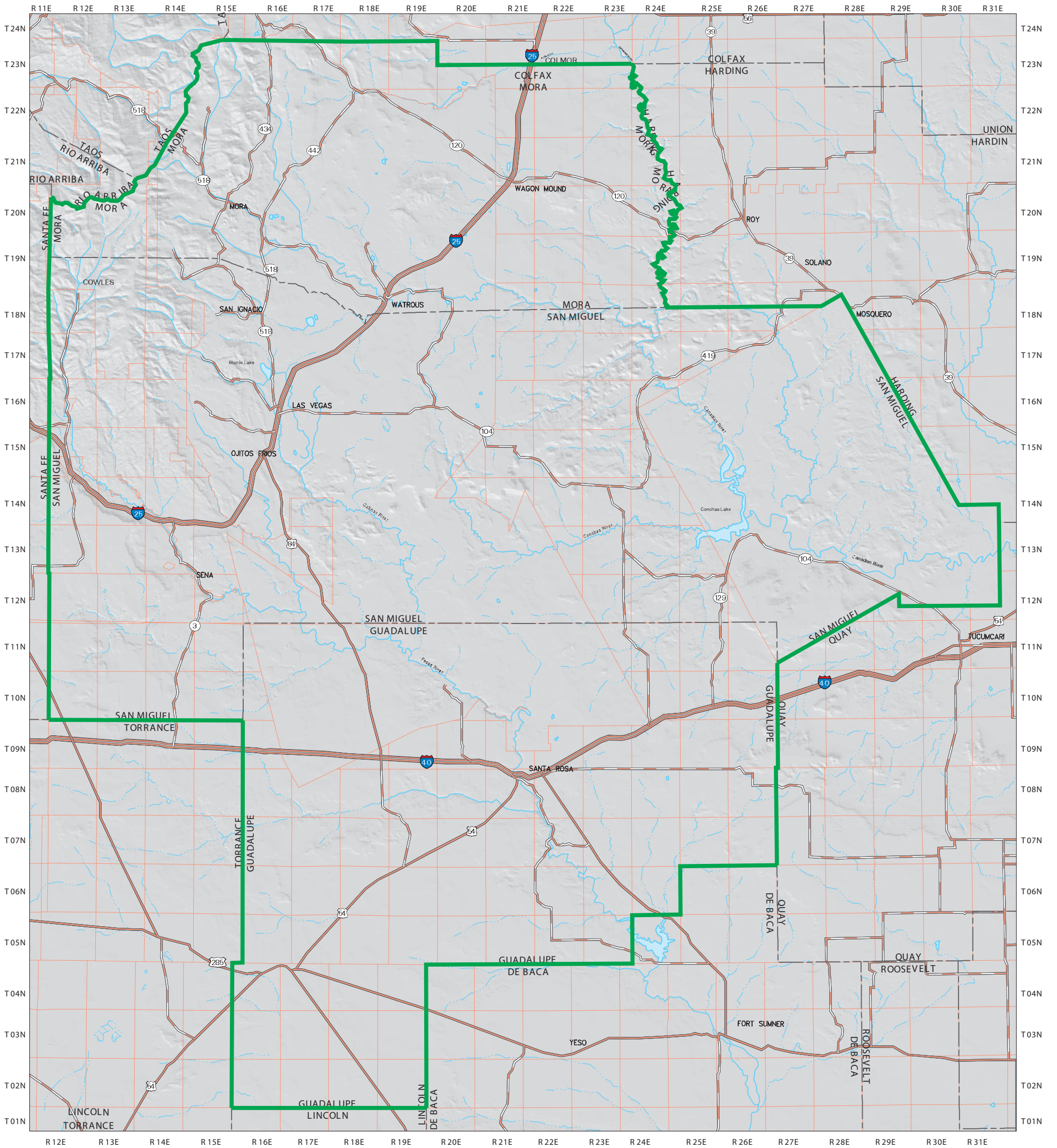


## **Appendix B**

### **WRRI Maps**

# Figure B-1 Mora - San Miguel - Guadalupe Water Plan Planning Region



- |  |                         |  |                 |
|--|-------------------------|--|-----------------|
|  | Explanation             |  | State Highway   |
|  | County Line             |  | Township/Range  |
|  | Perennial Stream/River  |  | Planning Region |
|  | Intermittent Stream     |  |                 |
|  | Perennial Water Body    |  | Interstate      |
|  | Intermittent Water Body |  | U.S. Highway    |

Produced by New Mexico Water Resources Research Institute, June 2004

Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. Shaded relief provided by RGIS and is based on 1:250,000 Digital Elevation Models (DEMs) created by the U.S. Geological Survey.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

SCALE 1: 800 000

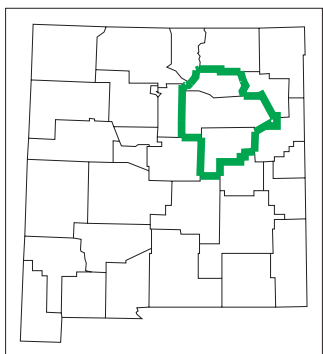
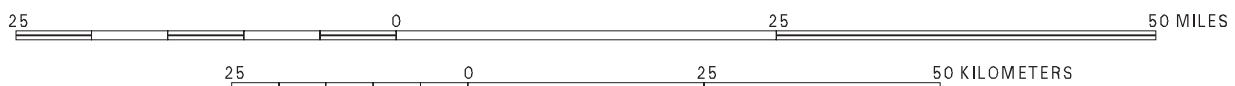
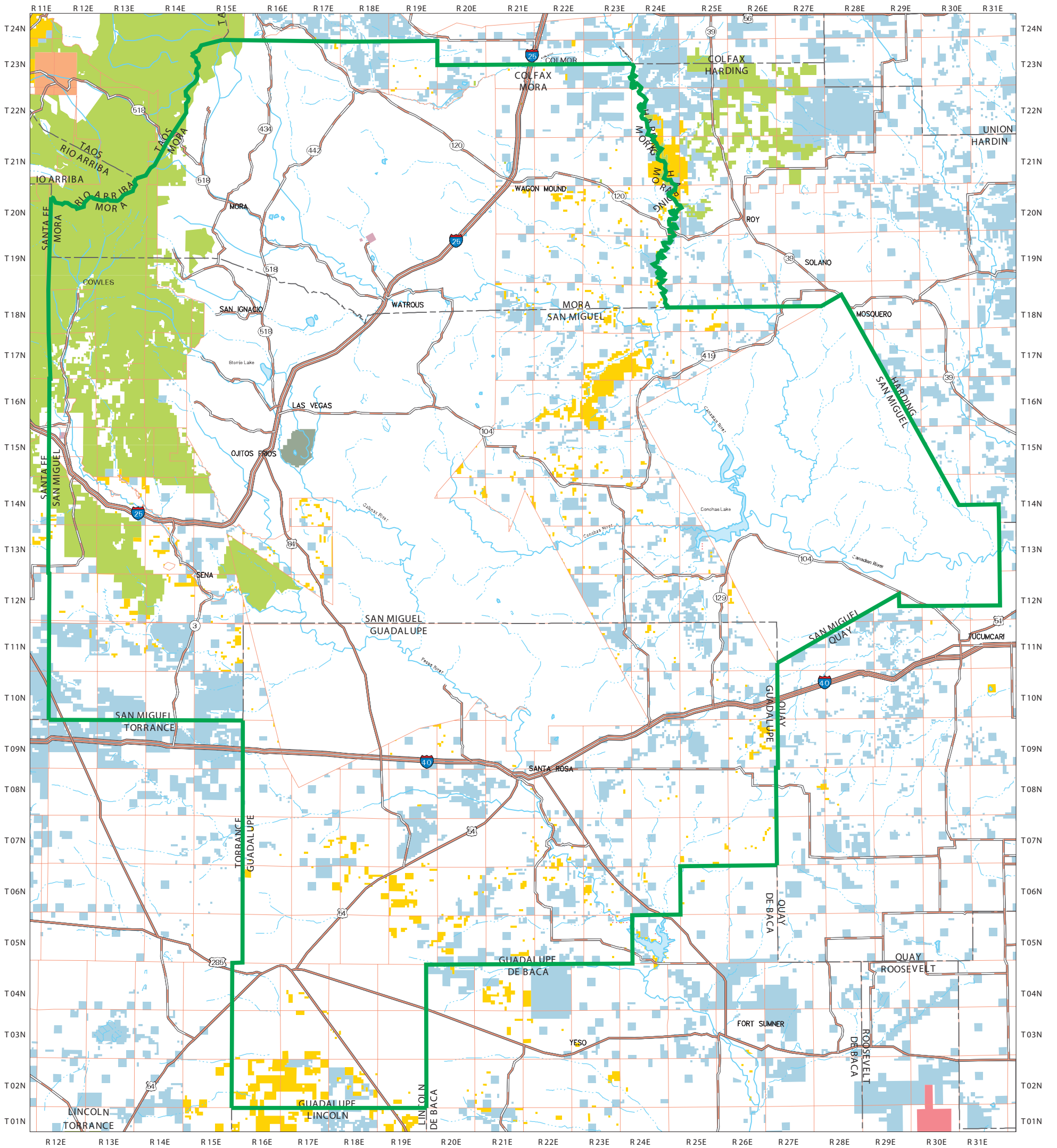




