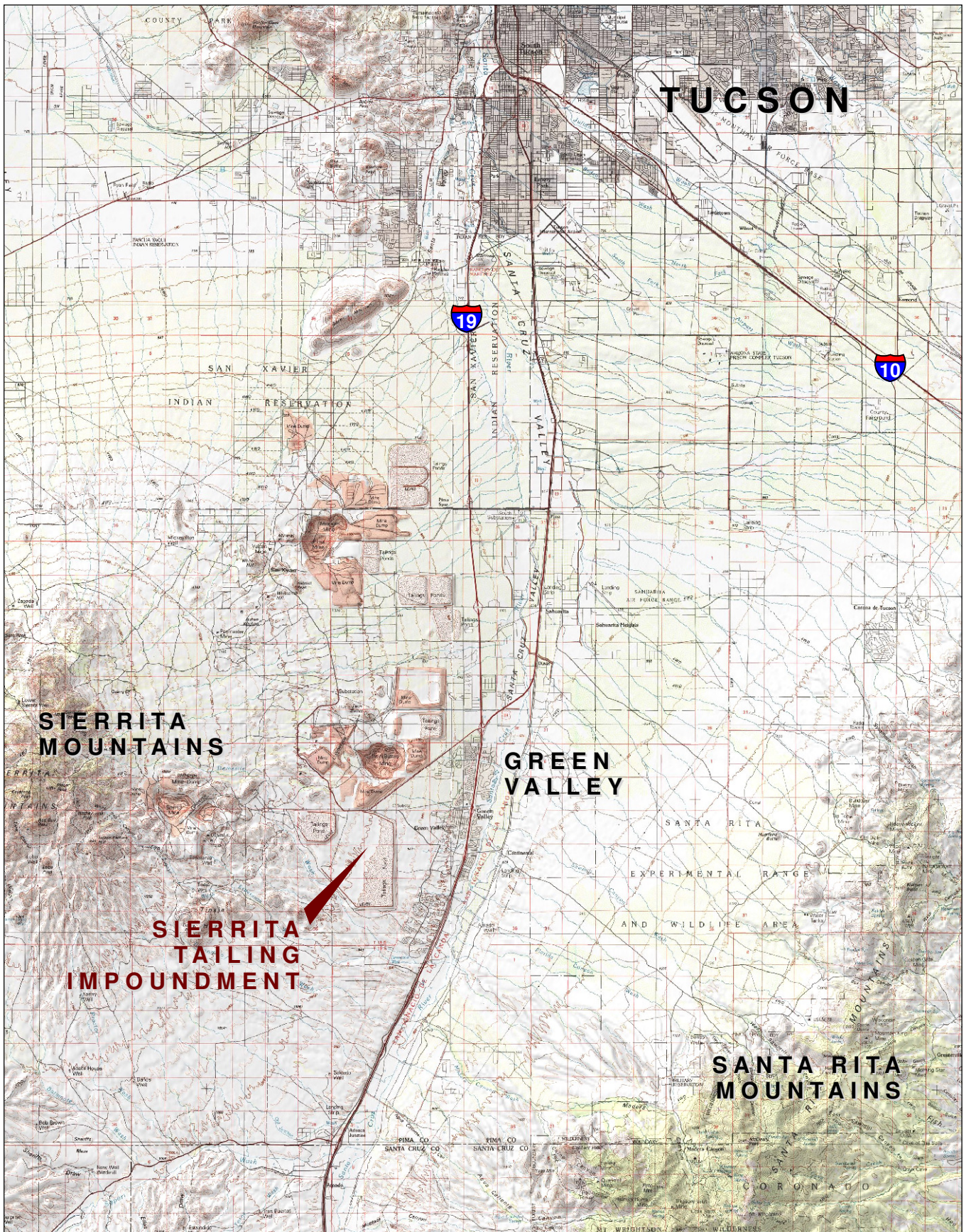


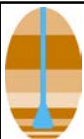
## FIGURES





0 10,000 20,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

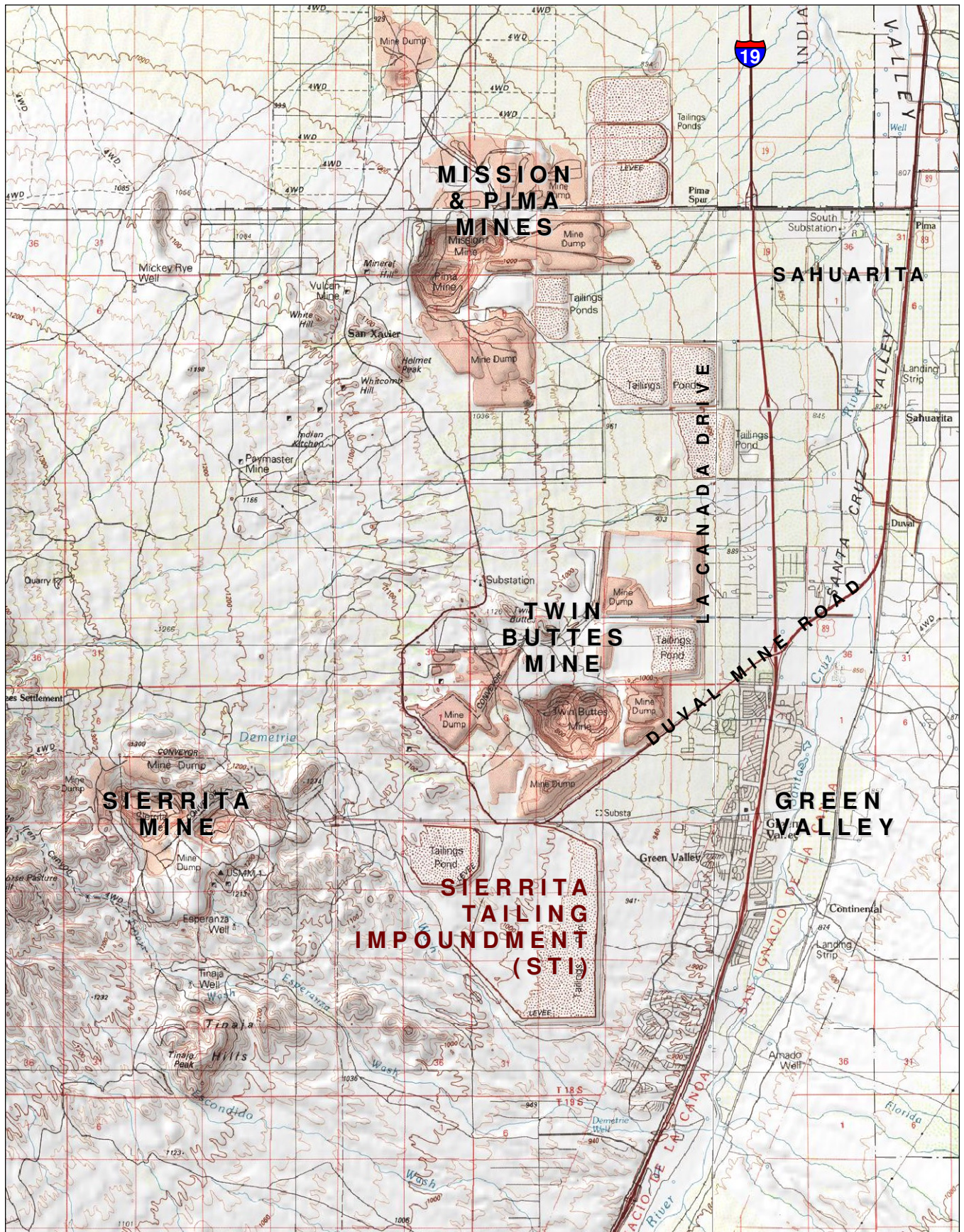


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#### REGIONAL LOCATION MAP

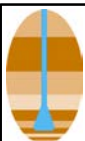
Approved	Date	Author	Date	File Name	Figure
JRN	03/03/08	RAM	03/03/08	7830001G	1





0 5,000 10,000 Feet

PROJECTION:  
UTM Zone12N NAD83



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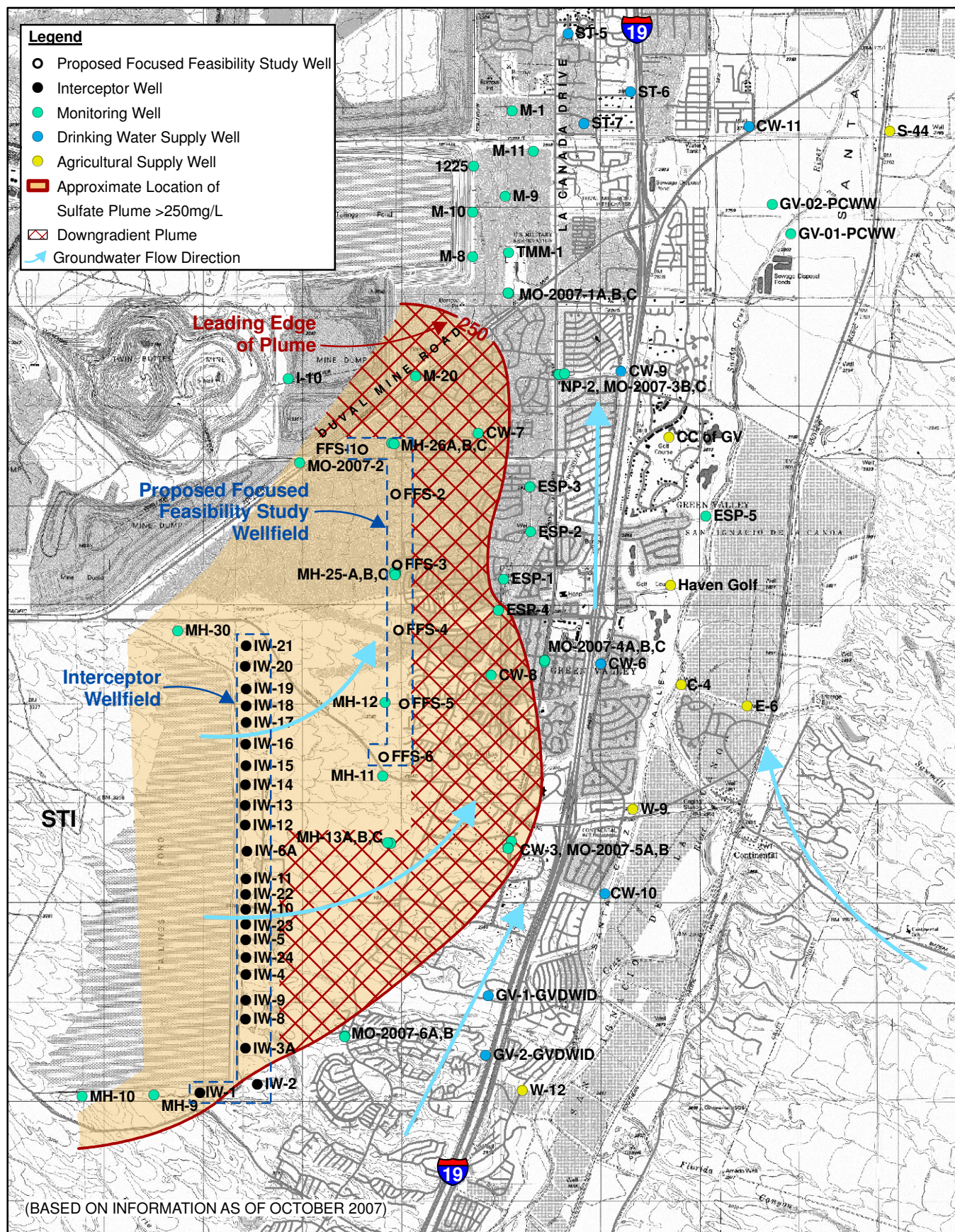
#### STI AND GREEN VALLEY

Approved	Date	Author	Date	File Name	Figure
JRN	09/17/08	RAM	09/17/08	7830002G	2



# Legend

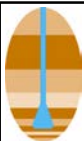
- Proposed Focused Feasibility Study Well
- Interceptor Well
- Monitoring Well
- Drinking Water Supply Well
- Agricultural Supply Well
- ▭ Approximate Location of Sulfate Plume >250mg/L
- ▭ Downgradient Plume
- Groundwater Flow Direction



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

N



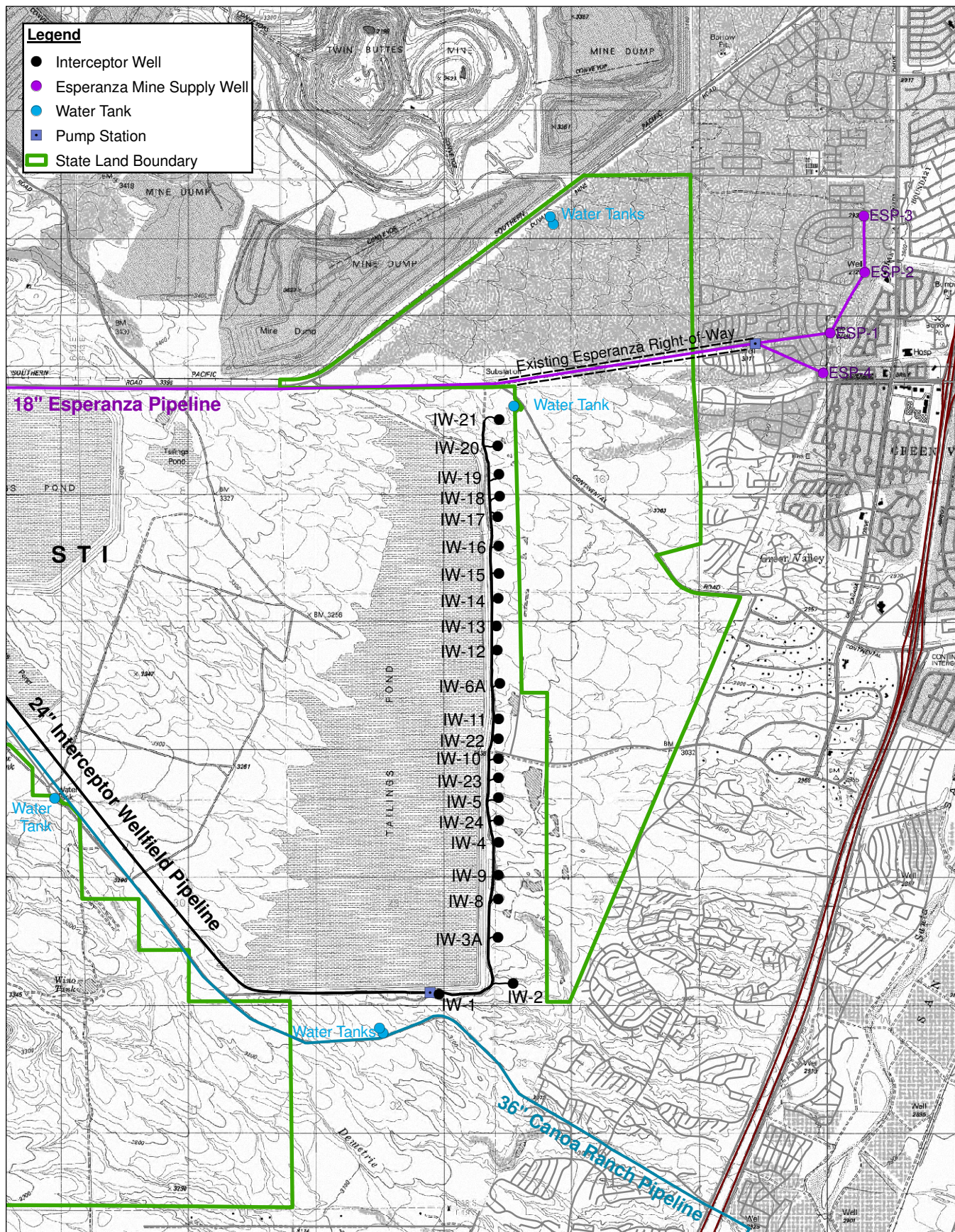
**HYDRO  
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CHEM, INC.**

