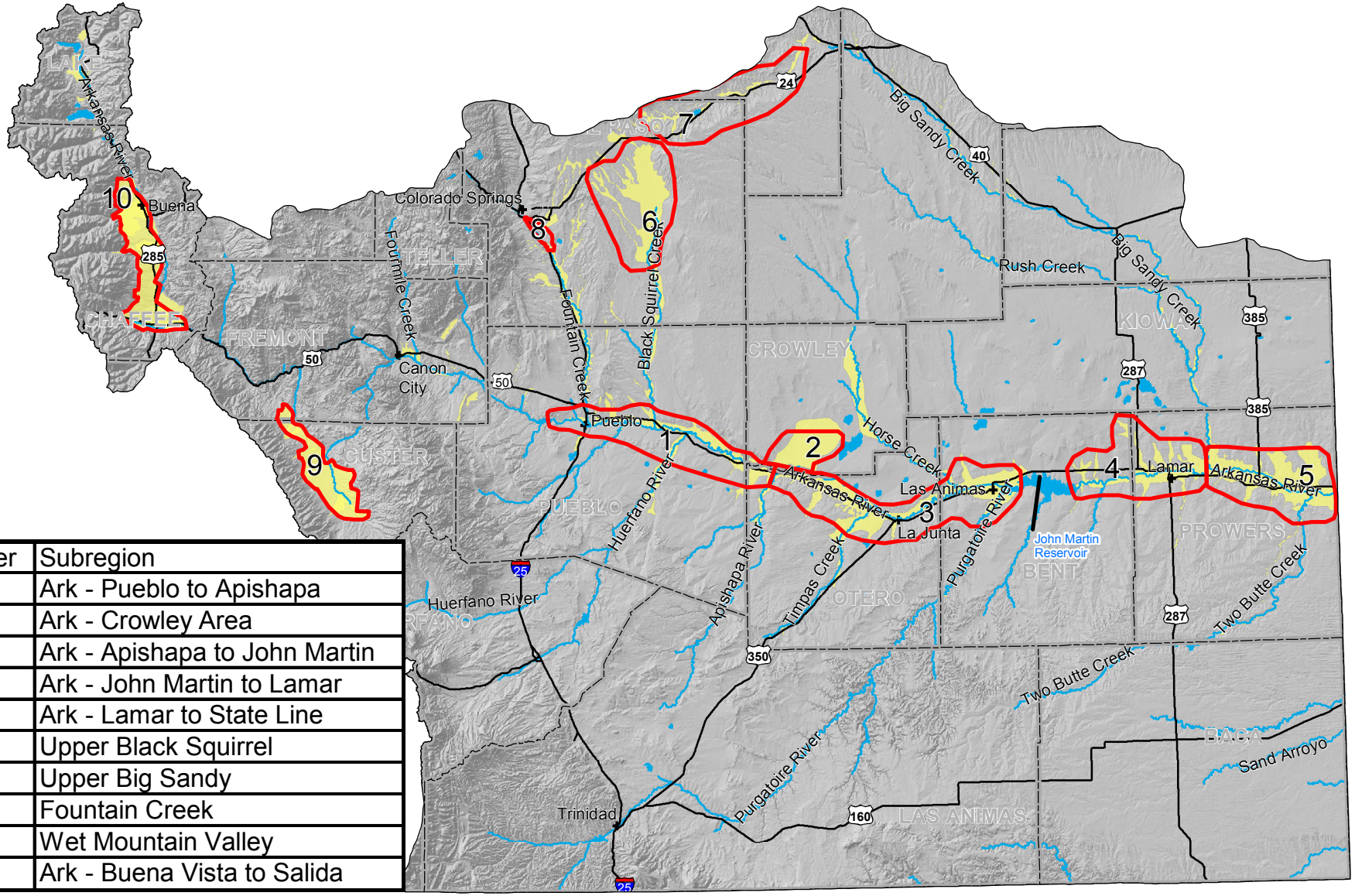
SB06-193 Underground Water Storage Study

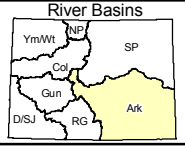
Arkansas River Basin Alluvial Aquifer Subregions



Number	Subregion
1	Ark - Pueblo to Apishapa
2	Ark - Crowley Area
3	Ark - Apishapa to John Martin
4	Ark - John Martin to Lamar
5	Ark - Lamar to State Line
6	Upper Black Squirrel
7	Upper Big Sandy
8	Fountain Creek
9	Wet Mountain Valley
10	Ark - Buena Vista to Salida