Figure B-2  
**Mora-San Miguel-Guadalupe Water Plan**  
**Land Ownership in the Planning Region**



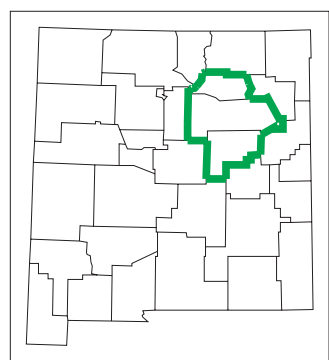
- | Explanation |                         |
|-------------|-------------------------|
|             | Planning Region         |
|             | BLM Public Land         |
|             | Bureau of Reclamation   |
|             | Forest Service          |
|             | US Fish & Wildlife      |
|             | Indian and Tribal Lands |
|             | National Parks Service  |
|             | Dept. of Defense        |
|             | State Land              |
|             | Private                 |
|             | State Line              |
|             | County Line             |
|             | Perennial Stream/River  |
|             | Intermittent Stream     |
|             | Perennial Water Body    |
|             | Intermittent Water Body |
|             | Interstate              |
|             | U.S. Highway            |
|             | State Highway           |
|             | Township/Range          |

Produced by New Mexico Water Resources Research Institute, June 2004  
 Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. Land ownership coverage developed by the BLM at 1:100,000 scale.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.



SCALE 1: 800 000

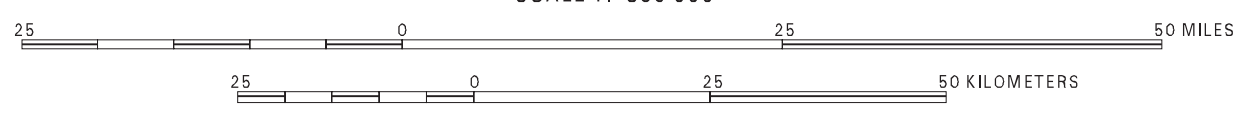
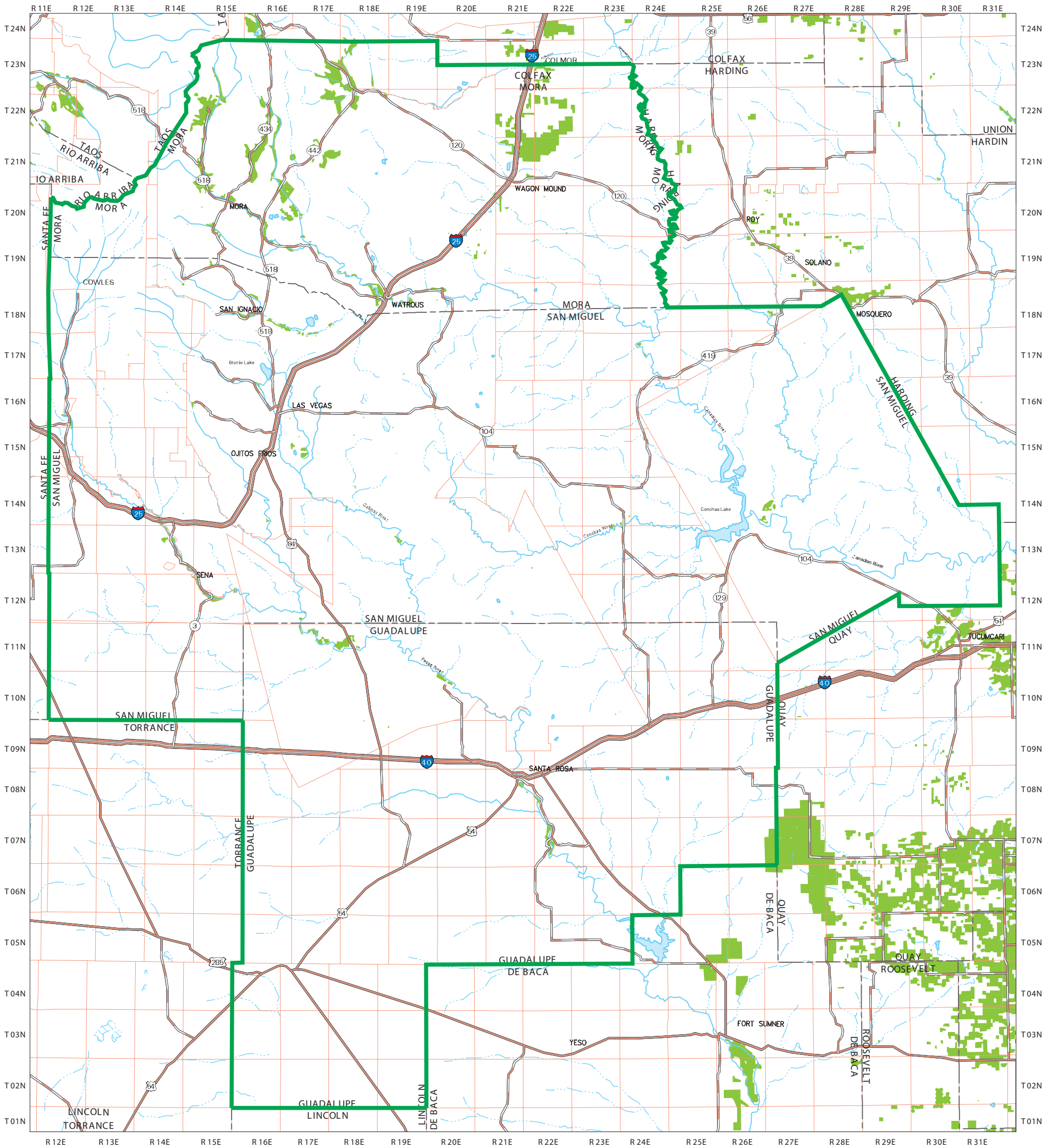


Figure B-3  
**Mora - San Miguel - Guadalupe Water Plan**  
**Agricultural Lands in the Planning Region**



- |  |                         |  |                             |
|--|-------------------------|--|-----------------------------|
|  | Explanation             |  | State Highway               |
|  | County Line             |  | Township/Range              |
|  | Perennial Stream/River  |  | Planning Region             |
|  | Intermittent Stream     |  | Agricultural/Irrigated Land |
|  | Perennial Water Body    |  |                             |
|  | Intermittent Water Body |  |                             |
|  | Interstate              |  |                             |
|  | U.S. Highway            |  |                             |

