



2009 ANNUAL MONITORING REPORT

HIGHWAY 96 SITE WHITE BEAR TOWNSHIP, MINNESOTA

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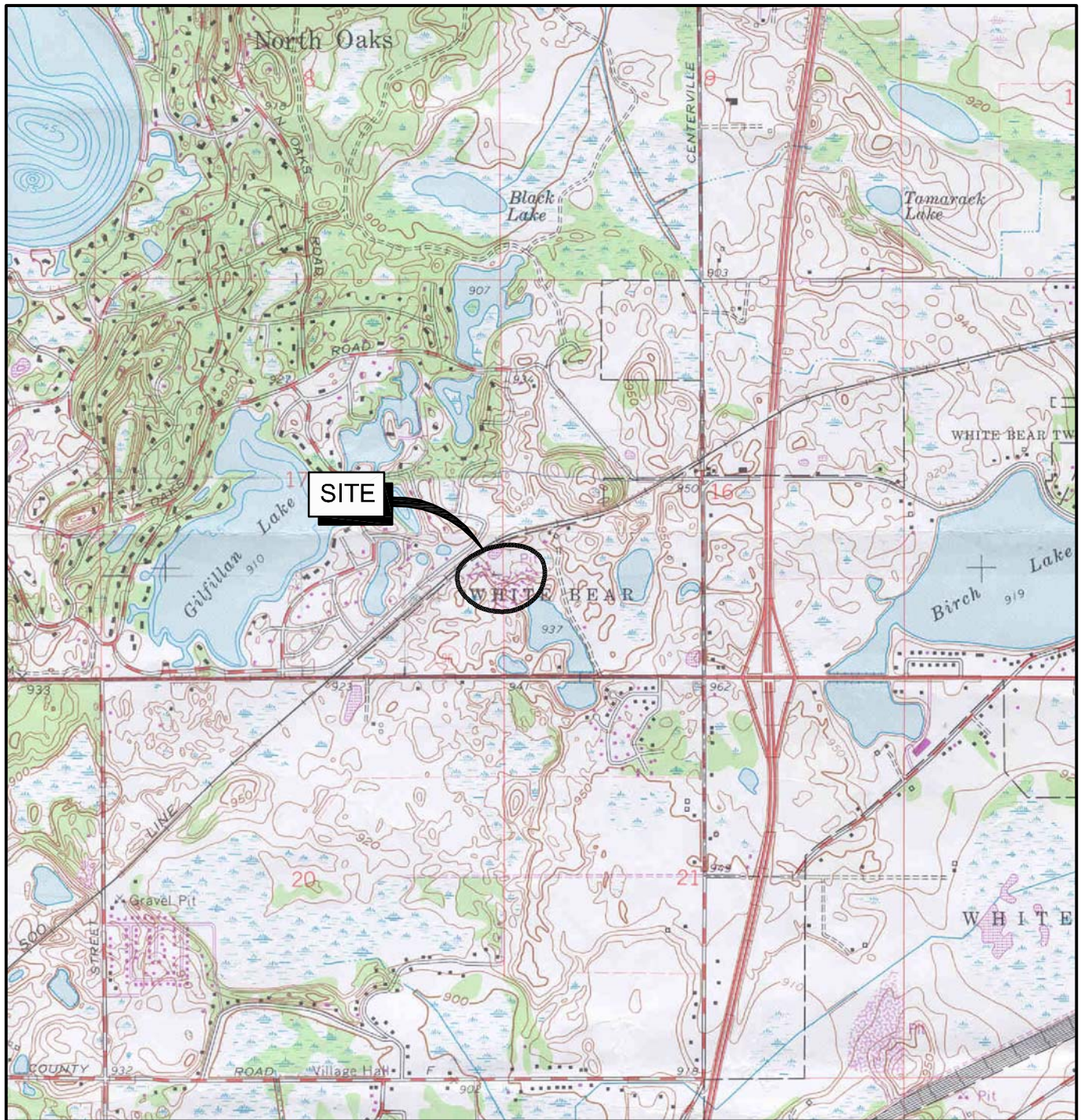
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NORTH DISPOSAL AREA



SOURCE: USGS 7.5 MINUTE QUAD
WHITE BEAR LAKE WEST, MINN.

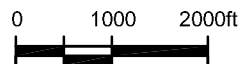
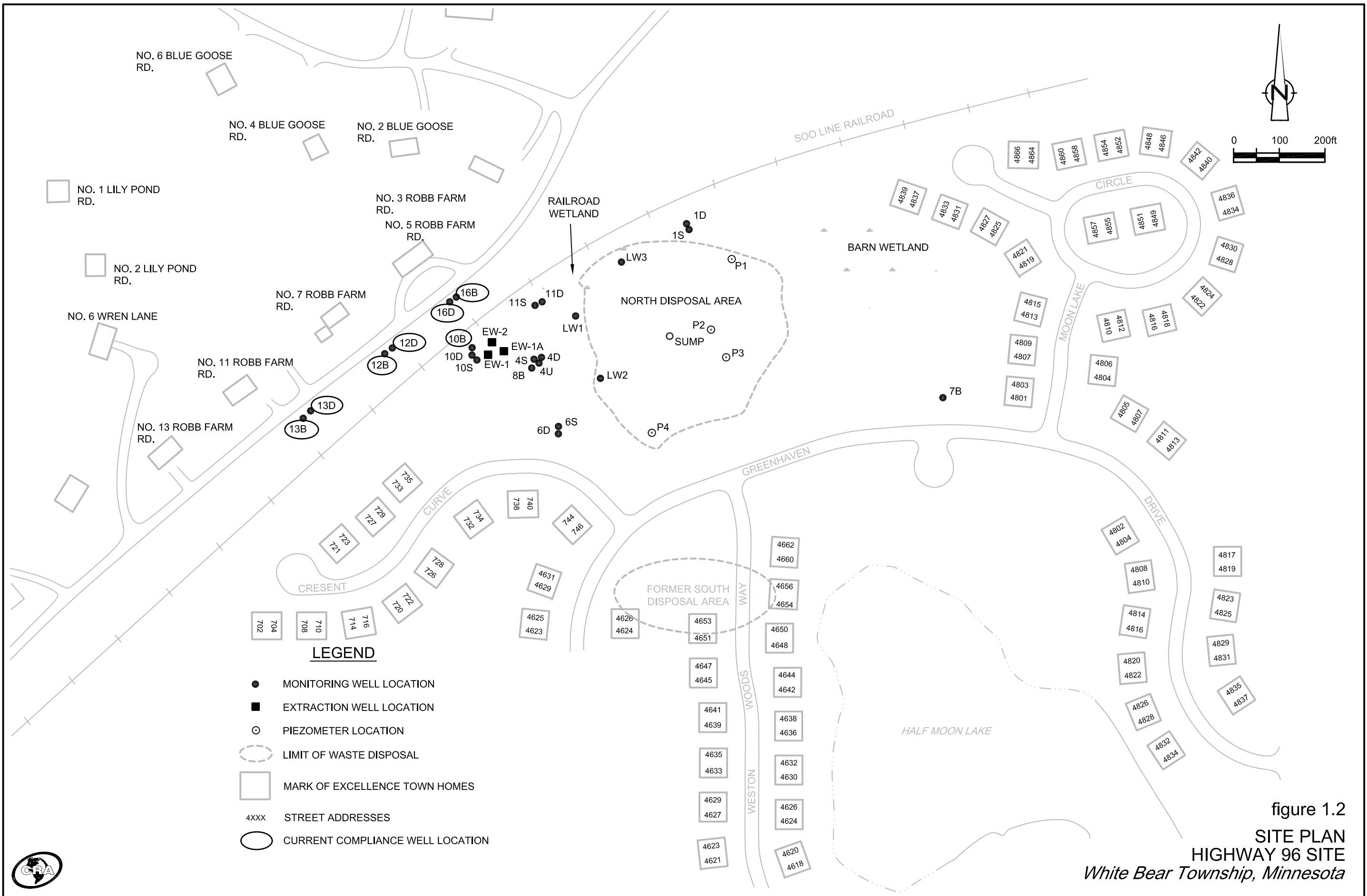
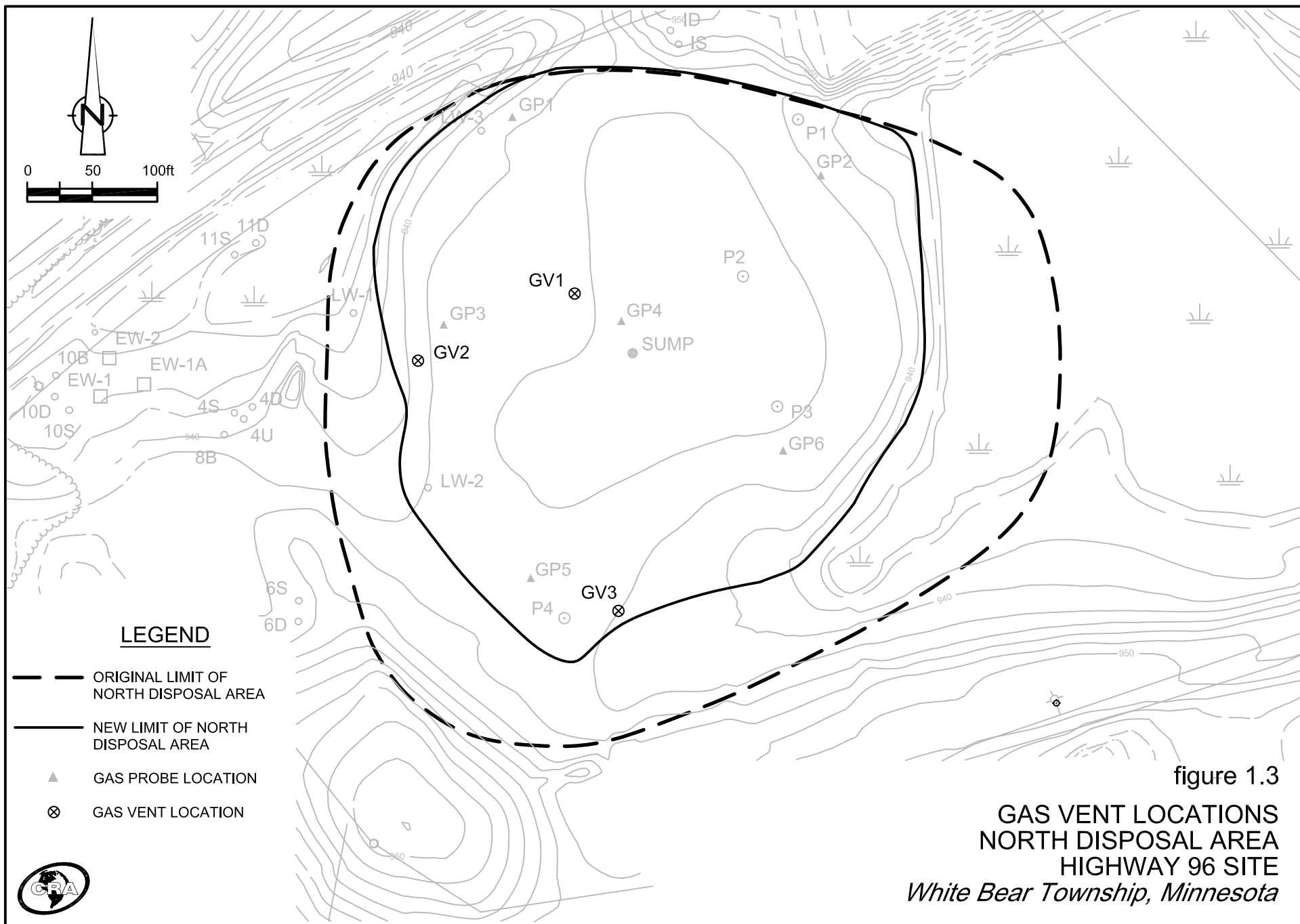


figure 1.1

SITE LOCATION
HIGHWAY 96 SITE
White Bear Township, Minnesota







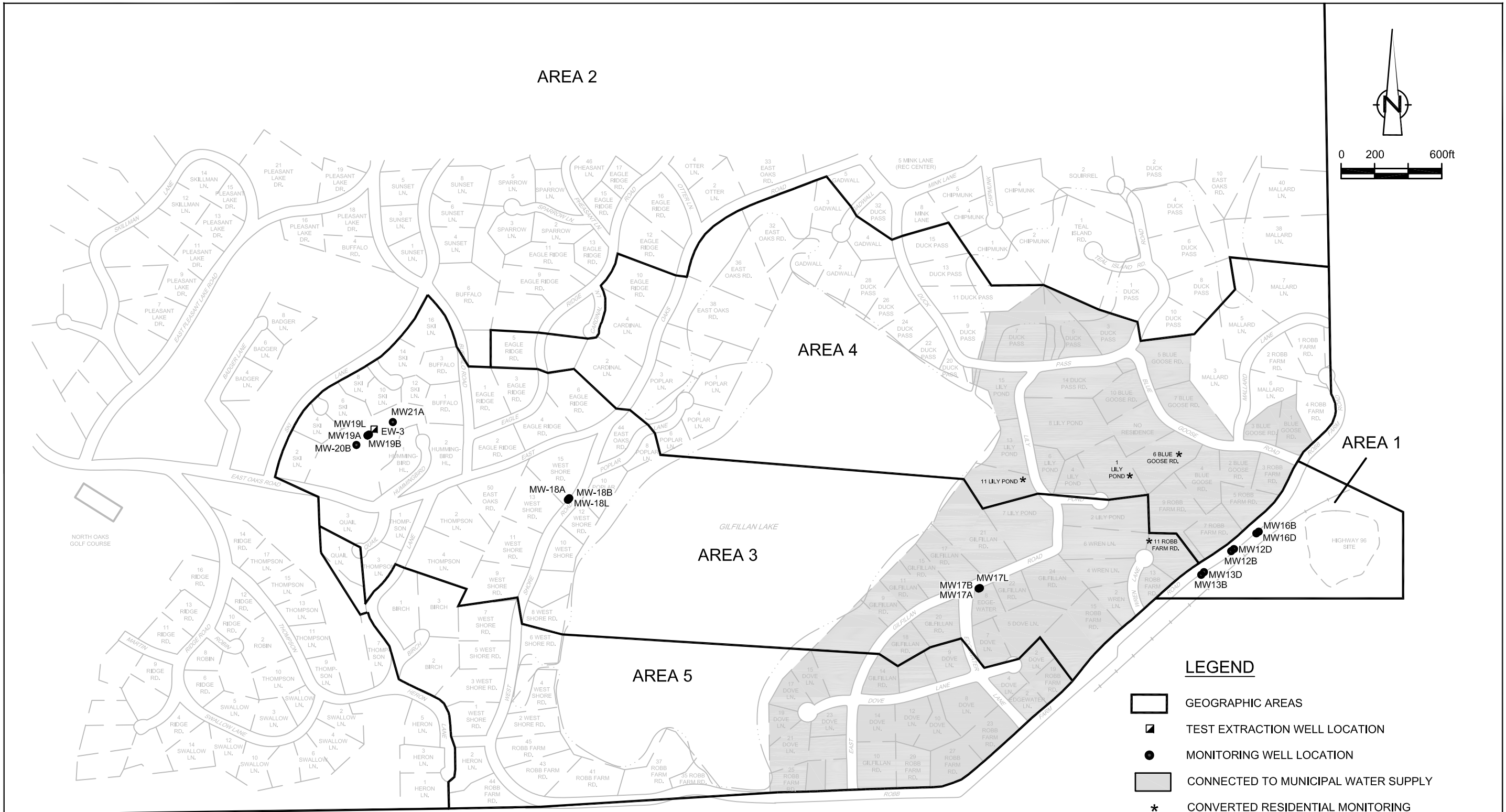


figure 1.4
 OFF-SITE GROUNDWATER MONITORING NETWORK
 HIGHWAY 96 SITE
White Bear Township, Minnesota





