AEROJET UPDATE

19 March 2014

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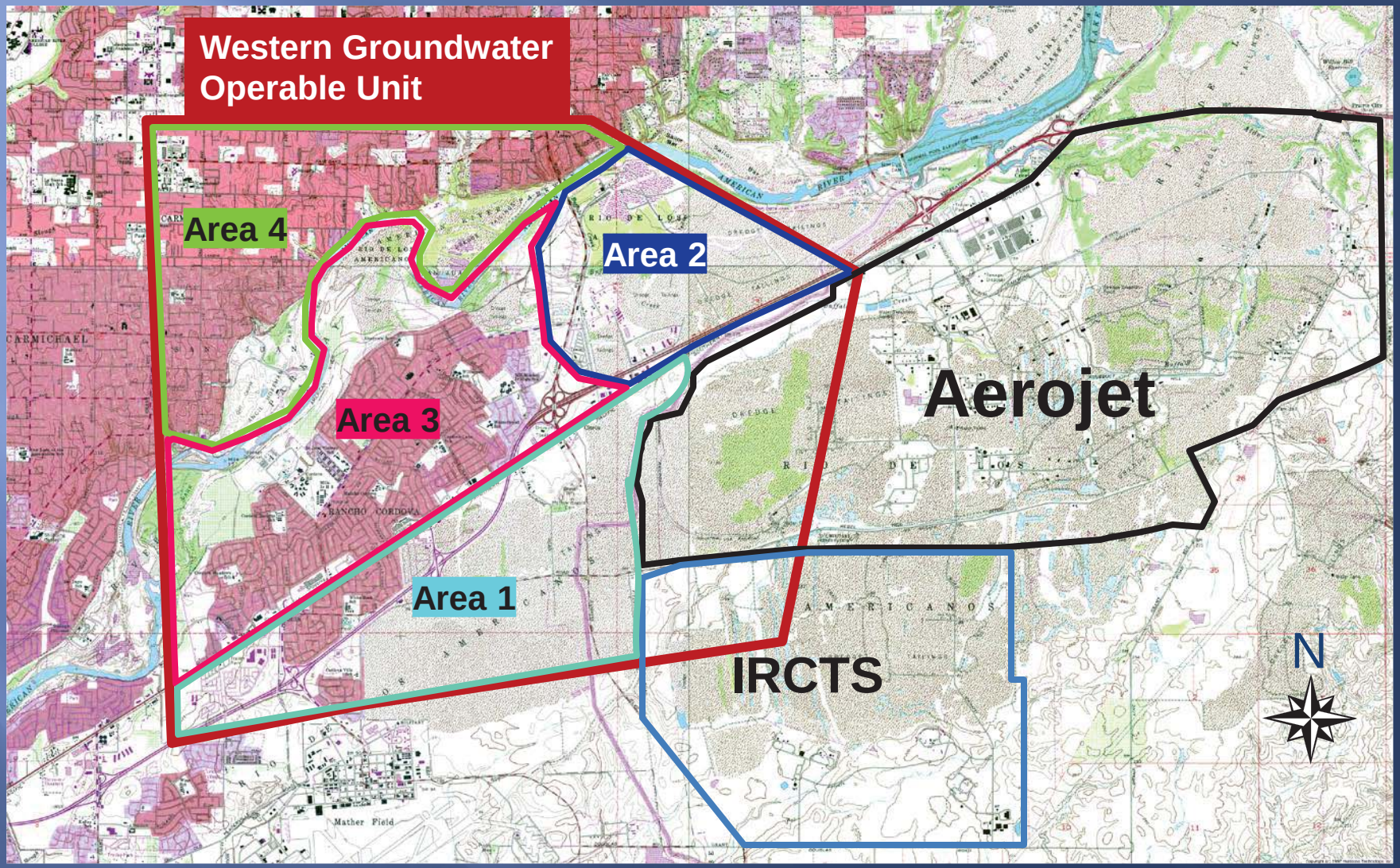
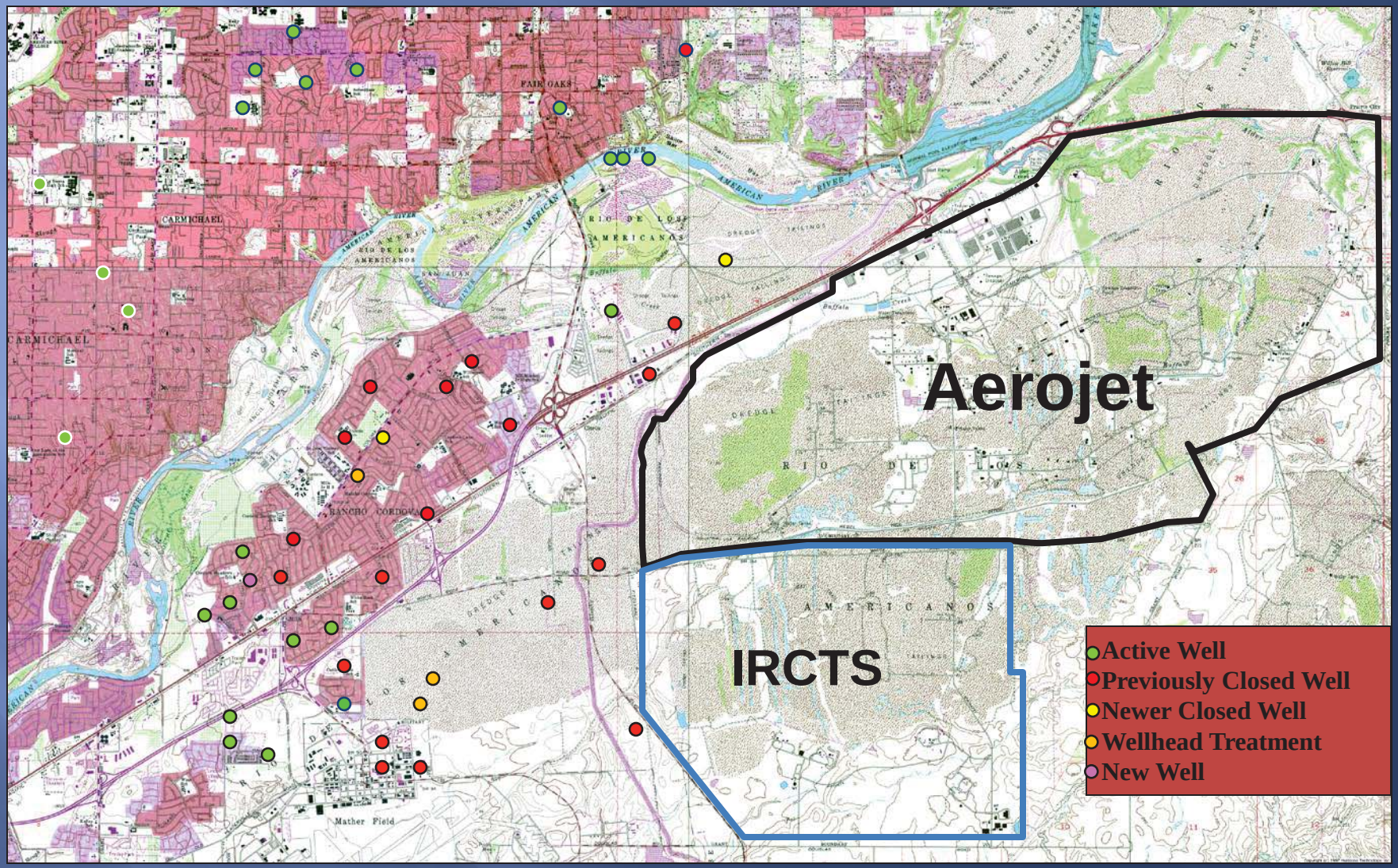