Sources: CDM 2006e; Jenkins & Taylor 1972; Topper et al. 2003

River Basins



Scale: 1:1,750,000

10 5 0 10 Miles

City
Highway
County
1 Subregion
Alluvial Extent

Colorado Water Conservation Board

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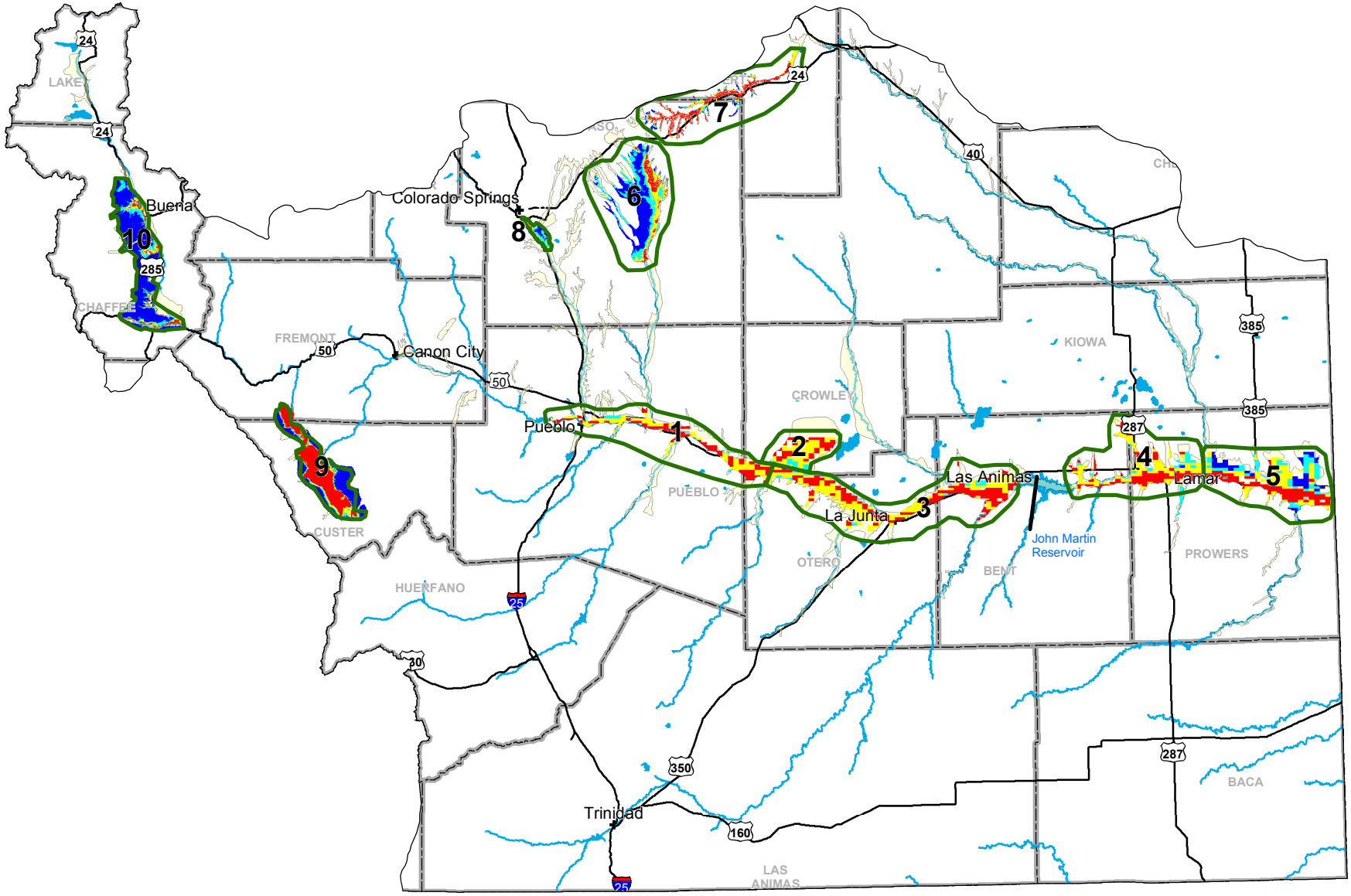
Figure 14

SB06-193 Underground Water Storage Study

Arkansas River Basin Depth to Water Table



Sources: CDM 2006 a, b, e; Cain & Edelmann 1986; Londquist & Livingston 1978; Principia Mathematica 2002; Topper et al. 2003; Watts 2005

River Basins

Scale: 1:1,750,000

10 5 0 10 Miles

- City
- Highway
- County
- 1 Subregion

Depth to Water Table (ft)