## LOCATION OF THE SULFATE PLUME

Approved	Date	Author	Date	File Name	Figure
JRN	09/17/08	RAM	09/17/08	7831028G	3

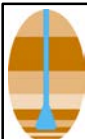


- Legend**
- Interceptor Well
  - Esperanza Mine Supply Well
  - Water Tank
  - Pump Station
  - ▭ State Land Boundary



0 2,000 4,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

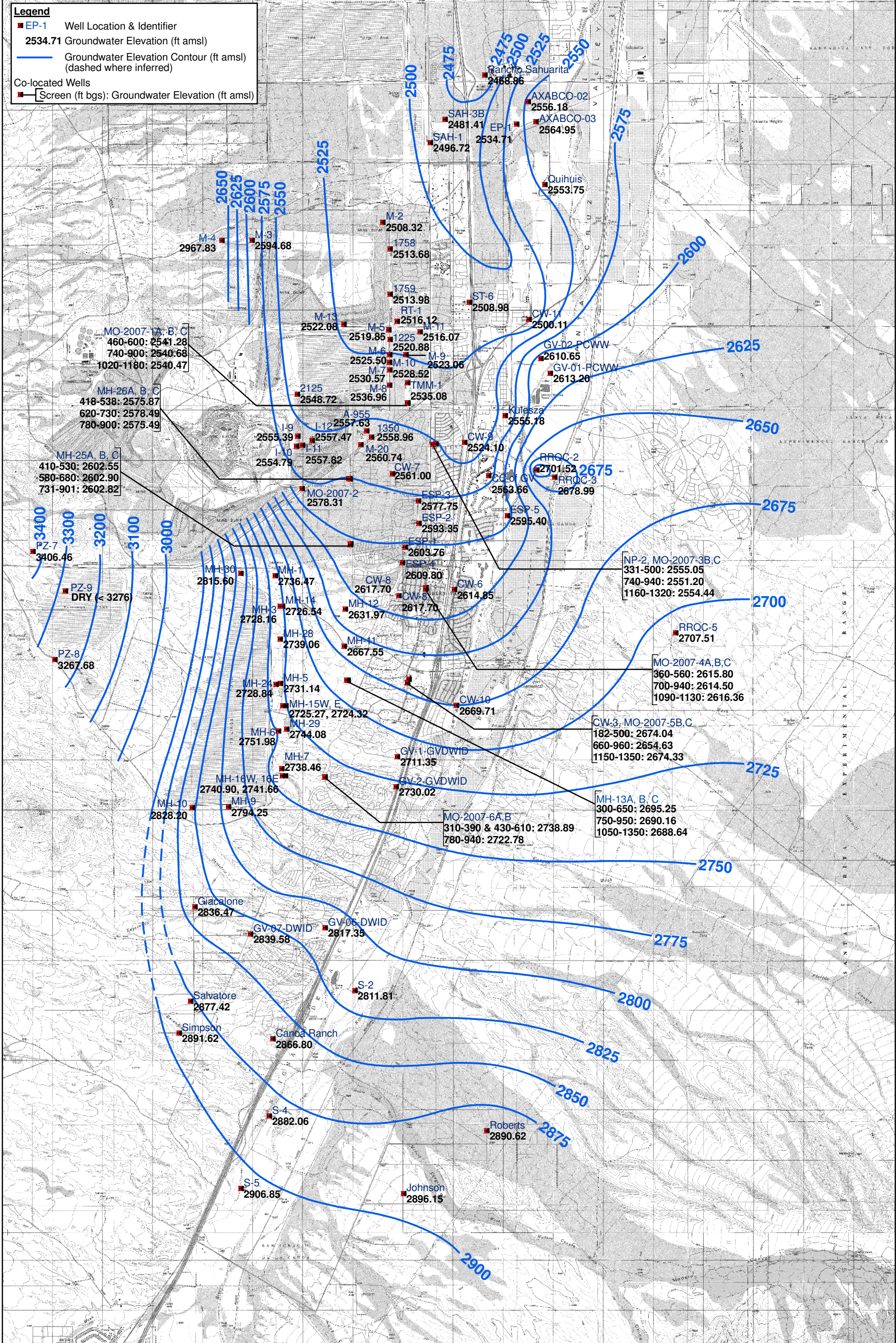


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**INTERCEPTOR WELLFIELD AND SIERRITA PIPELINES**

Approved	Date	Author	Date	File Name	Figure
JRN	10/10/08	RAM	10/10/08	7830031G	4





0 3,000 6,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

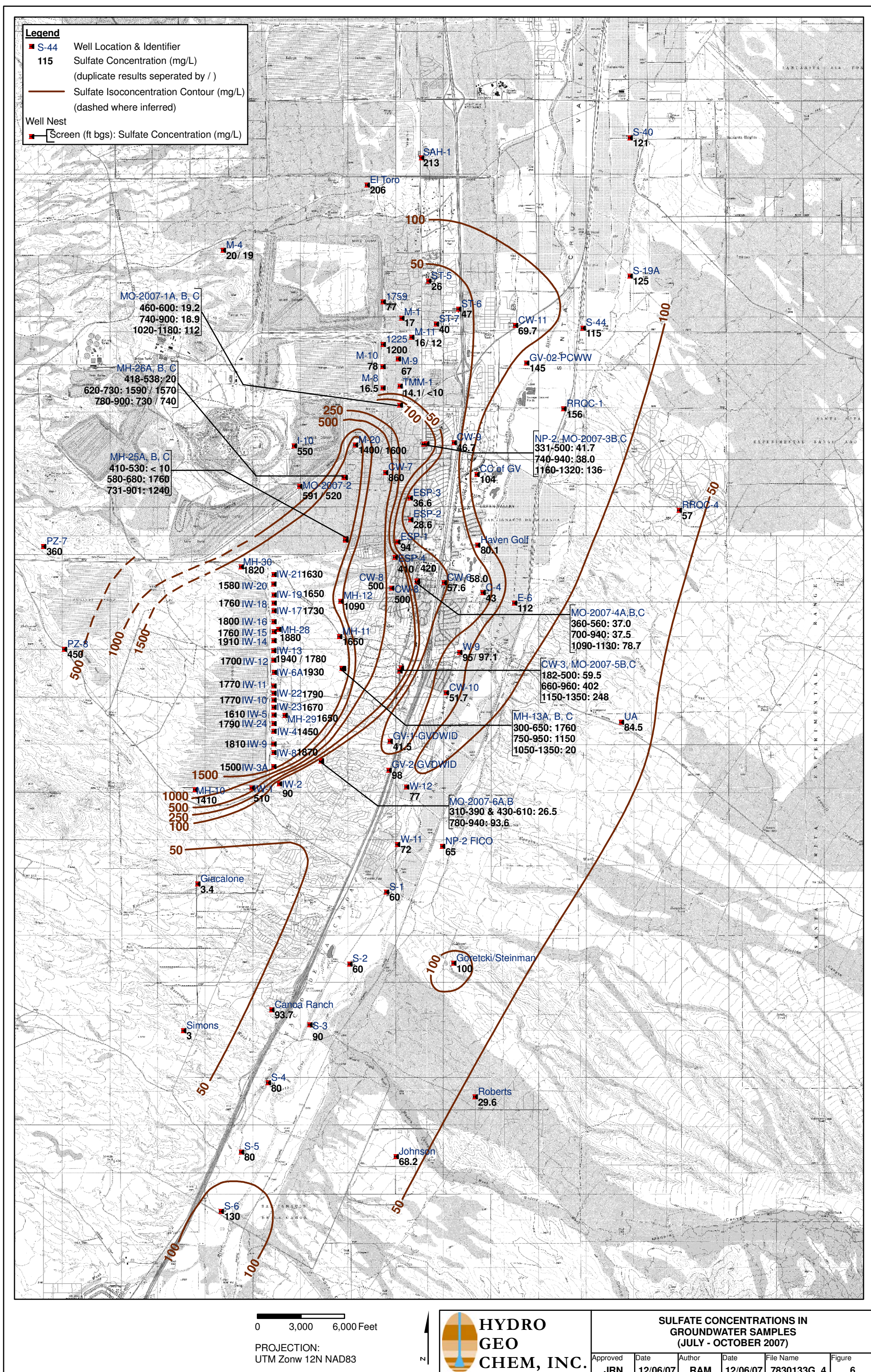


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**GROUNDWATER ELEVATIONS  
(JULY - OCTOBER 2007)**

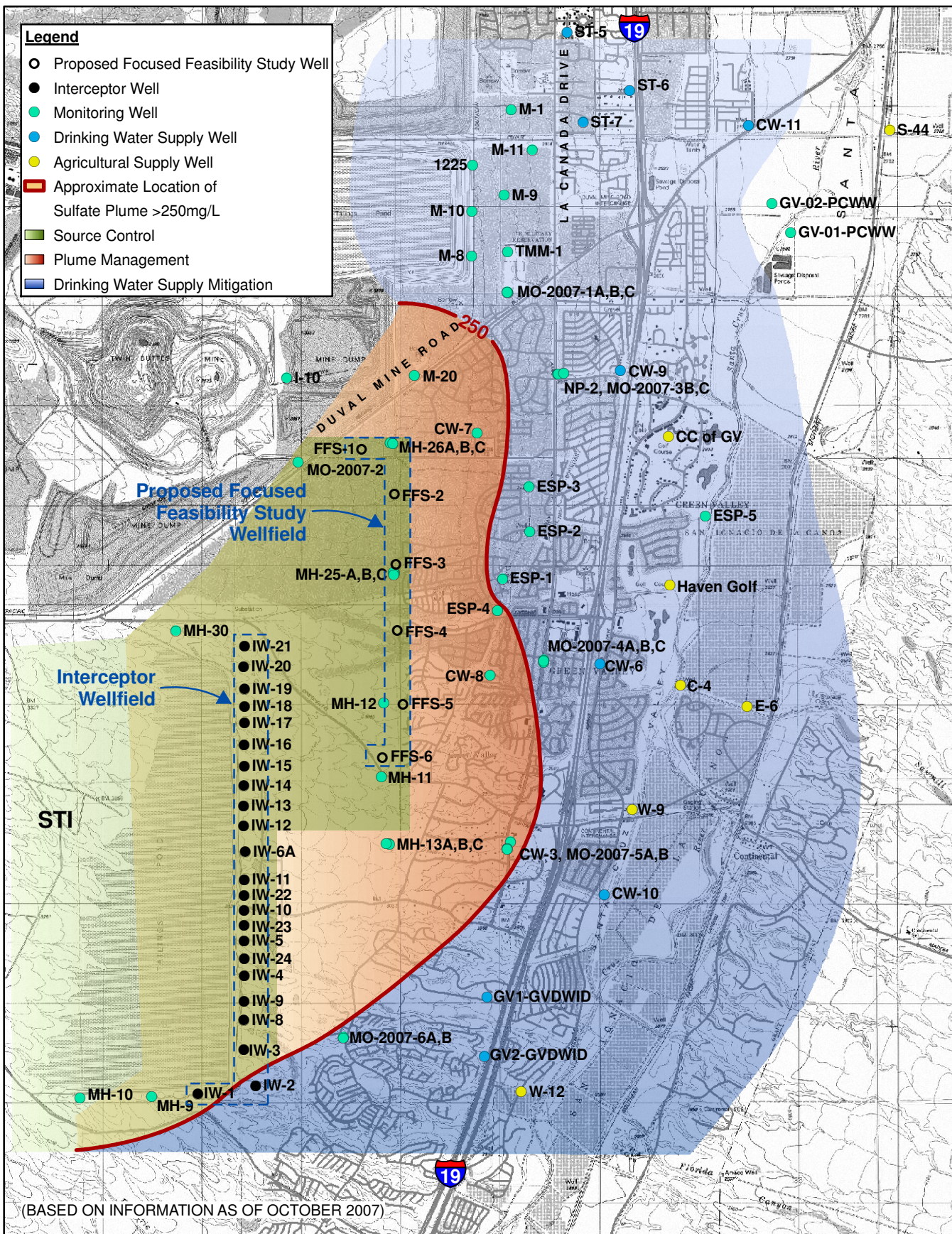
Approved	Date	Author	Date	File Name	Figure
JRN	11/27/07	RAM	11/27/07	7830103G 4	5







- Legend**
- Proposed Focused Feasibility Study Well
  - Interceptor Well
  - Monitoring Well
  - Drinking Water Supply Well
  - Agricultural Supply Well
  - ▭ Approximate Location of Sulfate Plume >250mg/L
  - ▭ Source Control
  - ▭ Plume Management
  - ▭ Drinking Water Supply Mitigation

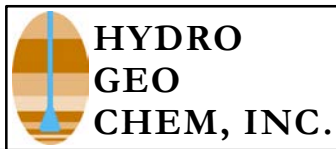


(BASED ON INFORMATION AS OF OCTOBER 2007)

0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

N



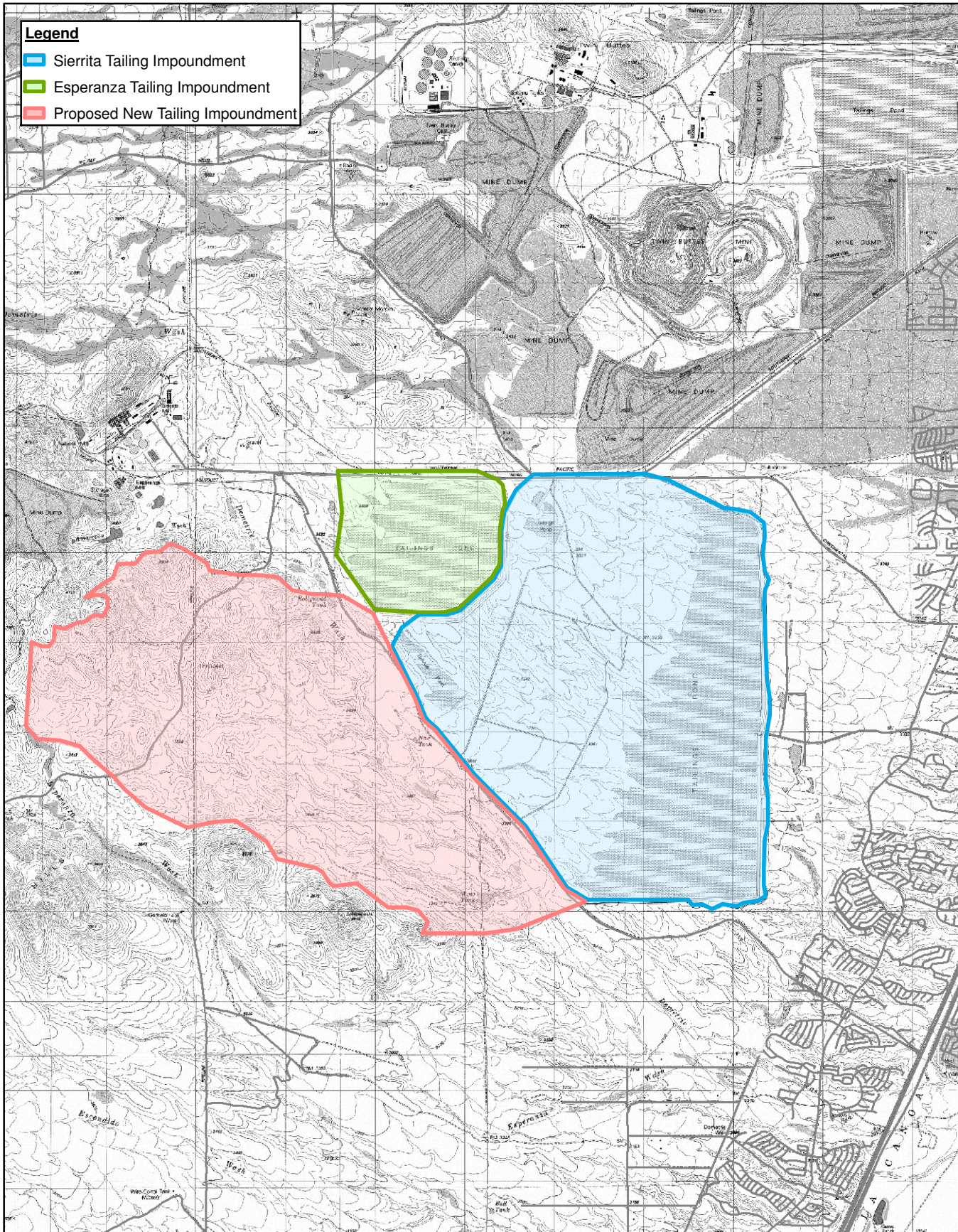
**AREAS OF APPLICATION OF MITIGATION MEASURES**

Approved	Date	Author	Date	File Name	Figure
JRN	10/17/08	RAM	10/17/08	7831023G	7



**Legend**

- Sierrita Tailing Impoundment
- Esperanza Tailing Impoundment
- Proposed New Tailing Impoundment