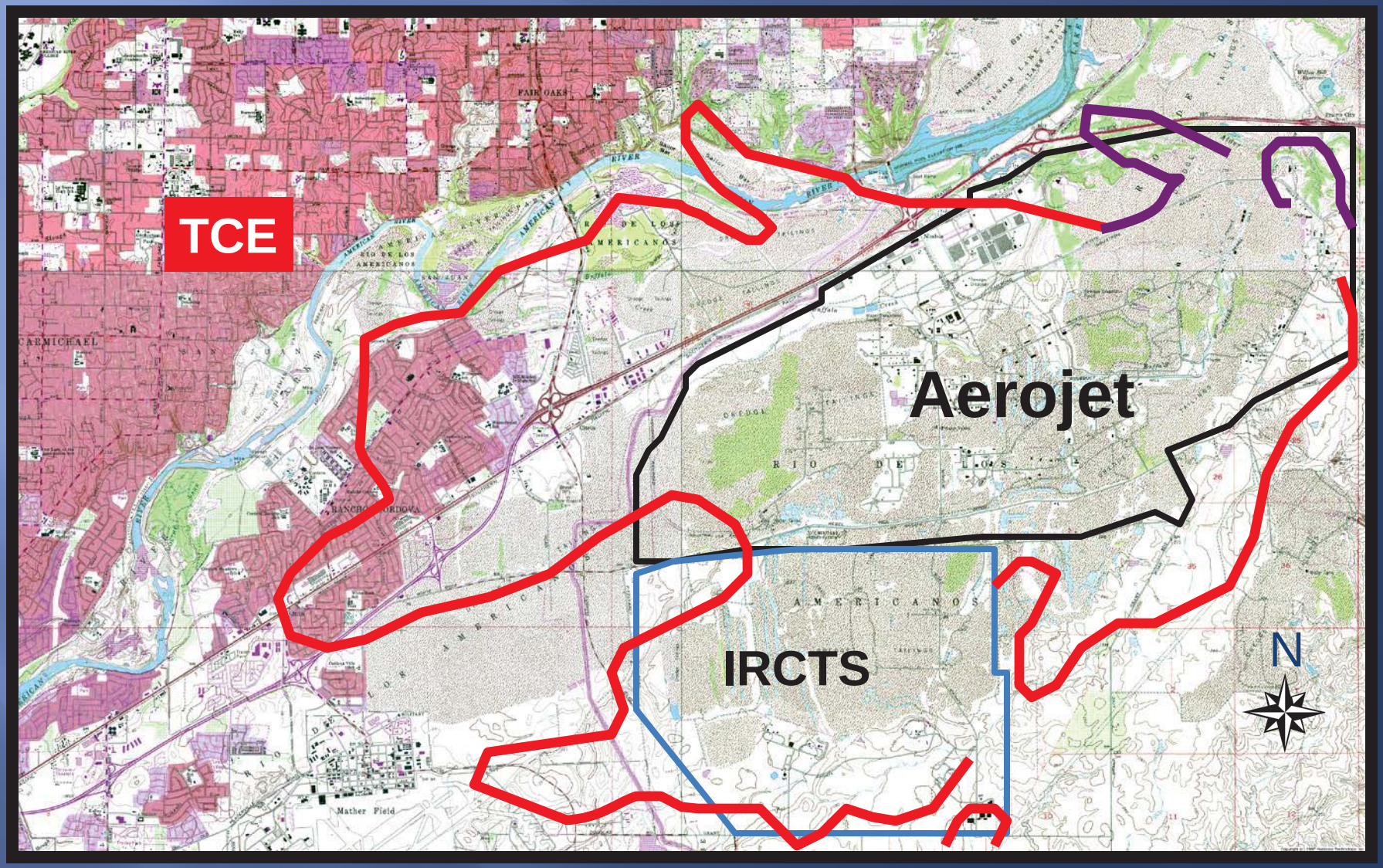
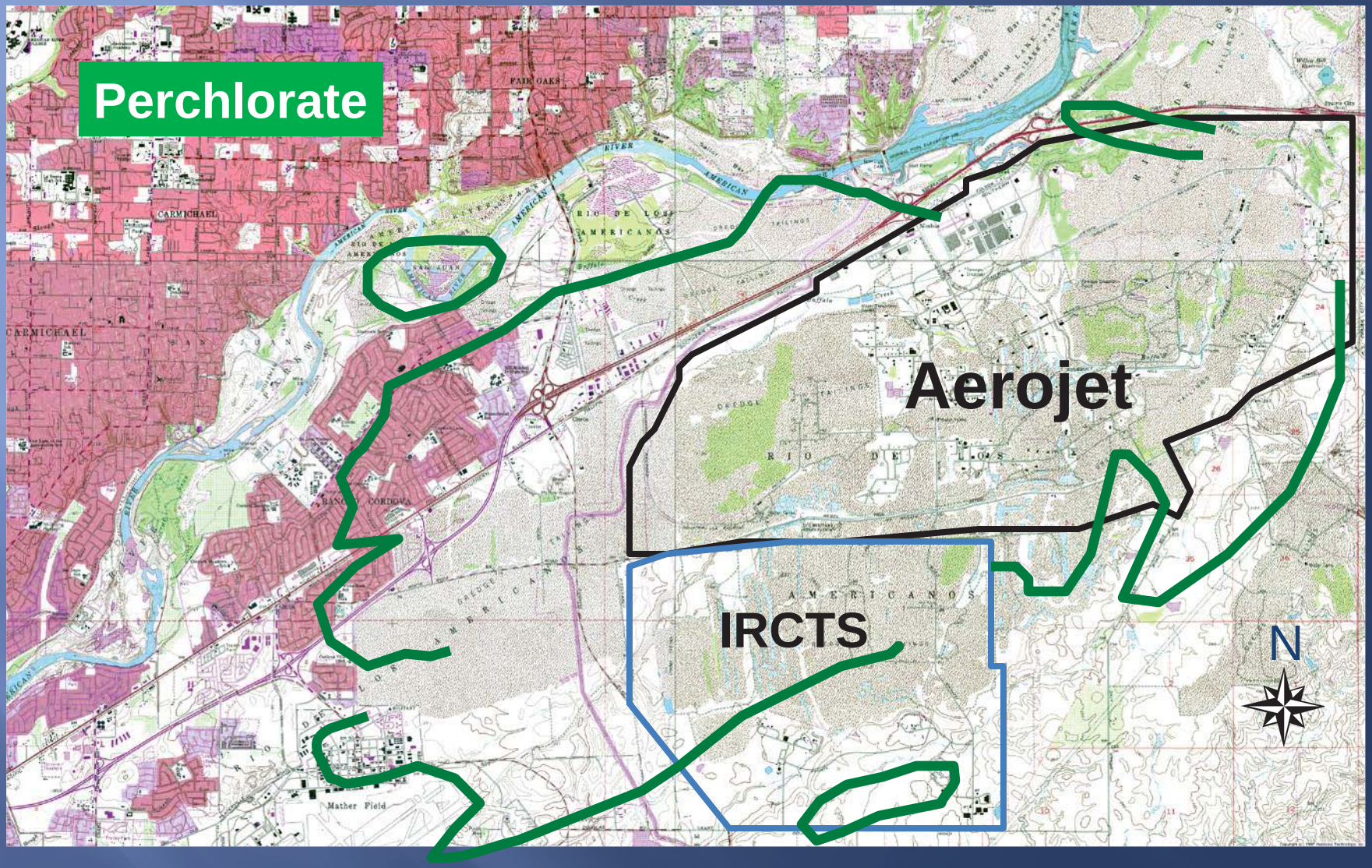
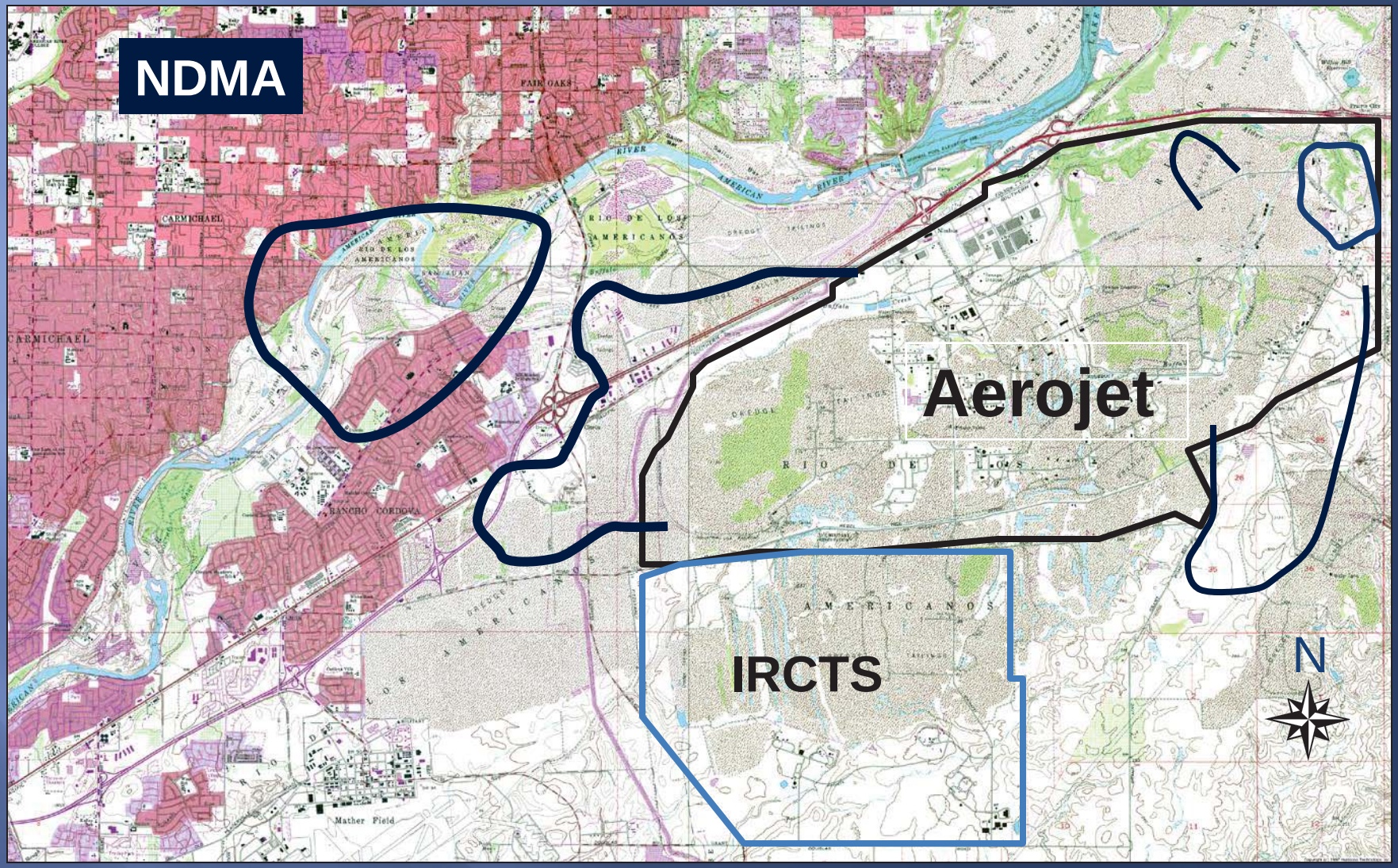
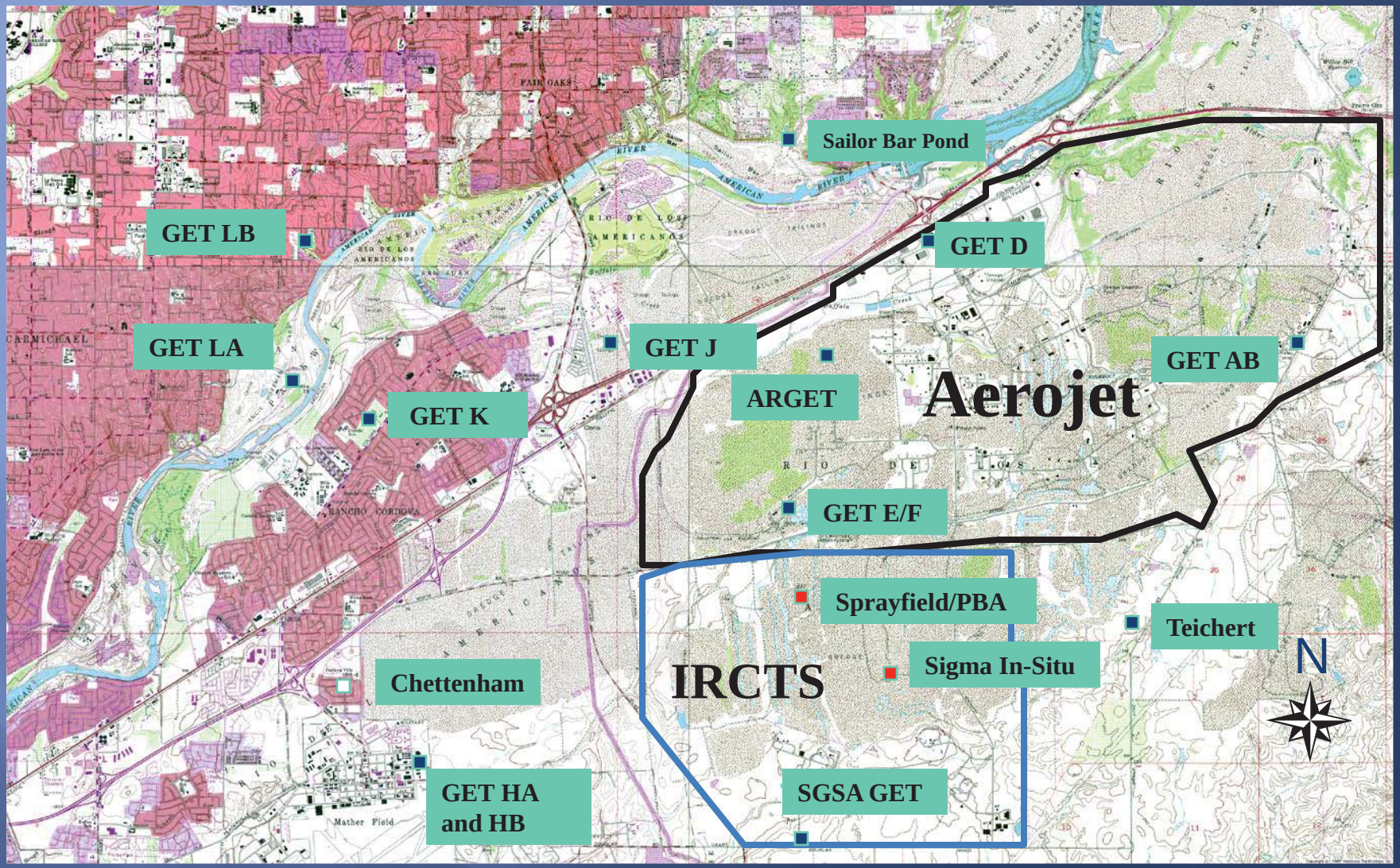

