

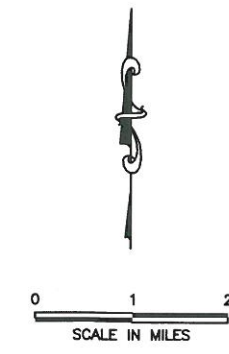
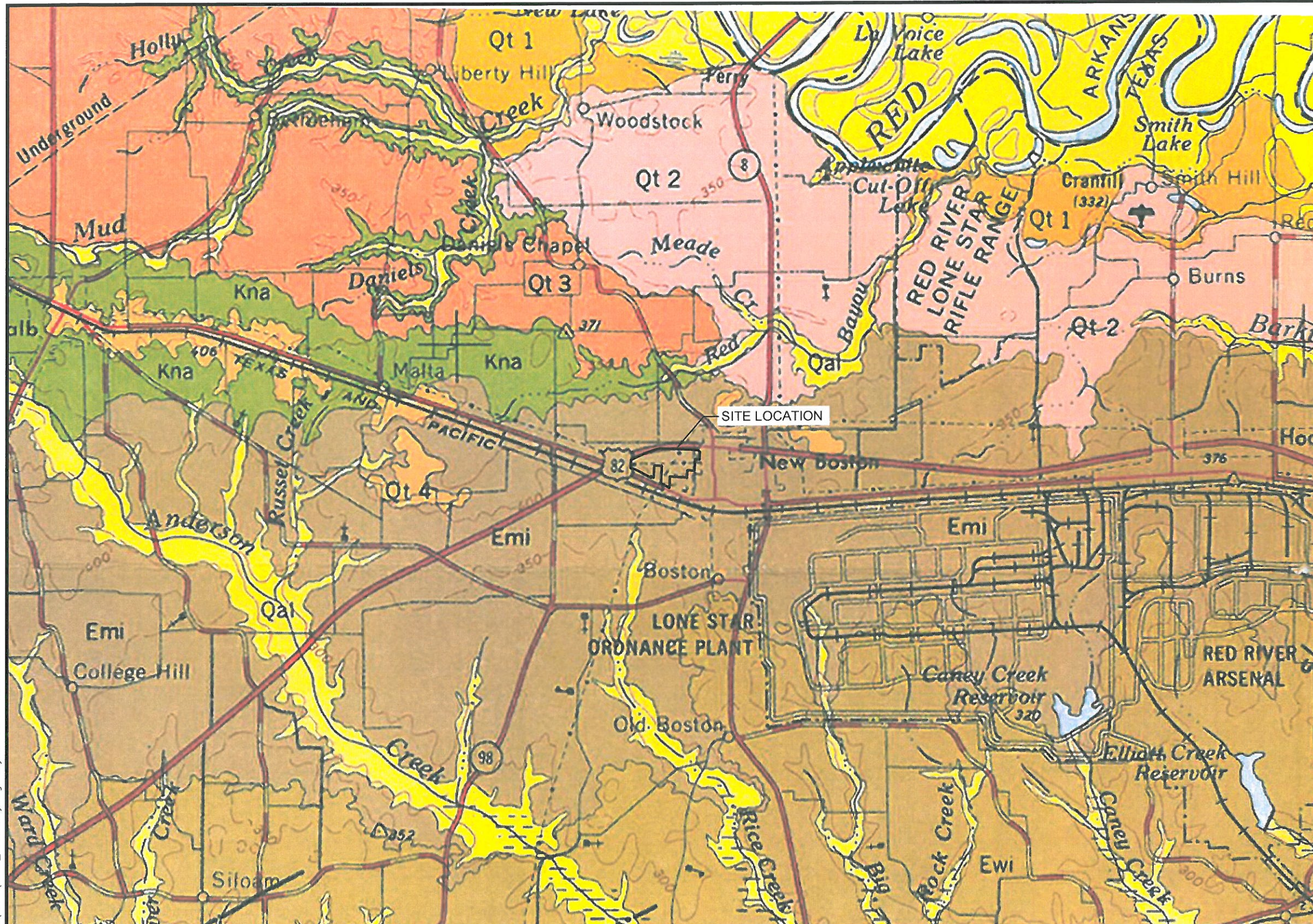
NEW BOSTON LANDFILL

