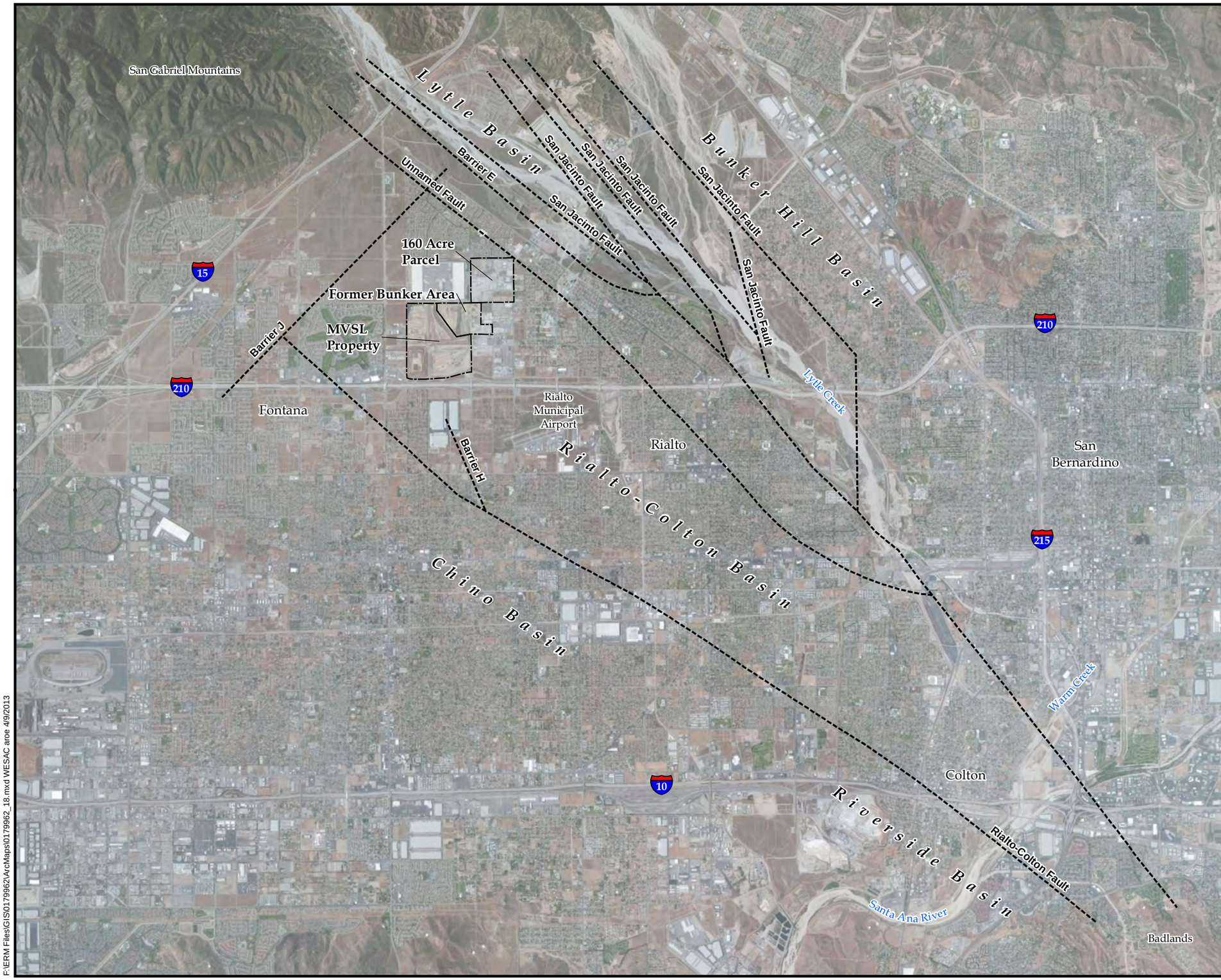
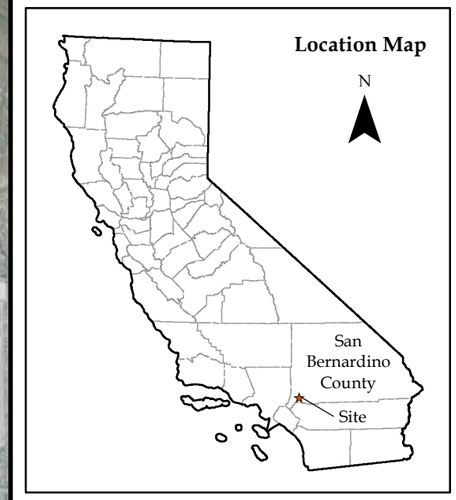
Figures





Legend

- Approximate Location Fault/Geologic Contact
- Site Boundary

Reference:
Bing Maps Aerial
(c) 2010 Microsoft Corporation and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

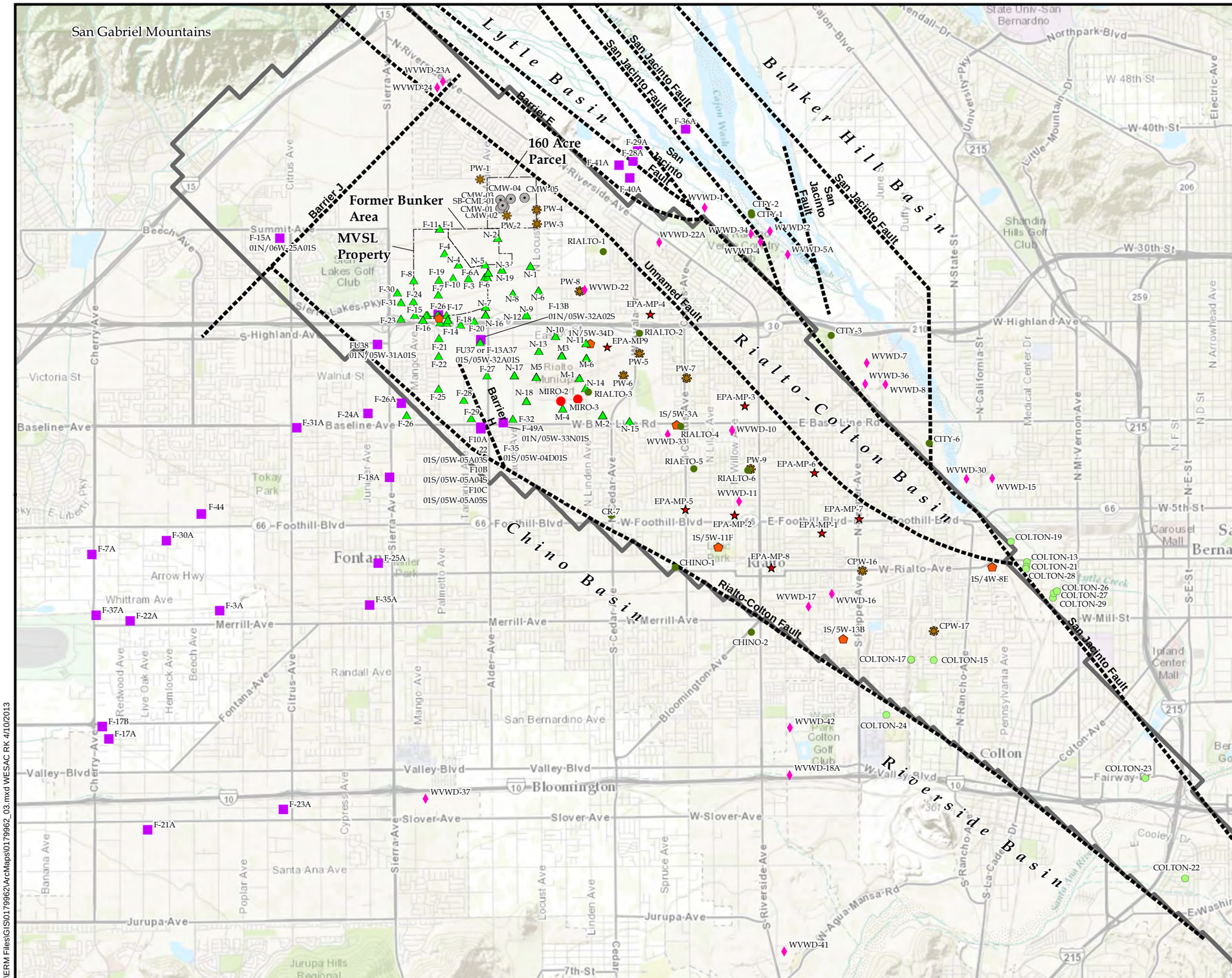
FIGURE 1-1

SITE LOCATION MAP

ERM

PREPARED BY: aroe (ERM)	JOB NO. 0179962 FILE: 0179962_18.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_18.mxd WESAC aroe 4/9/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

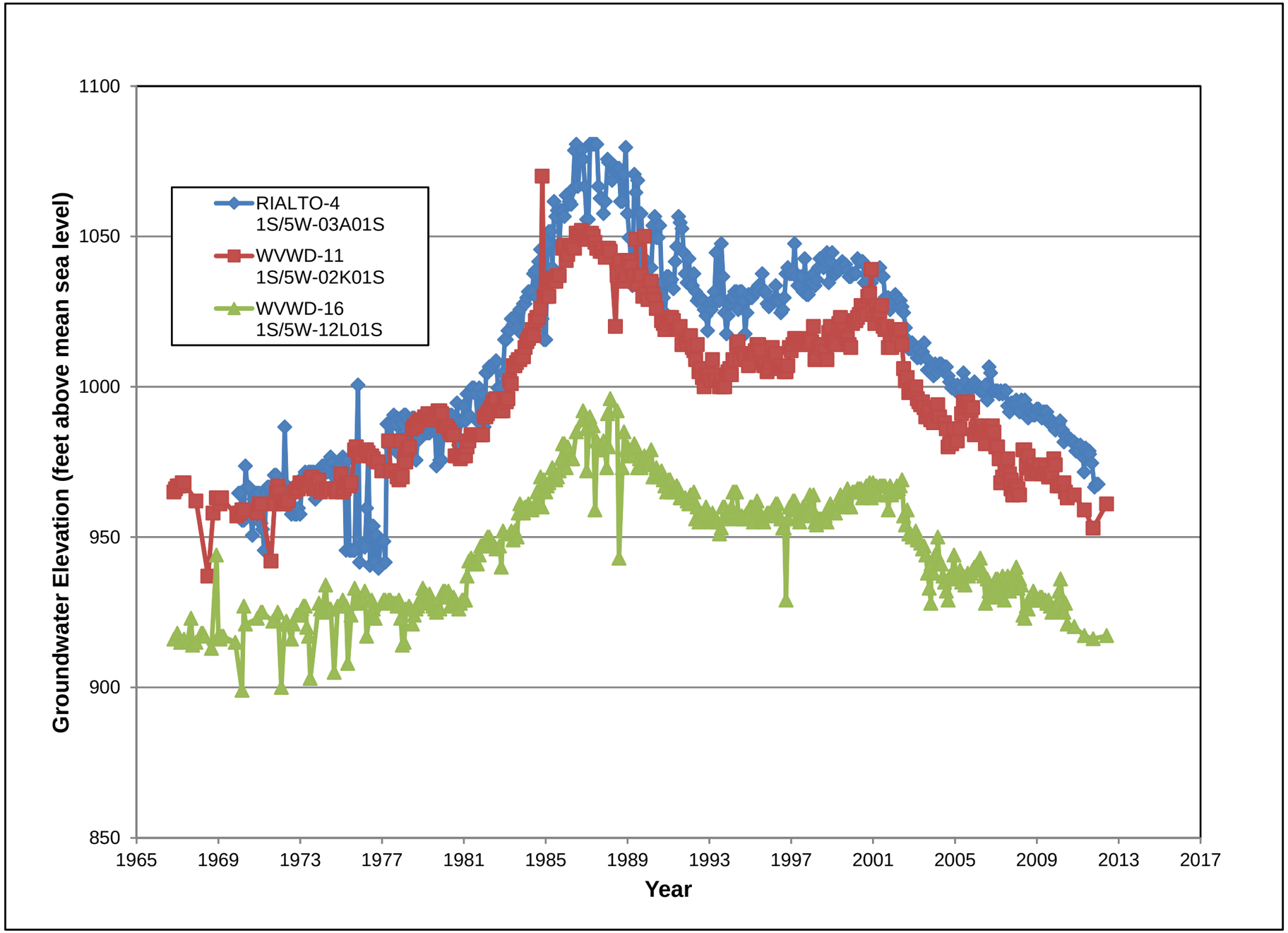
FIGURE 2-1

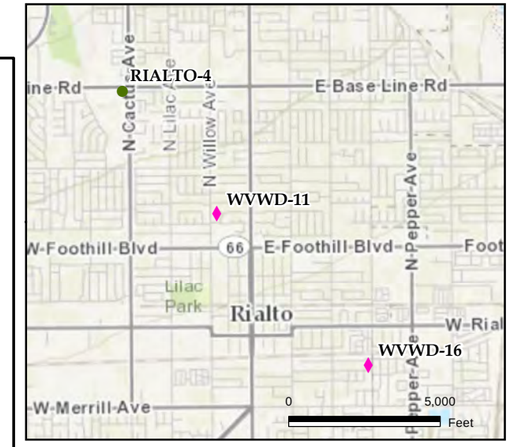
WELL LOCATION MAP

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_03.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_03.mxd WESAC RK 4/10/2013





SOURCE AREA OPERABLE UNIT
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FIGURE 2-2

RIALTO-COLTON BASIN
KEY WELL HYDROGRAPHS

ERM

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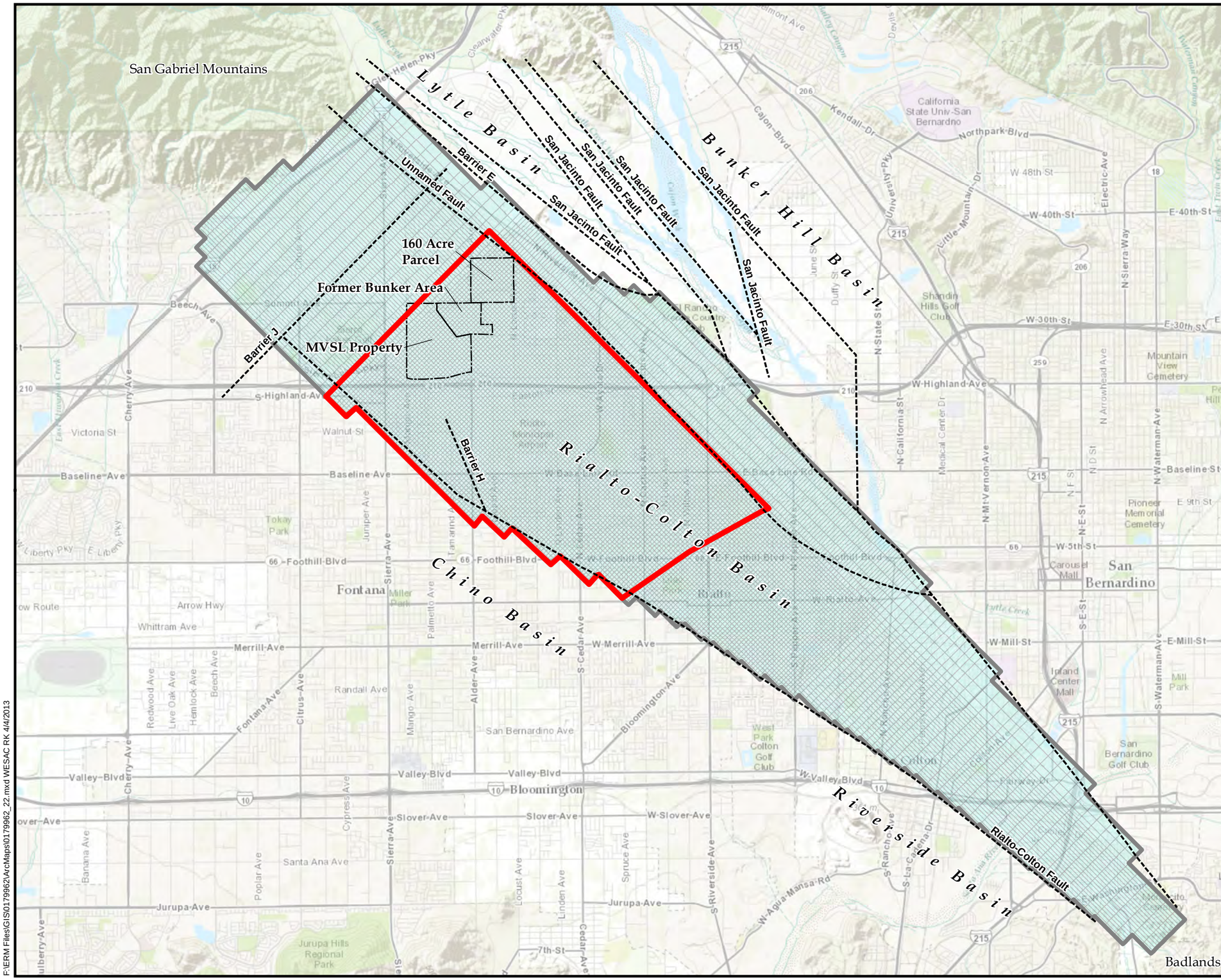
F:\ERM Files\GIS\0179962\ArcMaps\0179962_108.mxd WESAC RK 4/10/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-1

GROUNDWATER FLOW MODEL GRID

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962
FILE: 0179962_22.mxd

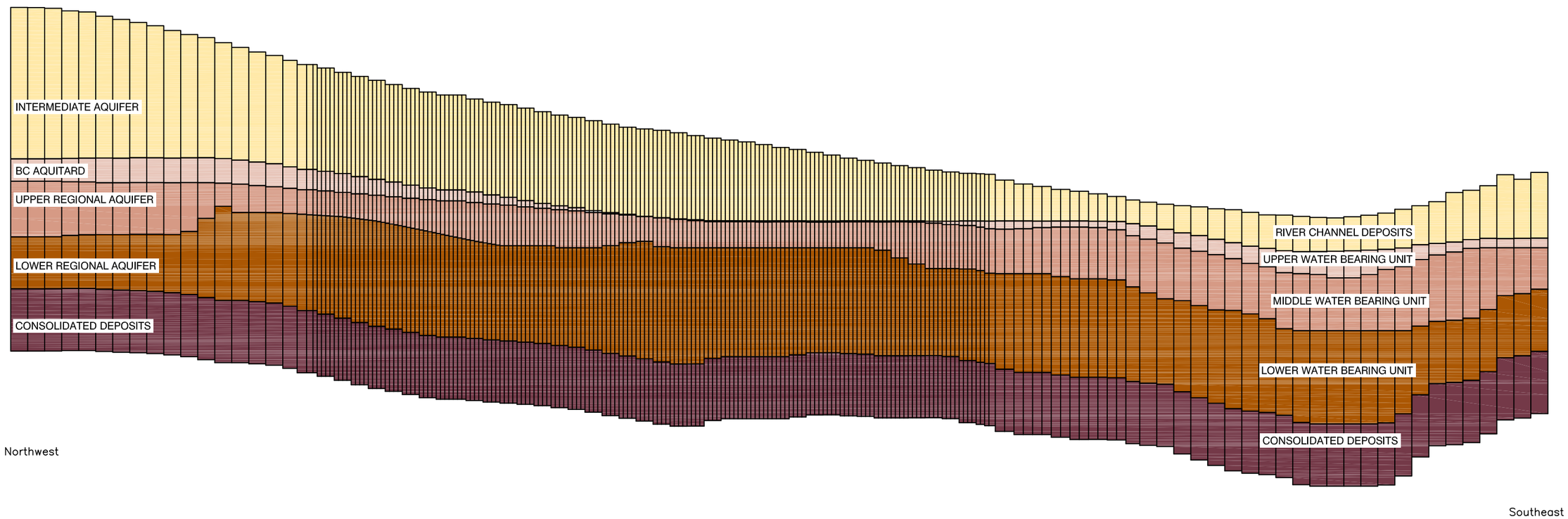
F:\ERM Files\GIS\0179962\ArcMaps\0179962_22.mxd WESAC RK 4/4/2013

Project No. 0179962

Date: 03/18/13

Drawn By: L. Castro

CAD File: F:\0179962\0179962-02



NOTE:

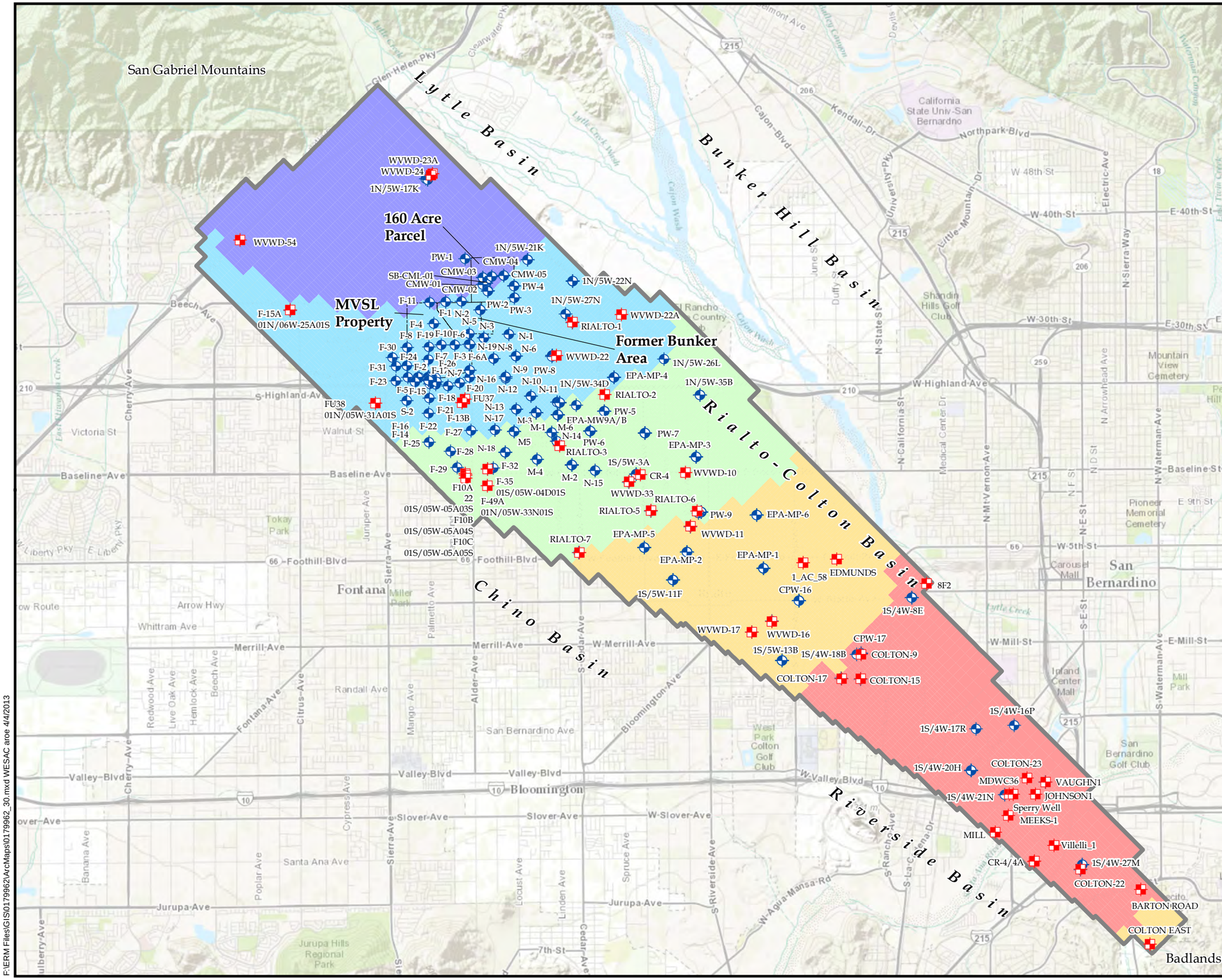
Cross-Sectional View Along Model Row 52

LEGEND MODEL LAYER:

1
2
3
4
5

Figure 3-2
Model Grid In
Cross Sectional View
Source Area Operable Unit
B.F. Goodrich Superfund Site

ERM 03/13



Legend

- Monitoring Well Used as Model Target Well
- Production Well
- Model Boundary
- Site Boundary

Modeled Ground Surface Elevation (ft. amsl.)

