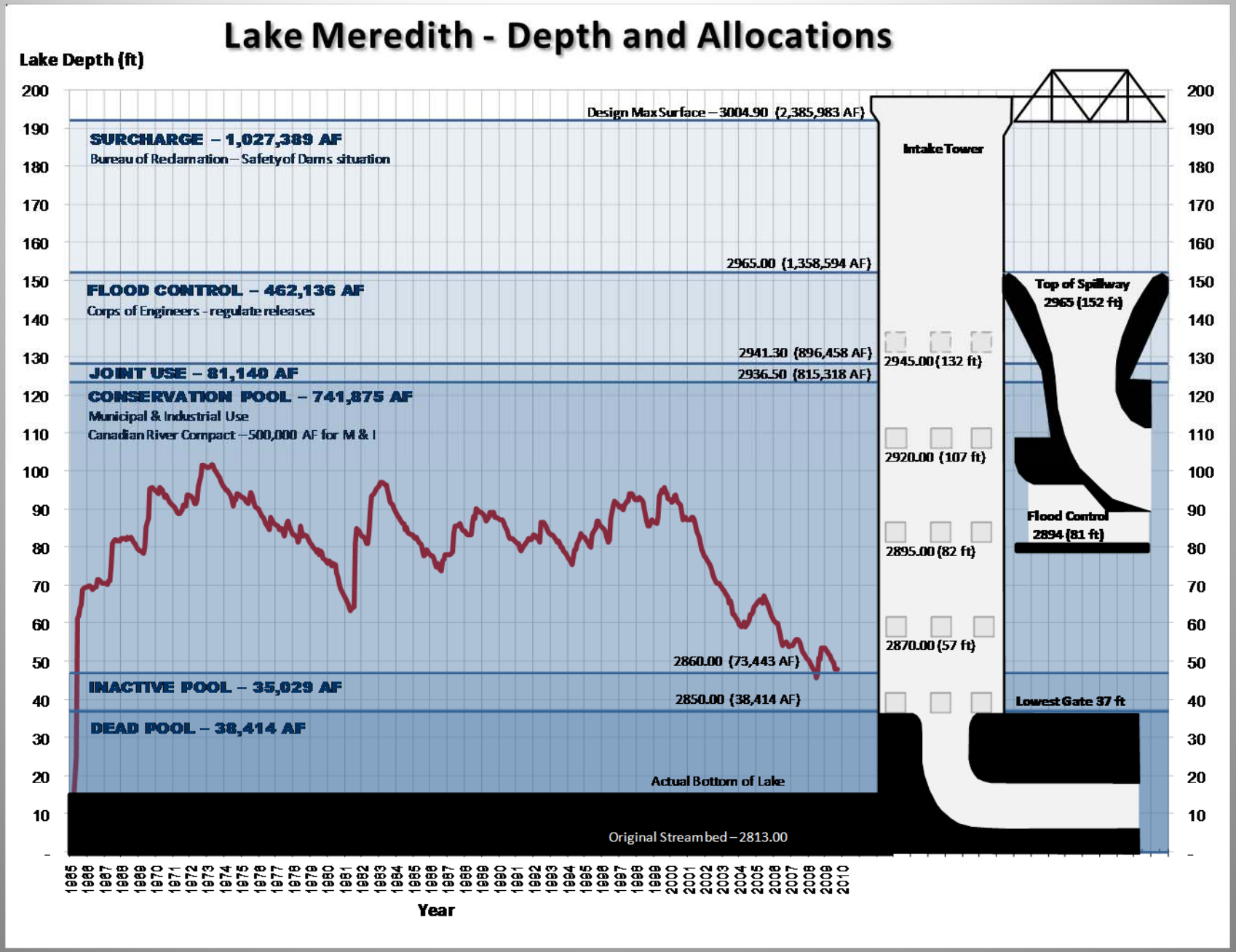
CRMWA Update

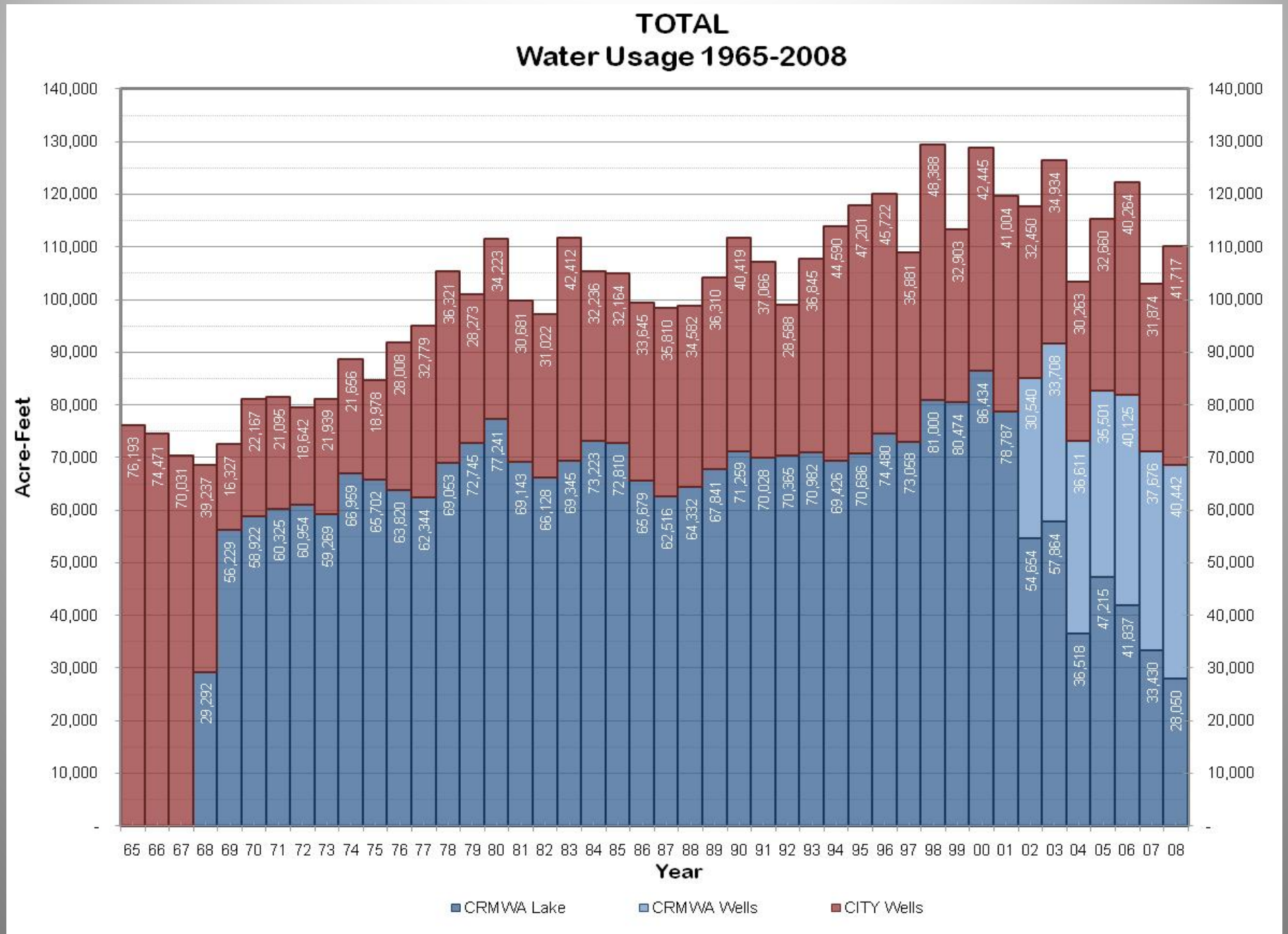
Canadian River Municipal Water Authority

