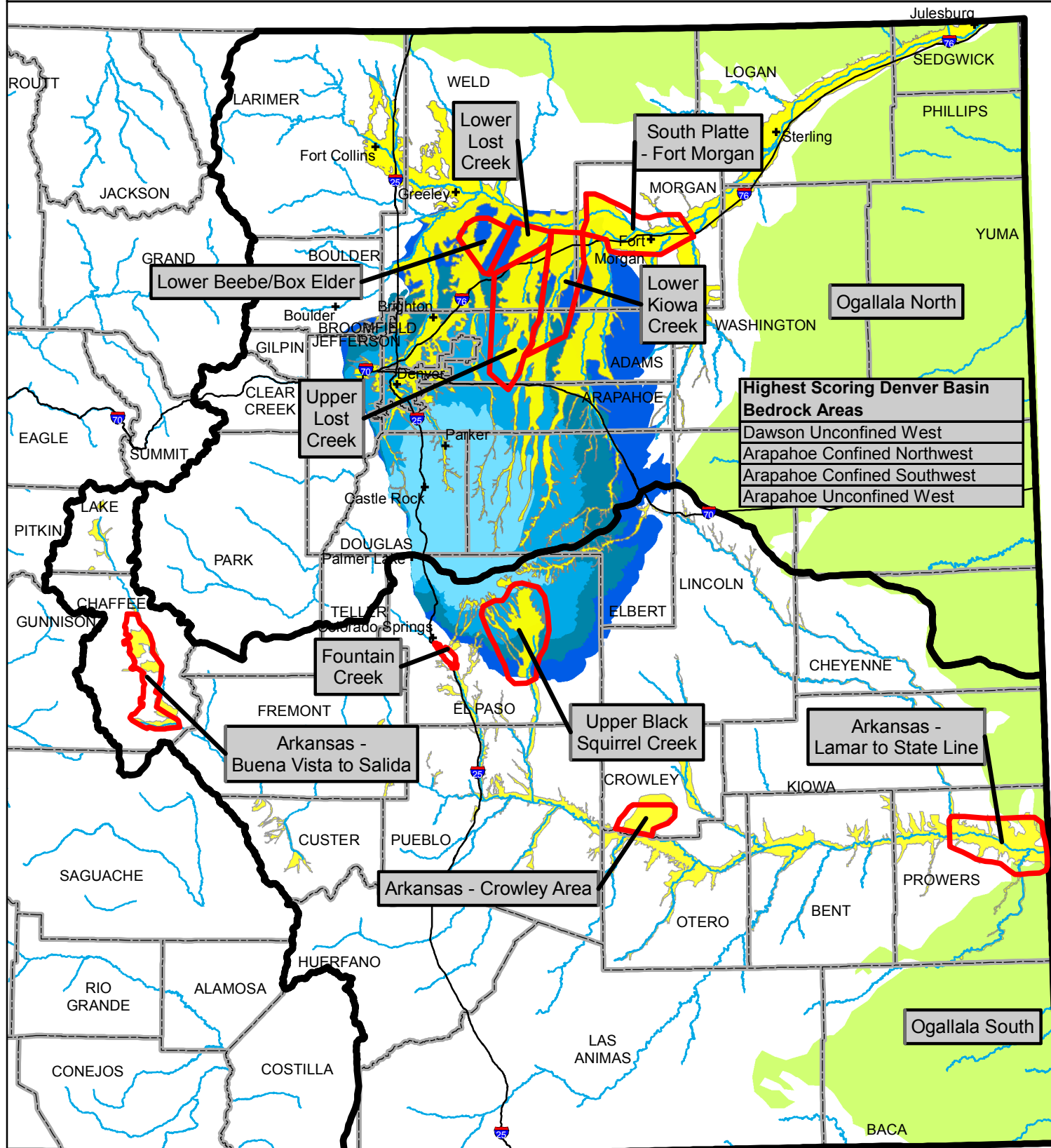


SB06 - 193 Underground Water Storage Study

Highest Scoring Aquifer Areas in the South Platte and Arkansas Basins



Sources: CDM 2004a; CDM 2004b; Topper et al. 2003



Colorado Water Conservation Board

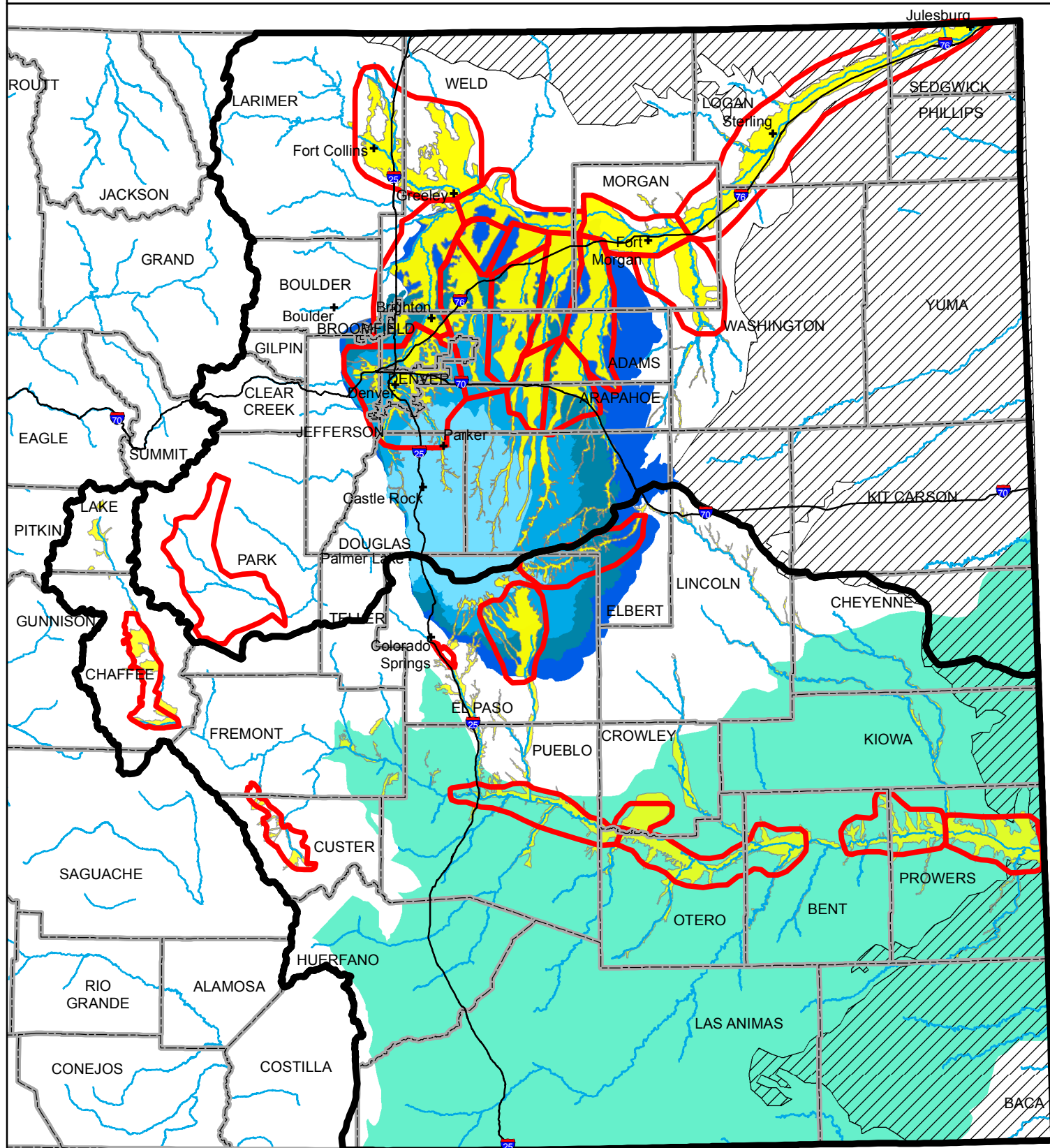
Prepared by: **CDM**

Figure ES-1

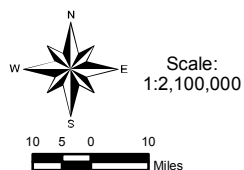


SB06 - 193 Underground Water Storage Study

Aquifers Evaluated in the South Platte and Arkansas River Basins



Sources: CDM 2006d; CDM 2006e; Topper et al. 2003



- + City
- ~ Highway
- County
- Alluvial Extent

- Alluvial Subregions
- Ogallala Extent
- Dakota-Cheyenne Extent

Denver Basin Aquifers

- Dawson Extent