- 940 - 1132
- 1132 - 1305
- 1305 - 1465
- 1465 - 1651
- 1651 - 2032

Note:
ft. amsl. = Feet above mean sea level.

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,500
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-3

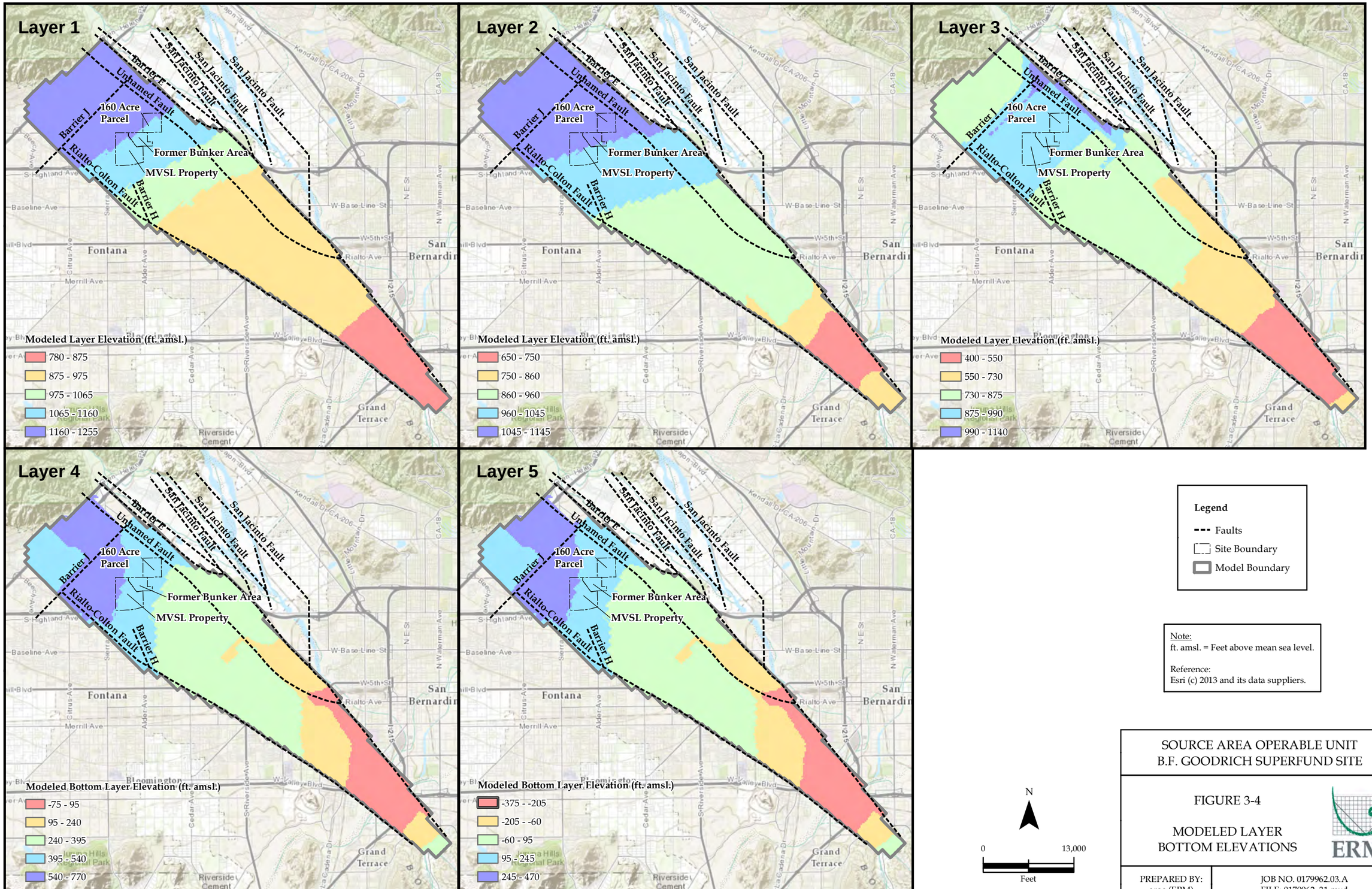
MODELED GROUND SURFACE ELEVATIONS

ERM

PREPARED BY:
aroe (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_30.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_30.mxd WESAC aroe 4/4/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-4

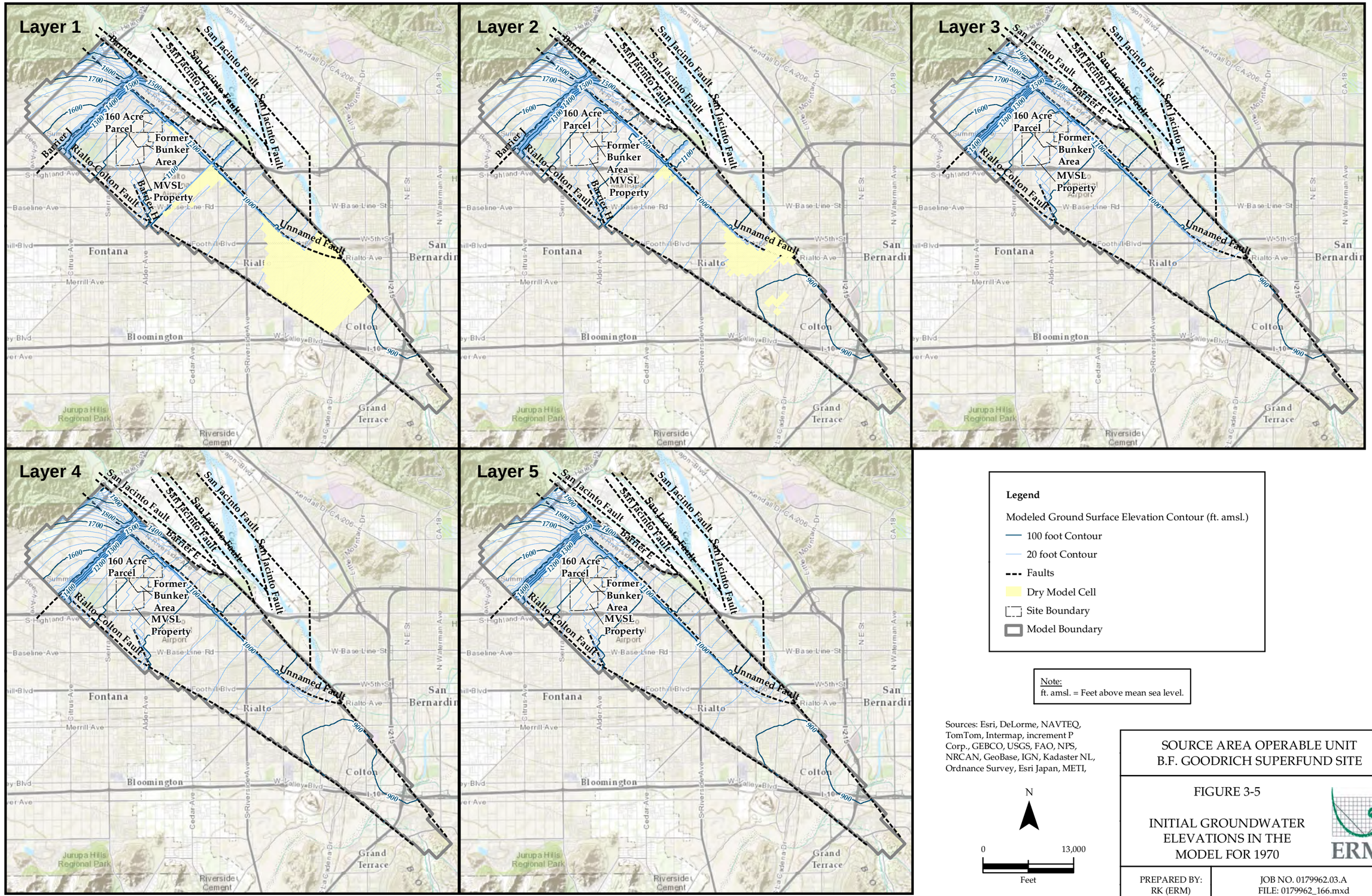
MODELED LAYER
BOTTOM ELEVATIONS

ERM

PREPARED BY:
aroe (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_31.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_31.mxd WESAC aroe 4/10/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-5

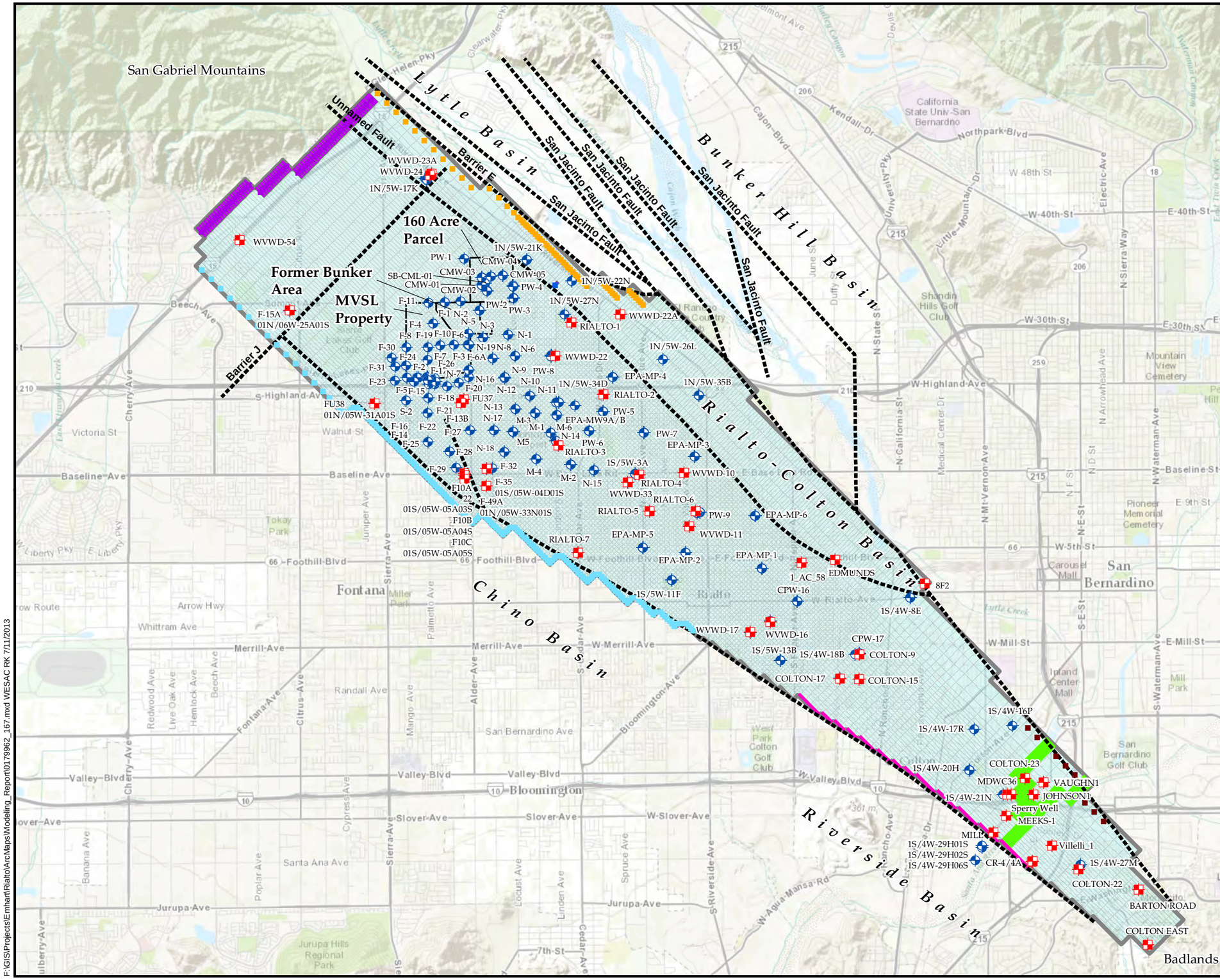
INITIAL GROUNDWATER ELEVATIONS IN THE MODEL FOR 1970

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_166.mxd

F:\GIS\Projects\Emhart\Rialto\ArcMaps\Modeling_Report\0179962_166.mxd WESAC RK 7/11/2013



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

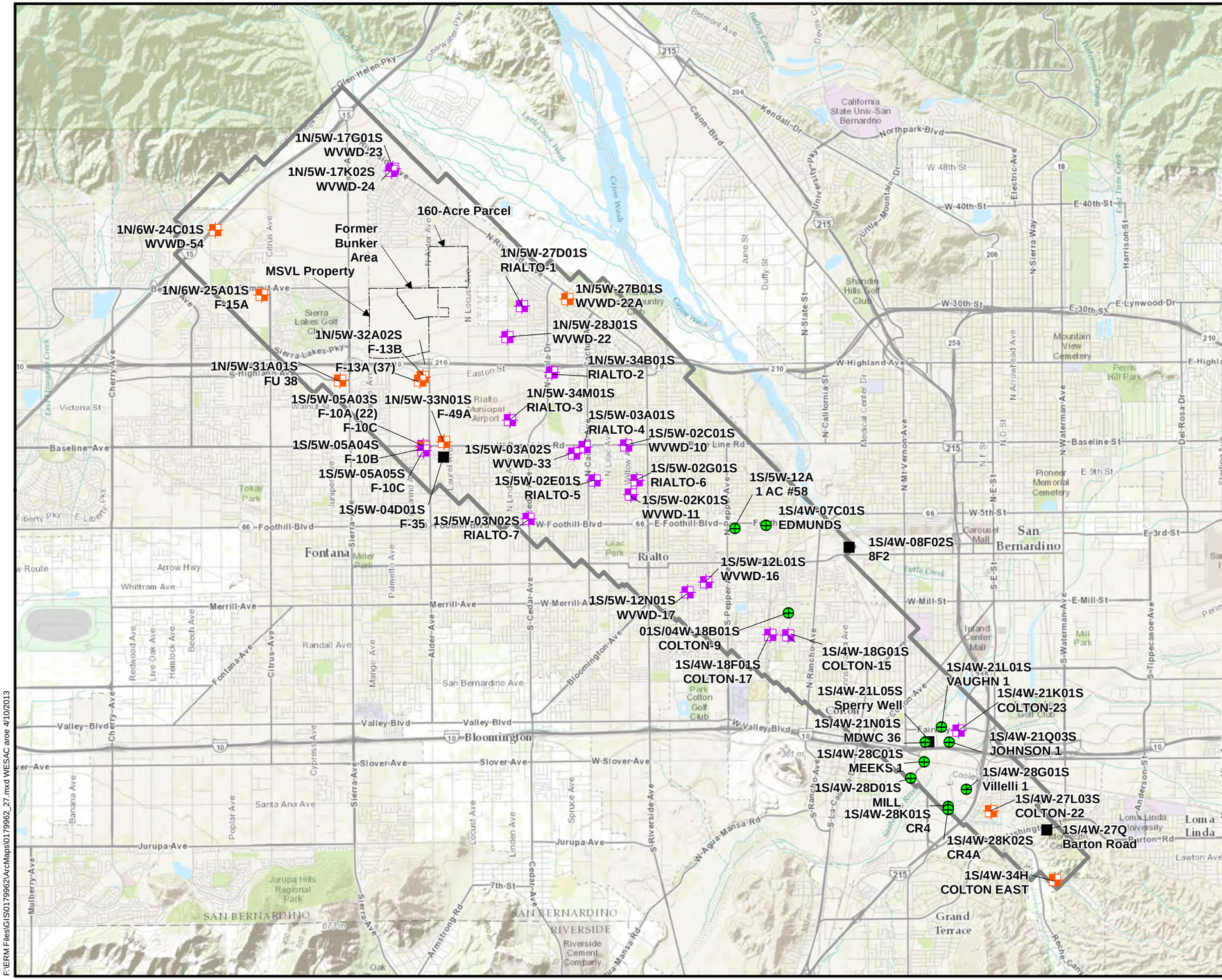
FIGURE 3-6

MODEL BOUNDARY CONDITIONS

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_167.mxd

F:\GIS\Projects\Emhart\Rialto\ArcMaps\Modeling_Report\0179962_167.mxd WESAC RK 7/11/2013



Legend

- USEPA Model
- USEPA and USGS Model
- USGS Model
- Additional Wells
- Site Boundary
- Model Boundary

Note:
All production wells shown are within the domain of the Emhart Model.

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,500

Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

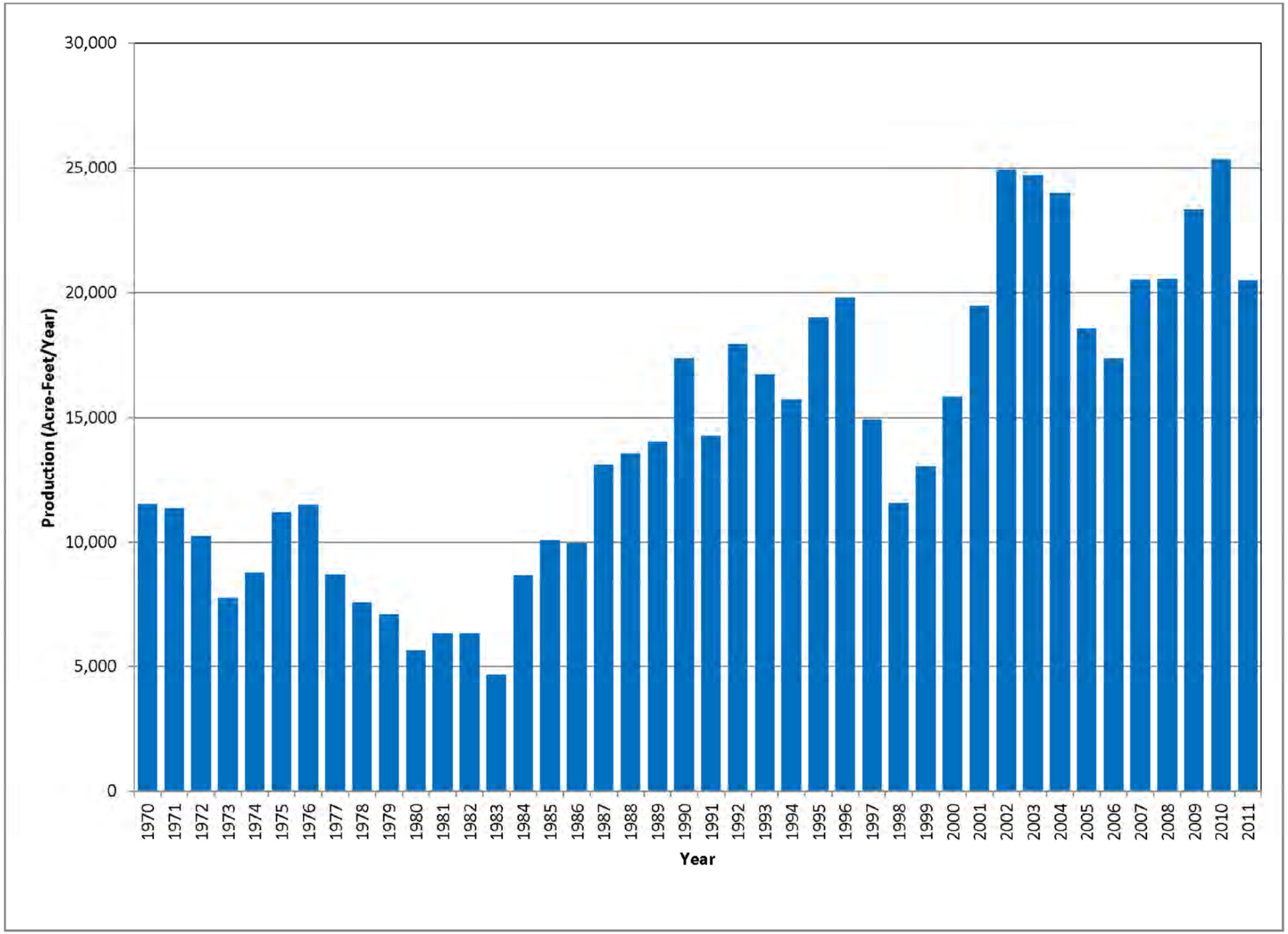
FIGURE 3-7

PRODUCTION WELLS
IN THE MODEL

ERM

PREPARED BY: aroe (ERM)	JOB NO. 0179962.03.A FILE: 0179962_27.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_27.mxd WESAC aroe 4/10/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

