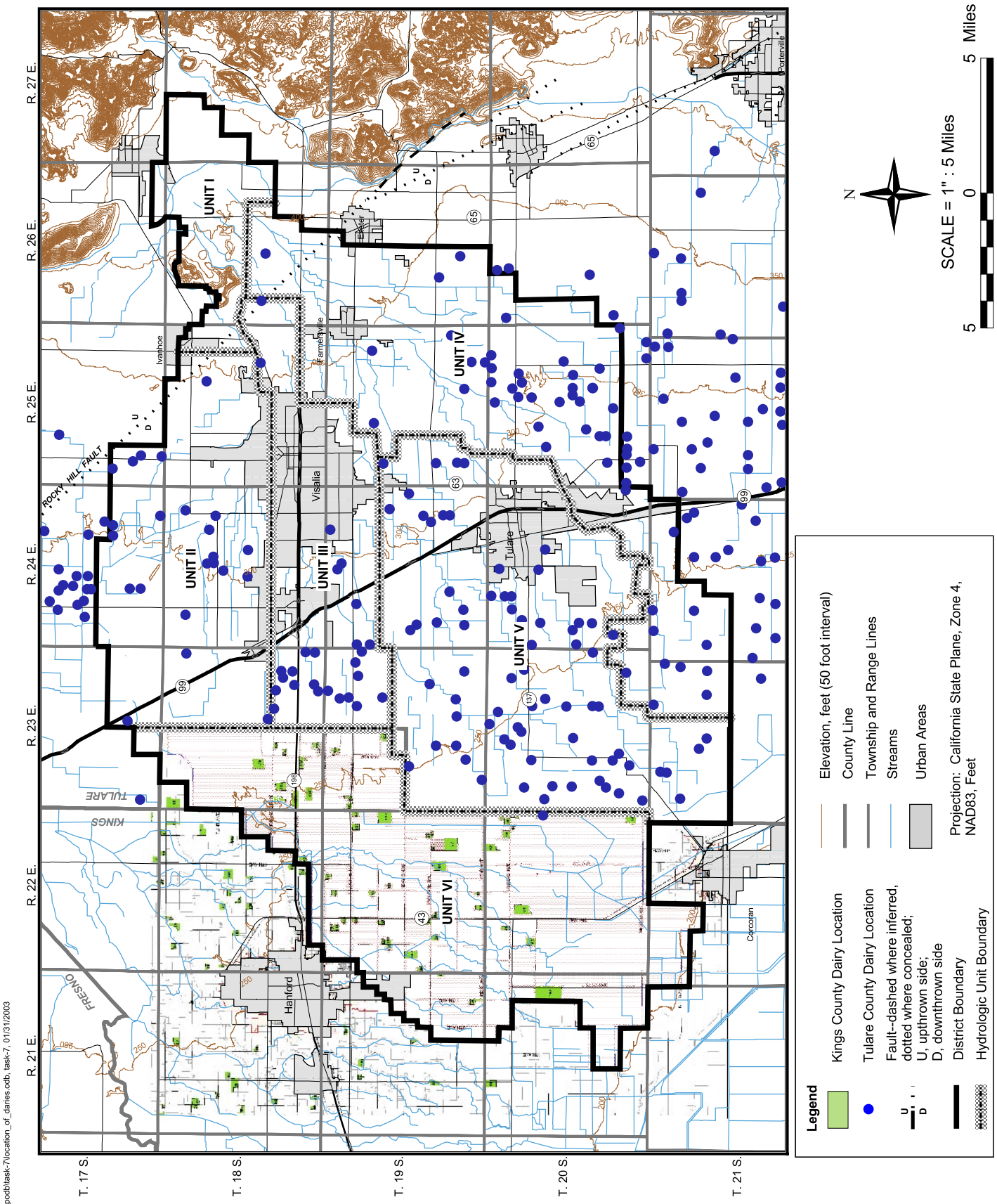


i:\kaweah\gis\mapodb\task-7\location_of_recharge_basins.odb, task-7, 07/16/2007

LOCATION OF RECHARGE BASINS

Kaweah Delta Water Conservation District

PLATE 10

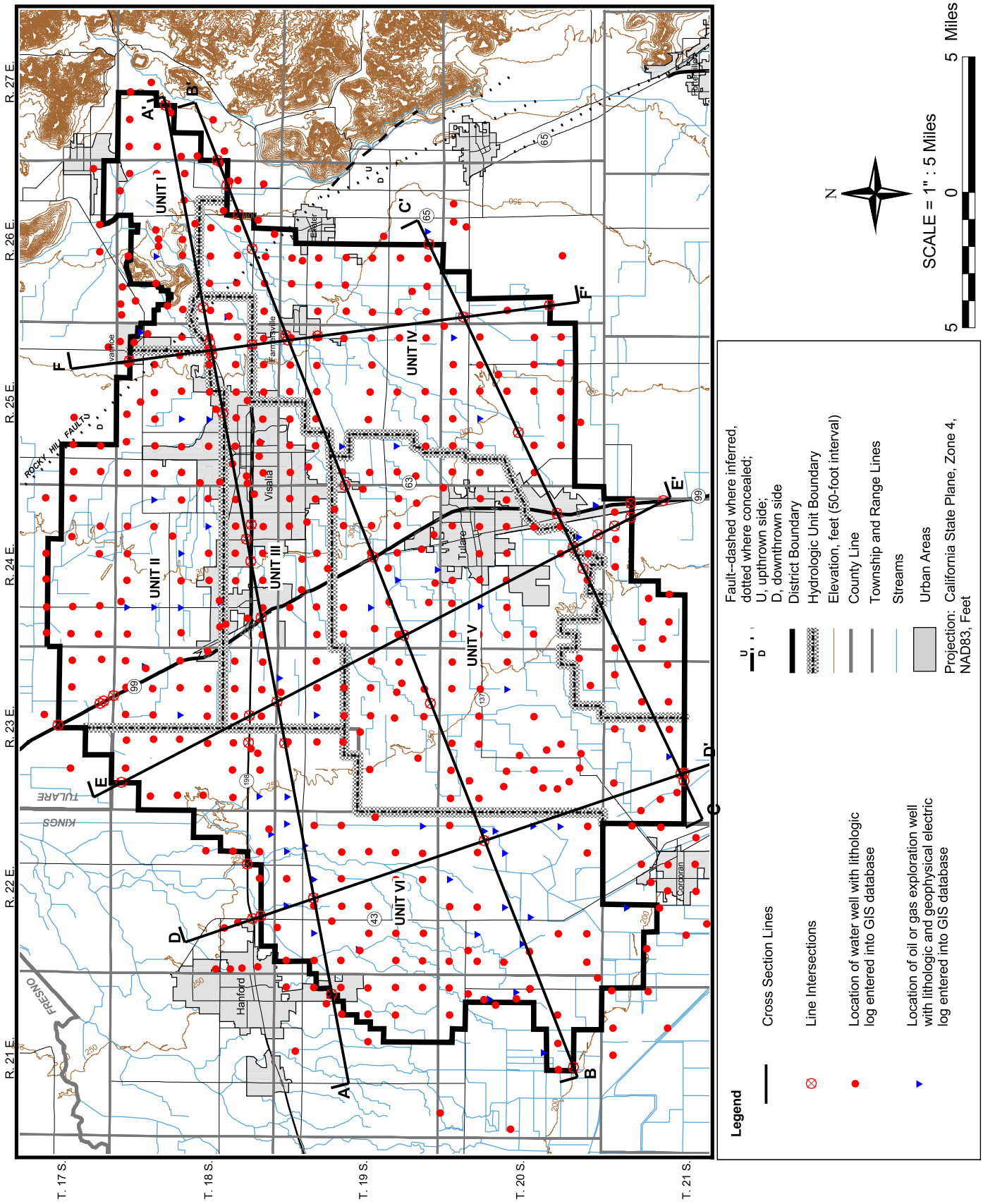


I:\kaweah\gis\mapodb\task-7\location_of_daries.odb, task-7, 01/31/2003

LOCATION OF DAIRIES

Kaweah Delta Water Conservation District

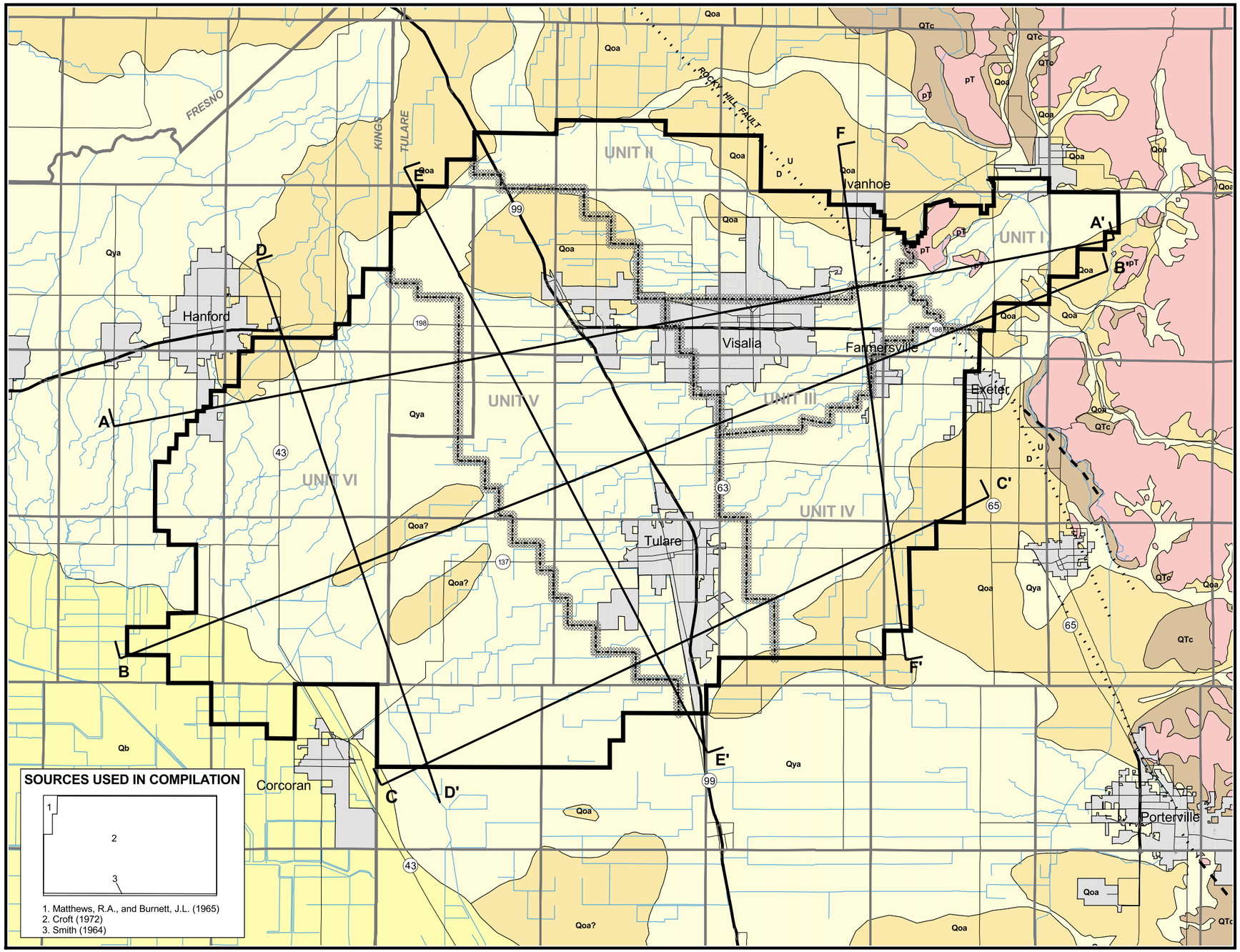
PLATE 11



WELL DATABASE AND CROSS SECTION LOCATION MAP

Kaweah Delta Water Conservation District

PLATE 12



Legend

- District Boundary
- Hydrologic Unit Boundary
- Cross Section Location
- County Line
- Township and Range Lines
- Streams
- Urban Areas
- Fault--dashed where inferred, dotted where concealed; U, upthrown side; D, downthrown side

Projection: California State Plane, Zone 4, NAD83, Feet

UNCONSOLIDATED DEPOSITS

WEST SIDE (Coast Ranges Provenance)

- QTa Alluvium, undifferentiated (Pliocene to Holocene)
- Qb Flood basin deposits (Holocene)
- QTl Lacustrine and marsh deposits (Pliocene and Pleistocene)

EAST SIDE (Sierra Nevada Provenance)

- Qya Younger alluvium (Holocene)
- Qoa Older alluvium (Pleistocene and Holocene (?))
- QTc Continental deposits (Pliocene and Pleistocene(?))

CONSOLIDATED ROCKS

- pT Basement complex (gabbro, diorite, granodiorite, and metamorphic rocks) (pre-Tertiary)

N

SCALE = 1:250,000

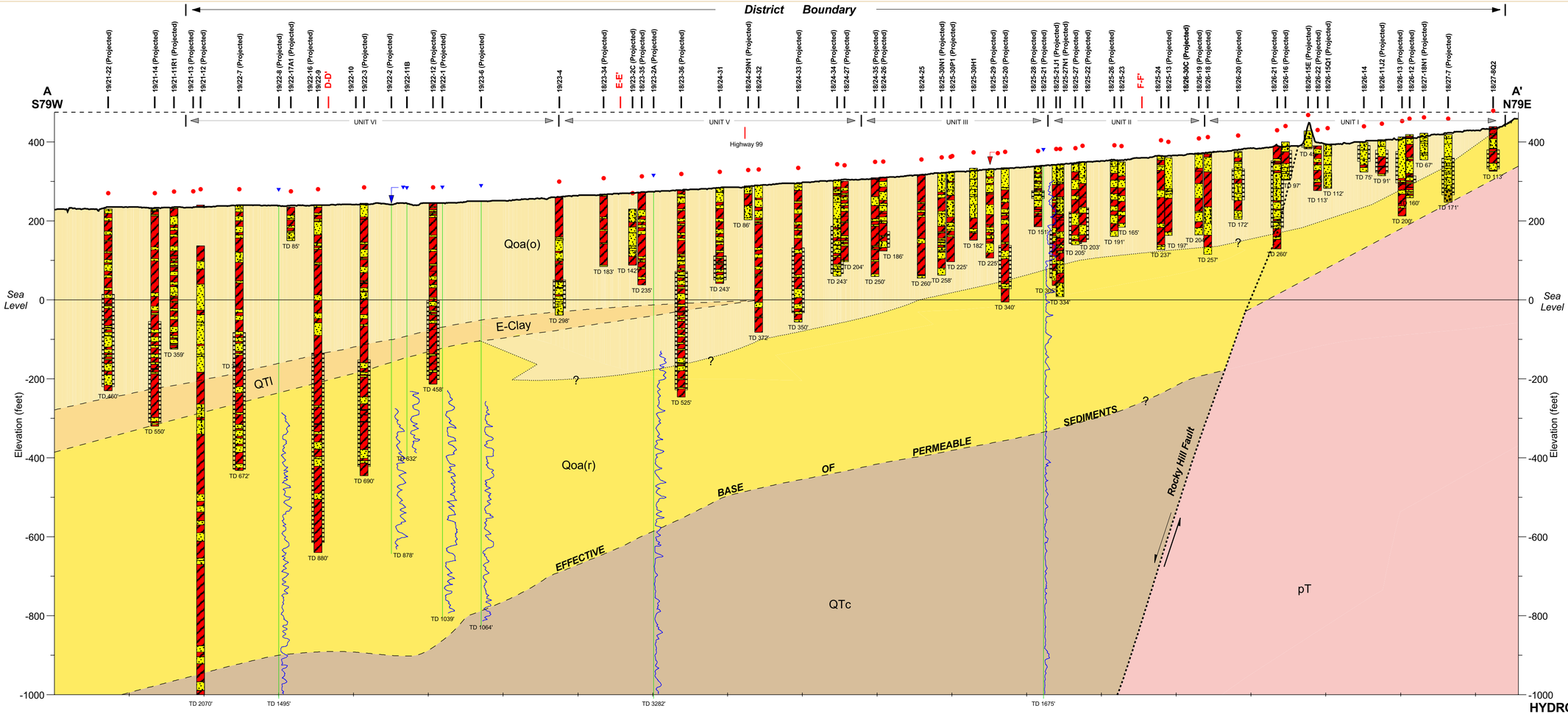
4 0 4 Miles

Kaweah Delta Water Conservation District

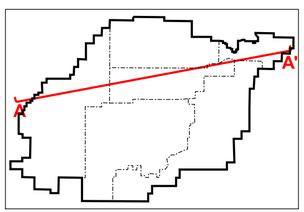
Regional Geologic Map

PLATE 13

December 2003 (Revised July 2007)
Project No. 3087.004.07



Section Location



GENERAL NOTES:

1) Stratigraphic contacts are approximate and are interpreted from well and electric logs. Conditions vary both along and perpendicular to the section line.