Western Groundwater Operable Unit
Area 4
Area 2
Area 3
Area 1
Aerojet
IRCTS
N
CARMICHAEL
RANCHO CORDOVA
Mather Field


Aerojet
IRCTS
Active Well
Previously Closed Well
Newer Closed Well
Wellhead Treatment
New Well
CARMICHAEL
FAIR OAKS
RIO DE LOS AMERICANOS
RANCHO CORDOVA
Mather Field

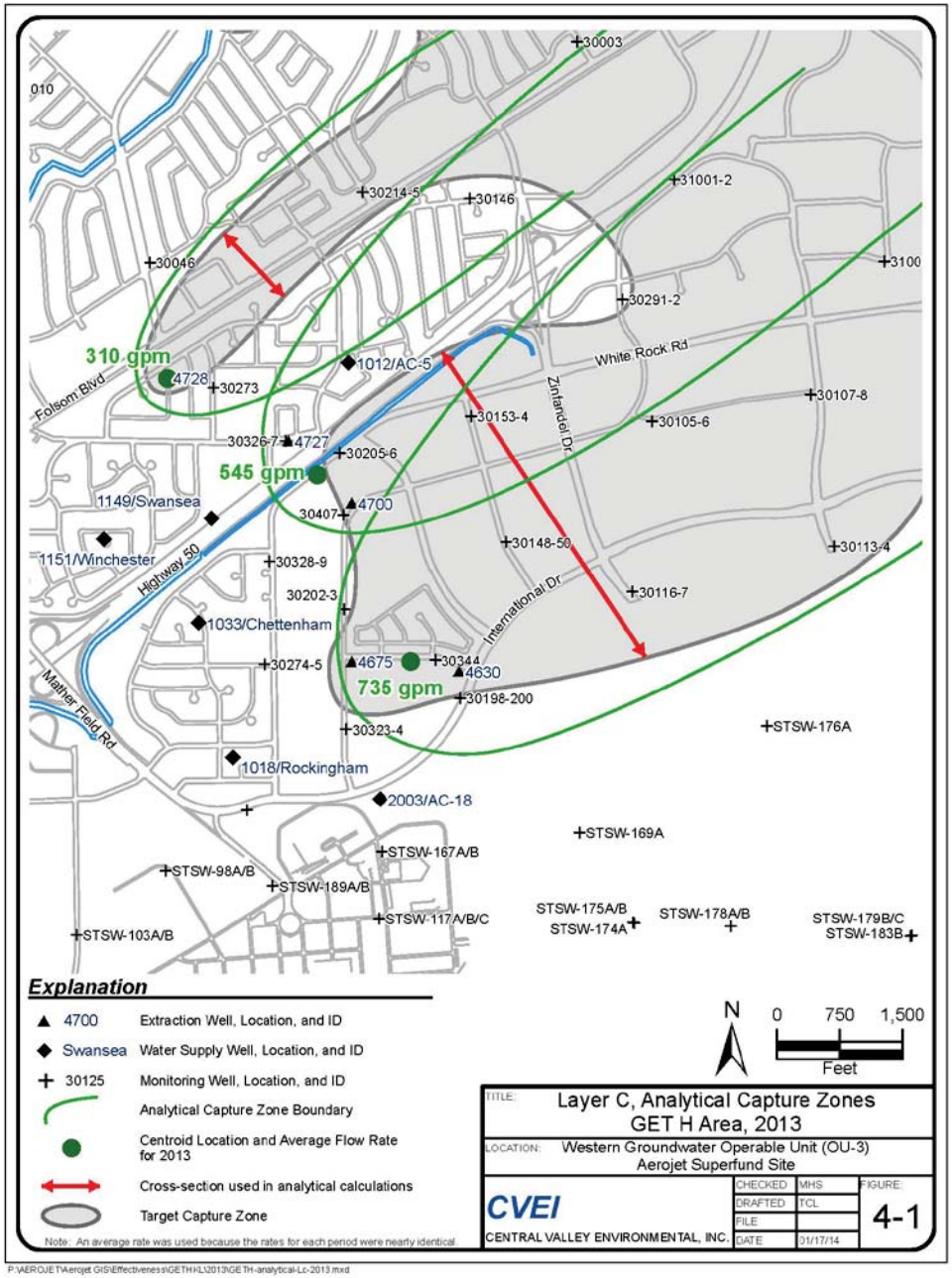

TCE
Aerojet
IRCTS
N
FAIR OAKS
CARMICHAEL
RANCHO CORDOVA
Mather Field
AMERICAN RIVER
RIO DE LOS AMERICANOS


Perchlorate
Aerojet
IRCTS
N
FAIR OAKS
CARMICHAEL
RIO DE LOS AMERICANOS
Mather Field


NDMA
Aerojet
IRCTS
N
FAIR OAKS
CARMICHAEL
RIO DE LOS AMERICANOS
RANCHO CORDOVA
Mather Field


Sailor Bar Pond
GET LB
GET D
GET LA
GET J
GET AB
ARGET
Aerojet
GET K
GET E/F
Sprayfield/PBA
Teichert
Sigma In-Situ
IRCTS
Chettenham
N
GET HA
and HB
SGSA GET

GET H Analytical Capture Zone Layer C April 2013



GET H Interpreted Capture Zone Layer C April 2013

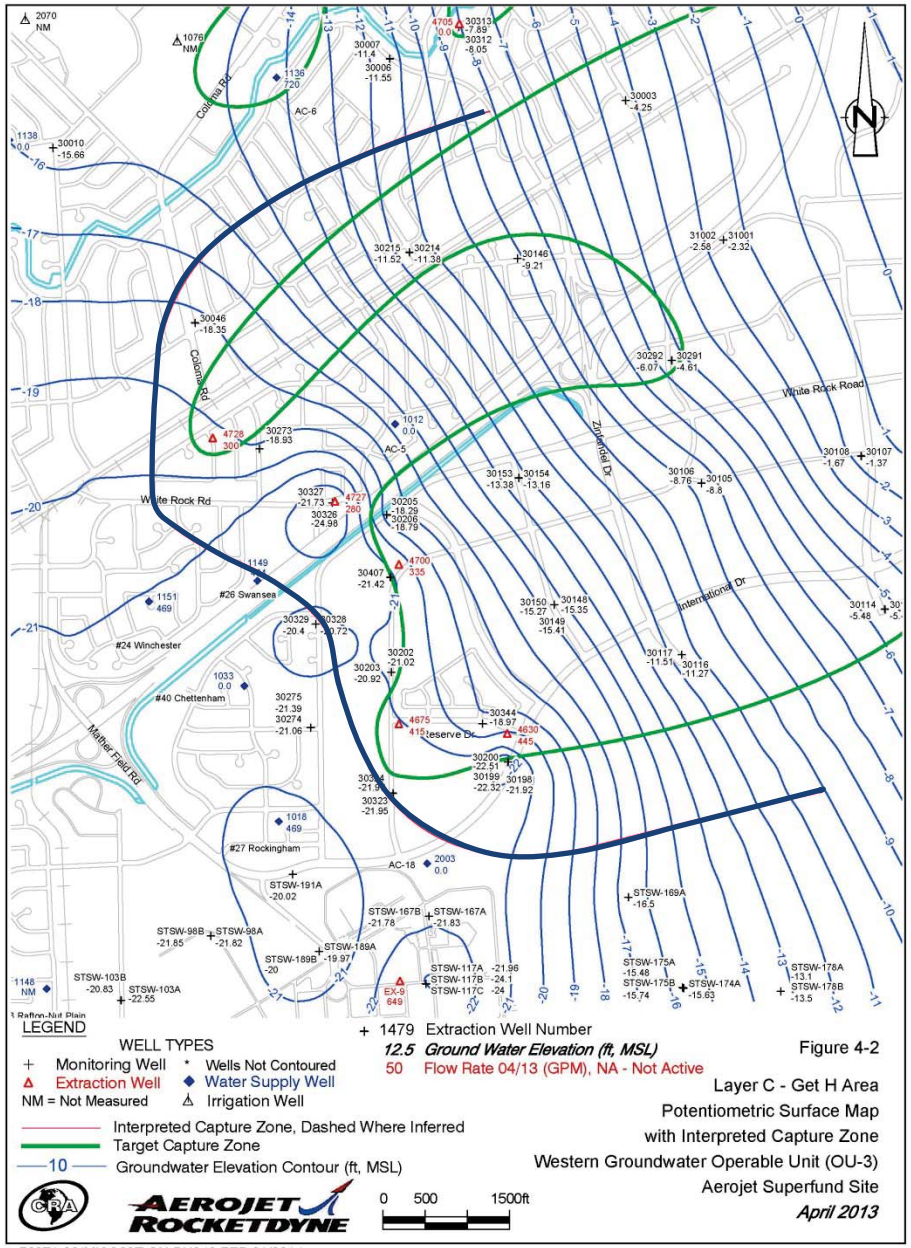
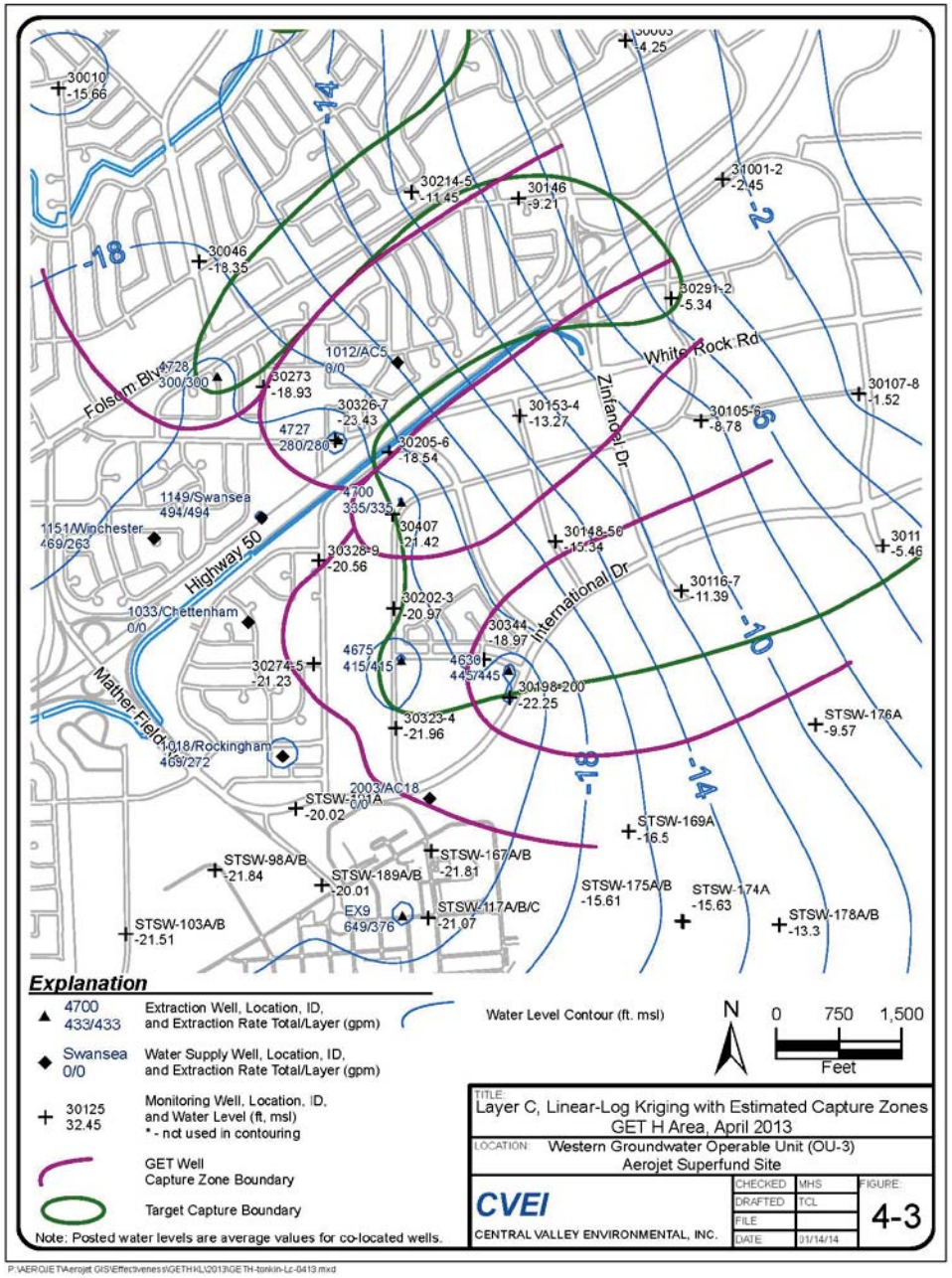