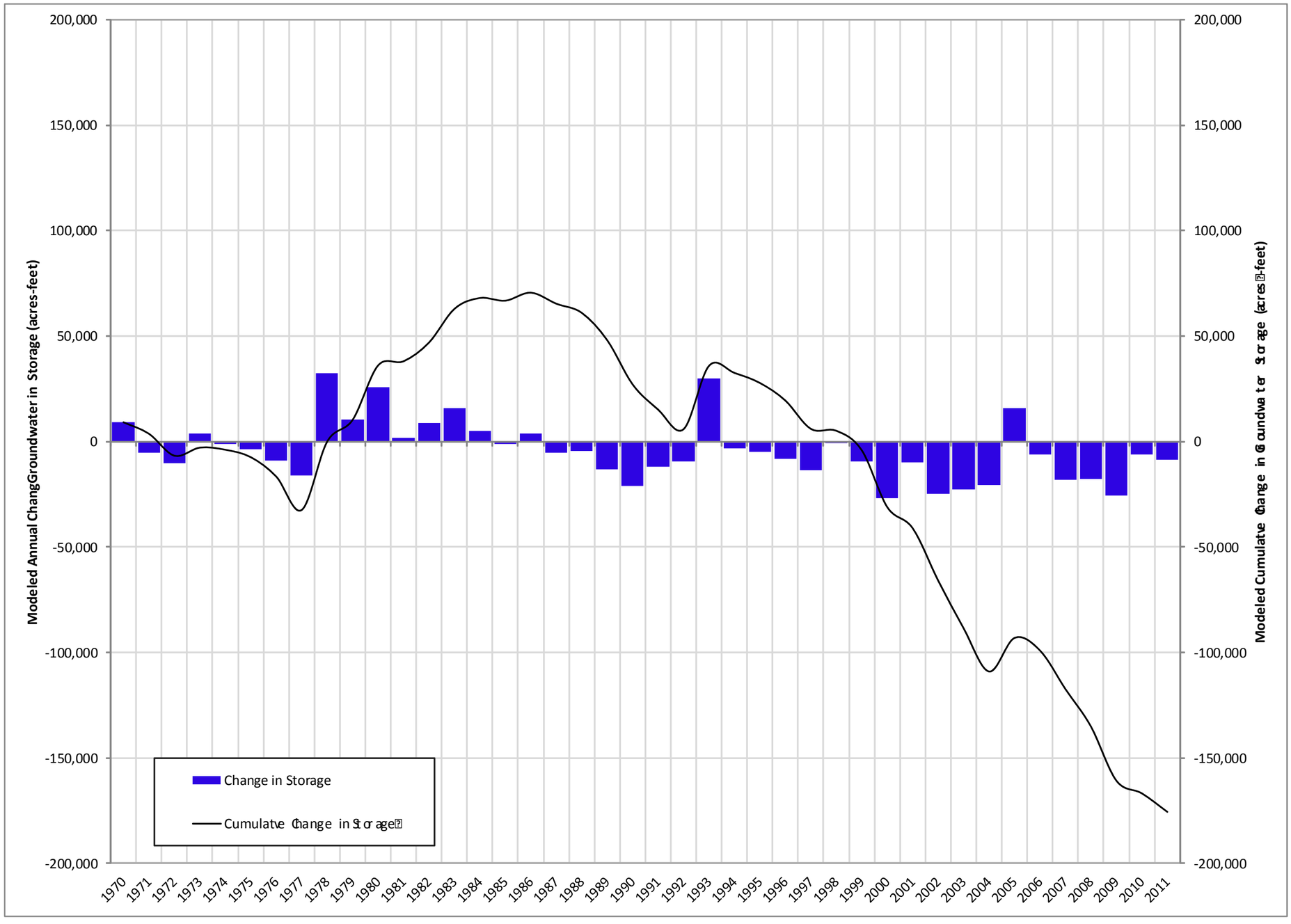
FIGURE 3-8

RIALTO-COLTON BASIN
ANNUAL PUMPING

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_36.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_36.mxd WESAC RK 4/10/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

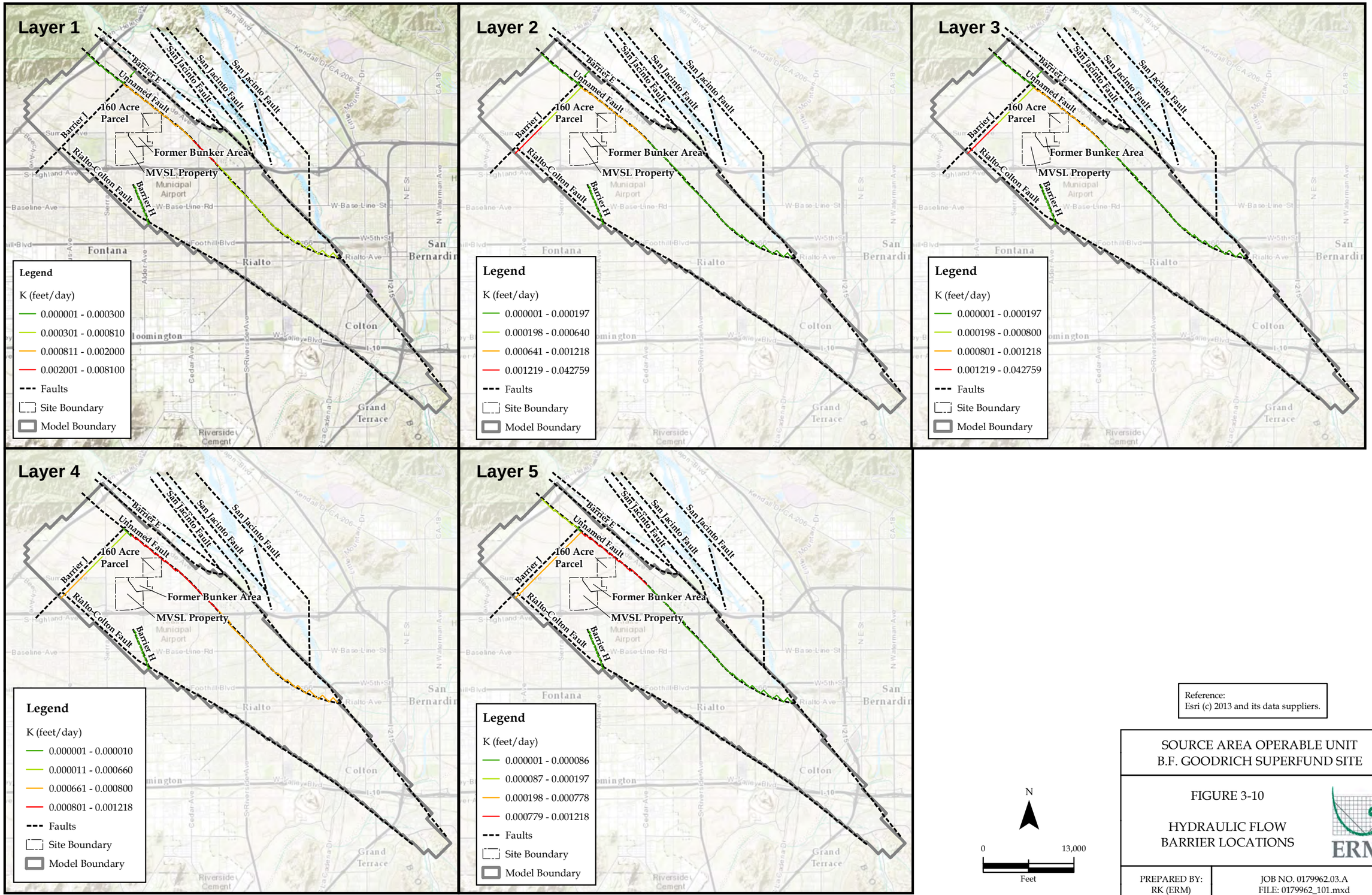
FIGURE 3-9

MODELED ANNUAL AND CUMULATIVE CHANGE IN GROUNDWATER STORAGE

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_110.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_110.mxd WESAC RK 4/10/2013



Reference:
Esri (c) 2013 and its data suppliers.

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-10

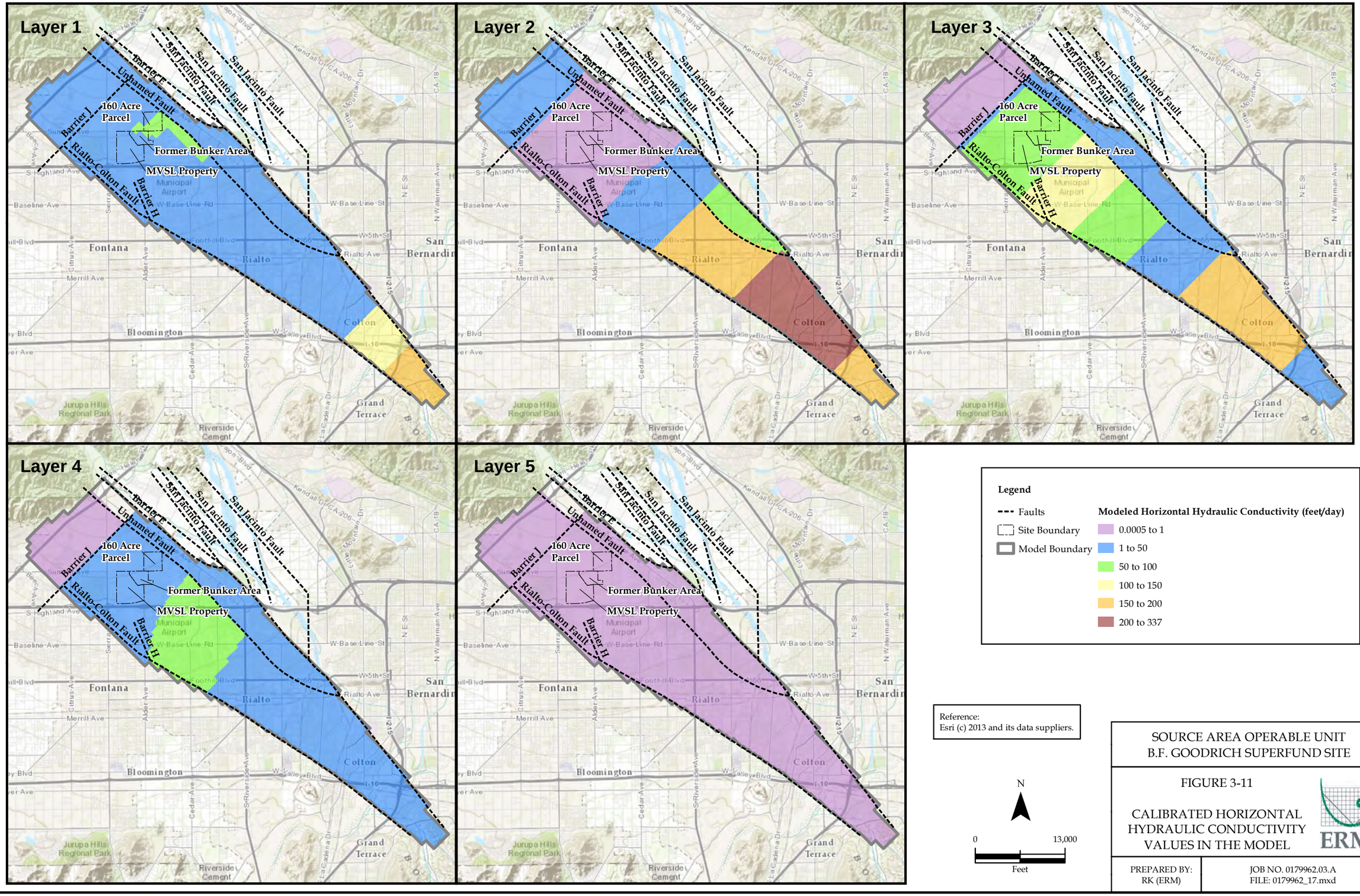
HYDRAULIC FLOW
BARRIER LOCATIONS

ERM

PREPARED BY:
RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_101.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_101.mxd WESAC RK 4/10/2013



Reference:
Esri (c) 2013 and its data suppliers.

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

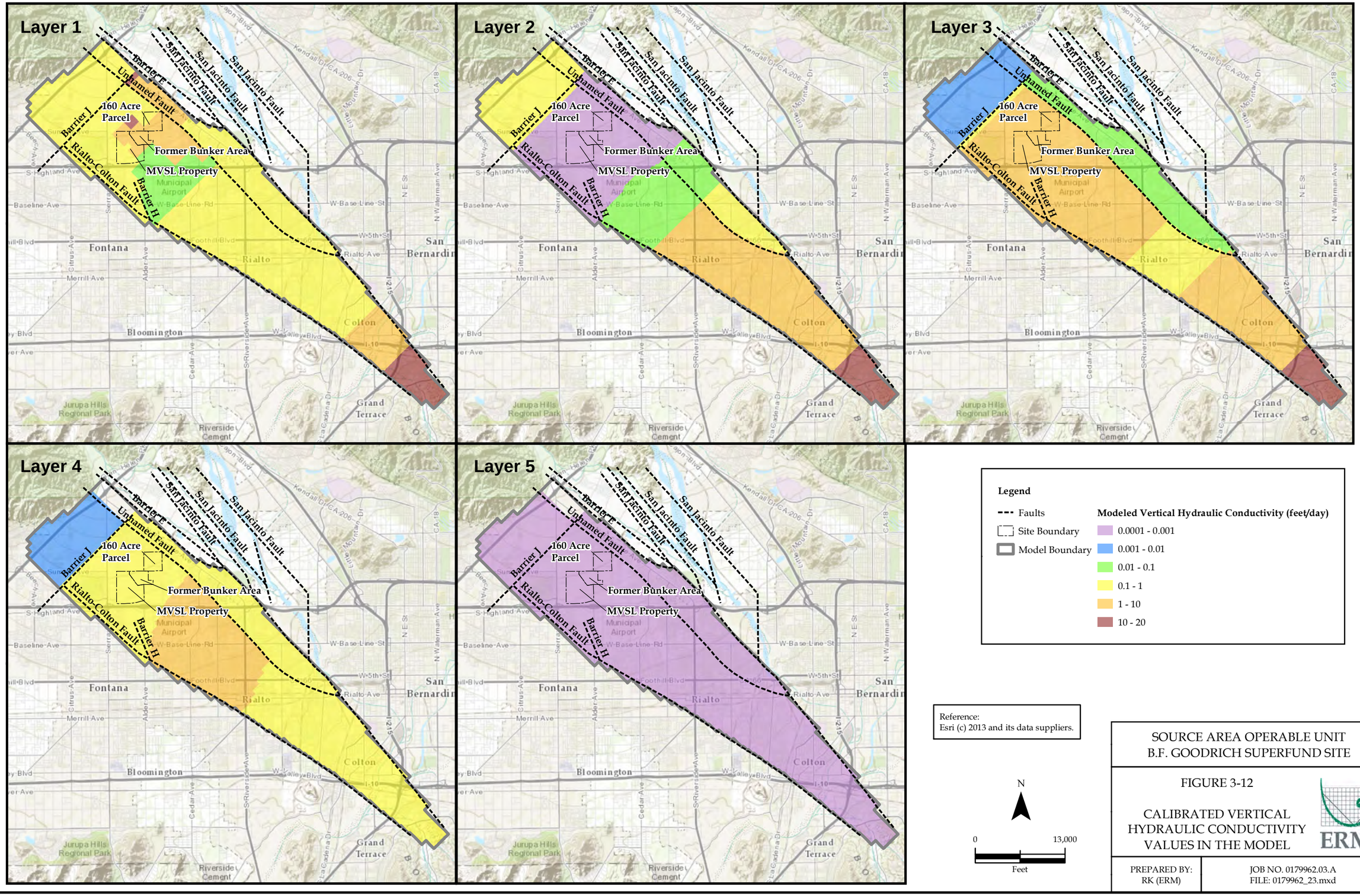
FIGURE 3-11

CALIBRATED HORIZONTAL HYDRAULIC CONDUCTIVITY VALUES IN THE MODEL

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_17.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_17.mxd WESAC RK 4/10/2013



Reference:
Esri (c) 2013 and its data suppliers.

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-12

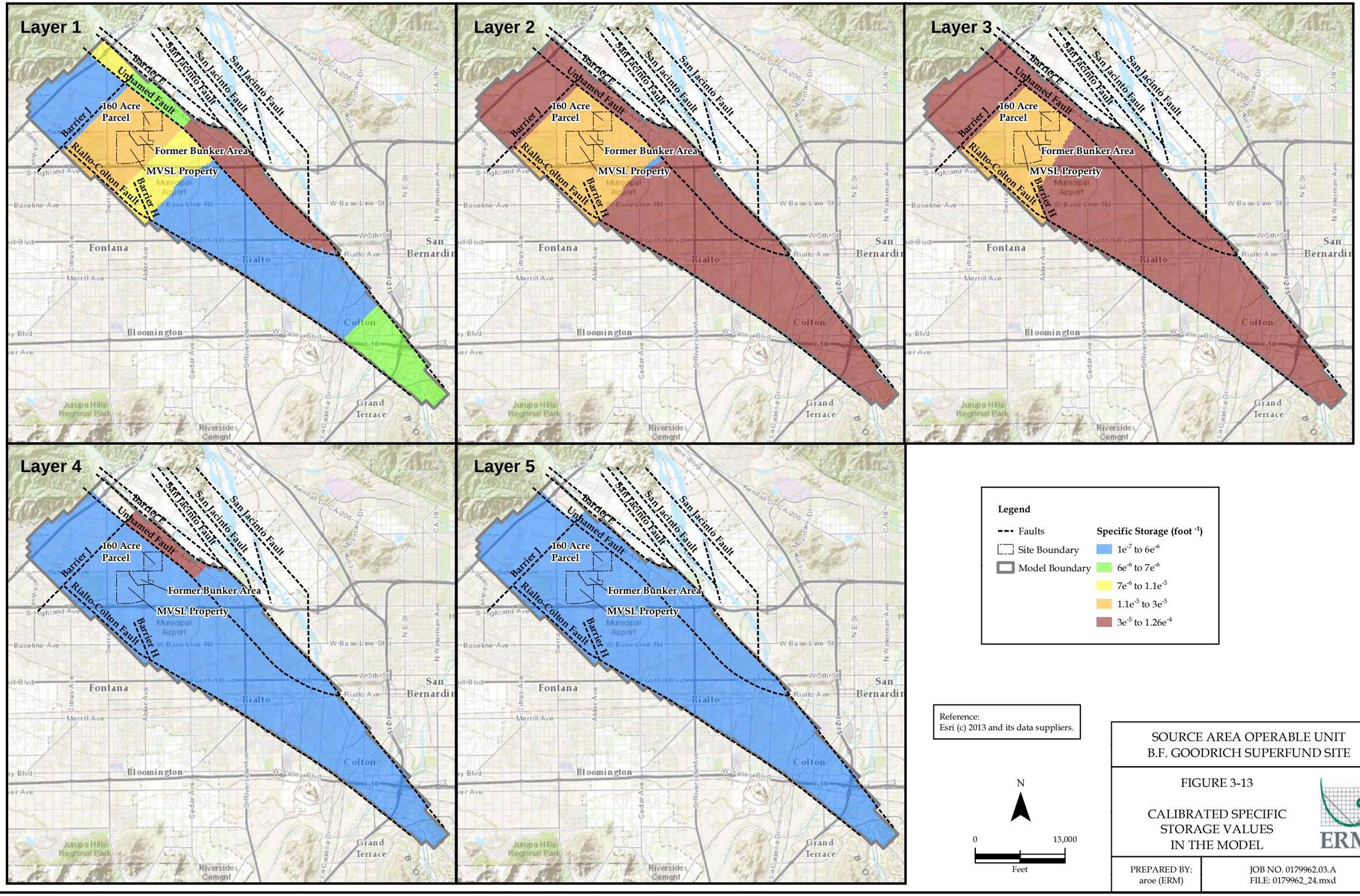
CALIBRATED VERTICAL HYDRAULIC CONDUCTIVITY VALUES IN THE MODEL

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_23.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_23.mxd WESAC RK 4/10/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-13

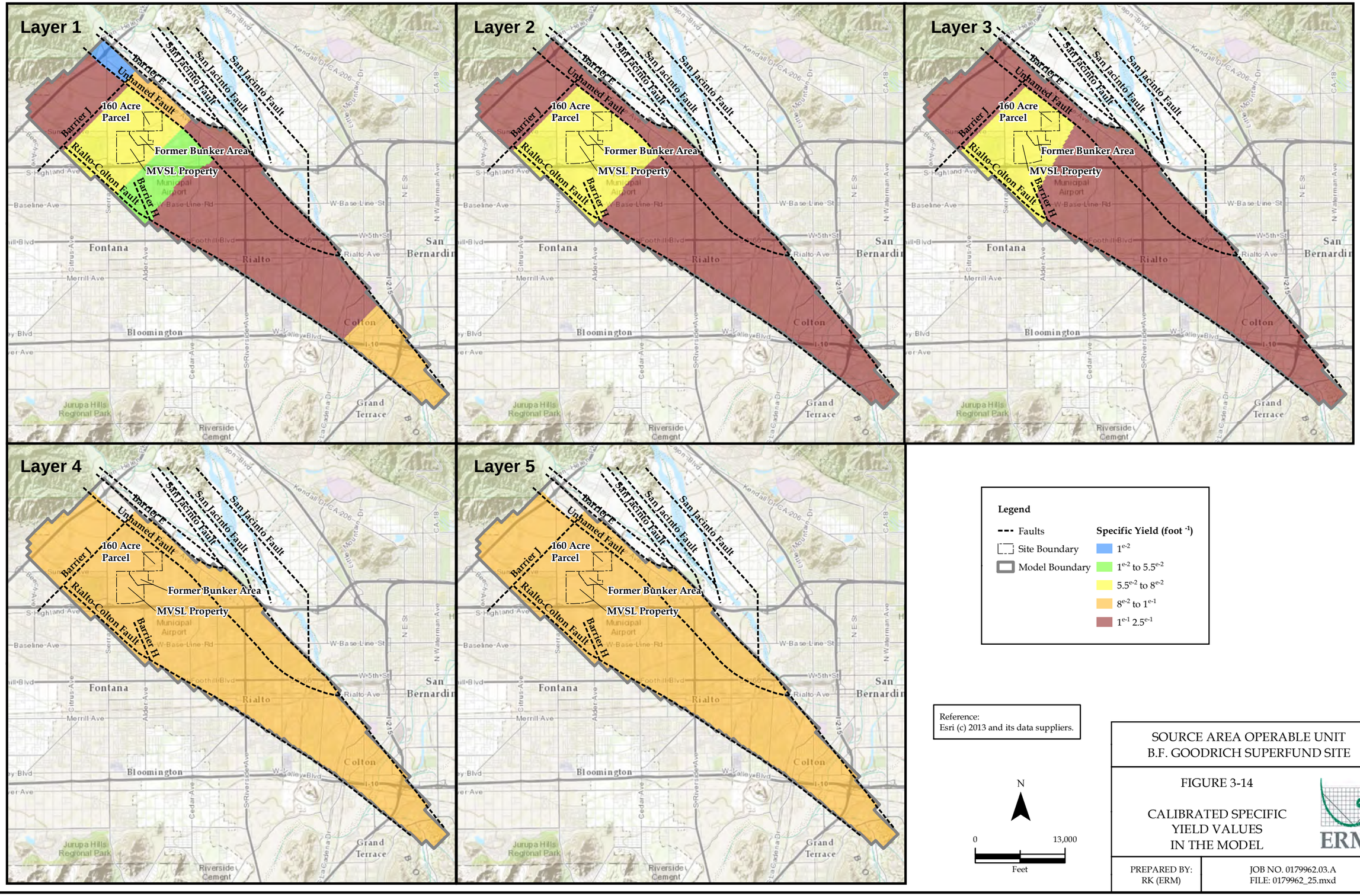
CALIBRATED SPECIFIC STORAGE VALUES IN THE MODEL

ERM

PREPARED BY: aroe (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_24.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_24.mxd WESAC aroe 4/10/2013



Reference:
Esri (c) 2013 and its data suppliers.