- 0 - 10
- 10 - 30
- 30 - 50
- > 50

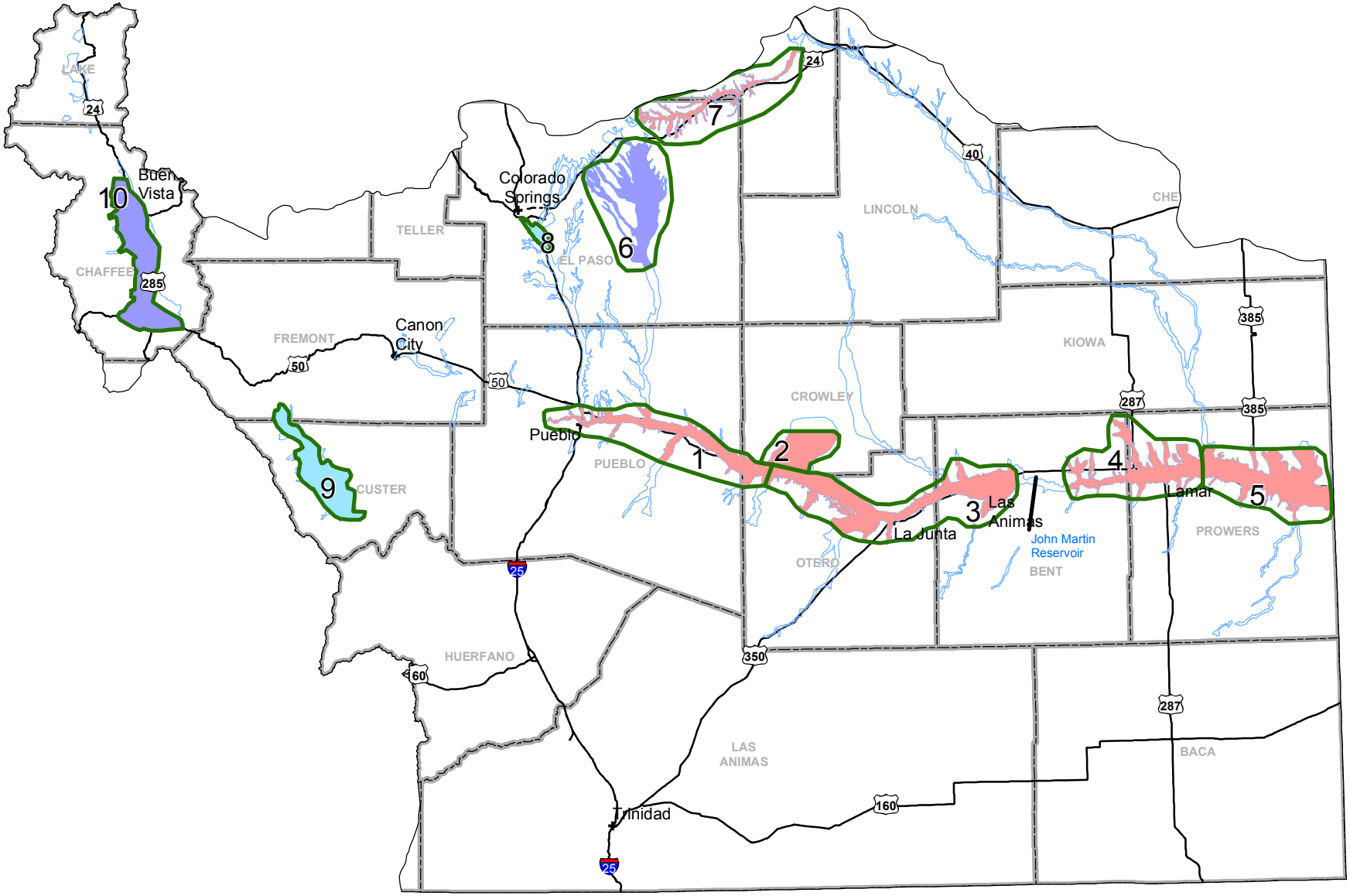
Colorado Water Conservation Board

Prepared by: CDM

Figure 15

SB06-193 Underground Water Storage Study

Arkansas River Basin Alluvial Aquifer Available Storage Capacity



Sources: CDM 2006 a, b, e; Cain & Edelmann 1986; Londquist & Livingston 1978; Principia Mathematica 2002; Topper et al 2003; Watts 2005