- Denver Extent
- Arapahoe Extent
- Laramie-Fox Hills Extent

Colorado Water
Conservation Board

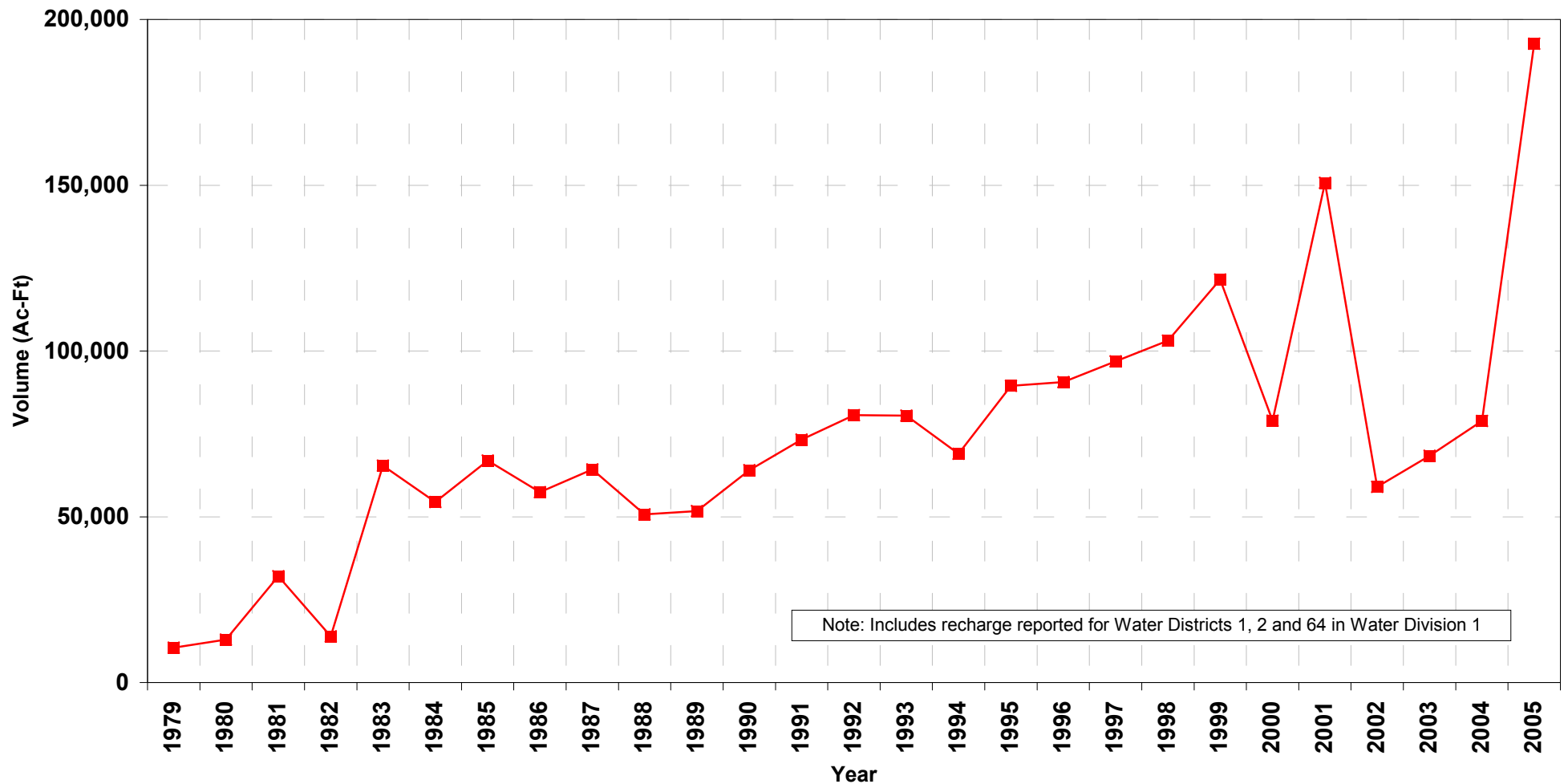


Prepared by: CDM

Figure 1

SB06-193 Underground Water Storage Study

Recharged Volumes to South Platte Alluvial Aquifers



Source: Hall 2006

Colorado Water
Conservation Board

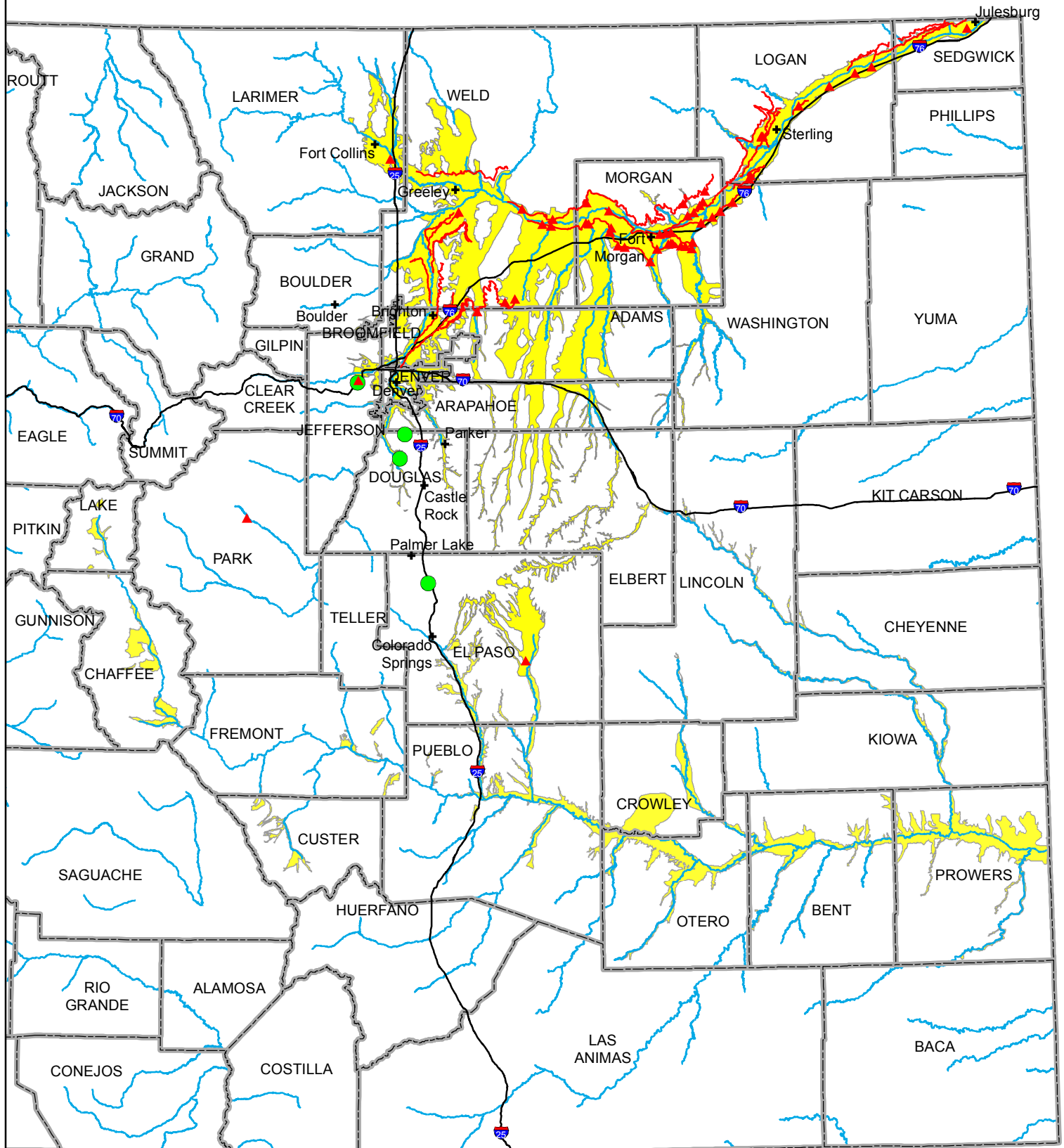


Prepared by: CDM

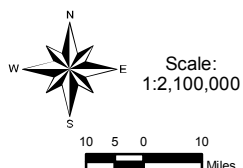
Figure 2

SB06 - 193 Underground Water Storage Study

Location of Aquifer Recharge Projects in the Study Area



Sources: Brand 2005; Cherokee Metropolitan District 2005; Sanchez 2007; Topper et al. 2004; Welton 2006



- + City
- Highway
- County
- Alluvial Extent