Produced by New Mexico Water Resources Research Institute, June 2004  
 Base map prepared by the U.S. Geological Survey  
 Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Landuse coverage developed by USGS/EPA at 1:250,000 scale. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS.  
 Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.  
 Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

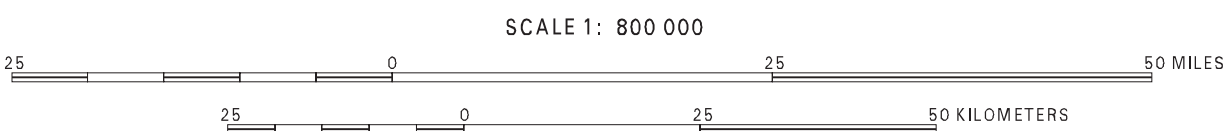
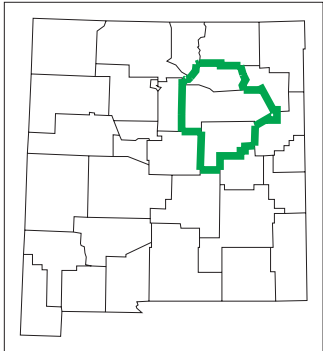
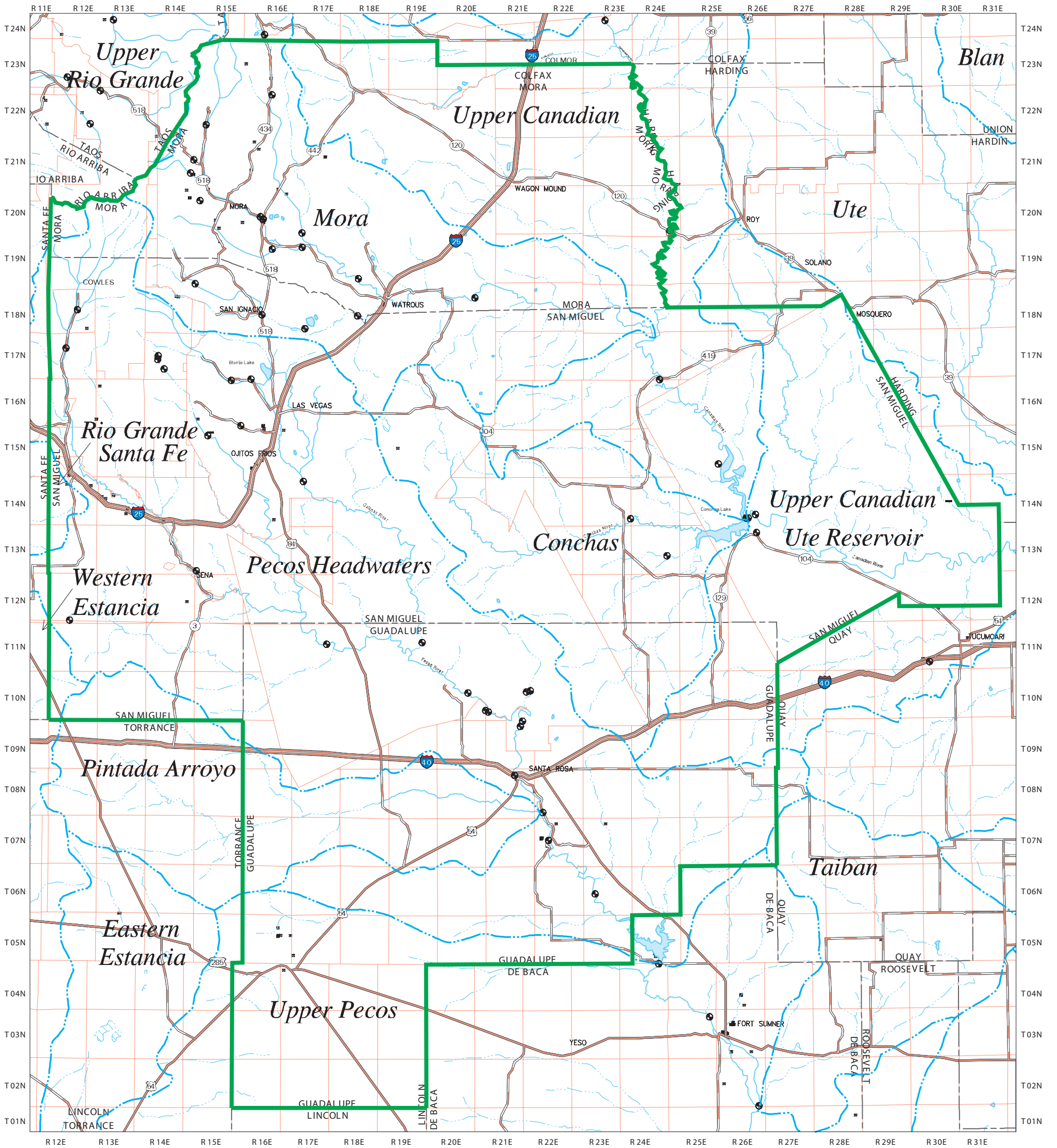




Figure B-4  
**Mora-San Miguel-Guadalupe Water Plan**  
**Water Resources in the Planning Region**



- |                         |                              |
|-------------------------|------------------------------|
| Explanation             | U.S. Highway                 |
| State Line              | State Highway                |
| County Line             | Township/Range               |
| Perennial Stream/River  | Planning Region              |
| Intermittent Stream     | Surface Watershed Boundaries |
| Perennial Water Body    | USGS Gaging Station          |
| Intermittent Water Body | Public Water Supply Well     |
| Interstate              |                              |

Produced by New Mexico Water Resources Research Institute, June 2004  
 Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. Watershed boundaries based on USGS 1:500,000 and 1:100,000 scale maps, data provided by the RGIS program. USGS Gaging stations based on USGS locations. Dam and reservoir locations based on USGS DLG 1:100,000 scale files and RGIS data. Location of municipal/public wells based on Office of the State Engineer records maintained in the W.A.T.E.R.S. database.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.  
 Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