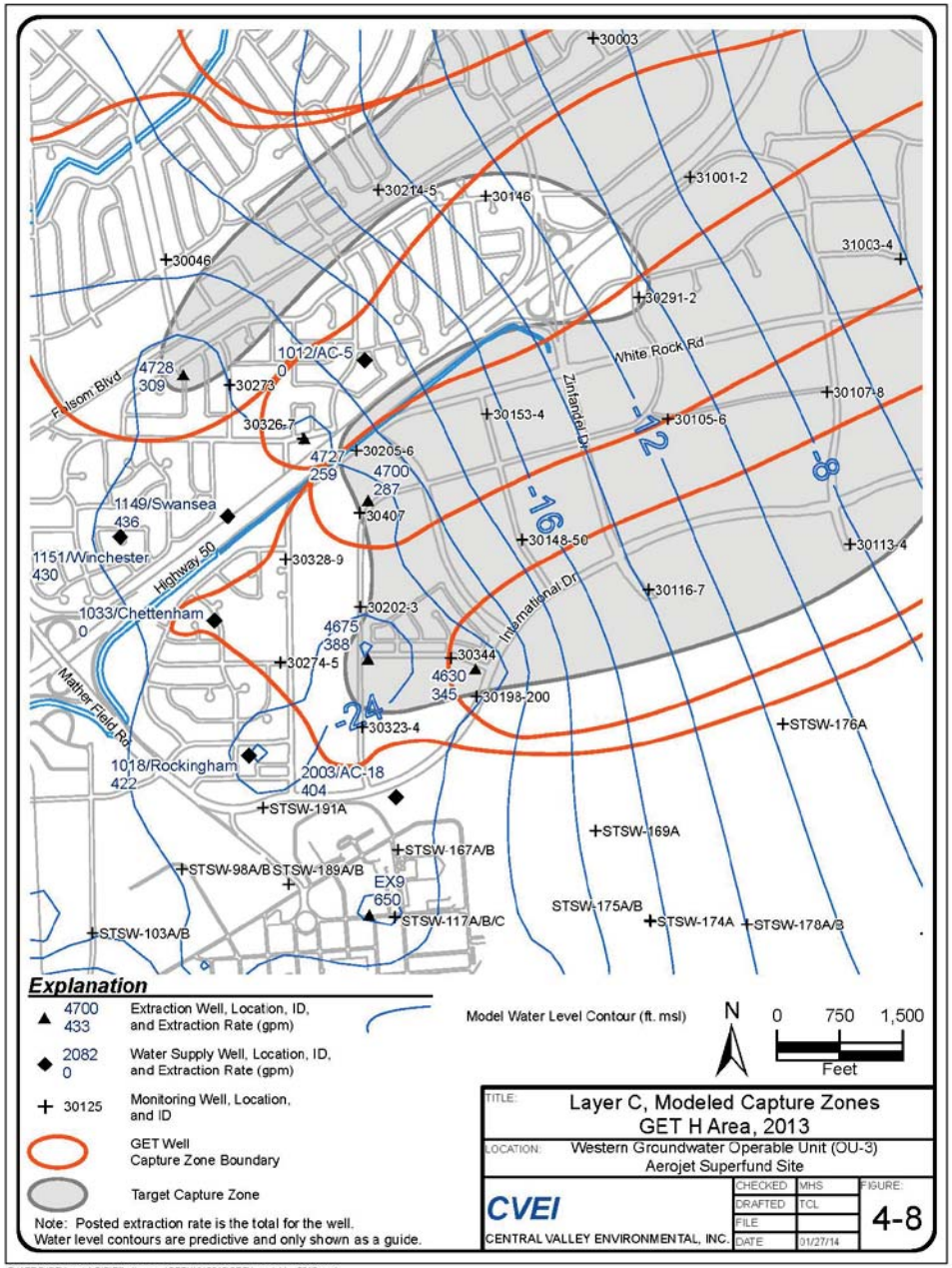
Figure 4-2
Layer C - Get H Area
Potentiometric Surface Map
with Interpreted Capture Zone
Western Groundwater Operable Unit (OU-3)
Aerojet Superfund Site
April 2013

56971-00(MISC007)GN-BU040 FEB 21/2014

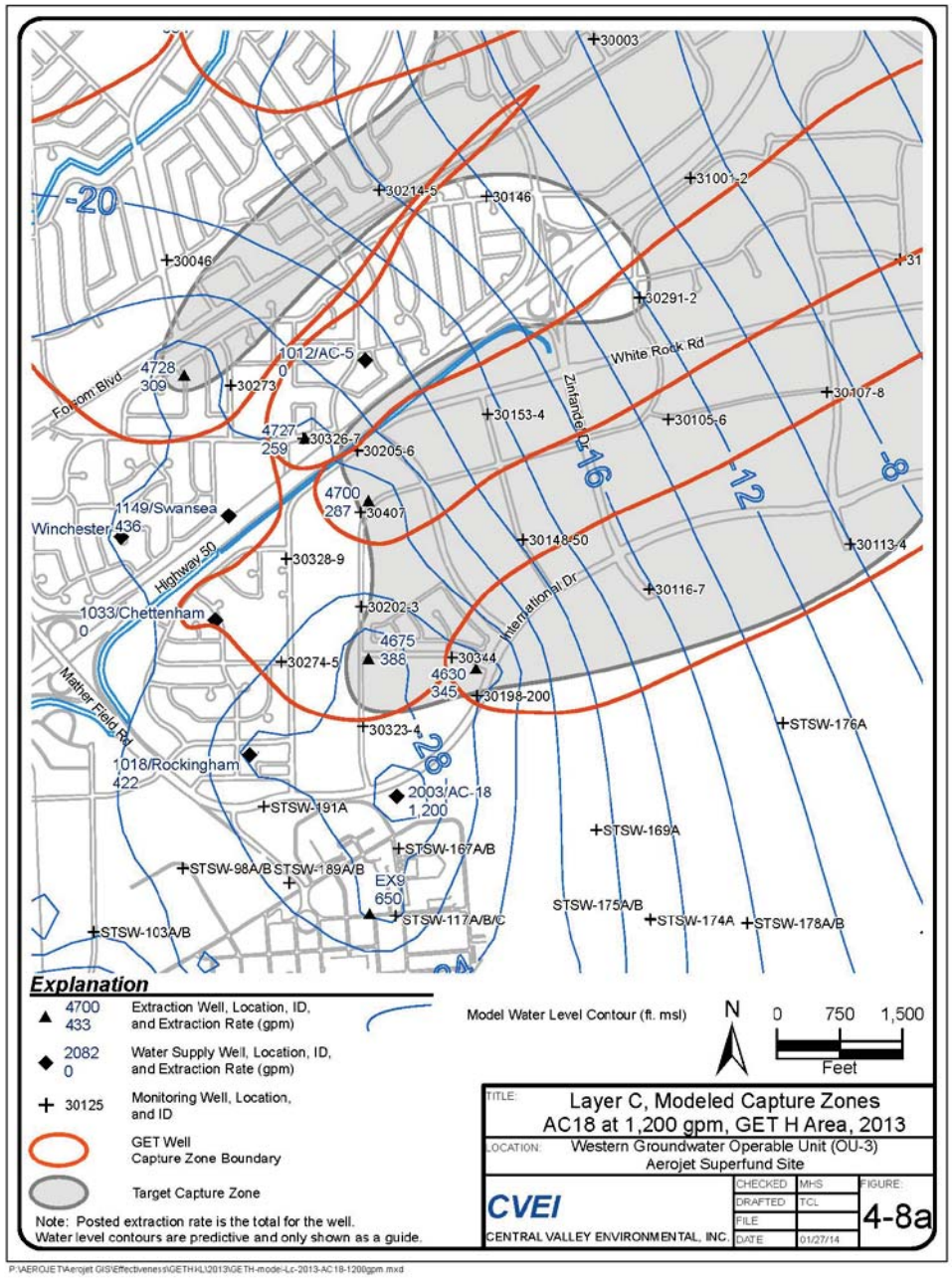
GET H Log Krige Capture Zone Layer C April 2013