- Bedrock Active Recharge Sites
- Alluvial Recharge Ditch System
- ▲ Alluvial Active Recharge Sites

Colorado Water
Conservation Board

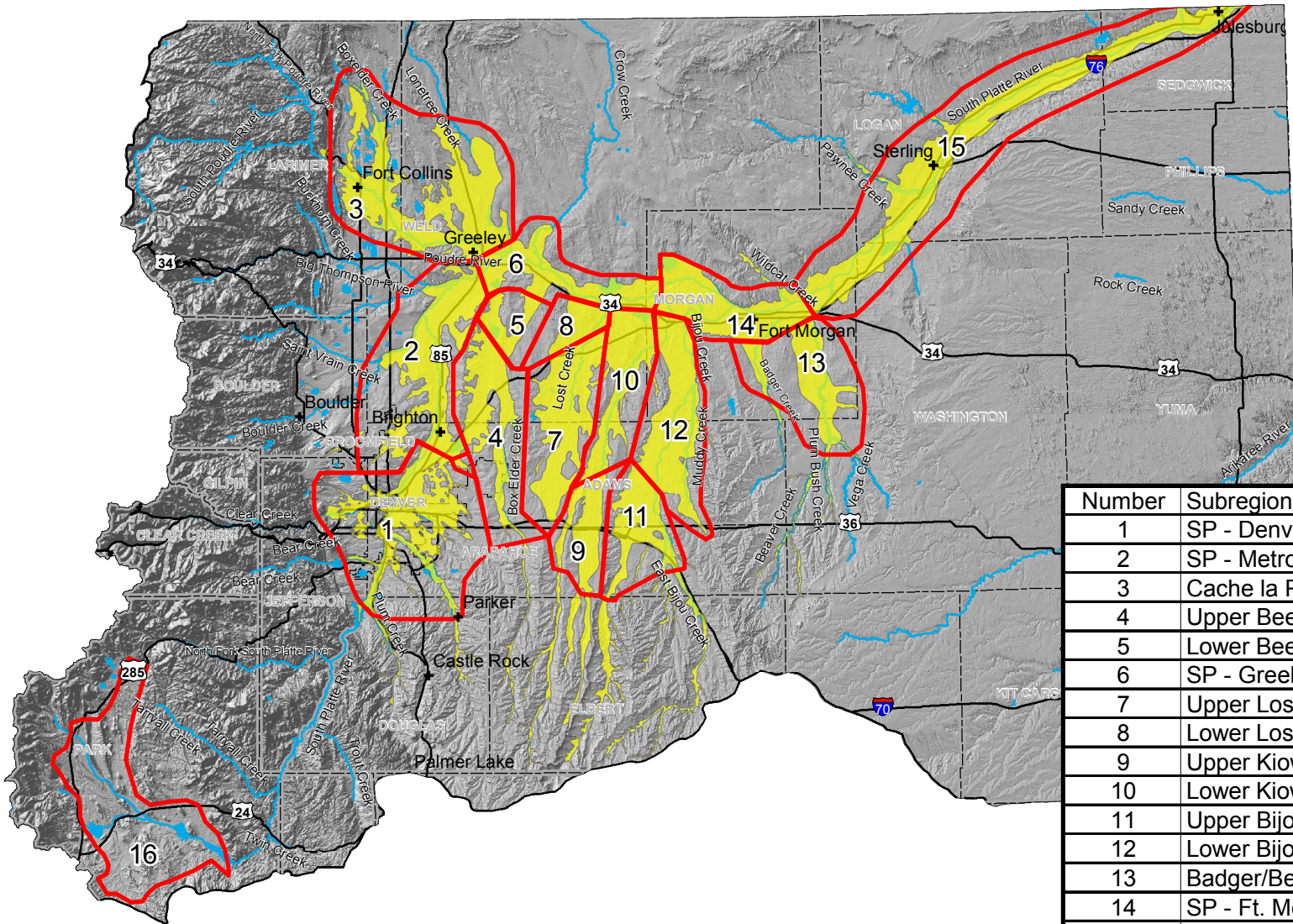


Prepared by: CDM

Figure 3

SB06-193 Underground Water Storage Study

South Platte River Basin Alluvial Aquifer Subregions



Number	Subregion
1	SP - Denver Metro
2	SP - Metro to Greeley
3	Cache la Poudre
4	Upper Beebe/Box Elder
5	Lower Beebe/Box Elder
6	SP - Greeley to Ft. Morgan
7	Upper Lost Creek
8	Lower Lost Creek
9	Upper Kiowa Creek
10	Lower Kiowa Creek
11	Upper Bijou Creek
12	Lower Bijou Creek
13	Badger/Beaver Creek
14	SP - Ft. Morgan
15	SP - Balzac to State Line
16	SP - South Park