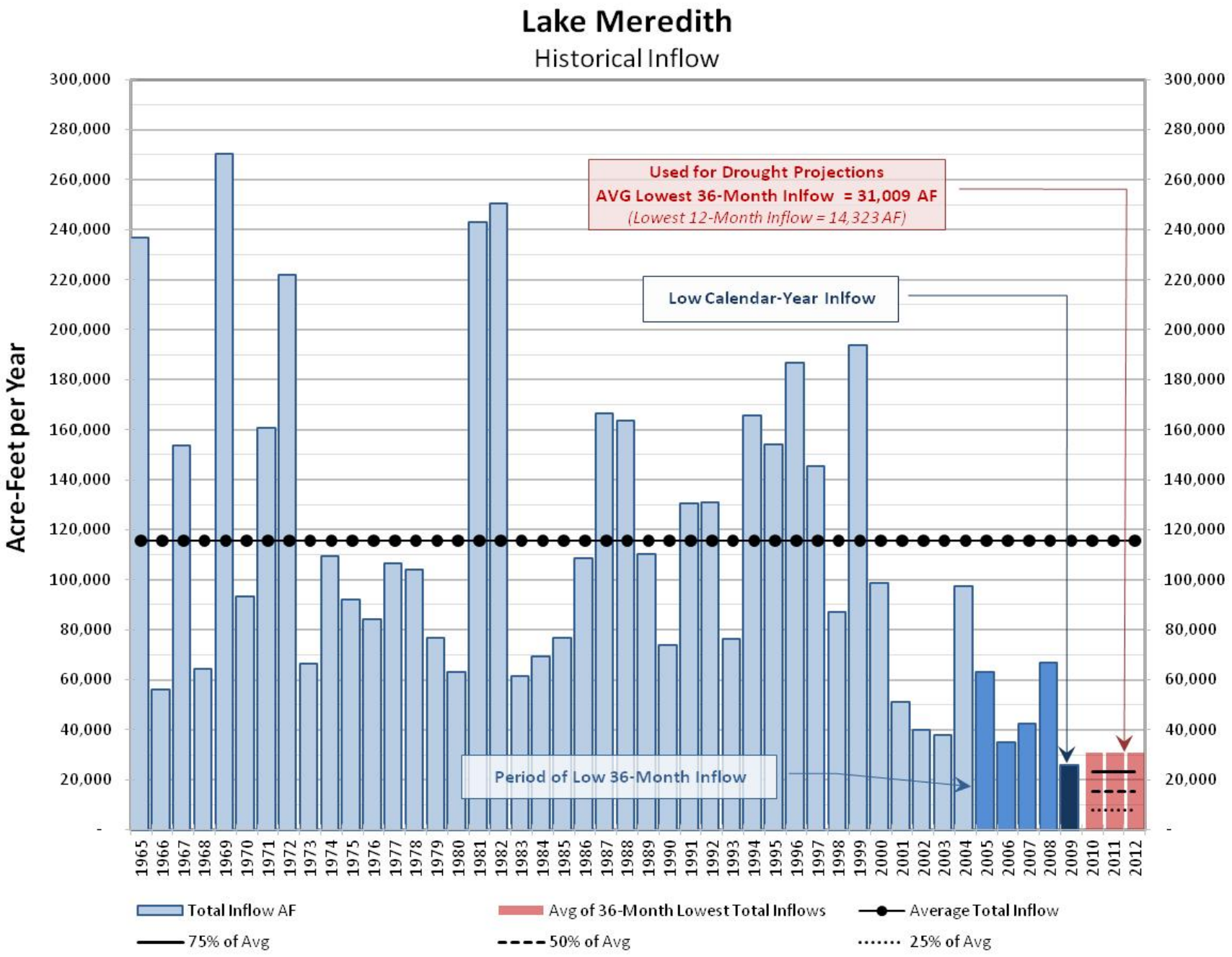
- Lake Meredith
  - Level & Allocations
  - Low Level Pumping
  - Salt Cedar
- Wellfield Expansion