GET H Modled Capture Zone Layer C

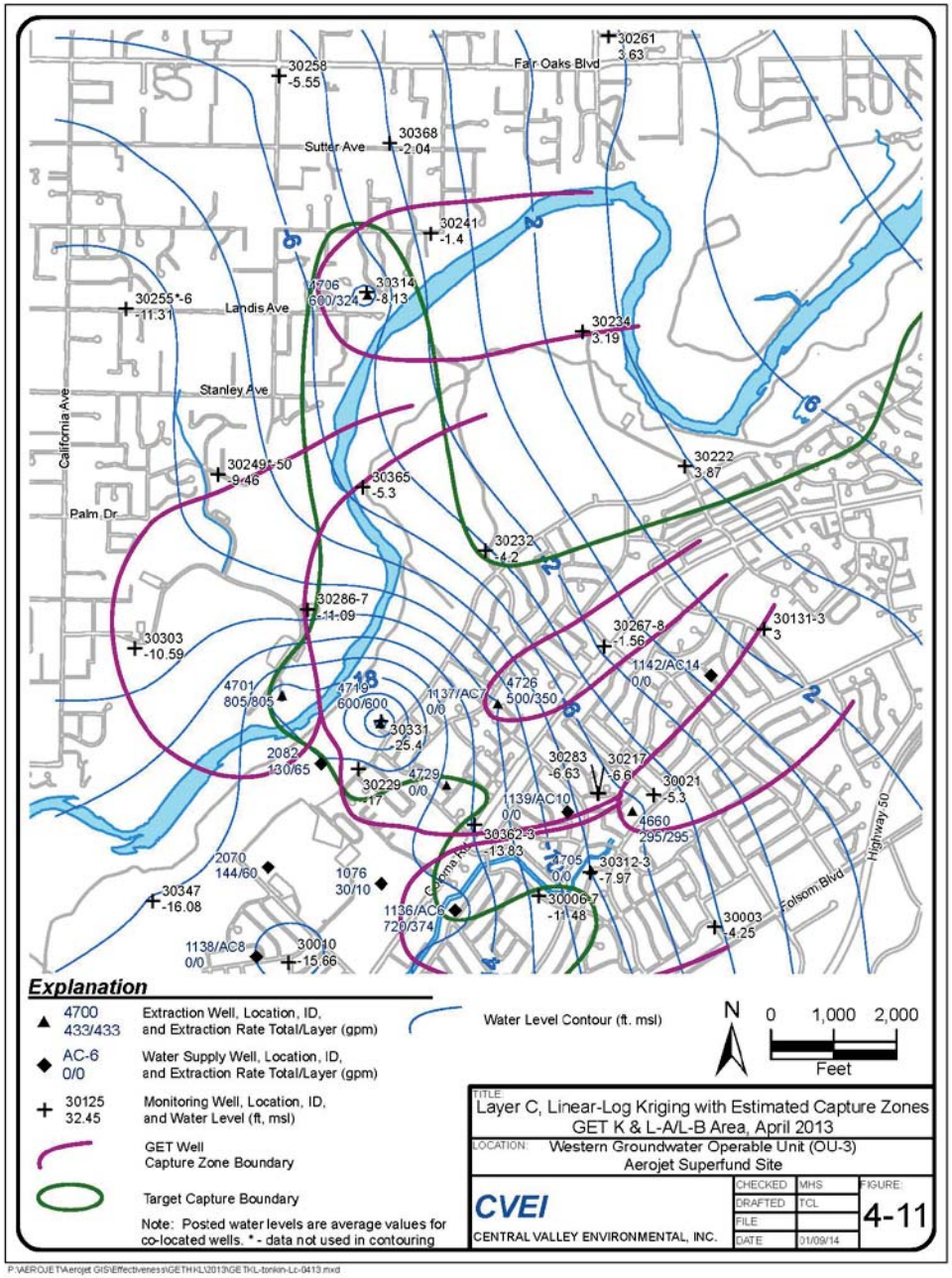


GET H Modled Capture Zone Layer C AC-18 1200 gpm

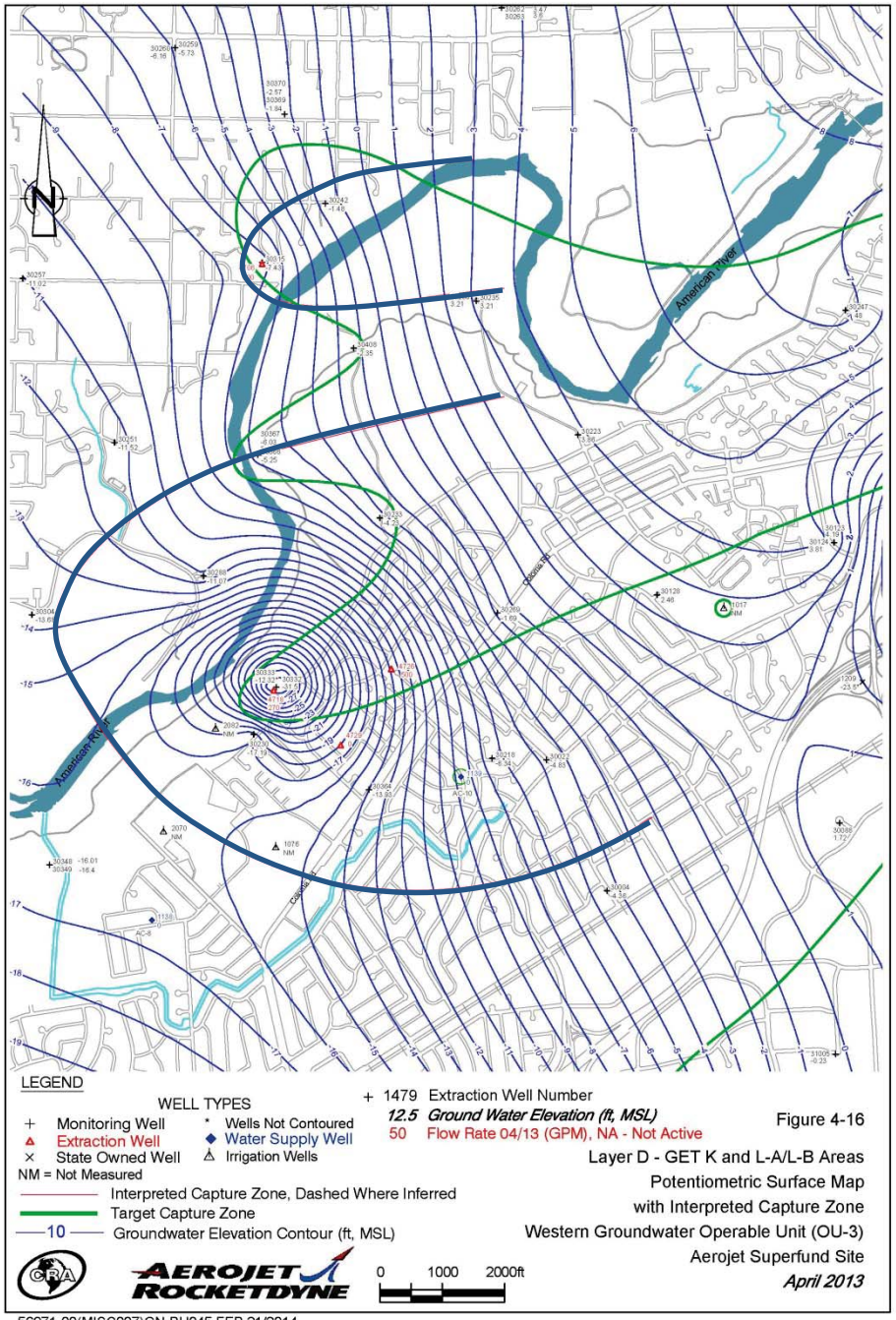


P:\AEROJET\Aerojet GIS\Effectiveness\GETHHL\2013\GETH-mode-Lc-2013-AC18-1200gpm.mxd

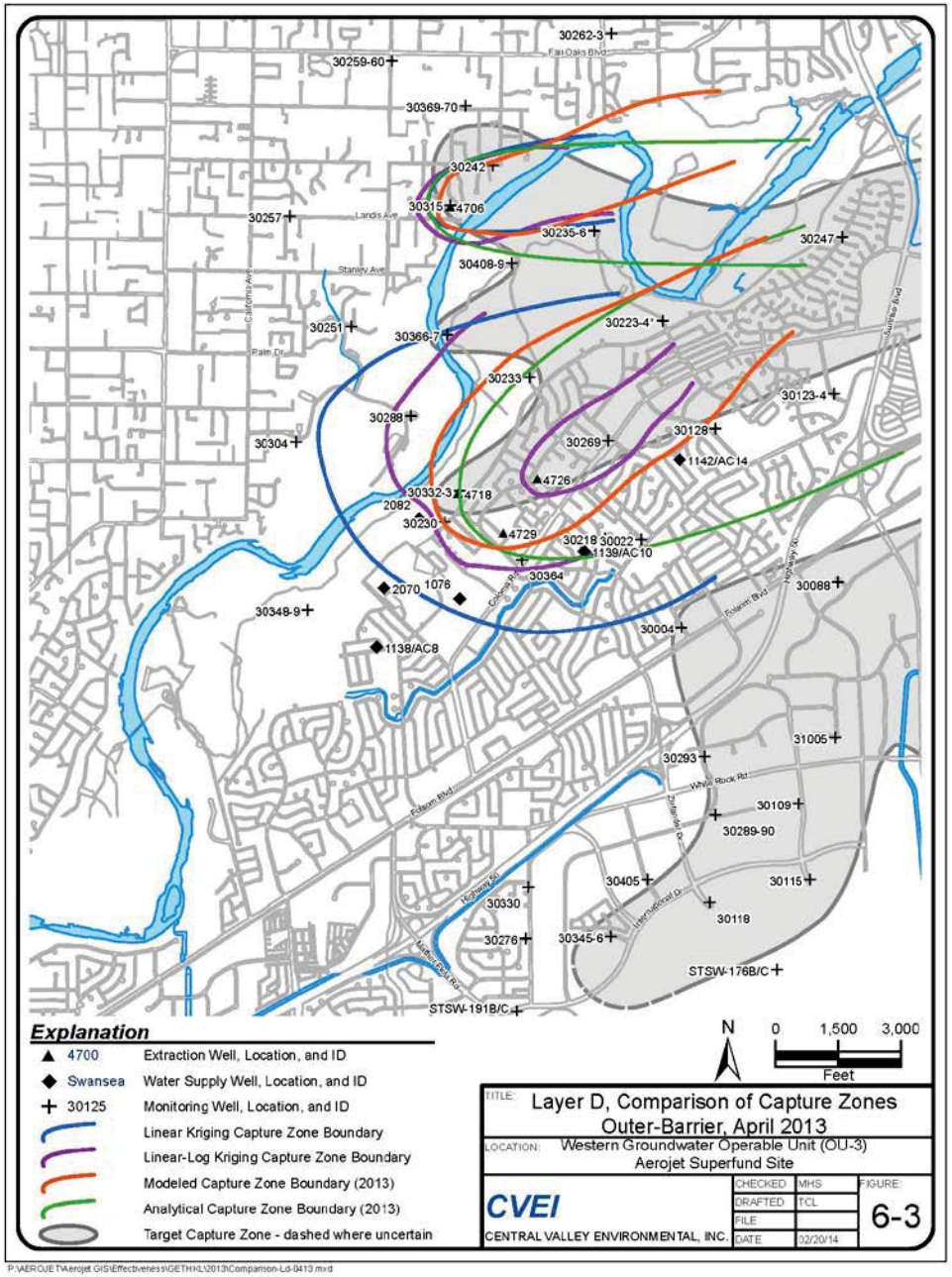
GET K/L Log Kriged Capture Zone Layer C April 2013



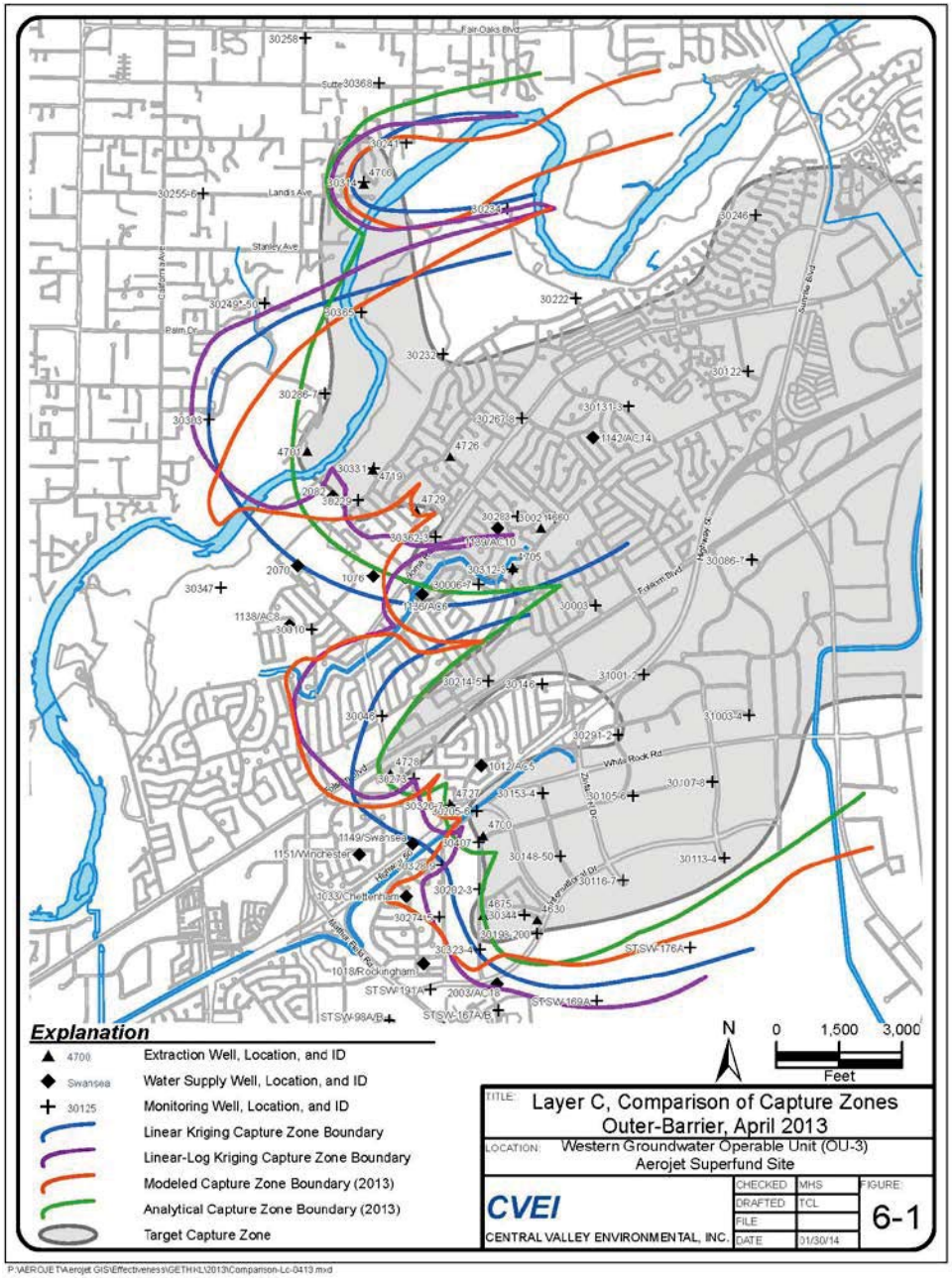
GET K/L Interpreted Capture Zone Layer D April 2013