Source: CDM 2006e



Scale:
1:1,750,000

10 5 0 10 Miles

- + City
- Highway
- County
- 1 Subregion

☐ Alluvial extent

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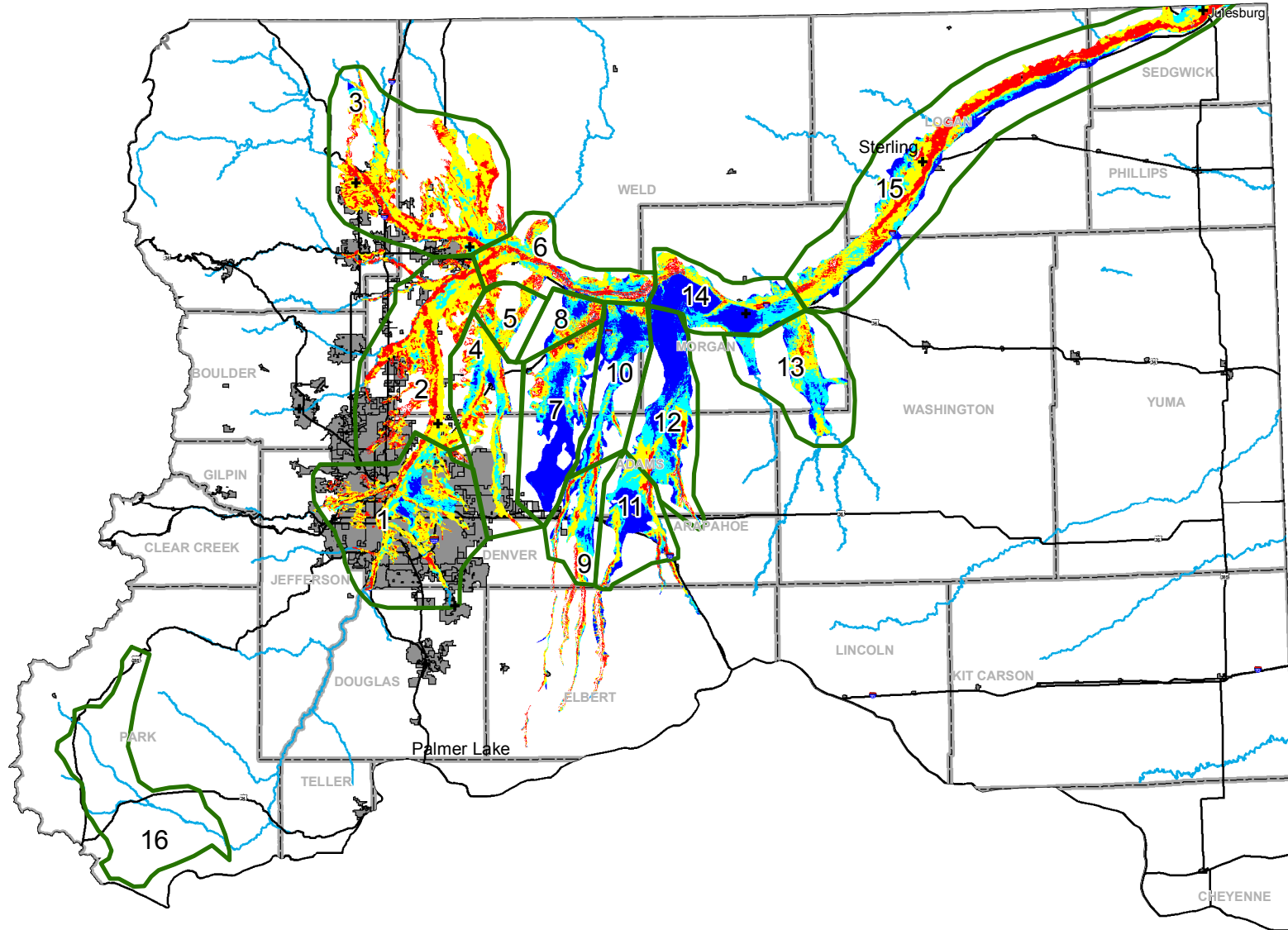
Prepared by: **CDM**



Figure 4

SB06-193 Underground Water Storage Study

South Platte River Basin Depth to Water Table



Source: CDM 2006b



Scale:
1:1,750,000
10 5 0 10 Miles

+ City
Highways
Counties
Subregion

Depth to Water (feet)
0 - 10
10 - 30

30 - 50
> 50
Data unavailable

Colorado Water
Conservation Board

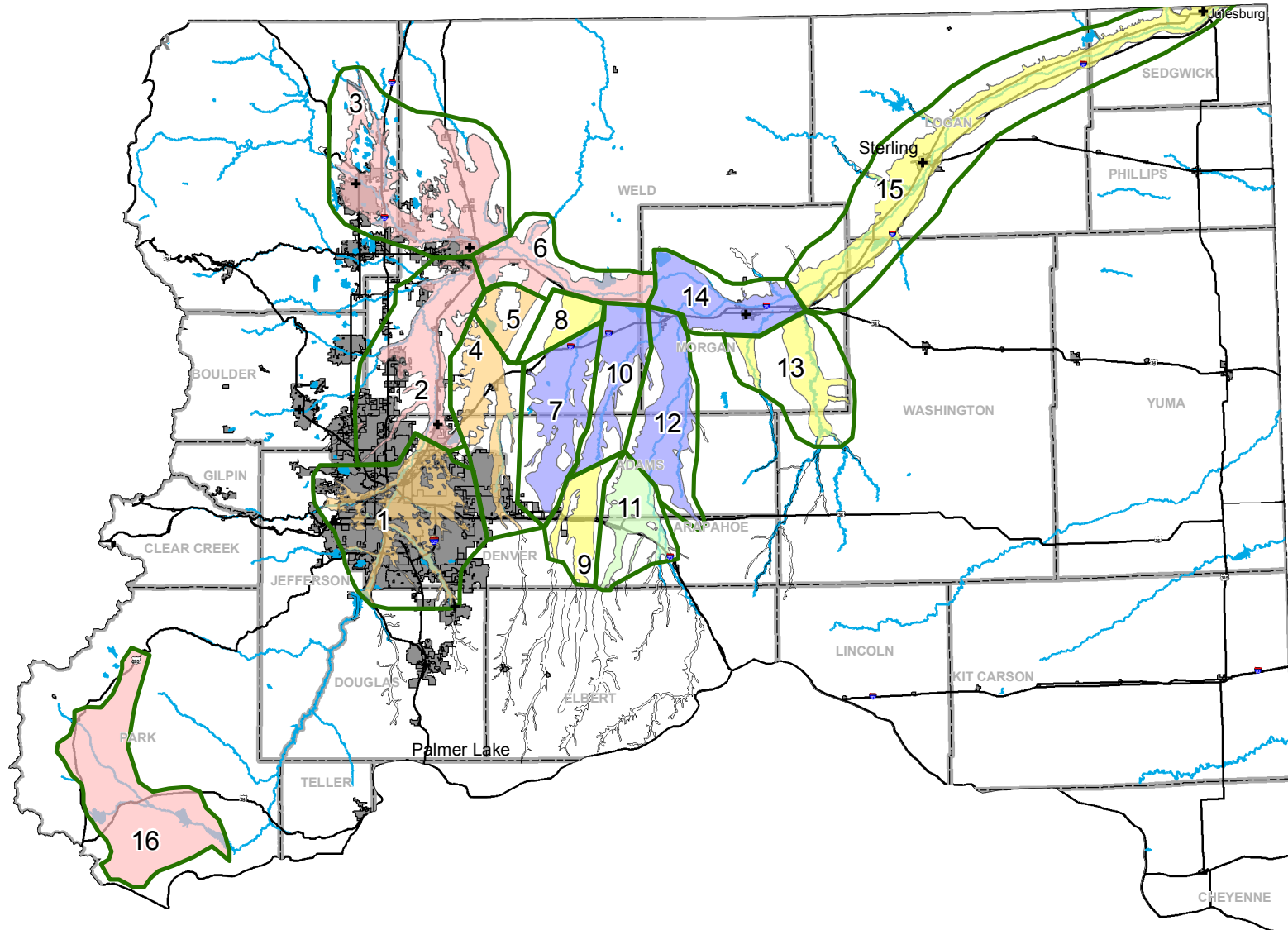
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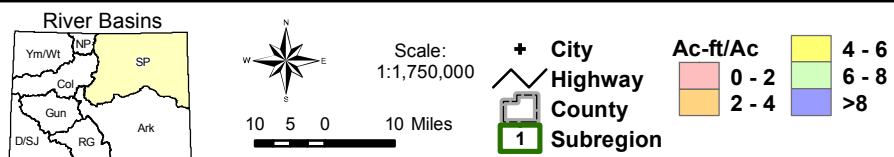
Figure 5