Lake Meredith



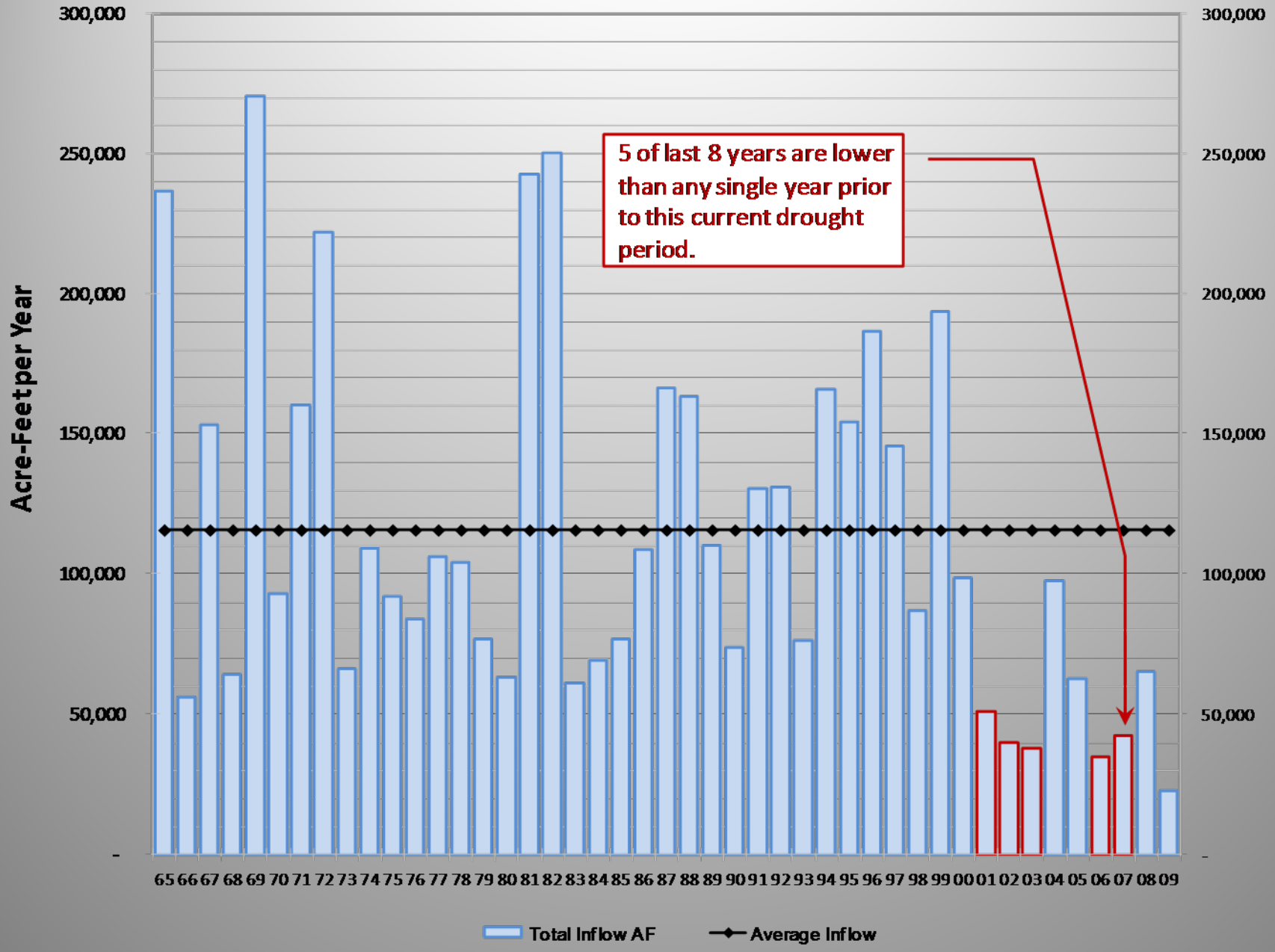
Lake Meredith

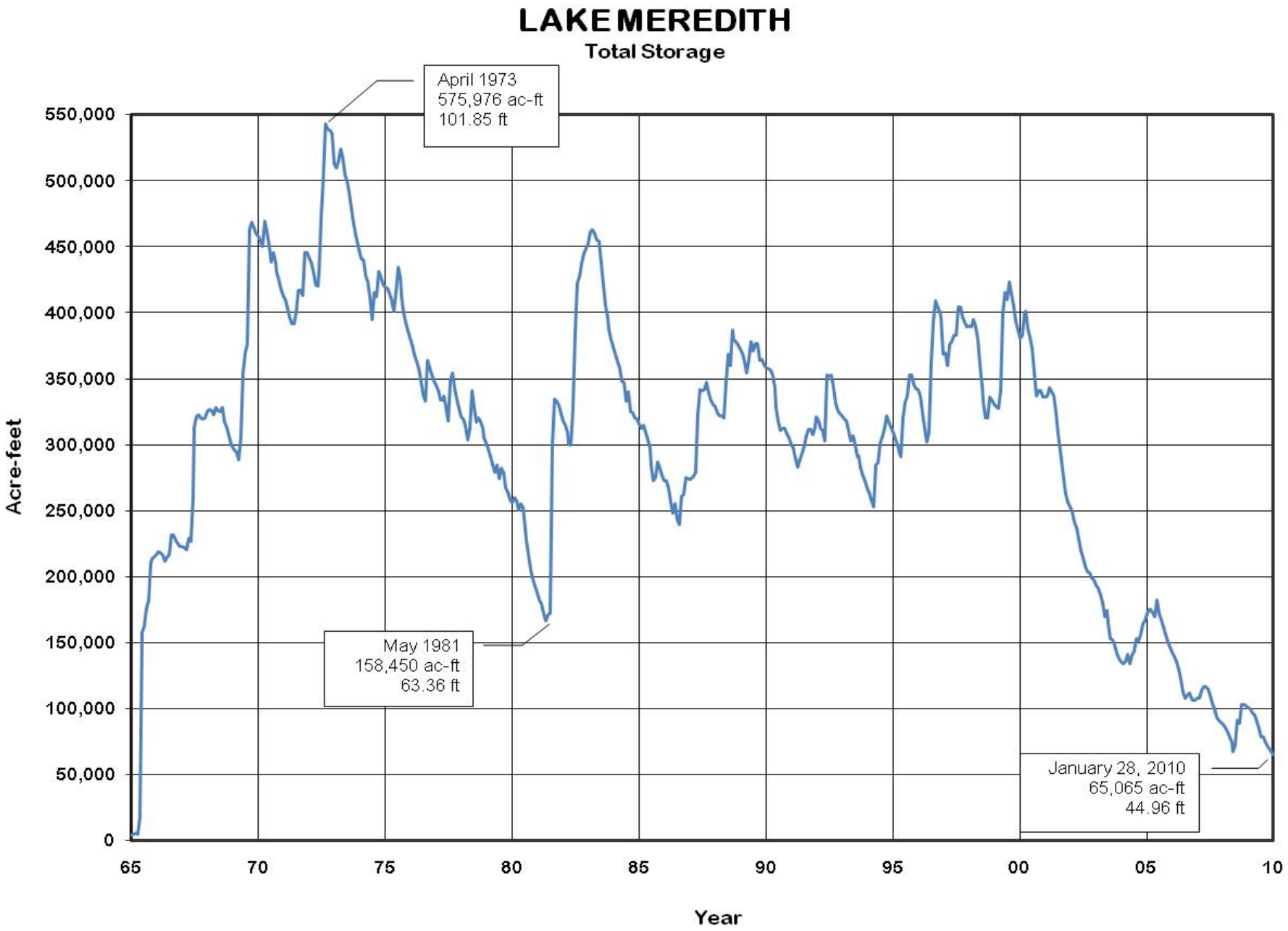


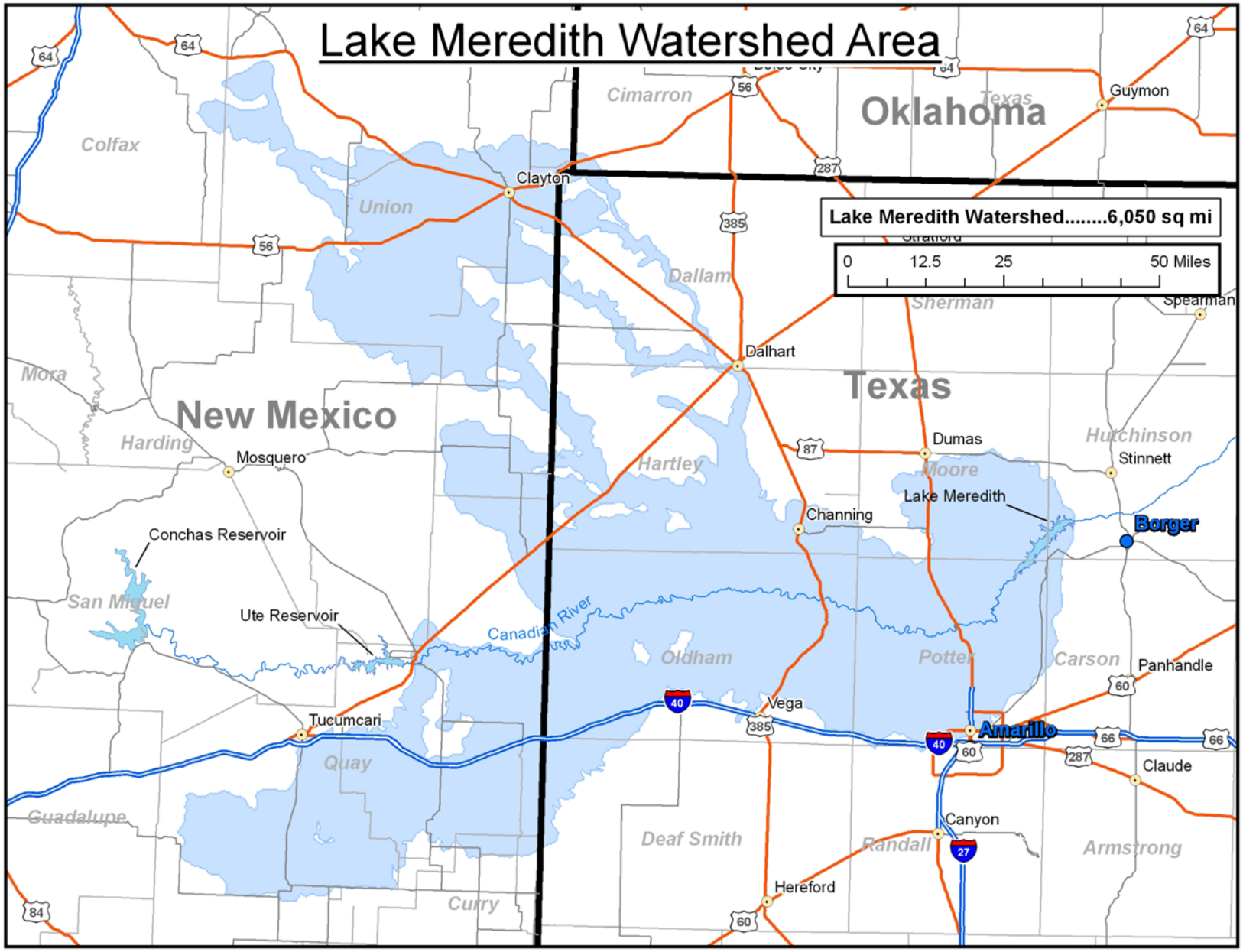

Lake Meredith
Historical Inflow
Acre-Feet per Year
Used for Drought Projections
AVG Lowest 36-Month Inlfow = 31,009 AF
(Lowest 12-Month Inflow = 14,323 AF)
Low Calendar-Year Inlfow
Period of Low 36-Month Inflow
Total Inflow AF