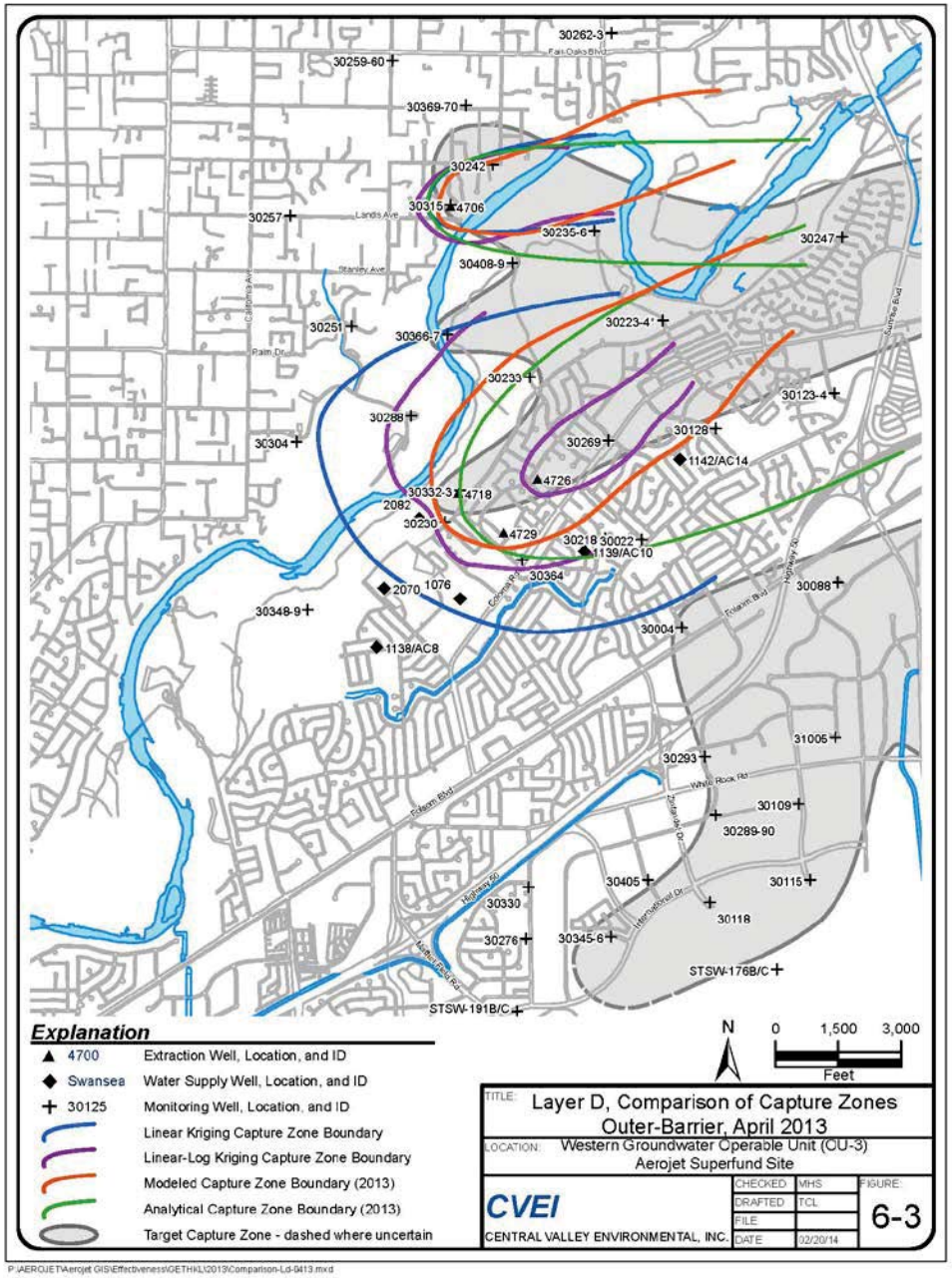
GET K/L Comparative Capture Zone Layer D April 2013