SB06-193 Underground Water Storage Study

South Platte River Basin Alluvial Aquifer Available Storage Capacity



Source: CDM 2006a, b, e; Topper et al. 2004



Colorado Water
Conservation Board

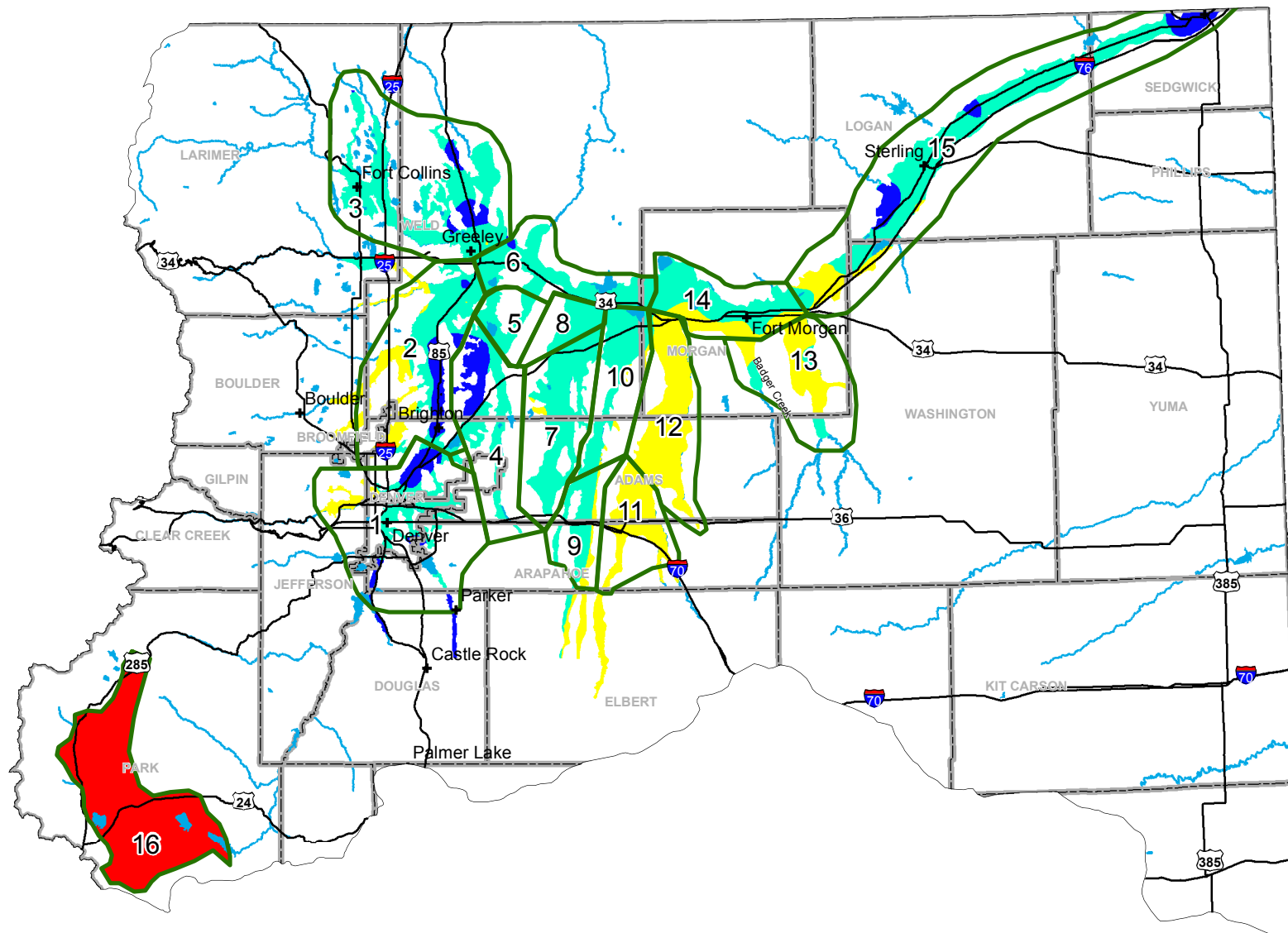
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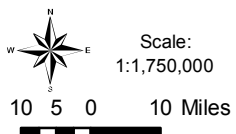
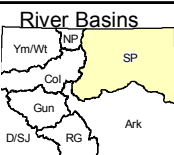
Figure 6

SB06-193 Underground Water Storage Study

South Platte River Basin Alluvial Aquifer Hydraulic Conductivity



Source: CDM 2006a



- + City
- Highway
- County
- 1 Subregion

Hydraulic Conductivity (ft/day)

- 0.1 - 25
- 25 - 50

- 50 - 250
- 250 - 500
- > 500

Colorado Water
Conservation Board

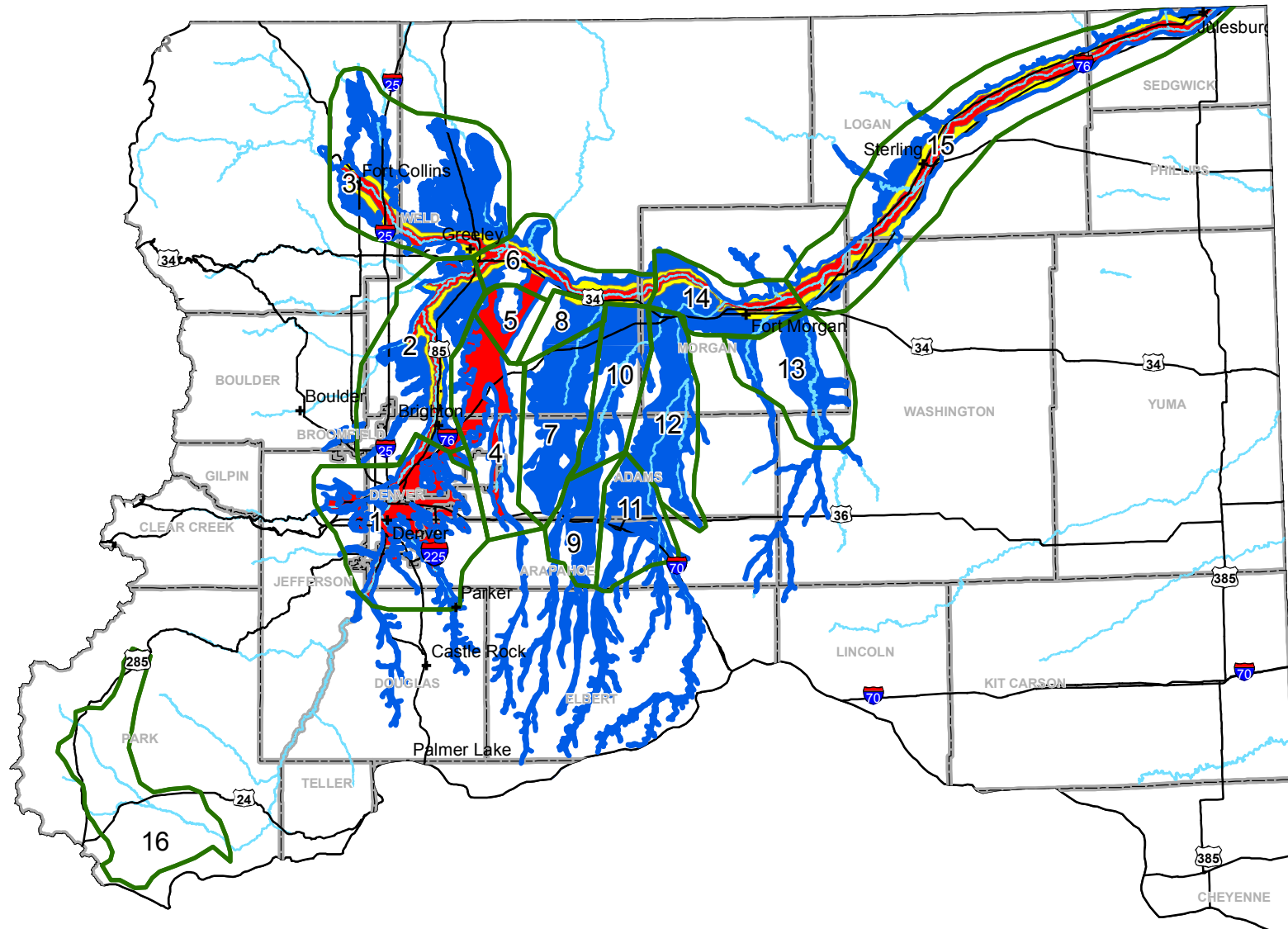
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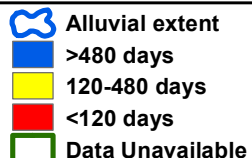
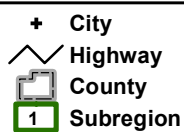
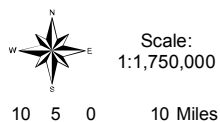
Figure 7