Avg of 36-Month Lowest Total Inflows
Average Total Inflow
75% of Avg
50% of Avg
25% of Avg

LAKE MEREDITH

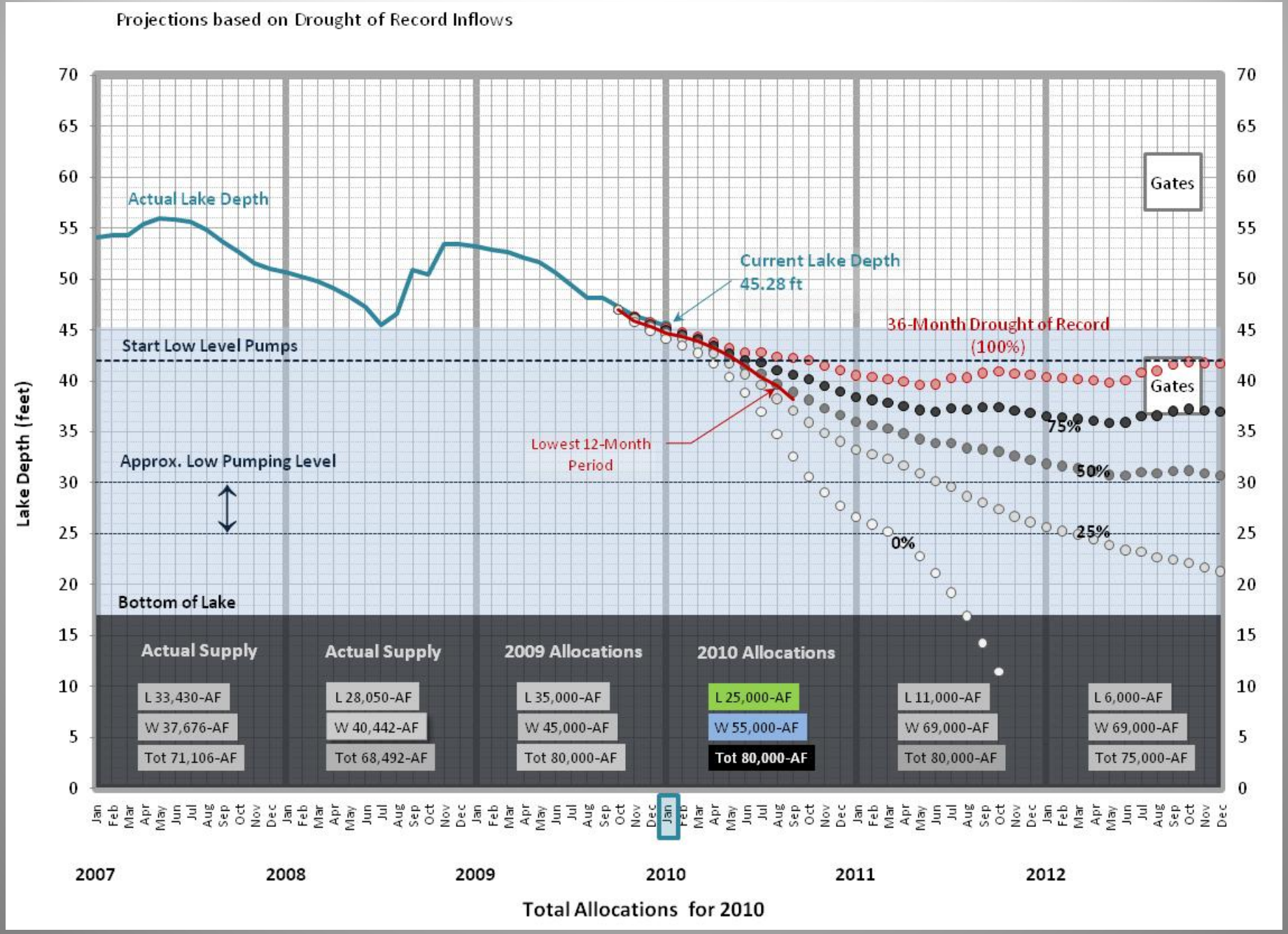
Historical Inflow




LAKE MEREDITH
Total Storage
April 1973
575,976 ac-ft
101.85 ft
May 1981
158,450 ac-ft
63.36 ft
January 28, 2010
65,065 ac-ft
44.96 ft
Acre-feet
550,000
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
65
70
75
80
85
90
95
00
05
10
Year