River Basins

N W E S

10 5 0 10 Miles

Scale: 1:1,750,000

City
Highway
County
Subregion

Available Volume (ac-ft/ac)
0 - 2
2 - 4
4 - 6
6 - 8
>8

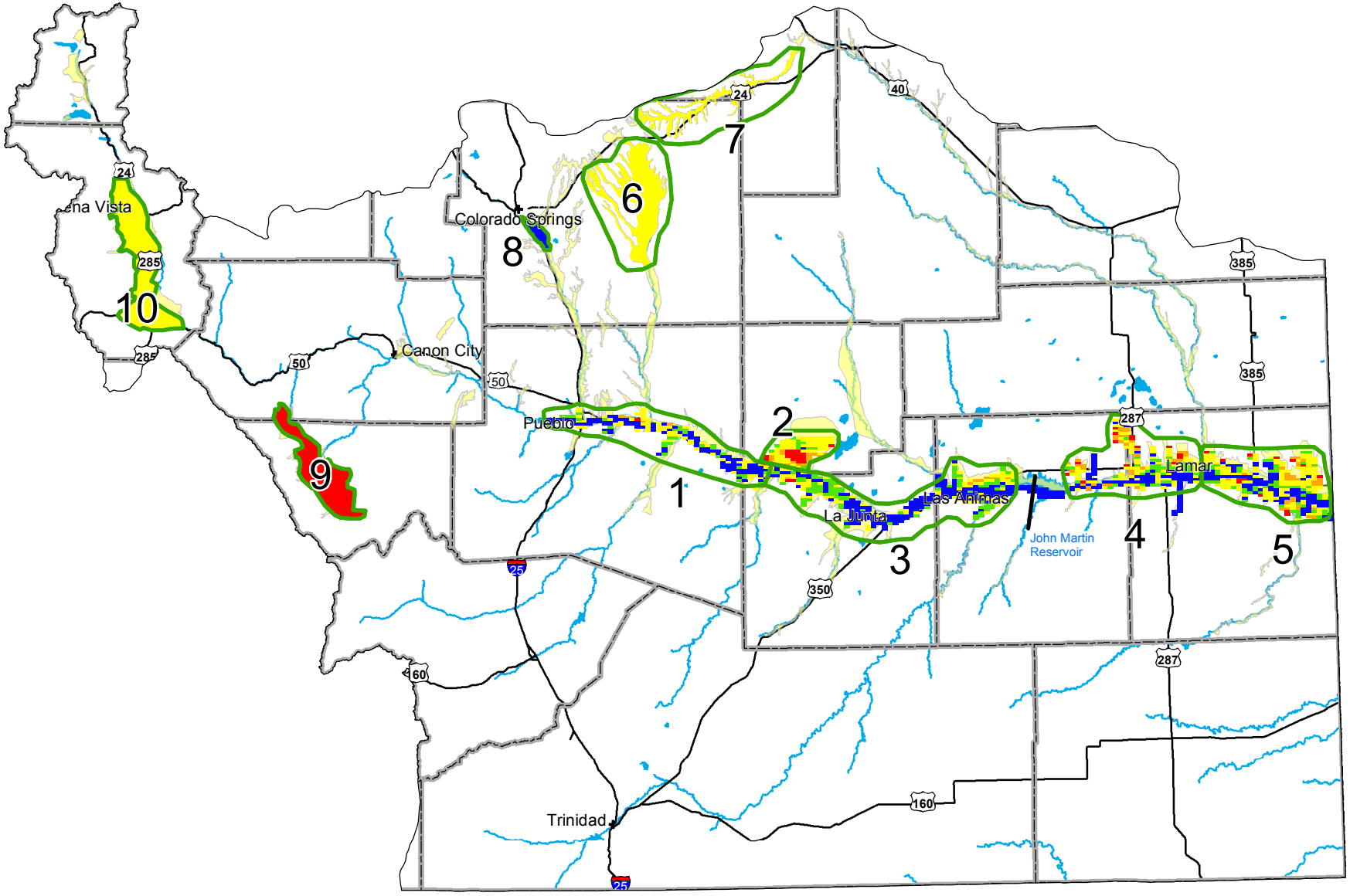
Colorado Water Conservation Board

Prepared by: CDM

Figure 16

SB06-193 Underground Water Storage Study

Arkansas River Basin Alluvial Aquifer Hydraulic Conductivity



Sources: CDM 2006a; Glover and Jenkins 1964; Londquist & Livingston 1978; Principia Mathematica 2002; Romero 1992

River Basins

Scale: 1:1,750,000

City
Highway
County
Subregion

Hydraulic Conductivity (ft/day)
0.1 - 25
25 - 50
50 - 250
250 - 500
> 500

Colorado Water Conservation Board

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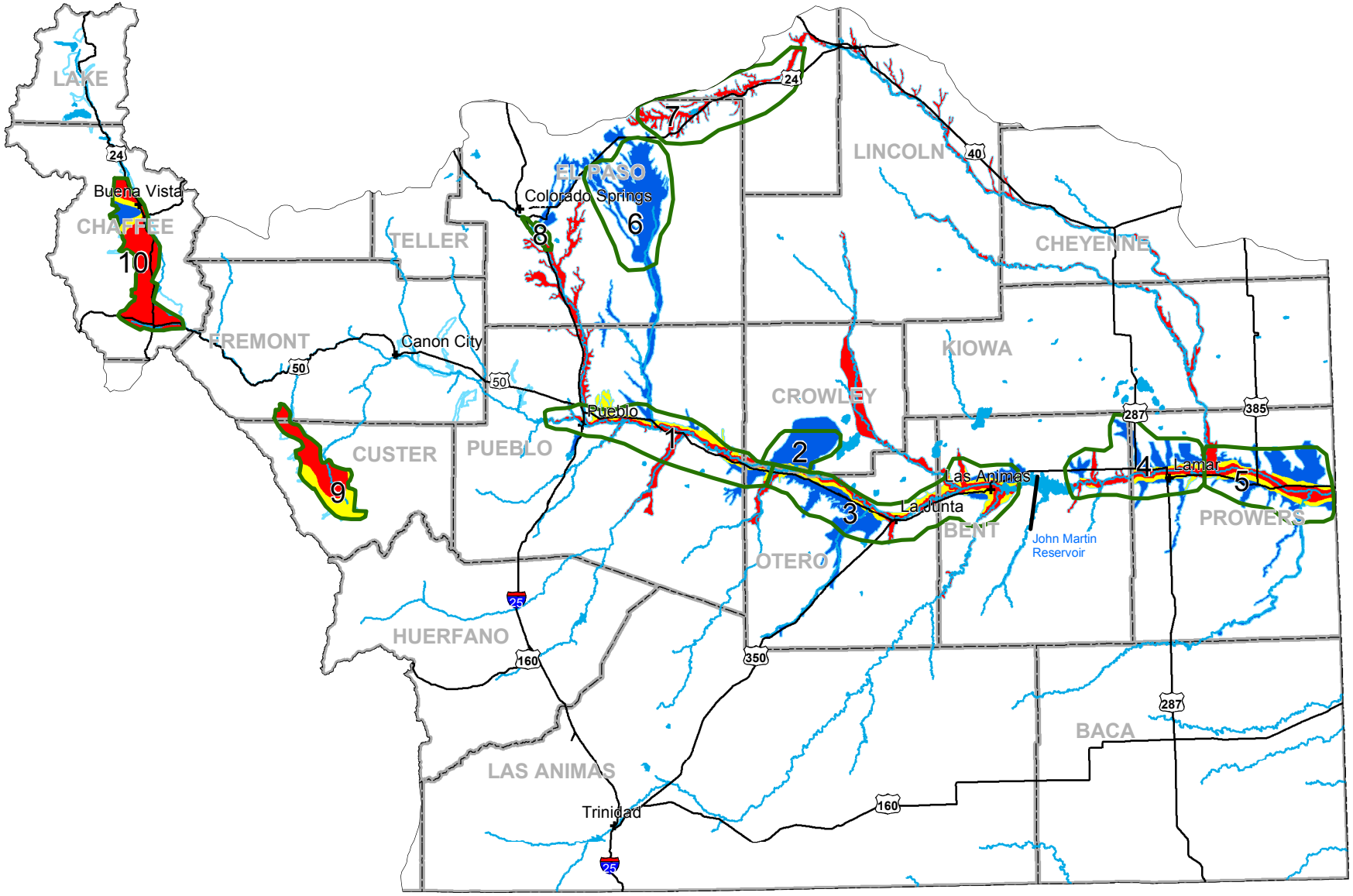
Figure 17

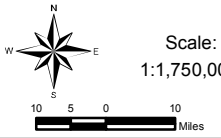
SB06-193 Underground Water Storage Study