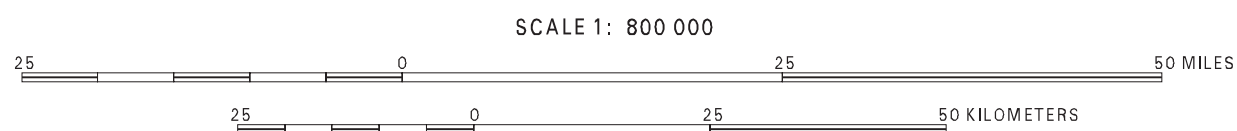
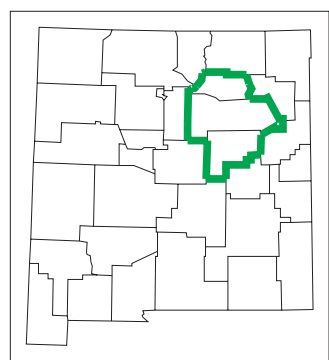
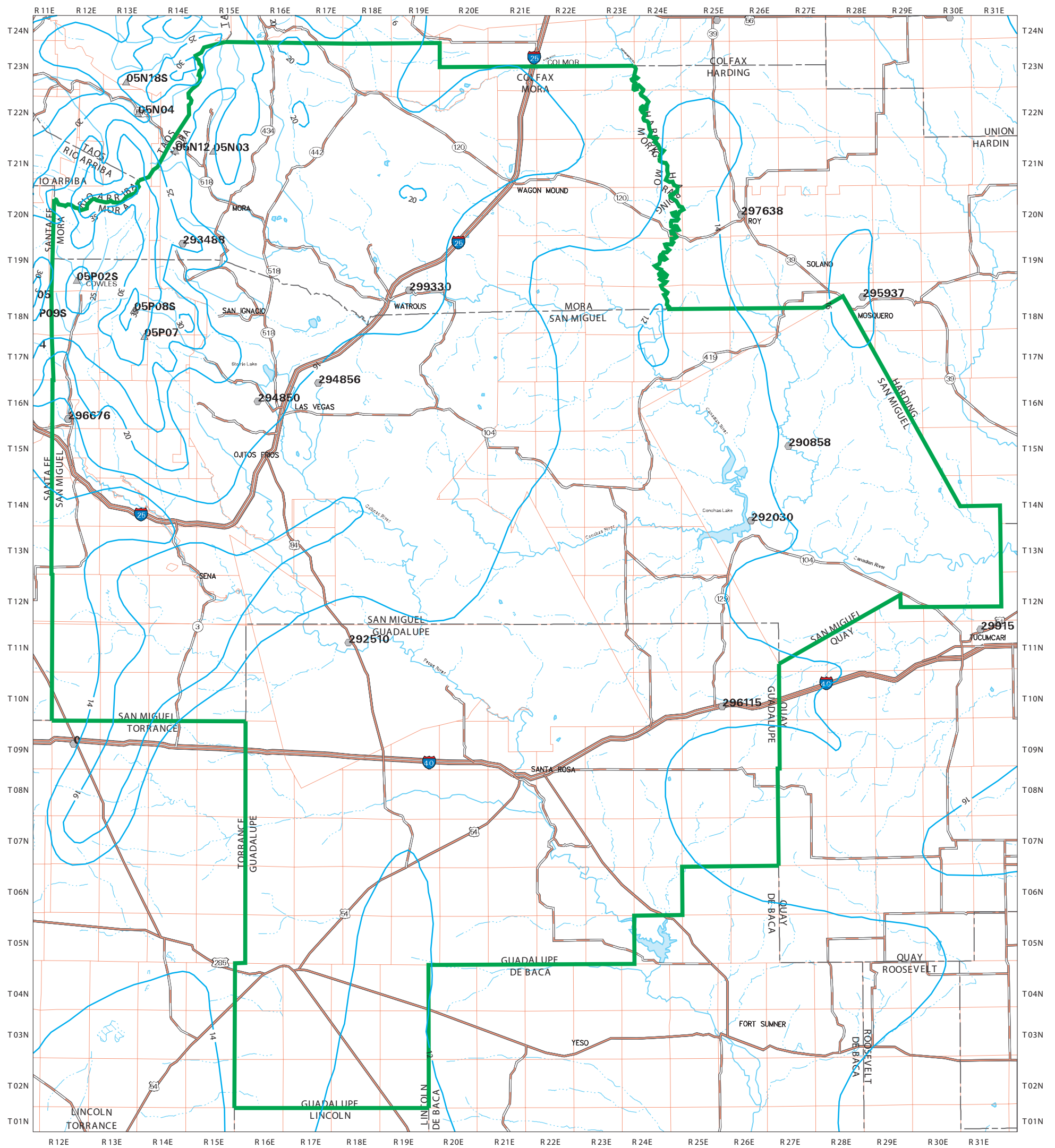
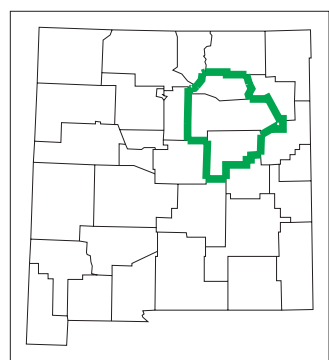


Figure B-5  
**Mora-San Miguel-Guadalupe Water Plan**  
**Annual Average Precipitation in the Planning Region**



- |                         |                                  |
|-------------------------|----------------------------------|
| Explanation             | State Highway                    |
| County Line             | Township/Range                   |
| Perennial Stream/River  | Planning Region                  |
| Intermittent Stream     | Precipitation Isoleths (inches)  |
| Perennial Water Body    | SNOTEL data measuring site       |
| Intermittent Water Body | National Weather Service station |
| Interstate              |                                  |
| U.S. Highway            |                                  |



Produced by New Mexico Water Resources Research Institute, June 2004

Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel-Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. This data set contains the precipitation isopleths of the state of New Mexico. The data set was created to digitally represent the average precipitation of the state of New Mexico between the years of 1931 and 1960. The original source of the data was the National Oceanic and Atmospheric Administration (NOAA). Earth Data Analysis Center manually digitized data from the NOAA 1:500,000 scale map of the state of New Mexico.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

SCALE 1: 800 000

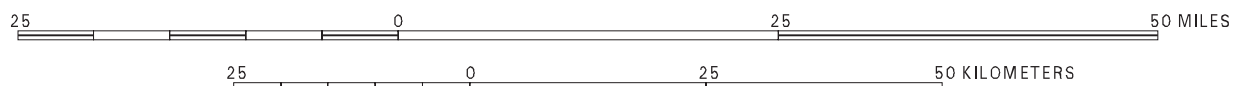
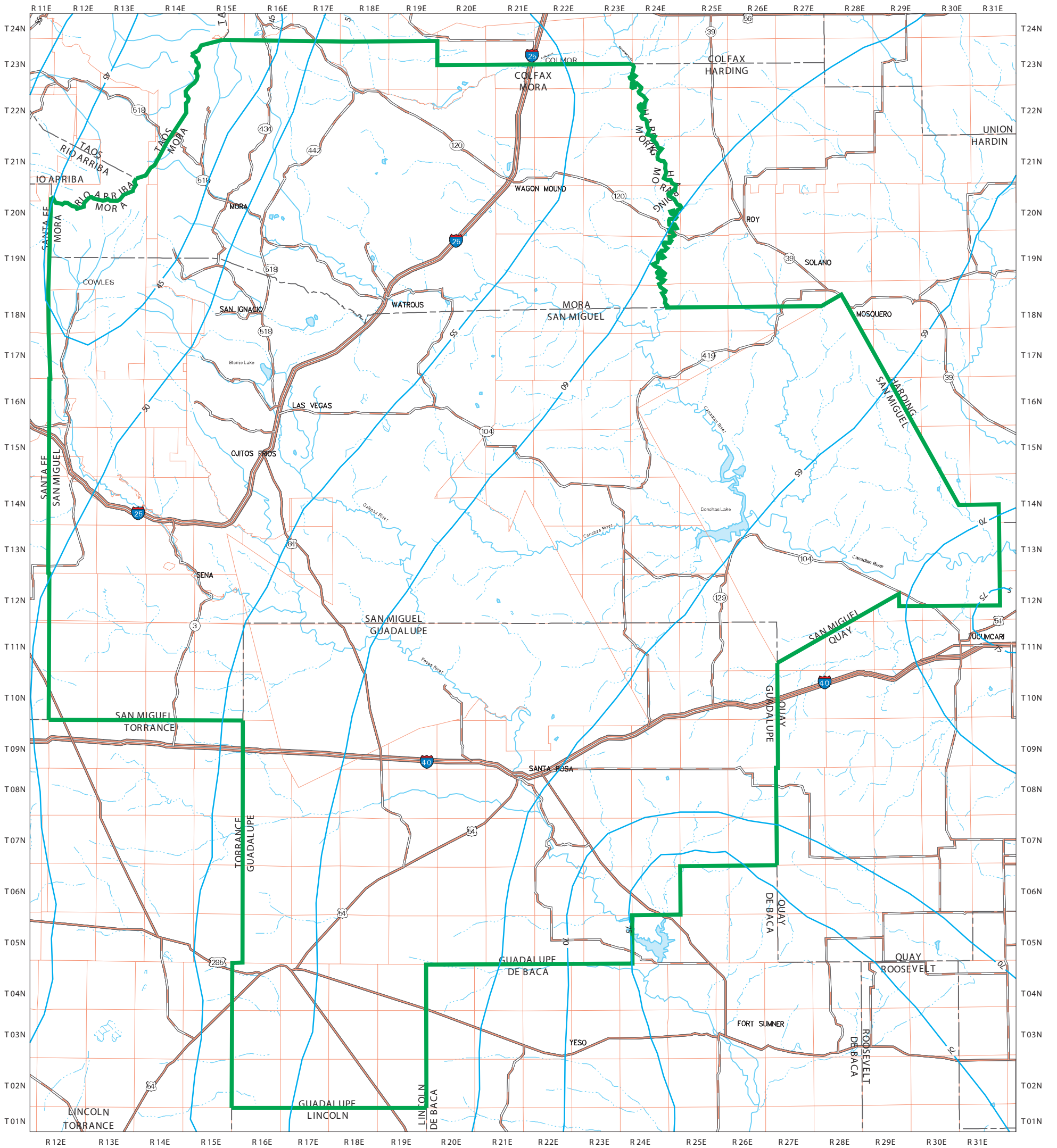