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 3-14

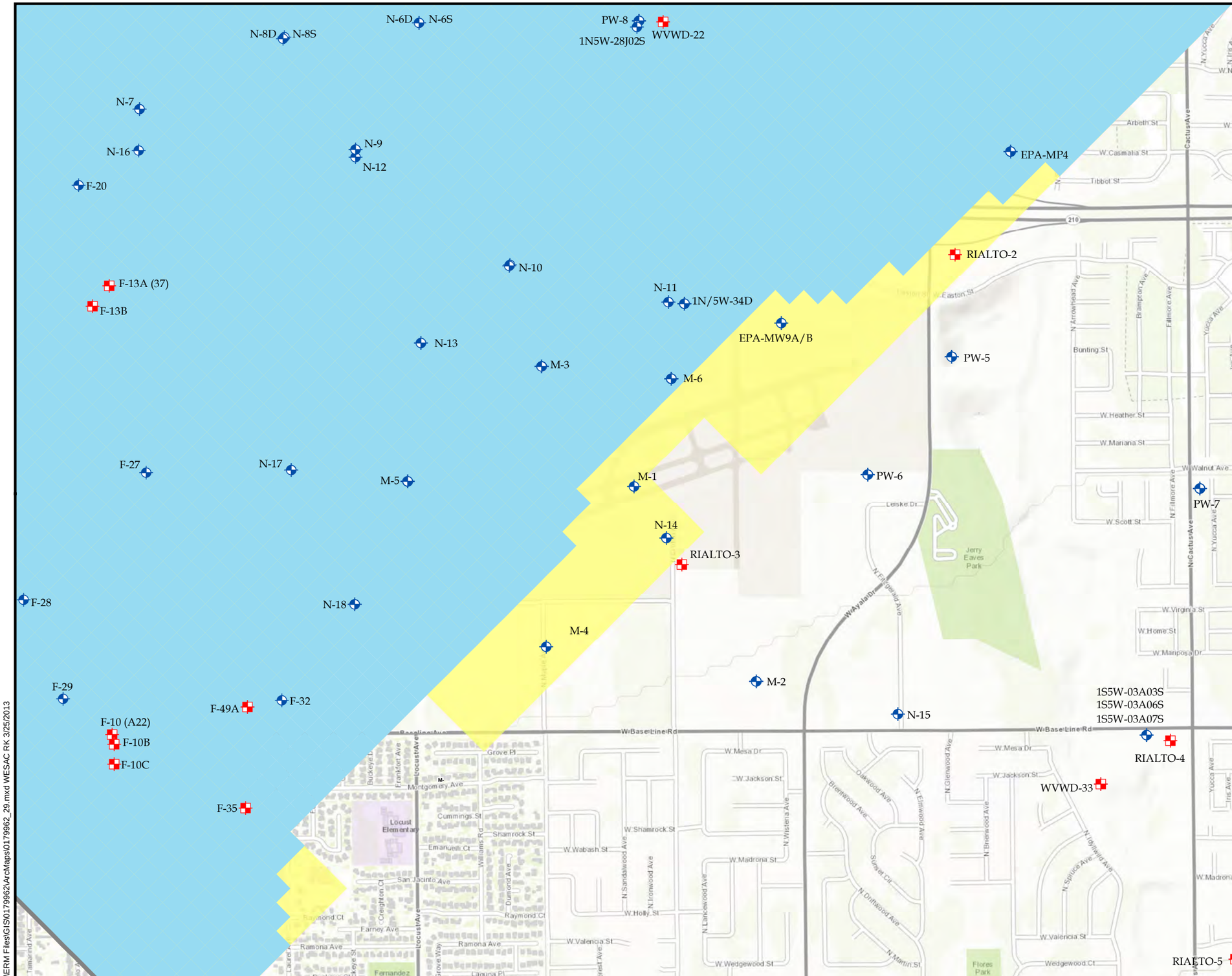
CALIBRATED SPECIFIC YIELD VALUES IN THE MODEL

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_25.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_25.mxd WESAC RK 4/10/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

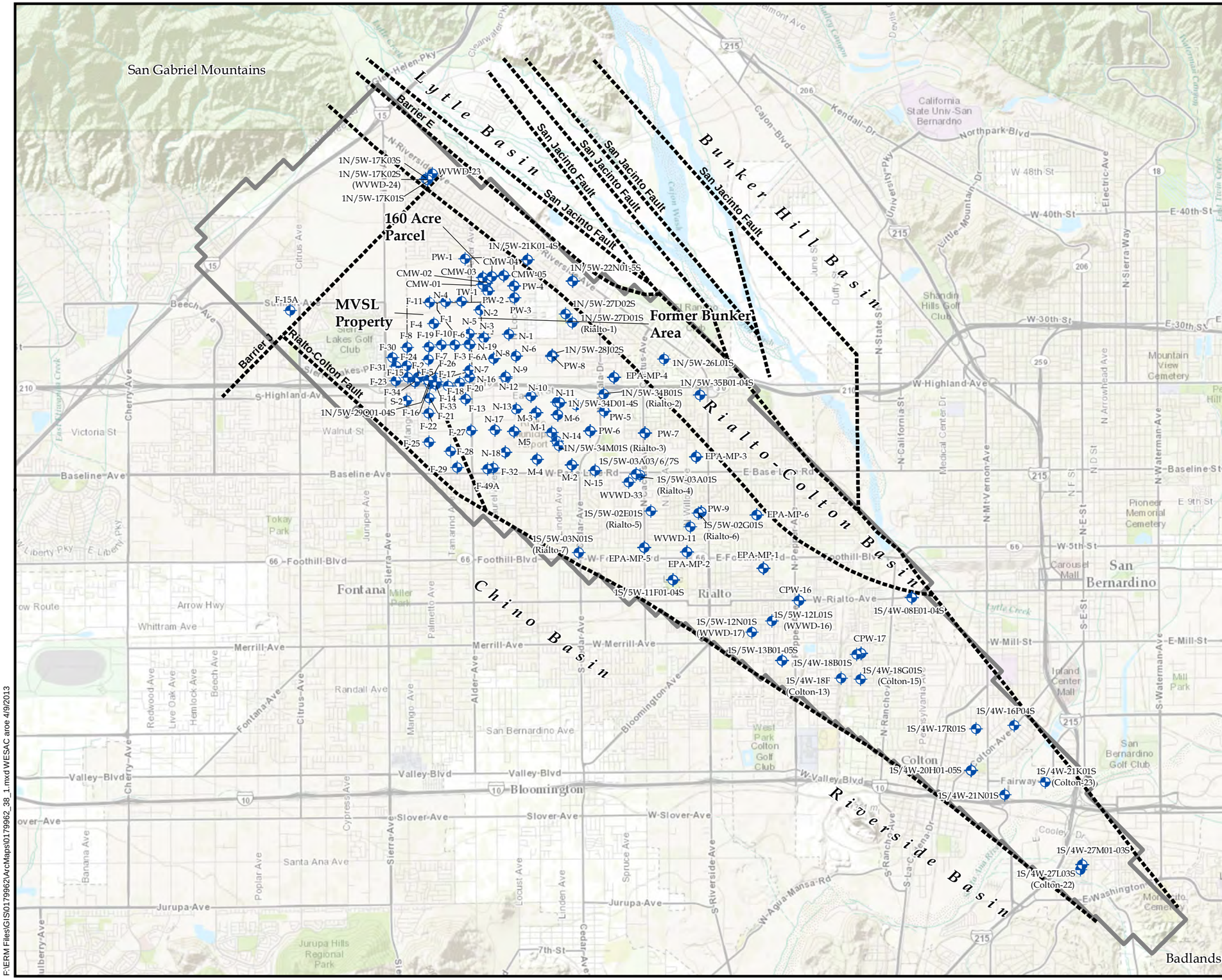
FIGURE 3-15

ADJUSTED LOCATION
OF THE BC AQUITARD
IN THE MODEL

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_29.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_29.mxd WESAC RK 3/25/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

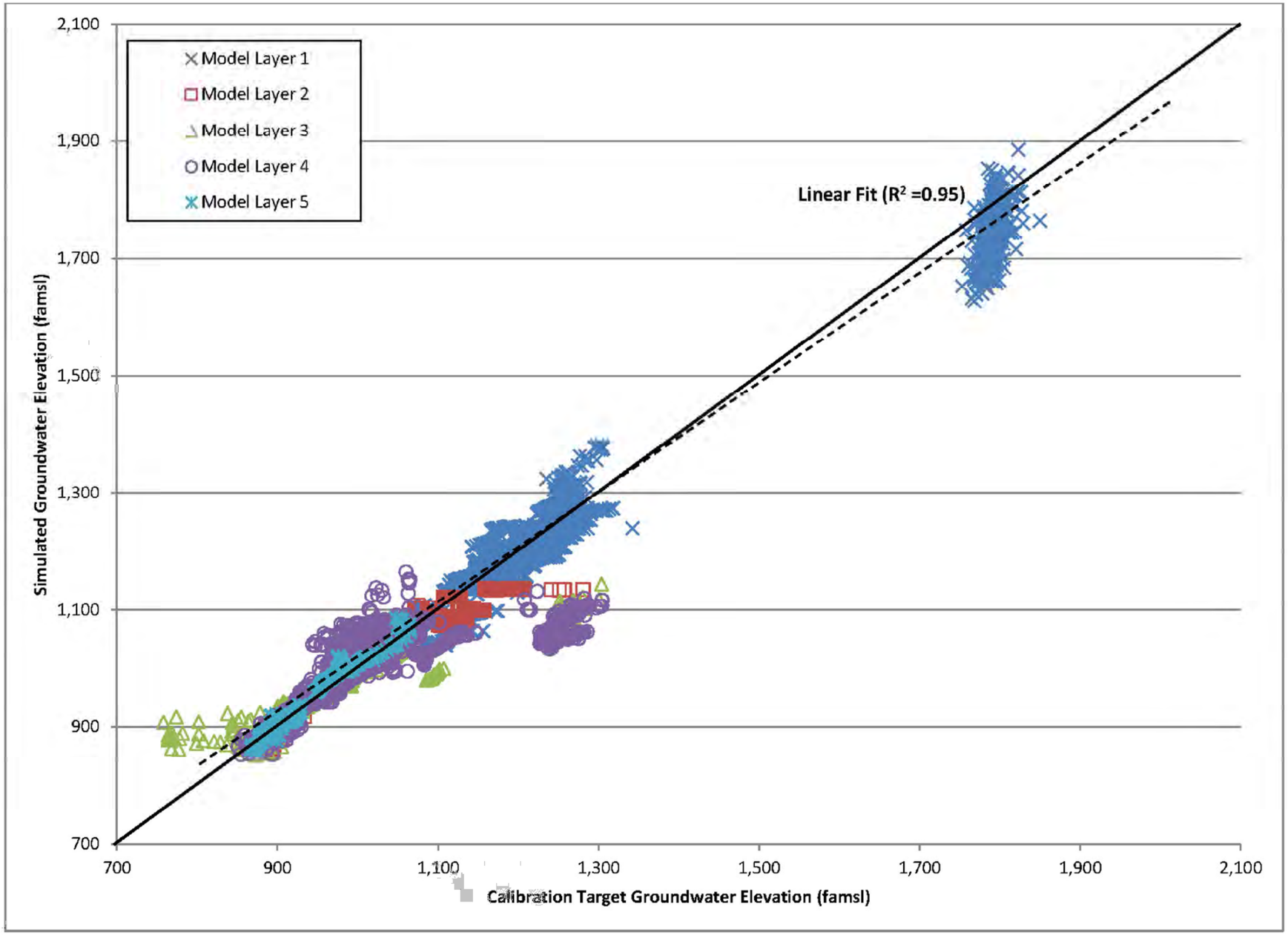
FIGURE 4-1

CALIBRATION TARGETS
IN THE MODEL

ERM

PREPARED BY: aroe (ERM)	JOB NO. 0179962.03.A FILE: 0179962_38_1.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_38_1.mxd WESAC aroe 4/9/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

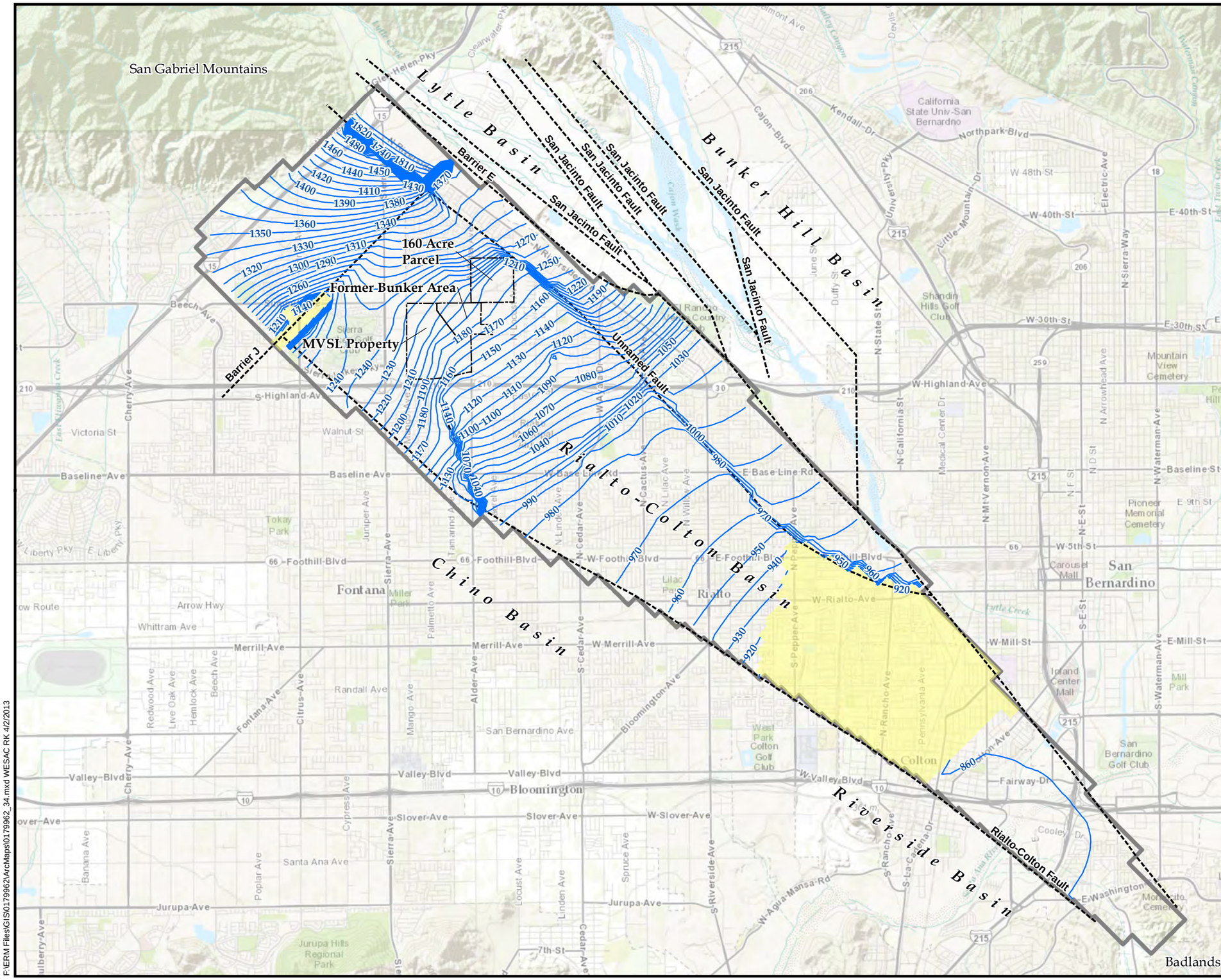
FIGURE 4-2

CALIBRATION SCATTER PLOT - SIMULATED VS. OBSERVED HEADS

ERM

PREPARED BY: aroe (ERM)	JOB NO. 0179962.03.A FILE: 0179962_33.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_33.mxd WESAC aroe 4/10/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary
- Dry Model Cell

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 4-3

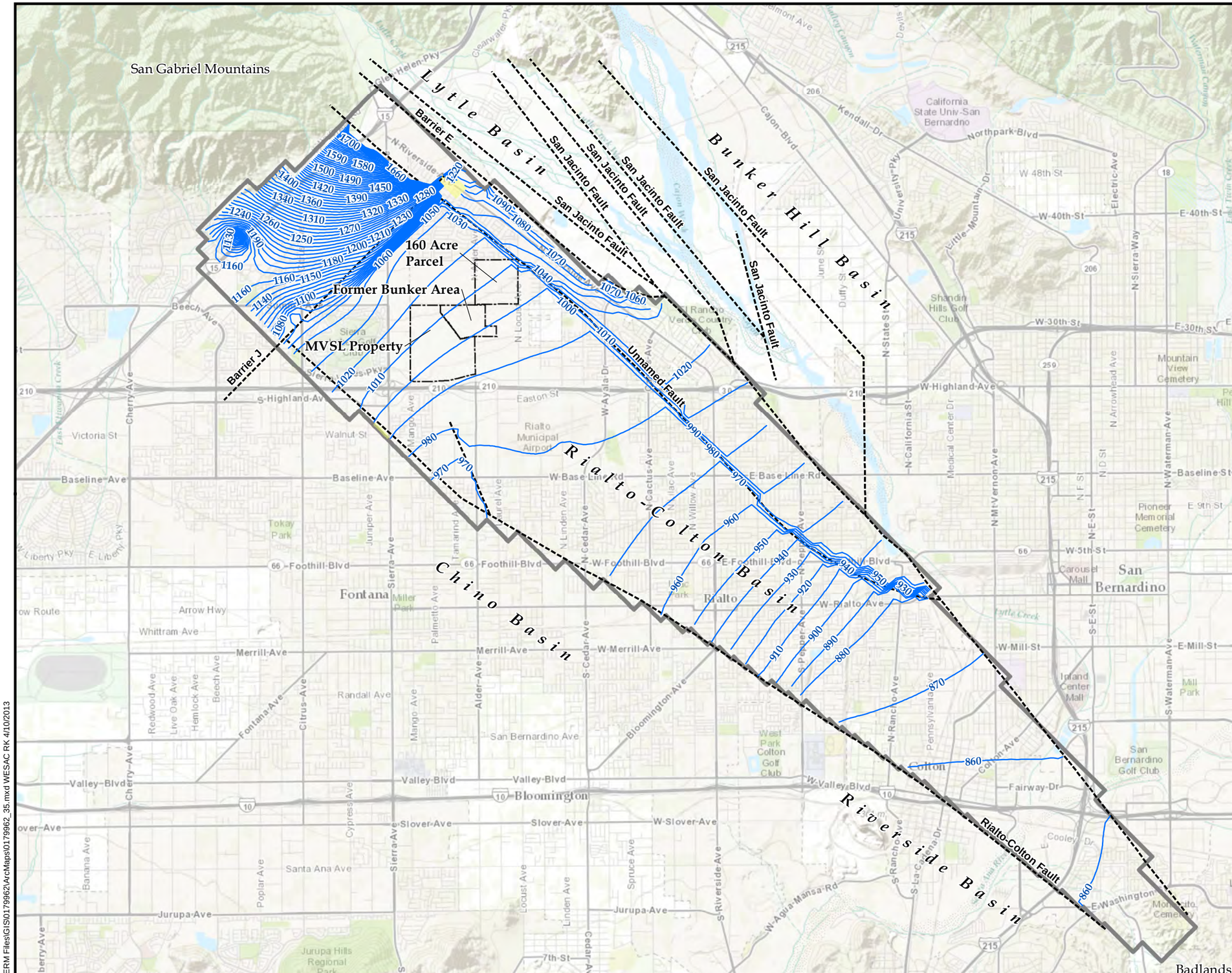
2011 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 1

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962
FILE: 0179962_34.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_34.mxd WESAC RK 4/2/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary
- Dry Model Cell

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

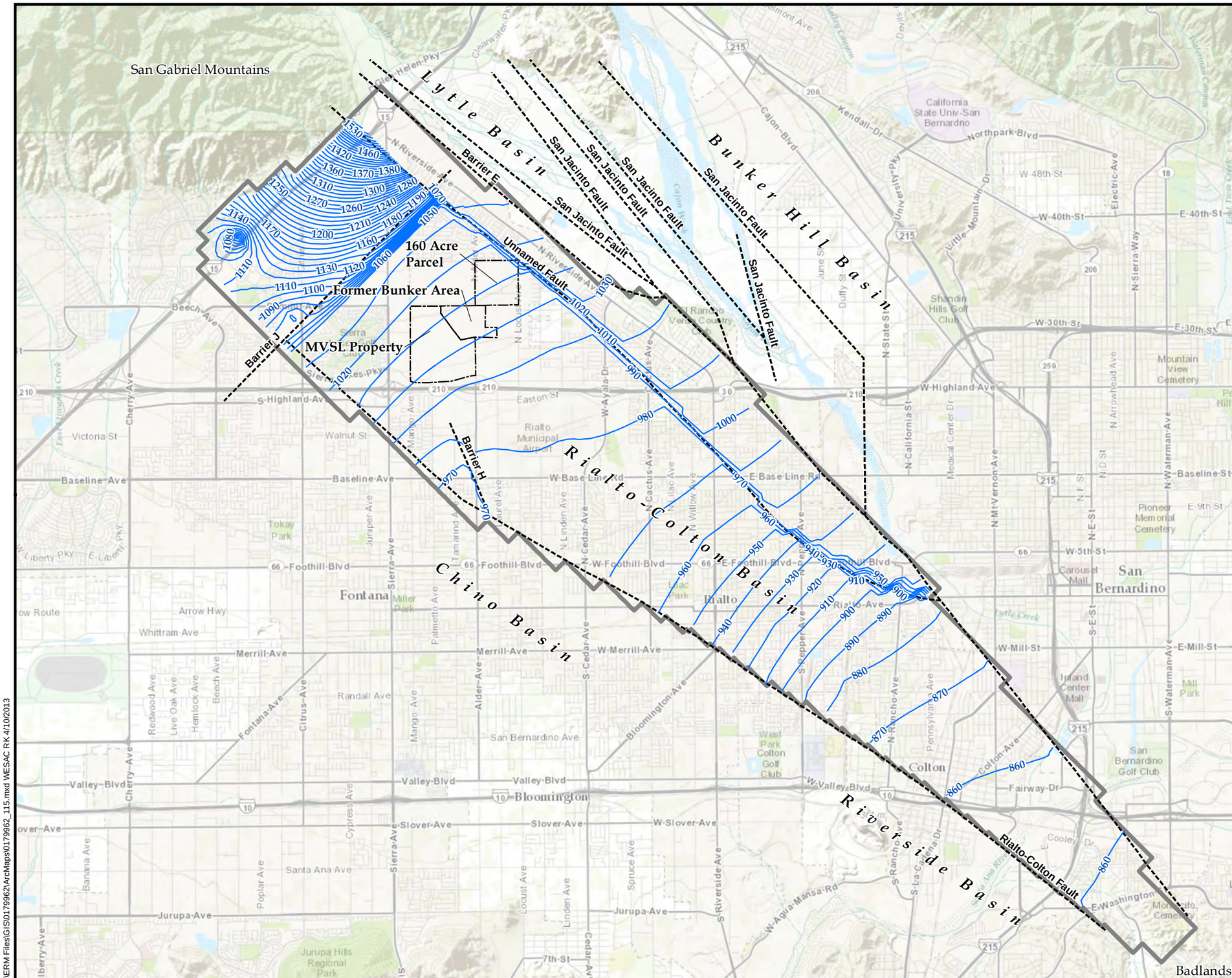
FIGURE 4-4

2011 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 3

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962 FILE: 0179962_35.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_35.mxd WESAC RK 4/10/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