2) Refer to Key to Cross Sections for descriptions of wells and electric log data shown above.

3) Wells and electric logs are projected to a distance of one mile onto the lines of the cross sections. Therefore stratigraphic contacts may not exactly correspond to the contact indications (lithology, shear strength, etc.) in the logs.

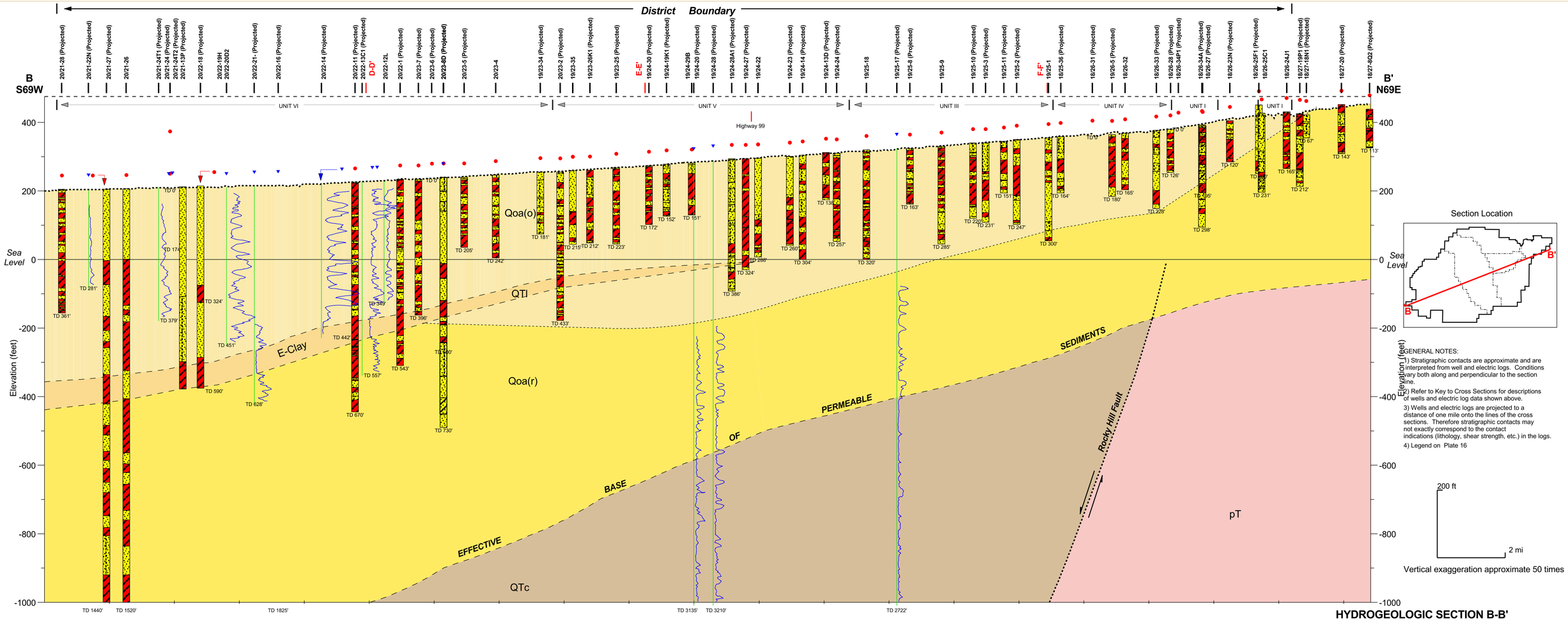
4) Legend on Plate 16

200 ft
2 mi

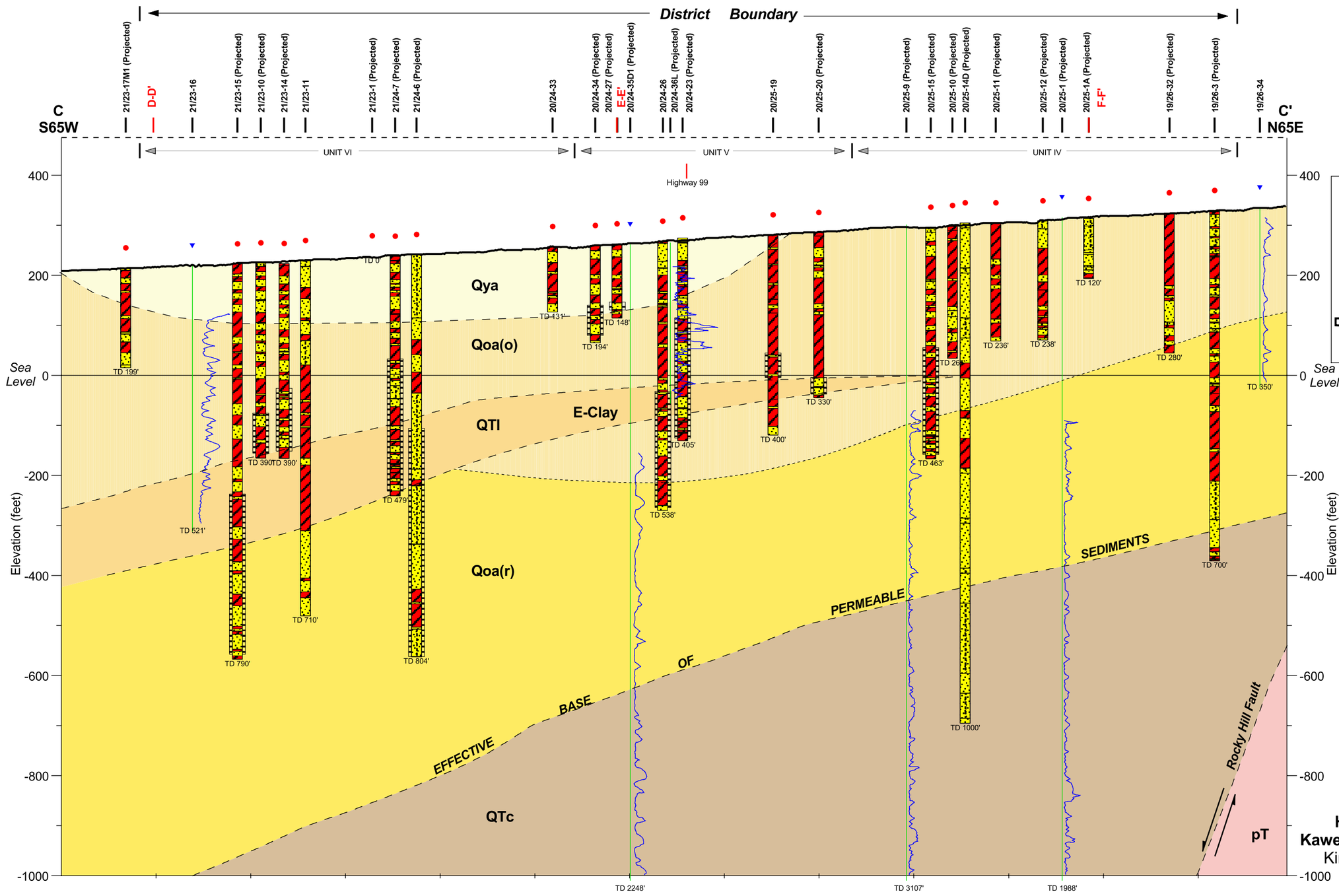
Vertical exaggeration approximate 50 times

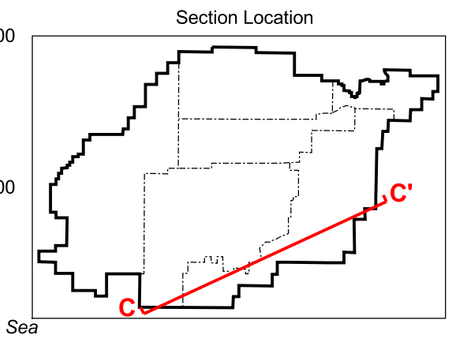
HYDROGEOLOGIC SECTION A-A'
Kaweah Delta Water Conservation District
Kings and Tulare Counties, California

December 2003 (Revised July 2007)
Project No. 3087.004.07



HYDROGEOLOGIC SECTION B-B'
Kaweah Delta Water Conservation District
Kings and Tulare Counties, California





GENERAL NOTES:

1) Stratigraphic contacts are approximate and are interpreted from well and electric logs. Conditions vary both along and perpendicular to the section line.

2) Refer to Key to Cross Sections for descriptions of wells and electric log data shown above.

3) Wells and electric logs are projected onto the lines of the cross sections. Therefore stratigraphic contacts may not exactly correspond to the contact indications (lithology, shear strength, etc.) in the logs.

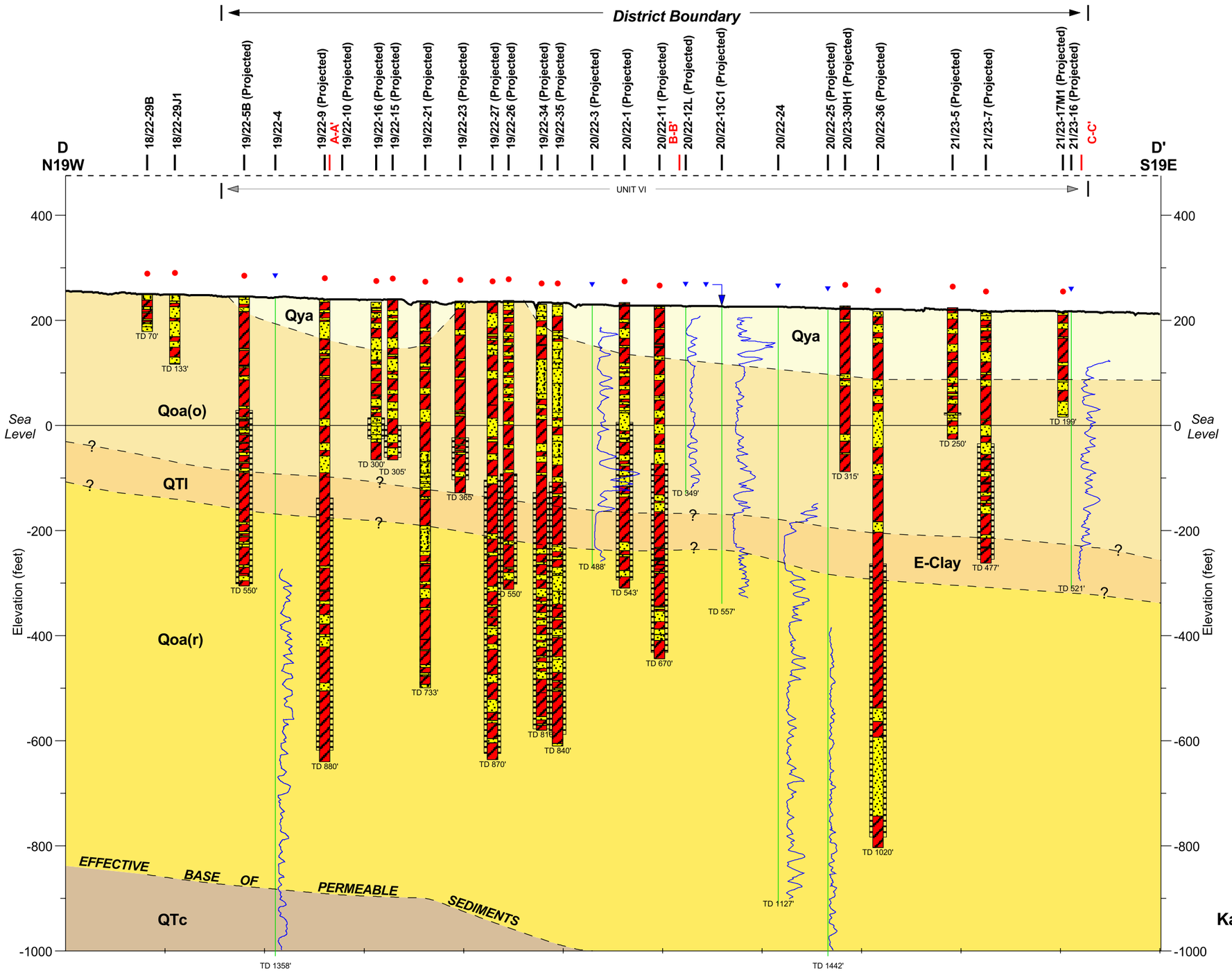
4) Legend on Plate 16

200 ft

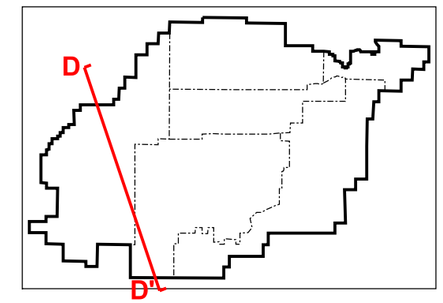
2 mi

Vertical exaggeration approximate 50 times

HYDROGEOLOGIC SECTION C-C'
Kaweah Delta Water Conservation District
Kings and Tulare Counties, California



Section Location



GENERAL NOTES:

1) Stratigraphic contacts are approximate and are interpreted from well and electric logs. Conditions vary both along and perpendicular to the section line.

2) Refer to Key to Cross Sections for descriptions of wells and electric log data shown above.

3) Wells and electric logs are projected to a distance of one mile onto the lines of the cross sections. Therefore stratigraphic contacts may not exactly correspond to the contact indications (lithology, shear strength, etc.) in the logs.