NOTE: FIGURE TAKEN FROM "REMEDIAL ACTION FINAL REPORT" CRA (1996)

figure 1.5
MUNICIPAL WATER SYSTEM
HIGHWAY 96 SITE
White Bear Township, Minnesota



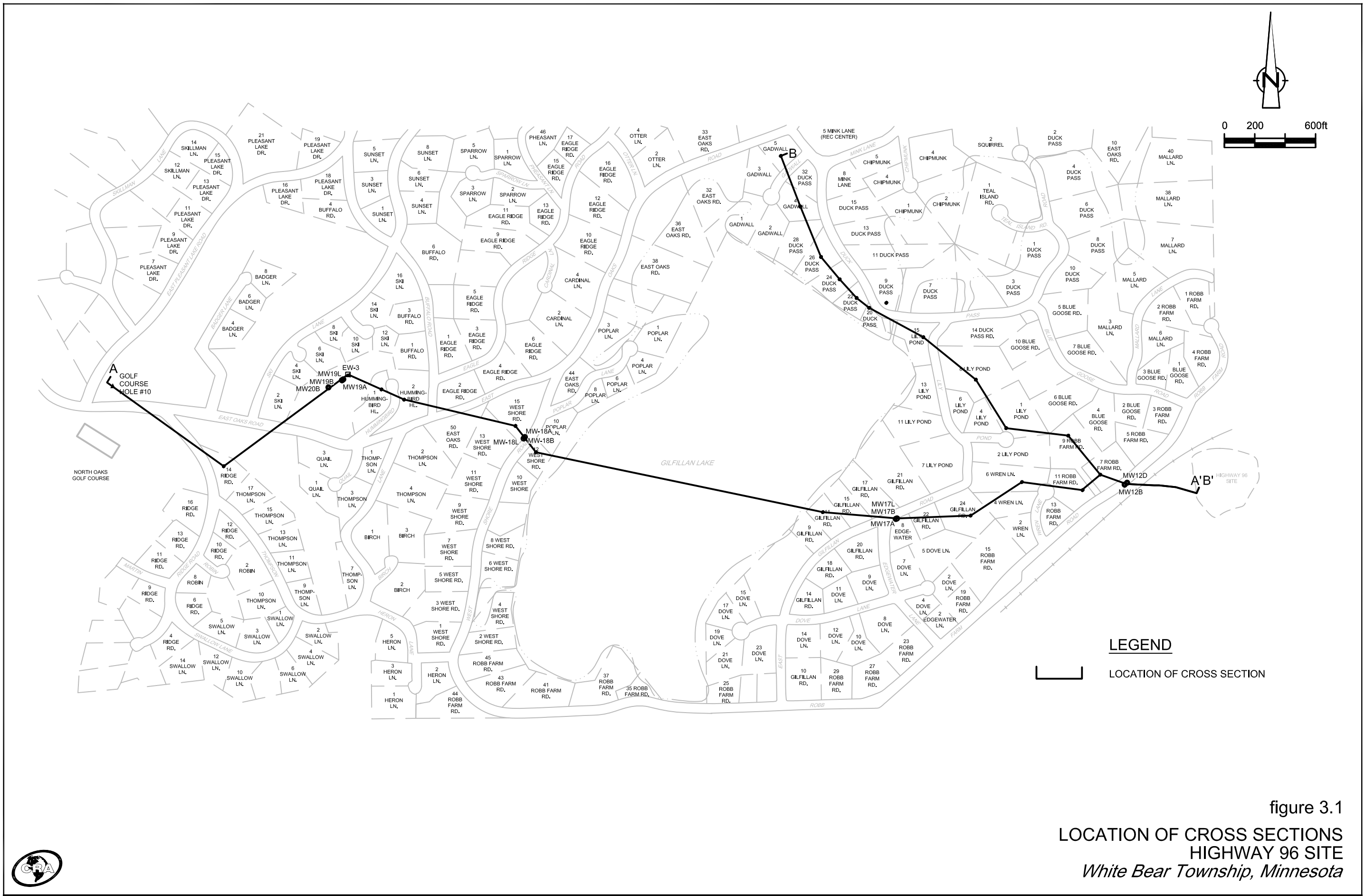
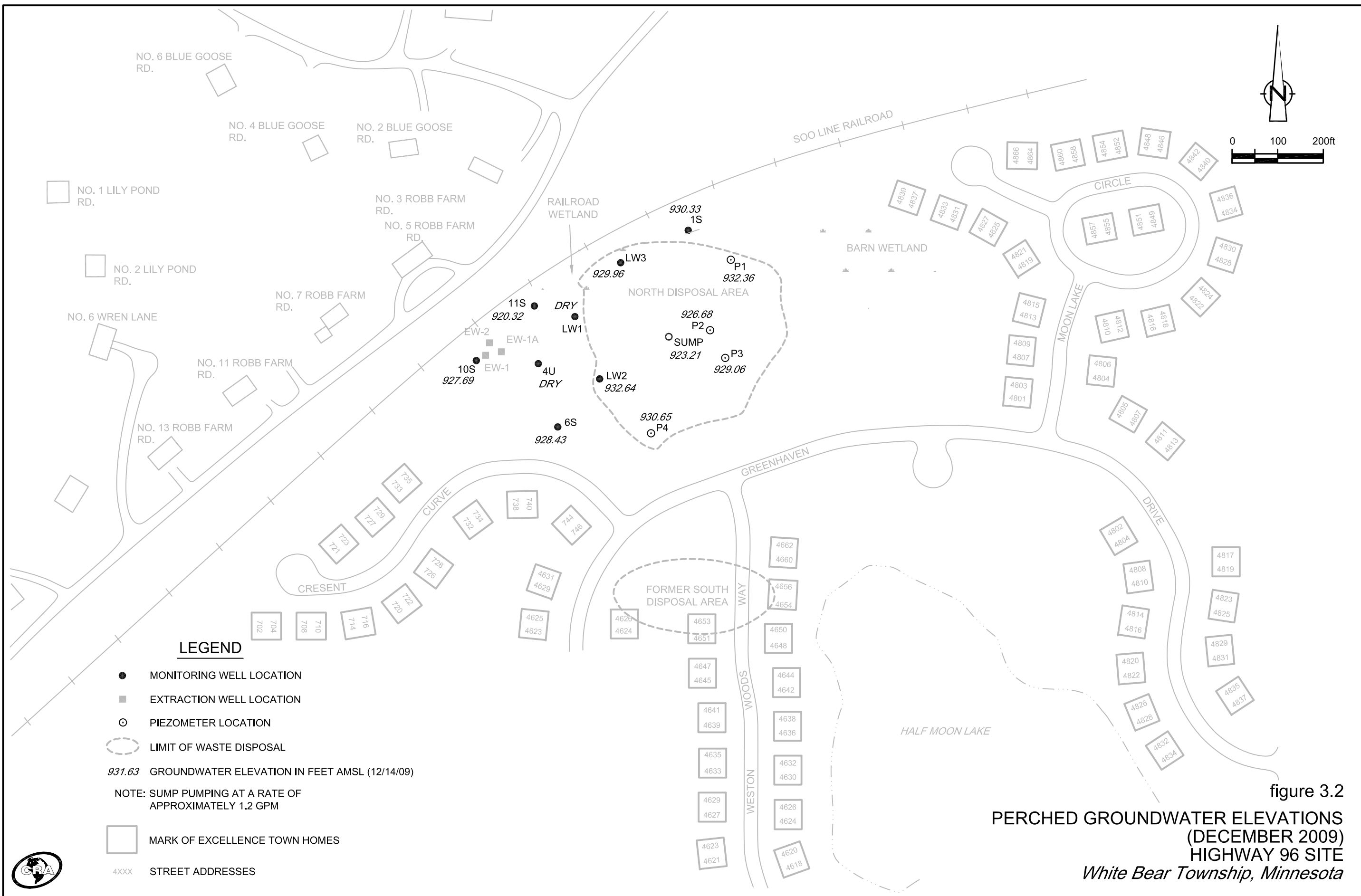


figure 3.1
 LOCATION OF CROSS SECTIONS
 HIGHWAY 96 SITE
 White Bear Township, Minnesota





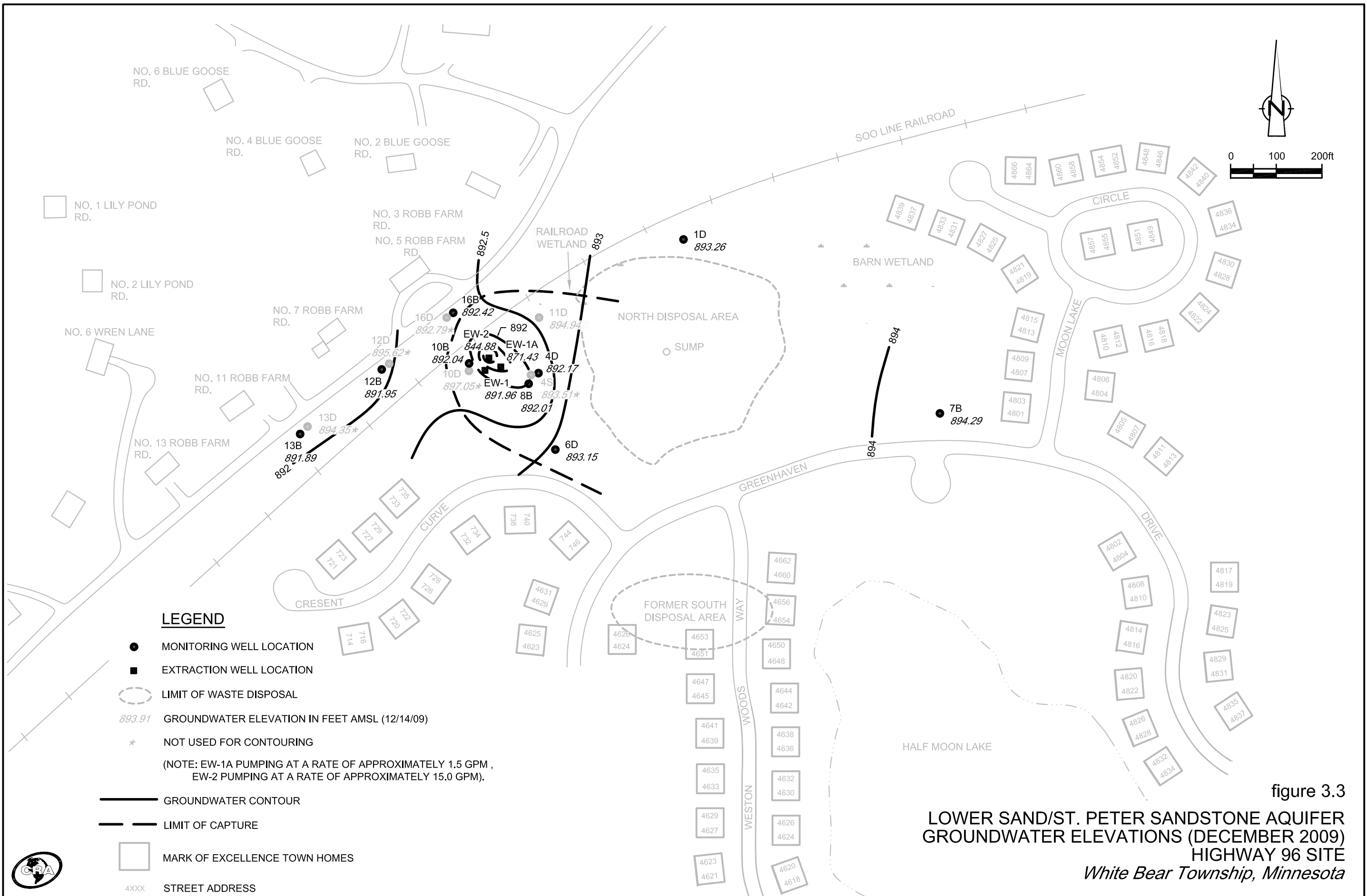
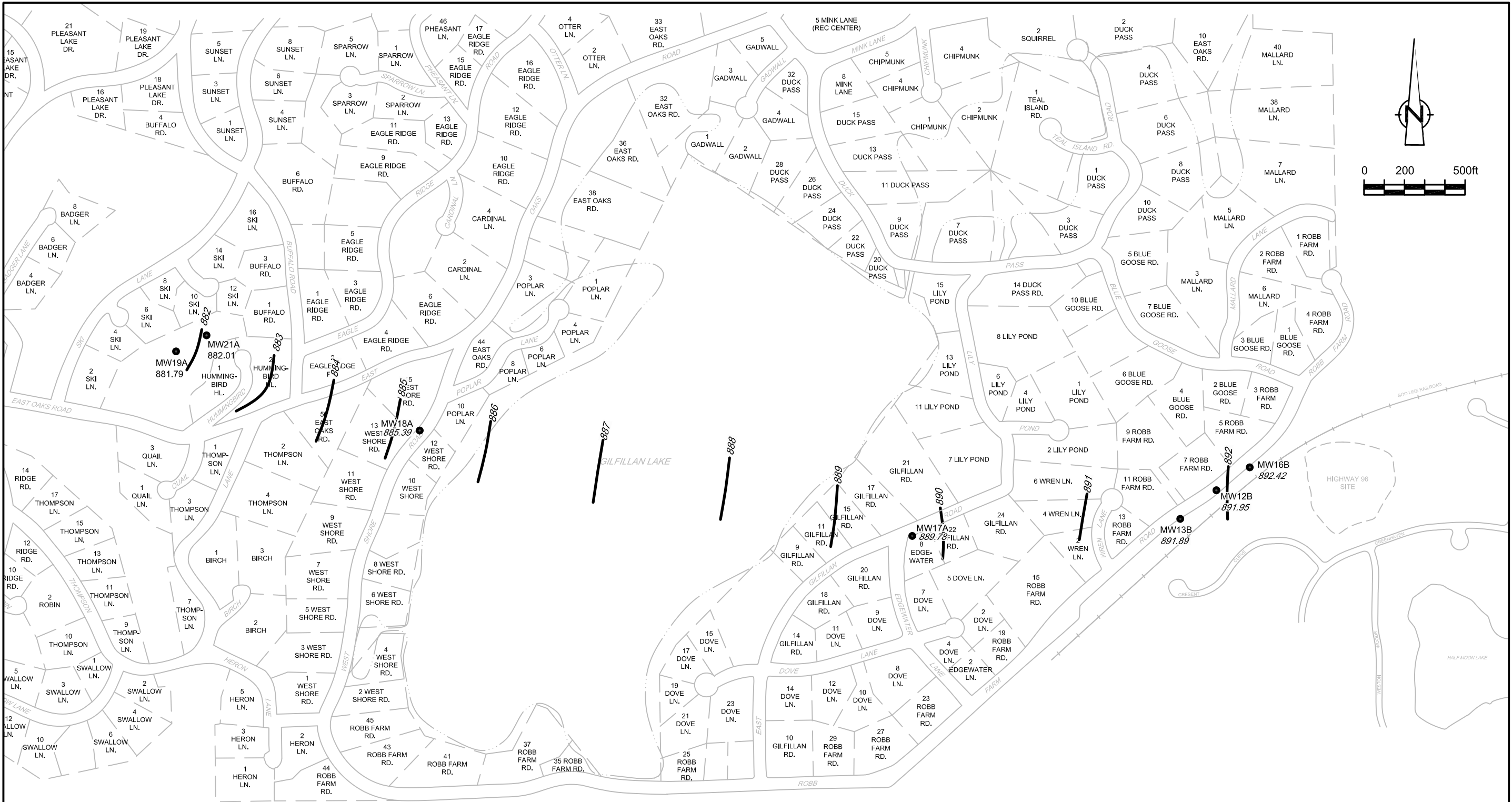


figure 3.3
 LOWER SAND/ST. PETER SANDSTONE AQUIFER
 GROUNDWATER ELEVATIONS (DECEMBER 2009)
 HIGHWAY 96 SITE
 White Bear Township, Minnesota