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83



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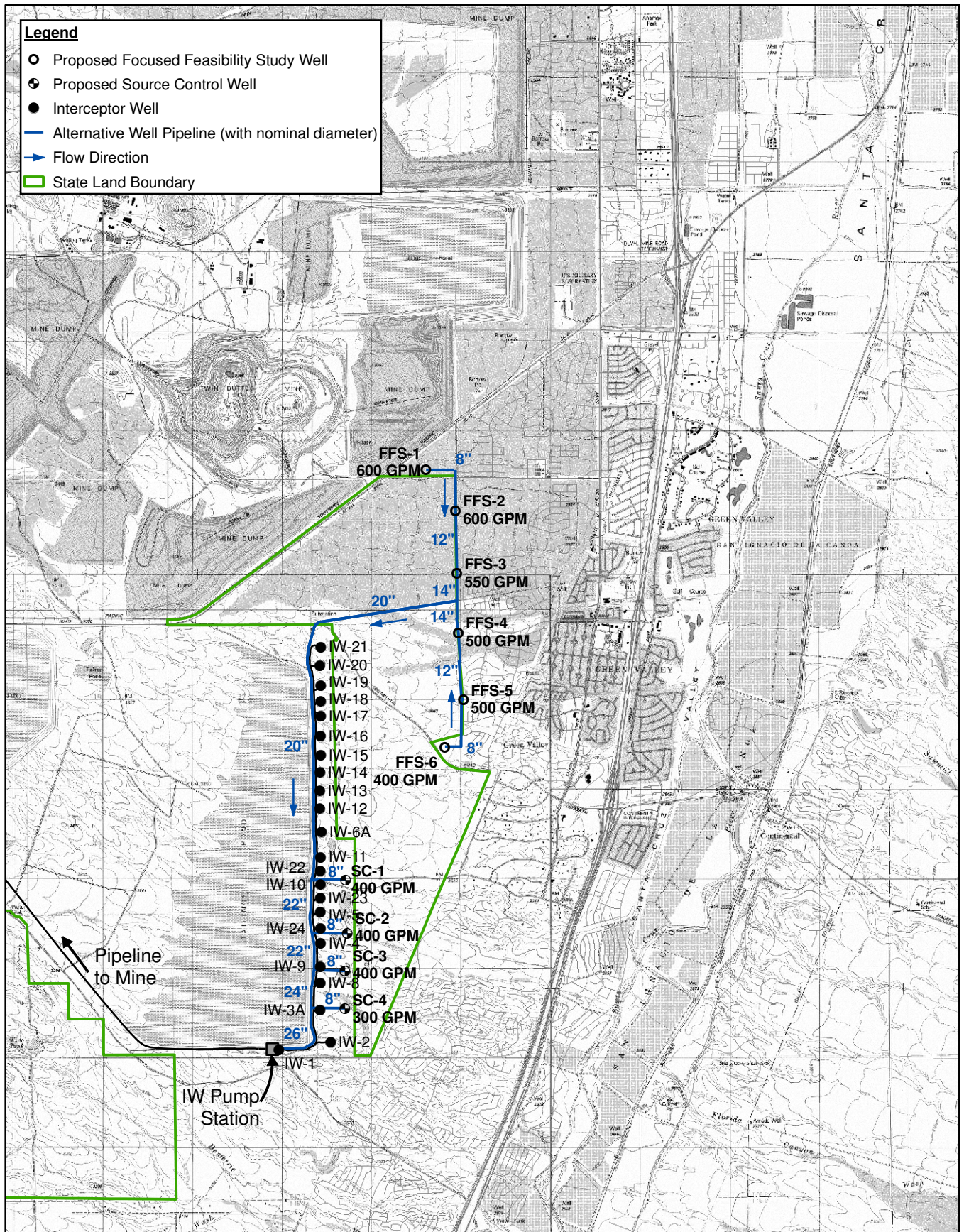
**LOCATION OF PROPOSED  
NEW TAILING IMPOUNDMENT**

Approved	Date	Author	Date	File Name	Figure
JRN	10/10/08	RAM	10/10/08	78310215G	8



# Legend

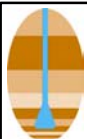
- Proposed Focused Feasibility Study Well
- Proposed Source Control Well
- Interceptor Well
- Alternative Well Pipeline (with nominal diameter)
- ➔ Flow Direction
- ▭ State Land Boundary



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

N



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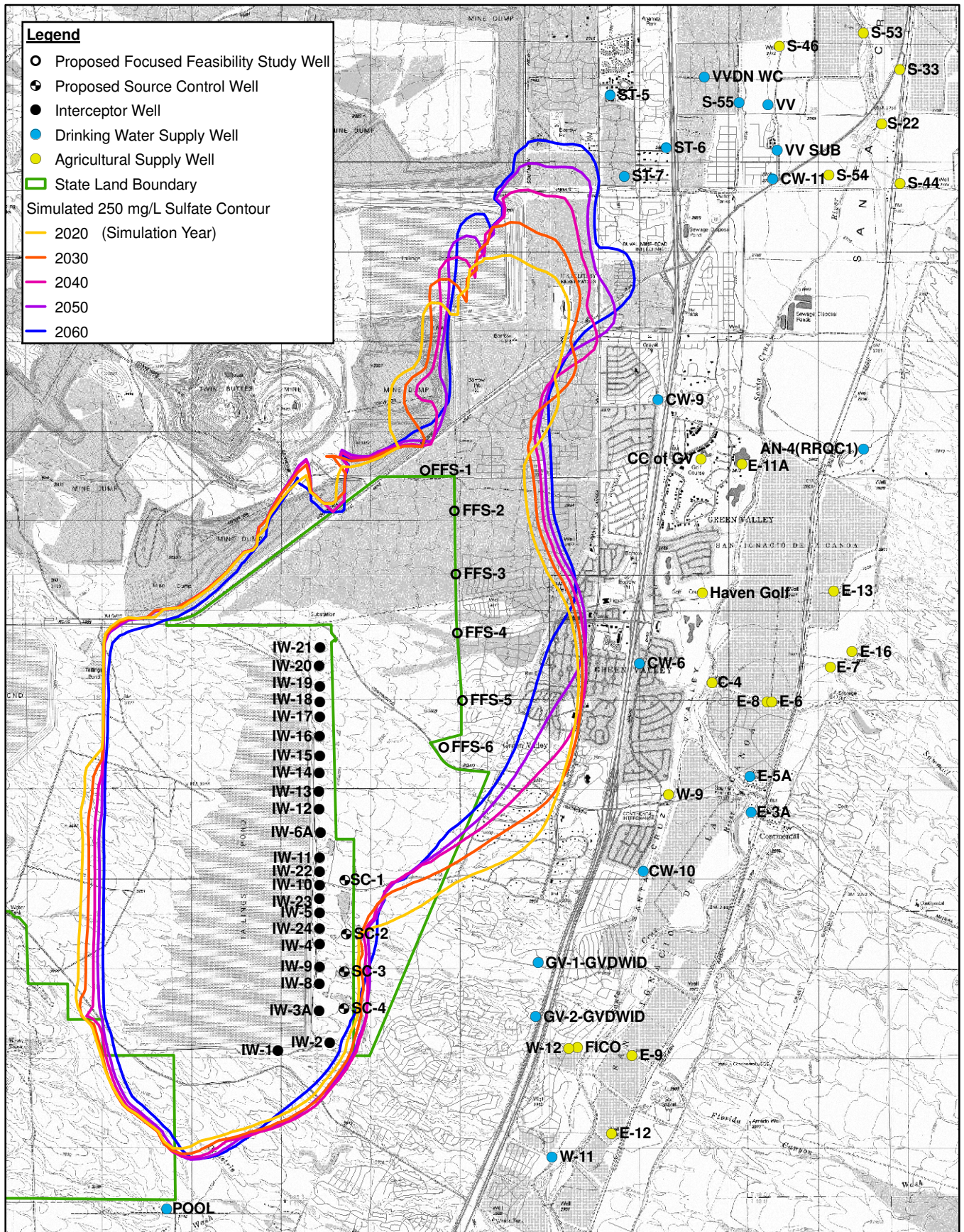
## ALTERNATIVE 1 FACILITIES

Approved	Date	Author	Date	File Name	Figure
MWK	10/02/08	RAM	10/02/08	7831080G	9



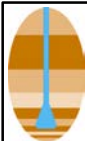
# Legend

- Proposed Focused Feasibility Study Well
- ⊙ Proposed Source Control Well
- Interceptor Well
- Drinking Water Supply Well
- Agricultural Supply Well
- ▭ State Land Boundary
- Simulated 250 mg/L Sulfate Contour
- 2020 (Simulation Year)
- 2030
- 2040
- 2050
- 2060



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83



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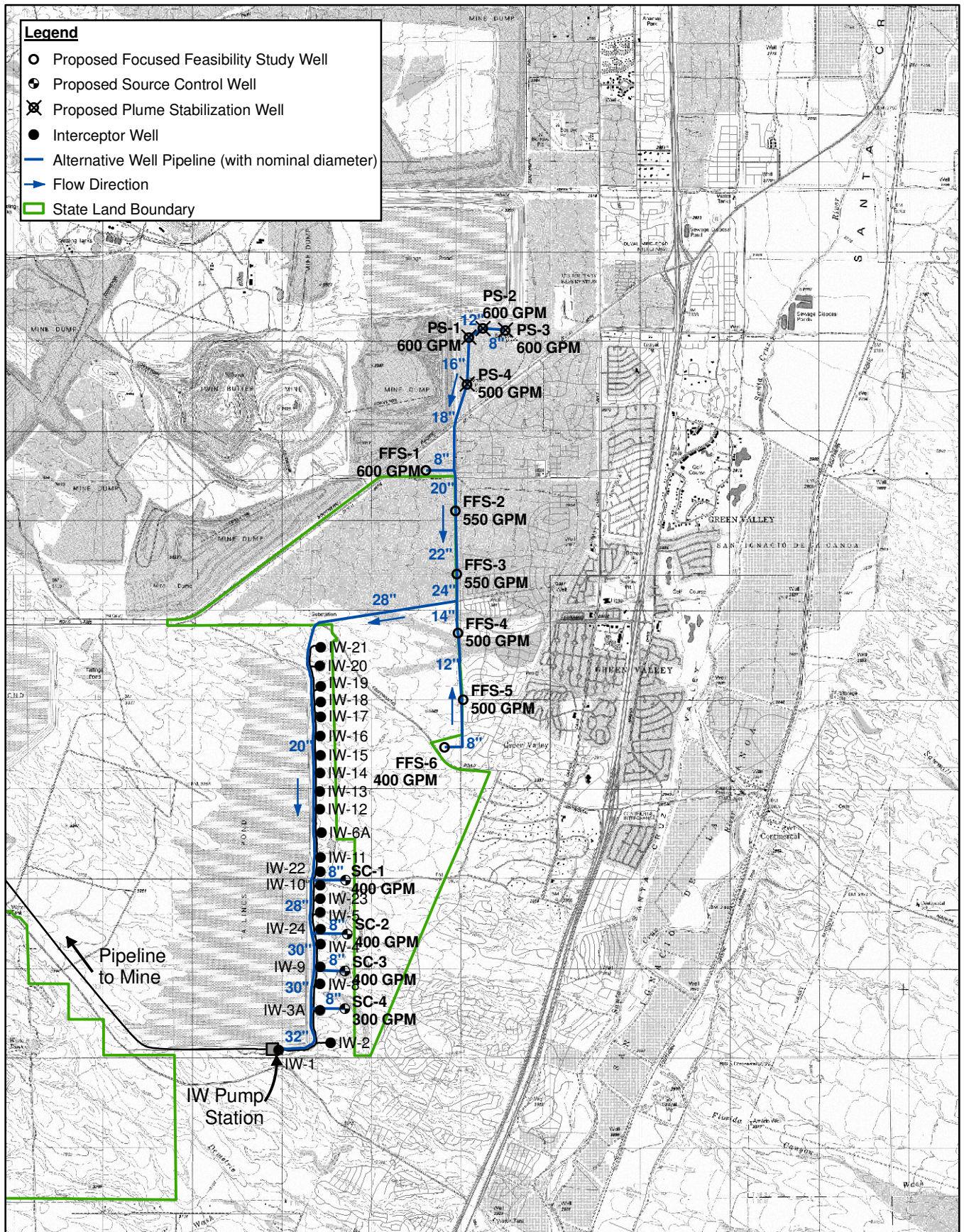
## SIMULATED SULFATE EXTENT FOR ALTERNATIVE 1

Approved	Date	Author	Date	File Name	Figure
NWH	07/18/08	RAM	07/18/08	7831082G	10



# Legend

- Proposed Focused Feasibility Study Well
- Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- Interceptor Well
- Alternative Well Pipeline (with nominal diameter)
- ➔ Flow Direction
- ▭ State Land Boundary



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

N



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## ALTERNATIVE 2 FACILITIES

Approved	Date	Author	Date	File Name	Figure
MWK	10/02/08	RAM	10/02/08	7831084G	11

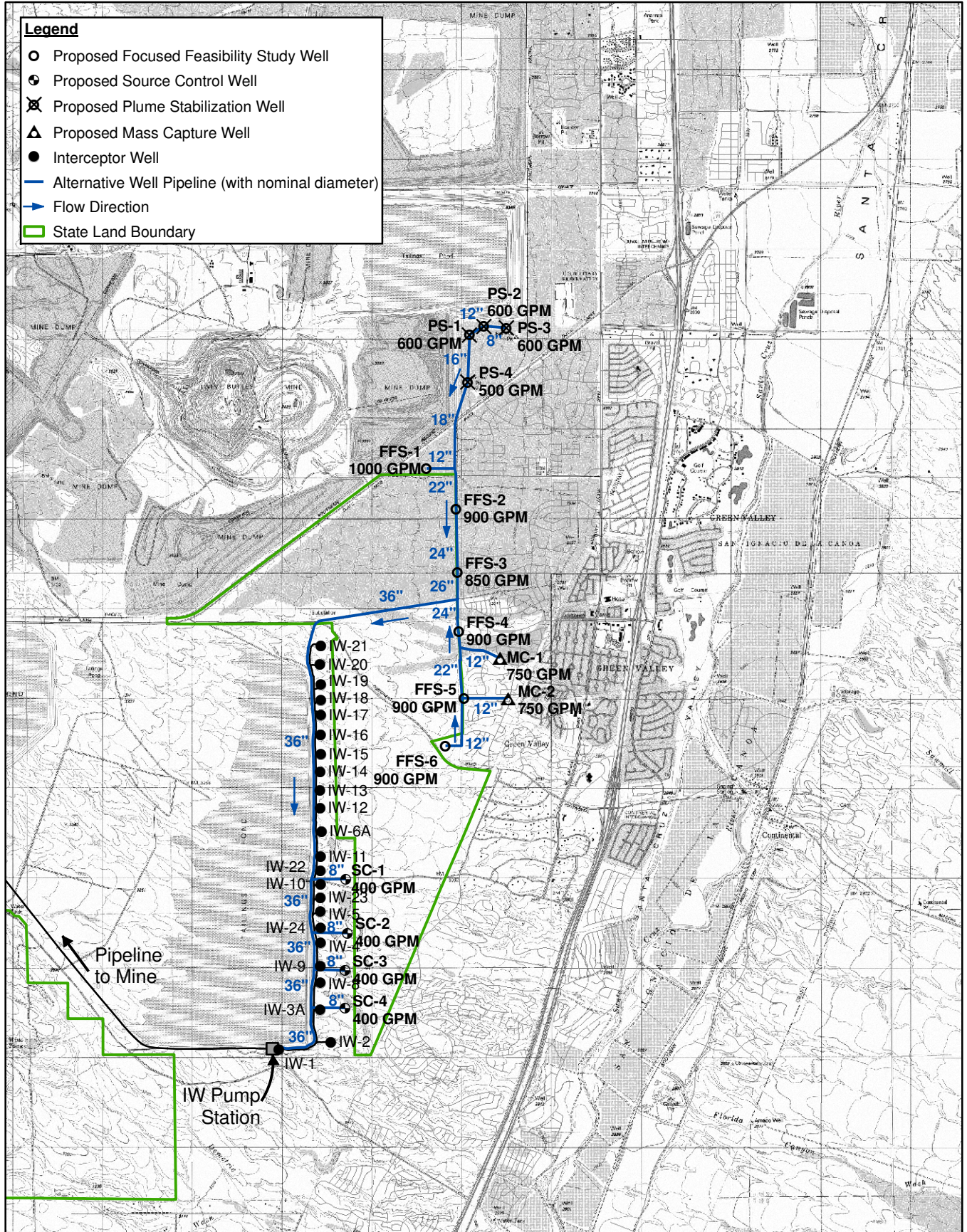






# Legend

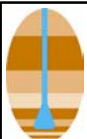
- Proposed Focused Feasibility Study Well
- ⊙ Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- △ Proposed Mass Capture Well
- Interceptor Well
- Alternative Well Pipeline (with nominal diameter)
- ➔ Flow Direction
- ▭ State Land Boundary