APPENDIX E1

REGIONAL GEOLOGIC/HYDROGEOLOGIC DATA

Geologic Vicinity Map.....E1-1
Geologic Vicinity Legend.....E1-2
Generalized Regional Geologic Cross Section.....E1-3
Regional Potentiometric Map of the Nacatoch AquiferE1-4
Water Well Location MapE1-5





INDEX OF GEOLOGIC MAPPING
 Numbers in outlined areas refer to items in bibliography in "Index to Areal Geologic Maps in Texas, 1891-1961," by T. E. Brown, Bureau of Economic Geology, The University of Texas (1963). For area A in Arkansas, see C. H. Dane, Upper Cretaceous Formations of Southwestern Arkansas, Arkansas Geologic Survey Bulletin 1, Plate 2 (1929). For Oklahoma, area B, see L. V. Davis, Geology and Ground-Water Resources of Southern McCurtain County, Oklahoma, Oklahoma Geological Survey Bulletin 86, Plate 1 (1960); area C, see J. D. Miser, Geologic Map of Oklahoma, U. S. Geological Survey (1954); area D, see H. D. Gibbs, Geologic Map of Eastern Choctaw County, Oklahoma, Thesis, The University of Oklahoma (1950); and for area E, in Texas, see J. C. Frye and A. B. Leonard, Pleistocene Geology of Red River Basin in Texas, University of Texas Bureau of Economic Geology Report Inv. 49 (1963).

VIRGIL E. BARNES, PROJECT DIRECTOR
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 Alluvium terraces, and unmapped areas compiled by Mary Kathryn Pieper from high altitude aerial photographs and field notes by J. C. Frye and A. B. Leonard with field checking and mapping of Texas portion by C. A. Shelby, D. E. Owen and Mary Kathryn Pieper and of Arkansas portion by T. J. Freeman. Geology scribed by J. W. Macon, W. G. Jones, and Carolyn McClellan.

NOTE:
 1. SEE FIGURE E1-2 FOR LEGEND.



Prepared by the Army Map Service (AMTV), Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1954 by photogrammetric methods from USGS and USCE quadrangles, 1:24,000 and 1:50,000, metric detail revised by photo-planimetric methods. Horizontal and vertical control by USGS, USO&GS, and USCE. Map field checked 1953. Limited revision by U.S. Geological Survey 1963.

CONTOUR INTERVAL 100 FEET
 WITH SUPPLEMENTARY CONTOURS AT 50 FOOT INTERVALS

TRANSVERSE MERCATOR PROJECTION
 1960 MAGNETIC DECLINATION FOR THIS SHEET VARIES FROM 8°45' EASTERLY FOR THE CENTER OF THE WEST EDGE TO 7°30' EASTERLY FOR THE CENTER OF THE EAST EDGE. MEAN ANNUAL CHANGE IS 0.3' WESTERLY.

GEOLOGIC ATLAS OF TEXAS, TEXARKANA SHEET

ELIAS H. SELLARDS MEMORIAL EDITION

REPRINTED 1979

GEOLOGIC VICINITY MAP

**WASTE MANAGEMENT OF TEXAS, INC.
 NEW BOSTON LANDFILL
 PERMIT AMENDMENT APPLICATION**



**BIGGS & MATHEWS
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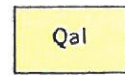
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| | | | E1-1 |

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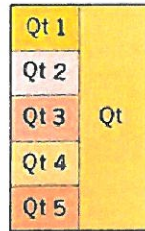
EXPLANATION
(Formations Described in Separate Text)