SB06-193 Underground Water Storage Study

South Platte River Basin Alluvial Aquifer Residence Time



Source: Hurr & Schneider 1972 a-f



Colorado Water
Conservation Board

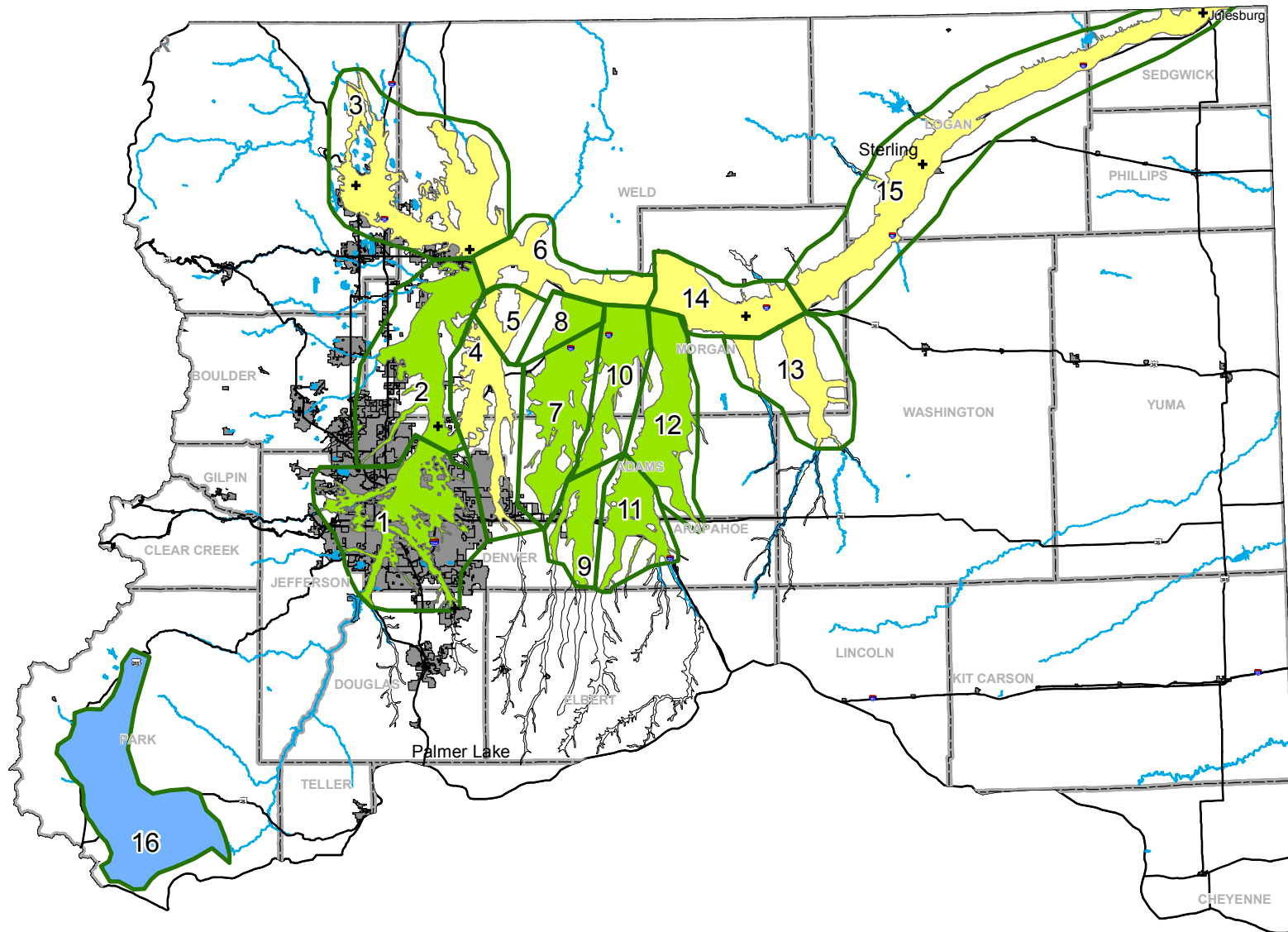
Prepared by: CDM



Figure 8

SB06-193 Underground Water Storage Study

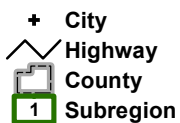
South Platte River Basin Alluvial Aquifer TDS Values