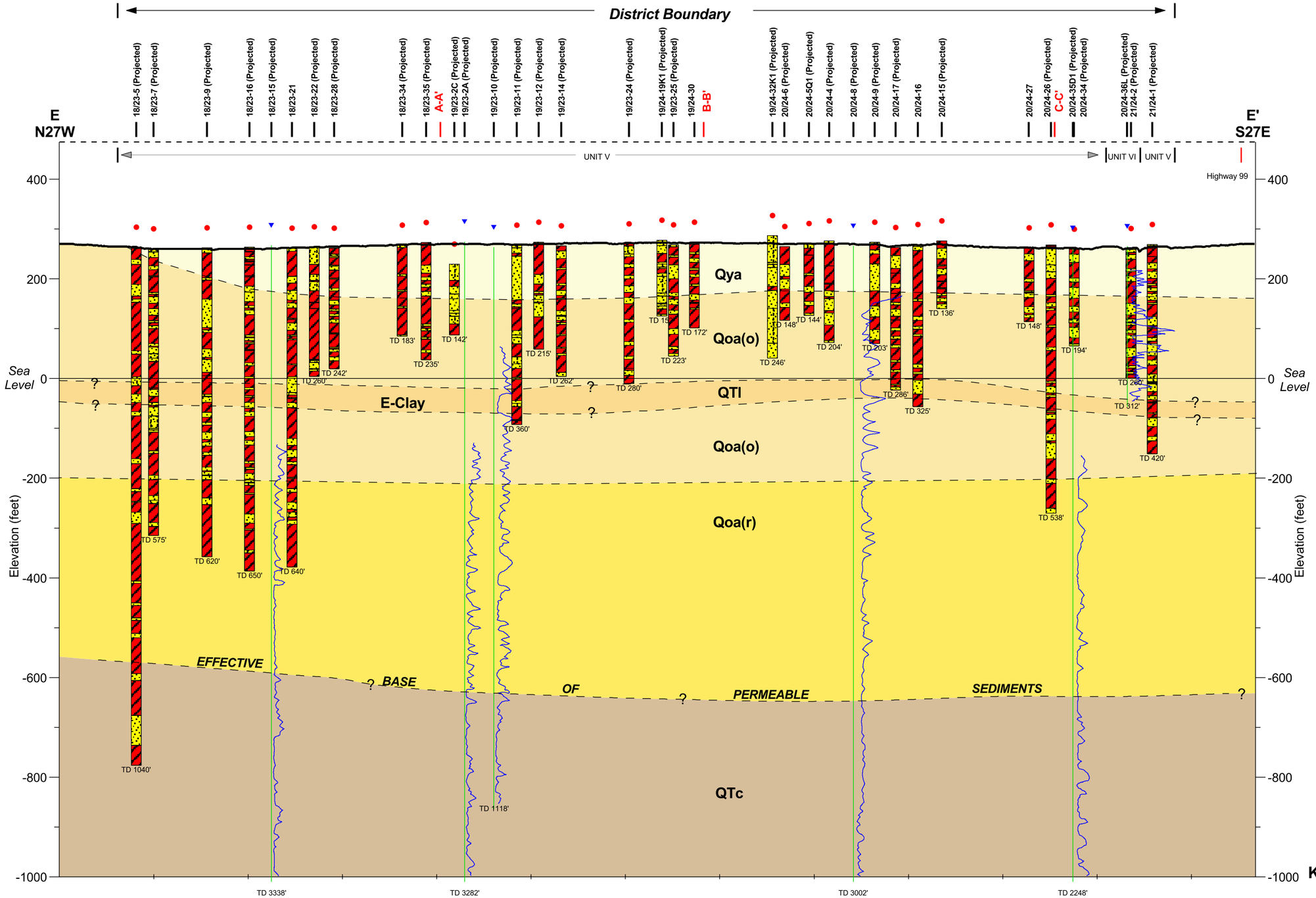
4) Legend on Plate 16

200 ft

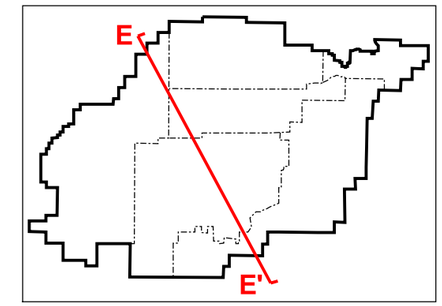
2 mi

Vertical exaggeration approximate 50 times

HYDROGEOLOGIC SECTION D-D'
Kaweah Delta Water Conservation District
Kings and Tulare Counties, California



Section Location



GENERAL NOTES:

1) Stratigraphic contacts are approximate and are interpreted from well and electric logs. Conditions vary both along and perpendicular to the section line.

2) Refer to Key to Cross Sections for descriptions of wells and electric log data shown above.

3) Wells and electric logs are projected to a distance of one mile onto the lines of the cross sections. Therefore stratigraphic contacts may not exactly correspond to the contact indications (lithology, shear strength, etc.) in the logs.

4) Legend on Plate 16

200 ft

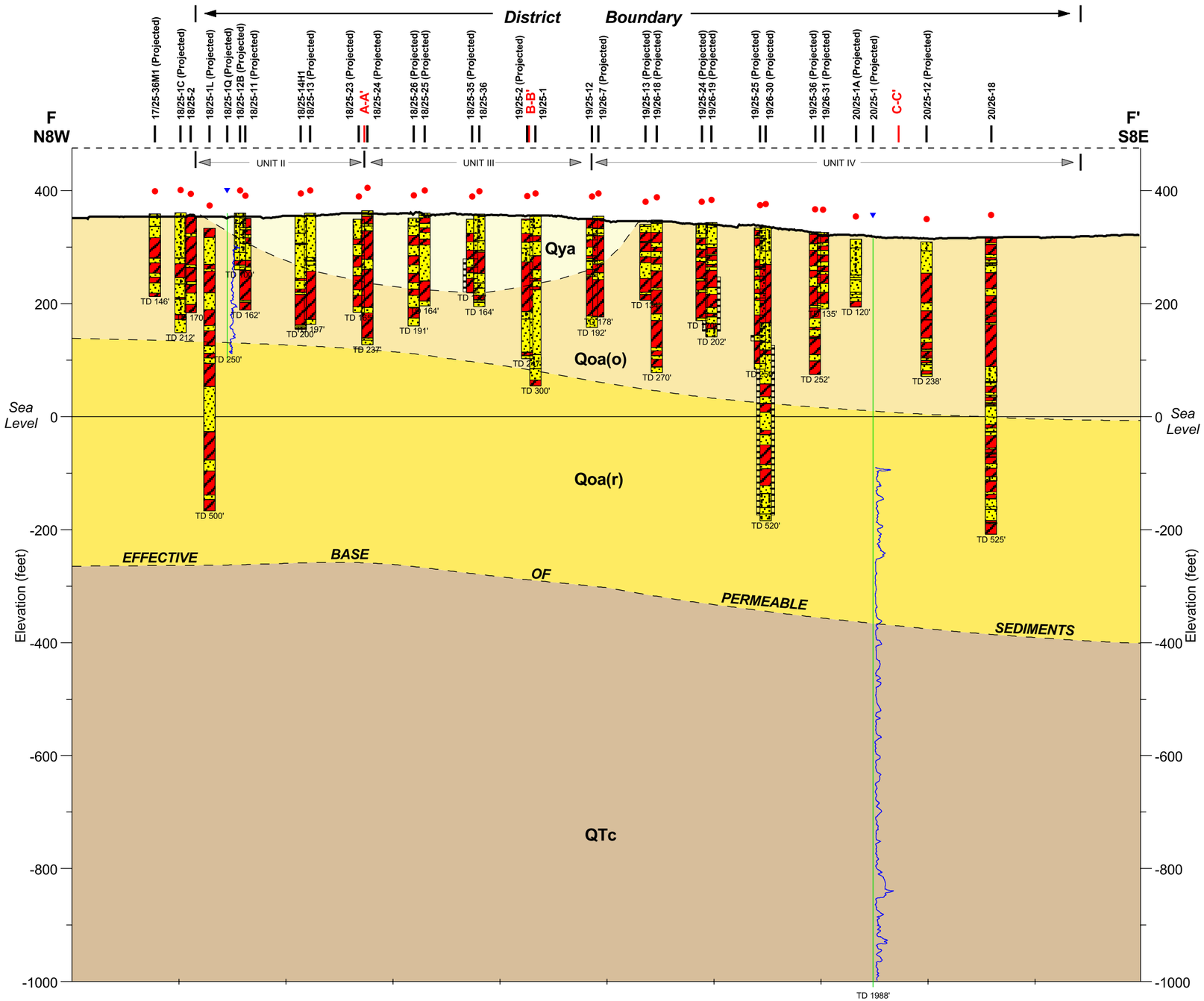
2 mi

Vertical exaggeration approximate 50 times

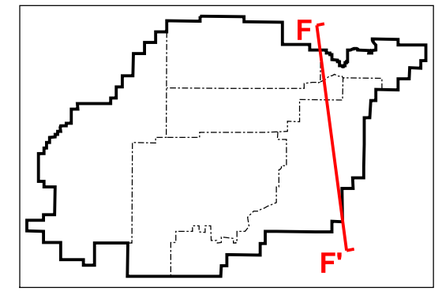
HYDROGEOLOGIC SECTION E-E'

Kaweah Delta Water Conservation District

Kings and Tulare Counties, California



Section Location



GENERAL NOTES:

1) Stratigraphic contacts are approximate and are interpreted from well and electric logs. Conditions vary both along and perpendicular to the section line.

2) Refer to Key to Cross Sections for descriptions of wells and electric log data shown above.

3) Wells and electric logs are projected to a distance of one mile onto the lines of the cross sections. Therefore stratigraphic contacts may not exactly correspond to the contact indications (lithology, shear strength, etc.) in the logs.

4) Legend on Plate 16

200 ft

2 mi

Vertical exaggeration approximate 50 times

HYDROGEOLOGIC SECTION F-F'
Kaweah Delta Water Conservation District
Kings and Tulare Counties, California

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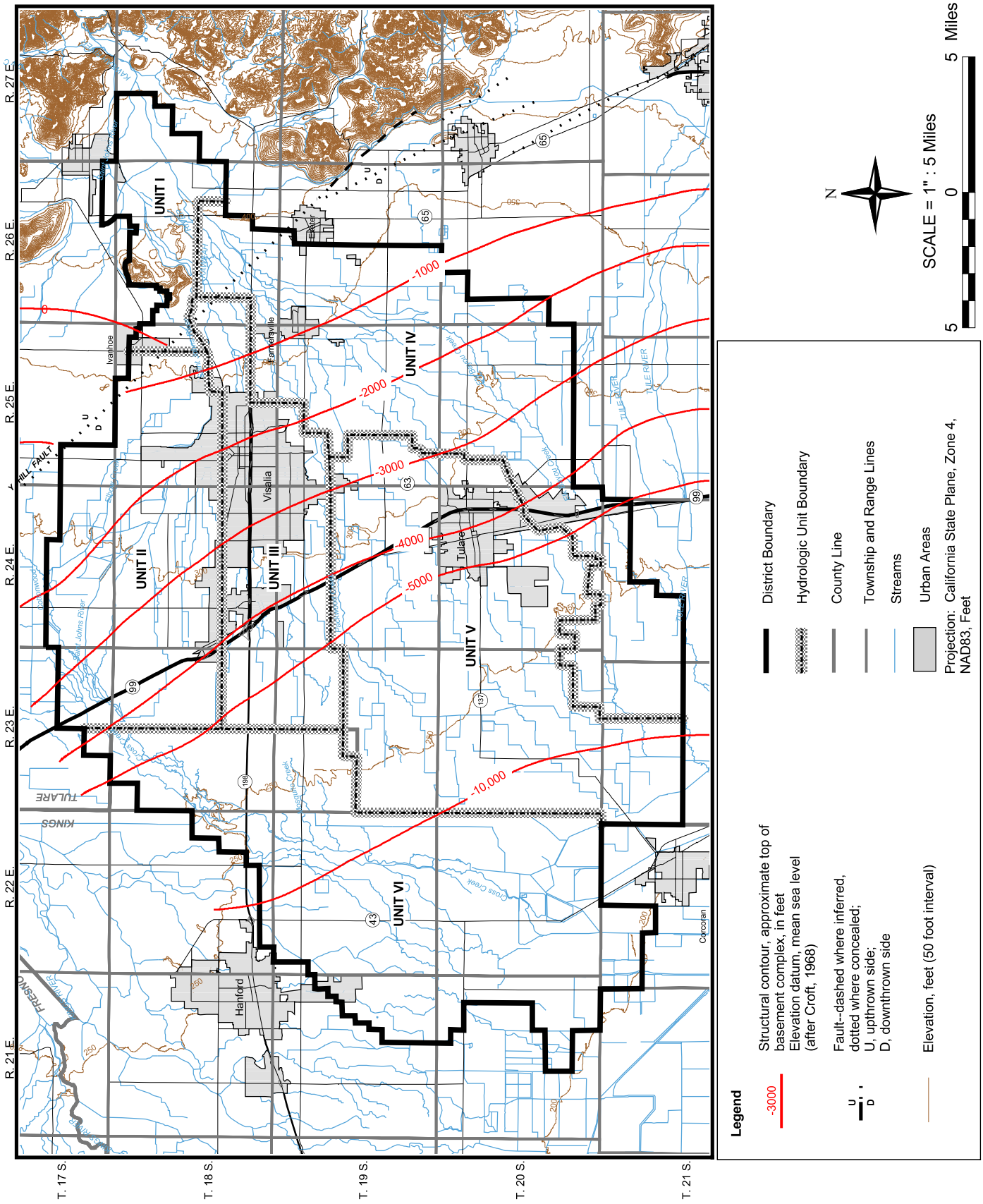
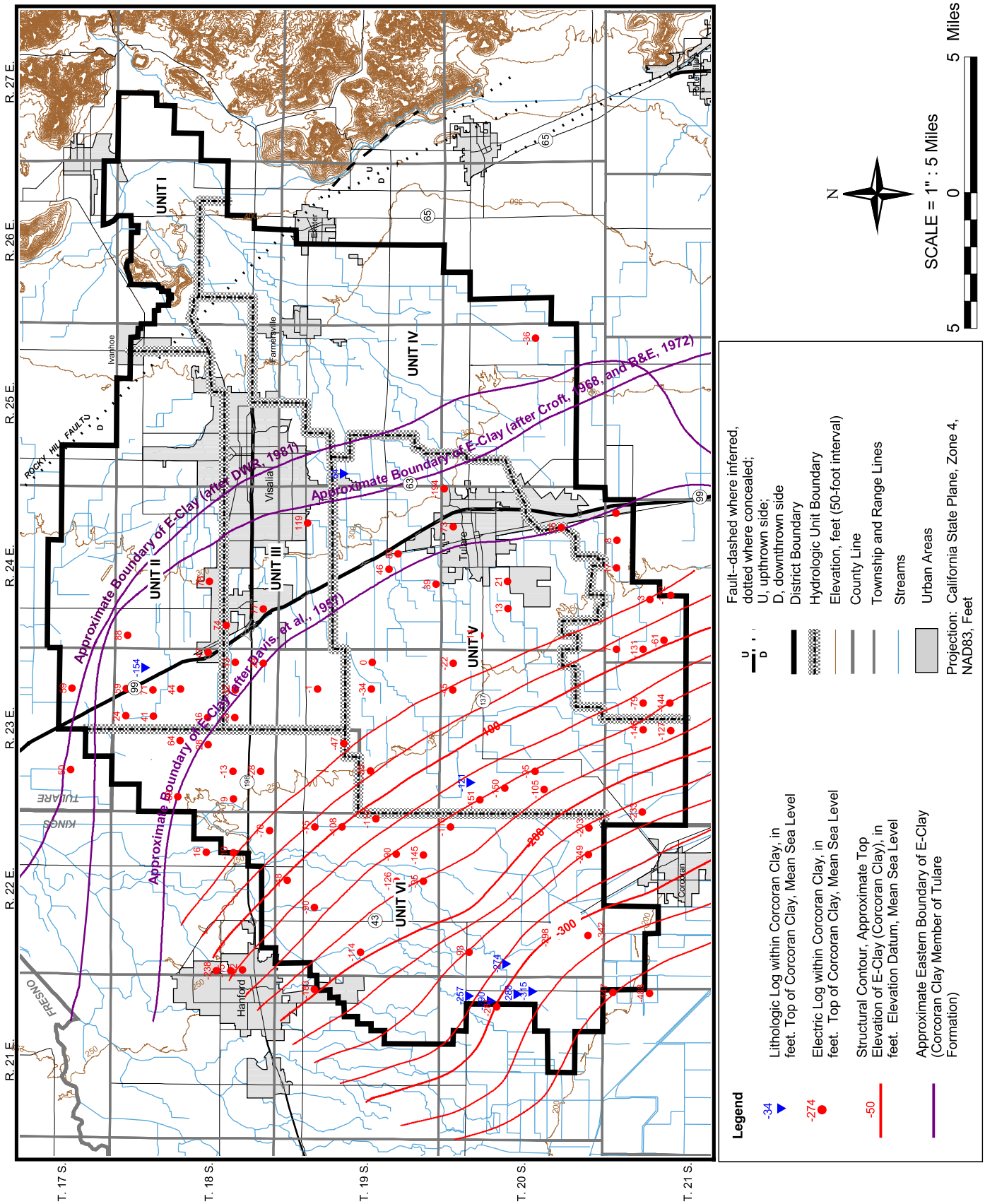