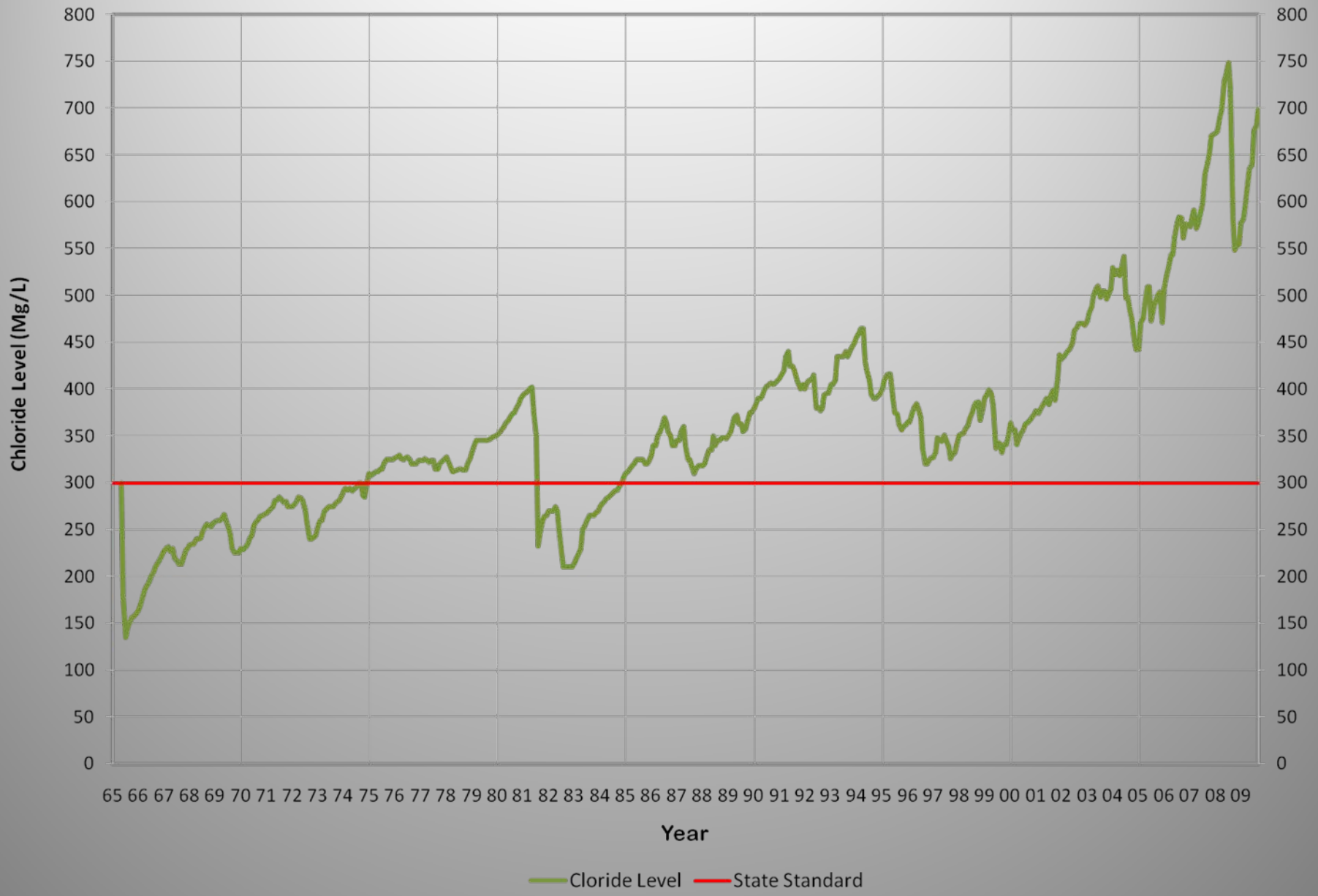

Lake Meredith Watershed Area
Lake Meredith Watershed.....6,050 sq mi
0
12.5
25
50 Miles
Oklahoma
Texas
New Mexico
Cimarron
Colfax
Union
Mora
Harding
San Miguel
Guadalupe
Quay
Curry
Dallam
Sherman
Hartley
Moore
Hutchinson
Oldham
Potter
Carson
Deaf Smith
Randall
Armstrong
Clayton
Guymon
Dalhart
Dumas
Stinnett
Spearman
Mosquero
Channing
Lake Meredith
Borger
Conchas Reservoir
Ute Reservoir
Canadian River
Tucumcari
Vega
Amarillo
Panhandle
Claude
Canyon
Hereford