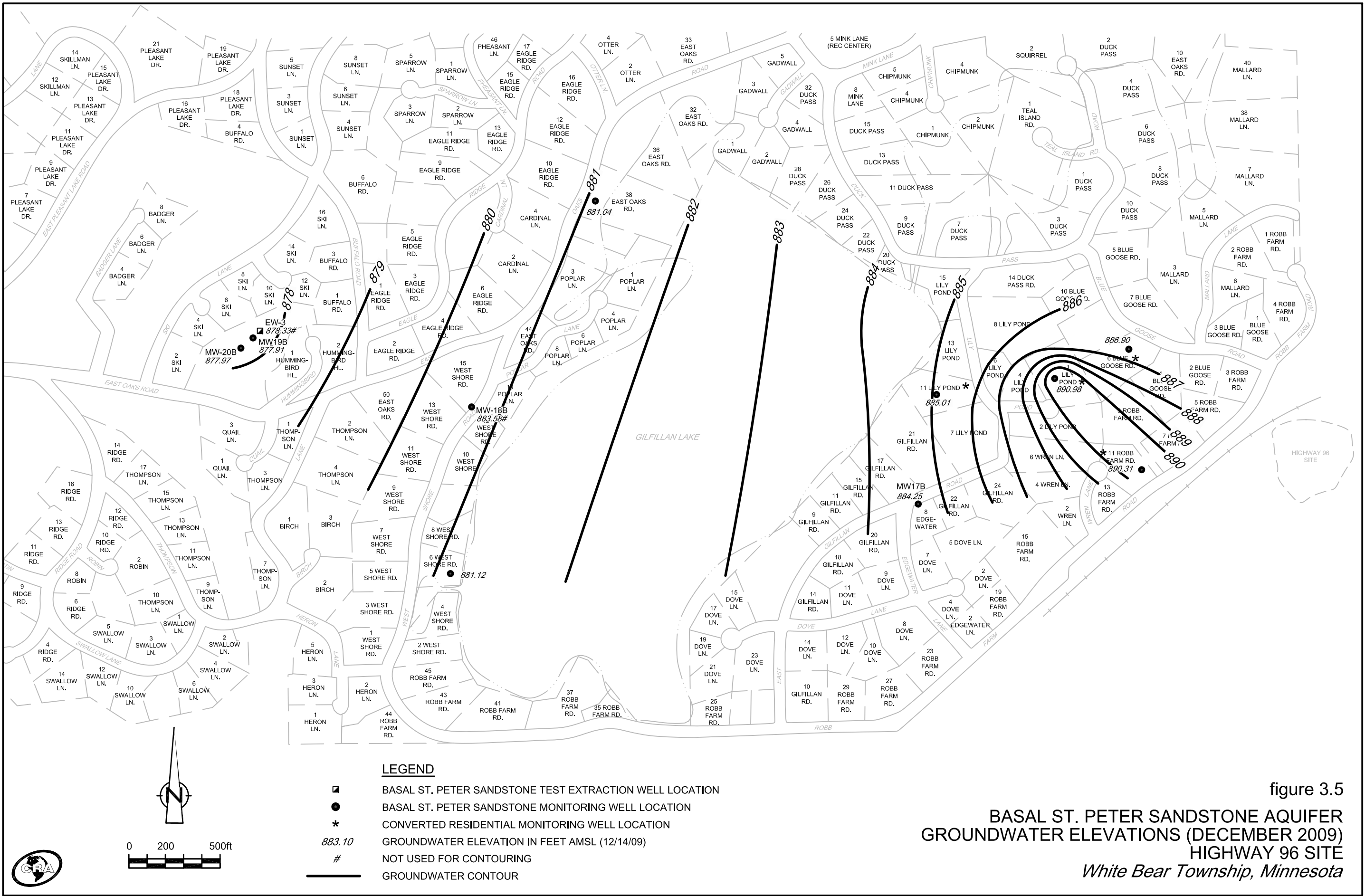


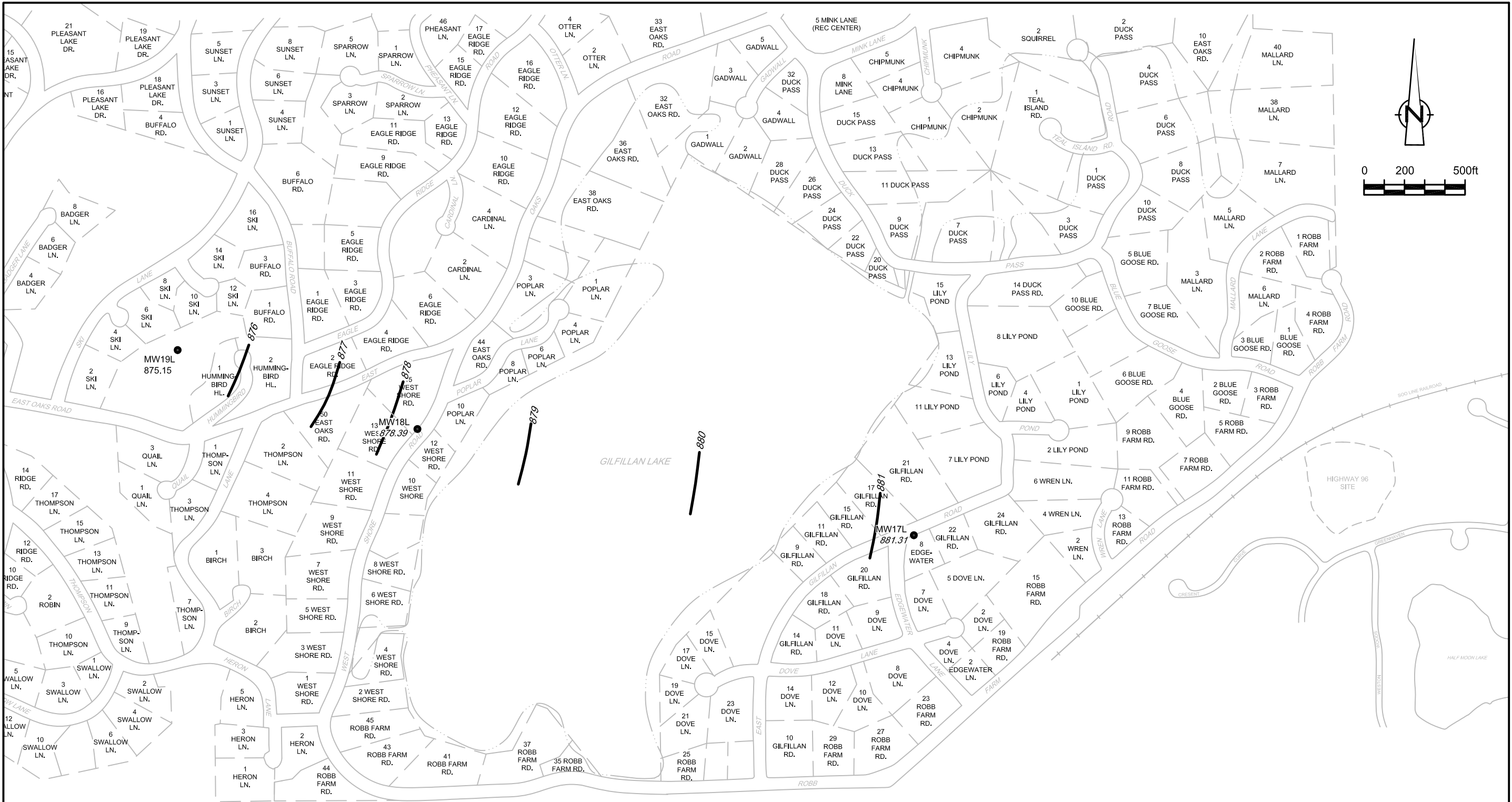
LEGEND

- UPPER ST. PETER SANDSTONE MONITORING WELL LOCATION
- 885.88 GROUNDWATER ELEVATION IN FEET AMSL (12/14/09)
- GROUNDWATER CONTOUR

figure 3.4
 UPPER ST. PETER SANDSTONE AQUIFER
 GROUNDWATER ELEVATIONS (DECEMBER 2009)
 HIGHWAY 96 SITE
White Bear Township, Minnesota







LEGEND

- PRAIRIE DU CHIEN MONITORING WELL LOCATION
- 885.88 GROUNDWATER ELEVATION IN FEET AMSL (12/14/09)
- GROUNDWATER CONTOUR

figure 3.6
PRAIRIE DU CHIEN AQUIFER
GROUNDWATER ELEVATIONS (DECEMBER 2009)
HIGHWAY 96 SITE
White Bear Township, Minnesota



FIGURE 3.7

POUNDS OF TOTAL VOCs (TVOCs) REMOVED
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