Arkansas River Basin Alluvial Aquifer Residence Time



Source: Jenkins & Taylor 1972

River Basins



Scale: 1:1,750,000

- City
- Highway
- County
- Subregion 1

- Alluvial Extent
- >480 days
- 120-480 days
- <120 days

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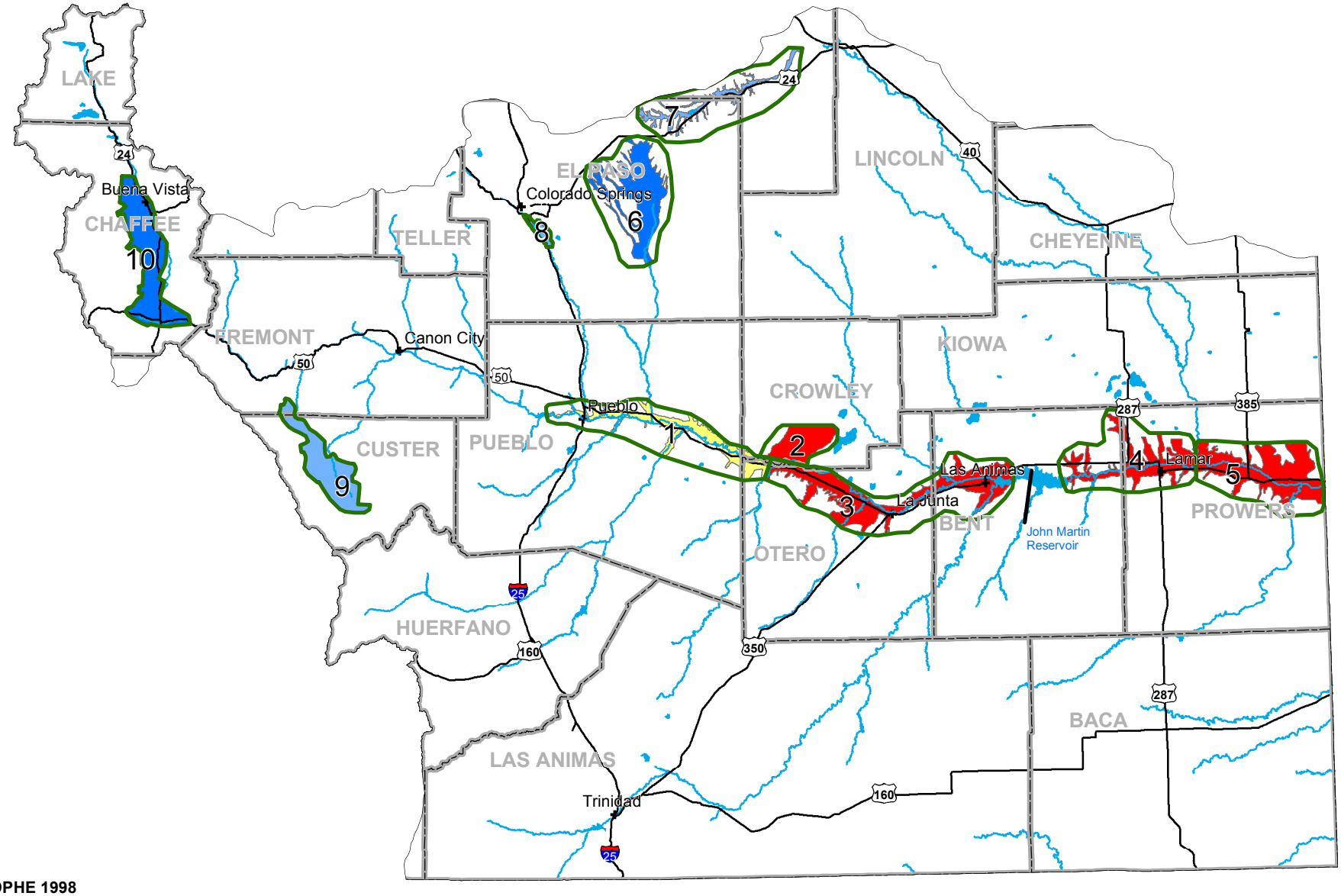
Figure 18

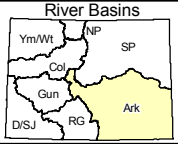
SB06-193 Underground Water Storage Study

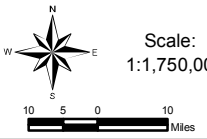
Arkansas River Basin Alluvial Aquifer TDS Values