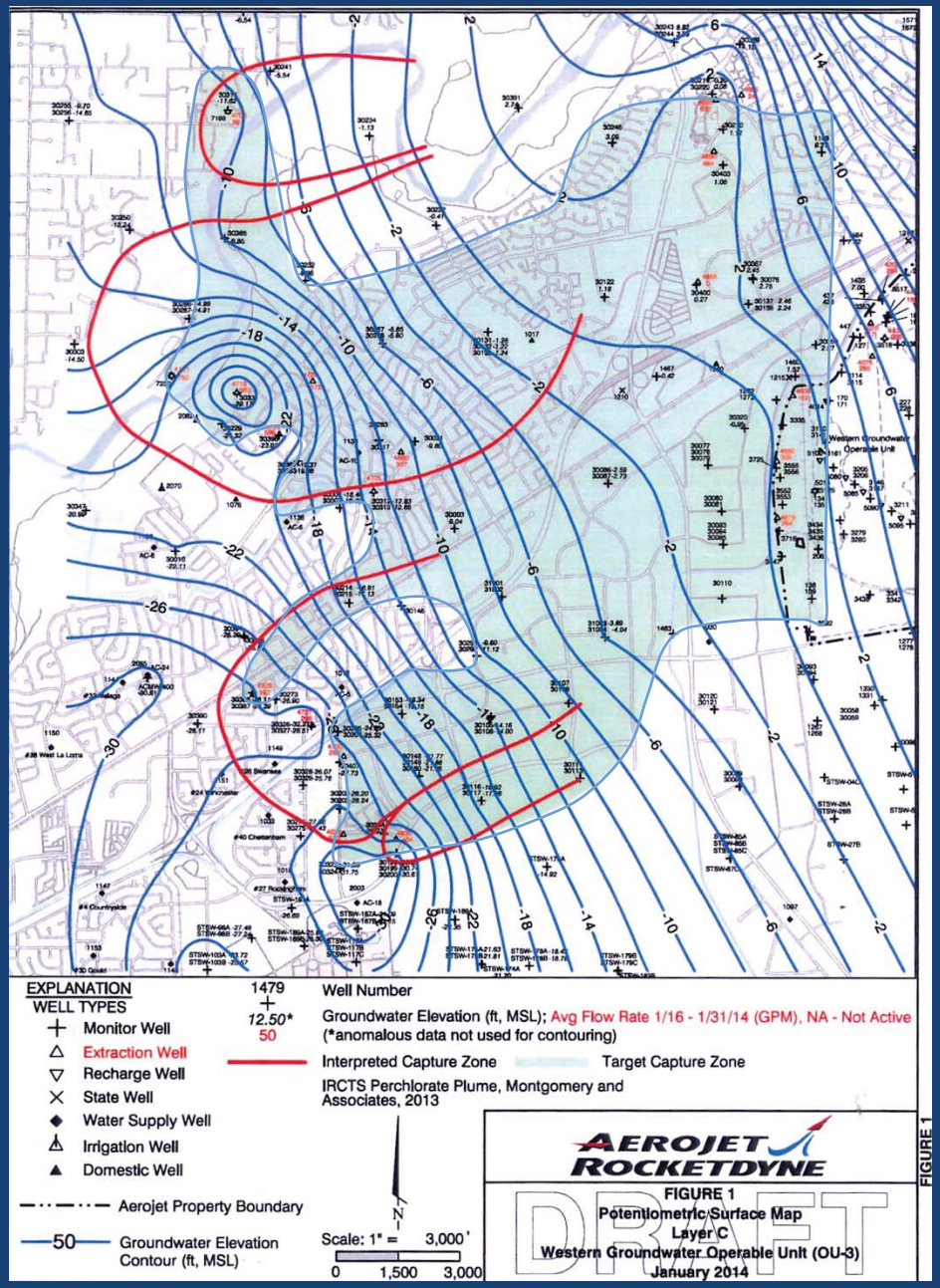
Capture Comparison Layer C



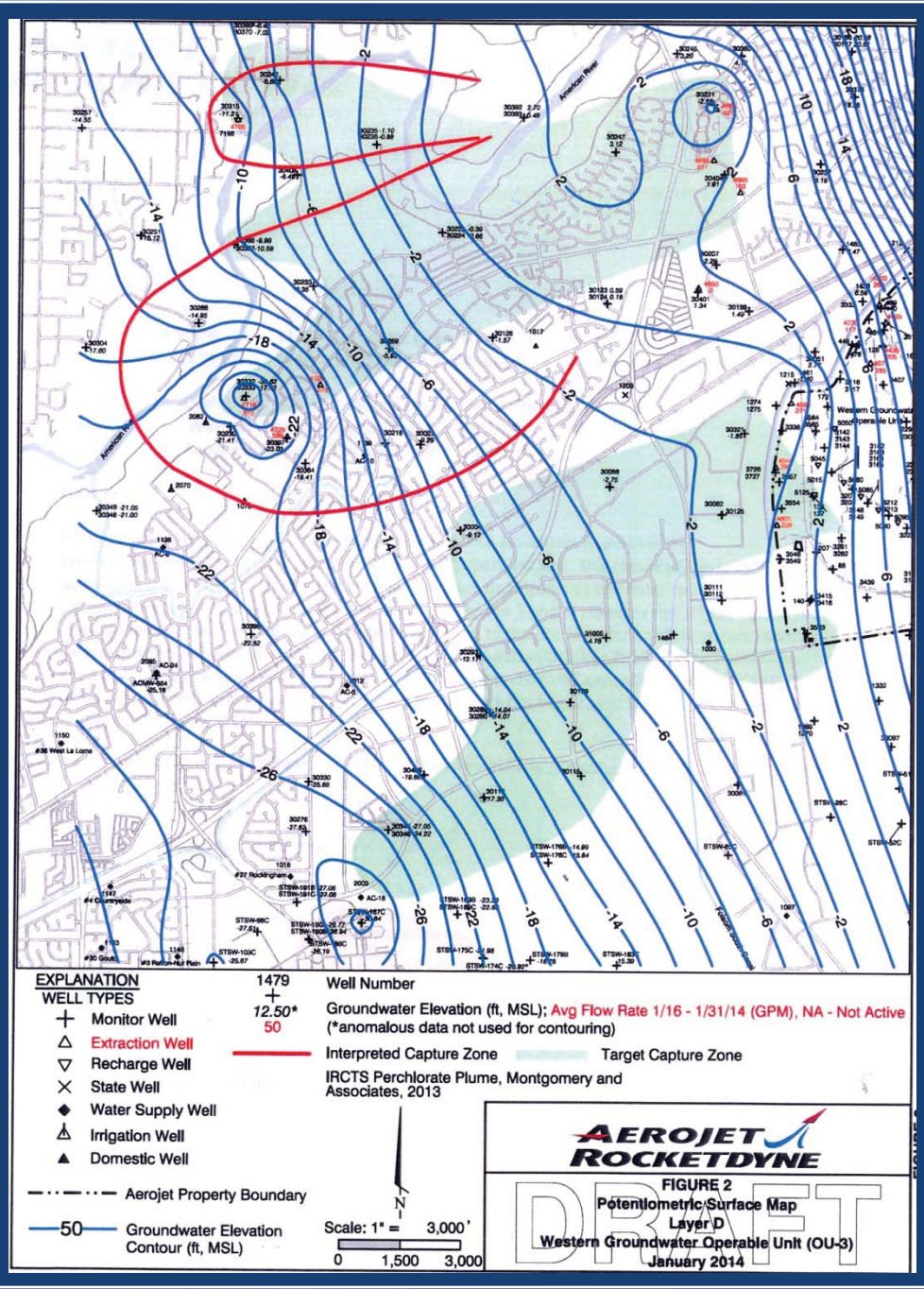
Capture Comparison Layer D



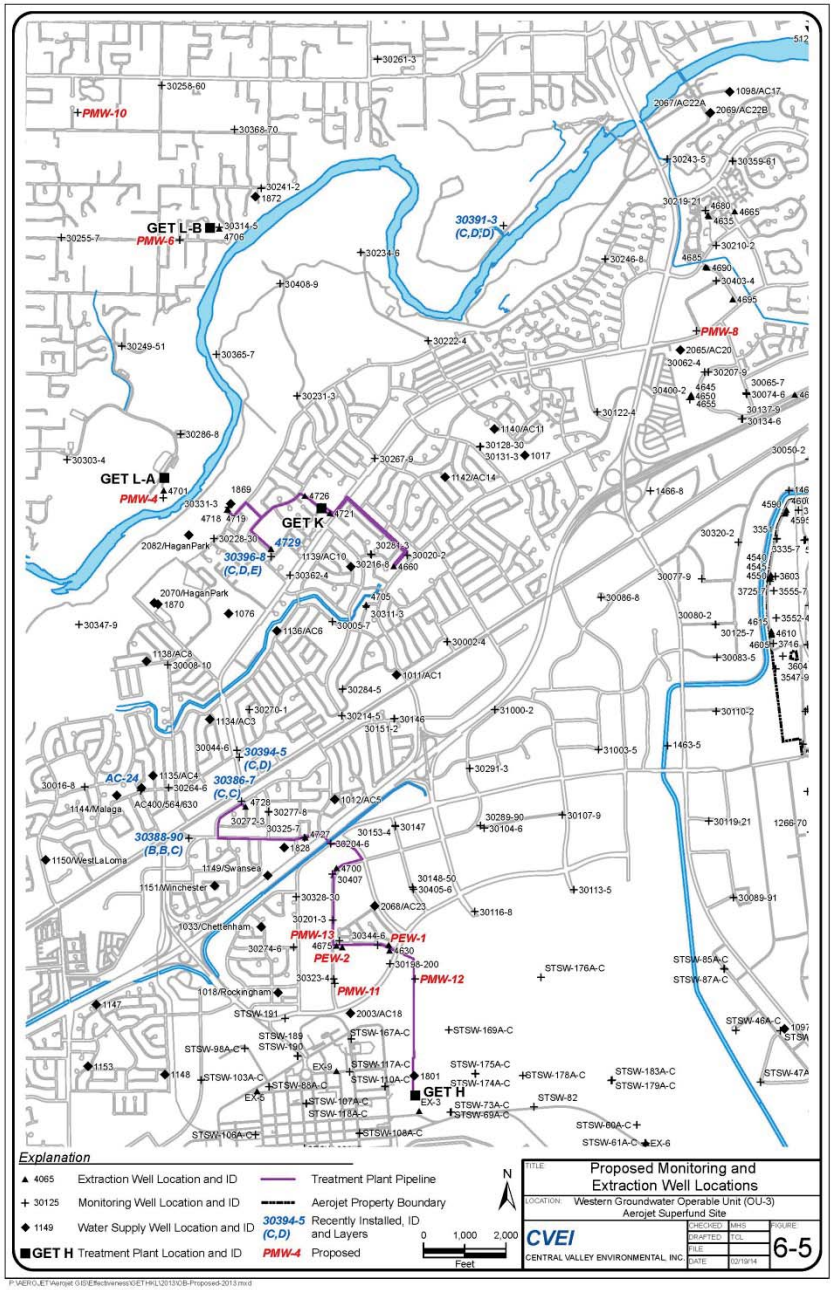
Capture
Jan 2014
Layer C

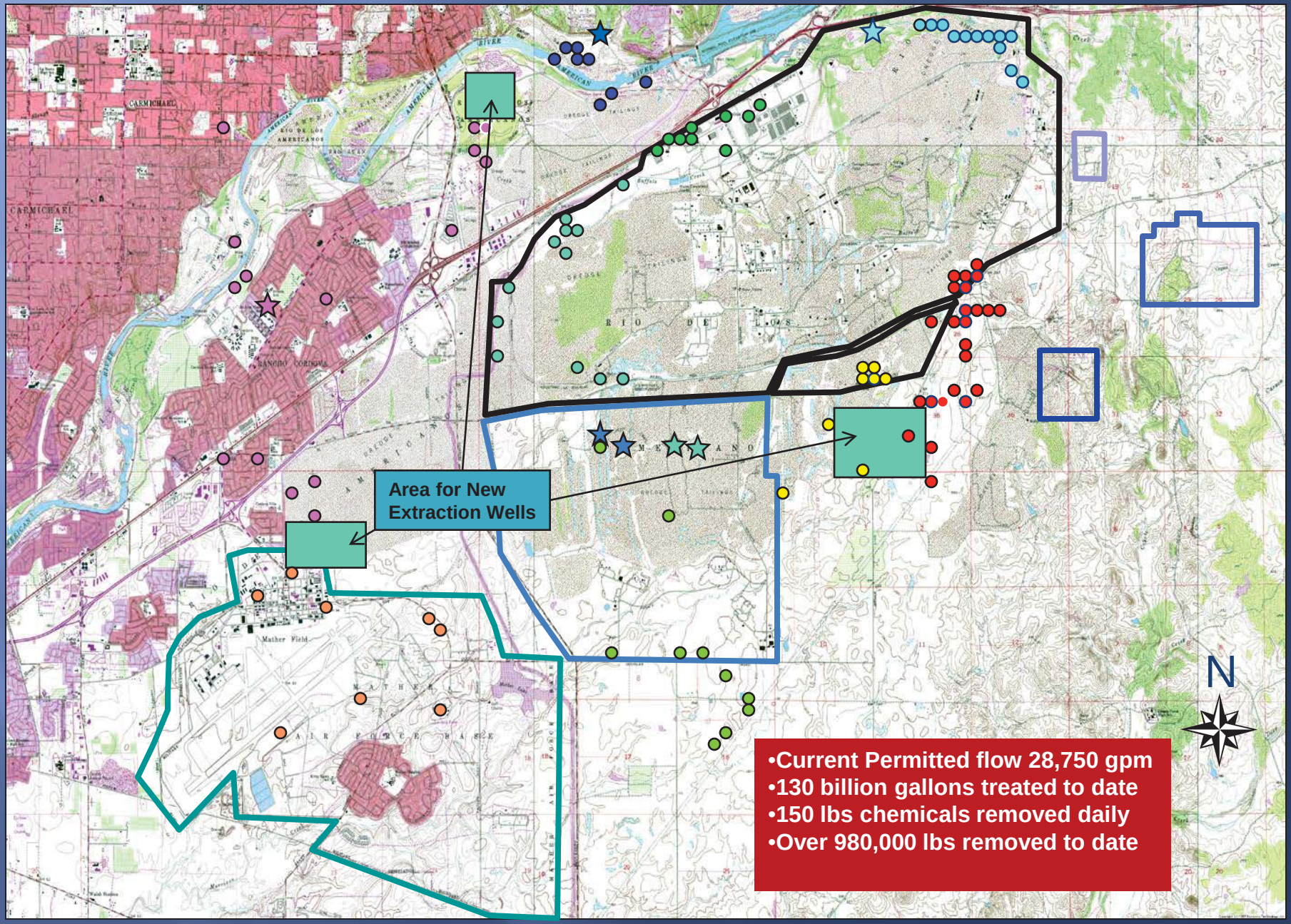


Capture Layer D Jan 2014



Future Work


Explanation
4065 Extraction Well Location and ID
30125 Monitoring Well Location and ID
1149 Water Supply Well Location and ID
GET H Treatment Plant Location and ID
Treatment Plant Pipeline
Aerojet Property Boundary
30394-5 (C,D) Recently Installed, ID and Layers
PMW-4 Proposed
0 1,000 2,000
Feet
N
TITLE
Proposed Monitoring and Extraction Well Locations
LOCATION:
Western Groundwater Operable Unit (OU-3)
Aerojet Superfund Site
CVEI
CENTRAL VALLEY ENVIRONMENTAL, INC.
CHECKED MHS
DRAFTED TCL
FILE
DATE 02/19/14
FIGURE
6-5
GET L-B
GET L-A
GET K
GET H
PMW-10
PMW-6
PMW-4
PMW-8
30391-3 (C,D;D)
30396-8 (C,D,E)
30394-5 (C,D)
30386-7 (C,C)
30388-90 (B,B,C)
AC-24
PMW-13
PEW-1
PEW-2
PMW-11
PMW-12



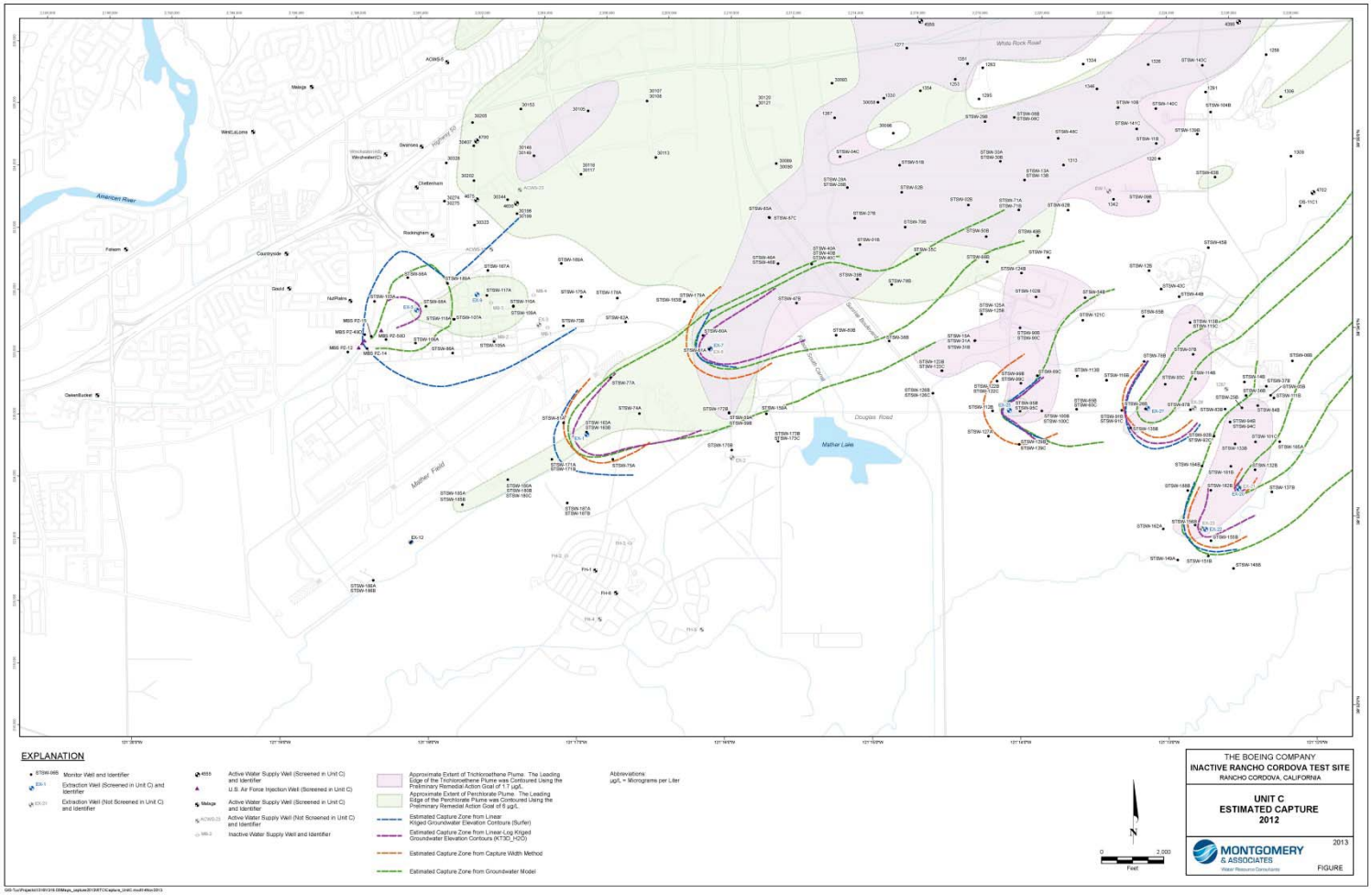
- Current Permitted flow 28,750 gpm
- 130 billion gallons treated to date
- 150 lbs chemicals removed daily
- Over 980,000 lbs removed to date