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

N



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## ALTERNATIVE 3 FACILITIES

Approved	Date	Author	Date	File Name	Figure
MWK	10/02/08	RAM	10/02/08	7831088G	13

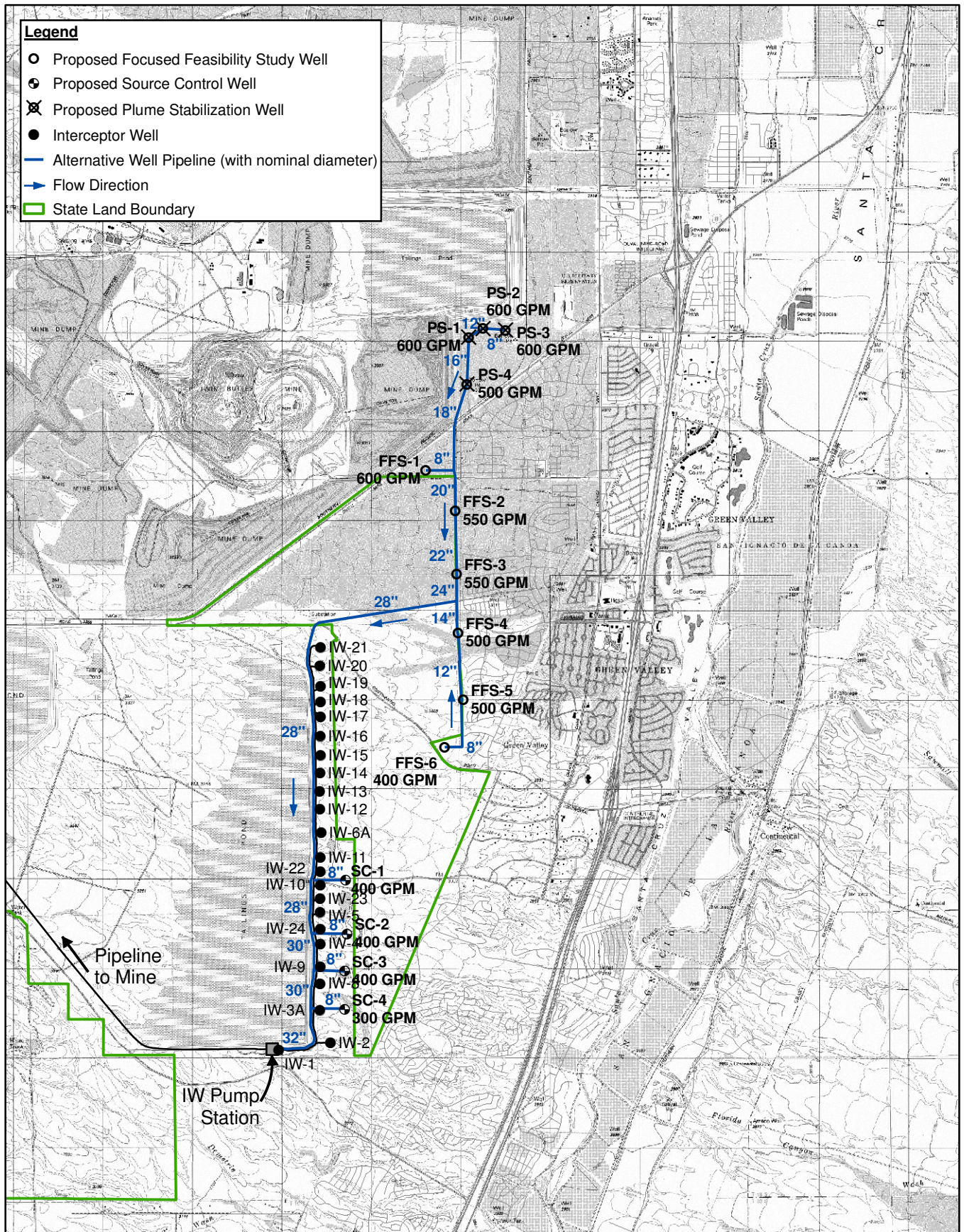






# Legend

- Proposed Focused Feasibility Study Well
- Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- Interceptor Well
- Alternative Well Pipeline (with nominal diameter)
- ➔ Flow Direction
- ▭ State Land Boundary



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

N



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## ALTERNATIVE 4 FACILITIES

Approved	Date	Author	Date	File Name	Figure
MWK	10/02/08	RAM	10/02/08	7831092G	15

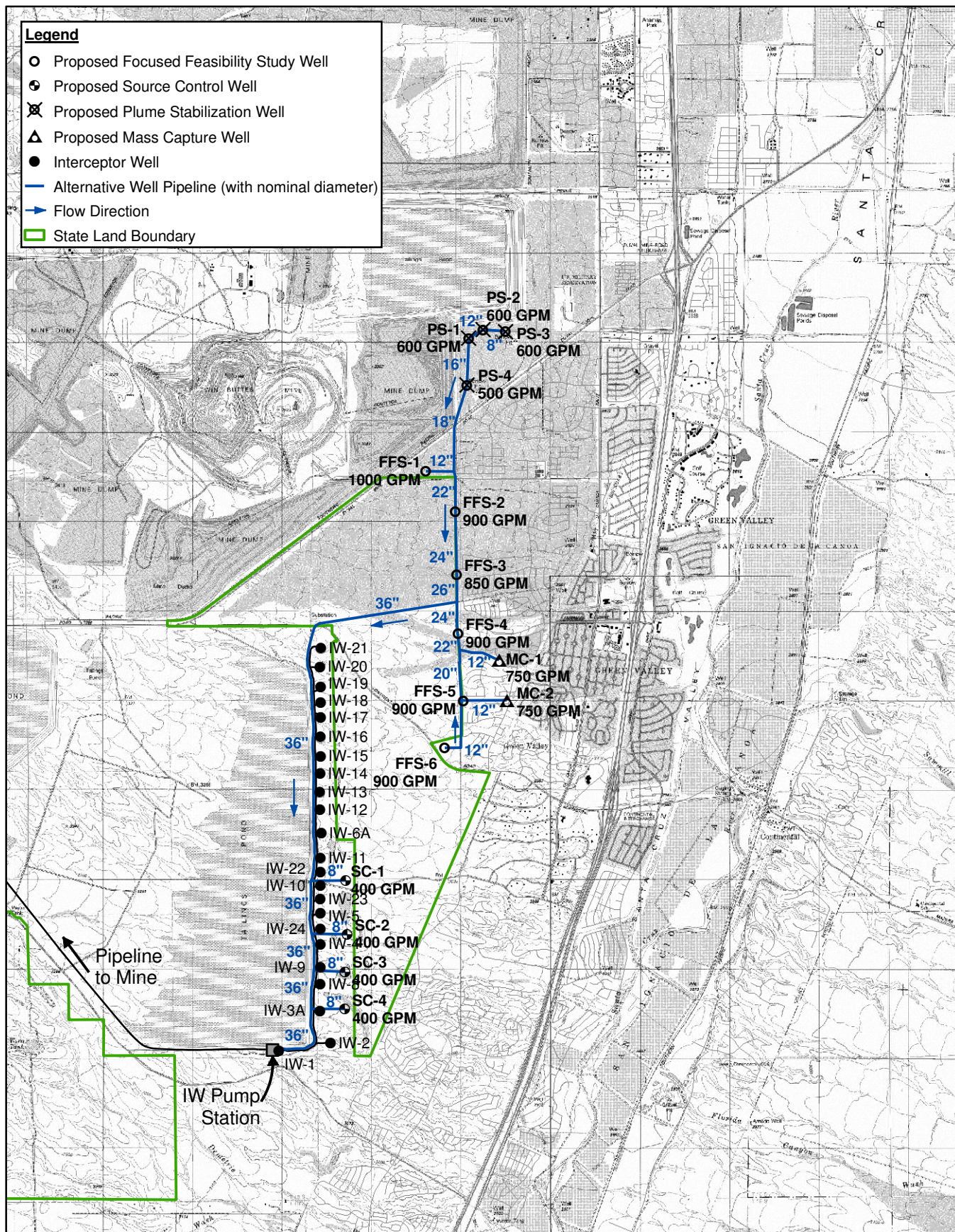






# Legend

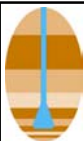
- Proposed Focused Feasibility Study Well
- Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- △ Proposed Mass Capture Well
- Interceptor Well
- Alternative Well Pipeline (with nominal diameter)
- ➔ Flow Direction
- ▭ State Land Boundary



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

N



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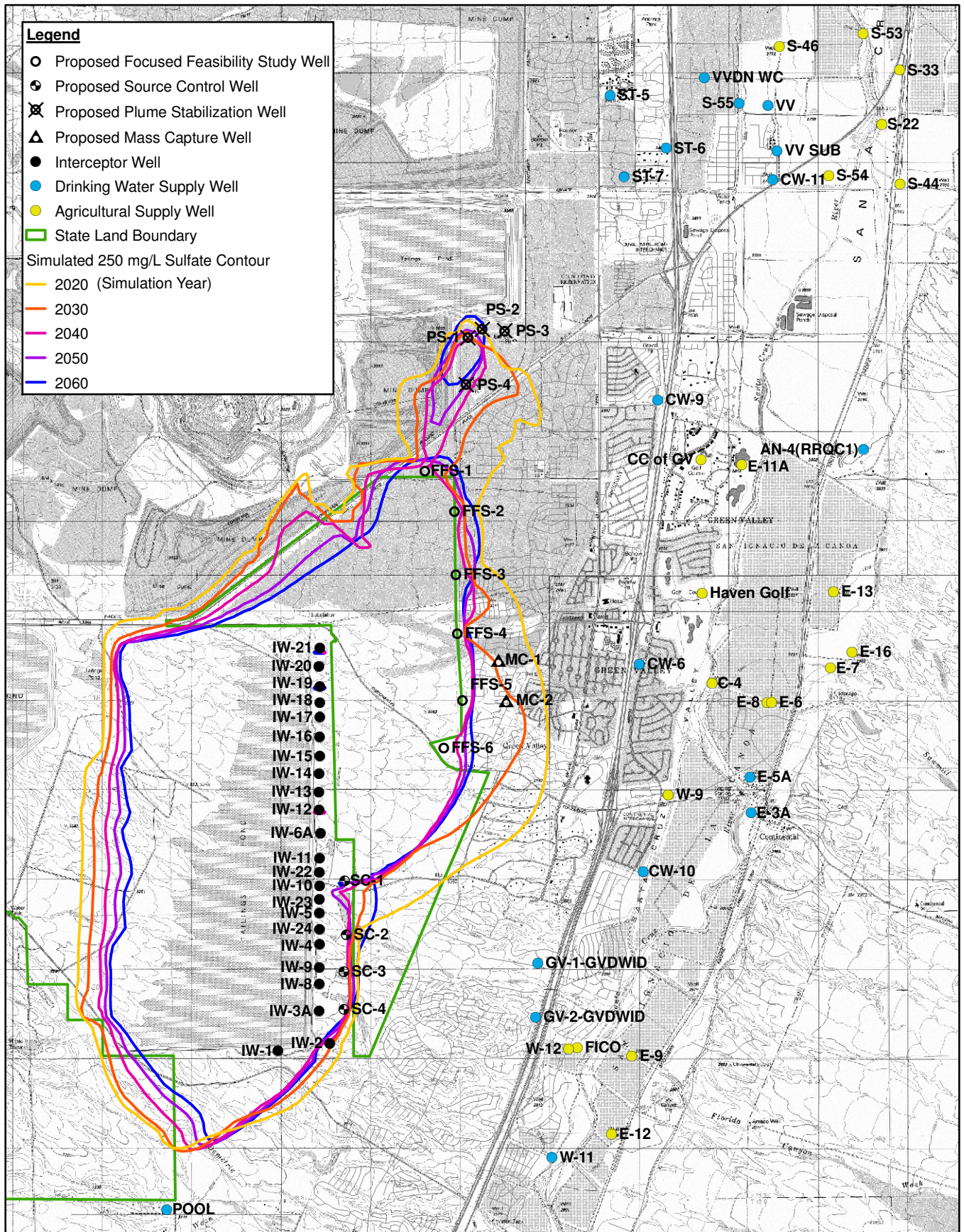
## ALTERNATIVE 5 FACILITIES

Approved	Date	Author	Date	File Name	Figure
MWK	10/02/08	RAM	10/02/08	7831096G	17



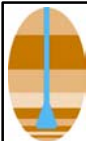
# Legend

- Proposed Focused Feasibility Study Well
- ⊕ Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- △ Proposed Mass Capture Well
- Interceptor Well
- Drinking Water Supply Well
- Agricultural Supply Well
- ▭ State Land Boundary
- Simulated 250 mg/L Sulfate Contour
- 2020 (Simulation Year)
- 2030
- 2040
- 2050
- 2060