i:\kaweah\gis\mapodb\task-7\basement_struc_contour8.5x11.odb, task-7, 02/05/2003

STRUCTURAL CONTOUR MAP TOP OF BASEMENT COMPLEX

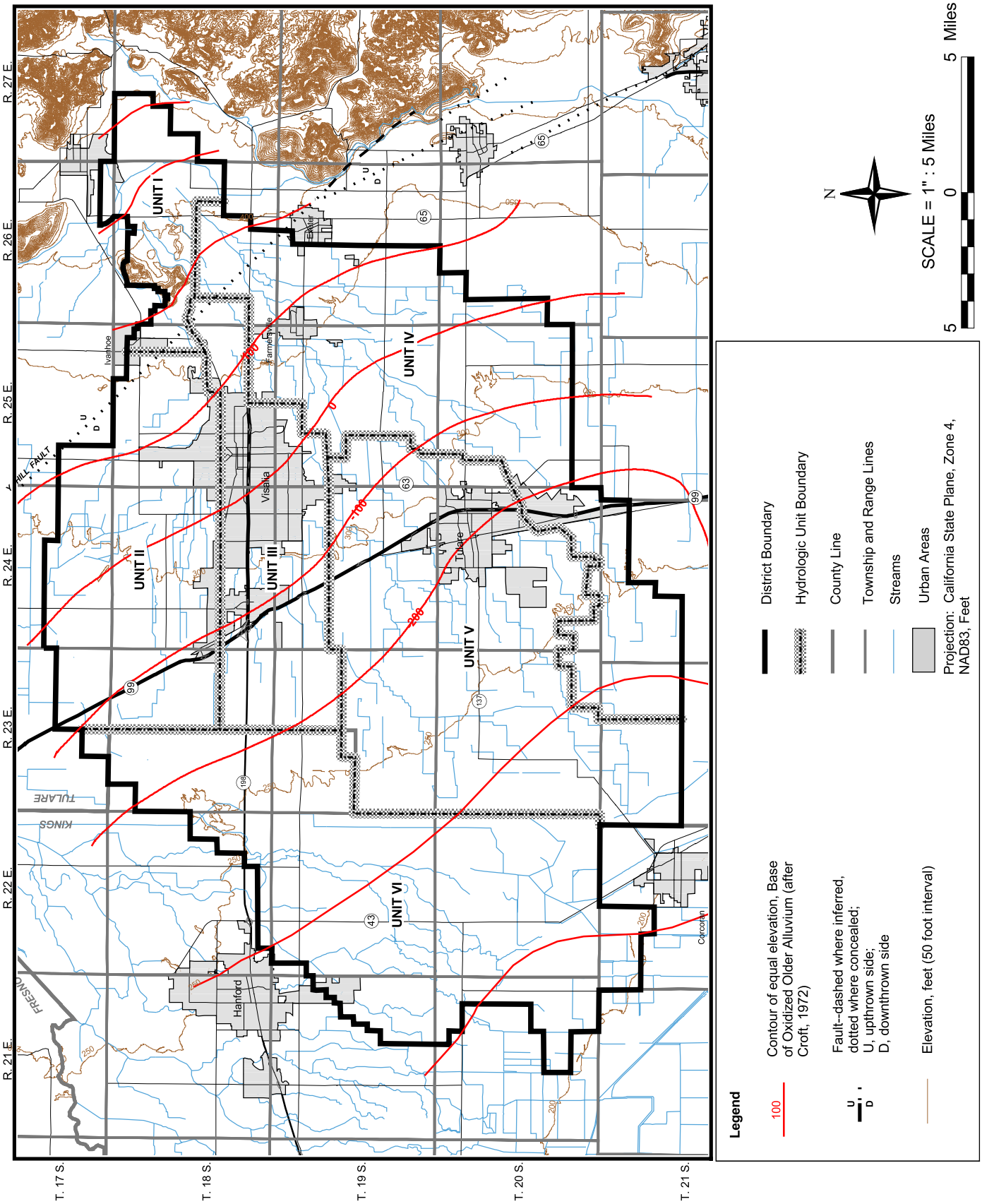
Kaweah Delta Water Conservation District



STRUCTURAL CONTOURS OF E (CORCORAN) CLAY MEMBER OF TULARE FORMATION

Kaweah Delta Water Conservation District

PLATE 21



BASE OF OXIDIZED OLDER ALLUVIUM CONTOUR MAP

Kaweah Delta Water Conservation District

PLATE 22

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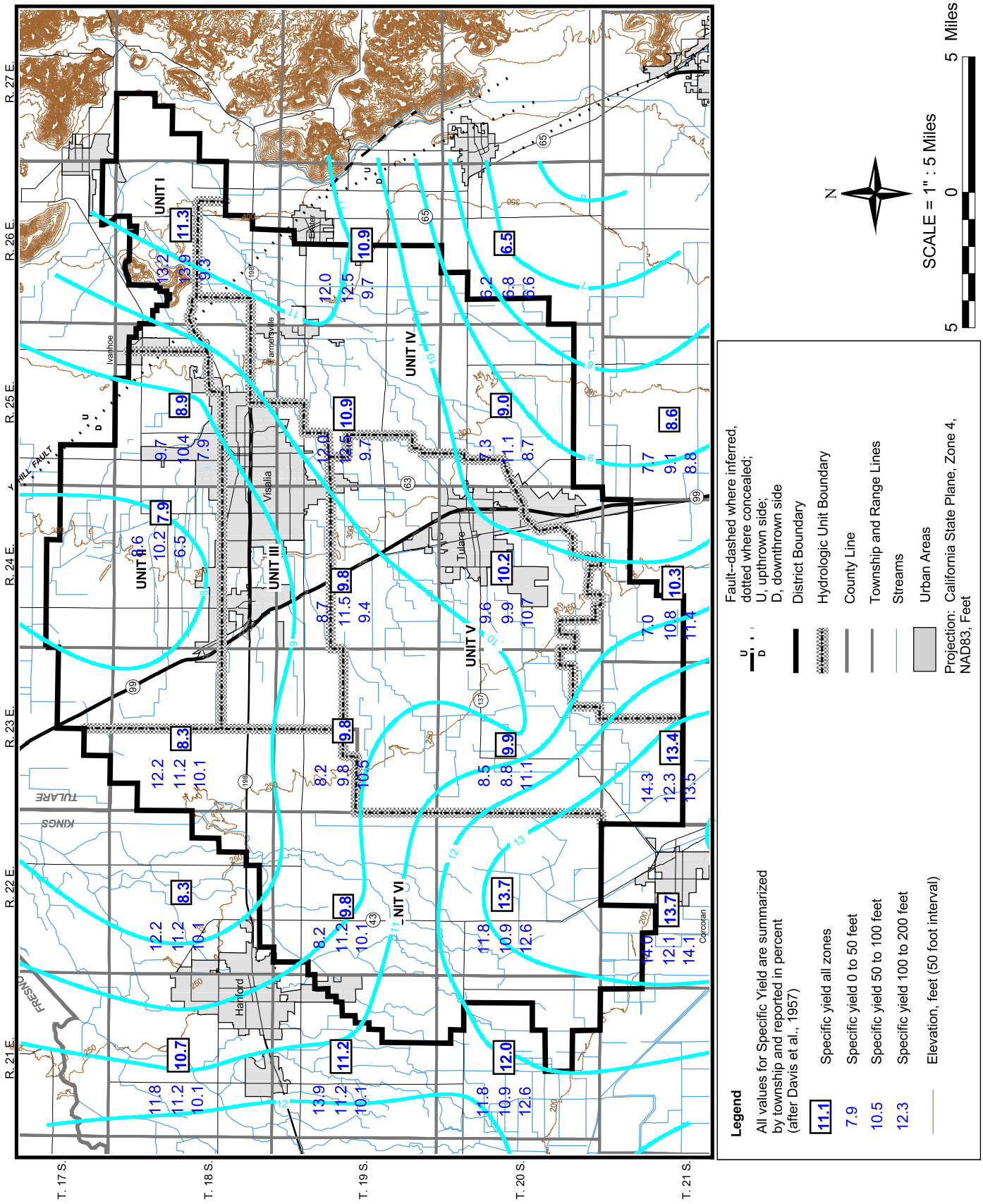
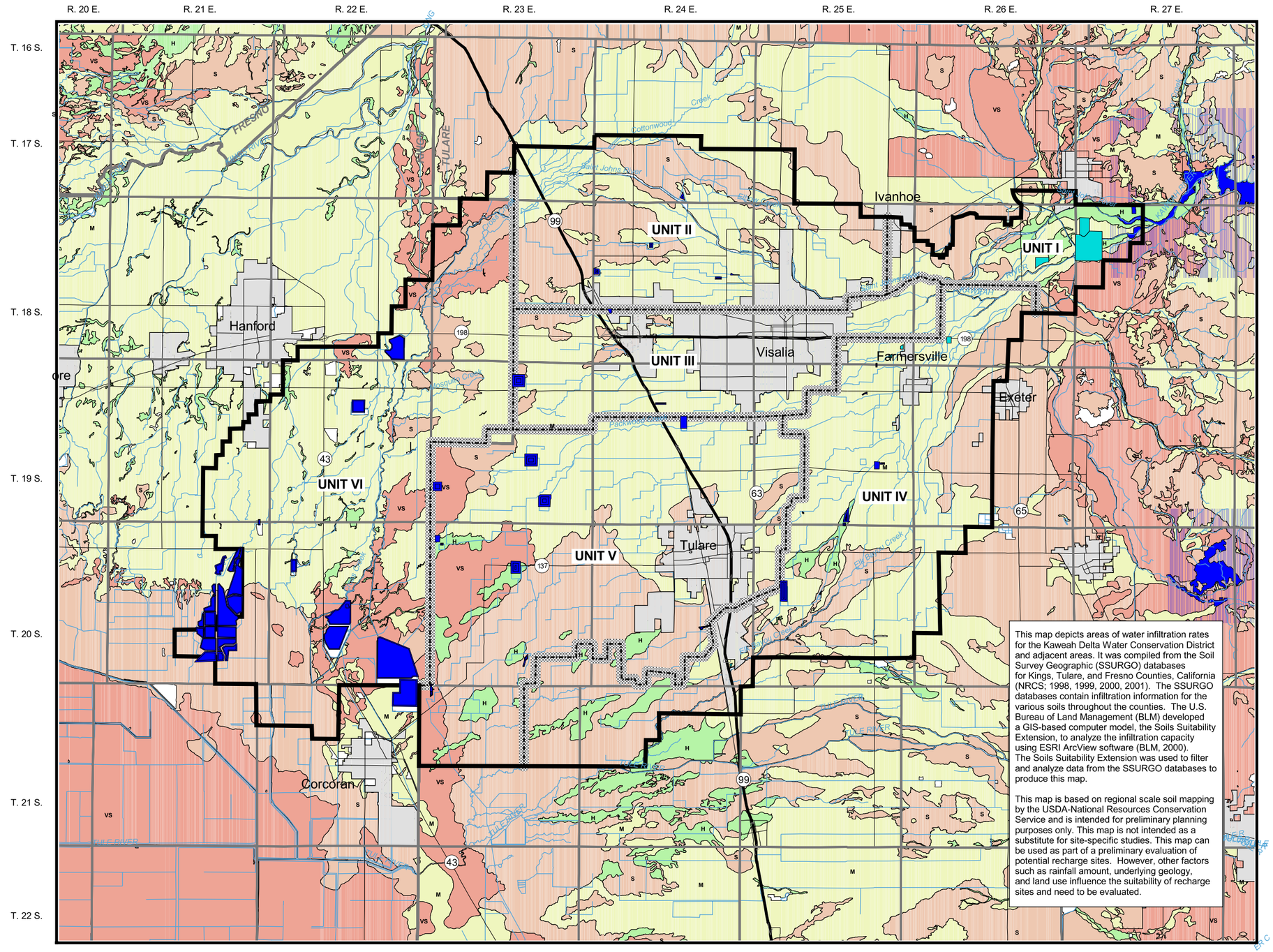


CONTOURS OF EQUAL SPECIFIC YIELD

Kaweah Delta Water Conservation District

I:\kaweah\gis\mapodb\task-7\contours_of_equal_sy.odb, task-7, 01/31/2003



This map depicts areas of water infiltration rates for the Kaweah Delta Water Conservation District and adjacent areas. It was compiled from the Soil Survey Geographic (SSURGO) databases for Kings, Tulare, and Fresno Counties, California (NRCS; 1998, 1999, 2000, 2001). The SSURGO databases contain infiltration information for the various soils throughout the counties. The U.S. Bureau of Land Management (BLM) developed a GIS-based computer model, the Soils Suitability Extension, to analyze the infiltration capacity using ESRI ArcView software (BLM, 2000). The Soils Suitability Extension was used to filter and analyze data from the SSURGO databases to produce this map.

This map is based on regional scale soil mapping by the USDA-National Resources Conservation Service and is intended for preliminary planning purposes only. This map is not intended as a substitute for site-specific studies. This map can be used as part of a preliminary evaluation of potential recharge sites. However, other factors such as rainfall amount, underlying geology, and land use influence the suitability of recharge sites and need to be evaluated.

Legend

- District Boundary
- Hydrologic Unit Boundary
- County Line
- Township and Range Lines
- Streams
- Existing Recharge Basins
- Proposed Recharge Basins
- Urban Areas

Projection: California State Plane, Zone 4, NAD83, Feet

H	High infiltration--NRCS Class A (low runoff potential). Soils with a high infiltration rate, even when thoroughly wetted. Chiefly consist of deep, well-drained to excessively drained sands or gravels. High rate of water transmission.
M	Moderate infiltration--NRCS Class B. Soils with a moderate infiltration rate when thoroughly wetted. Chiefly are moderately deep to deep, moderatelywell-drained to well-drained soils with moderately fine to moderately coarse textures. Moderate rate of water transmission.
S	Slow infiltration--NRCS Class C. Soils with a slow infiltration rate when thoroughly wetted. Chiefly have a layer that impedes downward movement of water or have a moderately fine to fine texture. Slow rate of water transmission
SW	Slow infiltration (wet soils)--NRCS Class C/D. Wet soils with a slow infiltration rate. Chiefly have a layer that impedes downward movementof water or have a moderately fine to fine texture
VS	Very slow infiltration--NRCS Class D (high runoff potential). Soils with a very slow infiltration rate when thoroughly wetted. Chiefly consist of clay soilsthat have a high swelling potential, soils that have a high permanent water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious materials. Very slow rate of water transmission.
ND	No data-- Soil polygons for which no hydrologic group was assigned in the SSURGO digital database.