Figure B-6  
**Mora-San Miguel-Guadalupe Water Plan**  
**Annual Average Free Water Surface Evaporation Rate**



Produced by New Mexico Water Resources Research Institute, June 2004

Base map prepared by the U.S. Geological Survey

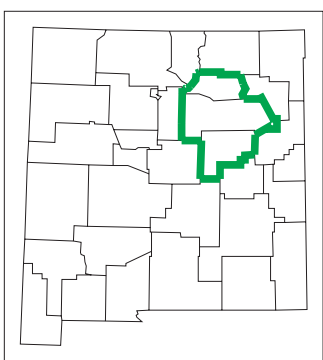
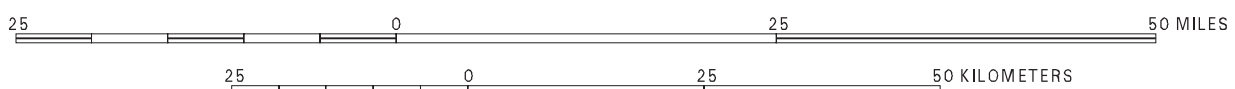
Compiled from digital data provided by the New Mexico Resource Geographic Information System (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land and Survey System (PLSS) from RGIS. This data set contains the evaporation isopleths of the state of New Mexico. The data set was created to digitally represent the average free surface water evaporation of the state of New Mexico between the years of 1931 and 1960. The original source of the data set came from National Oceanic and Atmospheric Administration (NOAA). NOAA Technical Report NWS53, Map 3: Annual FWS Evaporation. Publication date: 19910103. Earth Data Analysis Center manually digitized from the NOAA 1:500,000 scale map of the state of New Mexico.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

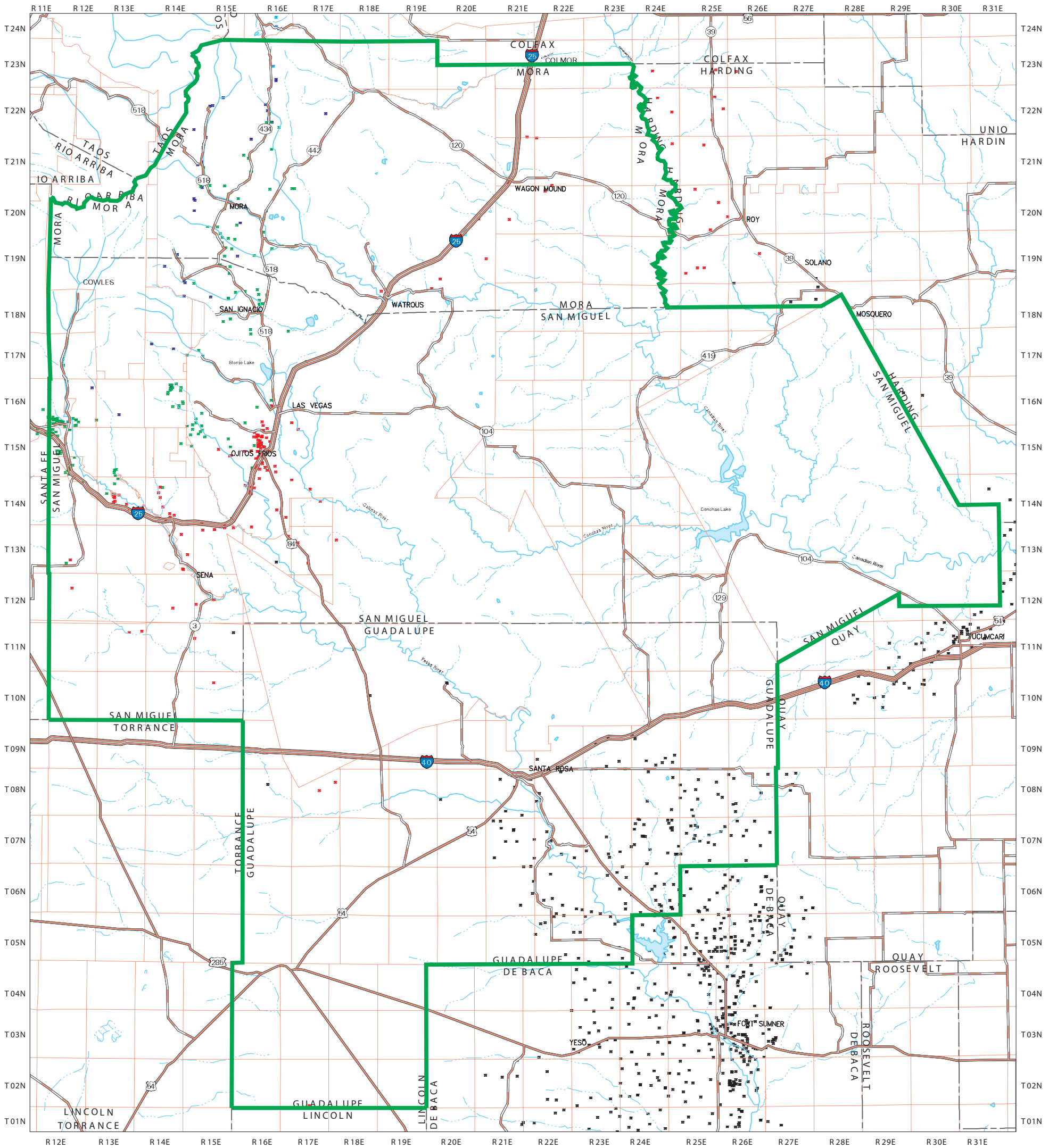
Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

- |                         |                                |
|-------------------------|--------------------------------|
| Explanation             | U.S. Highway                   |
| State Line              | State Highway                  |
| County Line             | Township/Range                 |
| Perennial Stream/River  | Planning Region                |
| Intermittent Stream     | Evaporation Isopleths (inches) |
| Perennial Water Body    |                                |
| Intermittent Water Body |                                |
| Interstate              |                                |

SCALE 1: 800 000



# Figure B-7 Mora-San Miguel-Guadalupe Water Plan Elevation of Ground Water Table for the Planning Region



- |   |  |
|---|--|
| <p><b>Explanation</b></p> <ul style="list-style-type: none"> <li> County Line</li> <li> Perennial Stream/River</li> <li> Intermittent Stream</li> <li> Perennial Water Body</li> <li> Intermittent Water Body</li> <li> Interstate</li> <li> U.S. Highway</li> <li> State Highway</li> <li> Township/Range</li> </ul> | <ul style="list-style-type: none"> <li> Planning Region</li> <li> 3843 to 5500 ft</li> <li> 5000 to 6500 ft</li> <li> 6000 to 7500 ft</li> <li> 7000 to 8500 ft</li> <li> 8000 to 9500 ft</li> </ul> |
|---|--|