Source: CDPHE 1998

River Basins





Scale: 1:1,750,000

City
Highway
County
1 Subregion

TDS (mg/L)
<250
250 - 500
500 - 1,000
1,000 - 2,000
>2,000

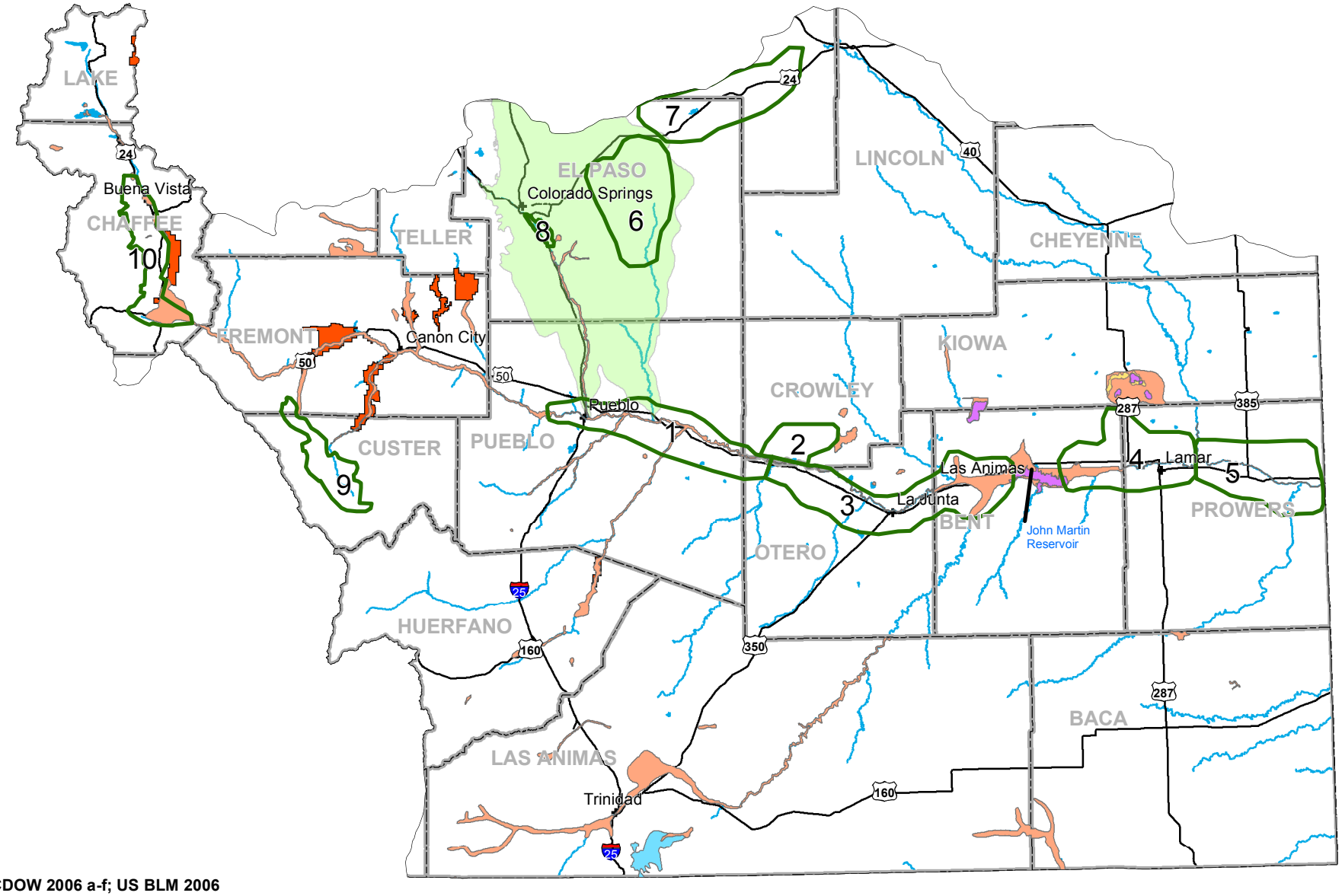
Colorado Water Conservation Board

Prepared by: CDM

Figure 19

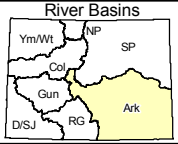
SB06-193 Underground Water Storage Study

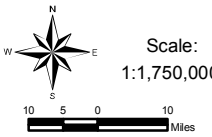
Arkansas River Basin Potential Habitat Concerns



Sources: CDOW 2006 a-f; US BLM 2006

River Basins





Scale: 1:1,750,000

- City
- Highway
- County
- 1 Subregion
- Preble's Meadow Jumping Mouse Range
- Least Tern Foraging Area
- Plains Sharp-Tailed Grouse Range
- Bald Eagle Winter Range
- Piping Plover Foraging Area
- Areas of Critical Environmental Concern