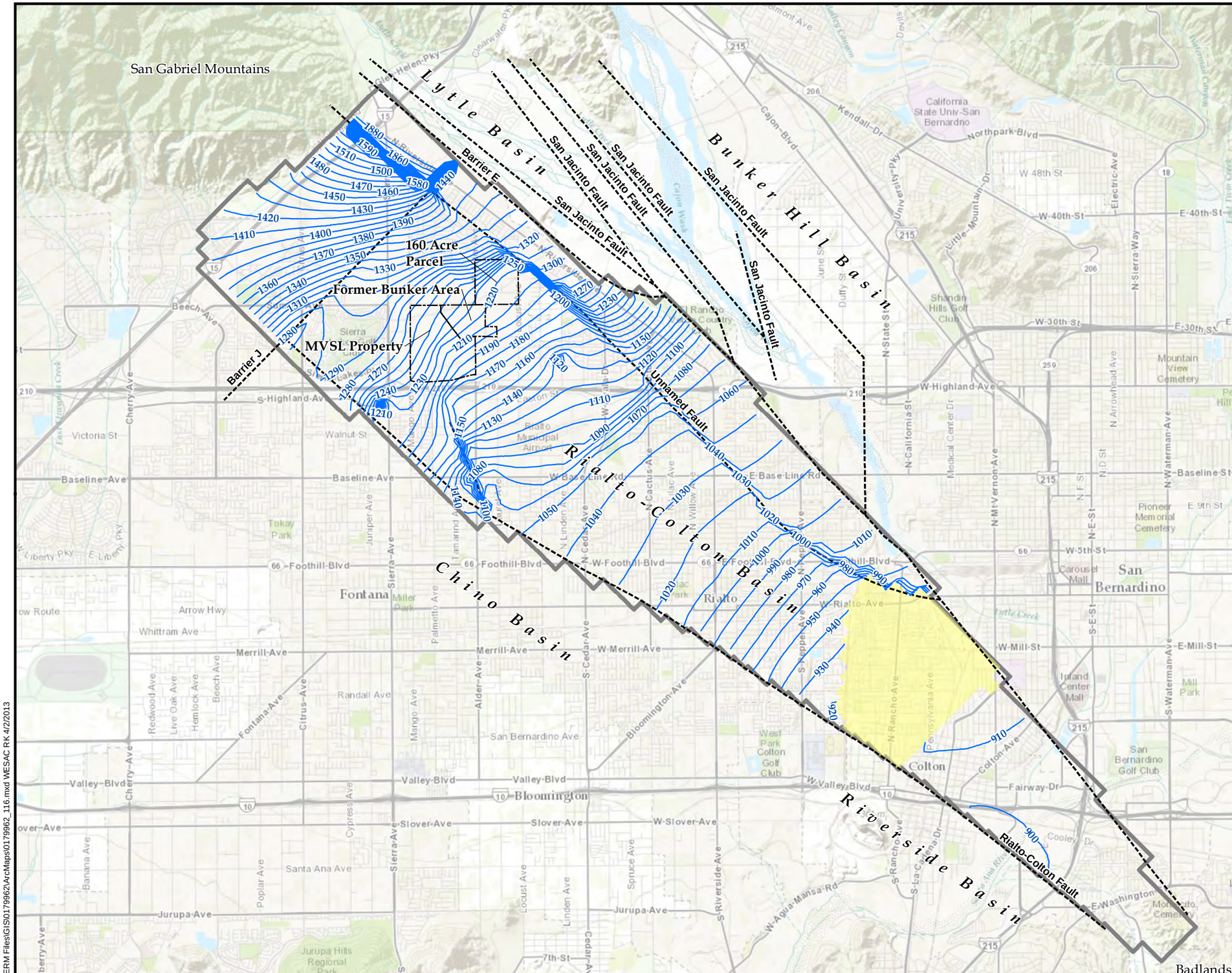
FIGURE 4-5

2011 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 4

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962 FILE: 0179962_115.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_115.mxd WESAC RK 4/10/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary
- Dry Model Cell

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

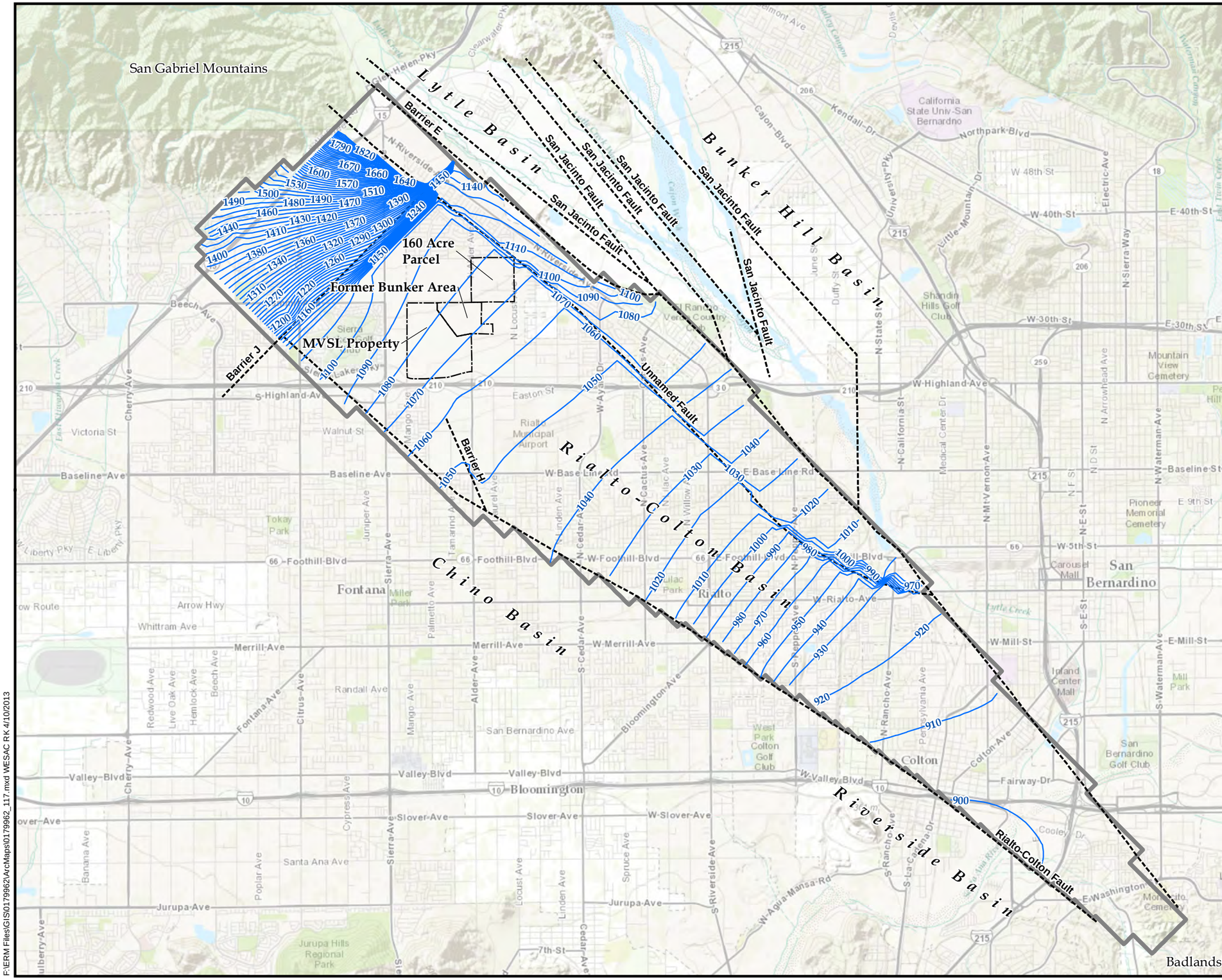
FIGURE 4-6

1996 BASIN WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 1

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962 FILE: 0179962_116.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_116.mxd WESAC RK 4/2/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 4-7

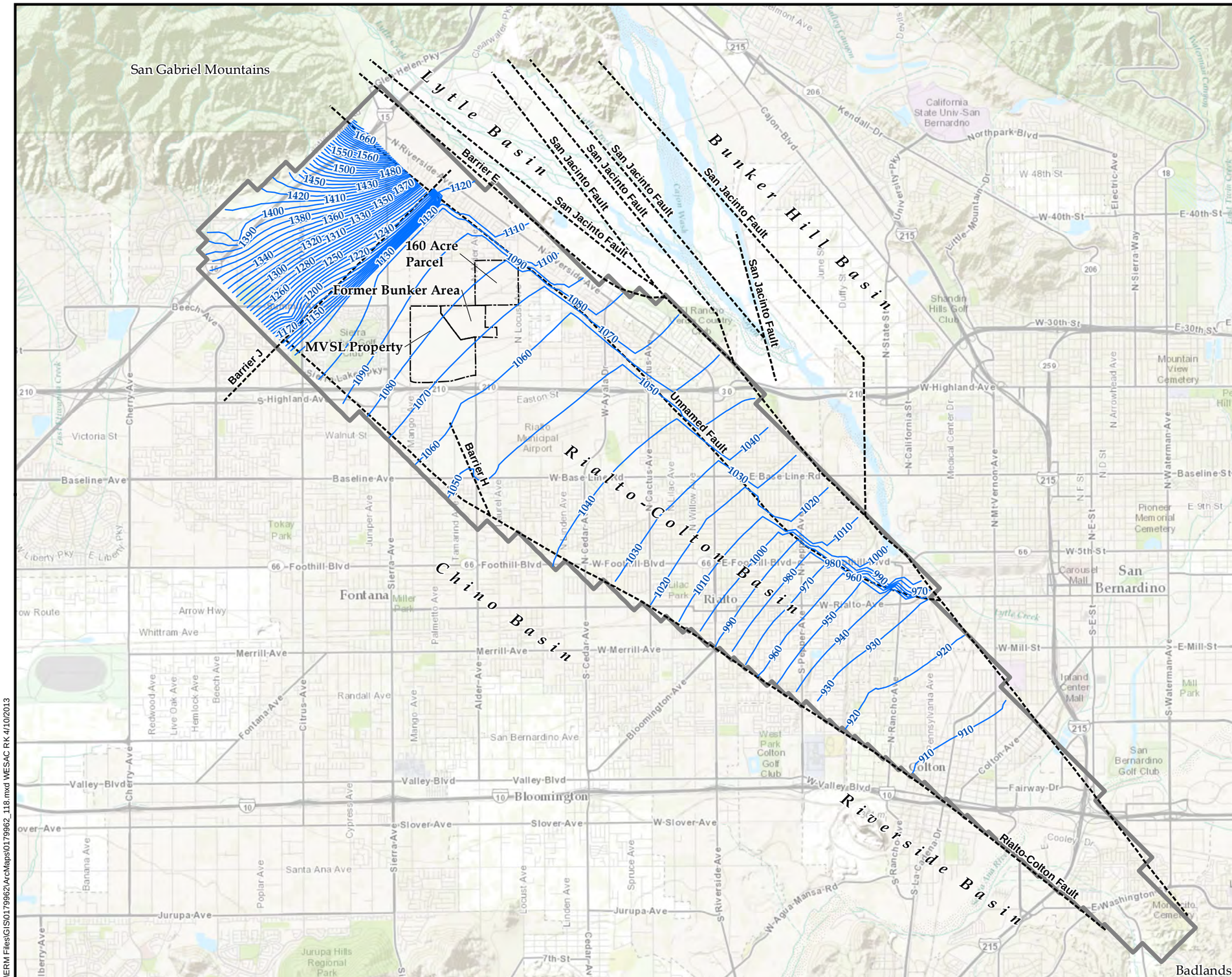
1996 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 3

ERM

PREPARED BY:
RK (ERM)

JOB NO. 0179962
FILE: 0179962_117.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_117.mxd WESAC RK 4/10/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

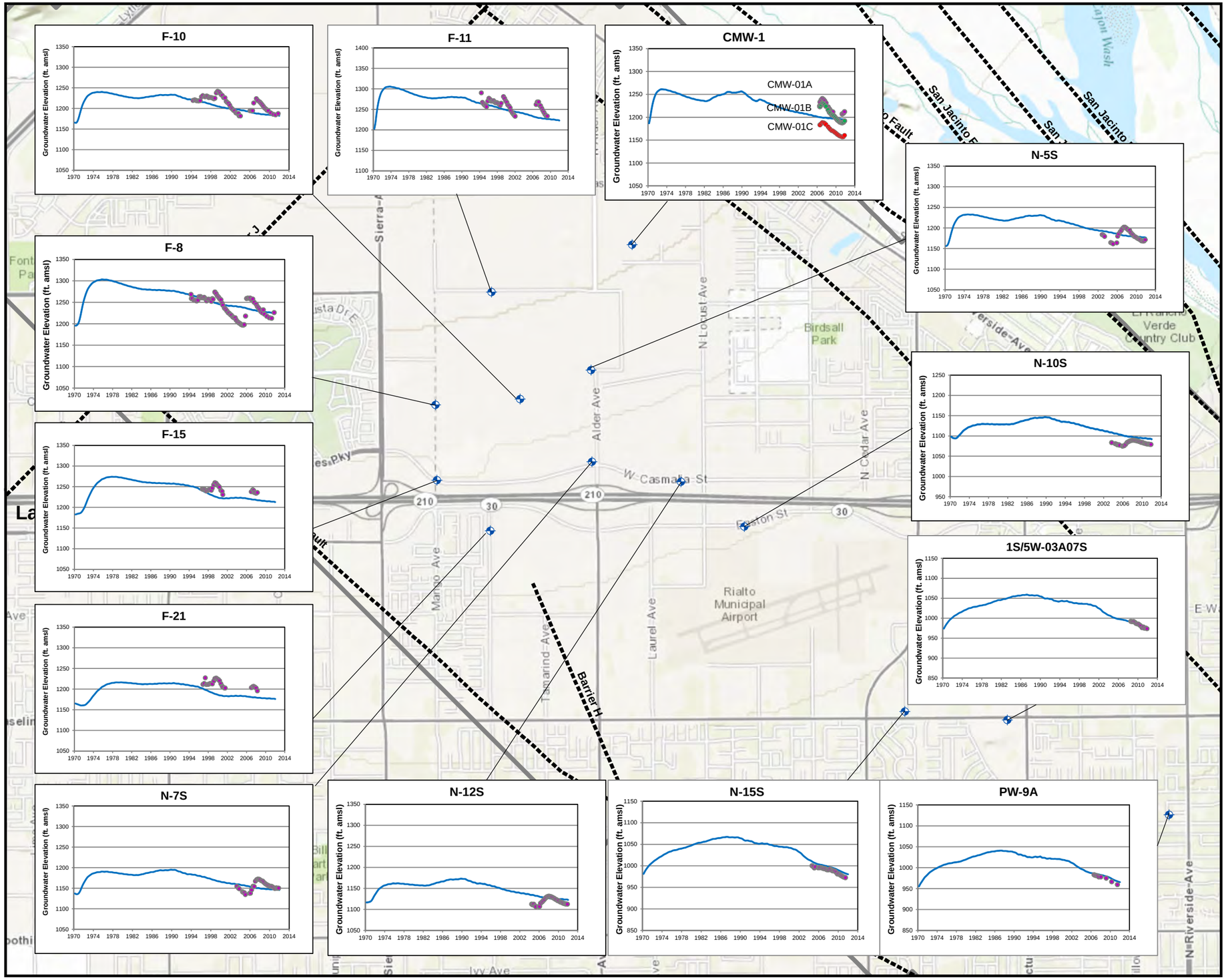
FIGURE 4-8

1996 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 4

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962 FILE: 0179962_118.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_118.mxd WESAC RK 4/10/2013



Legend

- Observation Wells Used as Model Targets
- Faults
- Model Boundary
- Observed
- Simulated

N

0 2,500

Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

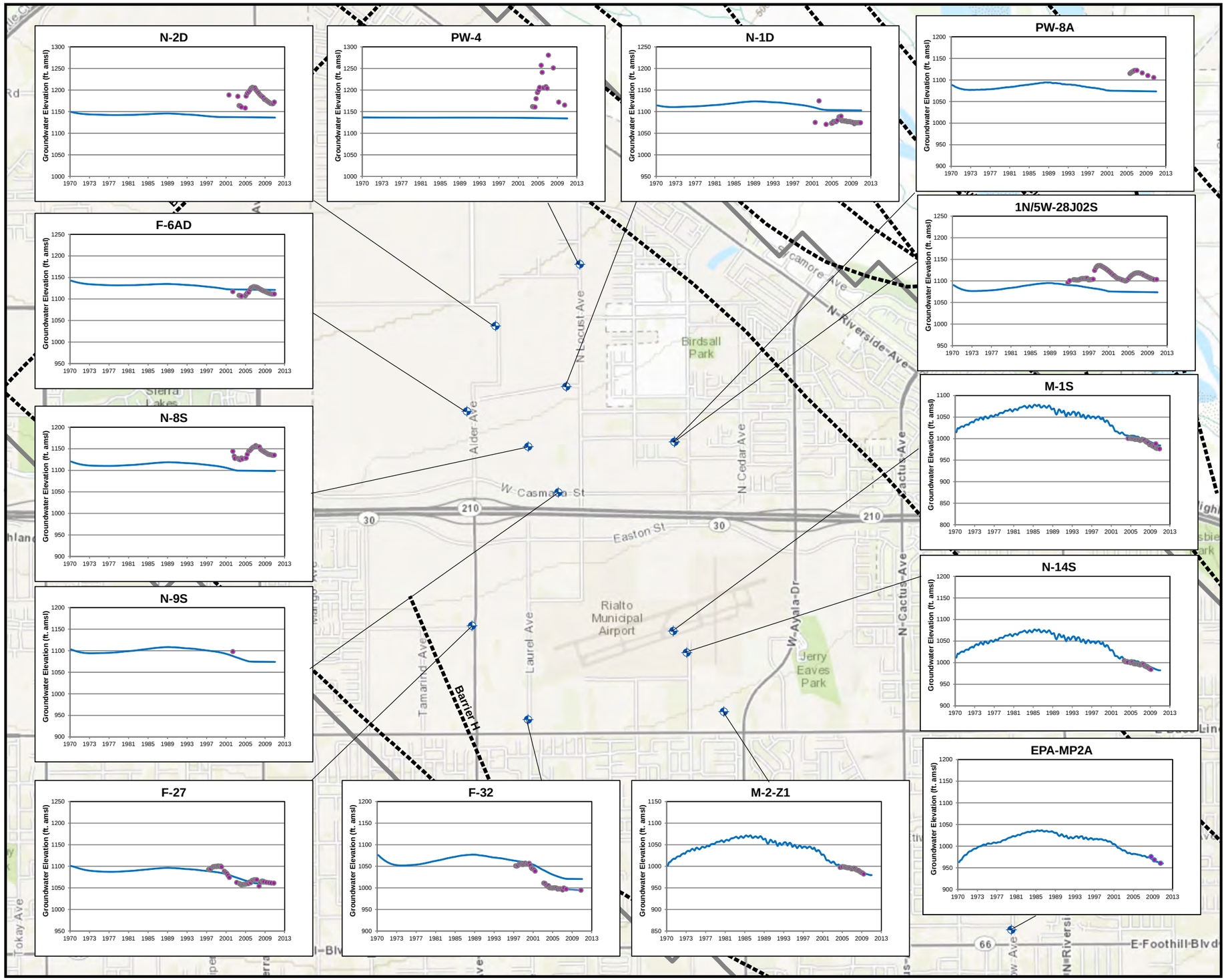
FIGURE 4-9

SIMULATED VERSUS OBSERVED GROUNDWATER ELEVATIONS - MODEL LAYER 1

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_103.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_103.mxd WESAC RK 4/10/2013



Legend

- Observation Wells Used as Model Targets
- Faults
- Model Boundary

- Observed
- Simulated

N

0 2,500

Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

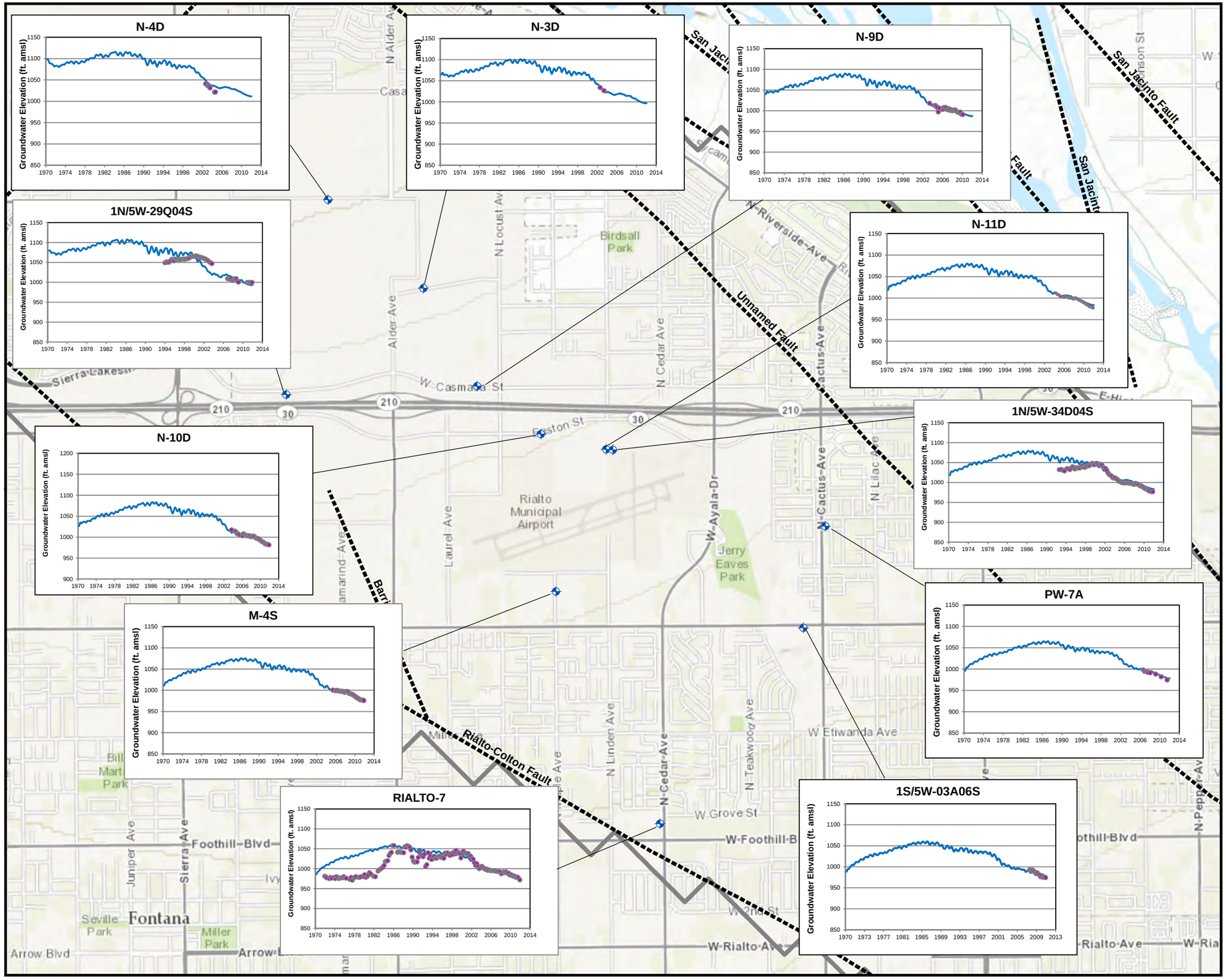
FIGURE 4-10

SIMULATED VERSUS OBSERVED GROUNDWATER ELEVATIONS - MODEL LAYER 2

ERM

PREPARED BY: CTALBOT (ERM)	JOB NO. 0179962.03.A FILE: 0179962_104.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_104.mxd WESAC CTALBOT 4/10/2013