Produced by New Mexico Water Resources Research Institute, June 2004

Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. Ground water table elevations are depicted by color classification of water table elevation values. Water table elevation is calculated by taking the surface elevation of the well and subtracting the latest depth to water value. Data is from the USGS GWSI database records for well locations and water depth.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

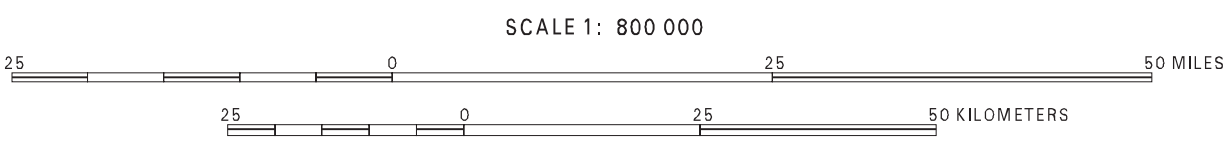
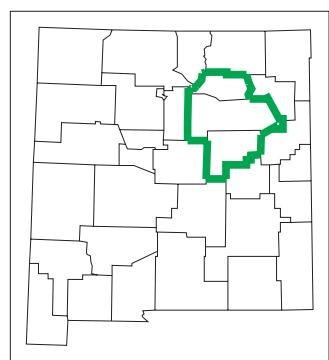
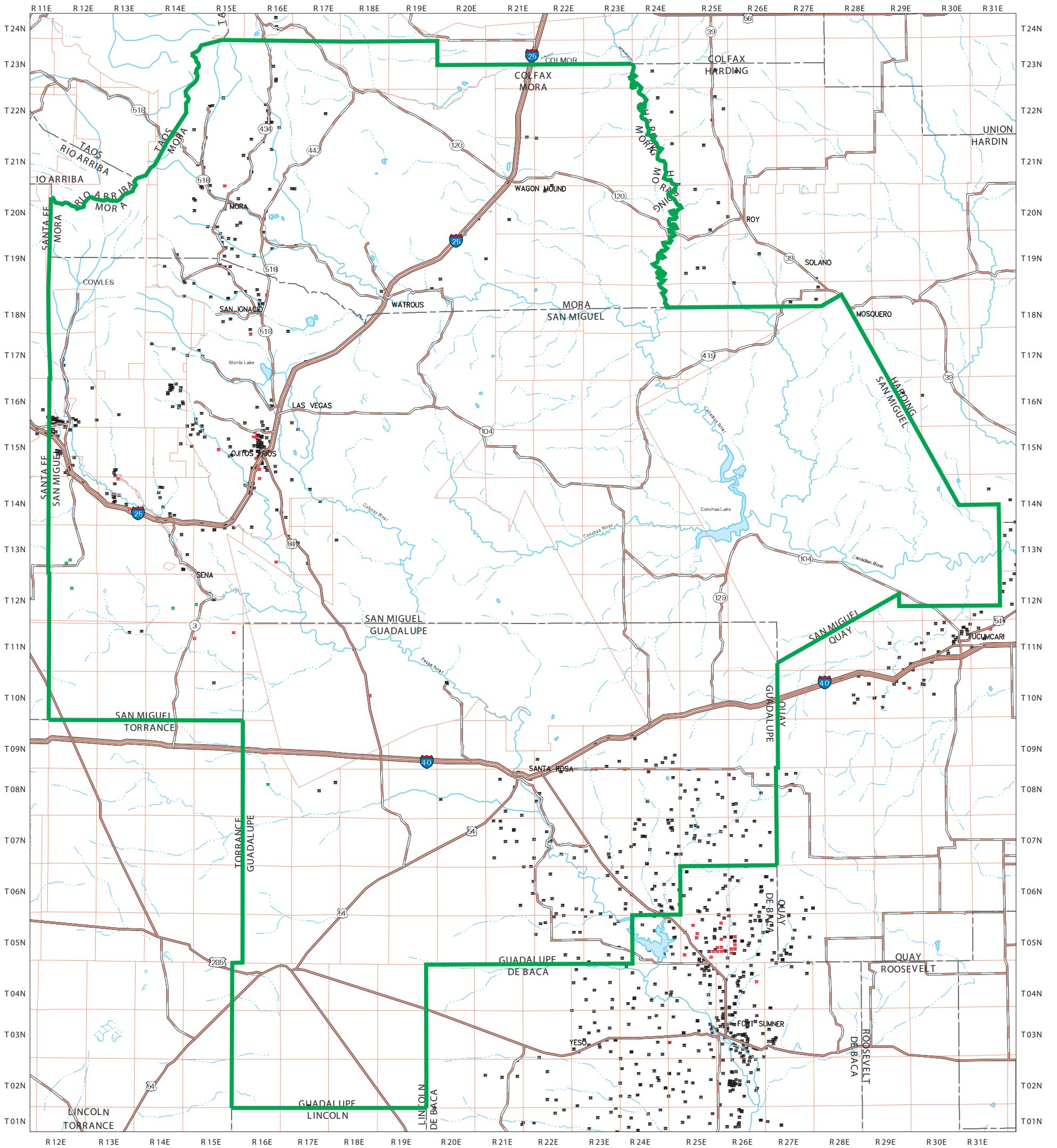




Figure B-8  
**Mora-San Miguel-Guadalupe Water Plan**  
**Depth to Ground Water Map**



- |                         |                 |
|-------------------------|-----------------|
| Explanation             | State Highway   |
| County Line             | Township/Range  |
| Perennial Stream/River  | Planning Region |
| Intermittent Stream     | 0 to 250 ft     |
| Perennial Water Body    | 250 to 500 ft   |
| Intermittent Water Body | 500 to 750 ft   |
| Interstate              |                 |
| U.S. Highway            |                 |

Produced by New Mexico Water Resources Research Institute, June 2004

Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. Depth to ground water is depicted by color classification of depth to water values. Data is from the USGS GWSI database records for well locations and water depth and were compiled. The range of years used to develop this map were from 1974 to 2003.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