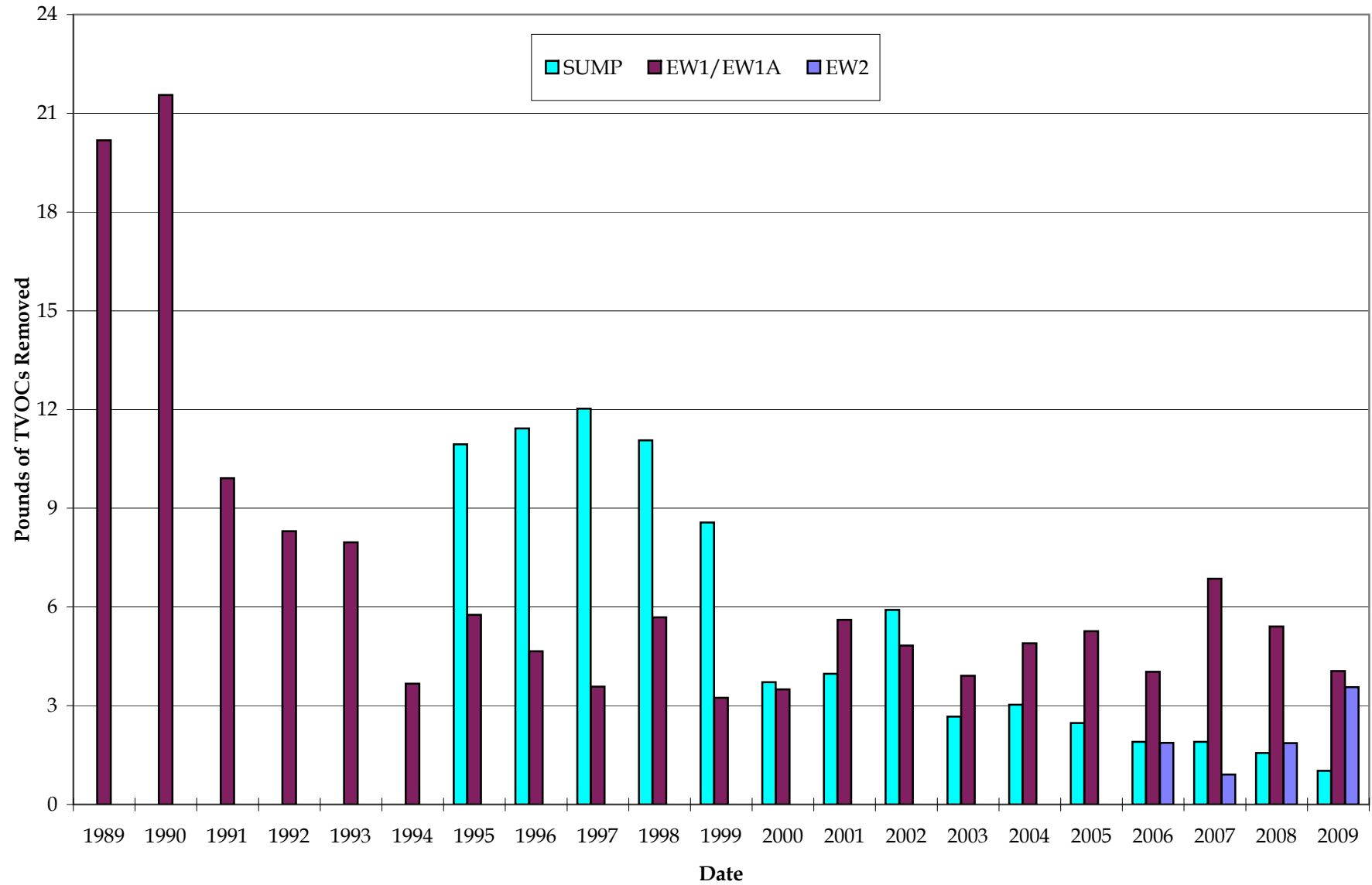


FIGURE 3.8

VOC REMOVAL EFFICIENCY
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

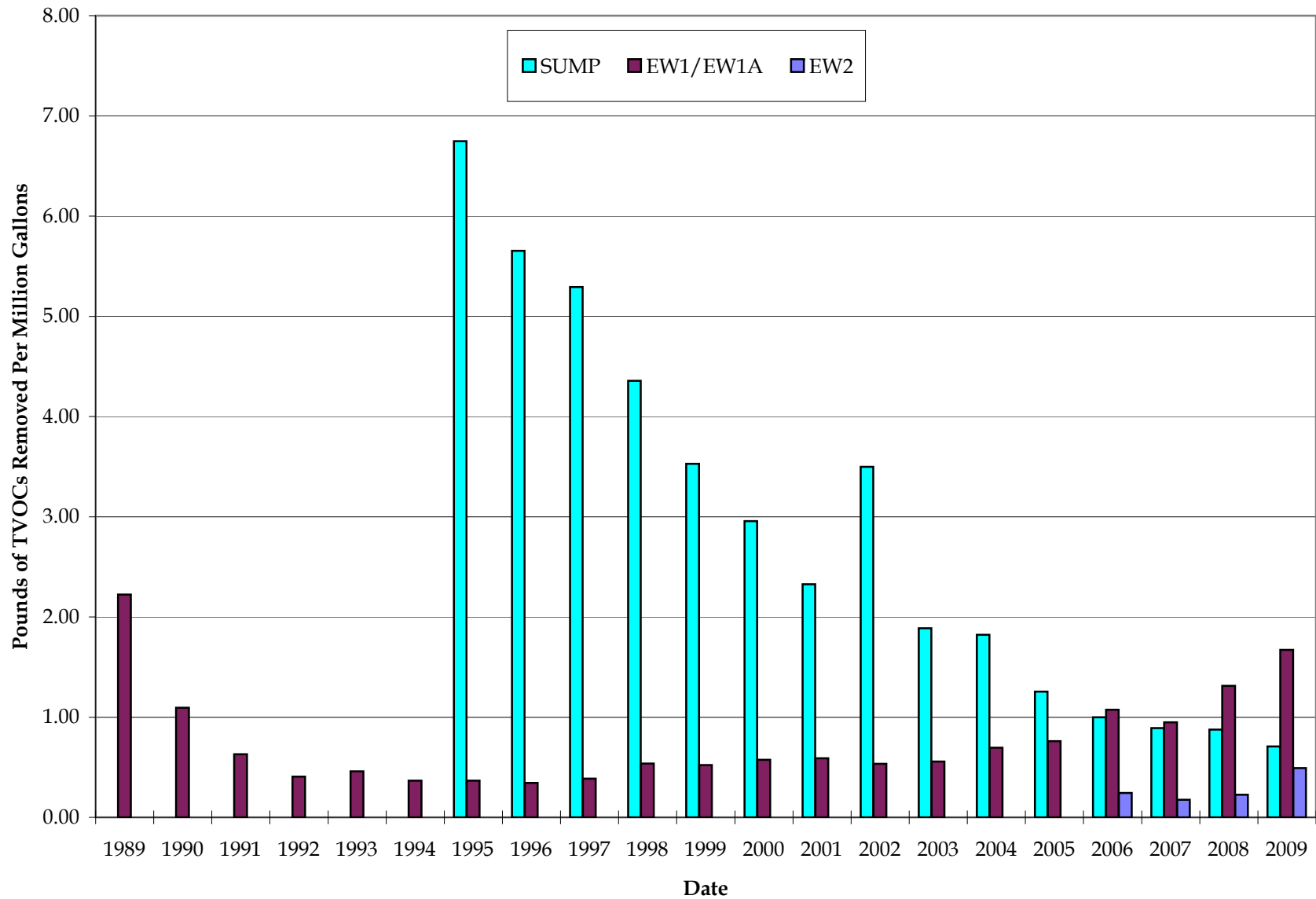
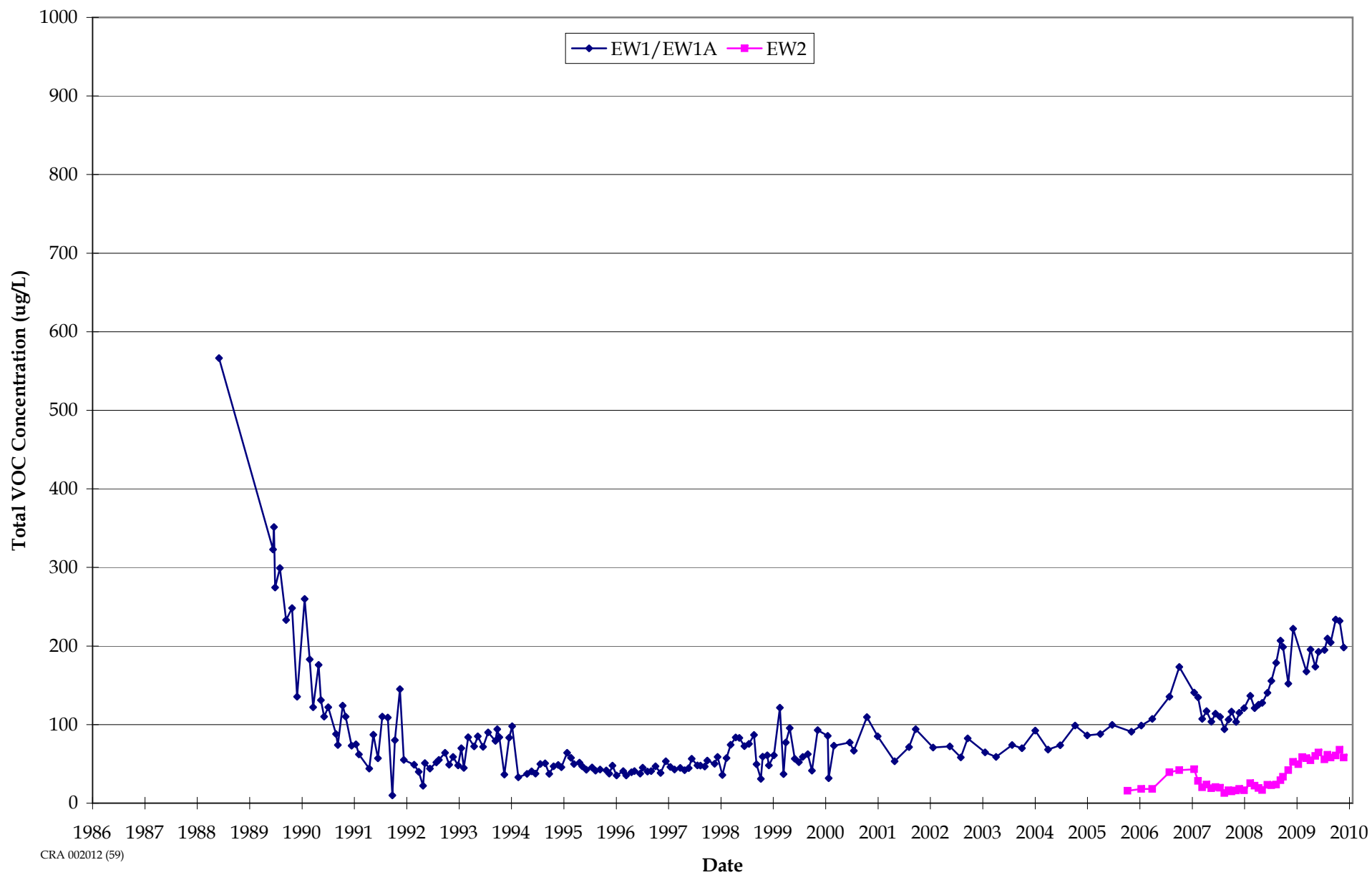


FIGURE 3.9

TOTAL VOC CONCENTRATIONS
EW1/EW1A/EW2
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA



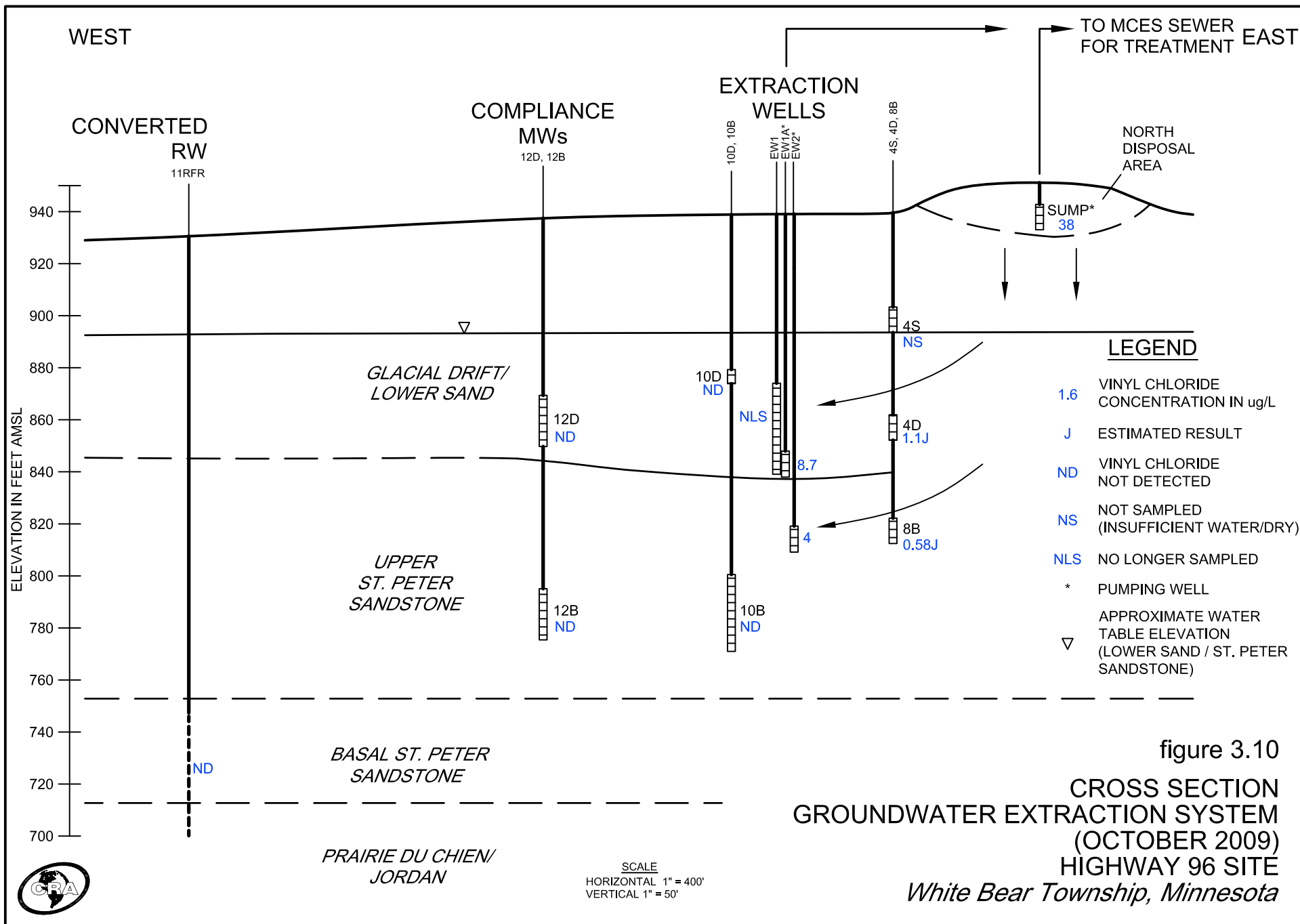


FIGURE 4.1
TOTAL VOC CONCENTRATIONS
LW3
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

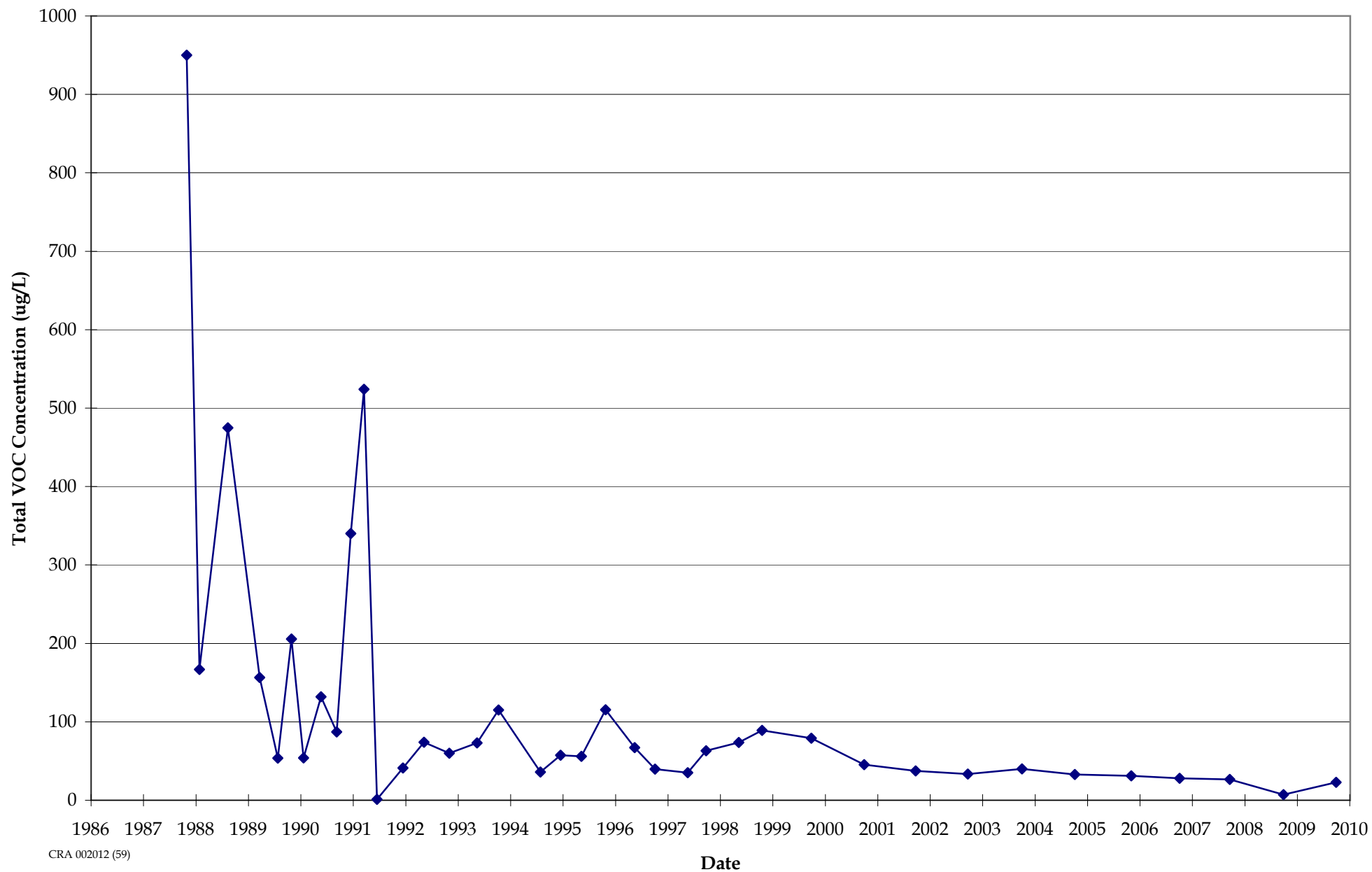


FIGURE 4.2

TOTAL VOC CONCENTRATIONS
MW4D
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

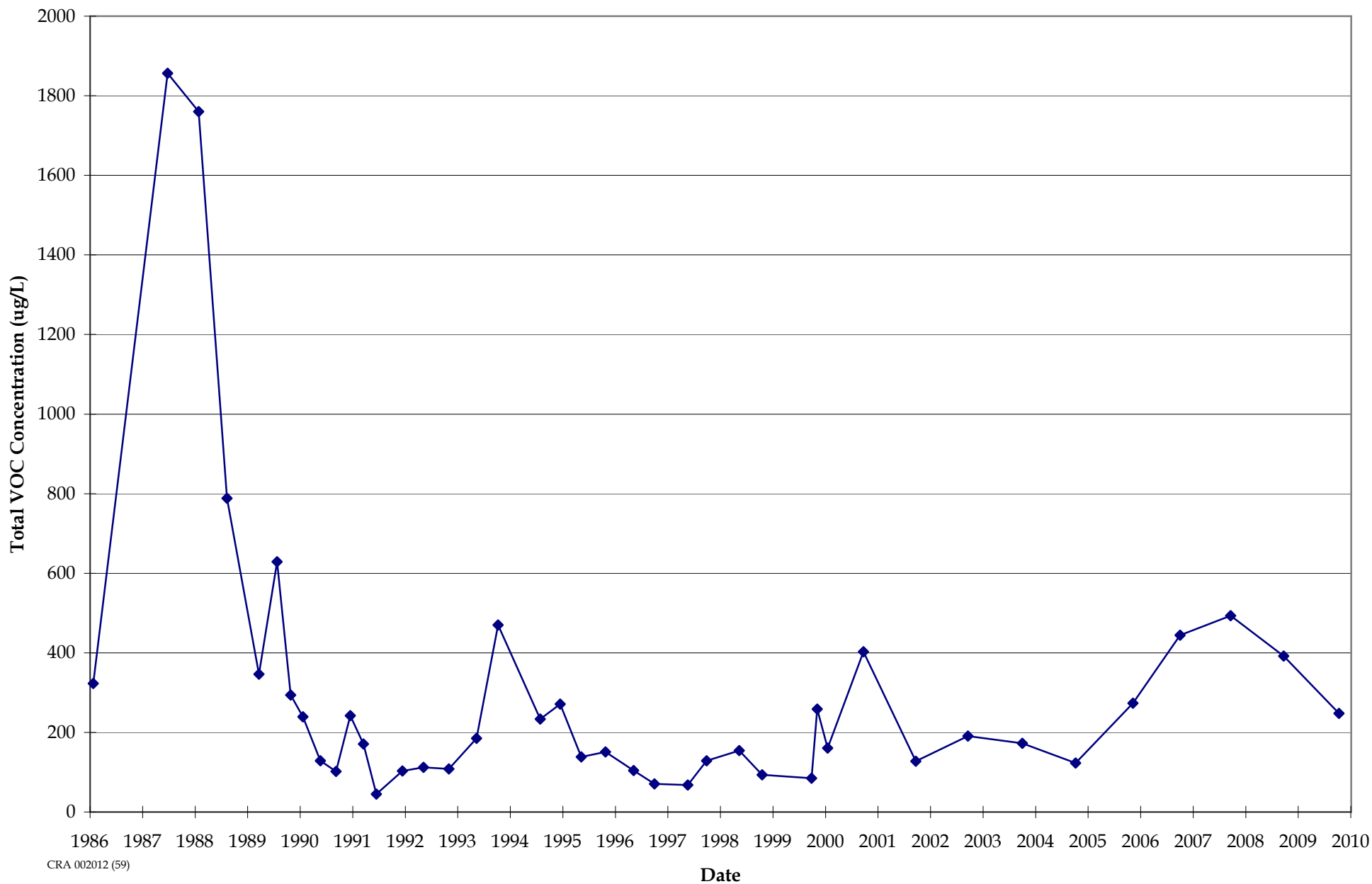


FIGURE 4.3

TOTAL VOC CONCENTRATIONS
MW12D
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