Legend

- Observation Wells Used as Model Targets
- Faults
- Model Boundary

- Observed
- Simulated

N

0 2,500
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

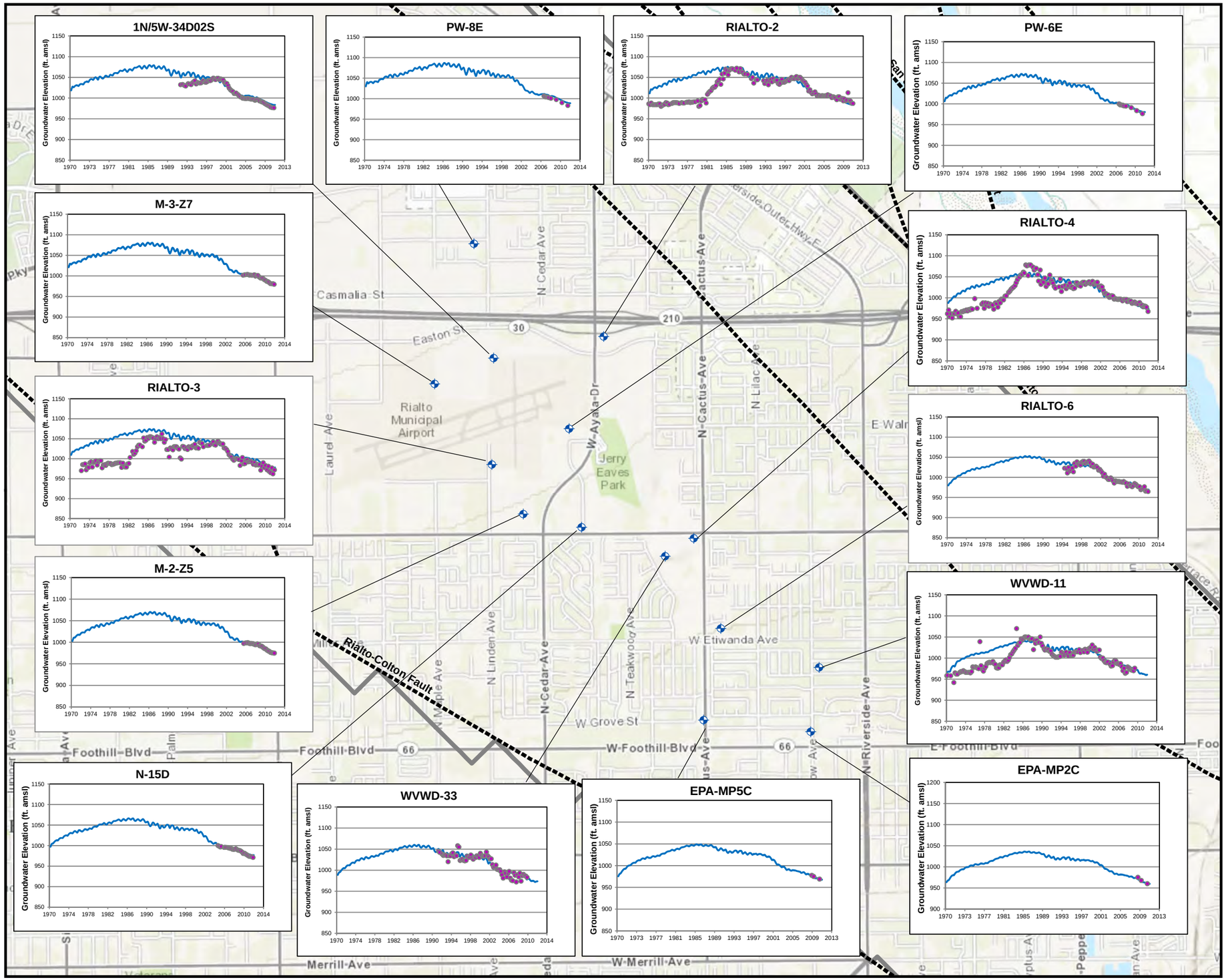
FIGURE 4-11

SIMULATED VERSUS OBSERVED GROUNDWATER ELEVATIONS - MODEL LAYER 3

ERM

PREPARED BY: CTALBOT (ERM)	JOB NO. 0179962.03.A FILE: 0179962_105.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_105.mxd WESAC CTALBOT 4/10/2013



SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

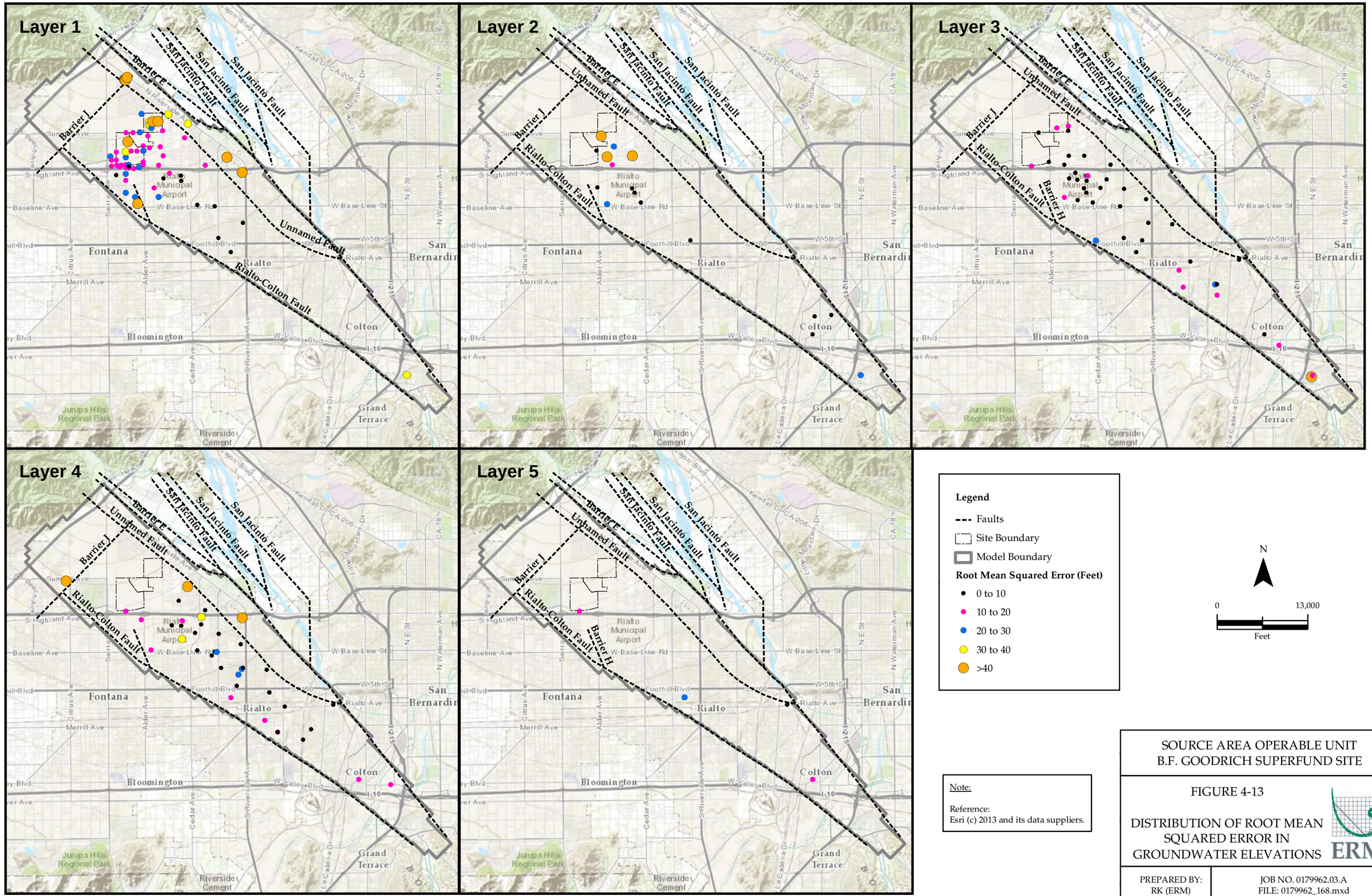
FIGURE 4-12

SIMULATED VERSUS OBSERVED GROUNDWATER ELEVATIONS - MODEL LAYER 4

ERM

PREPARED BY: CTALBOT (ERM)	JOB NO. 0179962.03.A FILE: 0179962_106.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_106.mxd WESAC CTALBOT 4/10/2013



Note:

Reference:
Esri (c) 2013 and its data suppliers.

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

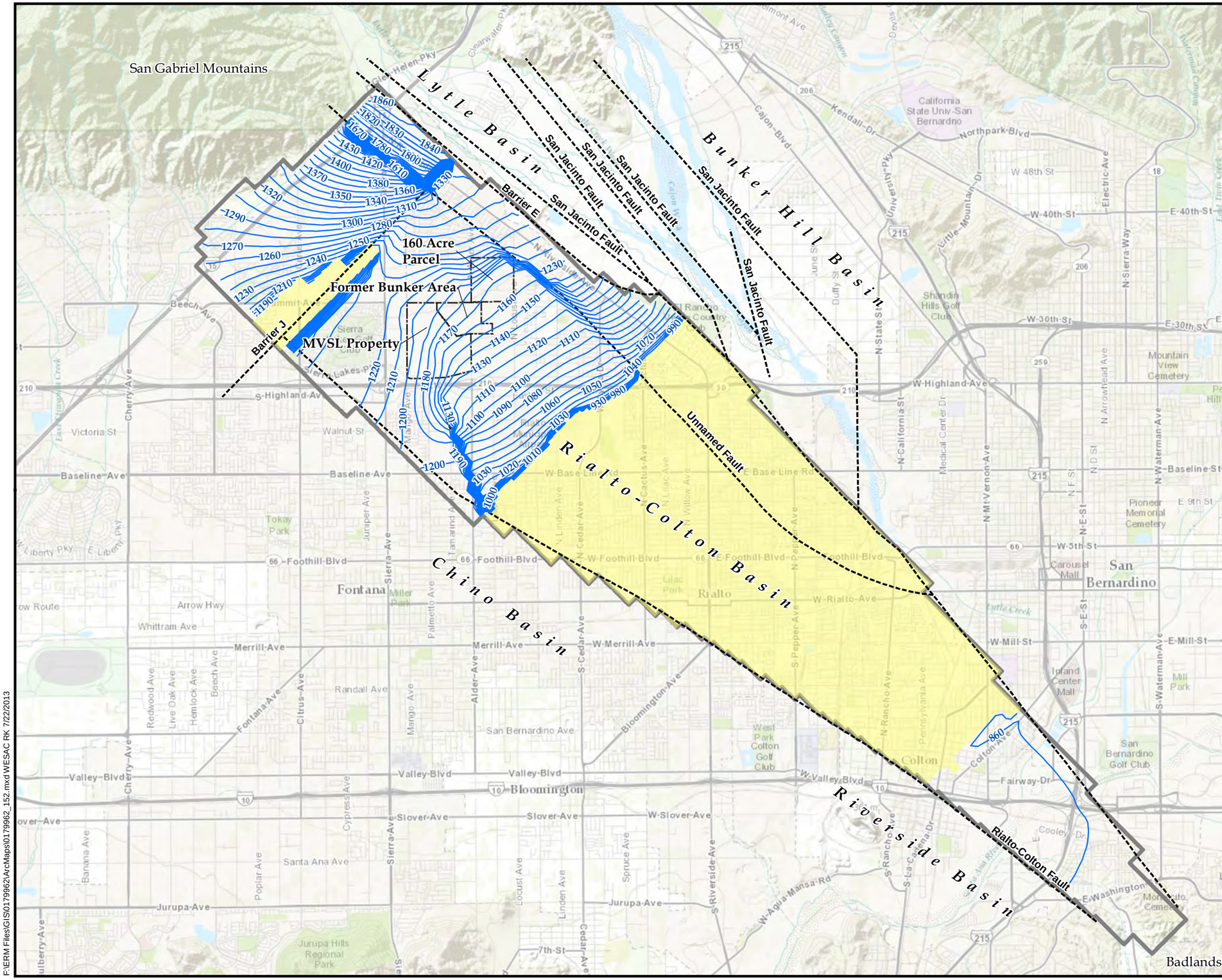
FIGURE 4-13

DISTRIBUTION OF ROOT MEAN SQUARED ERROR IN GROUNDWATER ELEVATIONS

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_168.mxd

F:\GIS\Projects\Emhart\Rialto\ArcMaps\Modeling_Report\0179962_168.mxd WESAC RK 7/11/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary
- Model Dry Cells

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-1

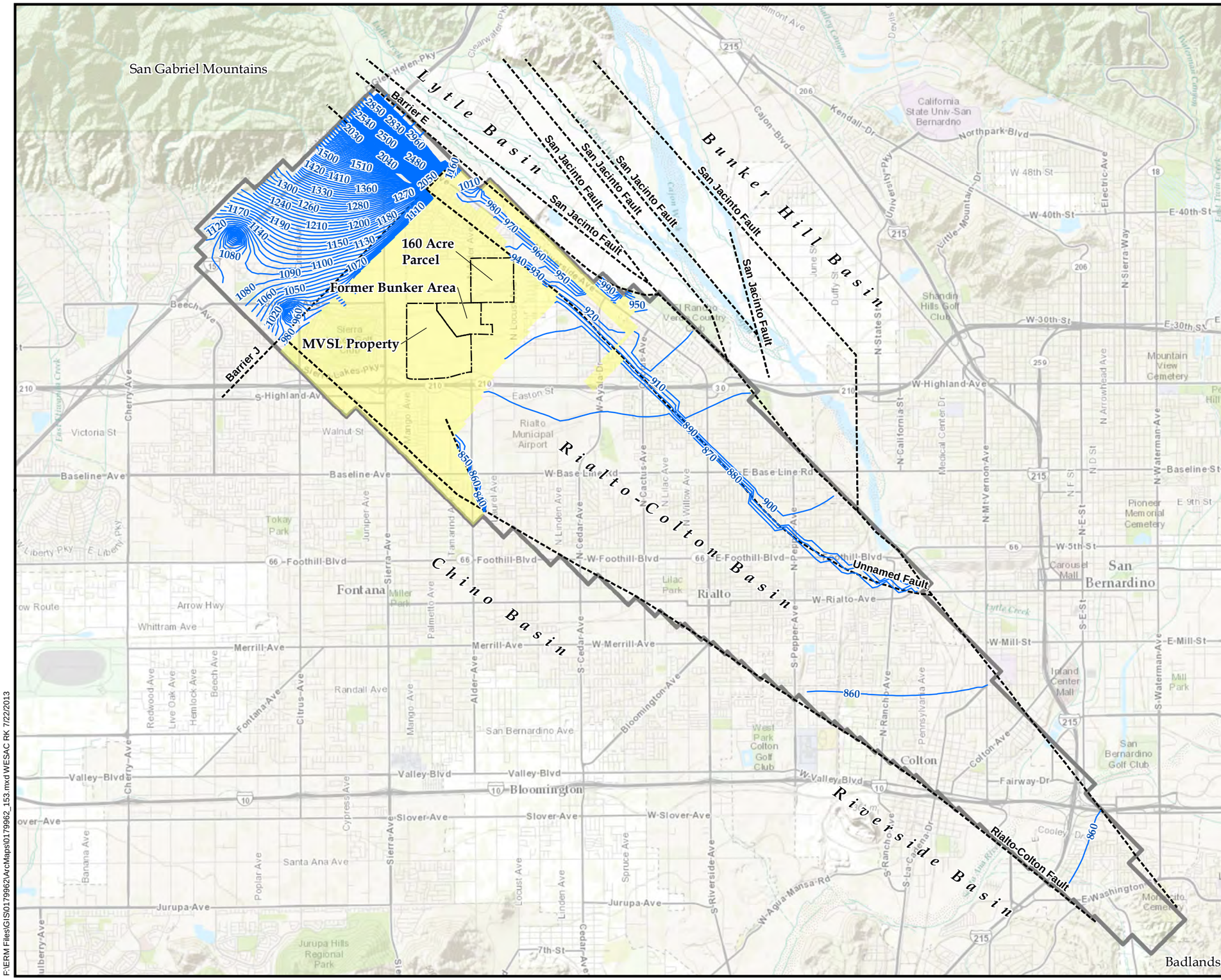
2053 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 1, SCENARIO 2Br

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962
FILE: 0179962_152.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_152.mxd WESAC RK 7/22/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary
- Model Dry Cells

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

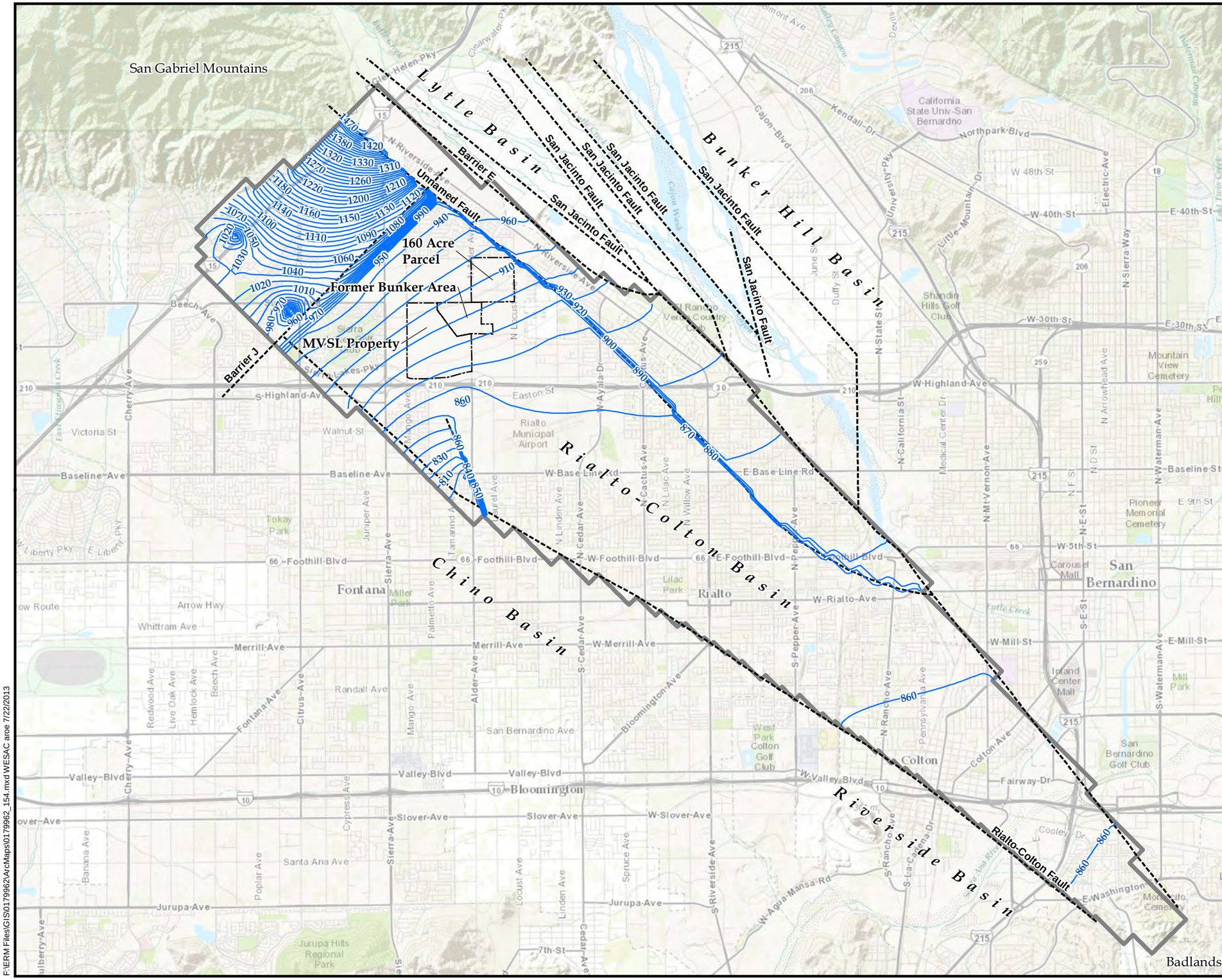
FIGURE 5-2

2053 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 3, SCENARIO 2Br

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962 FILE: 0179962_153.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_153.mxd WESAC RK 7/22/2013



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User

Reference:
Esri (c) 2013 and its data suppliers.