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83



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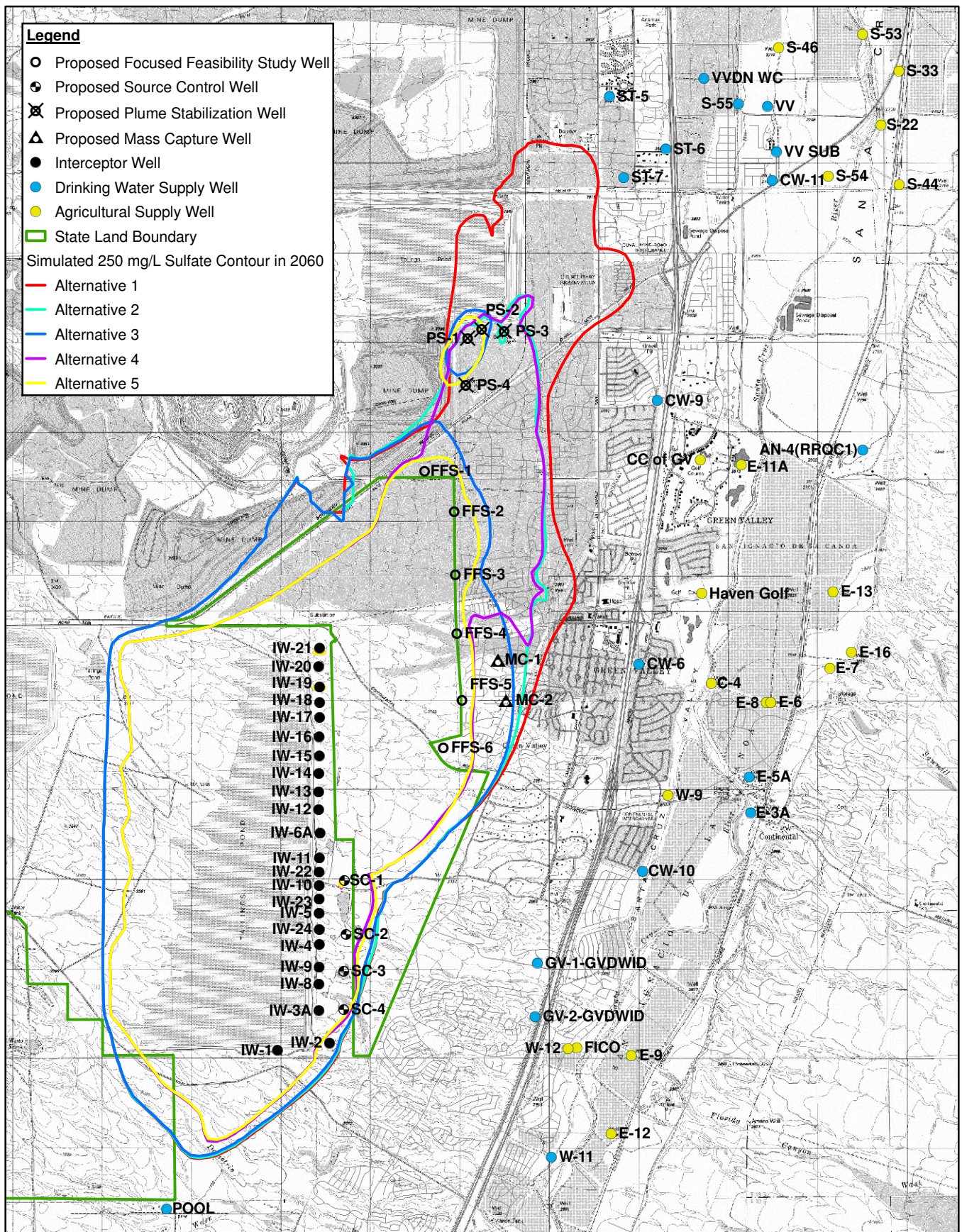
## SIMULATED SULFATE EXTENT FOR ALTERNATIVE 5

Approved	Date	Author	Date	File Name	Figure
NWH	10/10/08	RAM	10/10/08	7831098G	18



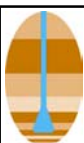
# Legend

- Proposed Focused Feasibility Study Well
- ⊙ Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- △ Proposed Mass Capture Well
- Interceptor Well
- Drinking Water Supply Well
- Agricultural Supply Well
- ▭ State Land Boundary
- Simulated 250 mg/L Sulfate Contour in 2060
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5



0 2,500 5,000 Feet

PROJECTION:  
UTM Zone 12N NAD83



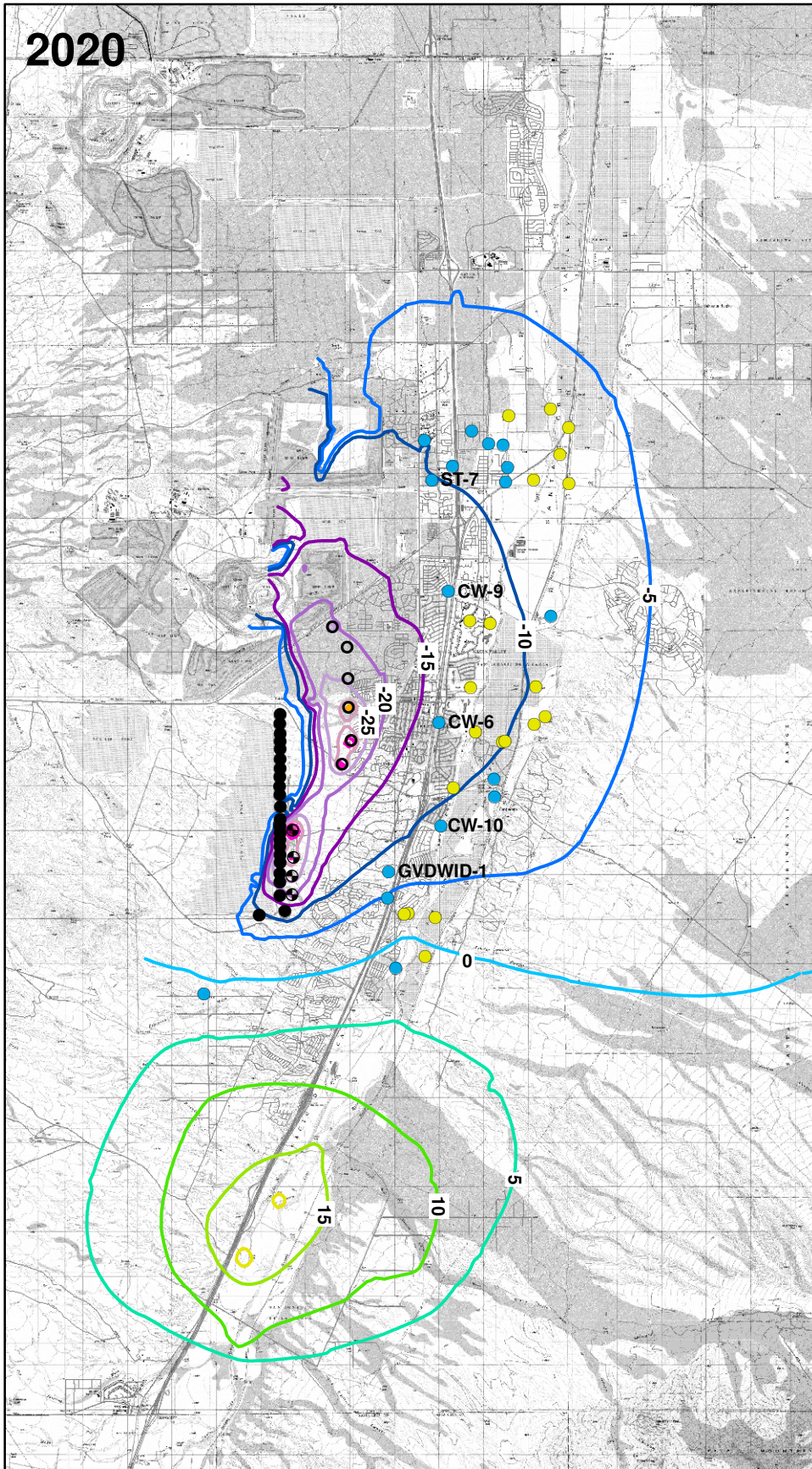
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## COMPARISON OF MITIGATION ALTERNATIVES SULFATE EXTENT IN 2060

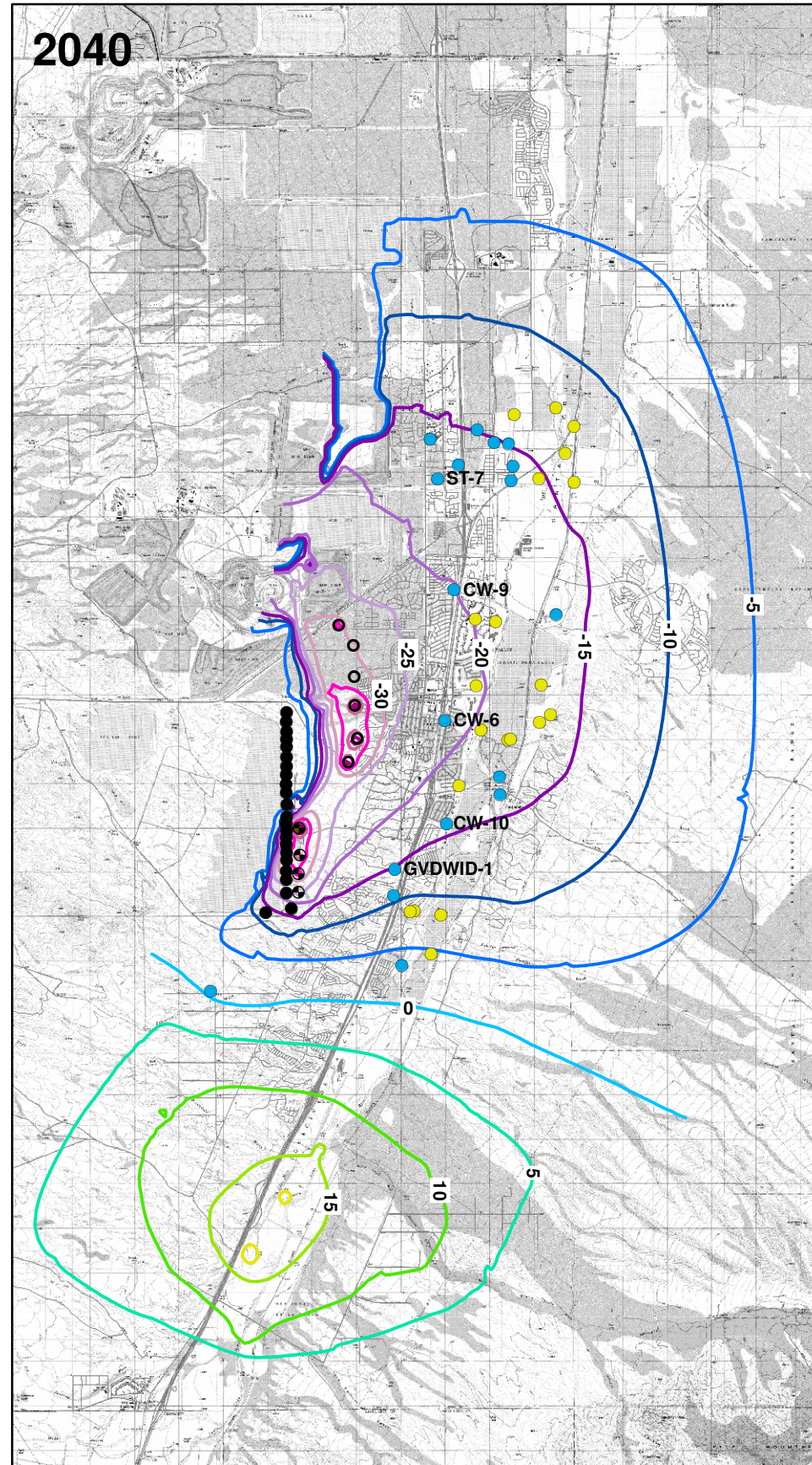
Approved	Date	Author	Date	File Name	Figure
NWH	10/10/08	RAM	10/10/08	7831100G	19



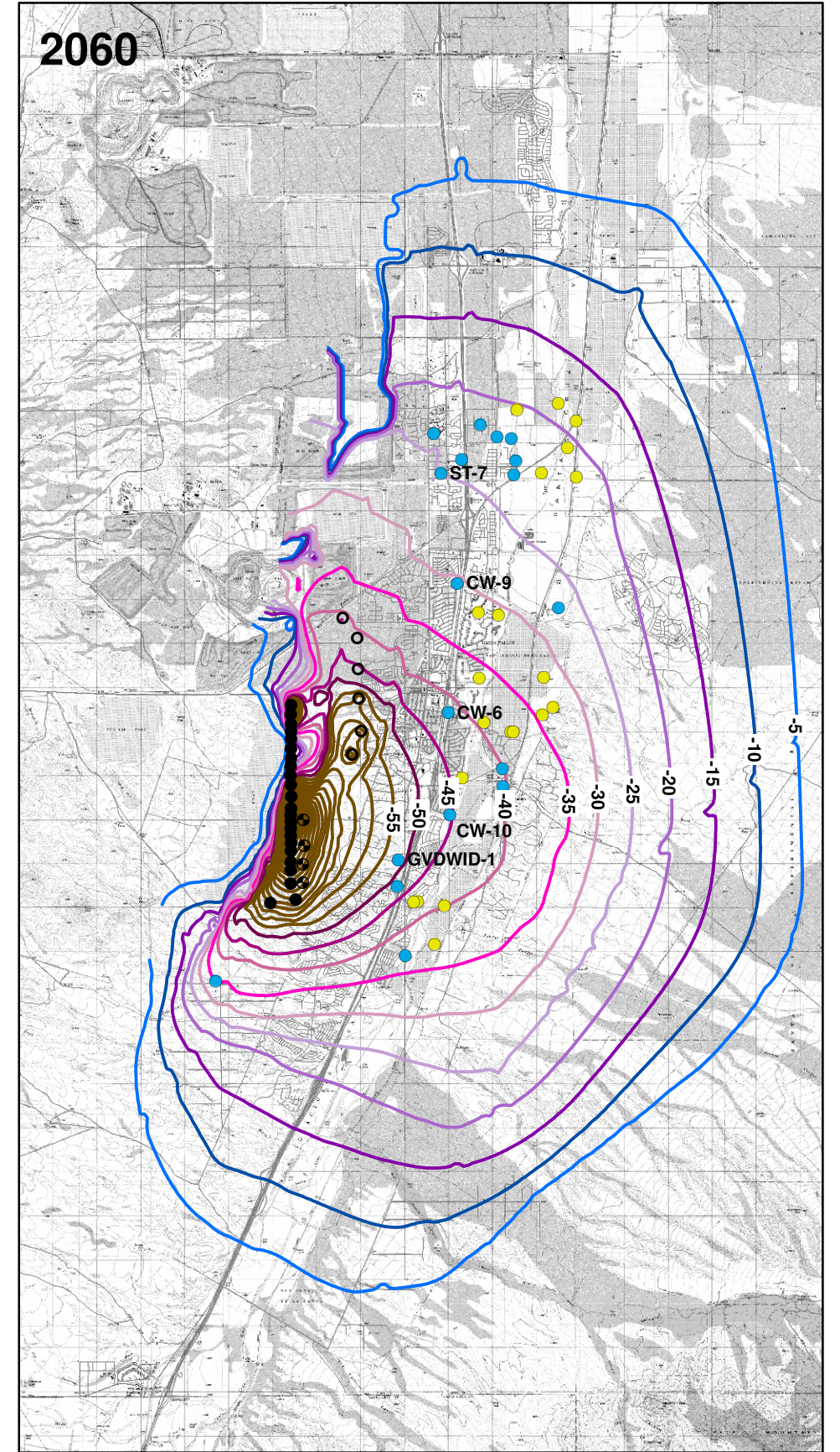
2020



2040



2060

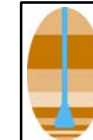


**Legend**

- Proposed Focused Feasibility Study Well
  - Proposed Source Control Well
  - Interceptor Well
  - Drinking Water Supply Well
  - Agricultural Supply Well
- Isopleth of Predicted Water Level Change (in feet) Relative to Reference Case
- |      |     |     |    |    |     |
|------|-----|-----|----|----|-----|
| ≤-55 | -35 | -15 | 5  | 25 | 45  |
| -50  | -30 | -10 | 10 | 30 | 50  |
| -45  | -25 | -5  | 15 | 35 | ≥55 |
| -40  | -20 | 0   | 20 | 40 |     |
- (Negative value indicates water level decline)