Lake Meredith – Drought Predictions



LAKE MEREDITH

Chloride Level

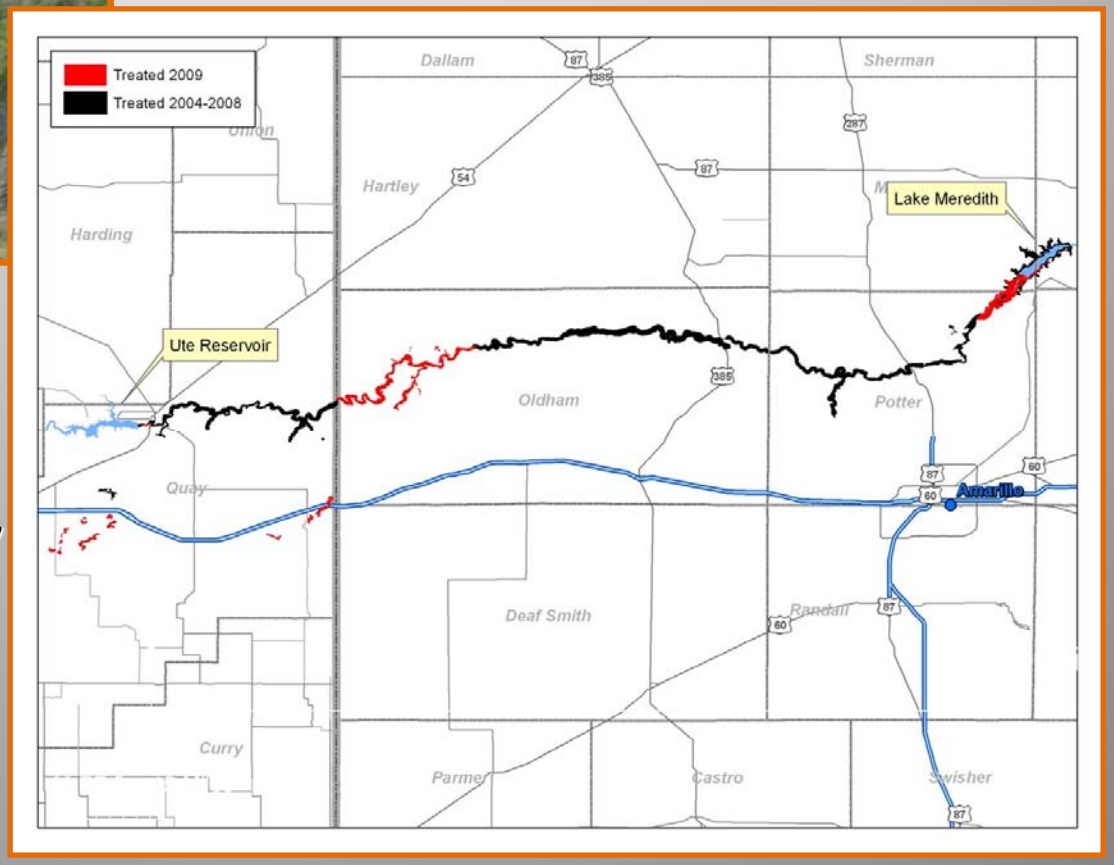


Low Level Pumping

Salt Cedar Eradication

Spraying Salt Cedar

- 160 river miles (Ute to Meredith)
- 21,300 acres ($3.0 million) acres treated in Texas & NM ($1.35 million from State, Feds)
- Estimated 5,000 acres remaining



- One large saltcedar can use up to 200 gallons of water/day
- One acre of saltcedar canuse up to 3 to 7 acre-ft of water/year
- 26,000 acres of Salt Cedar
- 45 billion gallons - Canadian River
- Total City Usage ~ 42 billion gals
- Total Cost ~ $ 3.5 million

Understory of untreated saltcedar forest

1 year after treatment. Annuals beginning to come back

John C. Williams Wellfield & Aqueduct

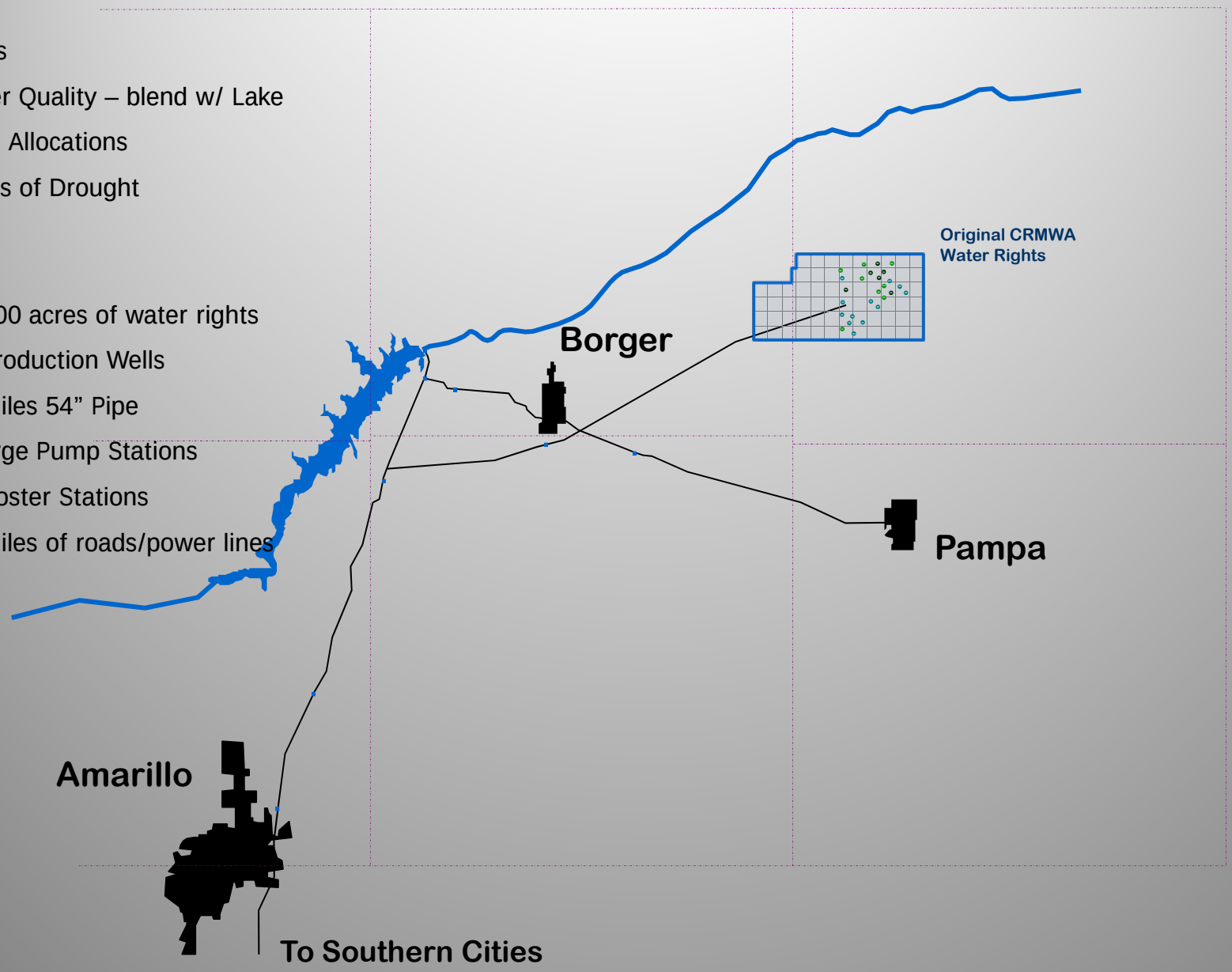
Canadian River Municipal Water Authority

Benefits

- Water Quality – blend w/ Lake
- More Allocations
- Times of Drought

Project

- 42,000 acres of water rights
- 27 Production Wells
- 36 miles 54” Pipe
- 2 Large Pump Stations
- 2 Booster Stations
- 40 miles of roads/power lines



John C. Williams Wellfield & Aqueduct

Canadian River Municipal Water Authority

Pump Station 21

- 3 – 2750 Hp Pumps/Motors
- Approx 40,000 gallons/minute
- 2 – 3 Million Gallon Tanks