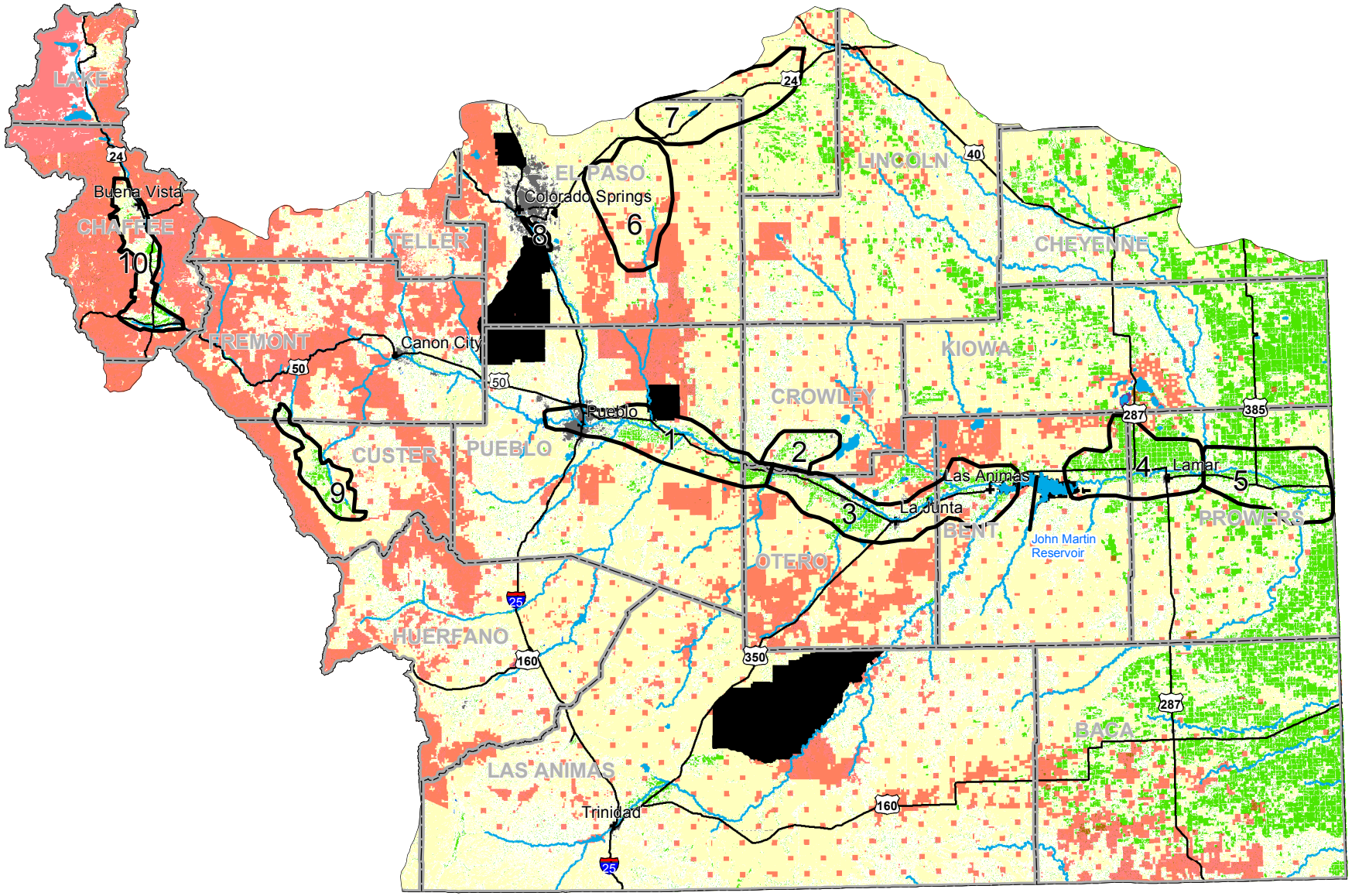
Colorado Water Conservation Board

Prepared by: CDM

Figure 20

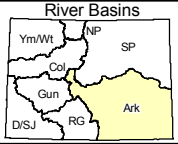
SB06-193 Underground Water Storage Study

Arkansas River Basin Land Use and Ownership



Sources: US BLM 2002; USGS National Land Classification Dataset 2001

River Basins



Scale: 1:1,750,000

10 5 0 10 Miles

City
Highway
County
1 Subregion

Water
Urban
Native/Rangeland
Agricultural

Potentially Inaccessible Public Lands
Publicly Accessible Lands

Colorado Water Conservation Board

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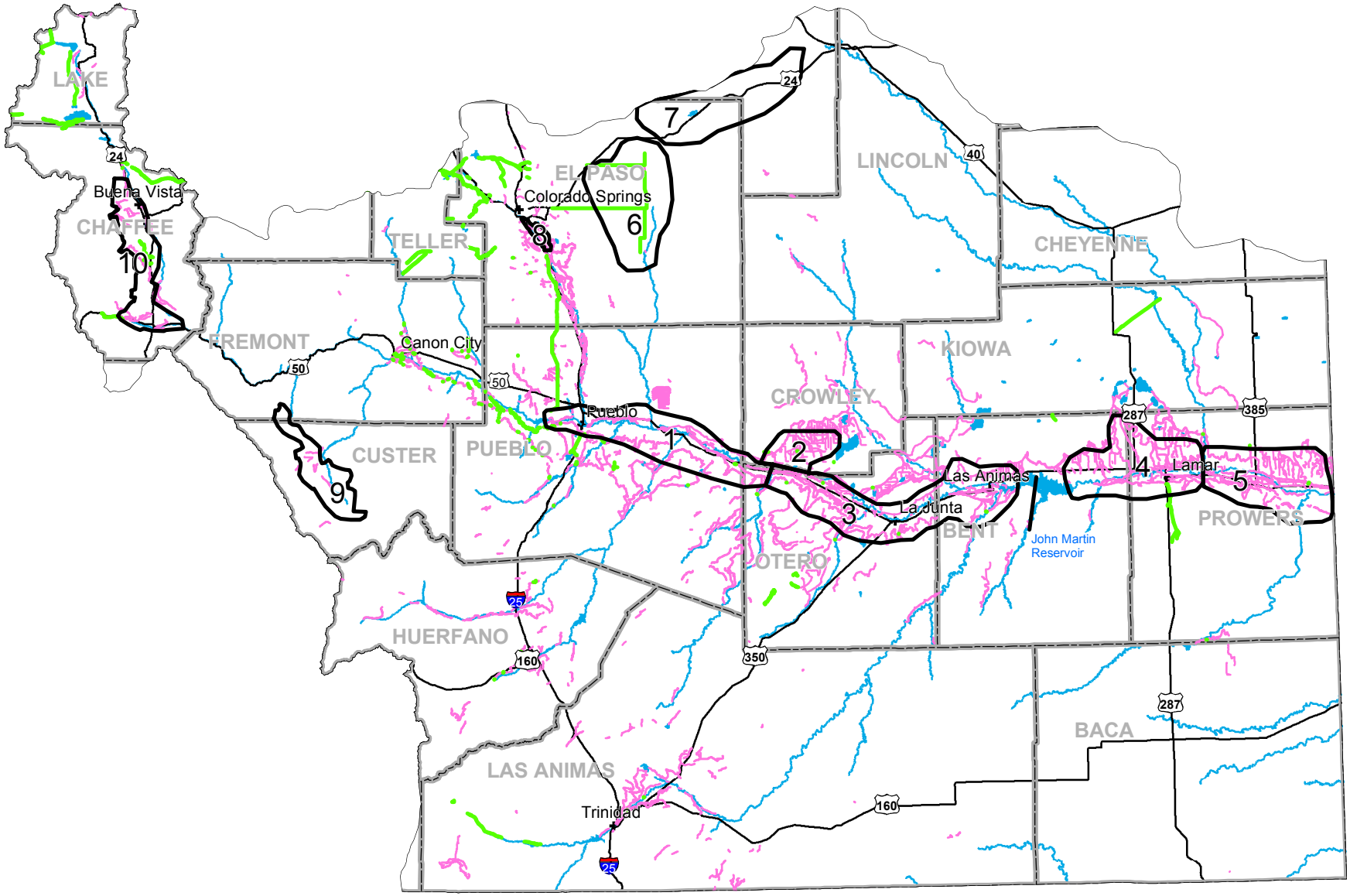
Figure 21