0 6,000 12,000 Feet

PROJECTION:  
UTM Zone 12N NAD83

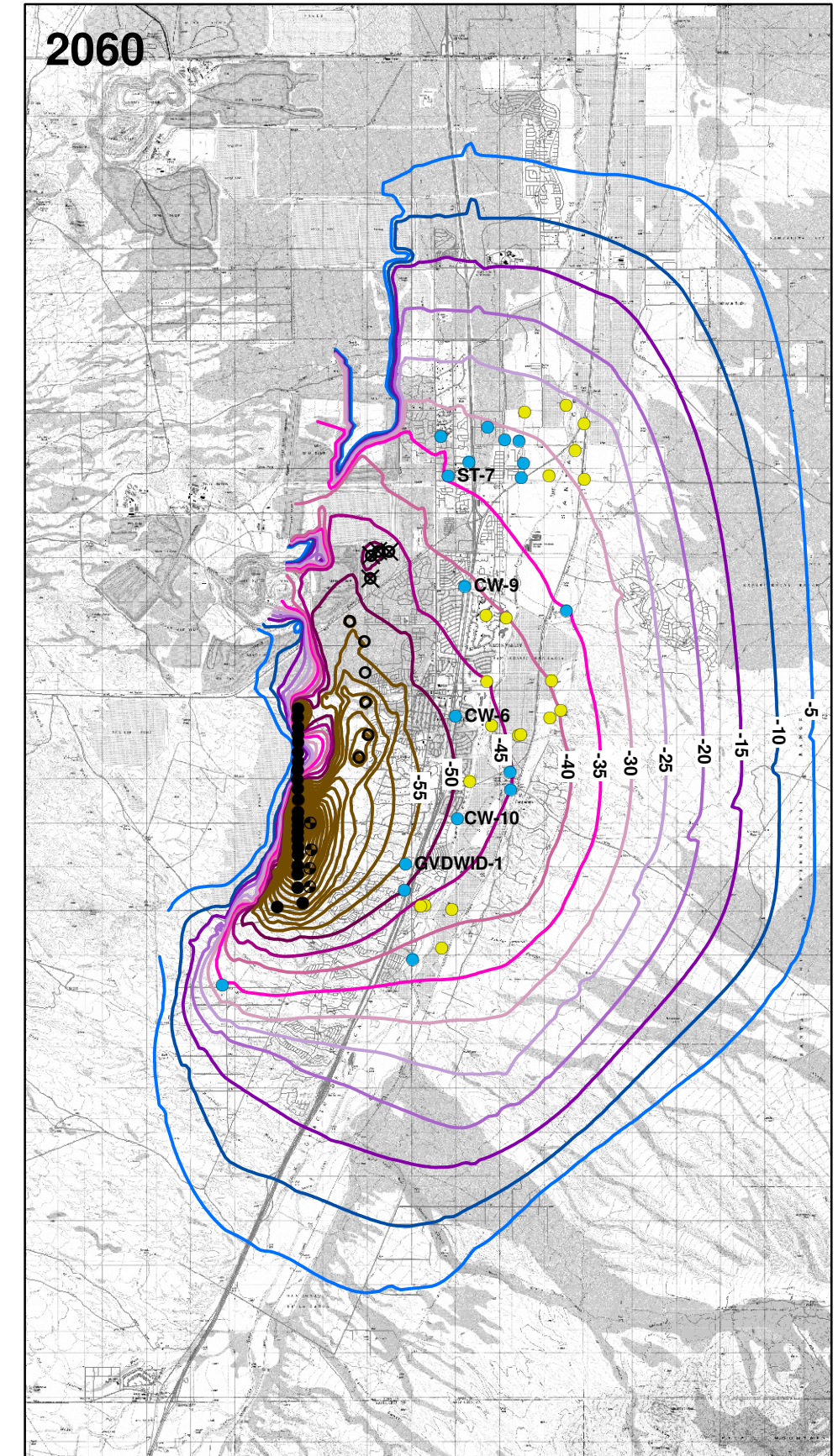
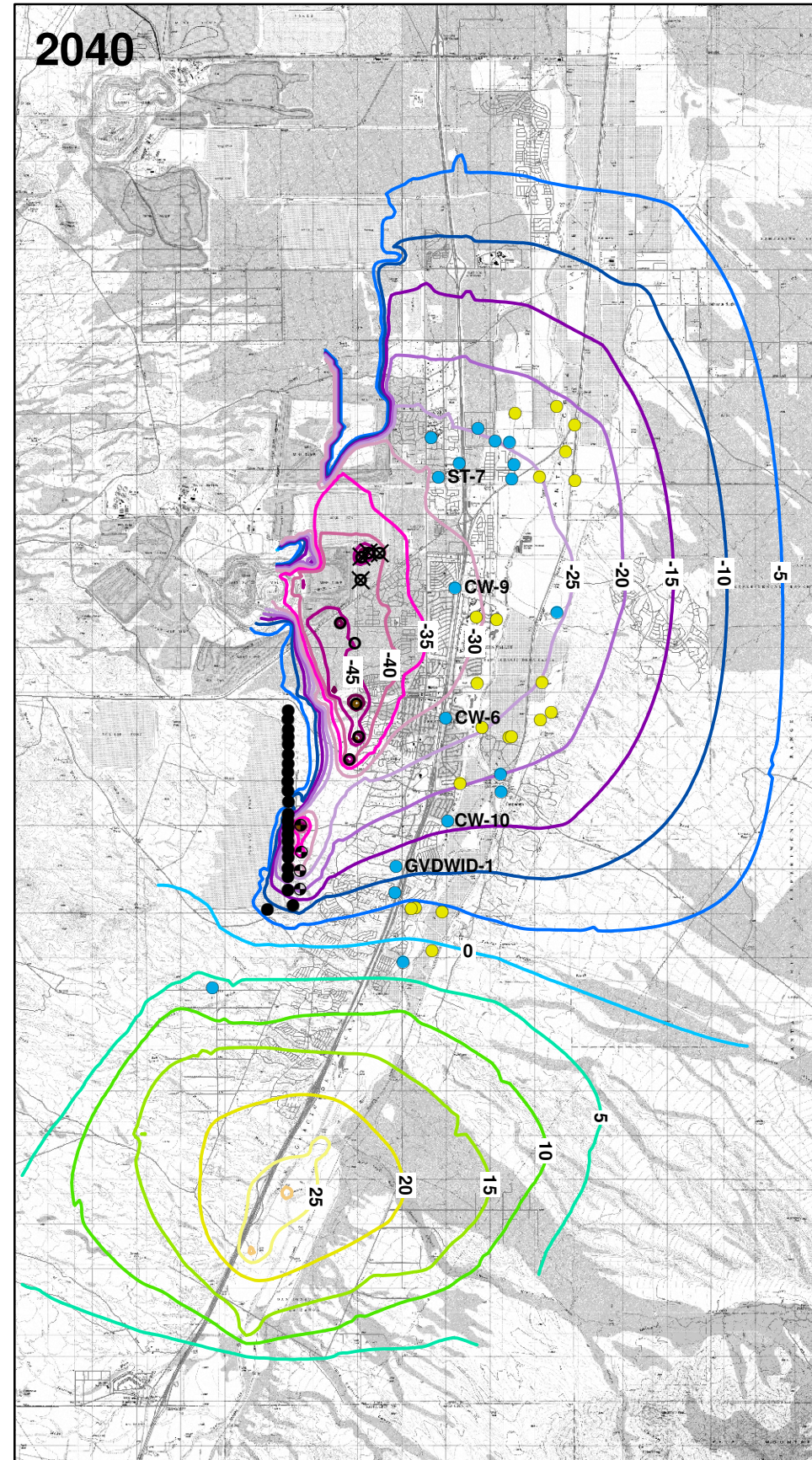
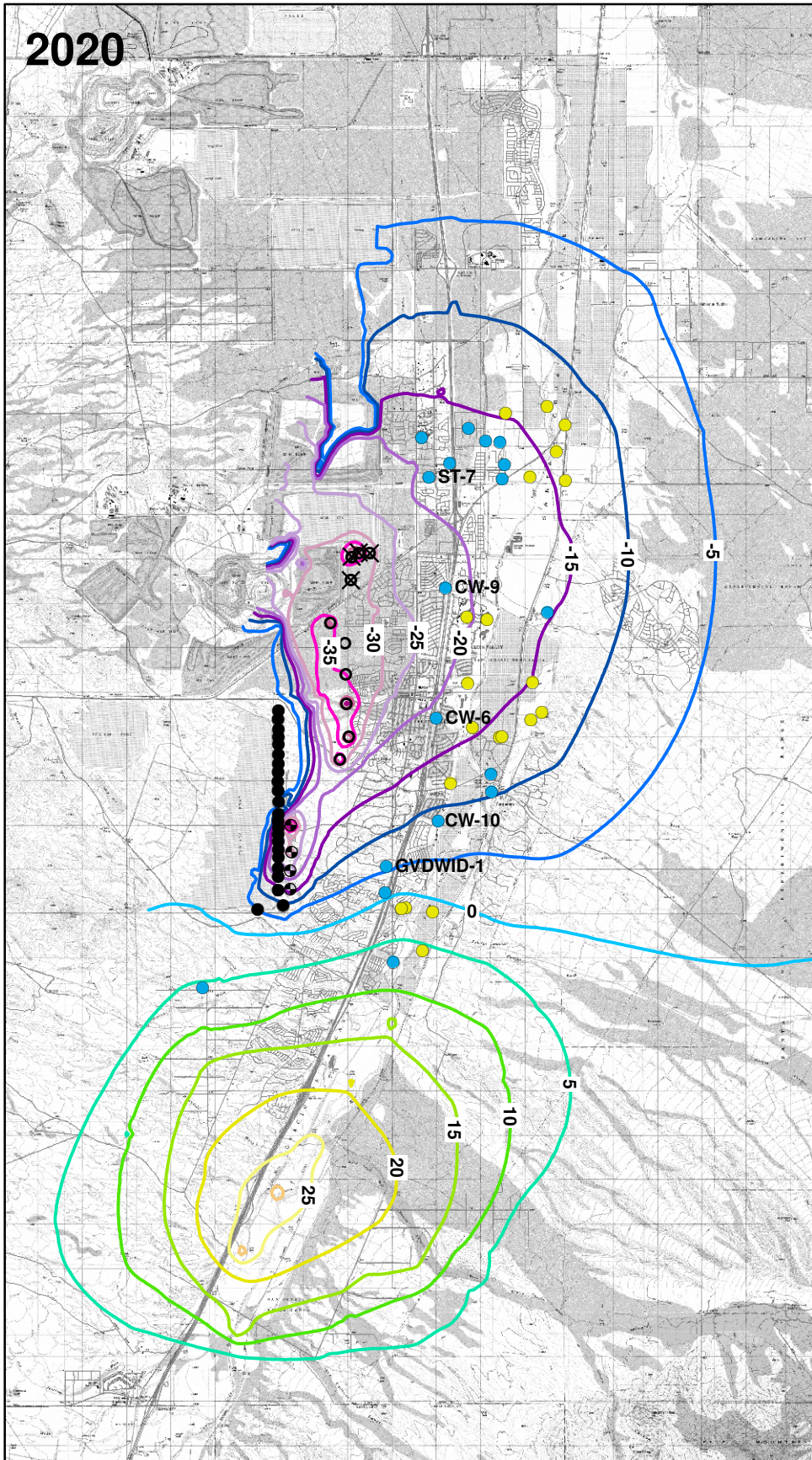


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**SIMULATED WATER LEVEL CHANGE FOR  
ALTERNATIVE 1**

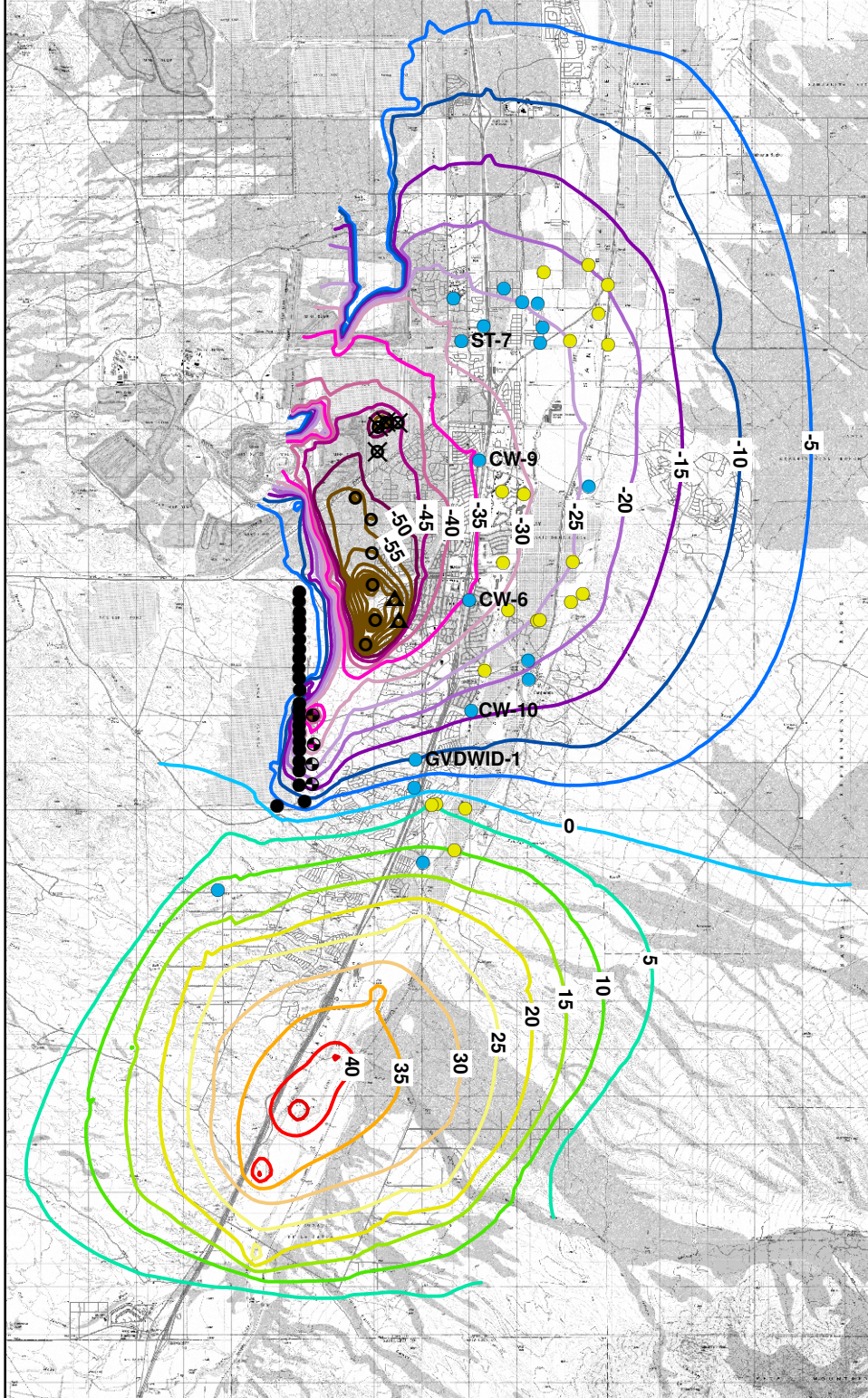
Approved	Date	Author	Date	File Name	Figure
NWH	10/10/08	RAM	10/10/08	7831103G	20