SCALE 1: 800 000

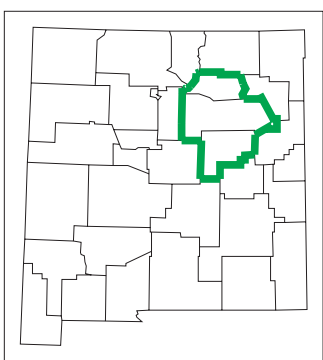
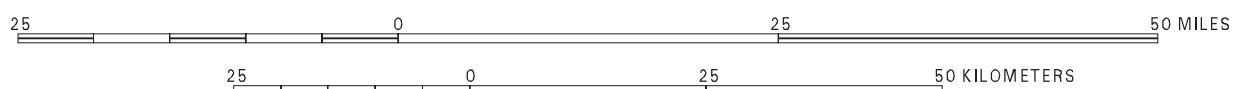
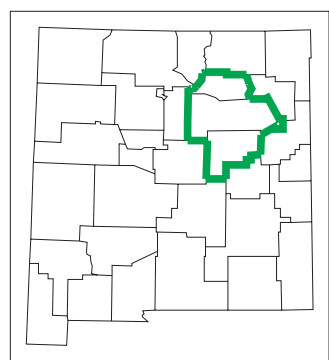
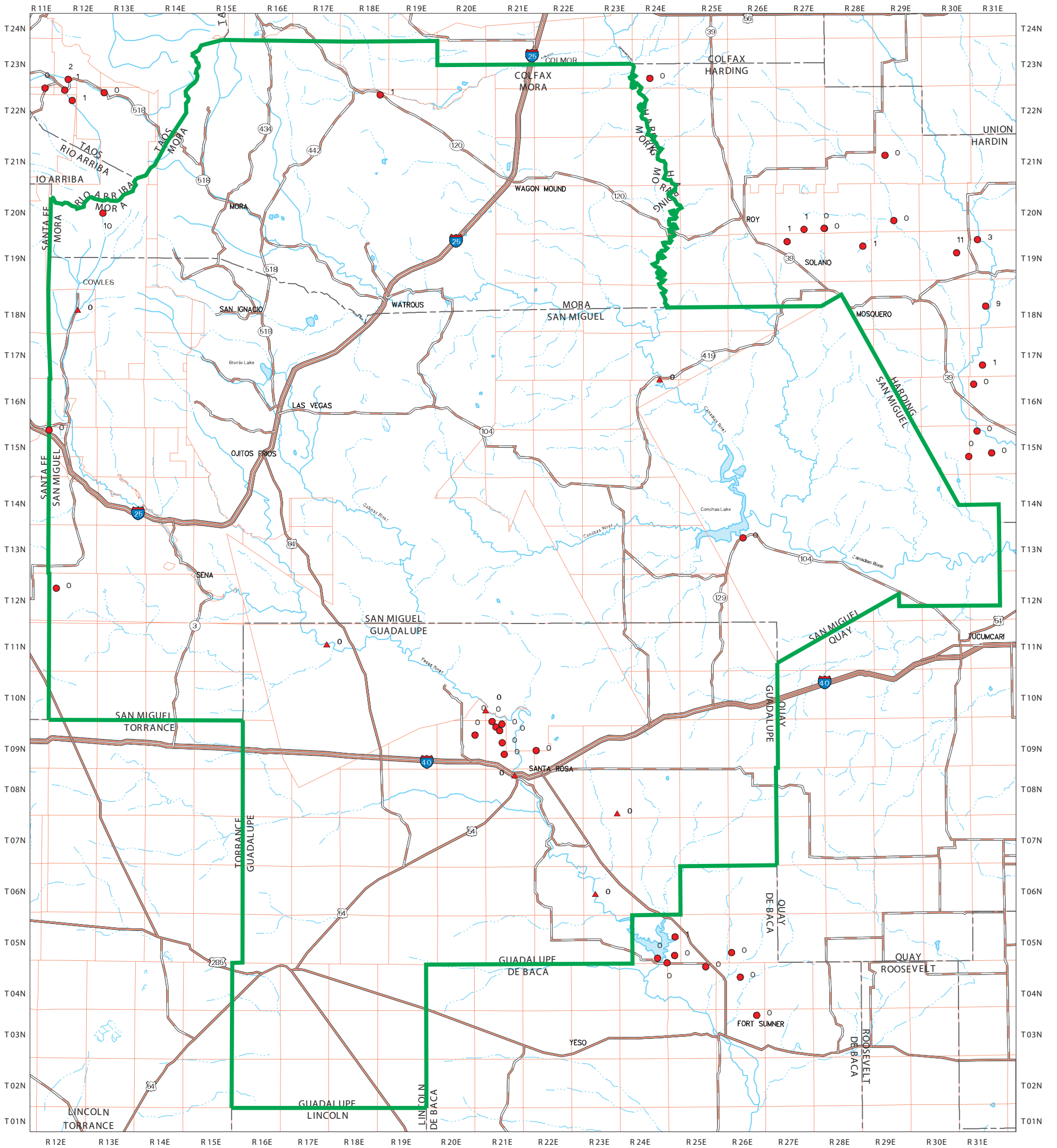


Figure B-9  
**Mora-San Miguel-Guadalupe Water Plan**  
**Nitrate Levels in the Planning Region**



- |                         |  |
|-------------------------|--|
| Explanation             | U.S. Highway                               |
| County Line             | State Highway                              |
| Perennial Stream/River  | Township/Range                             |
| Intermittent Stream     | Planning Region                            |
| Perennial Water Body    | Nitrate as N conc. (mg/L) in wells/springs |
| Intermittent Water Body | Nitrate as N conc. (mg/L) in surface water |
| Interstate              |  |

Produced by New Mexico Water Resources Research Institute, June 2004  
 Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. The water quality data is derived from USGS archives stored in the GWSI database.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

SCALE 1: 800 000

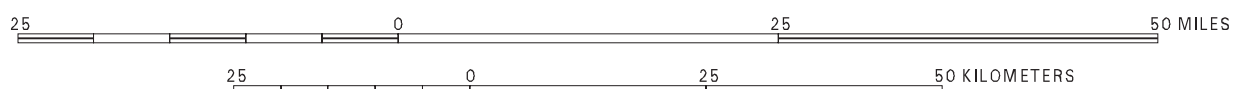
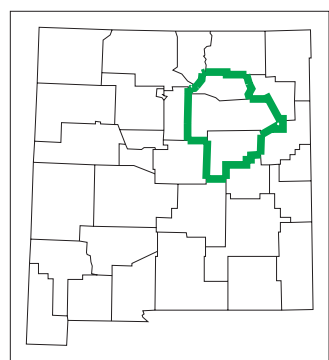
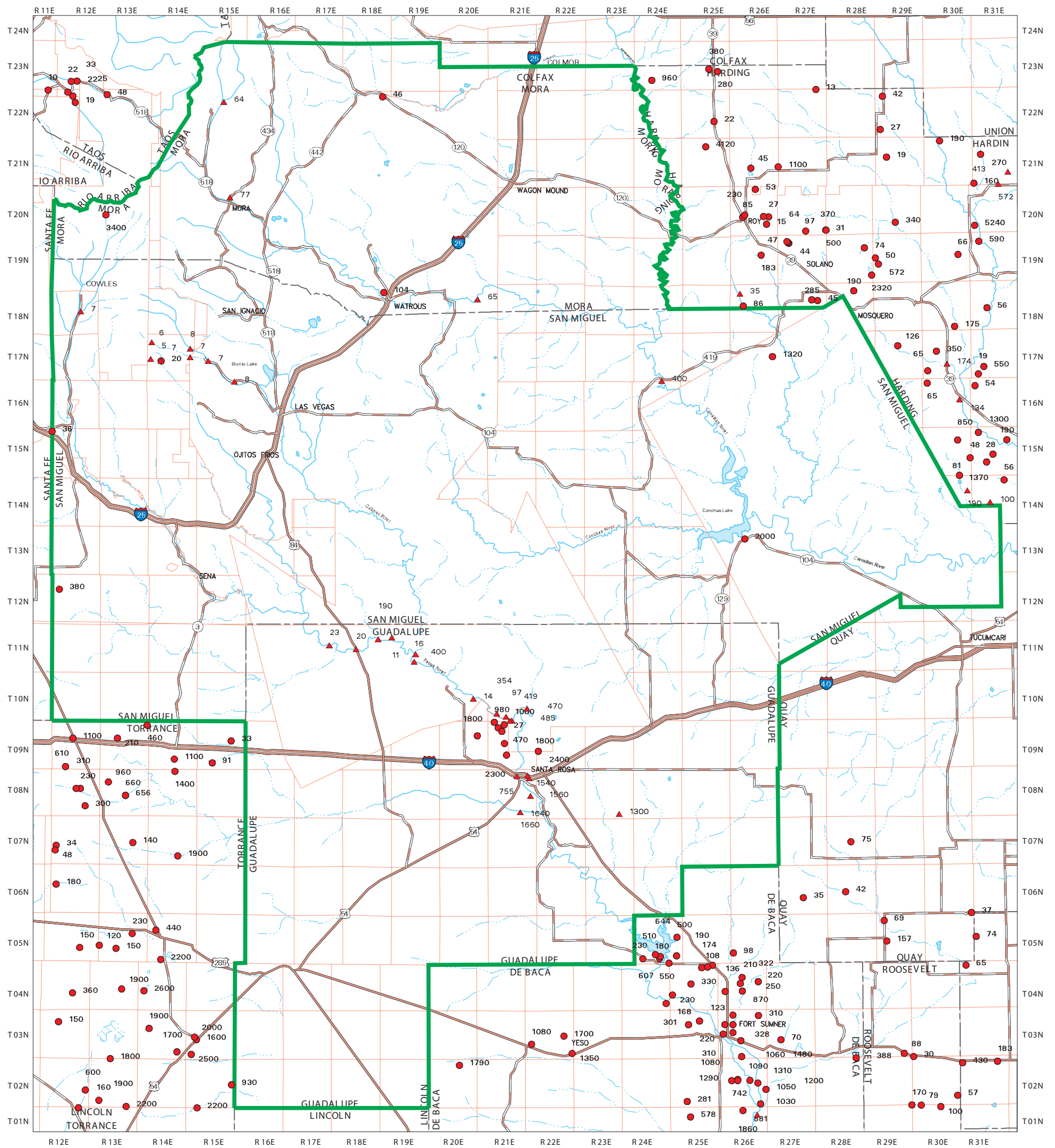