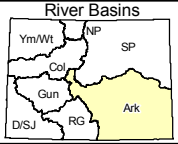
SB06-193 Underground Water Storage Study

Arkansas River Basin Existing Infrastructure



Sources: Colorado DWR; Cherokee Metropolitan District 2005; USGS 2006 NHD

River Basins



Scale: 1:1,750,000

10 5 0 10 Miles

City
Highway
County
1 Subregion

Canals and Ditches
Pipelines and Tunnels

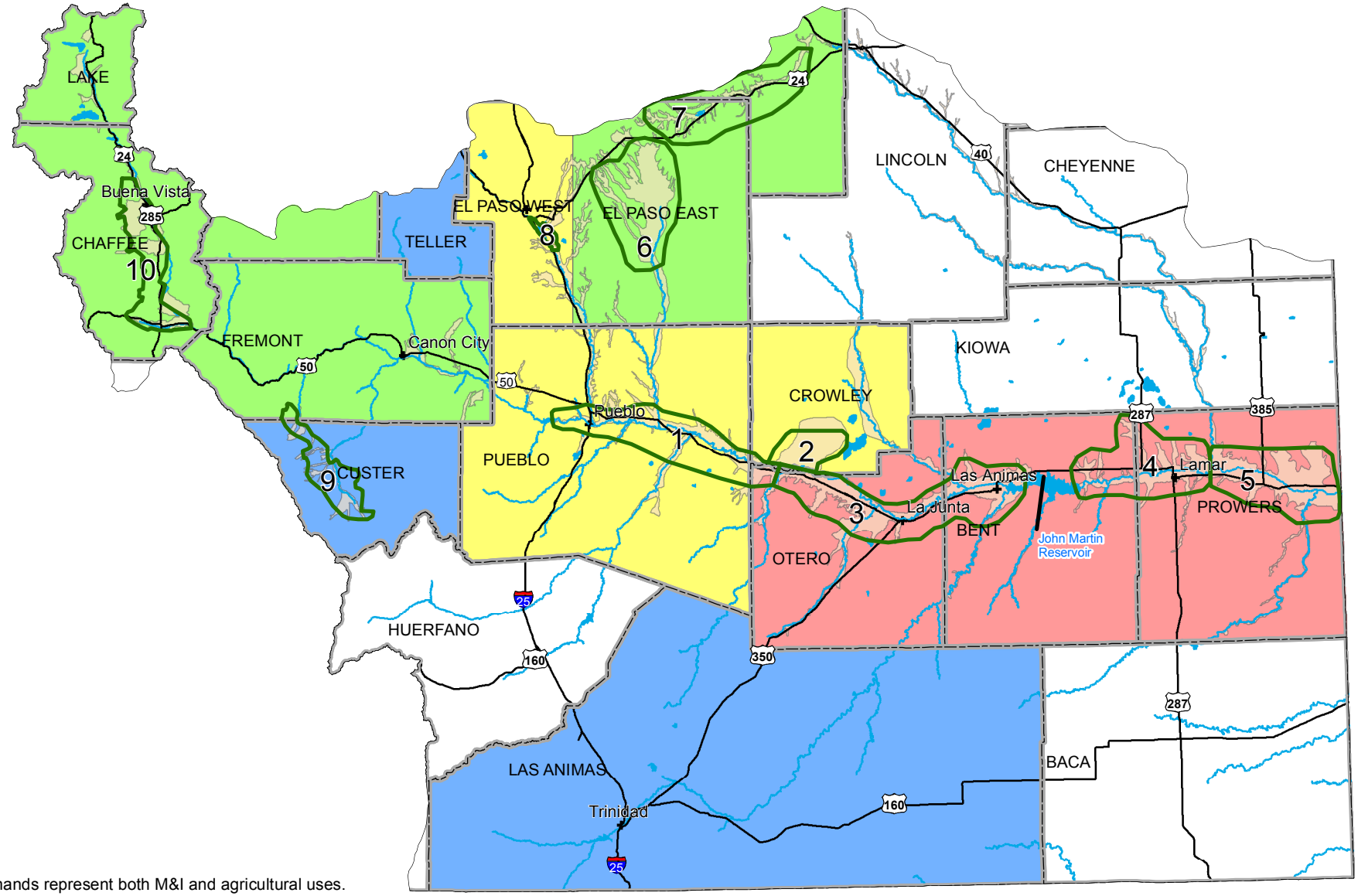
Colorado Water Conservation Board

Prepared by: CDM

Figure 22

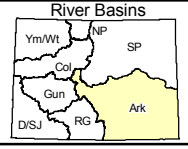
SB06-193 Underground Water Storage Study

Arkansas River Basin Projected Unmet Demand in 2030



Unmet demands represent both M&I and agricultural uses.
Sources: CDM 2004; CDSS 2001

River Basins



Scale: 1:1,750,000

10 5 0 10 Miles

City
Highway
1 Subregion
Alluvial Extent

Projected 2030 Unmet Demands by County (ac-ft/yr)

- No data available
- 1 - 1,000
- 1,000 - 5,000
- 5,000 - 10,000
- > 10,000

Colorado Water Conservation Board

Prepared by: CDM

Figure 23