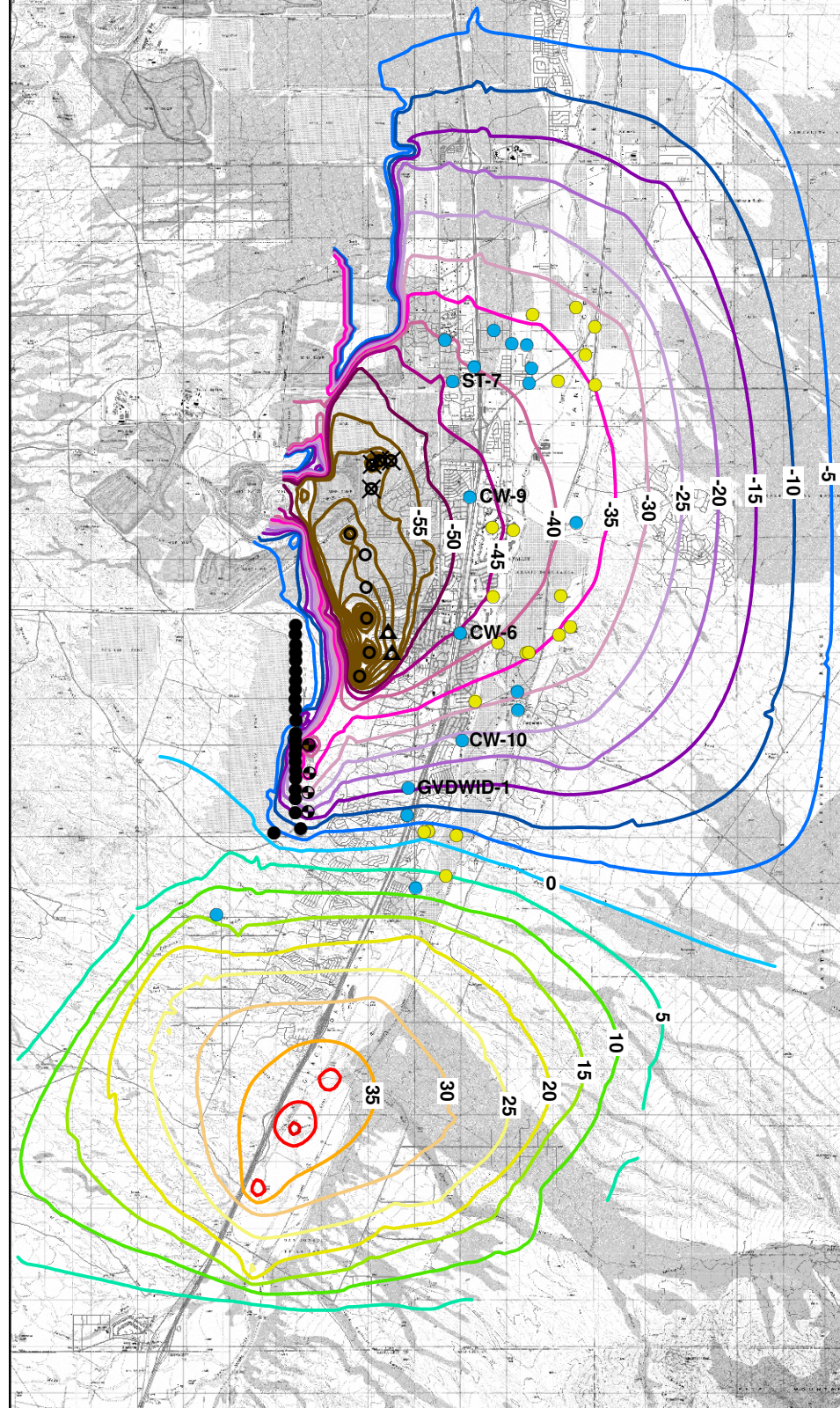




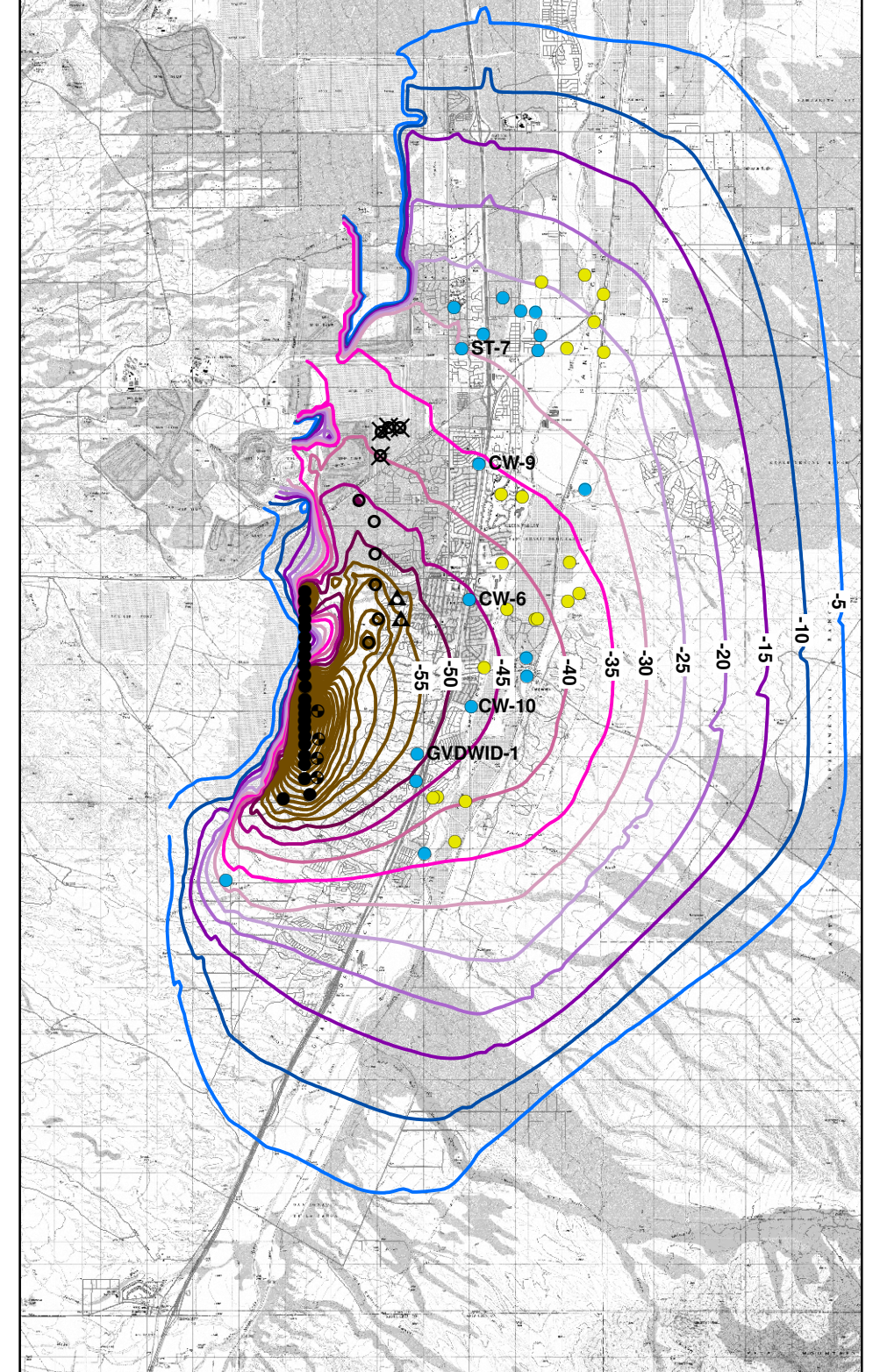
2020



2040



2060



**Legend**

- Proposed Focused Feasibility Study Well
- Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- ▲ Proposed Mass Capture Well
- Interceptor Well
- Drinking Water Supply Well
- Agricultural Supply Well

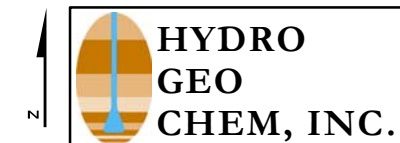
Isopleth of Predicted Water Level Change (in feet) Relative to Reference Case

≤ -55	-35	-15	5	25	45
-50	-30	-10	10	30	50
-45	-25	-5	15	35	≥ 55
-40	-20	0	20	40	

(Negative value indicates water level decline)

0 6,000 12,000 Feet

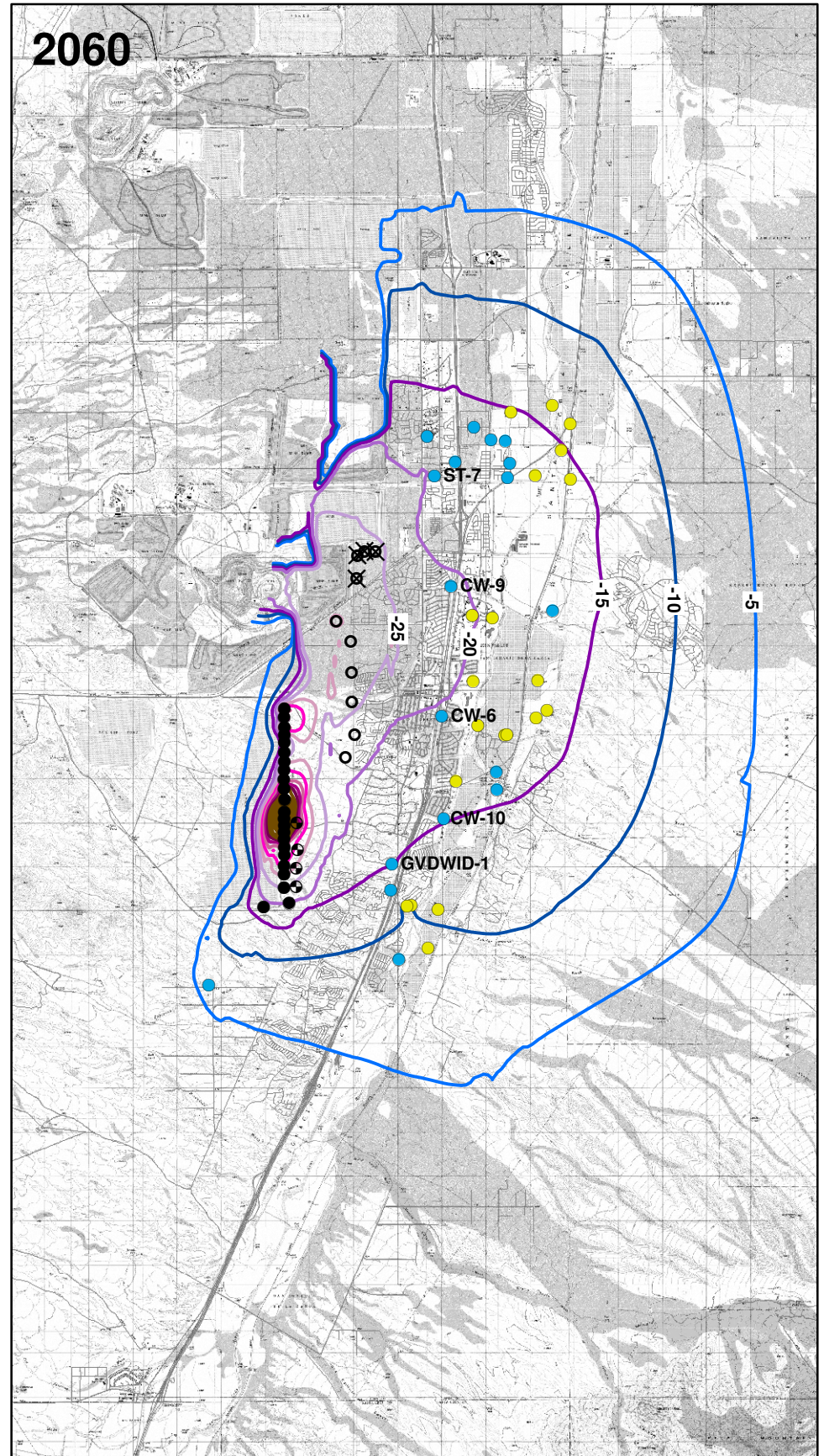
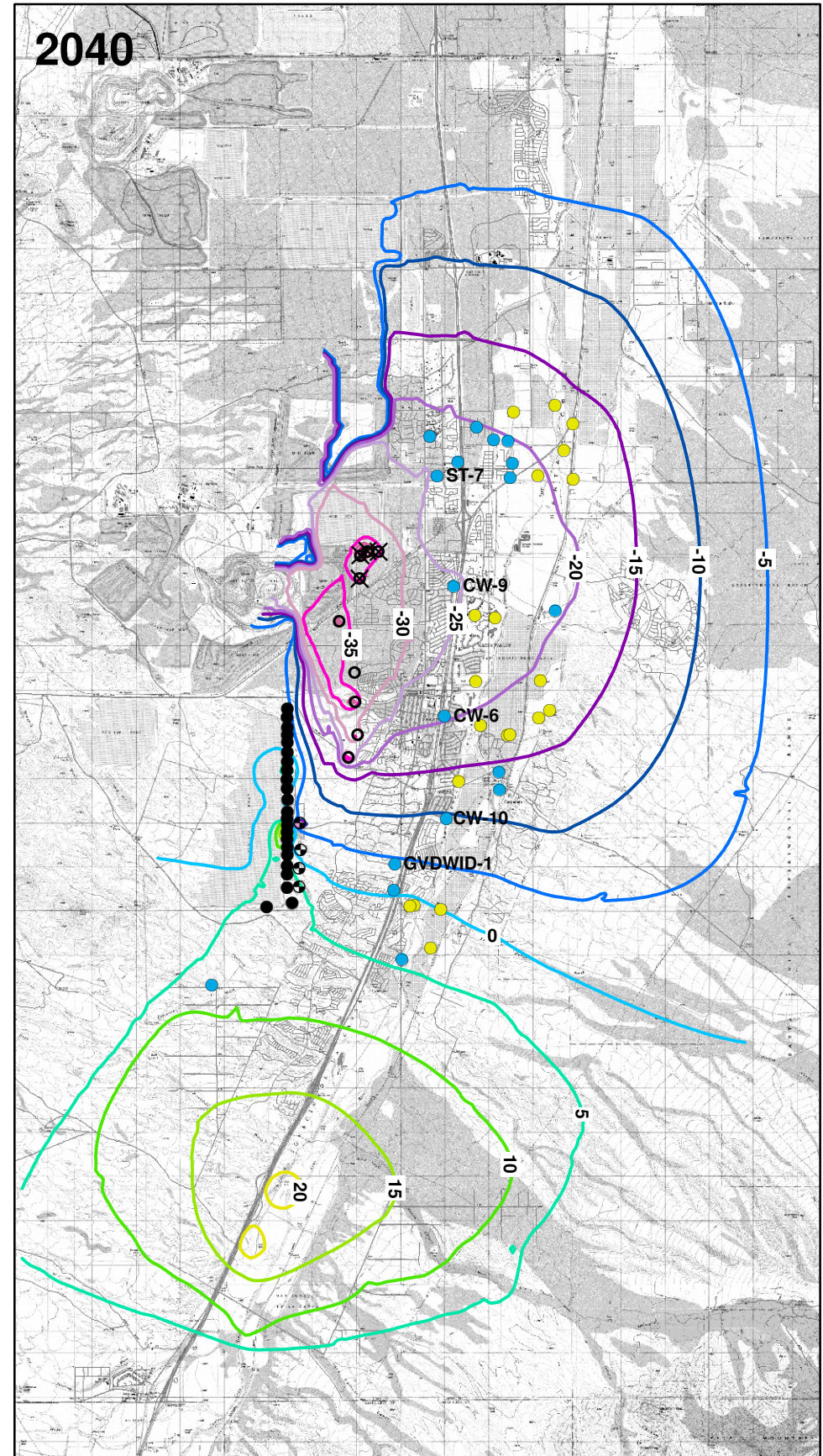
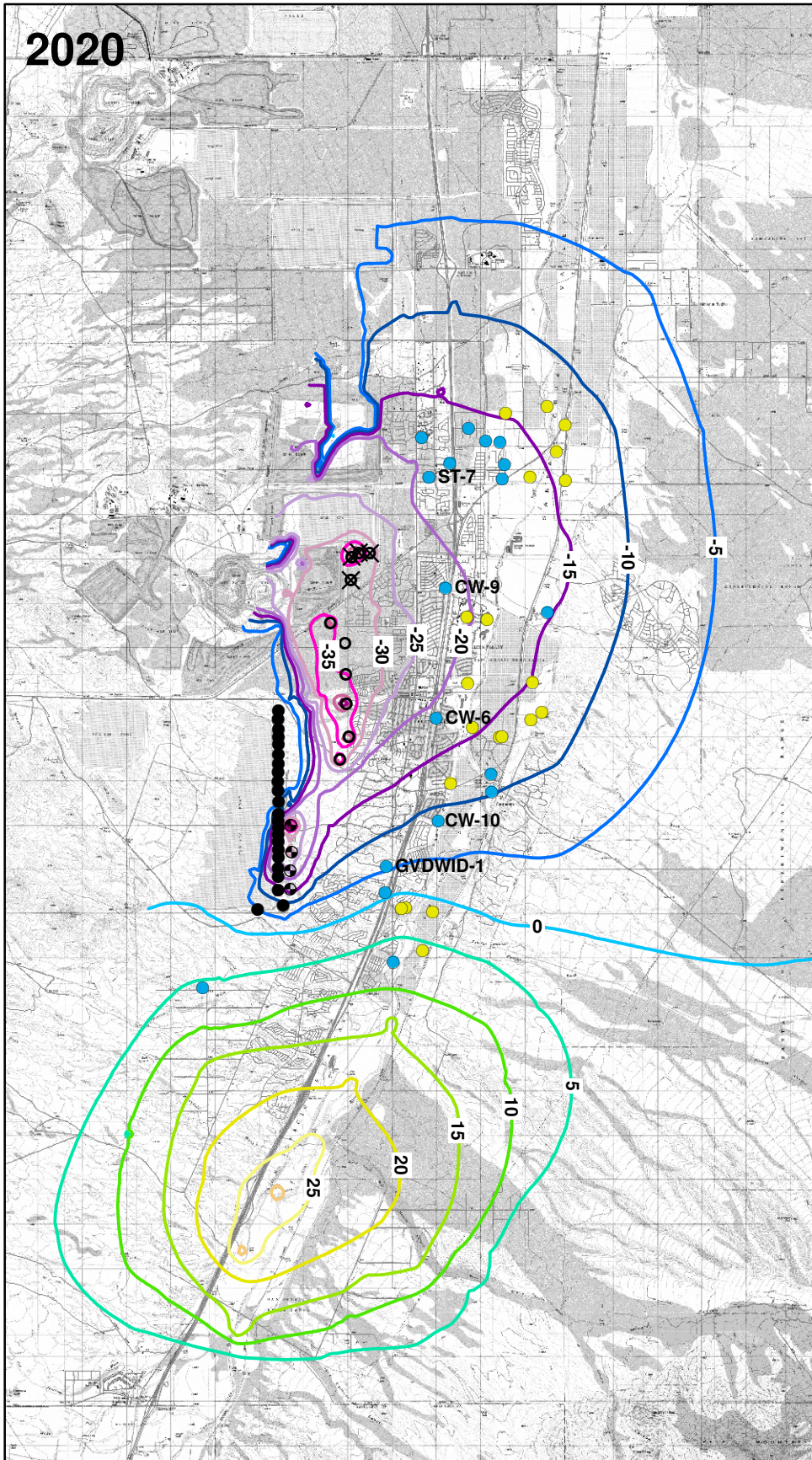
PROJECTION:  
UTM Zone 12N NAD83