Sources: CDPHE 1998; Topper et al. 2003



Scale:
1:1,750,000



TDS (mg/L)
0 - 250
250 - 500

500 - 1,000
1,000 - 2,000
>2,000

Colorado Water
Conservation Board

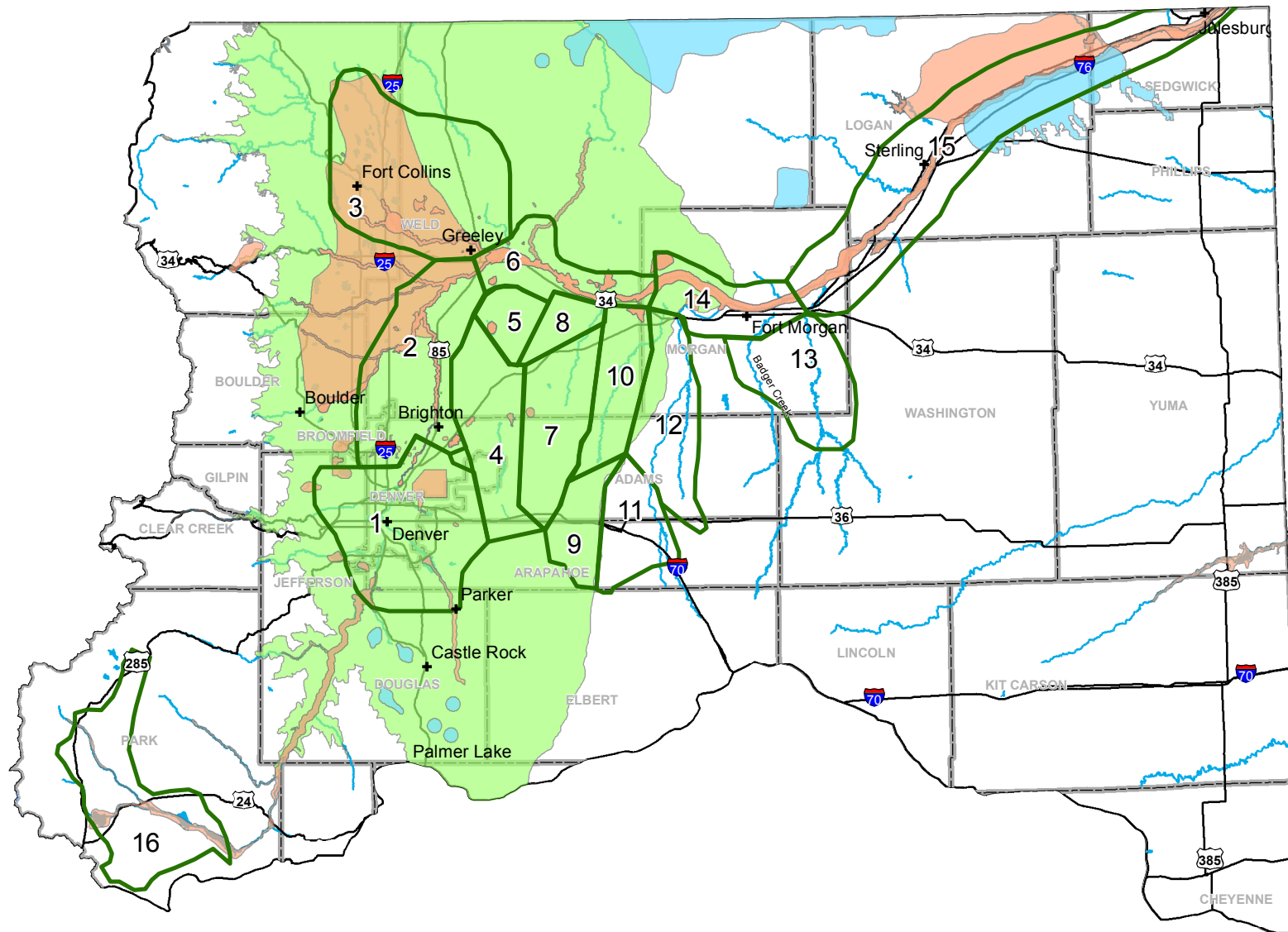
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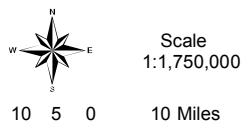
Figure 9

SB06-193 Underground Water Storage Study

South Platte River Basin Potential Habitat Concerns



Sources: CDOW 2006 a, b, d, e



- + City
- Highway
- County
- 1 Subregion

- Bald Eagle Range
- Plains Sharp-Tailed Grouse Range
- Preble's Meadow Jumping Mouse Range

Colorado Water
Conservation Board

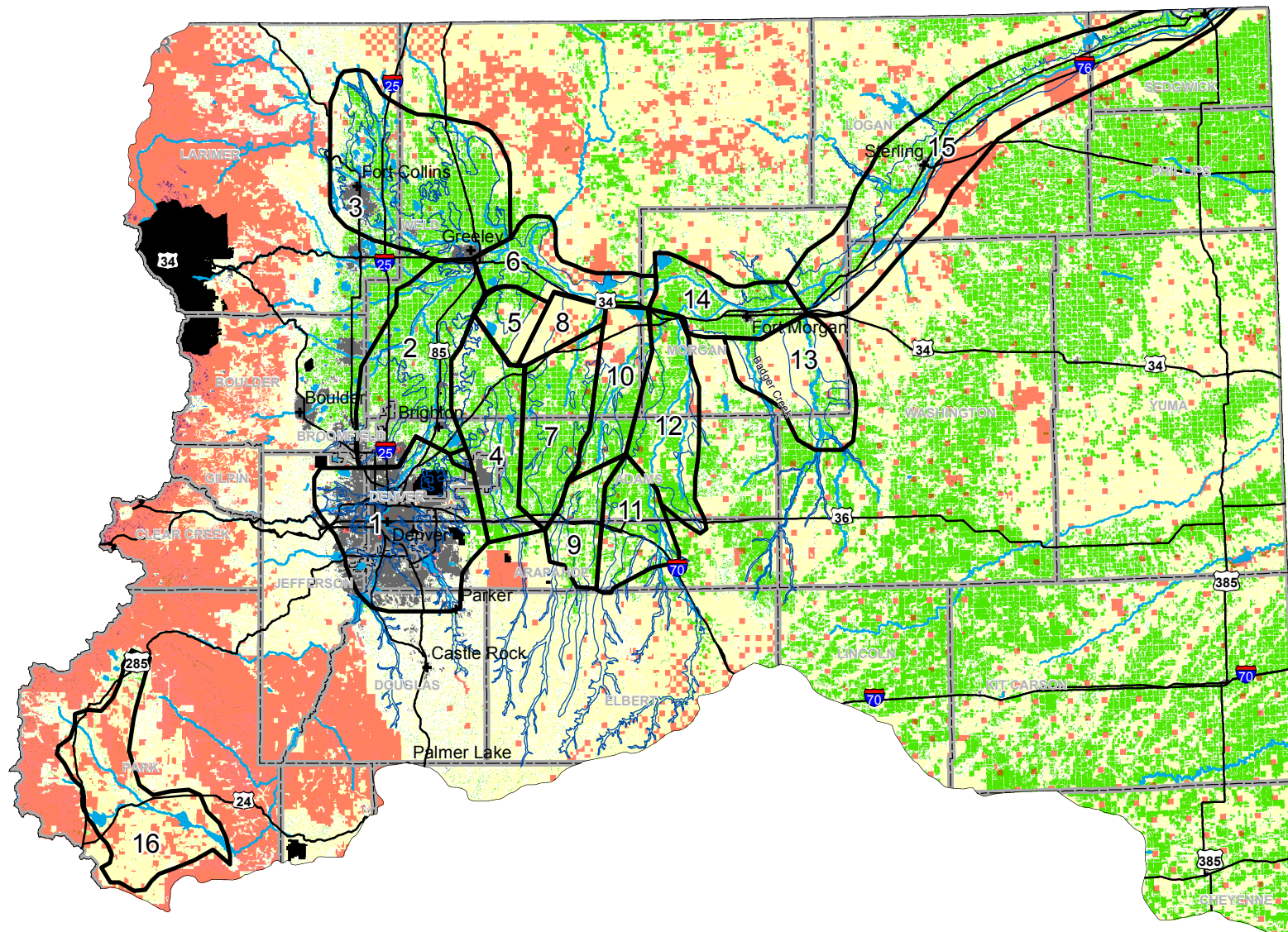
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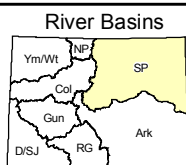
Figure 10

SB06-193 Underground Water Storage Study

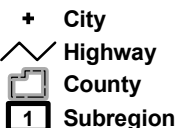
South Platte River Basin Land Use and Ownership