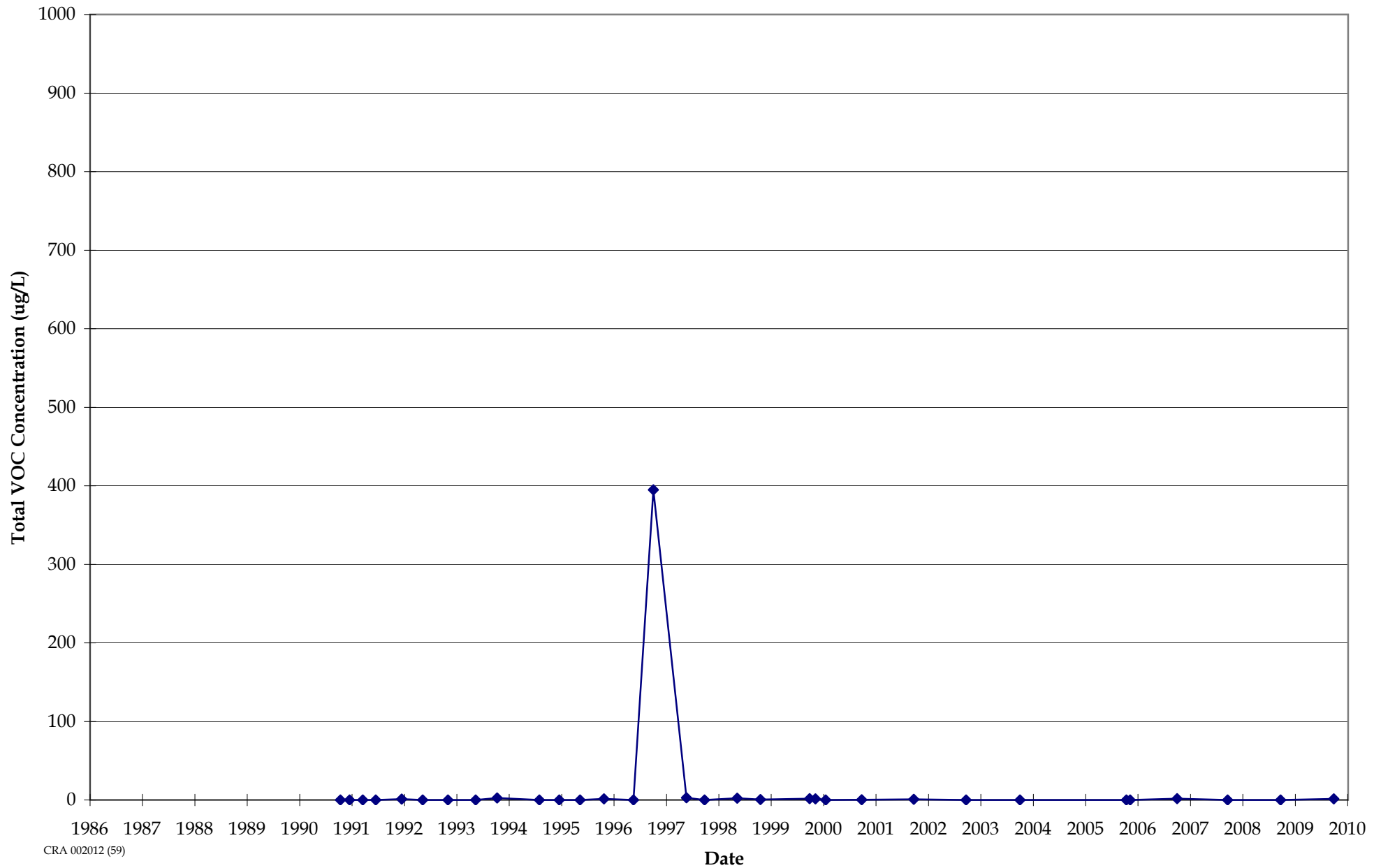


FIGURE 4.4

TOTAL VOC CONCENTRATIONS
MW8B
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

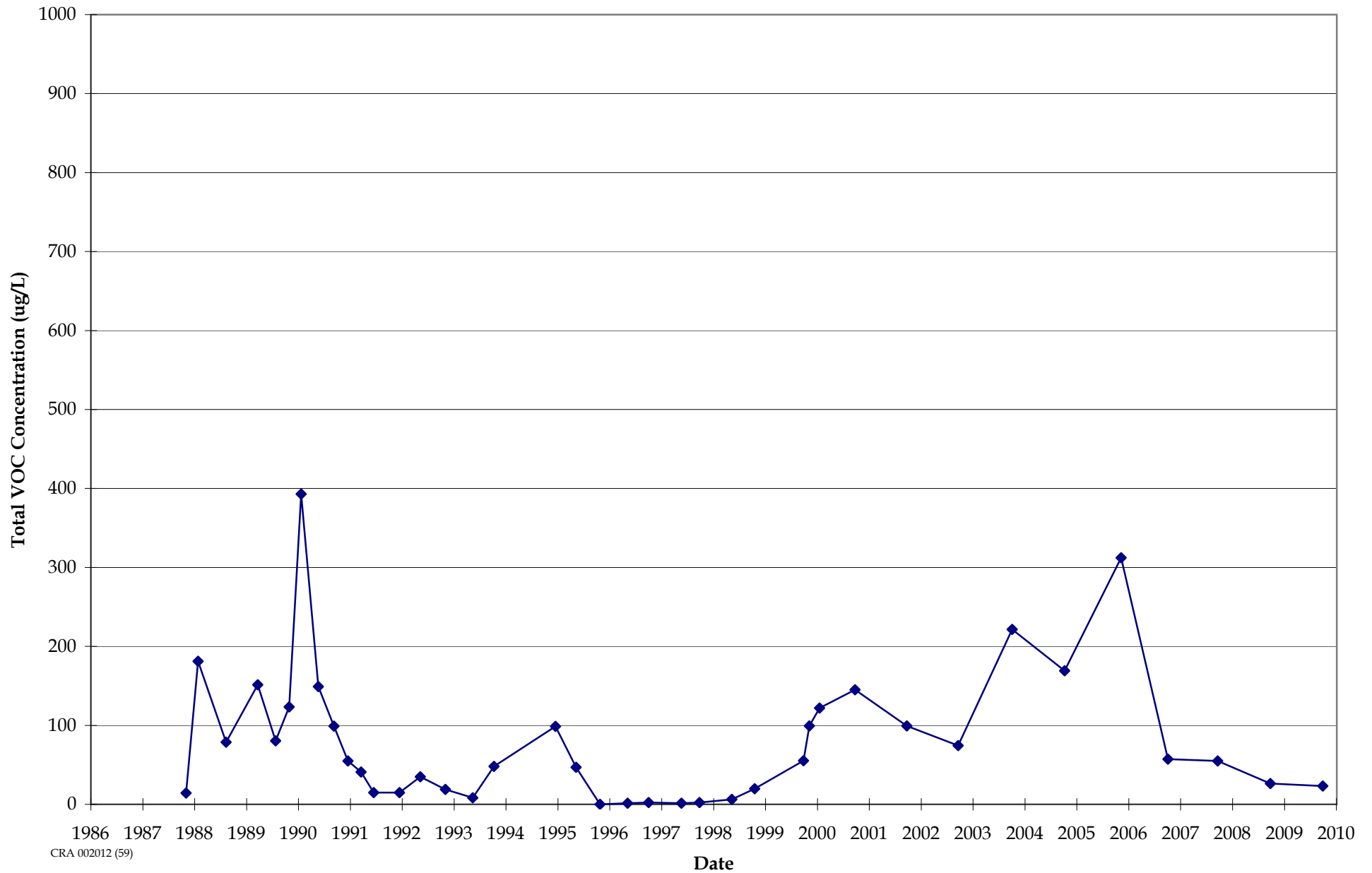


FIGURE 4.5

TOTAL VOC CONCENTRATIONS
MW12B
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

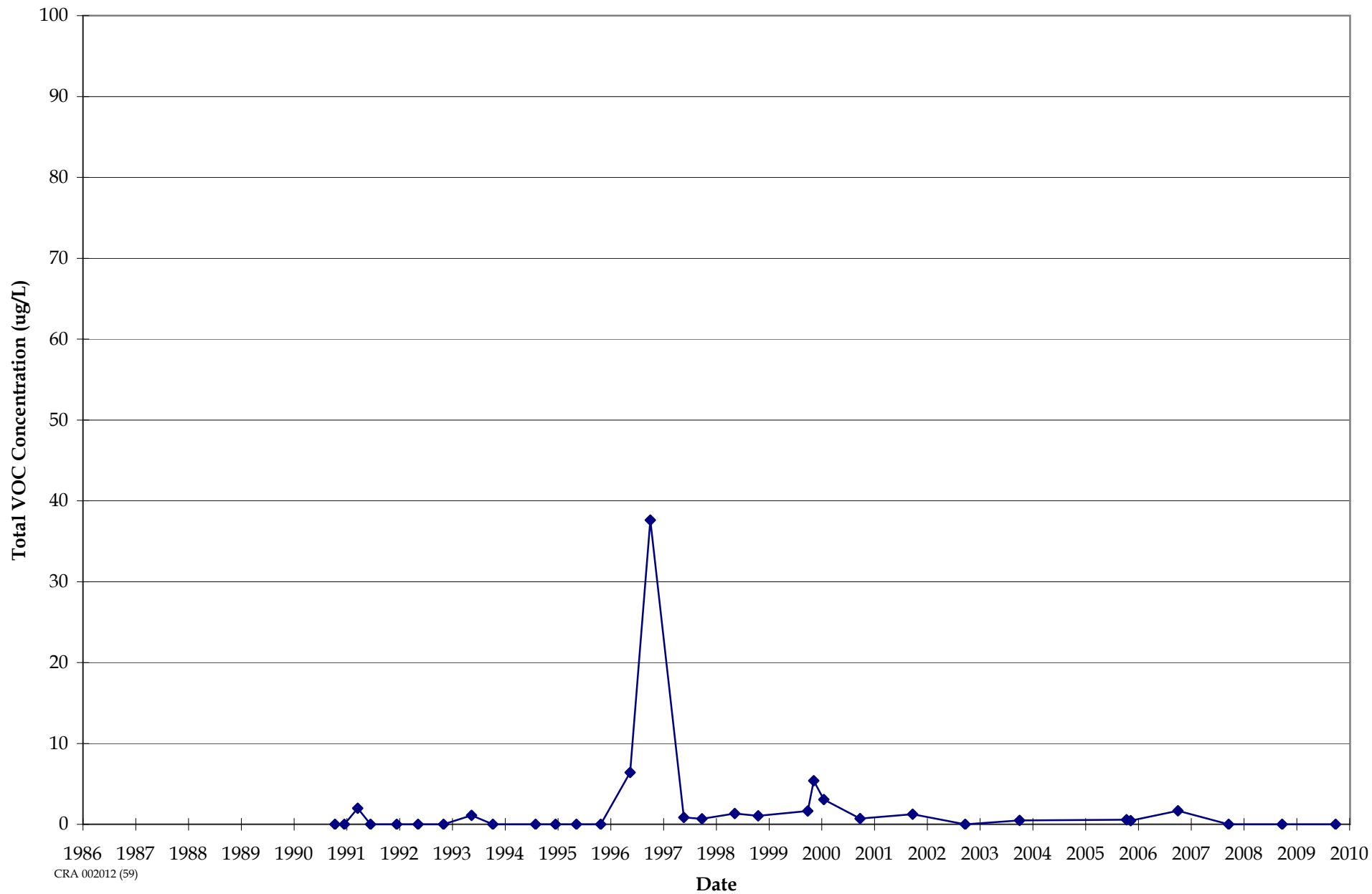


FIGURE 4.6

TOTAL VOC CONCENTRATIONS
11 ROBB FARM ROAD
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

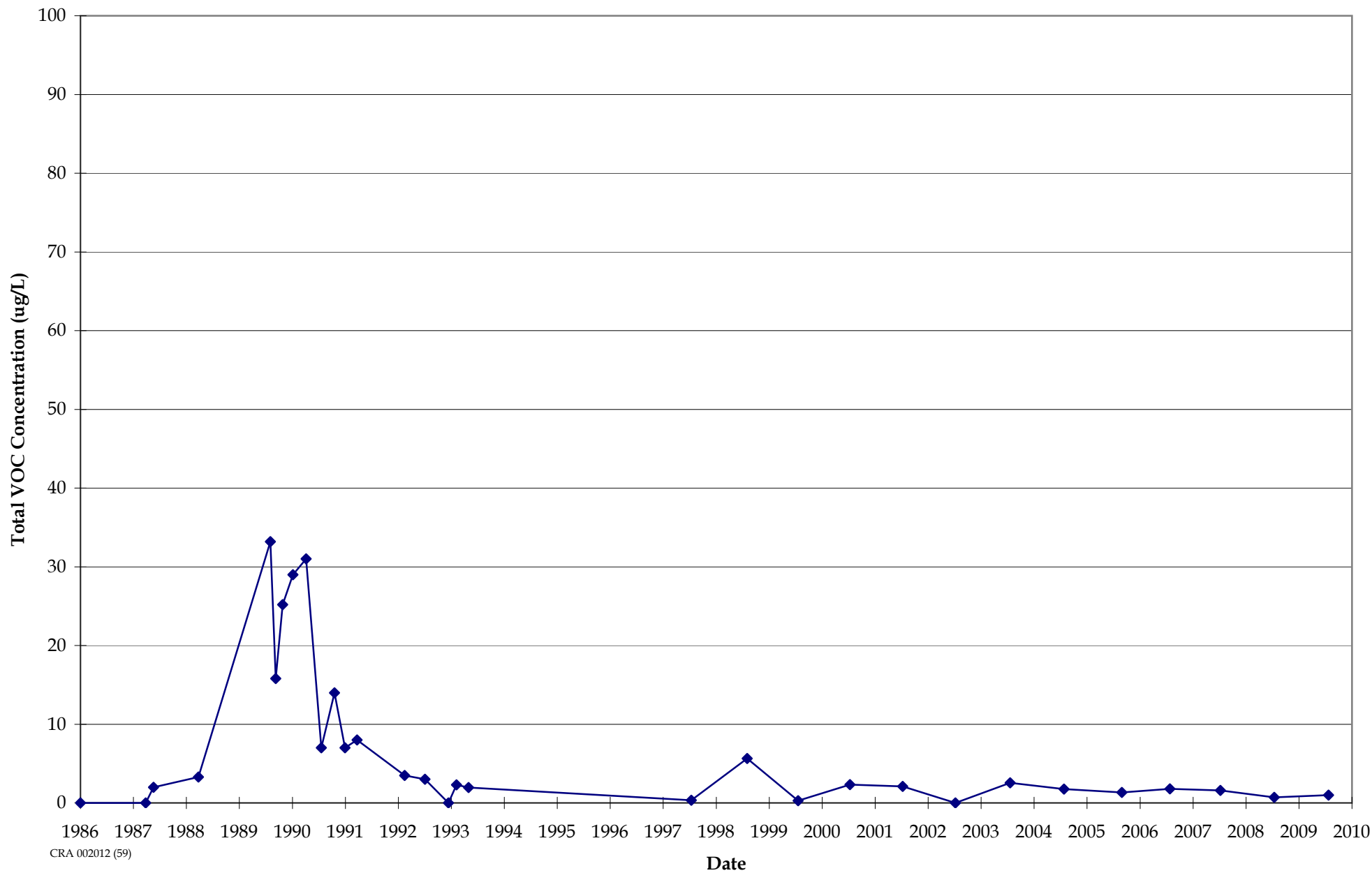


FIGURE 4.7

TOTAL VOC CONCENTRATIONS
1 LILY POND ROAD
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