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-3

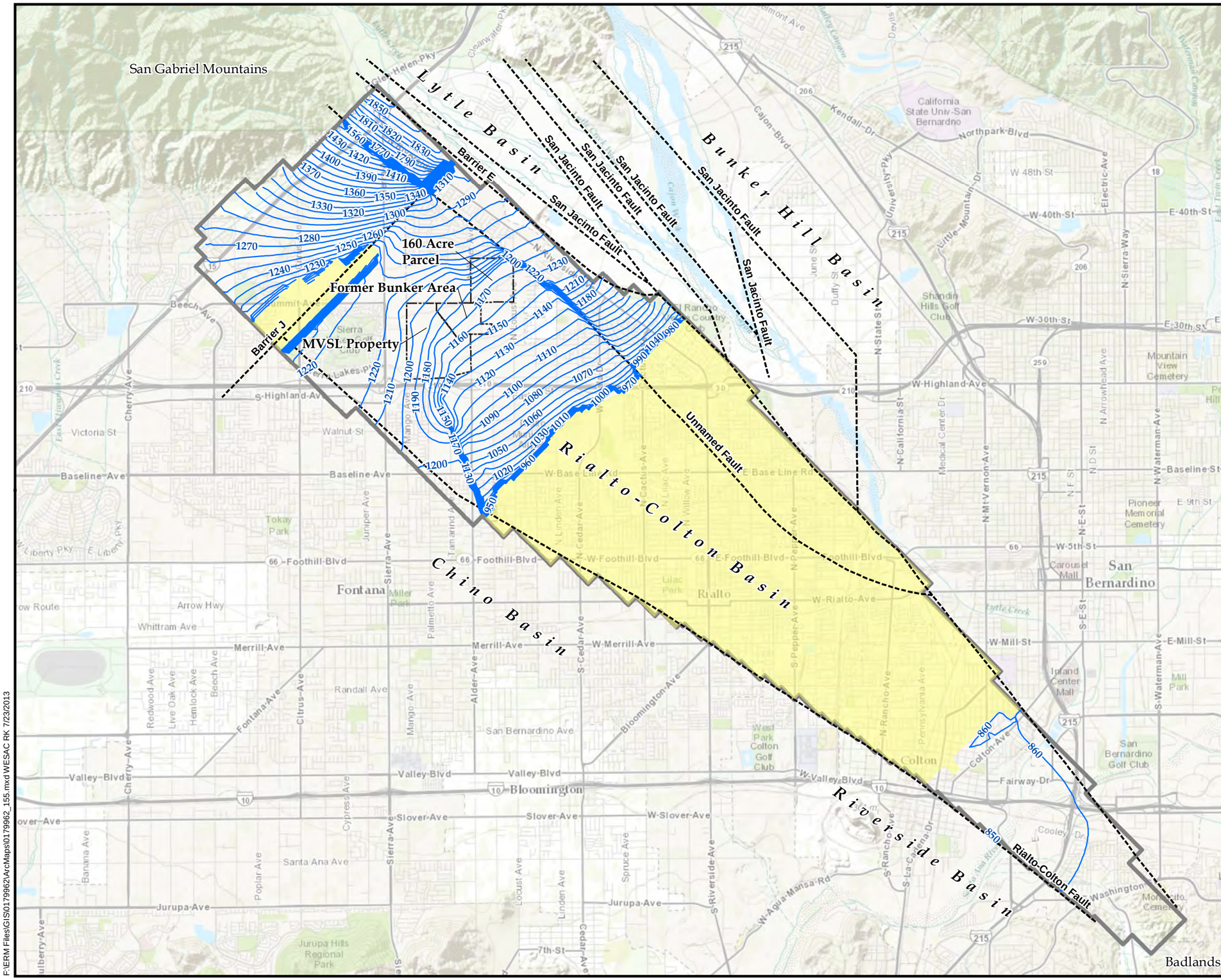
2053 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 4, SCENARIO 2Br

ERM

PREPARED BY: aroe (ERM)

JOB NO. 0179962
FILE: 0179962_154.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_154.mxd WESAC aroe 7/22/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary
- Model Dry Cells

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

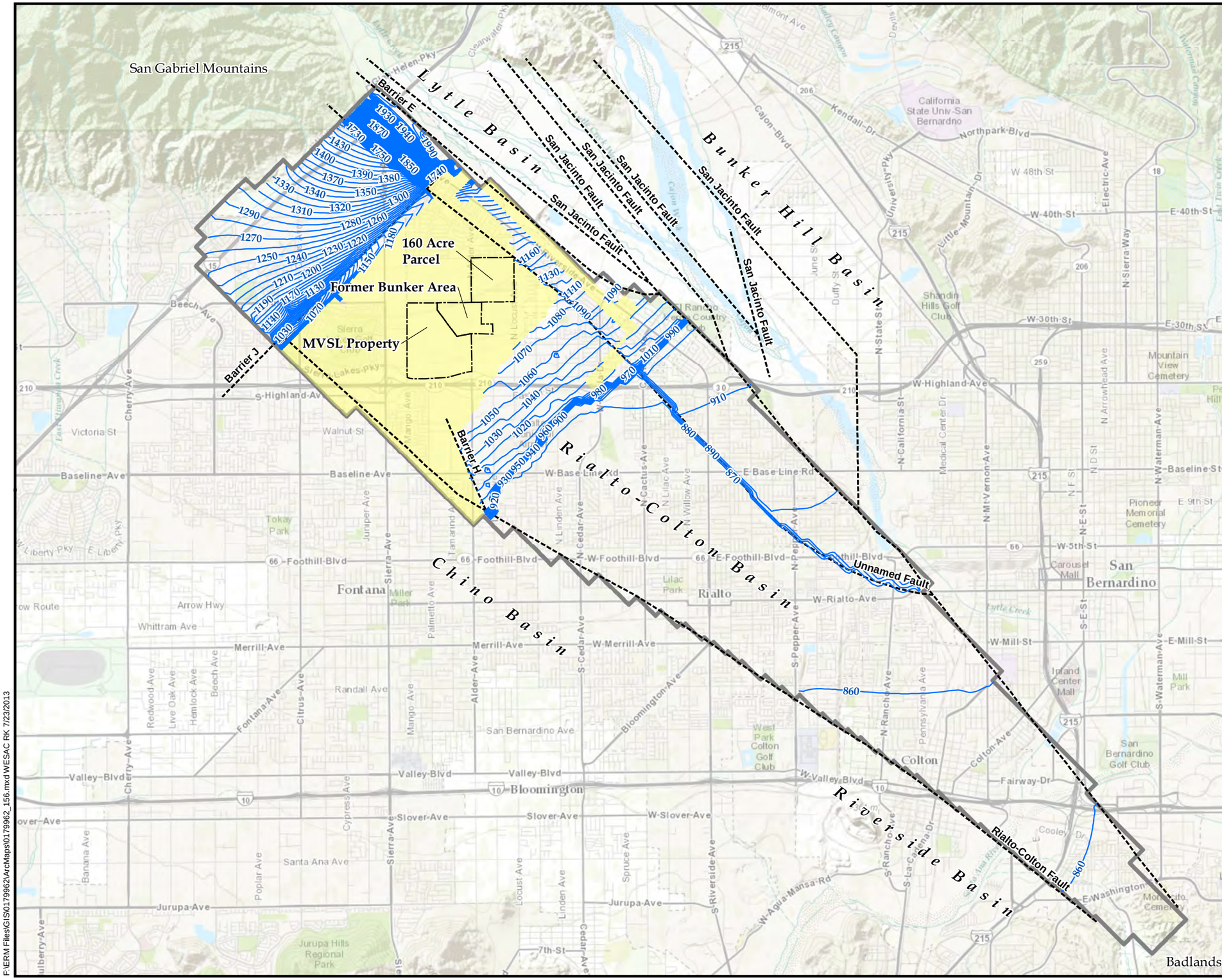
FIGURE 5-4
2053 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 1, SCENARIO 2D-3r

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962
FILE: 0179962_155.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_155.mxd WESAC RK 7/23/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary
- Model Dry Cells

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

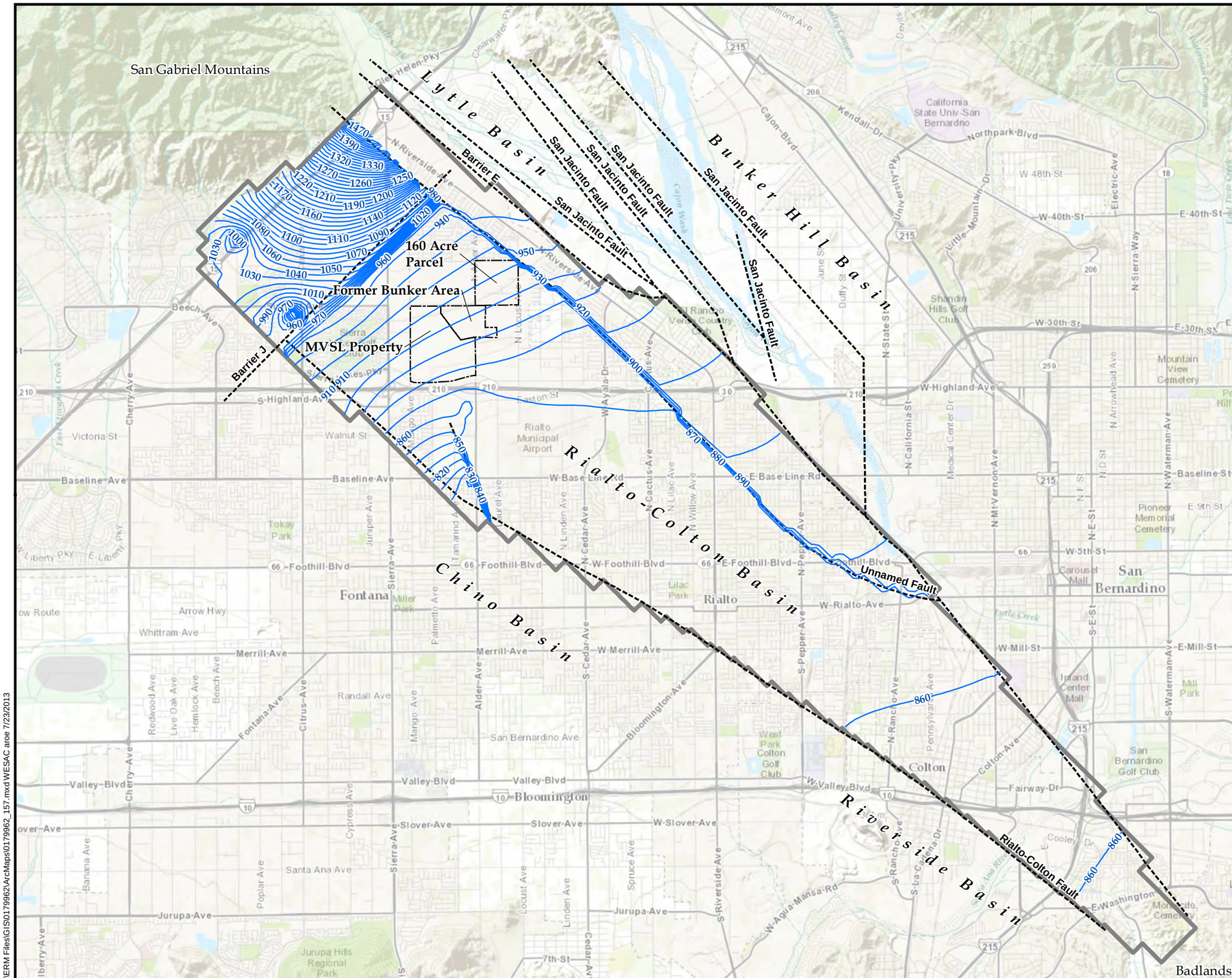
FIGURE 5-5
2053 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 3, SCENARIO 2D-3r

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962
FILE: 0179962_156.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_156.mxd WESAC RK 7/23/2013



Legend

- Groundwater Elevation Contour
- Approximate Location Fault/Geologic Contact
- Site Boundary
- Model Boundary

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User

Reference:
Esri (c) 2013 and its data suppliers.

N

0 6,000
Scale in Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

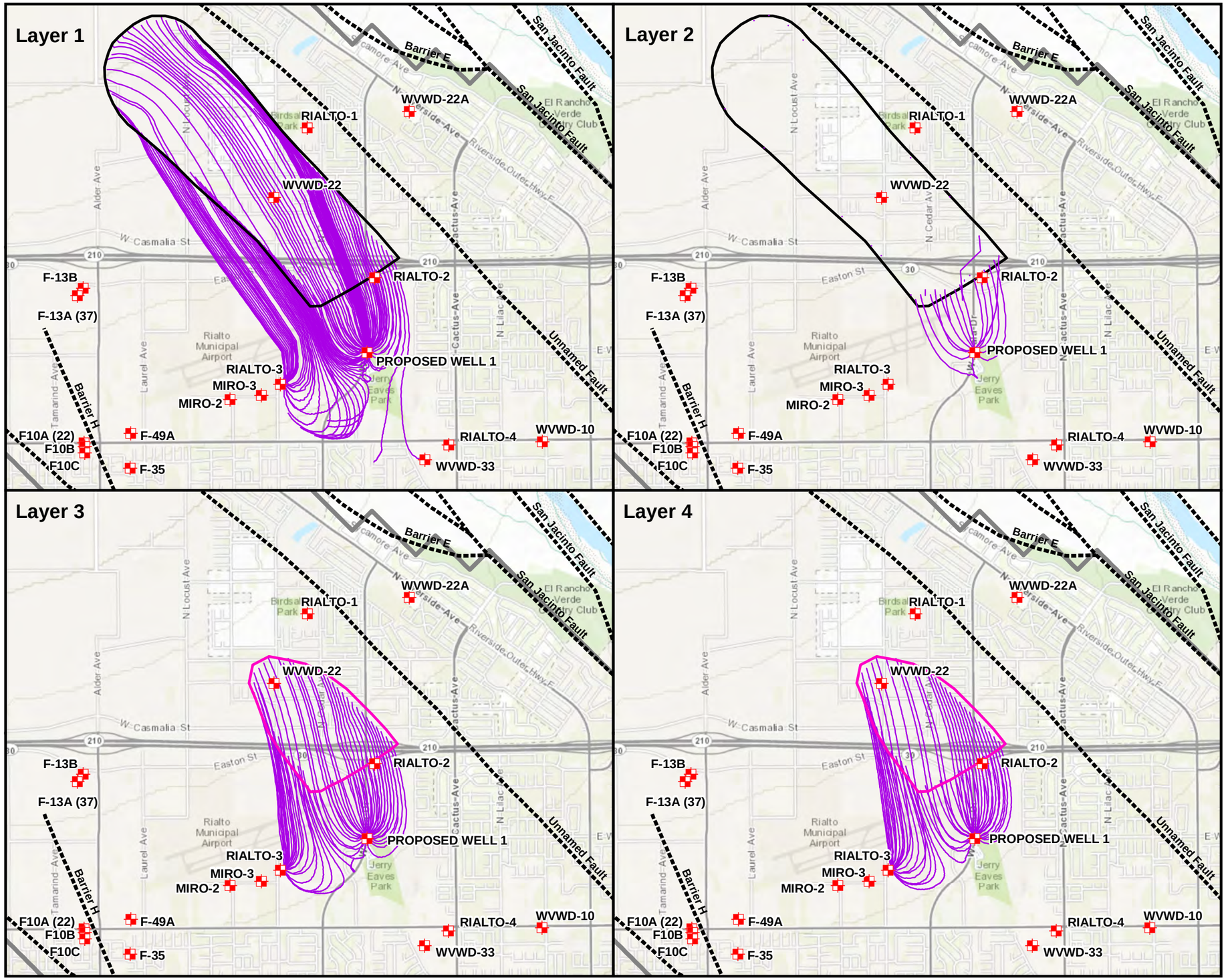
FIGURE 5-6
2053 BASIN-WIDE SIMULATED GROUNDWATER ELEVATIONS - MODEL LAYER 4, SCENARIO 2D-3r

ERM

PREPARED BY: aroe (ERM)

JOB NO. 0179962
FILE: 0179962_157.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_157.mxd WESAC aroe 7/23/2013



Legend

- Production Well
- Faults
- Model Particle Tracks
- Regional Aquifer Target Capture Zone
- Intermediate Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,700	2,744	1,159 - 1,910
Proposed Well 2	0	0	0
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-7

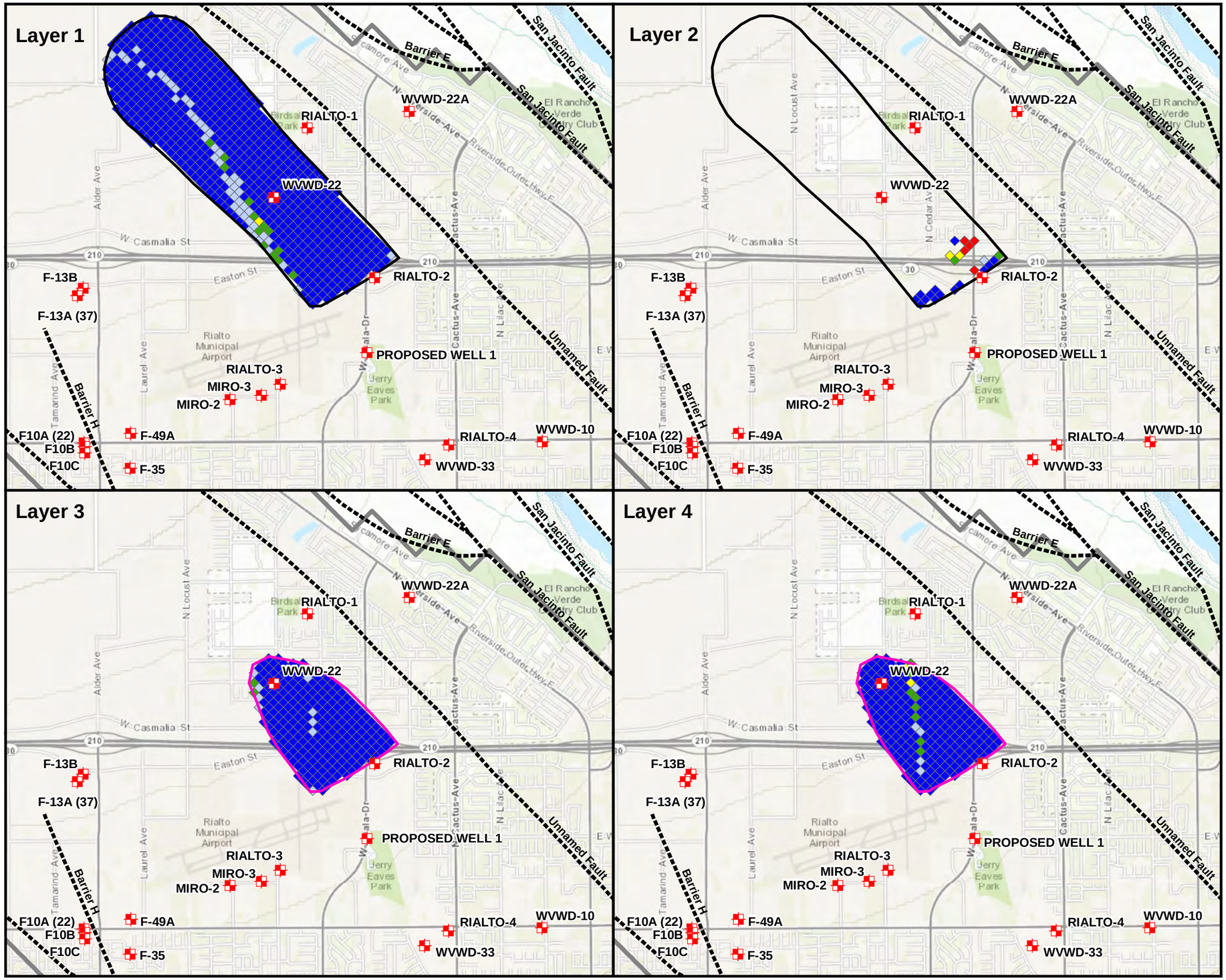
SCENARIO 2Br
PARTICLE TRACK SIMULATION

ERM

PREPARED BY:
CTALBOT (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_158.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_158.mxd WESAC CTALBOT 7/22/2013



Legend

- Production Well
- Faults

Frequency of Capture (%)

- < 40
- 40 to 60
- 60 to 80
- 80 to 90
- 90 to 100
- Intermediate Aquifer Target Capture Zone
- Regional Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,700	2,744	1,159 - 1,910
Proposed Well 2	0	0	0
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-8

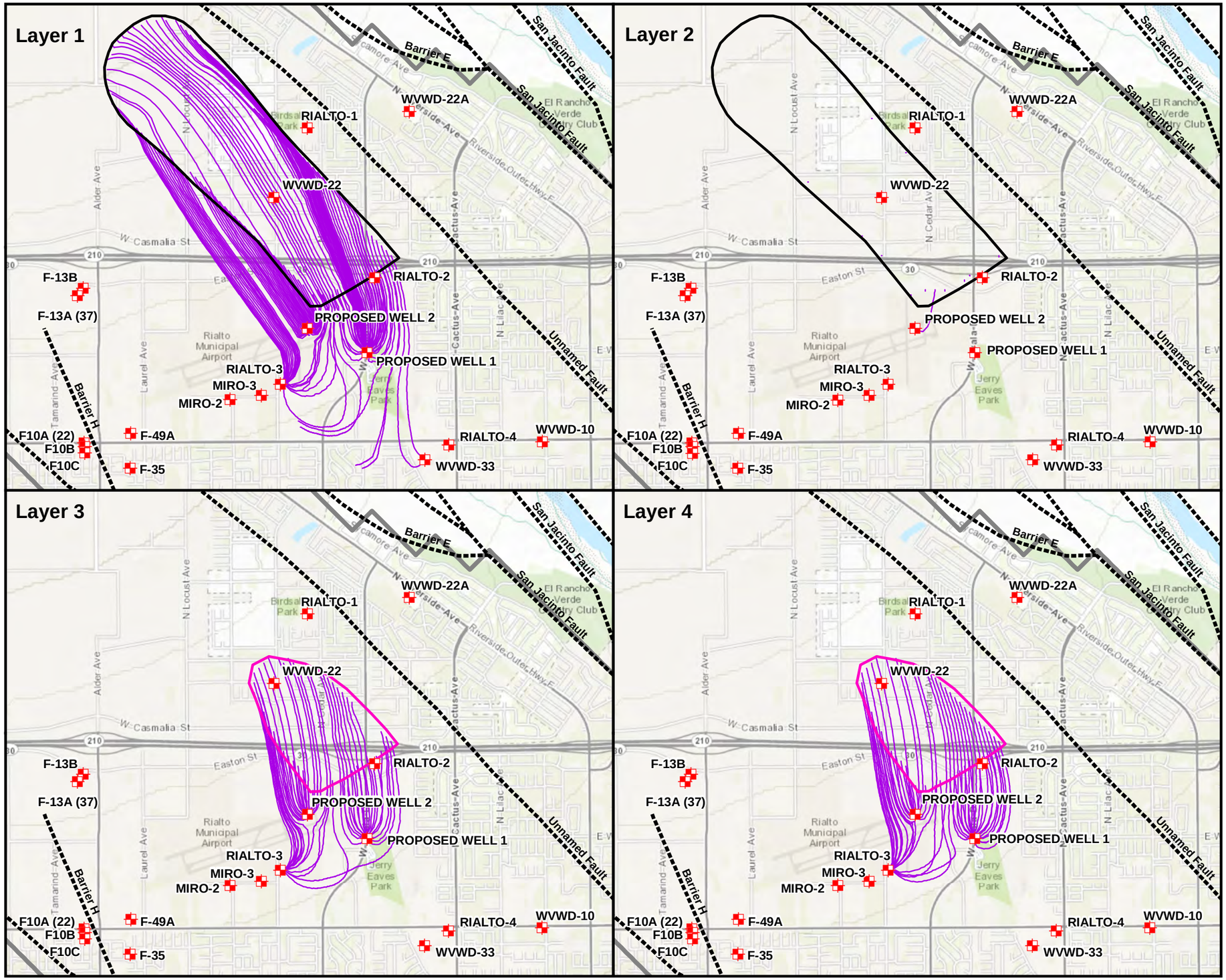
SCENARIO 2Br
FREQUENCY OF CAPTURE

ERM

PREPARED BY:
RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_159.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_159.mxd WESAC RK 7/22/2013