N

SCALE = 1:250,000

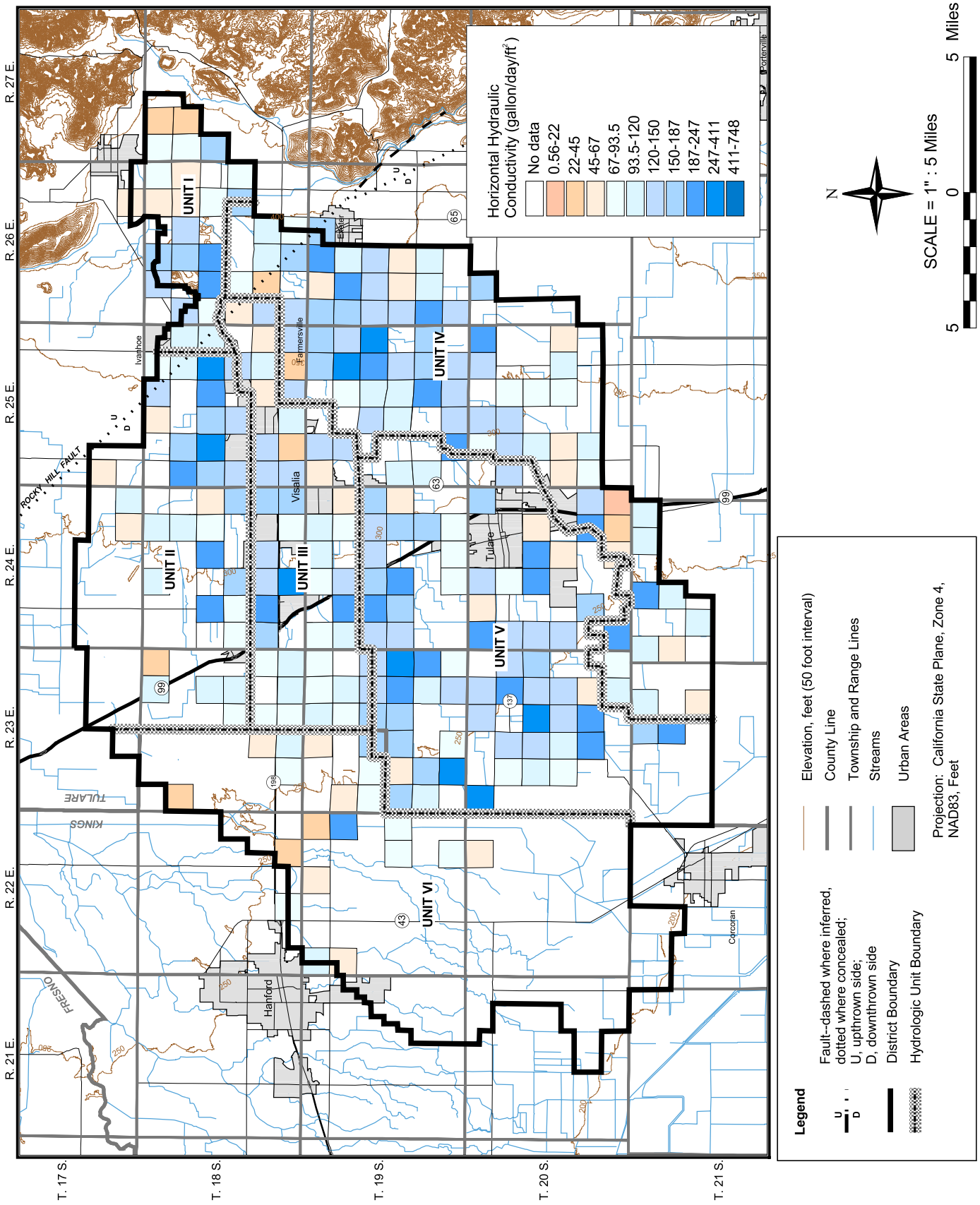
4 0 4 Miles

Kaweah Delta Water Conservation District

Soil Infiltration

PLATE 24

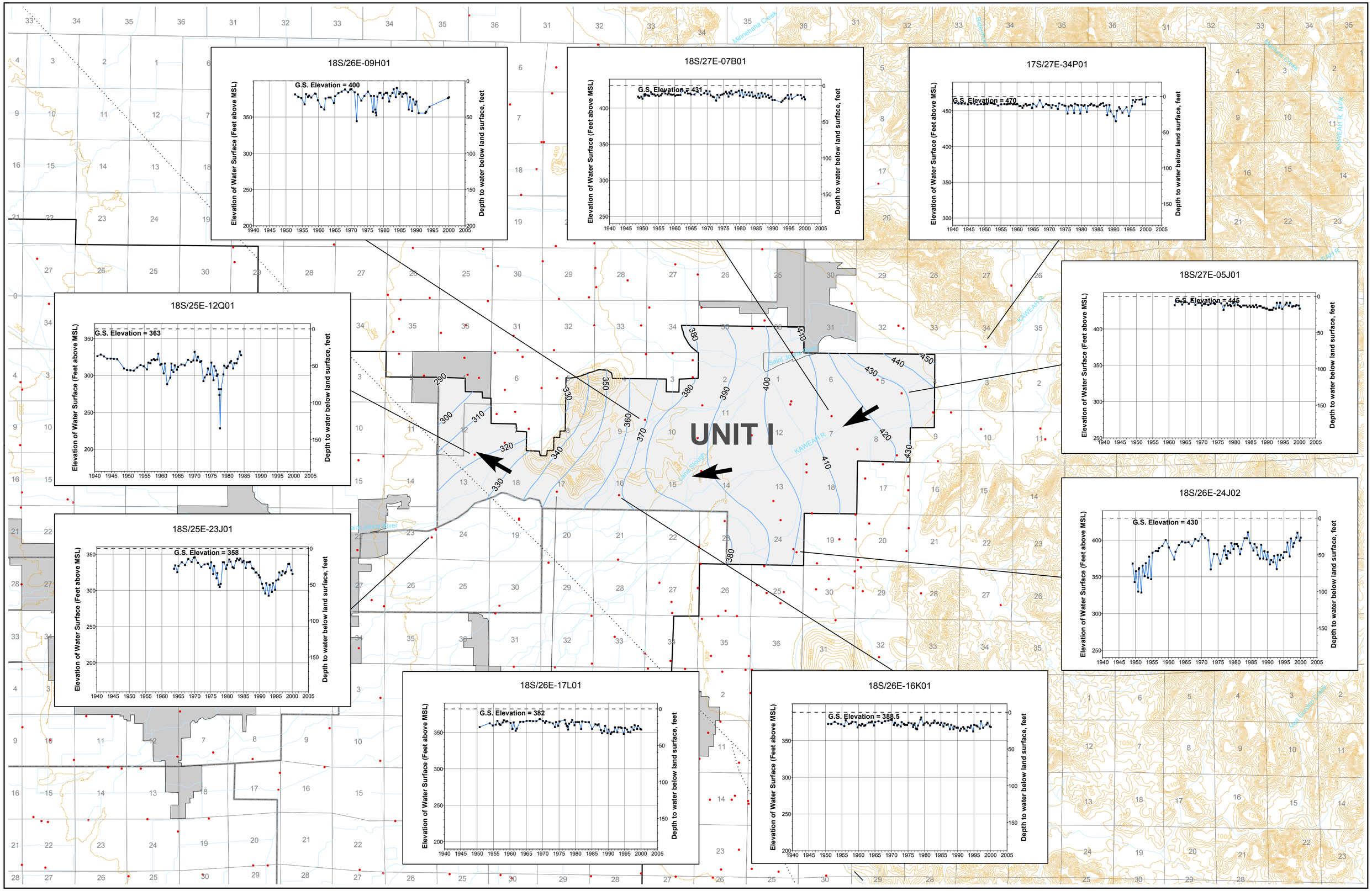
I:\kaweah\gis\mapodb\task-7\soil_infiltration.odb, task-7, 02/05/2003

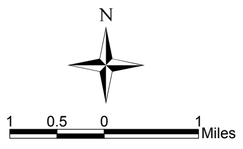


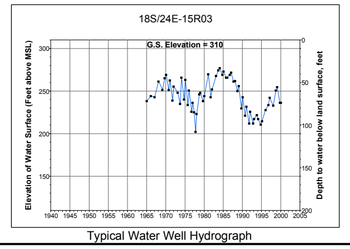
MAP OF HORIZONTAL HYDRAULIC CONDUCTIVITY (gallon/day/ft²)

Kaweah Delta Water Conservation District

I:\kaweah\gis\mapodb\task-7\horizontal_hydraulic_conductivity_8.5x11.odb, task-7, 01/31/2003



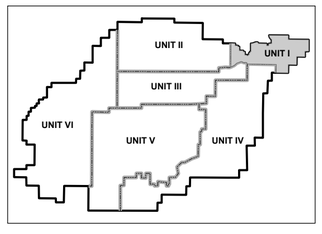




Typical Water Well Hydrograph

Legend

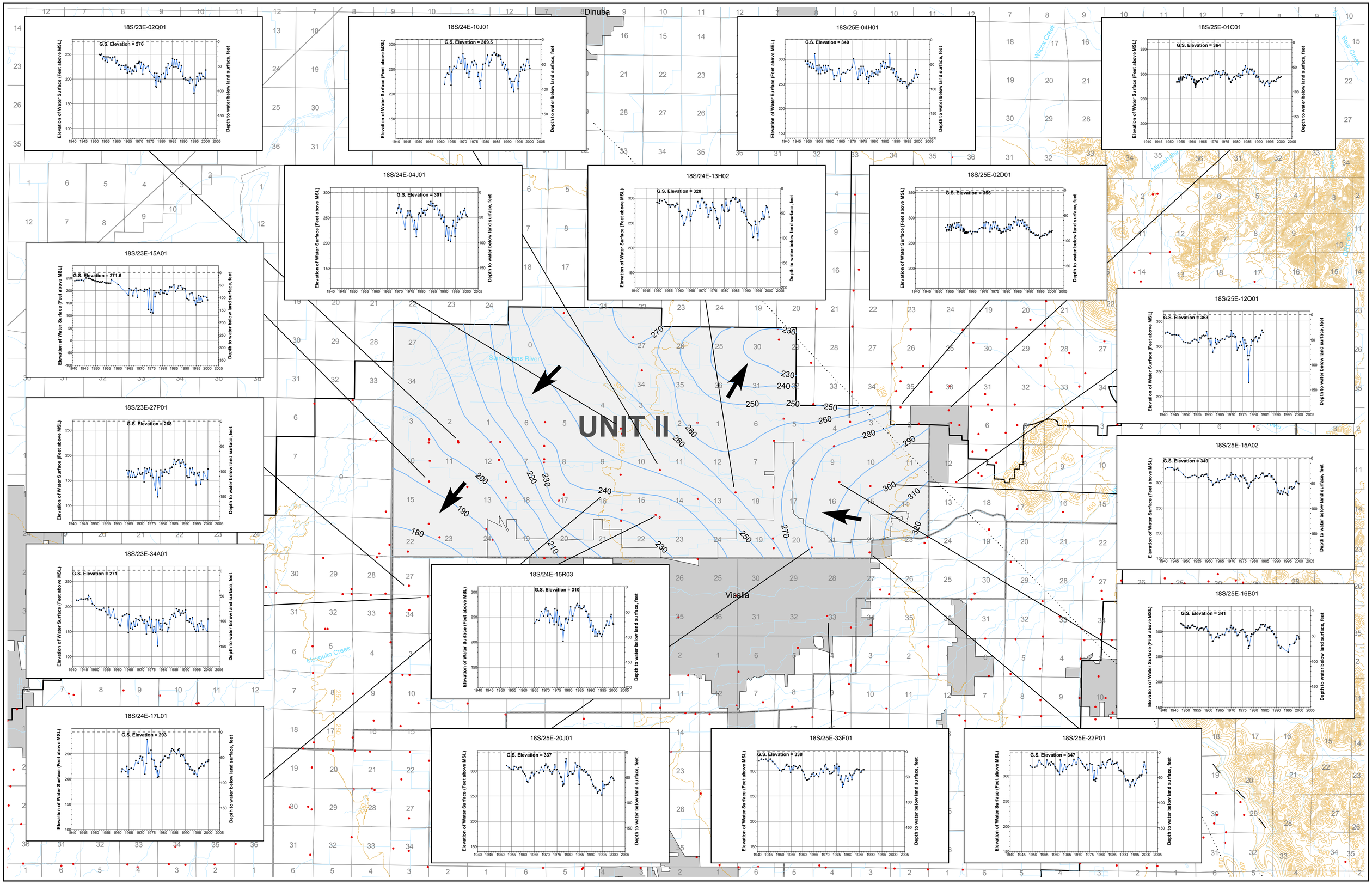
- Well Location Used in Contouring Elevations
- Streams and Canals
- Groundwater Elevation Contour, Spring 2000 (10 foot interval)
- Elevation Contour (50 foot interval)
- Kaweah Delta Water Conservation District Outline
- Hydrologic Unit Boundaries
- Faults-Dashed Where Inferred, Dotted Where Concealed
- Urban Areas
- Section Lines
- Direction of Groundwater Flow



HYDROGRAPHS FOR SELECTED WELLS, HYDROLOGIC UNIT I

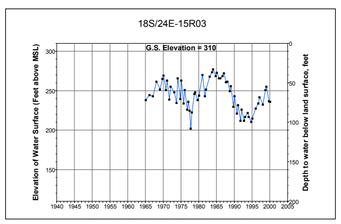
Kaweah Delta Water Conservation Distrtict

PLATE 26



N

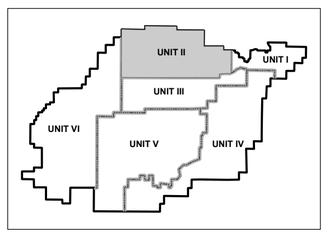
1 0.5 0 1 Miles



Typical Water Well Hydrograph

Legend

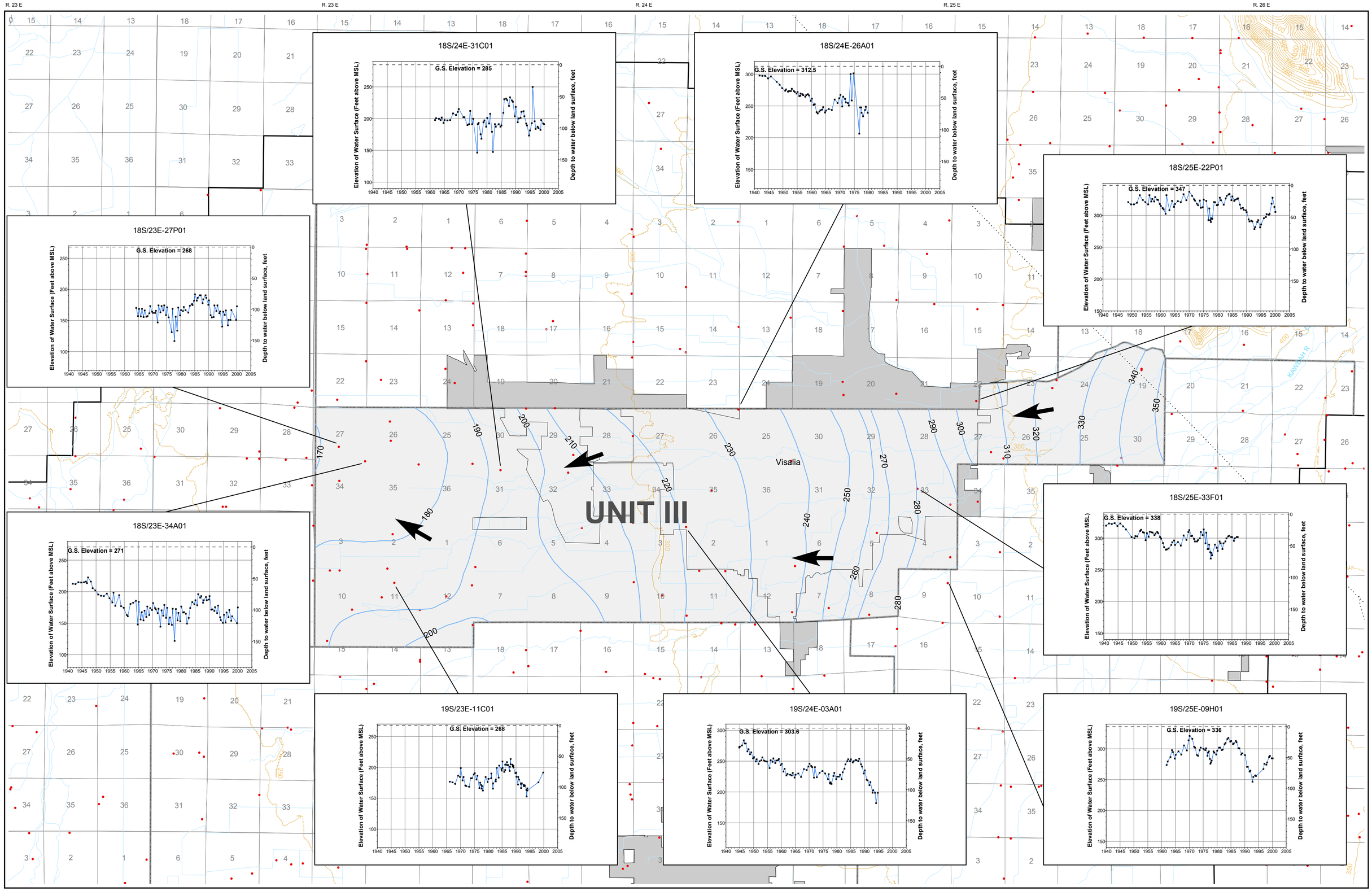
- Well Location Used in Contouring Elevations
- Streams and Canals
- Groundwater Elevation Contour, Spring 2000 (10 foot interval)
- Elevation Contour (50 foot interval)
- Kaweah Delta Water Conservation District Outline
- Hydrologic Unit Boundaries
- Faults-Dashed Where Inferred, Dotted Where Concealed
- Urban Areas
- Section Lines
- Direction of Groundwater Flow