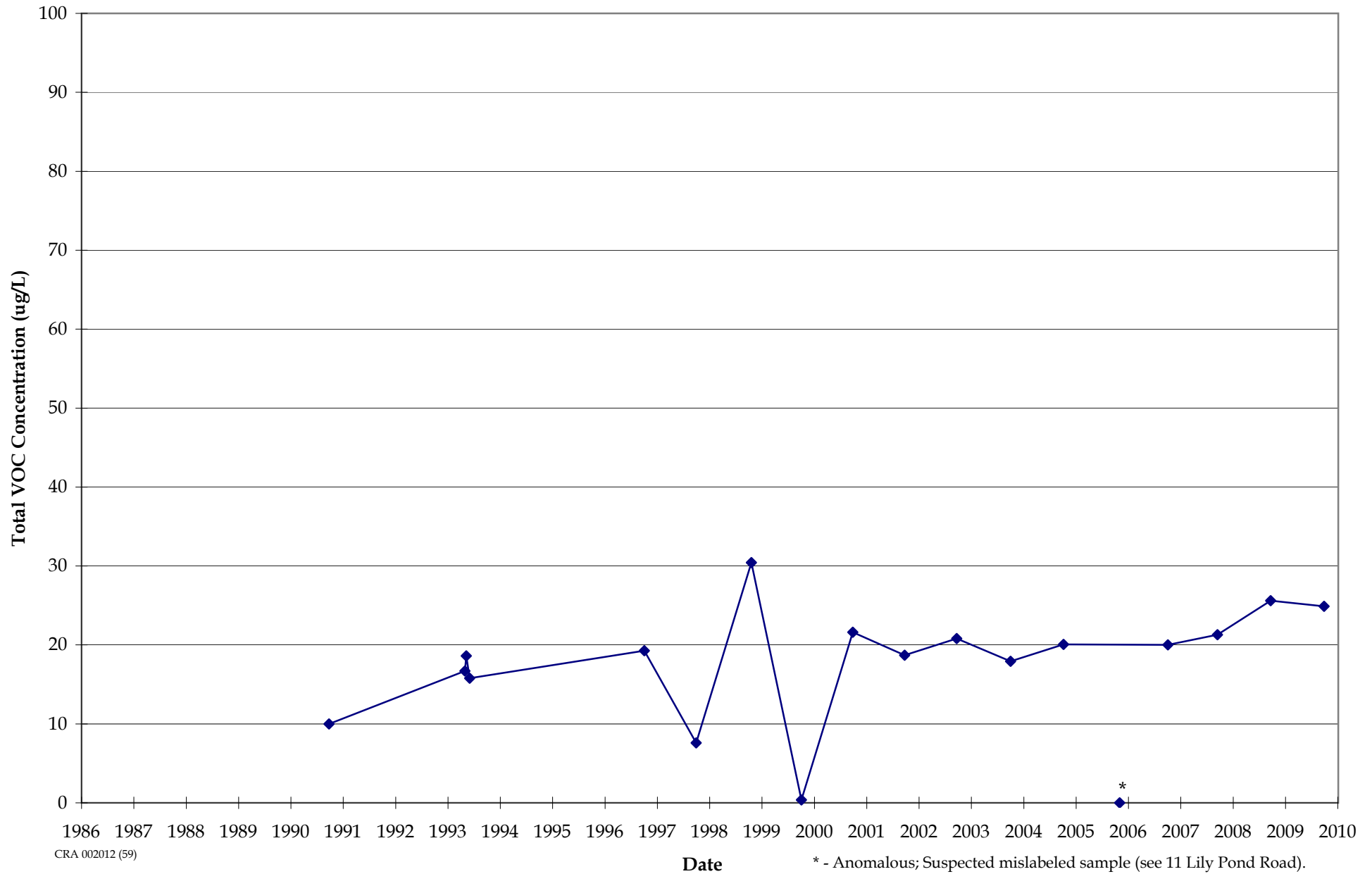


FIGURE 4.8

TOTAL VOC CONCENTRATIONS
11 LILY POND ROAD
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

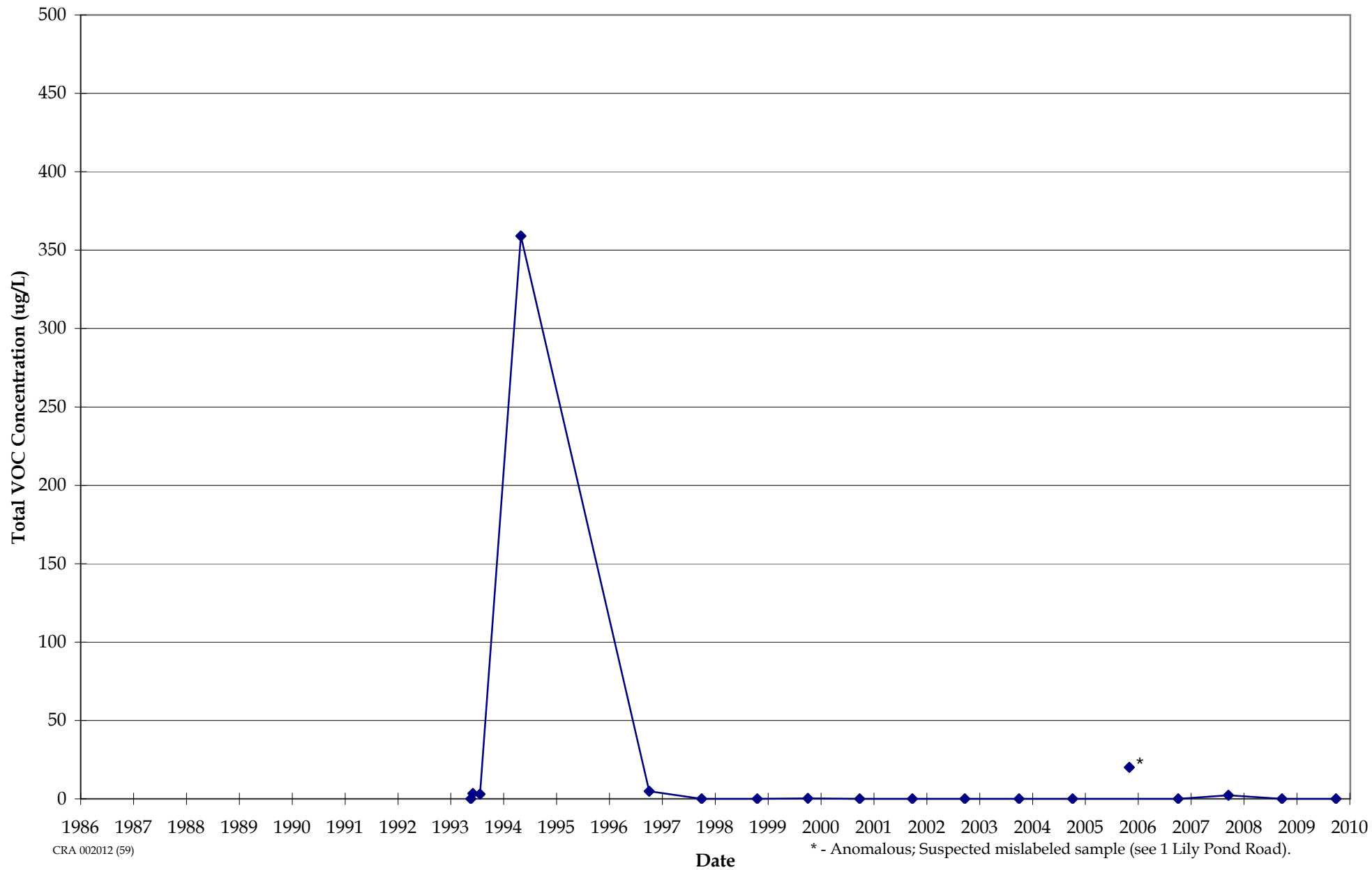


FIGURE 4.9

TOTAL VOC CONCENTRATIONS
6 BLUE GOOSE ROAD
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

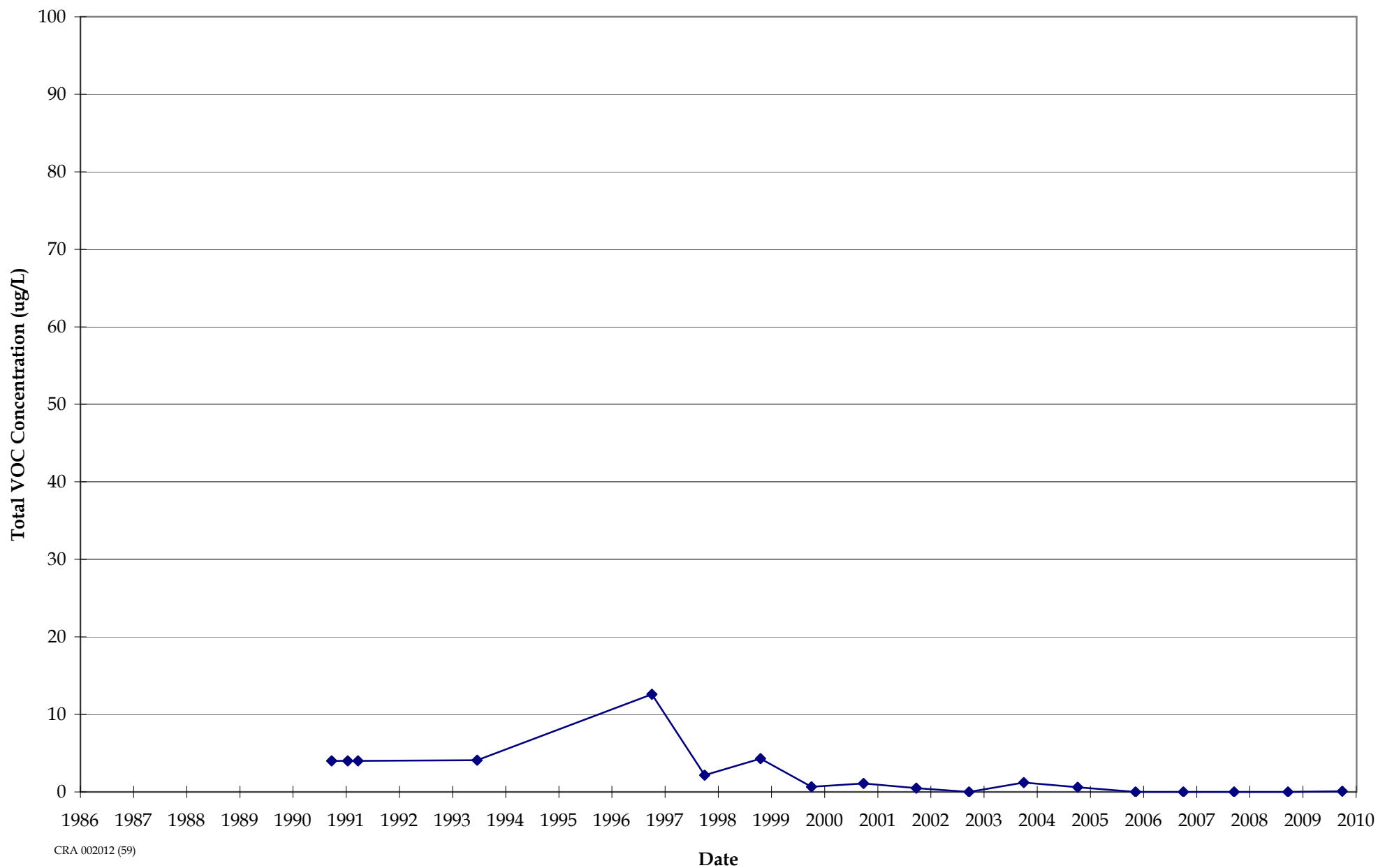
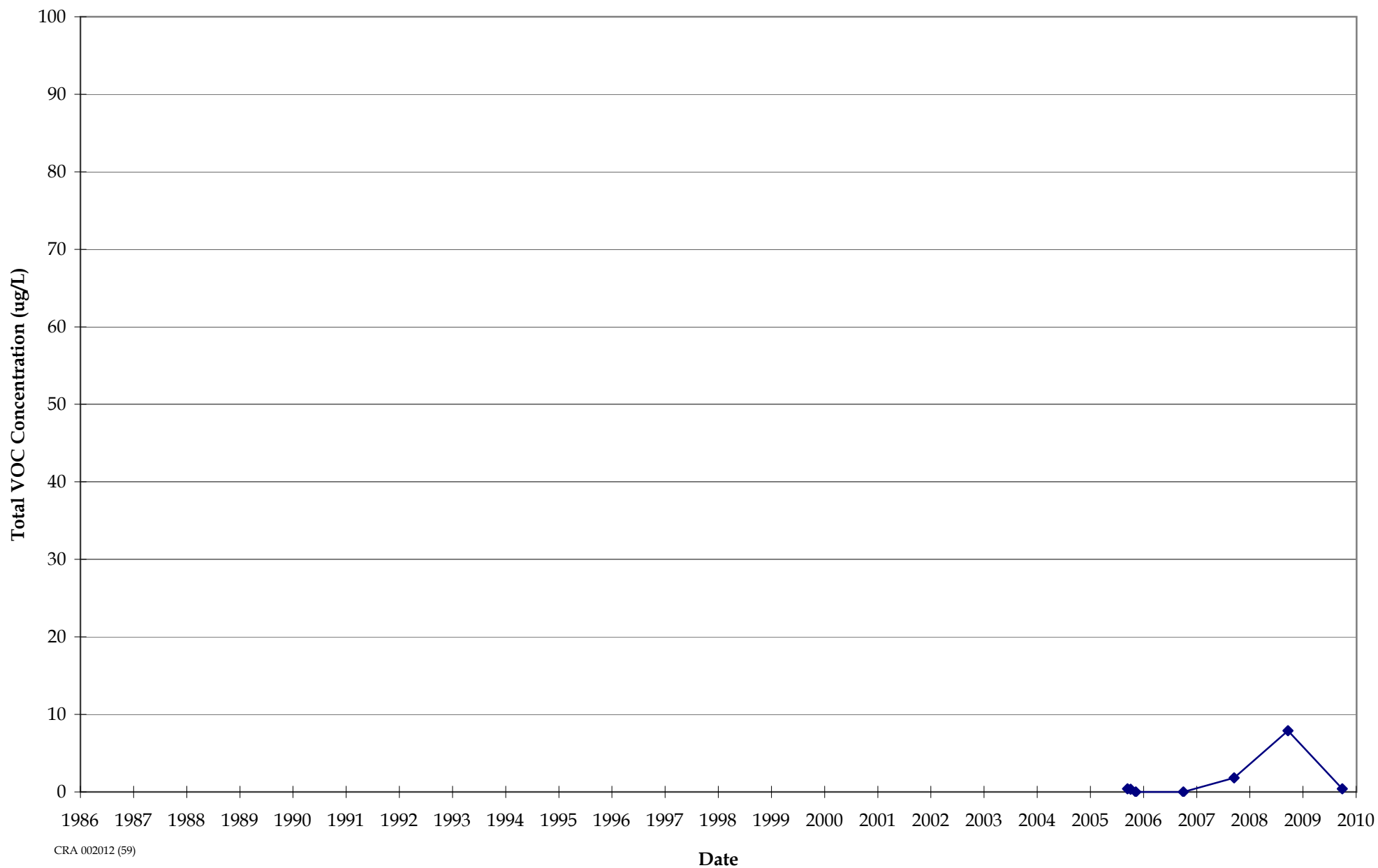
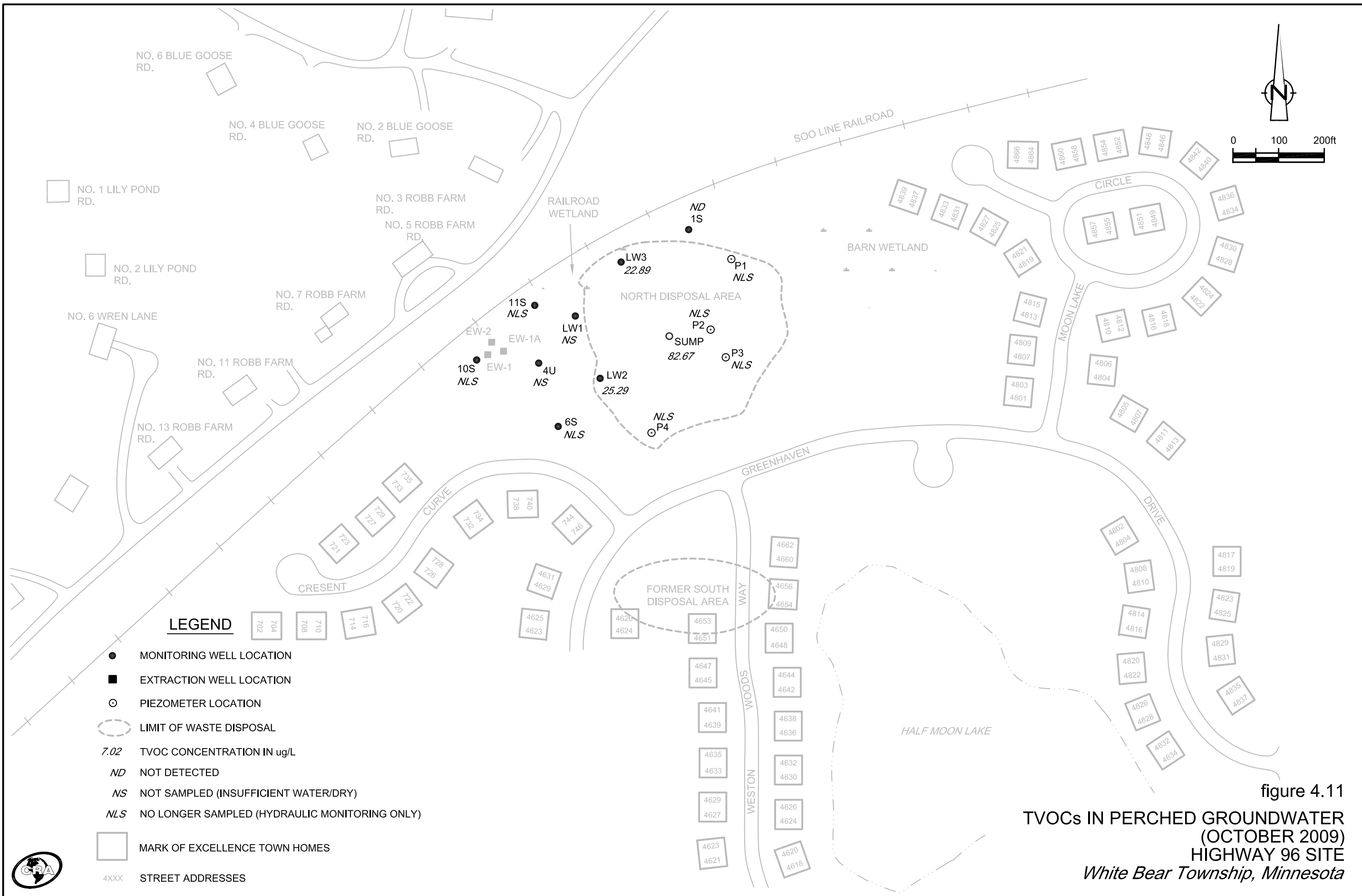