Typical Well

- 27 Production Wells
- Avg Capacity 1,400 gpm
- Max 3,000 gpm
- Avg Casing Diameter 18-inches
- Avg Pump Depth 457 feet
- Motor sizes 100-500 Hp
- Total Production 50,000 acre-feet @ 100% operation

CRMWA

Water Rights - Roberts County

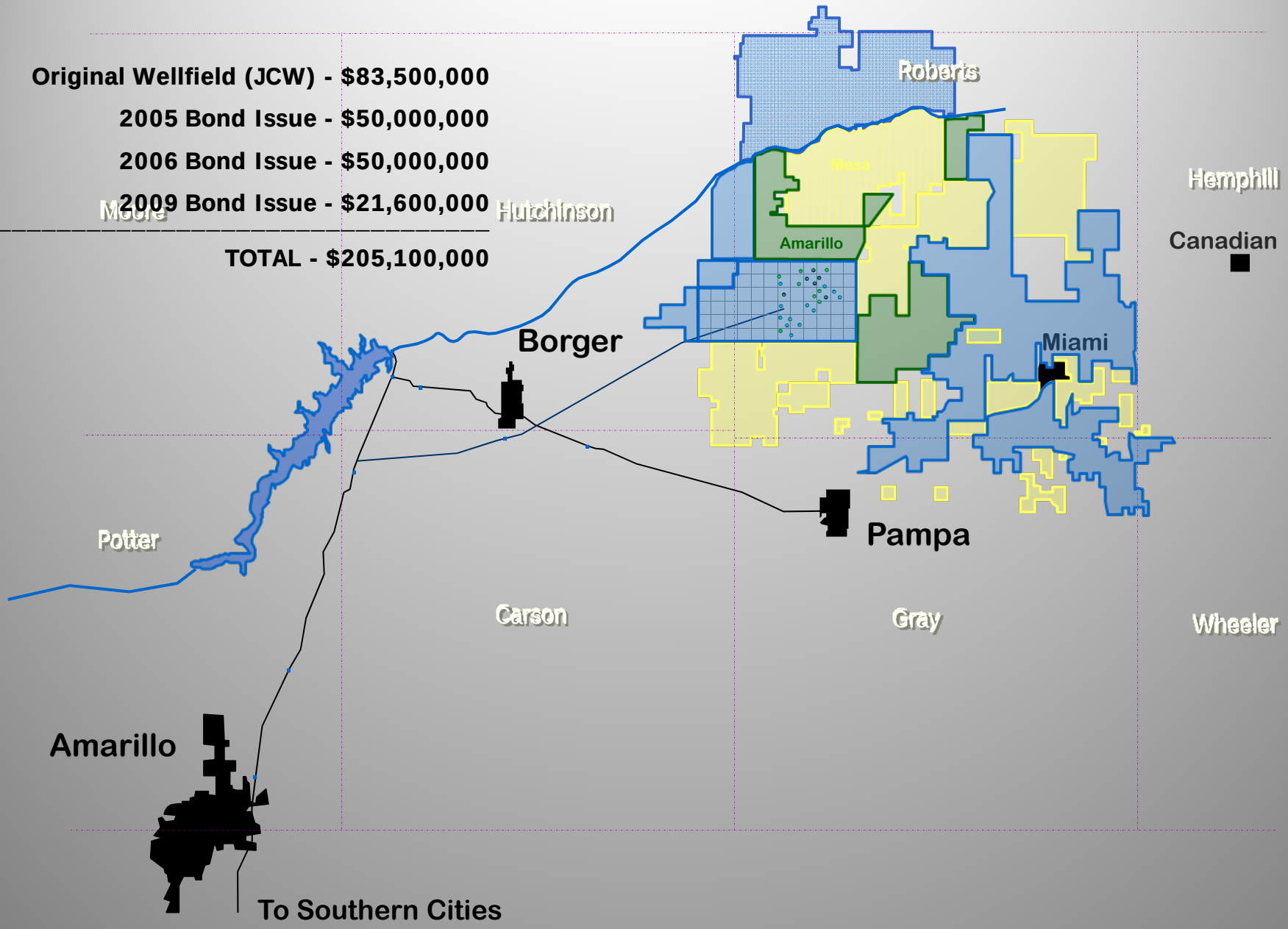
Original Wellfield (JCW) - $83,500,000

2005 Bond Issue - $50,000,000

2006 Bond Issue - $50,000,000

2009 Bond Issue - $21,600,000

TOTAL - $205,100,000



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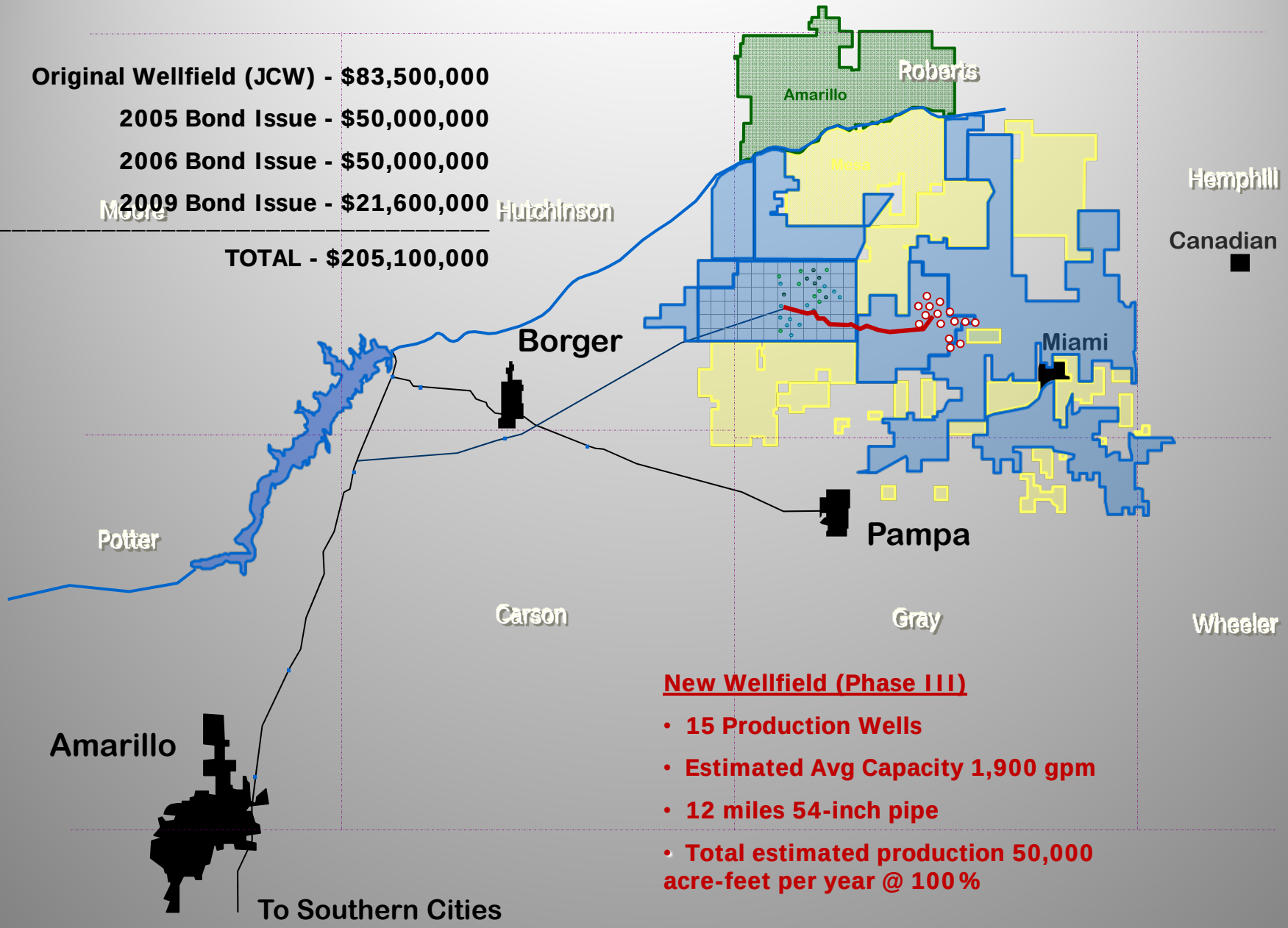
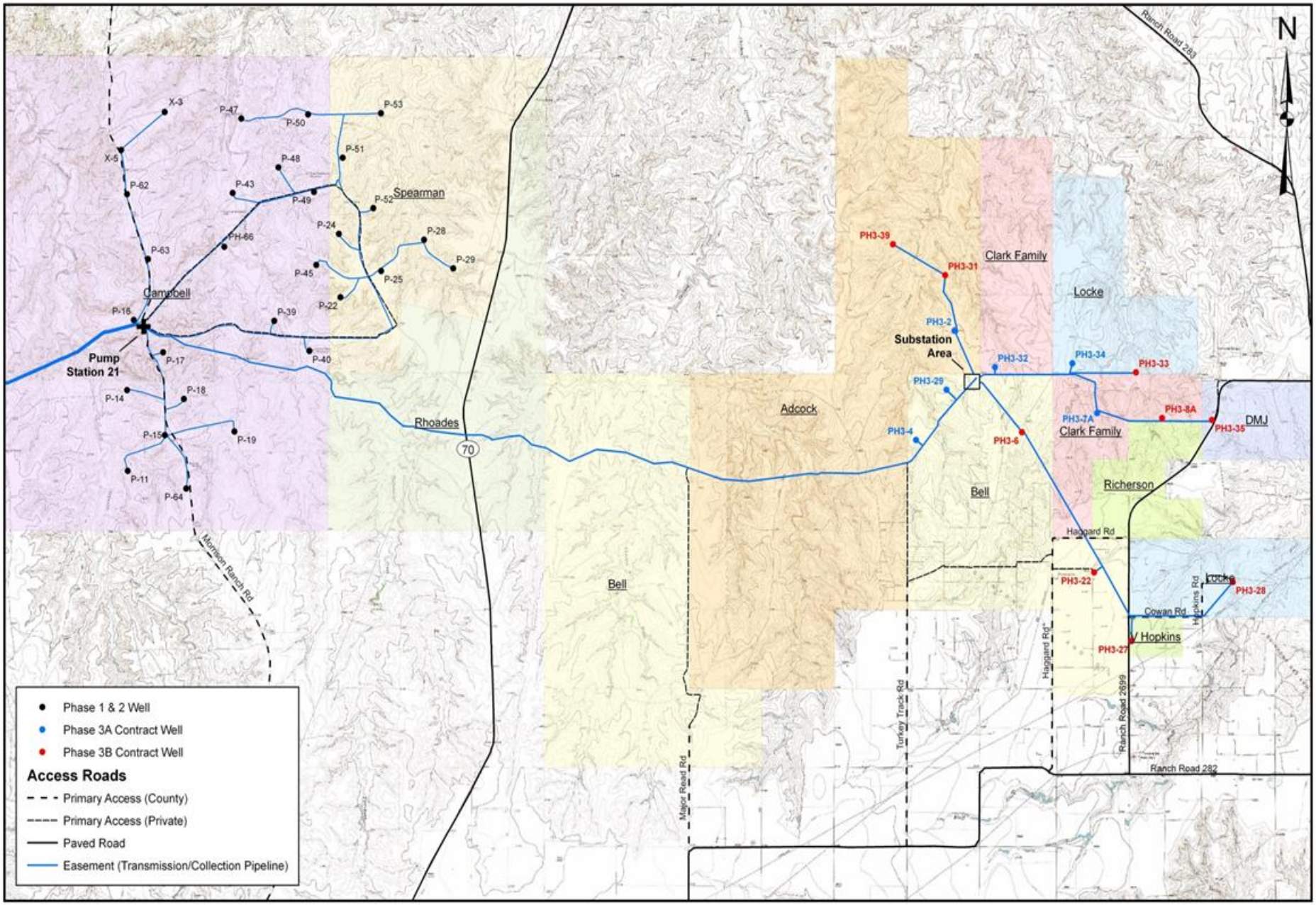


New Wellfield (Phase III)

- 15 Production Wells
- Estimated Avg Capacity 1,900 gpm
- 12 miles 54-inch pipe
- Total estimated production 50,000 acre-feet per year @ 100%


N
Ranch Road 283
X-3
P-47
P-50
P-53
X-5
P-51
P-48
P-62
P-43
P-49
P-52
Spearman
P-24
P-28
PH-66
P-63
P-29
P-45
P-25
Campbell
P-22
P-16
P-39
Pump
Station 21
P-17
P-40
P-14
P-18
P-15
P-19
P-11
P-64
Morrison Ranch Rd
Rhoades
70
Adcock
Bell
Bell
PH3-39
PH3-31
Clark Family
Locke
PH3-2
Substation
Area
PH3-32
PH3-34
PH3-33
PH3-29
PH3-7A
PH3-8A
DMJ
PH3-35
Clark Family
PH3-4
PH3-6
Richerson
Haggard Rd
PH3-22
Locke
PH3-28
Cowan Rd
Hopkins Rd
V Hopkins
PH3-27
Haggard Rd
Turkey Track Rd
Ranch Road 2899
Ranch Road 282
Major Road Rd
Phase 1 & 2 Well
Phase 3A Contract Well
Phase 3B Contract Well
Access Roads
Primary Access (County)
Primary Access (Private)
Paved Road
Easement (Transmission/Collection Pipeline)

WRIGHT
450D

WRIGHT
CONSTRUCTION COMPANY
850D

WHITEMAN

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