Recent



Alluvium

Pleistocene



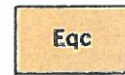
Fluviatile terrace deposits



Sparta Sand



Weches Formation



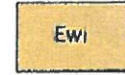
Queen City Formation



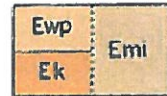
Reklaw Formation



Carrizo Sand



Wilcox Group undivided



Midway Group



Navarro Group undivided

QUATERNARY

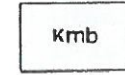
TERTIARY

Upper Cretaceous

Lower Cretaceous



Neylandville Formation



Marlbrook Marl



Pecan Gap Chalk, Wolfe City Formation,
Annona Chalk, and Ozan Formation

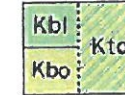


Gober Chalk

(Showing Roxton Limestone beds, Kr., locally)



Brownstown Marl



Blossom Sand, Bonham Formation, and Tokio Formation



Eagle Ford Formation



Woodbine Group undivided



Washita Group undivided



Goodland Limestone



Antlers Sand

CRETACEOUS

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GEOLOGIC VICINITY LEGEND

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
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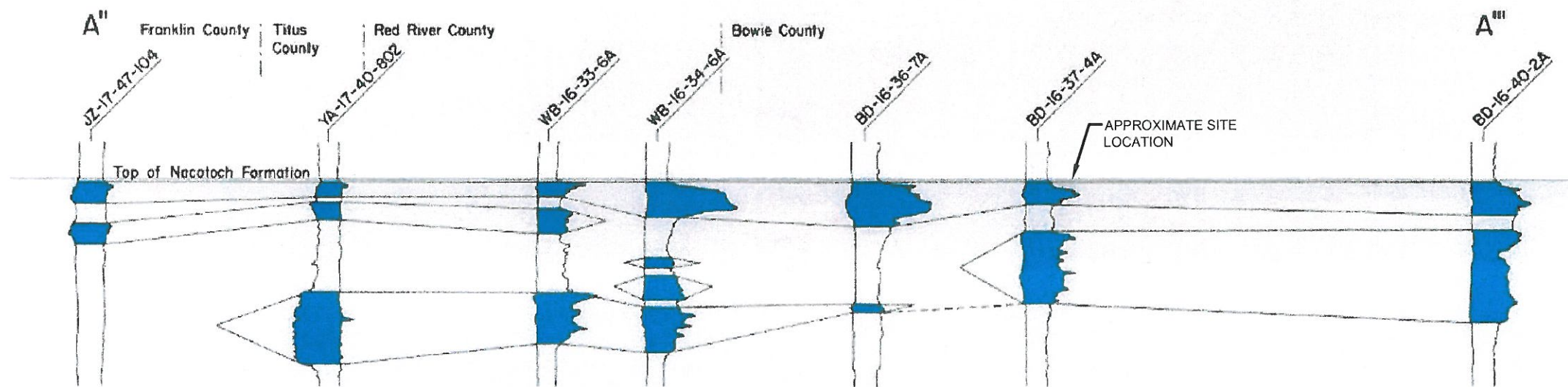
DRAWING
E1-2

GEOLOGIC ATLAS OF TEXAS, TEXARKANA SHEET

ELIAS H. SELLARDS MEMORIAL EDITION

REPRINTED 1979

Prepared by the Army Map Service (AMTV), Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1954 by photogrammetric methods from USGS and USCE quadrangles, 1:24,000 and 1:50,000, metric detail revised by photo-planimetric methods. Horizontal and vertical control by USGS, USC&GS, and USCE. Map field checked 1953. Limited revision by U.S. Geological Survey 1963.