FIGURE 4.10
TOTAL VOC CONCENTRATIONS
MW17L
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA





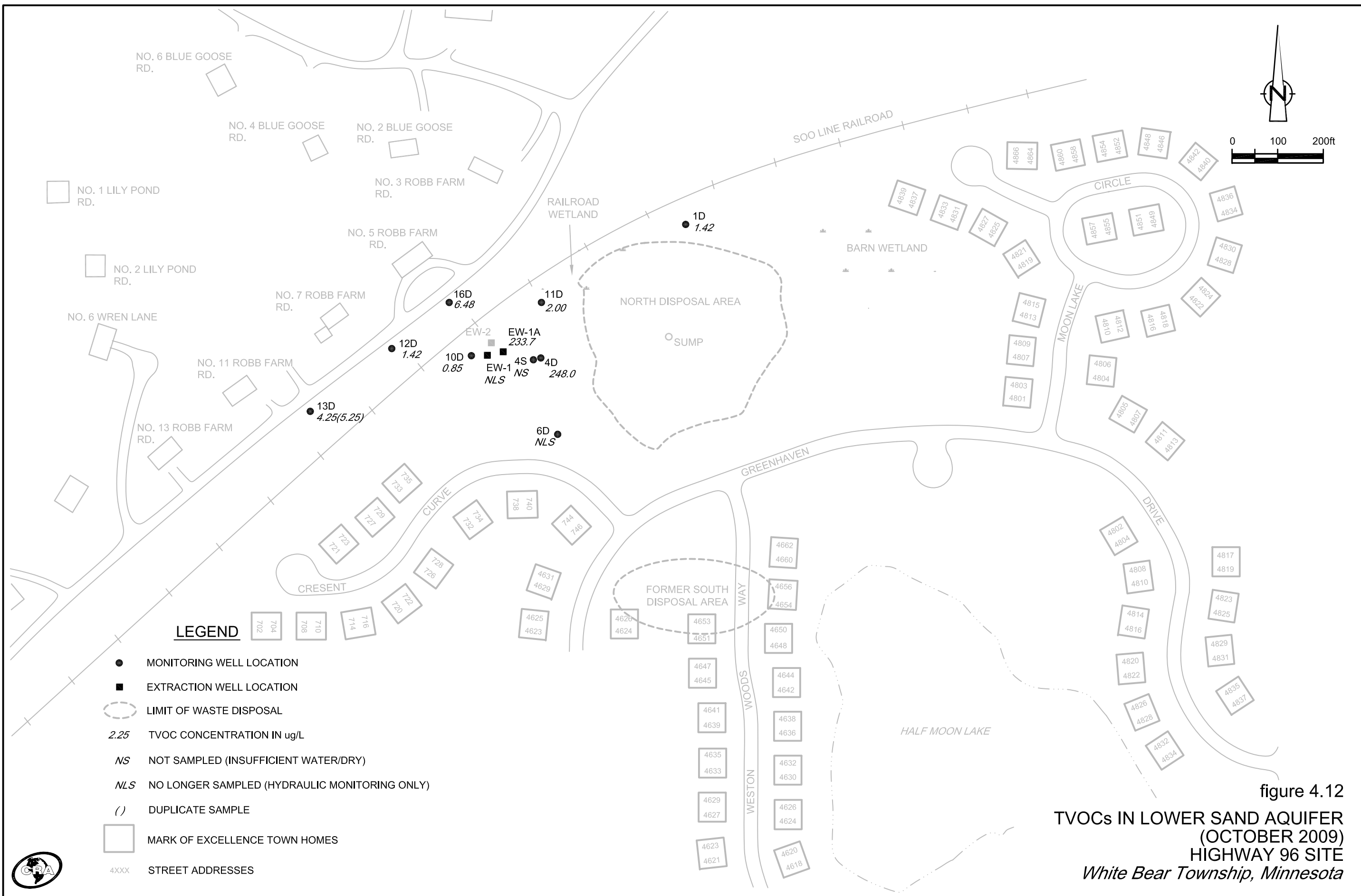
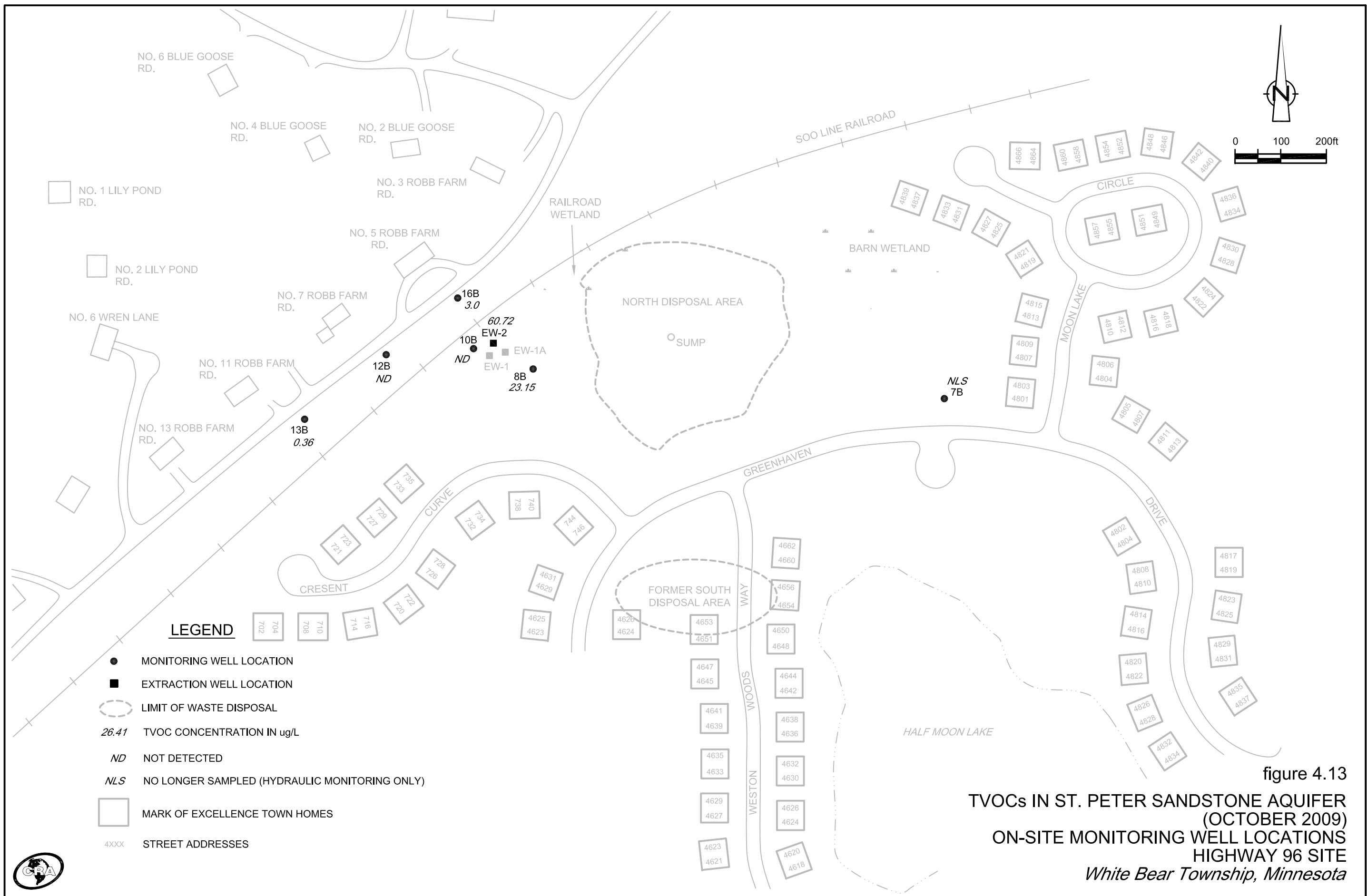
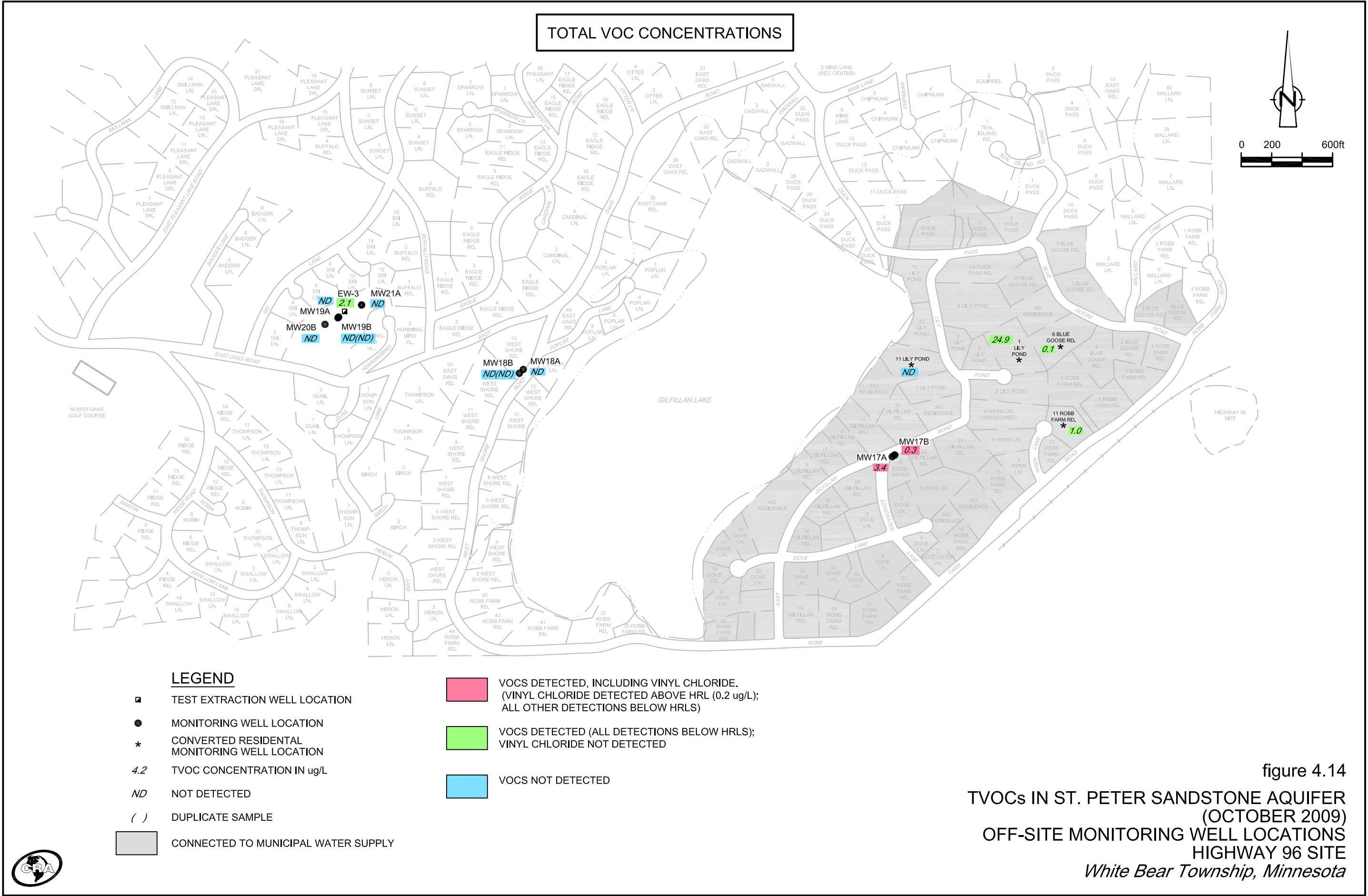
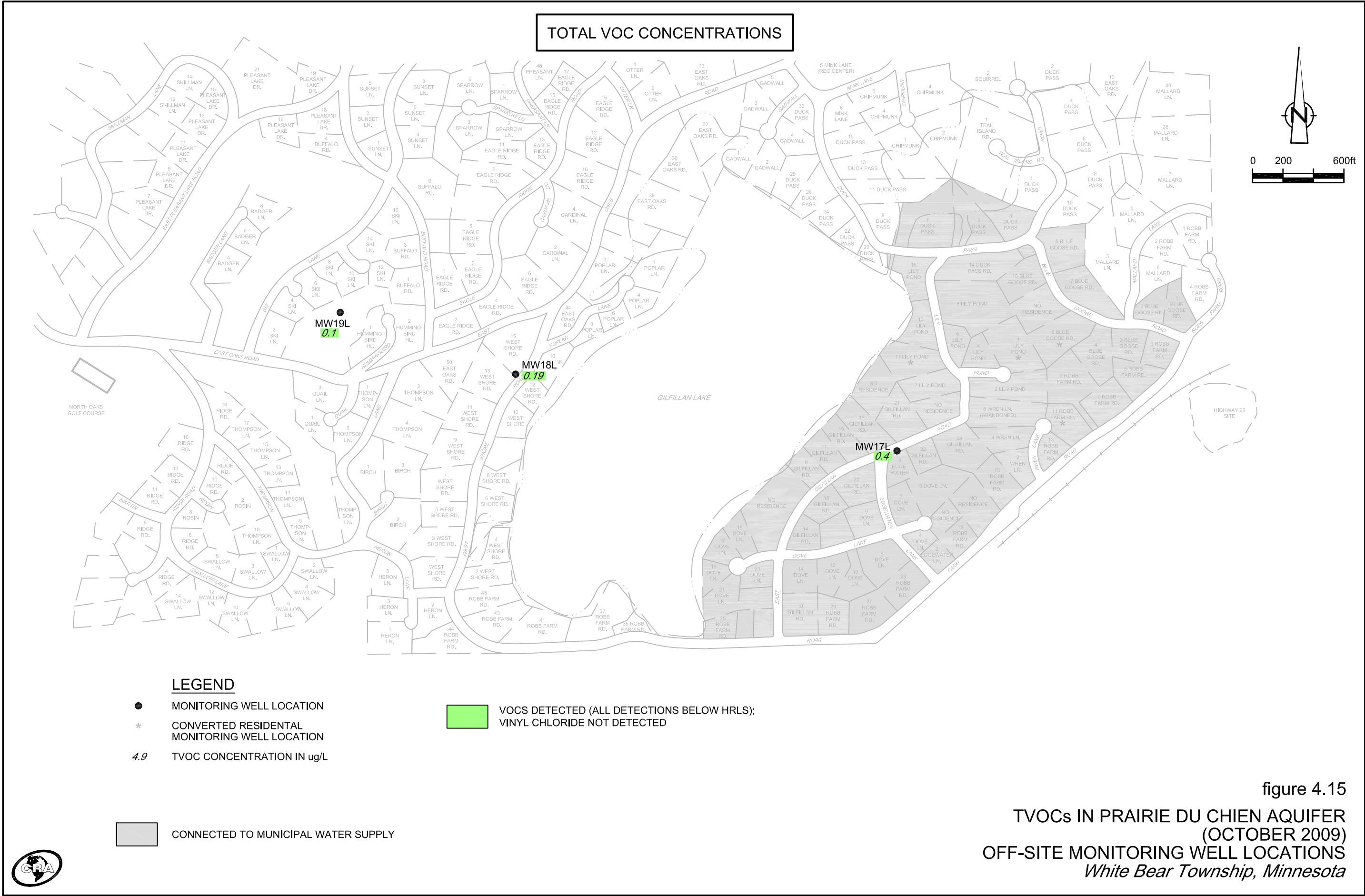
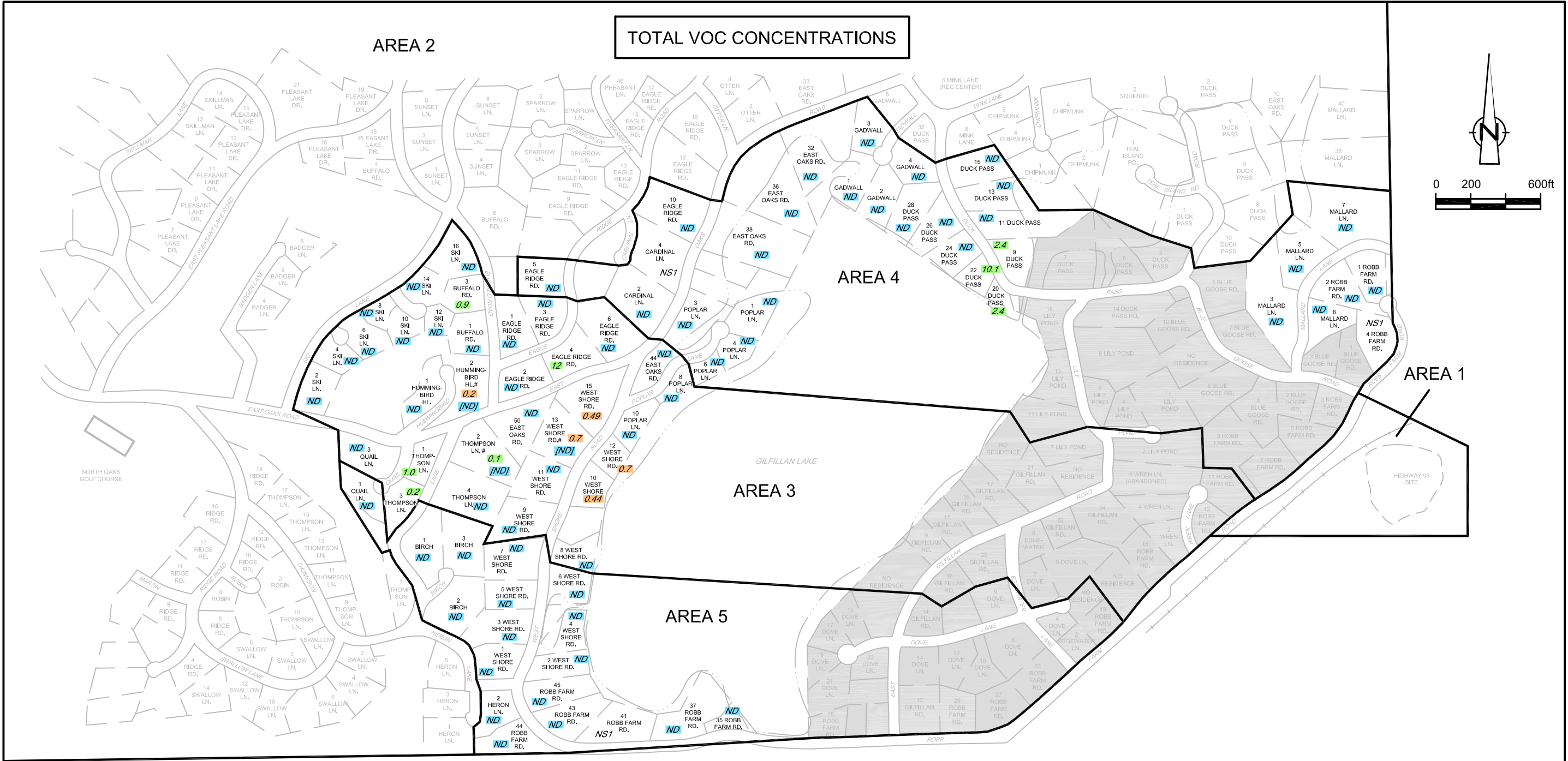