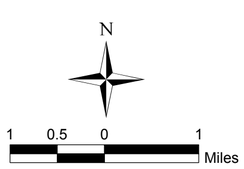


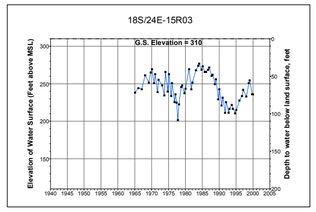
HYDROGRAPHS FOR SELECTED WELLS, HYDROLOGIC UNIT II

Kaweah Delta Water Conservation Distrtict

PLATE 27



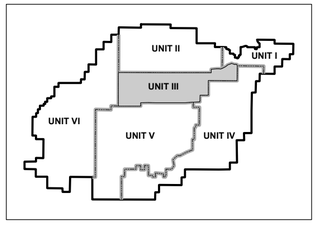




Typical Water Well Hydrograph

Legend

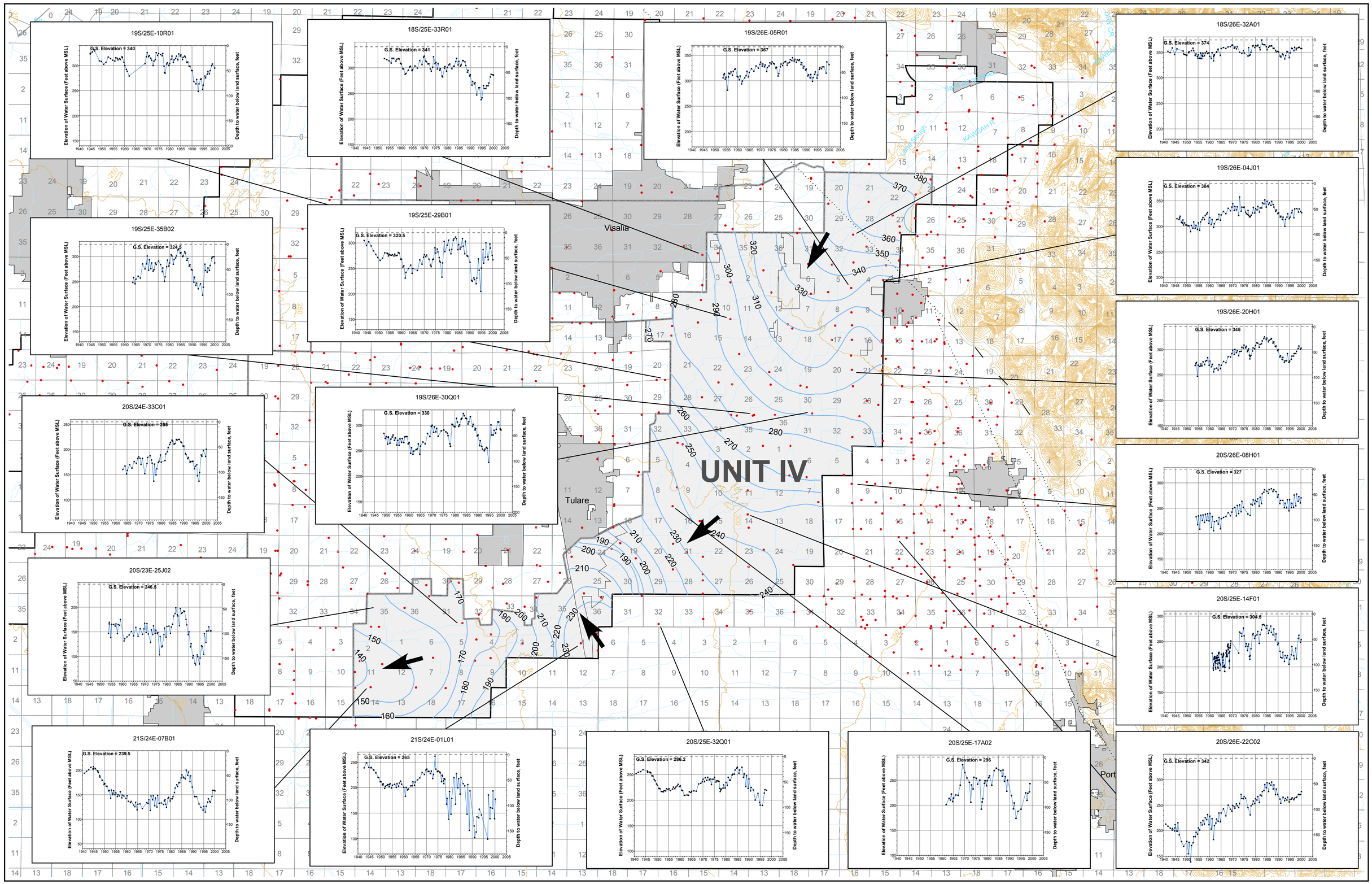
- Well Location Used in Contouring Elevations
- Streams and Canals
- Groundwater Elevation Contour, Spring 2000 (10 foot interval)
- Elevation Contour (50 foot interval)
- Kaweah Delta Water Conservation District Outline
- Hydrologic Unit Boundaries
- Faults-Dashed Where Inferred, Dotted Where Concealed
- Urban Areas
- Section Lines
- Direction of Groundwater Flow



HYDROGRAPHS FOR SELECTED WELLS, HYDROLOGIC UNIT III

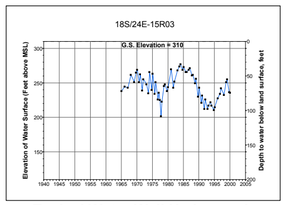
Kaweah Delta Water Conservation Distrtict

PLATE 28



N

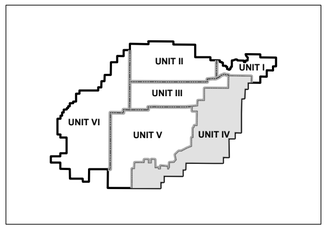
2 1 0 2 Miles



Typical Water Well Hydrograph

Legend

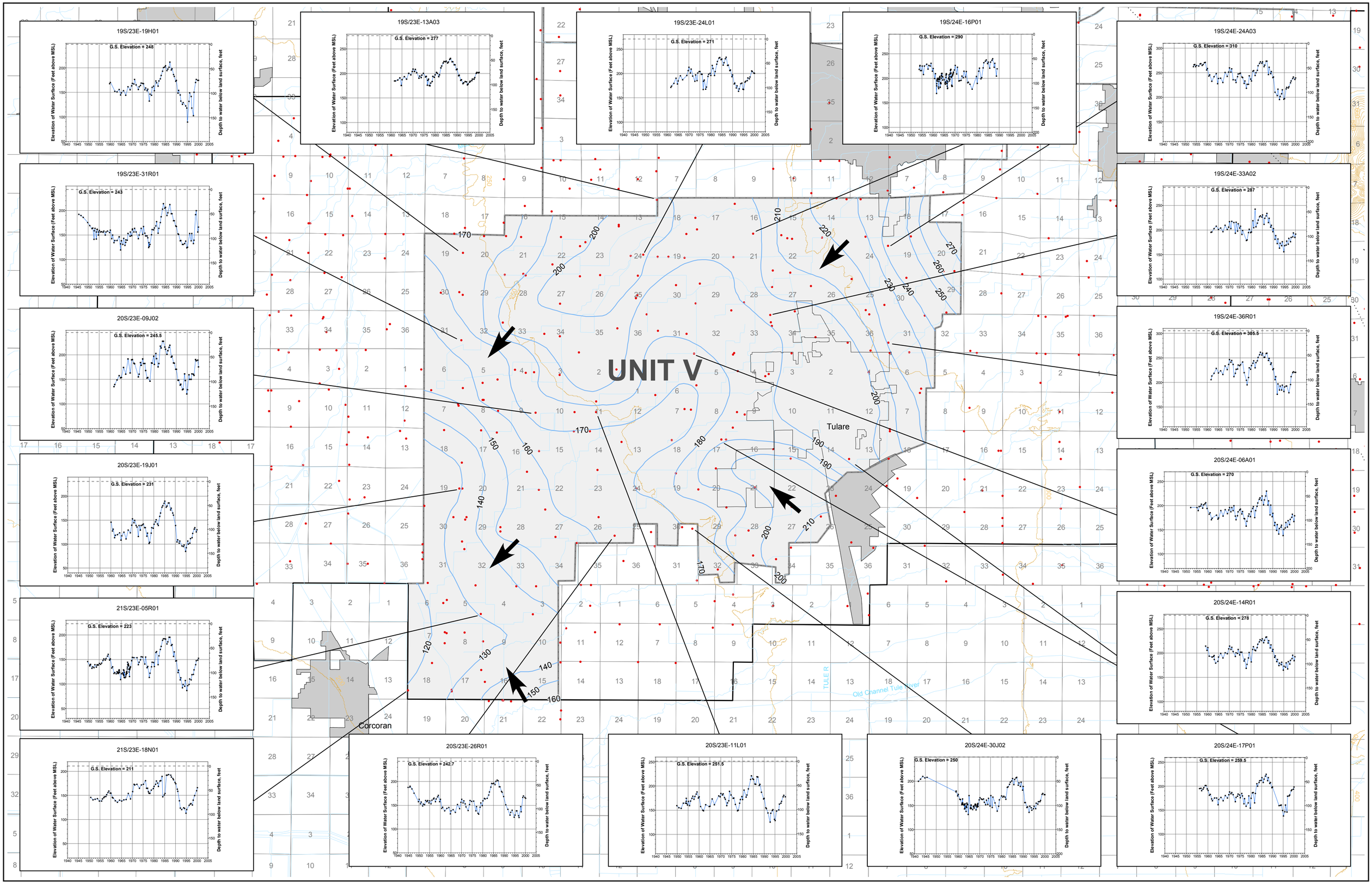
- Well Location Used in Contouring Elevations
- Streams and Canals
- Groundwater Elevation Contour, Spring 2000 (10 foot interval)
- Elevation Contour (50 foot interval)
- Kaweah Delta Water Conservation District Outline
- Hydrologic Unit Boundaries
- Faults-Dashed Where Inferred, Dotted Where Concealed
- Urban Areas
- Section Lines
- Direction of Groundwater Flow