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



Scale:
1:1,750,000



Water
Urban
Native/Rangeland
Agricultural

Potentially Inaccessible Public Lands
Publicly Accessible Lands

Colorado Water
Conservation Board

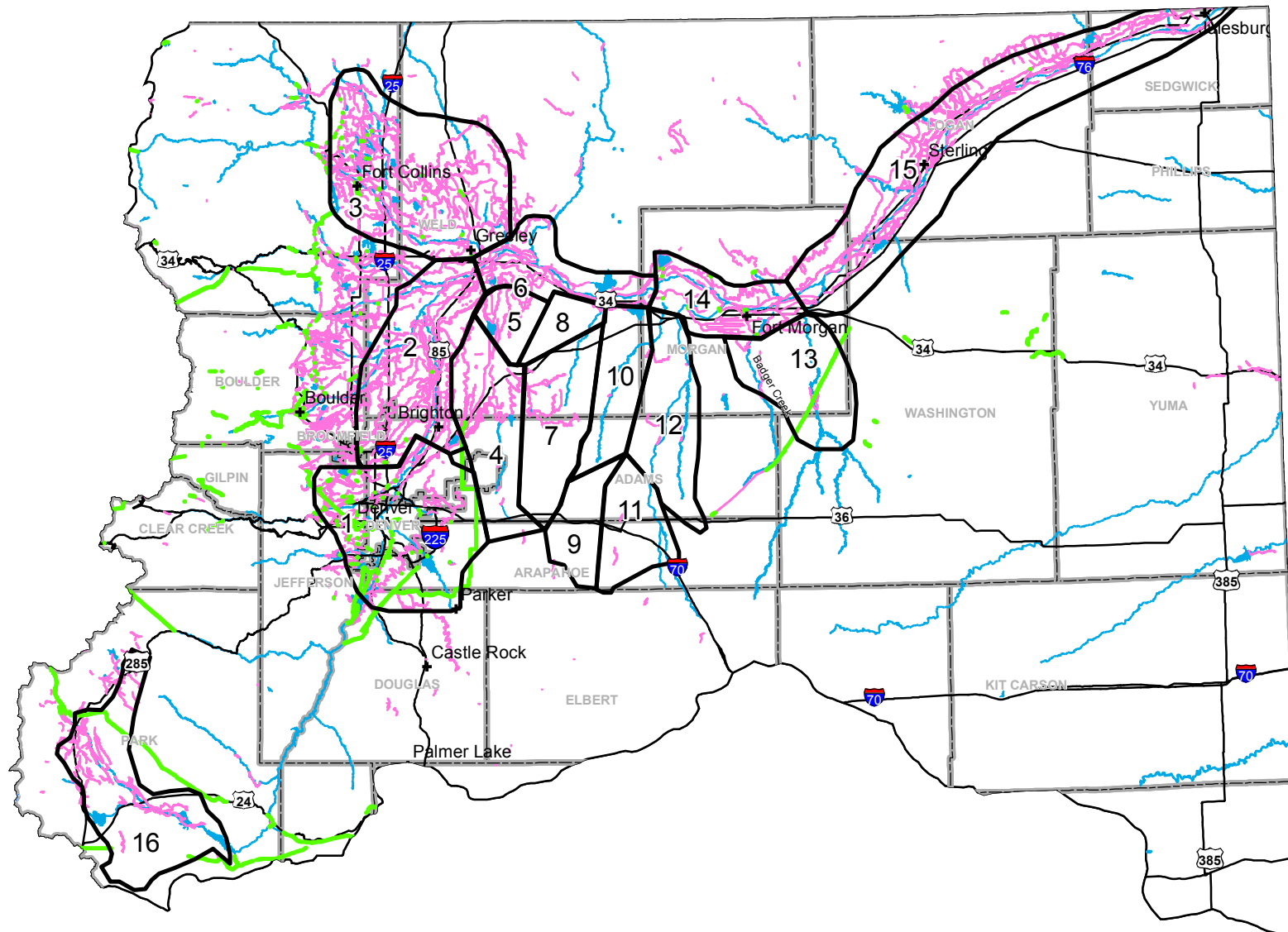
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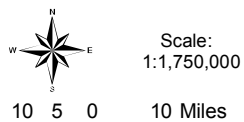
Figure 11

SB06-193 Underground Water Storage Study

South Platte River Basin Existing Infrastructure



Sources: Colorado DWR; USGS 2006 NHD



- + City
- Highway
- County
- 1 Subregion

- Canals and Ditches
- Pipelines and Tunnels

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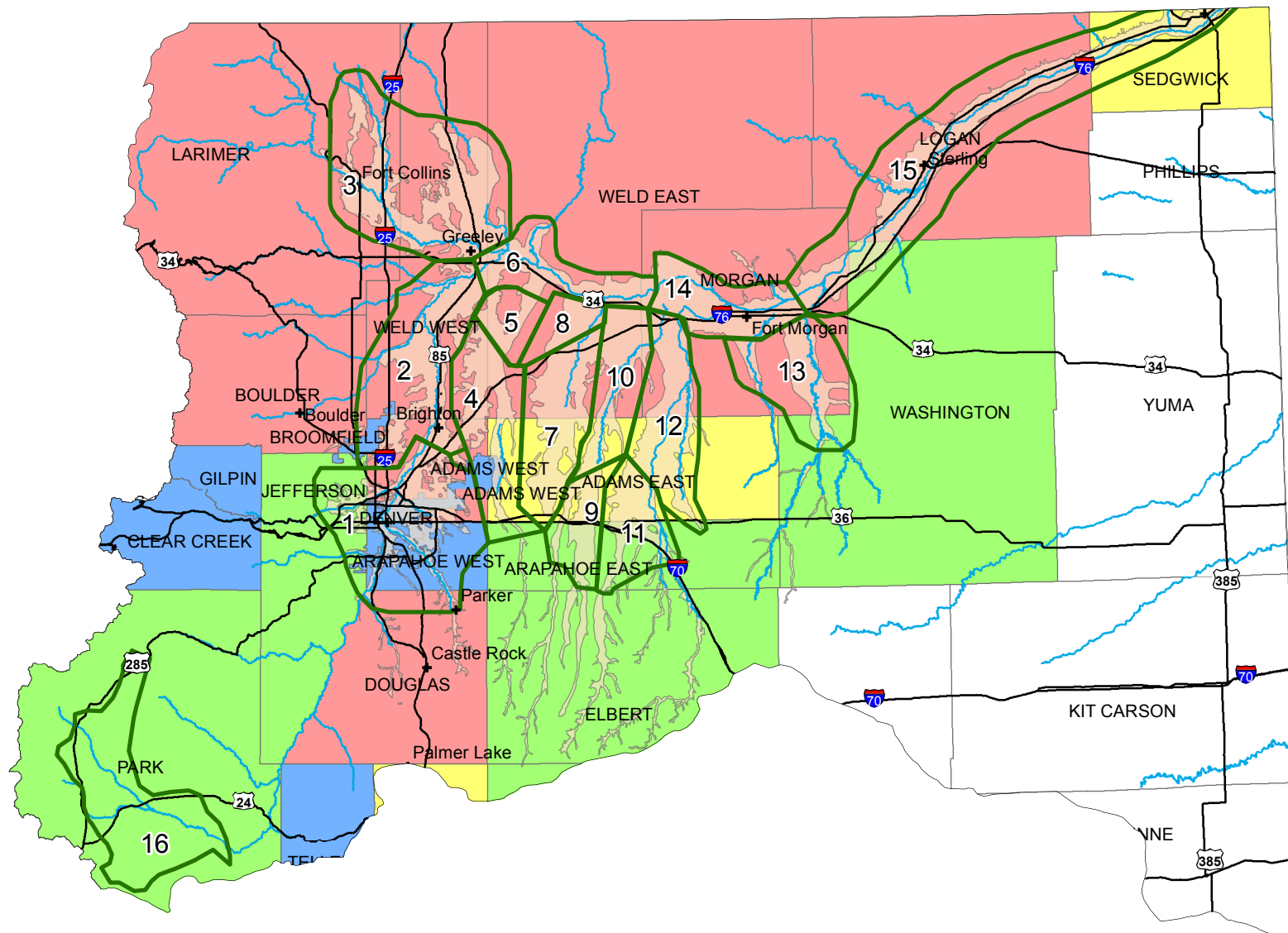
Prepared by: CDM



Figure 12

SB06-193 Underground Water Storage Study

South Platte River Basin Projected Unmet Demand in 2030



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



Scale:
1:1,750,000
0 5 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

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Prepared by: **CDM**



Figure 13