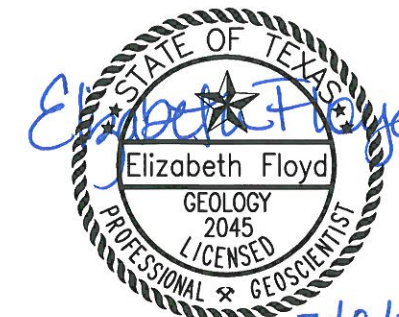
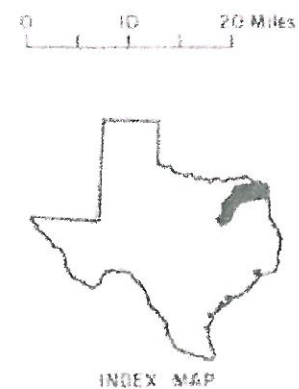
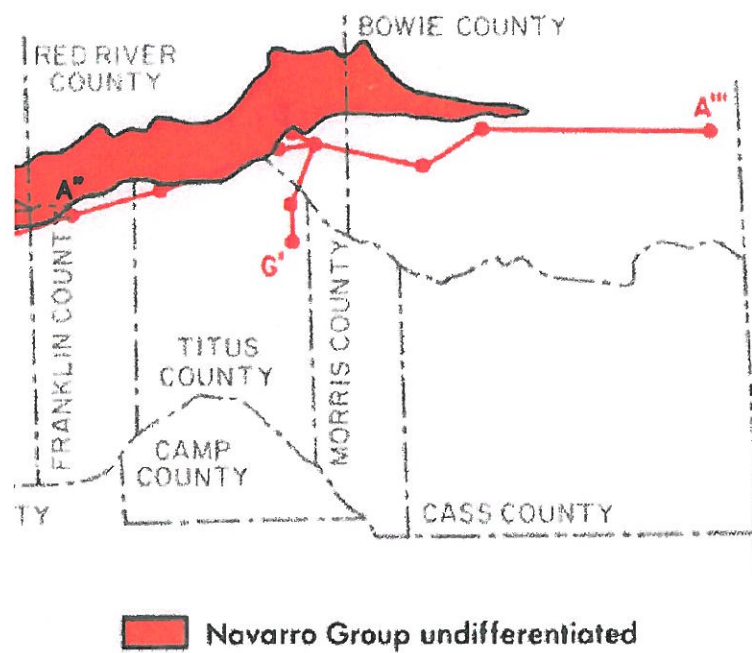


200
100
0
Feet

0 2 4
Miles

Line of cross section
shown in Figure 15

 Sand unit
Correlations by Knight (1984)