HYDROGRAPHS FOR SELECTED WELLS, HYDROLOGIC UNIT IV

Kaweah Delta Water Conservation Distrtict

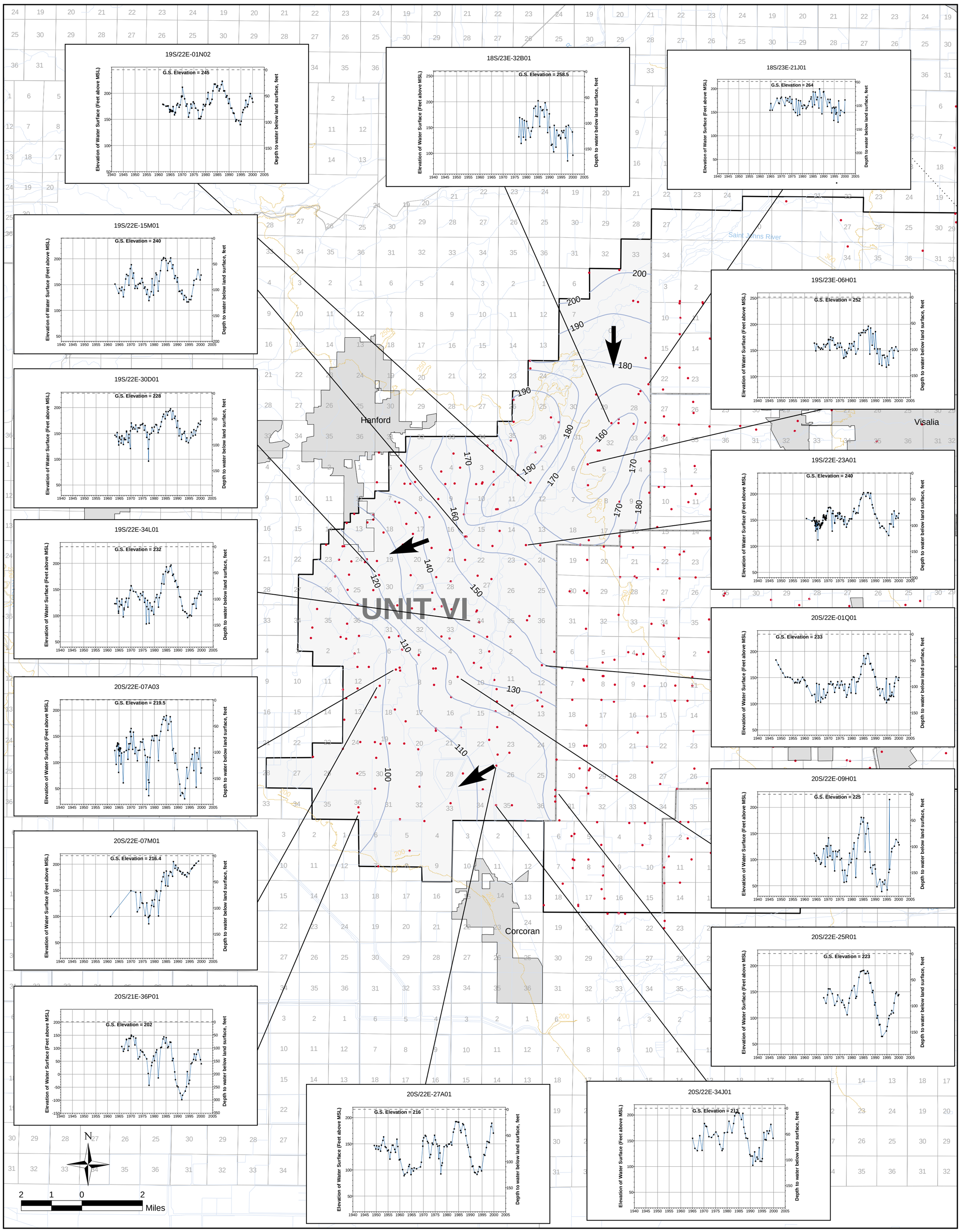
PLATE 29

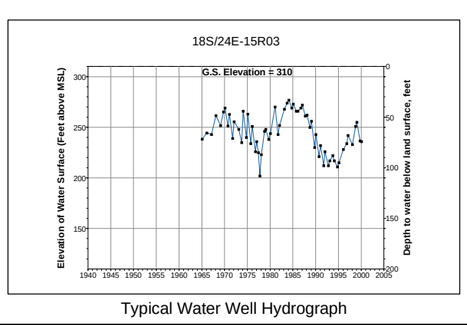


HYDROGRAPHS FOR SELECTED WELLS, HYDROLOGIC UNIT V

Kaweah Delta Water Conservation Distrtict

PLATE 30

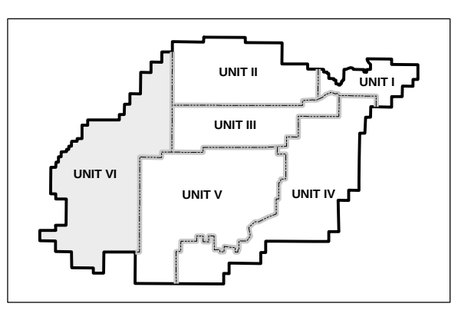




Typical Water Well Hydrograph

Legend

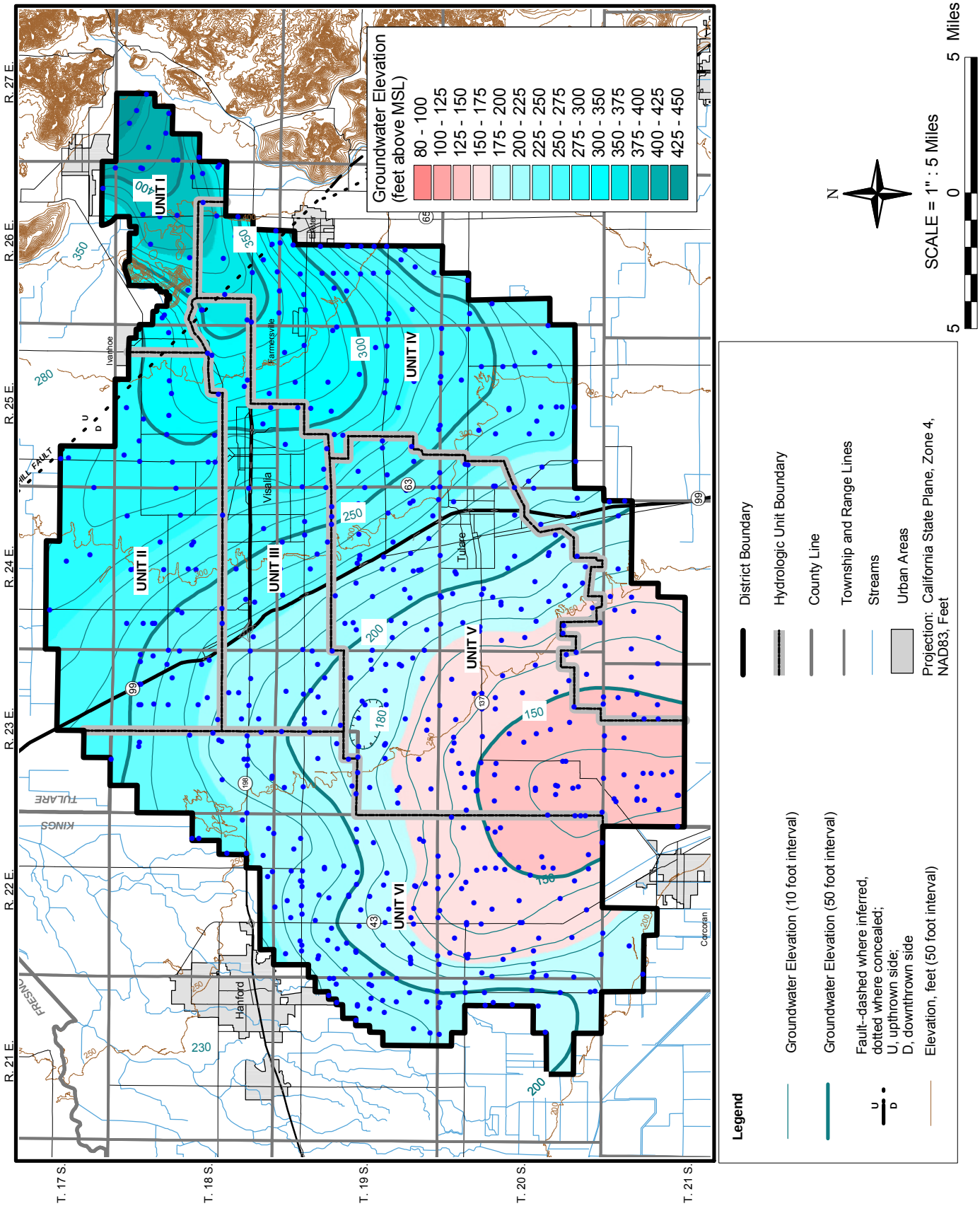
- Well Location Used in Contouring Elevations
- Streams and Canals
- Groundwater Elevation Contour, Spring 2000 (10 foot interval)
- Elevation Contour (50 foot interval)
- Kaweah Delta Water Conservation District Outline
- Hydrologic Unit Boundaries
- Faults-Dashed Where Inferred, Dotted Where Concealed
- Urban Areas
- Section Lines
- Direction of Groundwater Flow



HYDROGRAPHS FOR SELECTED WELLS, HYDROLOGIC UNIT VI

Kaweah Delta Water Conservation Distrtict

PLATE 31



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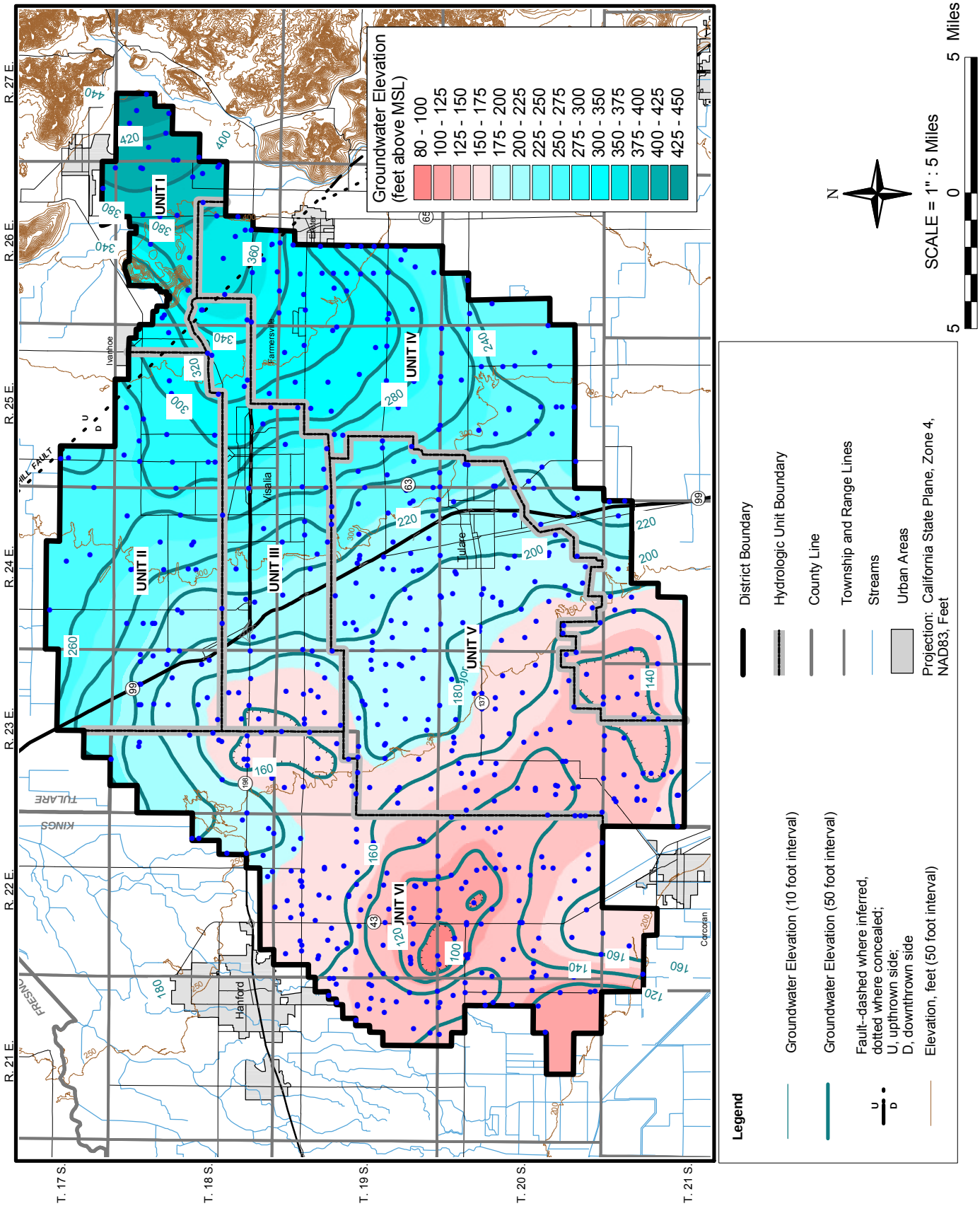
CONTOURS OF EQUAL GROUNDWATER ELEVATION, SPRING 1952

Kaweah Delta Water Conservation District



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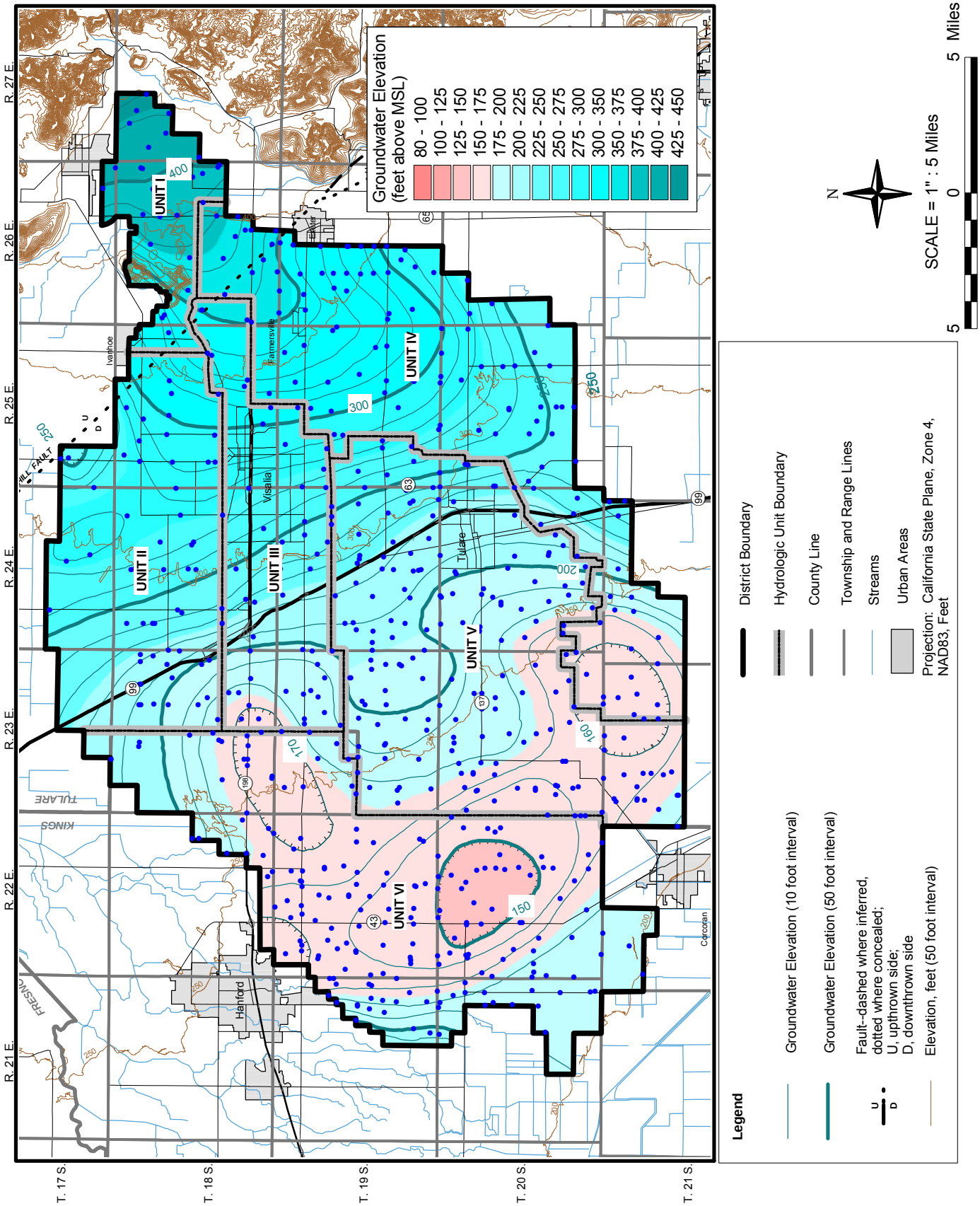
CONTOURS OF EQUAL GROUNDWATER ELEVATION, SPRING 1971

Kaweah Delta Water Conservation District



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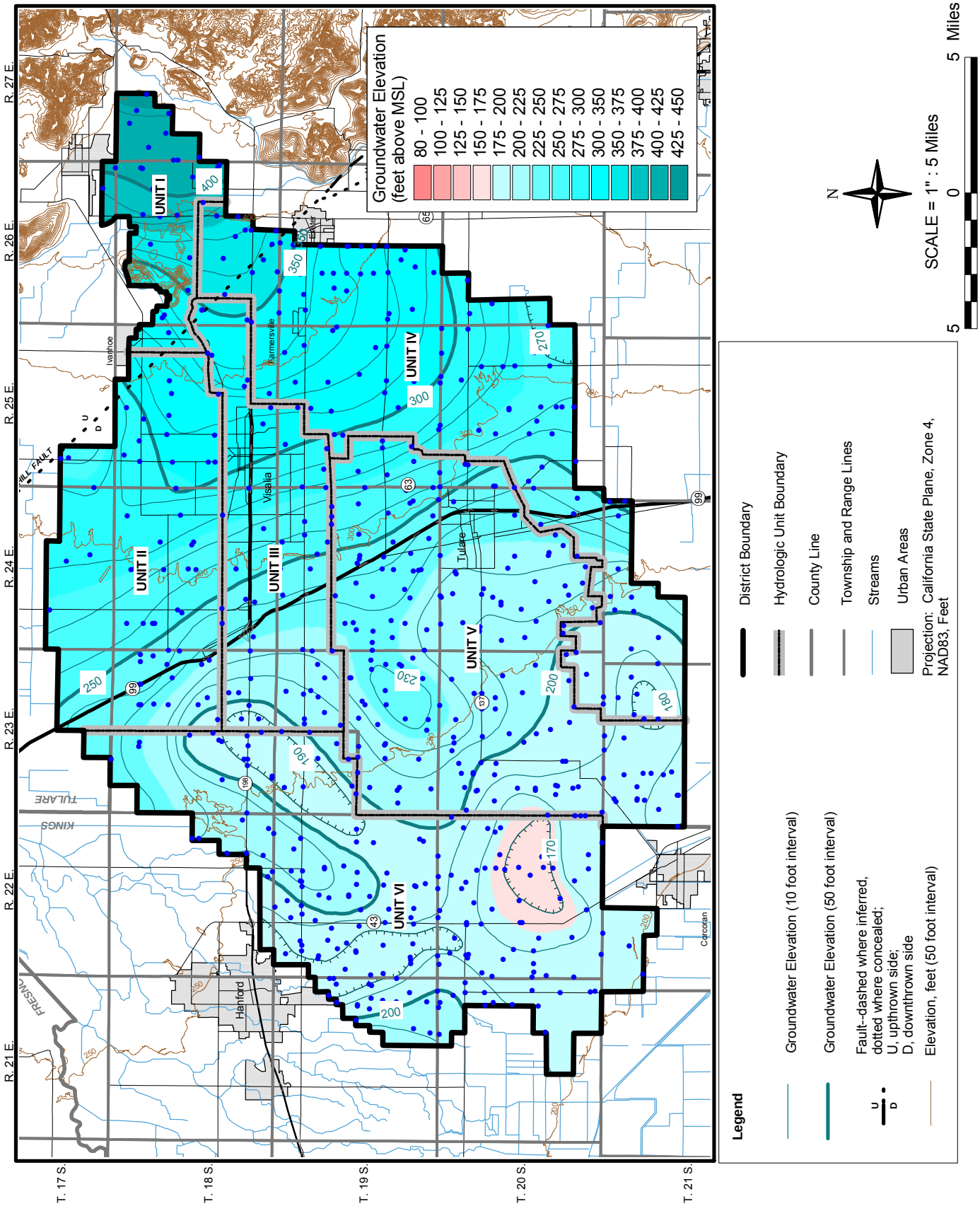
CONTOURS OF EQUAL GROUNDWATER ELEVATION, SPRING 1981