Legend

- Production Well
- Model Particle Tracks
- Faults
- Regional Aquifer Target Capture Zone
- Intermediate Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,000	1,614	682 - 1,123
Proposed Well 2	700	1,130	477 - 786
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-9

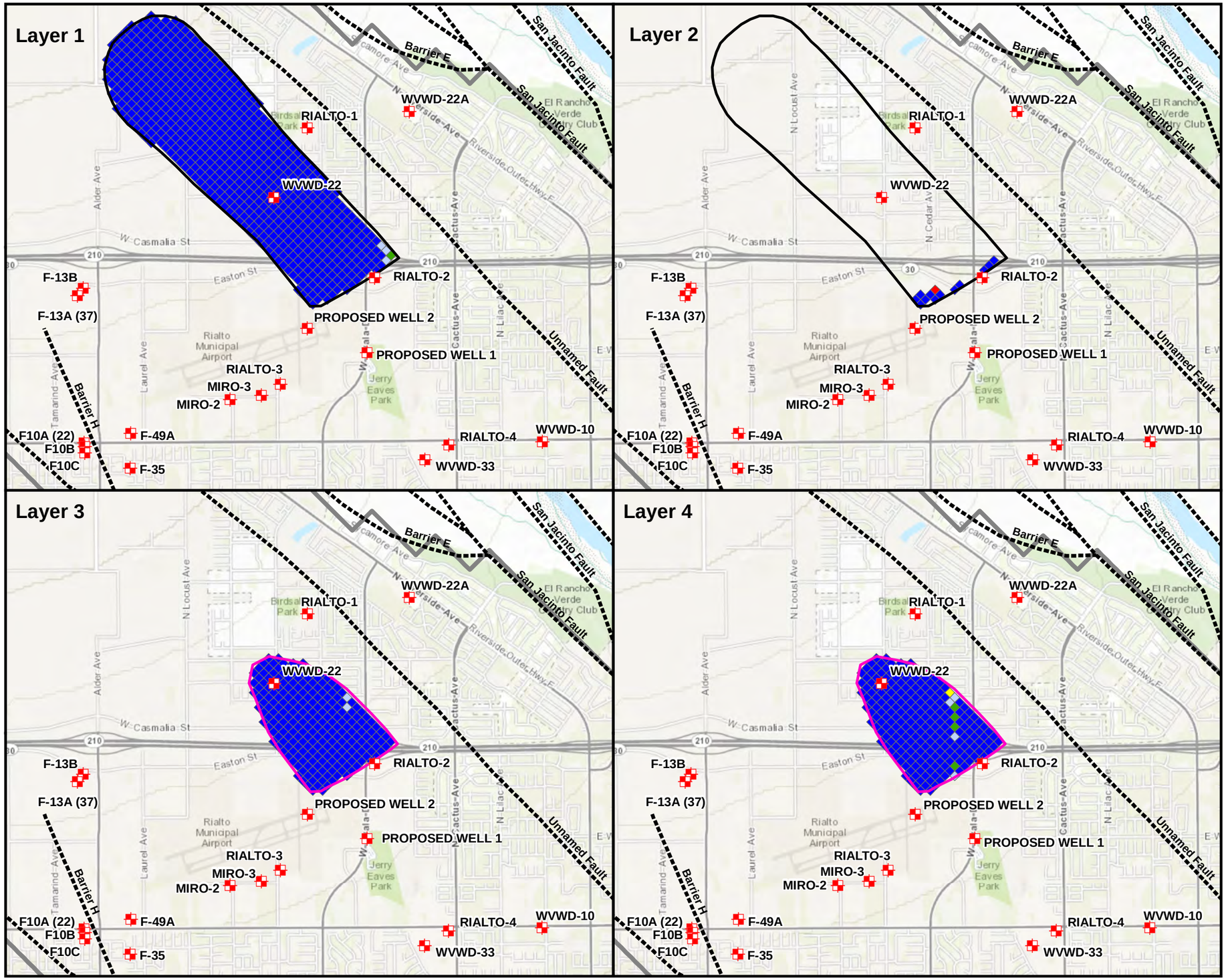
SCENARIO 2D-3r
PARTICLE TRACK SIMULATION

ERM

PREPARED BY:
RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_160.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_160.mxd WESAC RK 7/22/2013



Legend

- Production Well
- Faults

Frequency of Capture (%)

- < 40
- 40 to 60
- 60 to 80
- 80 to 90
- 90 to 100
- Intermediate Aquifer Target Capture Zone
- Regional Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,000	1,614	682 - 1,123
Proposed Well 2	700	1,130	477 - 786
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-10

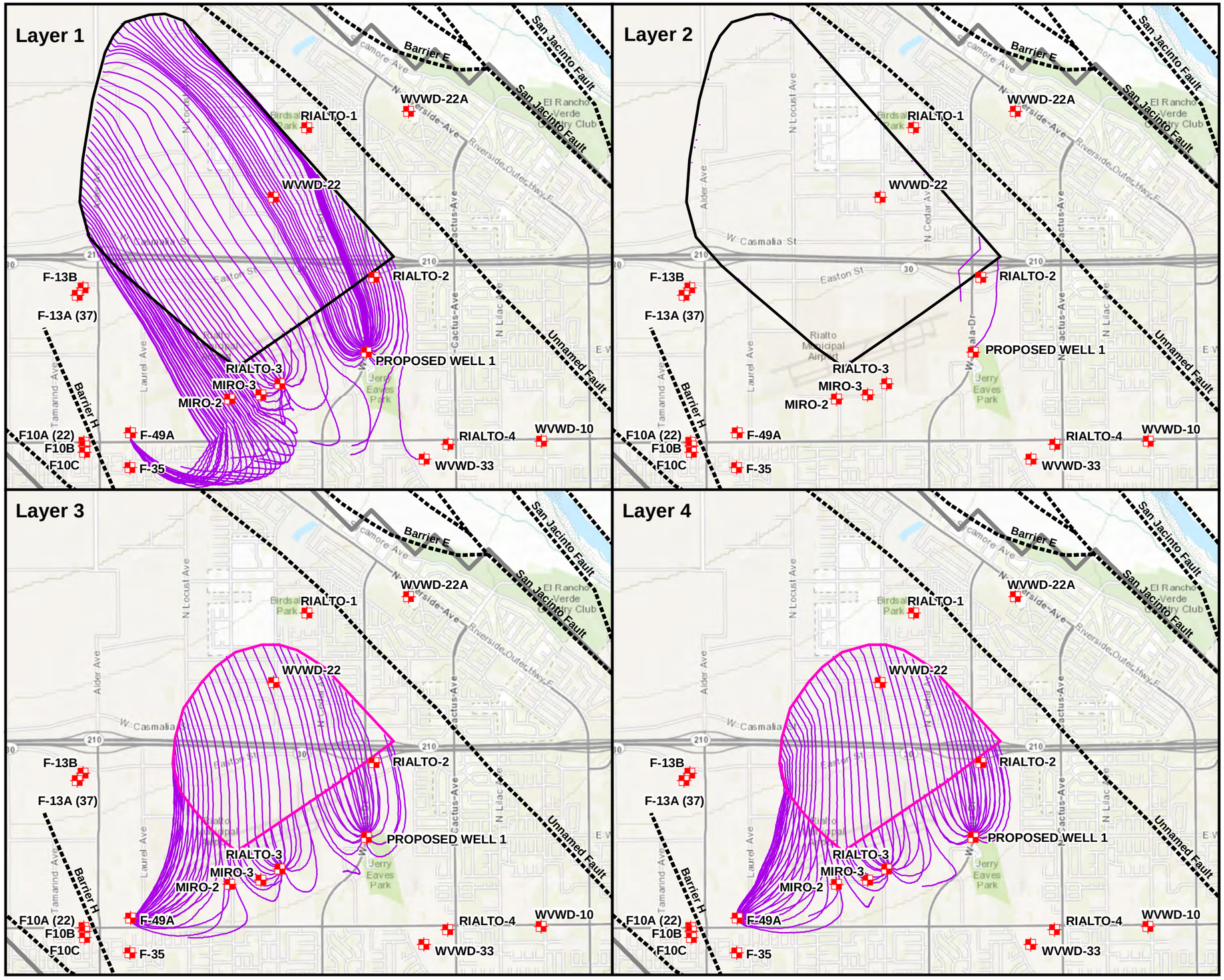
SCENARIO 2D-3r
FREQUENCY OF CAPTURE

ERM

PREPARED BY:
RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_161.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_161.mxd WESAC RK 7/22/2013



Legend

- Production Well
- Faults
- Model Particle Tracks
- Regional Aquifer Target Capture Zone
- Intermediate Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,700	2,744	1,159 - 1,910
Proposed Well 2	0	0	0
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

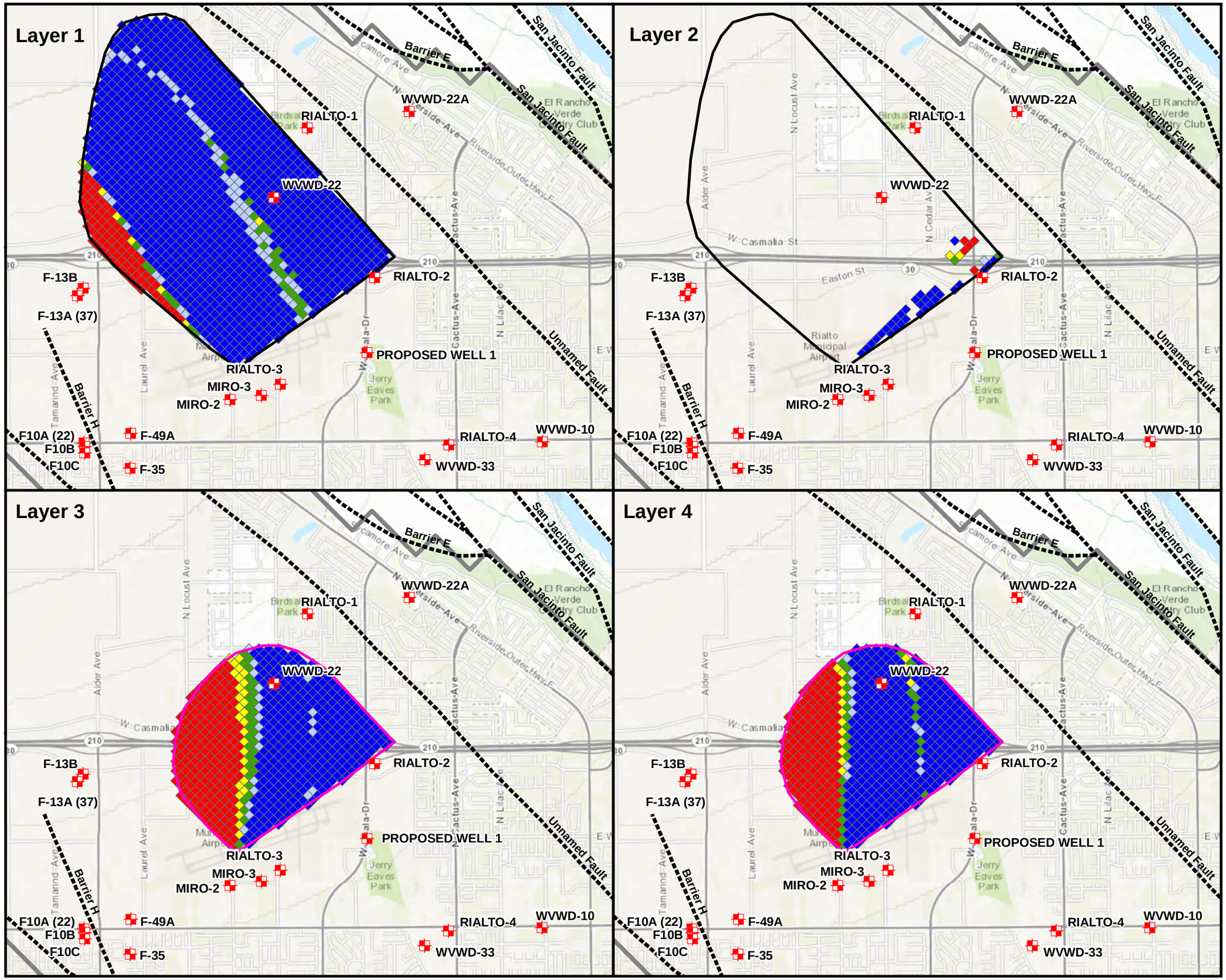
FIGURE 5-11

COMBINED CAPTURE - SCENARIO 2Br PARTICLE TRACK SIMULATION

ERM

PREPARED BY: RK (ERM)	JOB NO. 0179962.03.A FILE: 0179962_162.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_162.mxd WESAC RK 7/22/2013



Legend

- Production Well
- Faults

Frequency of Capture (%)

- < 40
- 40 to 60
- 60 to 80
- 80 to 90
- 90 to 100
- Intermediate Aquifer Target Capture Zone
- Regional Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,700	2,744	1,159 - 1,910
Proposed Well 2	0	0	0
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-12

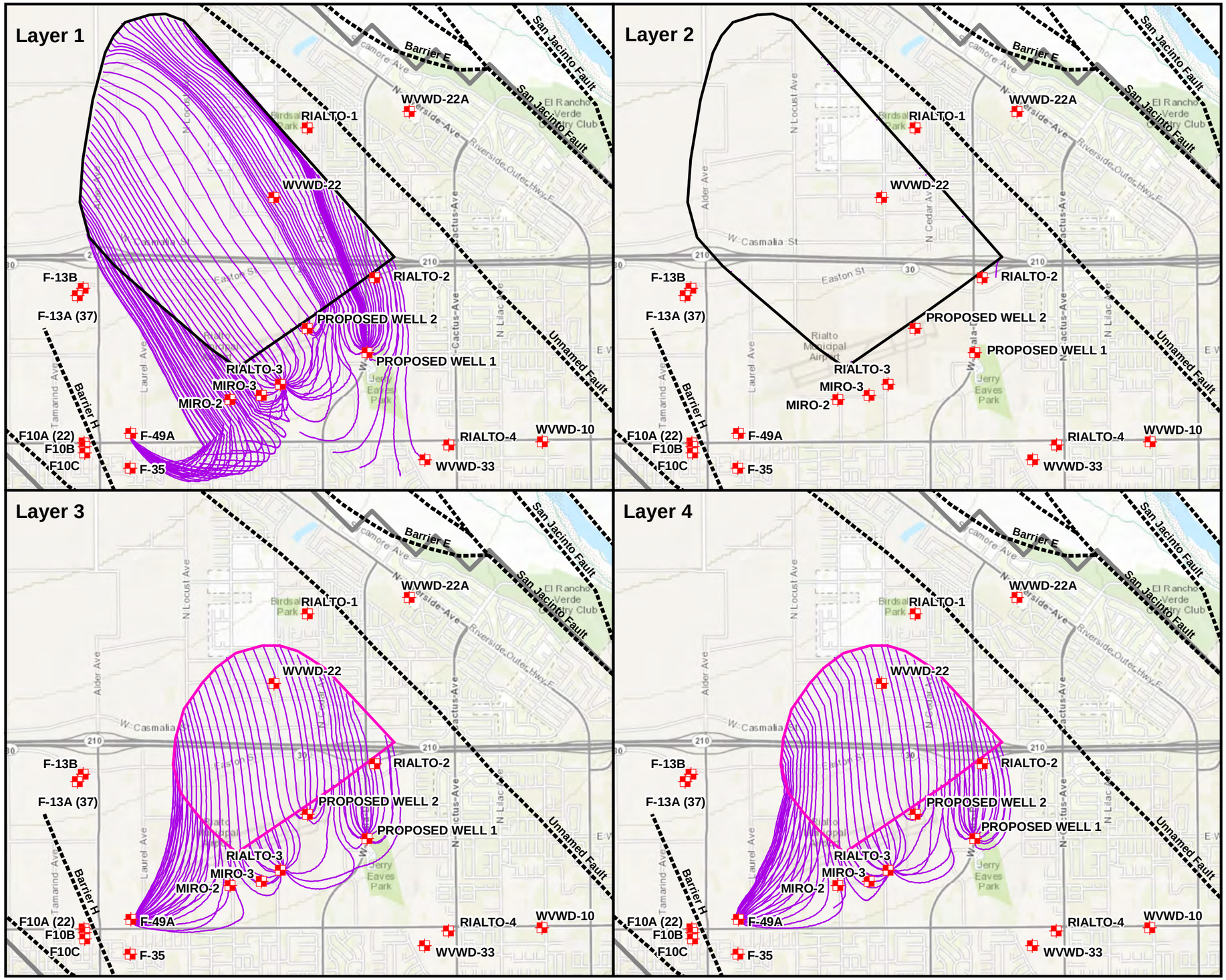
COMBINED CAPTURE - SCENARIO 2Br FREQUENCY OF CAPTURE

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_163.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_163.mxd WESAC RK 7/22/2013



Legend

- Production Well
- Faults
- Model Particle Tracks
- Regional Aquifer Target Capture Zone
- Intermediate Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,000	1,614	682 - 1,123
Proposed Well 2	700	1,130	477 - 786
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-13

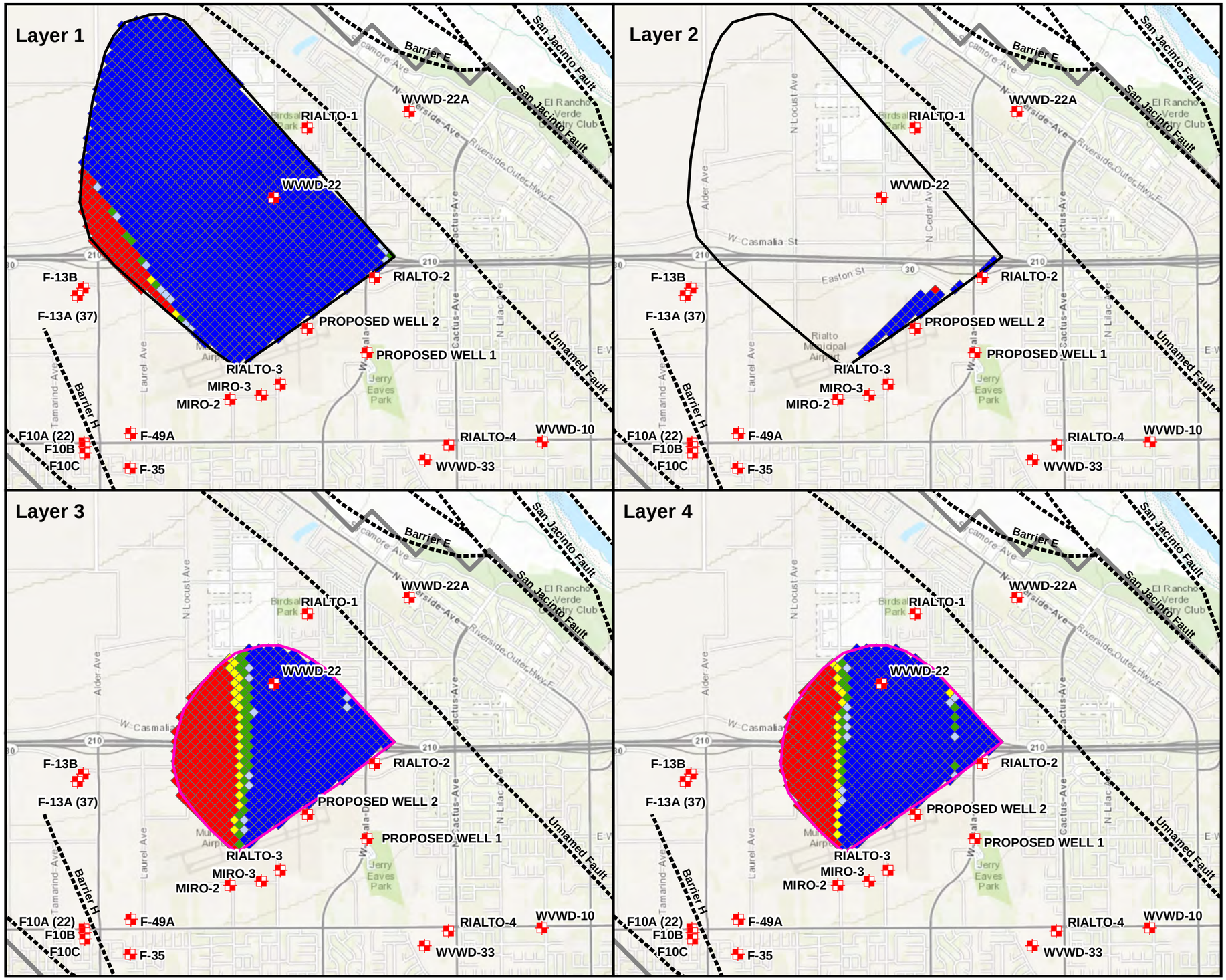
COMBINED CAPTURE - SCENARIO 2D-3r PARTICLE TRACK SIMULATION

ERM

PREPARED BY: RK (ERM)

JOB NO. 0179962.03.A
FILE: 0179962_164.mxd

F:\ERM Files\GIS\0179962\ArcMaps\0179962_164.mxd WESAC RK 7/22/2013



Legend

- Production Well
- Faults

Frequency of Capture (%)

- < 40
- 40 to 60
- 60 to 80
- 80 to 90
- 90 to 100
- Intermediate Aquifer Target Capture Zone
- Regional Aquifer Target Capture Zone
- Model Boundary

Well	Pumping Rate		
	Annual Average		Range
	GPM	AF/yr	GPM
RIALTO-2	0	0	0
RIALTO-3	1,300	2,098	886 - 1,460
Miro-2	0	0	0
Miro-3	0	0	0
Proposed Well 1	1,000	1,614	682 - 1,123
Proposed Well 2	700	1,130	477 - 786
Total Flow Rate	3,000	4,842	2,045 - 3,370

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

Notes:
1) GPM = Gallons per Minute.
2) AF/yr = Acre-Feet per Year.

N

0 3,000
Feet

SOURCE AREA OPERABLE UNIT
B.F. GOODRICH SUPERFUND SITE

FIGURE 5-14

COMBINED CAPTURE - SCENARIO 2D-3r FREQUENCY OF CAPTURE

ERM

PREPARED BY: RK (ERM)

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