**GENERALIZED REGIONAL
GEOLOGIC CROSS SECTION**

**WASTE MANAGEMENT OF TEXAS, INC.
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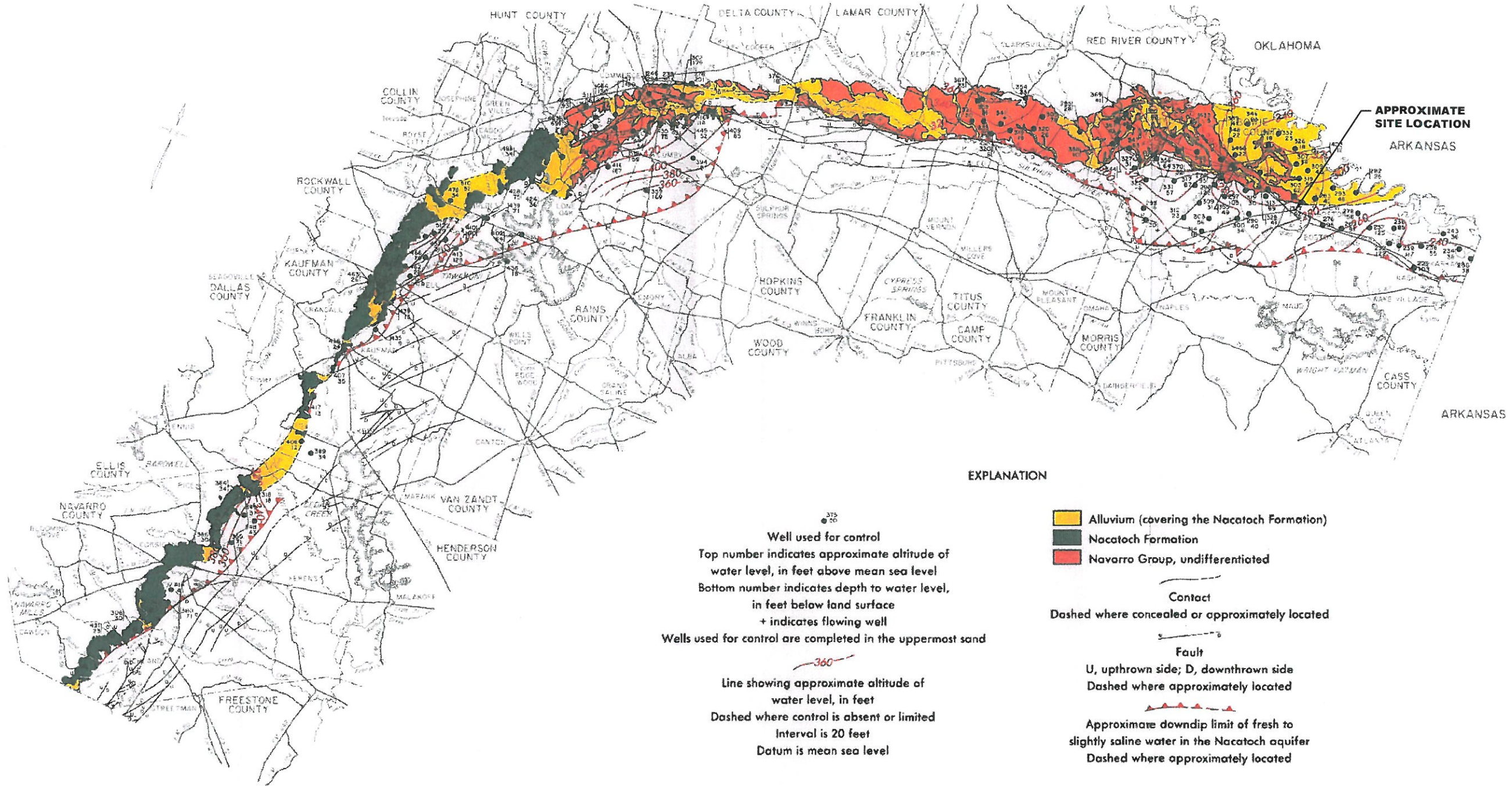
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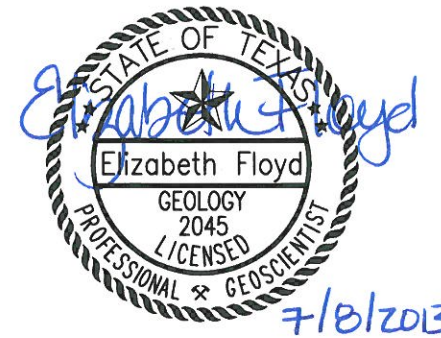
ASHWORTH, J.B., 1988, GROUNDWATER RESOURCES OF THE NACATOCH AQUIFER, TEXAS WATER DEVELOPMENT BOARD REPORT 305, AUSTIN, TX 149P.

| REVISIONS | | | | | | | TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222 | |
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| REV | DATE | DESCRIPTION | DWN BY | DES BY | CHK BY | APP BY | DSN. ESF | DATE : 11/10 | DRAWING |
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0 5 10 15 20 Miles
 Base map and geology adapted from Texarkana, Sherman, Tyler, Dallas and Waco sheets of the Geologic Atlas of Texas Bureau of Economic Geology. The University of Texas at Austin.