Kaweah Delta Water Conservation District



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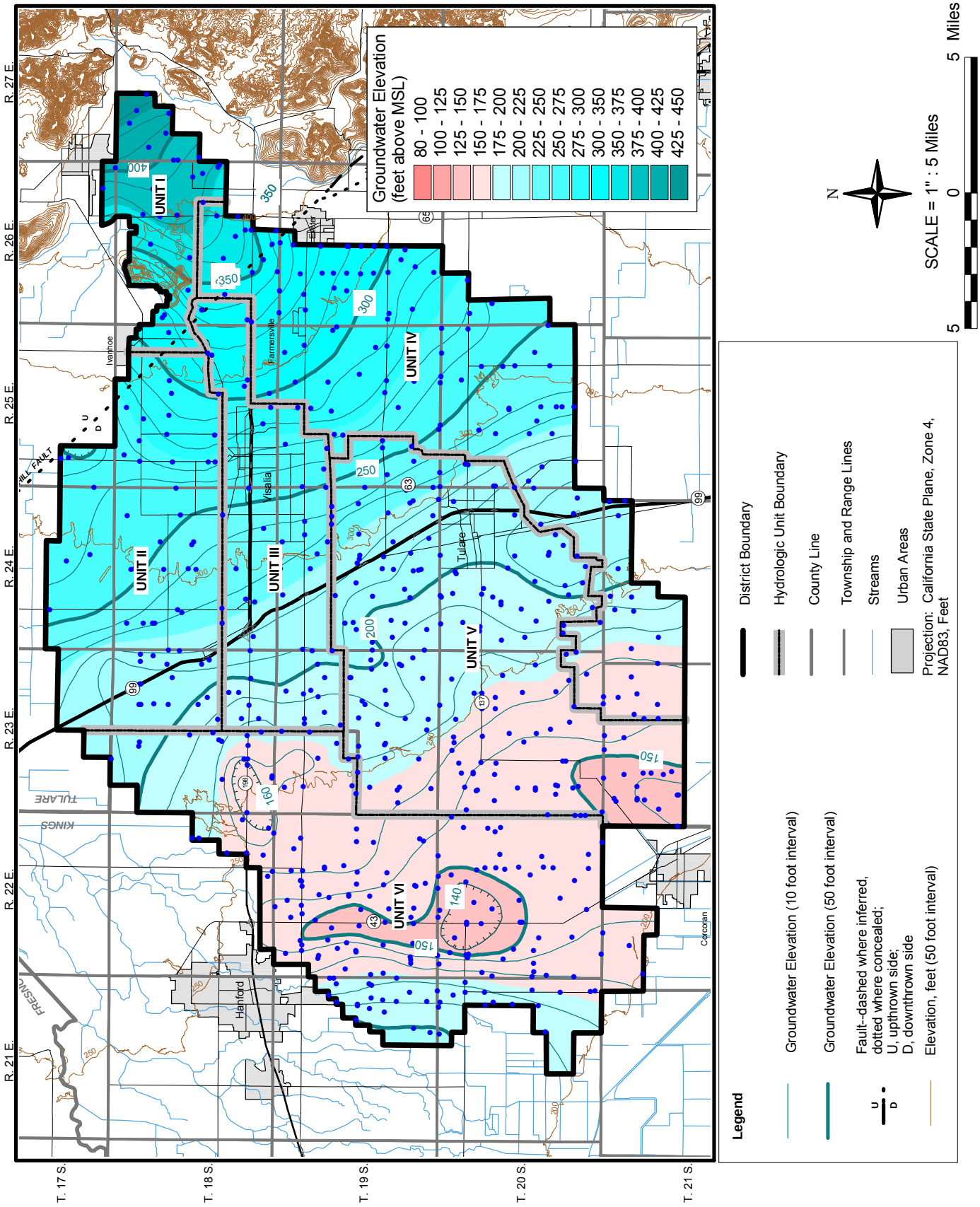
CONTOURS OF EQUAL GROUNDWATER ELEVATION, SPRING 1985

Kaweah Delta Water Conservation District



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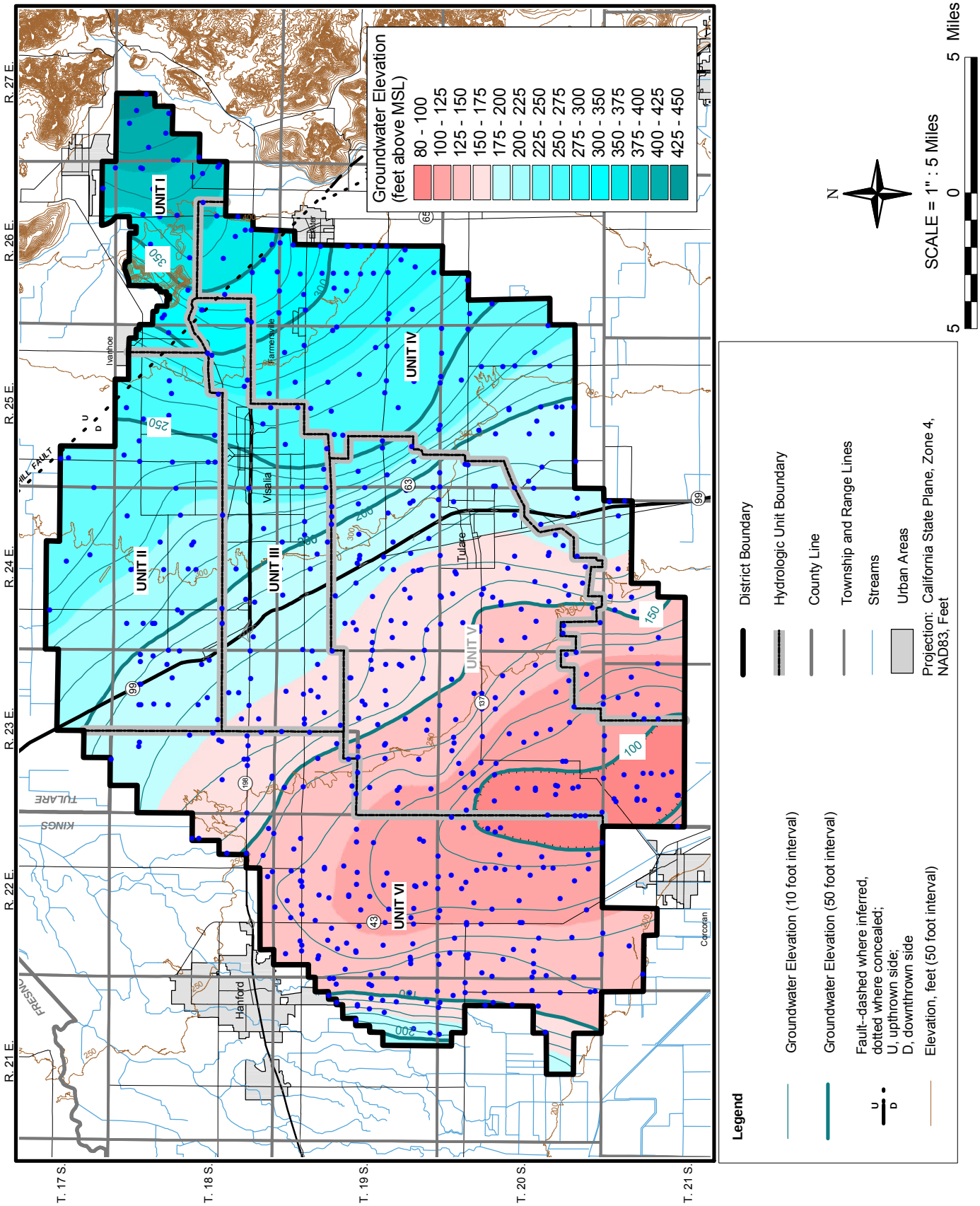
CONTOURS OF EQUAL GROUNDWATER ELEVATION, SPRING 1990

Kaweah Delta Water Conservation District



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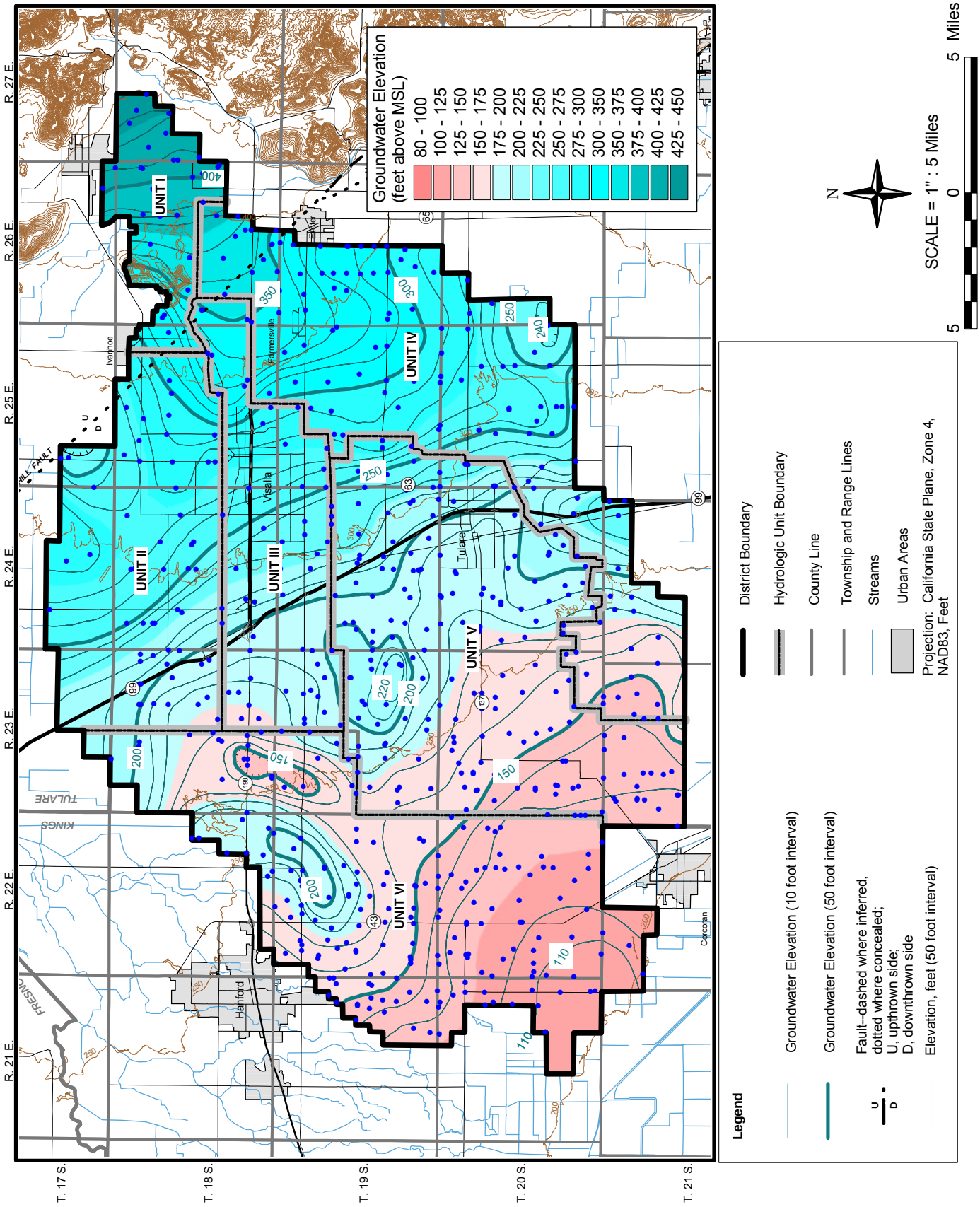
CONTOURS OF EQUAL GROUNDWATER ELEVATION, SPRING 1995

Kaweah Delta Water Conservation District



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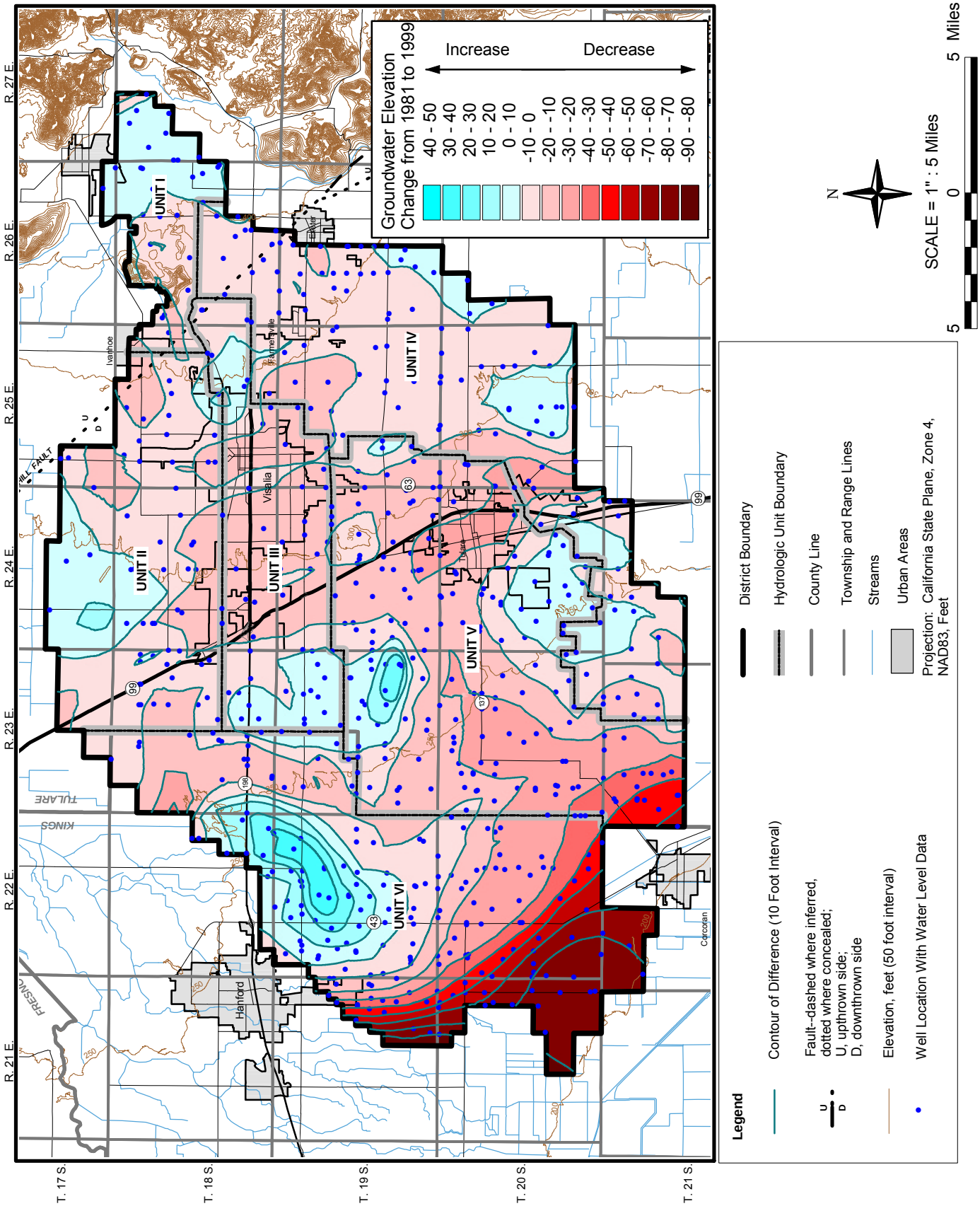
CONTOURS OF EQUAL GROUNDWATER ELVEATION, SPRING 1999

Kaweah Delta Water Conservation District

December 2003 (Revised July 2007)
Project No. 3087.004.07



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CONTOURS OF EQUAL DIFFERENCE IN WATER LEVELS, 1981 TO 1999

Kaweah Delta Water Conservation District

PLATE 39