**SIMULATED WATER LEVEL CHANGE FOR  
ALTERNATIVE 3**

Approved	Date	Author	Date	File Name	Figure
NWH	10/10/08	RAM	10/10/08	7831105G	22





**Legend**

- Proposed Focused Feasibility Study Well
- Drinking Water Supply Well
- ⊙ Proposed Source Control Well
- Agricultural Supply Well
- ⊗ Proposed Plume Stabilization Well
- Interceptor Well

Isopleth of Predicted Water Level Change (in feet) Relative to Reference Case

≤ -55	-35	-15	5	25	45
-50	-30	-10	10	30	50
-45	-25	-5	15	35	≥ 55
-40	-20	0	20	40	

(Negative value indicates water level decline)

0 6,000 12,000 Feet

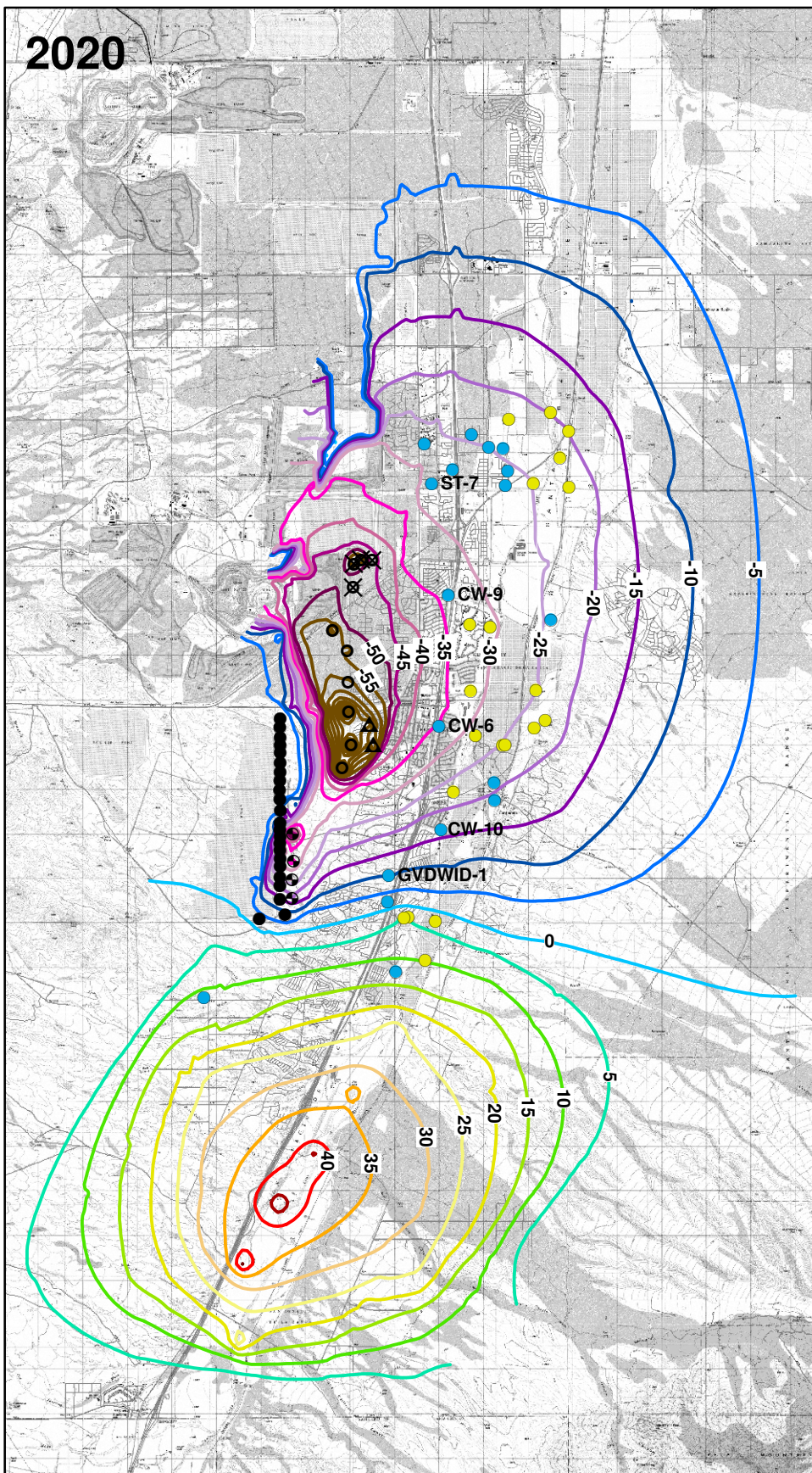
PROJECTION:  
UTM Zone 12N NAD83

**SIMULATED WATER LEVEL CHANGE FOR  
ALTERNATIVE 4**

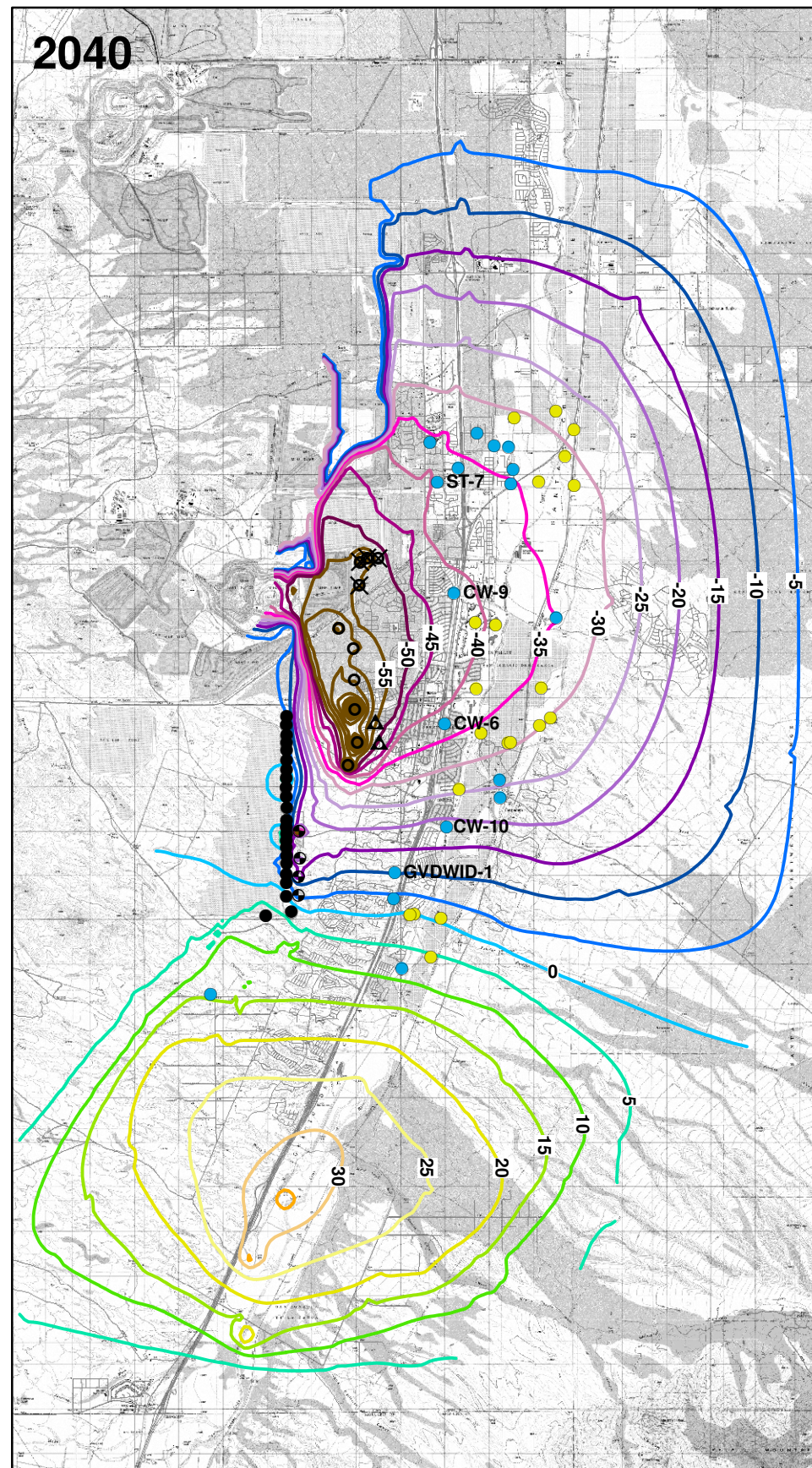
Approved	Date	Author	Date	File Name	Figure
NWH	10/10/08	RAM	10/10/08	7831106G	23



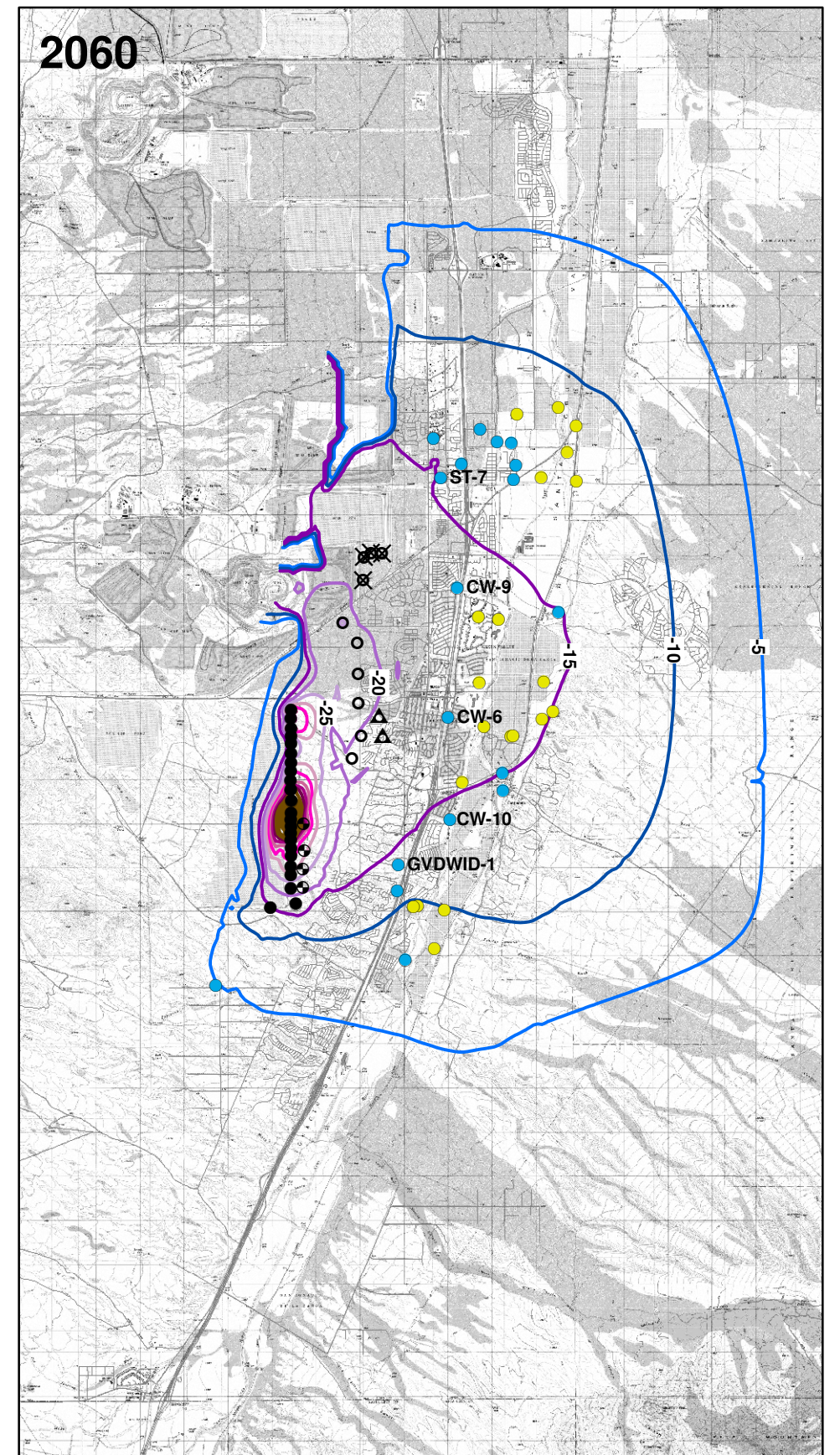
2020



2040



2060



**Legend**

- Proposed Focused Feasibility Study Well
- Proposed Source Control Well
- ⊗ Proposed Plume Stabilization Well
- △ Proposed Mass Capture Well
- Interceptor Well
- Drinking Water Supply Well
- Agricultural Supply Well

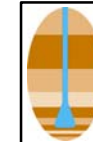
Isopleth of Predicted Water Level Change (in feet) Relative to Reference Case

≤ -55	-35	-15	5	25	45
-50	-30	-10	10	30	50
-45	-25	-5	15	35	≥ 55
-40	-20	0	20	40	

(Negative value indicates water level decline)

0 6,000 12,000 Feet

PROJECTION:  
UTM Zone 12N NAD83



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**SIMULATED WATER LEVEL CHANGE FOR  
ALTERNATIVE 5**

Approved	Date	Author	Date	File Name	Figure
NWH	10/10/08	RAM	10/10/08	7831107G	24