REGIONAL POTENTIOMETRIC MAP OF THE NACATOCH AQUIFER
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION

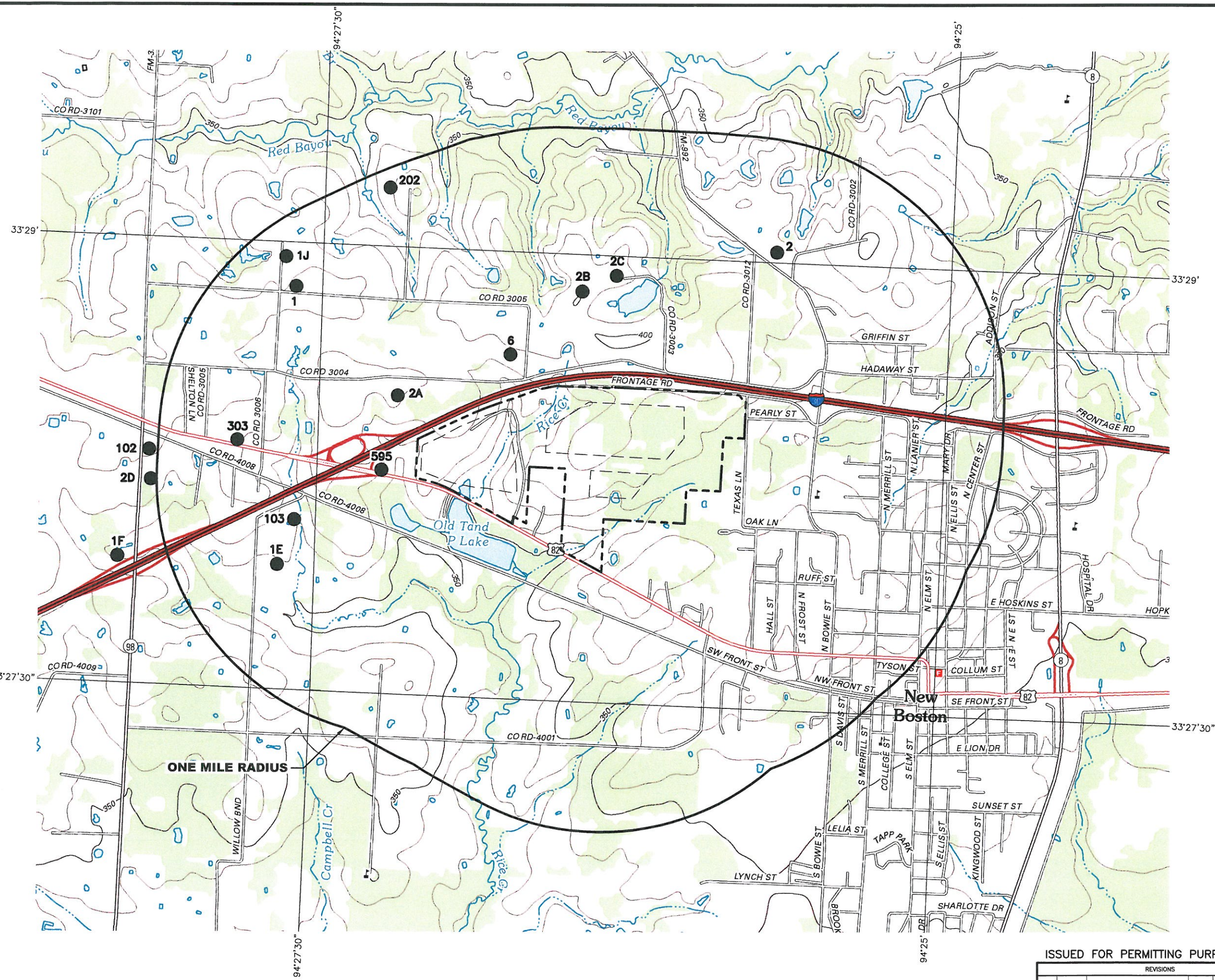
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ASHWORTH, J.B., 1988, GROUNDWATER RESOURCES OF THE NACATOCH AQUIFER, TEXAS WATER DEVELOPMENT BOARD REPORT 305, AUSTIN, TX 149.

J:\101\05\112\Att E\1-5_WaterWells.dwg Layout: E1-5 User: scundiff



NEW BOSTON, TX
2012

ROAD CLASSIFICATION

| | |
|------------------|-------------|
| Interstate Route | State Route |
| US Route | Local Road |
| Ramp | 4WD |

LEGEND

- PERMIT BOUNDARY
- - - LANDFILL FOOTPRINT
- ONE MILE RADIUS
- SURFACE WATER BODY OR OTHER WATER
- WATER WELL

NOTE:
1. TOPOGRAPHIC BASE MAP DOWNLOADED FROM USGS WEBSITE ON FEBRUARY 6, 2013.



WATER WELL LOCATION MAP
WASTE MANAGEMENT OF TEXAS, INC.
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