Changes in Extraction and Treatment

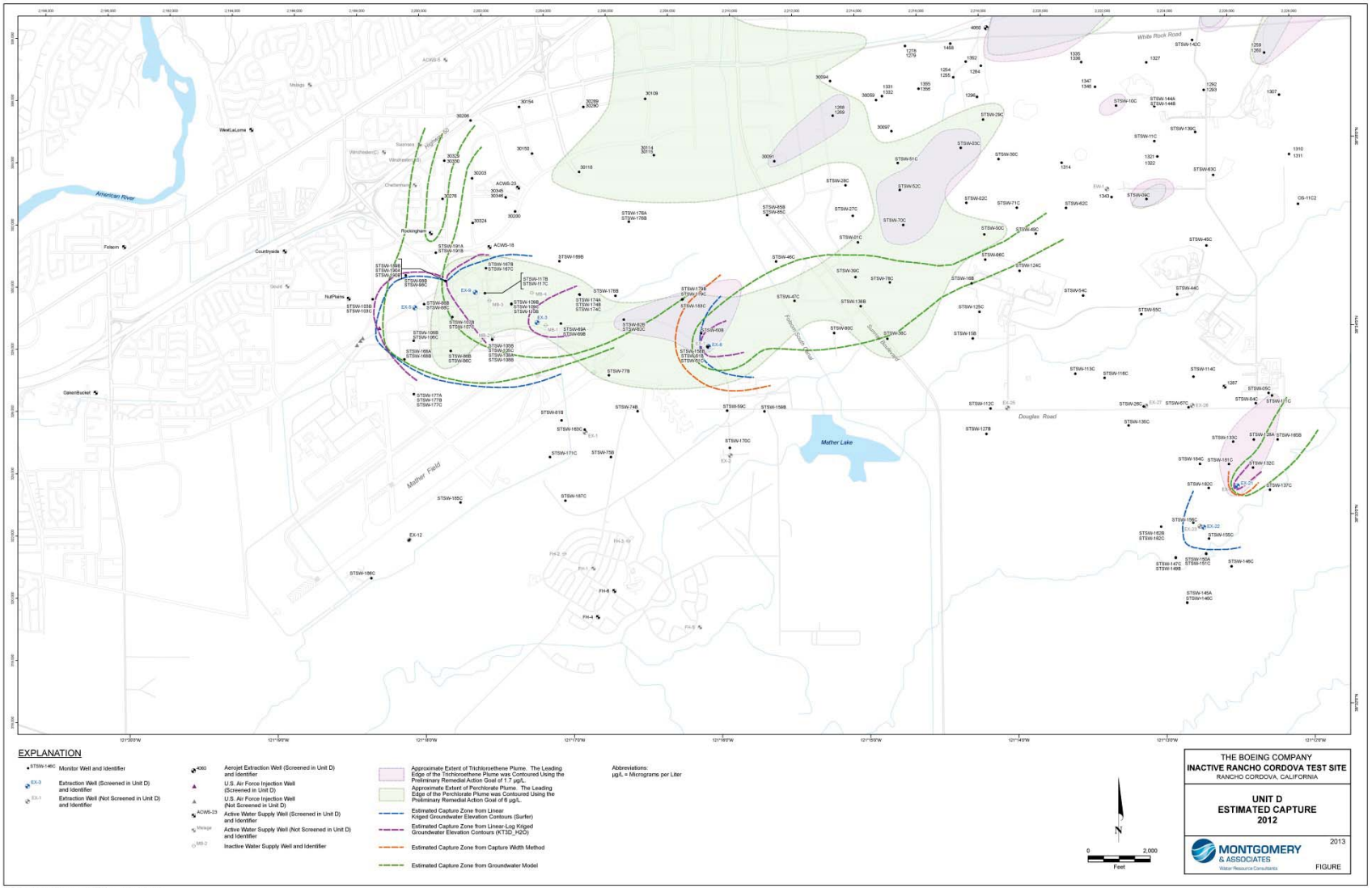
- GET A and GET B have been combined and GET AB is being expanded
- GET EF is being expanded
- GET D is gone and GET D well water going to an expanded ARGET facility with added perchlorate treatment
- Added Ion Exchange vessels at GET H
- Increased pumping at Sailor Bar extraction well
- AC-6 Pumping Full-Time with IX units
- AC-12 converted to extraction well for GET K

Reuse of Treated Groundwater

- Supplied to Teichert for use at Grant Line Road Facility and Future Scott Road
- Replacing Aerojet's 2000 gpm Industrial Supply from Folsom
- Working with Golden State and Carmichael to bring back water discharged to the American River



Whitu Rock Road
Douglas Road
Mather Lake
Mather Field
Amarcen River
EXPLANATION
STSW-06B Monitor Well and Identifier
EX-1 Extraction Well (Screened in Unit C) and Identifier
EX-21 Extraction Well (Not Screened in Unit C) and Identifier
4555 Active Water Supply Well (Screened in Unit C) and Identifier
U.S. Air Force Injection Well (Screened in Unit C)
Malaga Active Water Supply Well (Screened in Unit C) and Identifier
ACWS-23 Active Water Supply Well (Not Screened in Unit C) and Identifier
MB-2 Inactive Water Supply Well and Identifier
Approximate Extent of Trichloroethene Plume. The Leading Edge of the Trichloroethene Plume was Contoured Using the Preliminary Remedial Action Goal of 1.7 µg/L
Approximate Extent of Perchlorate Plume. The Leading Edge of the Perchlorate Plume was Contoured Using the Preliminary Remedial Action Goal of 6 µg/L
Estimated Capture Zone from Linear Kriged Groundwater Elevation Contours (Surfer)
Estimated Capture Zone from Linear-Log Kriged Groundwater Elevation Contours (KT3D_H2O)
Estimated Capture Zone from Capture Width Method
Estimated Capture Zone from Groundwater Model
Abbreviations:
µg/L = Micrograms per Liter
N
0
2,000
Feet
THE BOEING COMPANY
INACTIVE RANCHO CORDOVA TEST SITE
RANCHO CORDOVA, CALIFORNIA
UNIT C
ESTIMATED CAPTURE
2012
2013
MONTGOMERY & ASSOCIATES
Water Resource Consultants
FIGURE



American River
Mather Lake
Mather Field
Douglas Road
White Rock Road
Folsom South Canal
Sunrise Boulevard
Rockingham
Folsom
Countryside
NutPlains
OakenBucket
WestLaLoma
Mulega
Chattanooga
Sacramento
Windsheden
Gould
Highway 50
EXPLANATION
STSW-146C Monitor Well and Identifier
EX-3 Extraction Well (Screened in Unit D) and Identifier
EX-1 Extraction Well (Not Screened in Unit D) and Identifier
4060 Aerojet Extraction Well (Screened in Unit D) and Identifier
U.S. Air Force Injection Well (Screened in Unit D)
U.S. Air Force Injection Well (Not Screened in Unit D)
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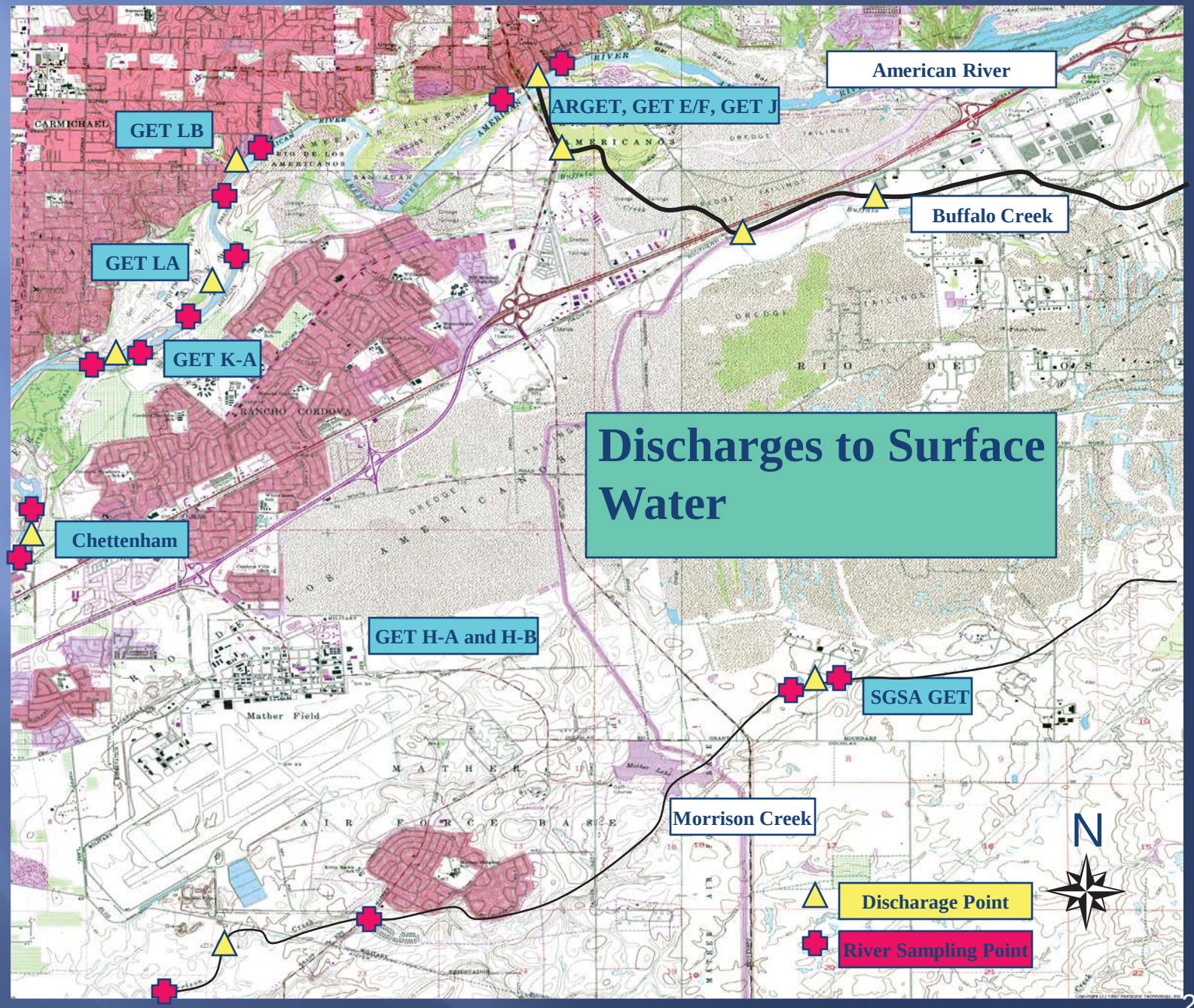
0
2,000
Feet
THE BOEING COMPANY
INACTIVE RANCHO CORDOVA TEST SITE
RANCHO CORDOVA, CALIFORNIA
UNIT D
ESTIMATED CAPTURE
2012
2013
MONTGOMERY & ASSOCIATES
Water Resource Consultants
FIGURE

QUESTIONS?

STATE OF CALIFORNIA

CENTRAL VALLEY REGION

REGIONAL WATER QUALITY CONTROL BOARD



Discharges to Surface Water