Figure B-10  
**Mora-San Miguel-Guadalupe Water Plan**  
**Sulfate Levels in the Planning Region**



- |                         |                                       |
|-------------------------|---------------------------------------|
| Explanation             | Interstate                            |
| State Line              | U.S. Highway                          |
| County Line             | State Highway                         |
| Perennial Stream/River  | Township/Range                        |
| Intermittent Stream     | Planning Region                       |
| Perennial Water Body    | Sulfate conc. (mg/L) in wells/springs |
| Intermittent Water Body |                                       |

Produced by New Mexico Water Resources Research Institute, June 2004  
 Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora San Miguel Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. The water quality data is derived from USGS archives stored in the GWSI database.

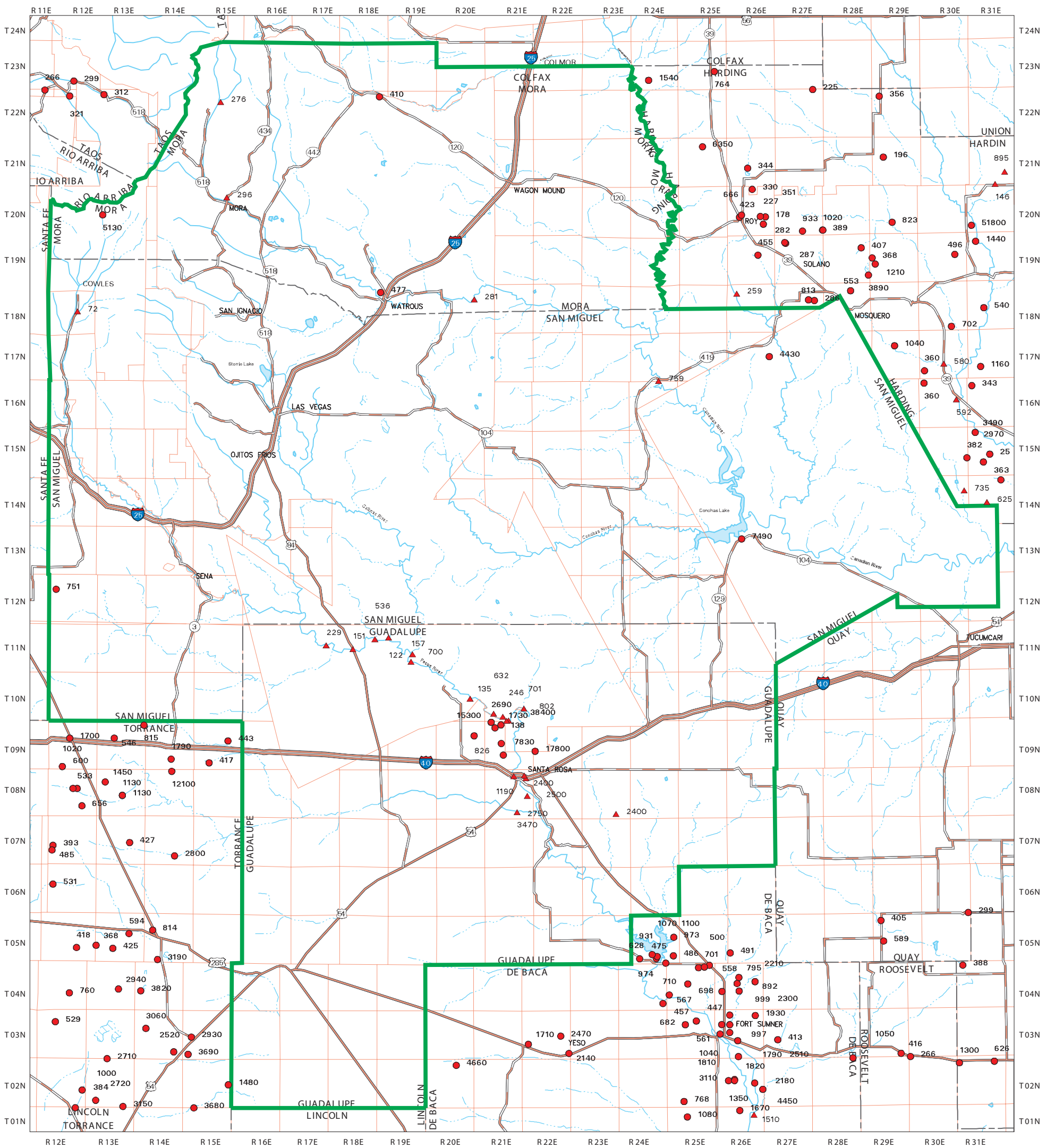
Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

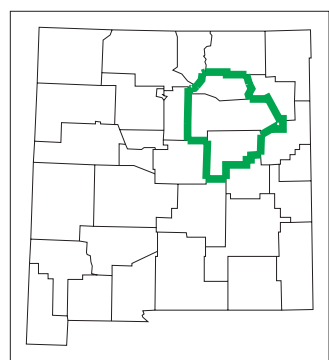
SCALE 1: 800 000



Figure B-11  
**Mora-San Miguel-Guadalupe Water Plan**  
**TDS Levels in the Planning Region**



- |                         |                                   |
|-------------------------|-----------------------------------|
| Explanation             | U.S. Highway                      |
| County Line             | State Highway                     |
| Perennial Stream/River  | Township/Range                    |
| Intermittent Stream     | Planning Region                   |
| Perennial Water Body    | TDS conc. in wells/springs (mg/L) |
| Intermittent Water Body |                                   |
| Interstate              |                                   |



Produced by New Mexico Water Resources Research Institute, June 2004  
 Base map prepared by the U.S. Geological Survey

Compiled from digital data provided by the New Mexico Resource Geographic Information System Program (RGIS). Original base maps digitized from 1:500,000 mylar sheets and 100,000 paper maps for New Mexico. These data meet National Mapping Accuracy Standards for 1:500,000 and 1:100,000 scale maps. Boundary of the Mora, San Miguel, and Guadalupe Water Planning Region is based on the New Mexico county boundaries. The cadastral accuracy of the county boundaries was verified by the use of 1:100,000 Public Land Survey System (PLSS) from RGIS. The water quality data is derived from USGS archives stored in the GWSI database.

Horizontal accuracy: At the scale of 1:800,000, at least 90 percent of the points tested are within 1/30th inch (0.0333 inch), or 677 ground meters, of their true location.

Projection: Universal Transverse Mercator, Zone 13, Units meters, NAD83.

SCALE 1: 800 000