figure 4.12
TVOCs IN LOWER SAND AQUIFER
(OCTOBER 2009)
HIGHWAY 96 SITE
White Bear Township, Minnesota









LEGEND

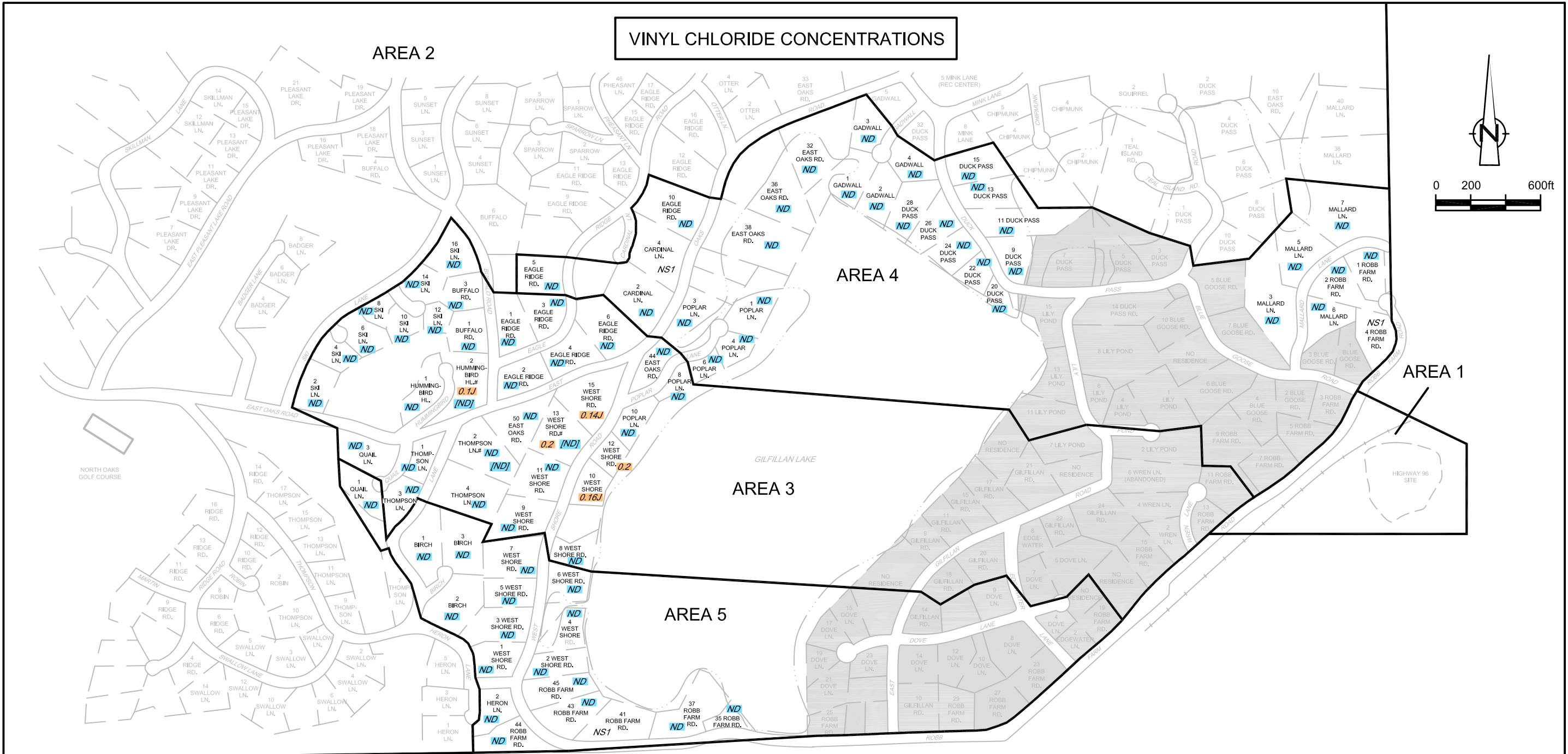
- GEOGRAPHIC AREAS
- 1.1** MAXIMUM TVOC CONCENTRATION (2009) IN µg/L
- ND** NOT DETECTED
- NS1** NOT SAMPLED (NO RESPONSE/DECLINED)
- #** NEW (DEEPER) RESIDENTIAL WELL INSTALLED (2009)
- []** NEW WELL RESULT

- VOCS DETECTED, INCLUDING VINYL CHLORIDE (ALL DETECTIONS AT OR BELOW HRLS)
- VOCS DETECTED (ALL DETECTIONS BELOW HRLS); VINYL CHLORIDE NOT DETECTED
- VOCS NOT DETECTED

CONNECTED TO MUNICIPAL WATER SUPPLY

figure 4.16
MAXIMUM TVOC CONCENTRATIONS
IN RESIDENTIAL WELLS (2009)
HIGHWAY 96 SITE
White Bear Township, Minnesota





LEGEND

-  GEOGRAPHIC AREAS
- 0.3* MAXIMUM VINYL CHLORIDE CONCENTRATION (2009) IN $\mu\text{g/L}$
- J* ESTIMATED RESULT
- ND* NOT DETECTED
- NS1* NOT SAMPLED (NO RESPONSE/DECLINED)
- #* NEW (DEEPER) RESIDENTIAL WELL INSTALLED (2009)
- []* NEW WELL RESULT
-  CONNECTED TO MUNICIPAL WATER SUPPLY

-  VINYL CHLORIDE DETECTED AT OR BELOW HRL (0.2 $\mu\text{g/L}$)
-  VINYL CHLORIDE NOT DETECTED

figure 4.17
MAXIMUM VINYL CHLORIDE CONCENTRATIONS
IN RESIDENTIAL WELLS (2009)
HIGHWAY 96 SITE
White Bear Township, Minnesota



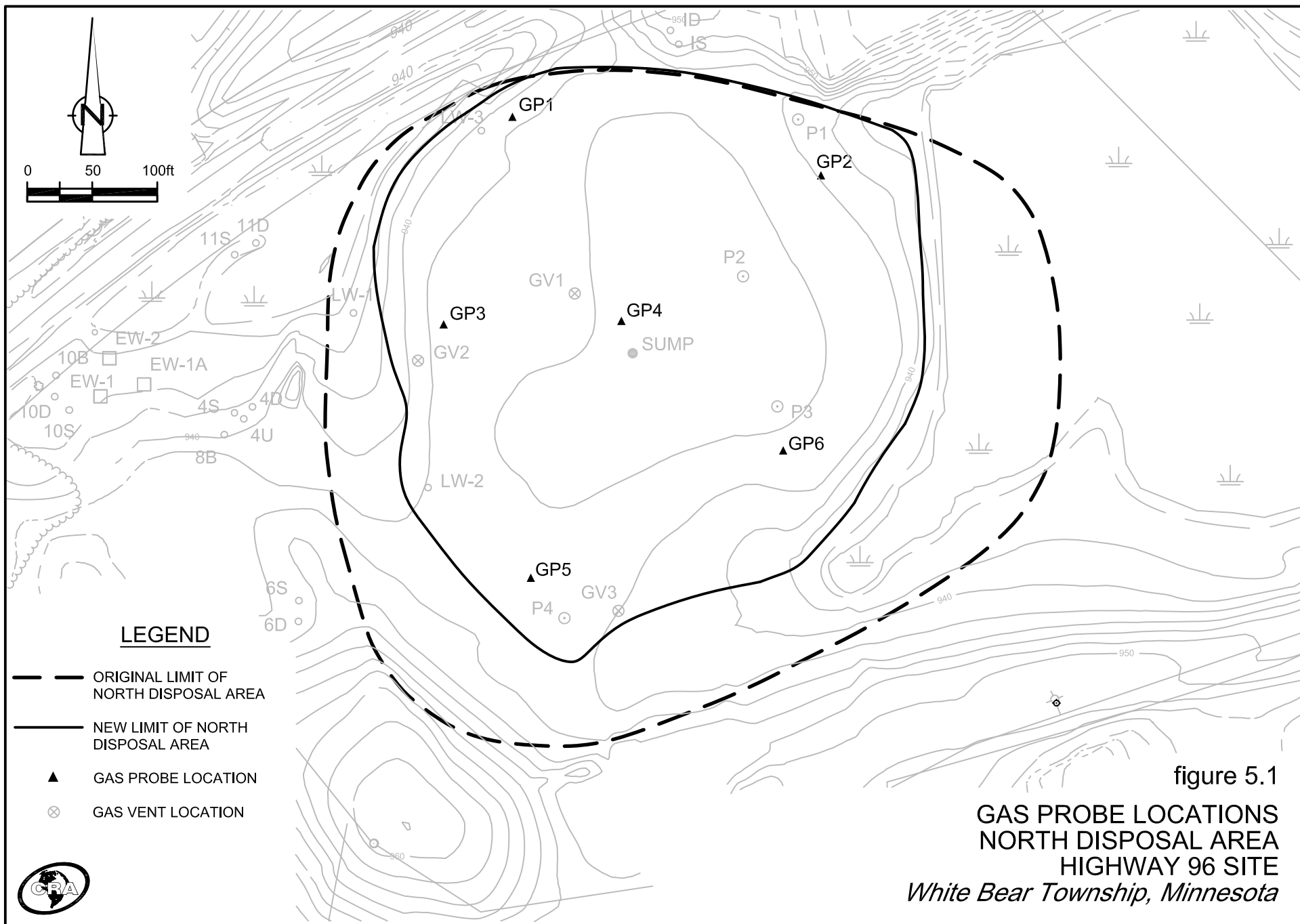


FIGURE 5.2
% COMBUSTIBLE GAS CONCENTRATIONS
GP1
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

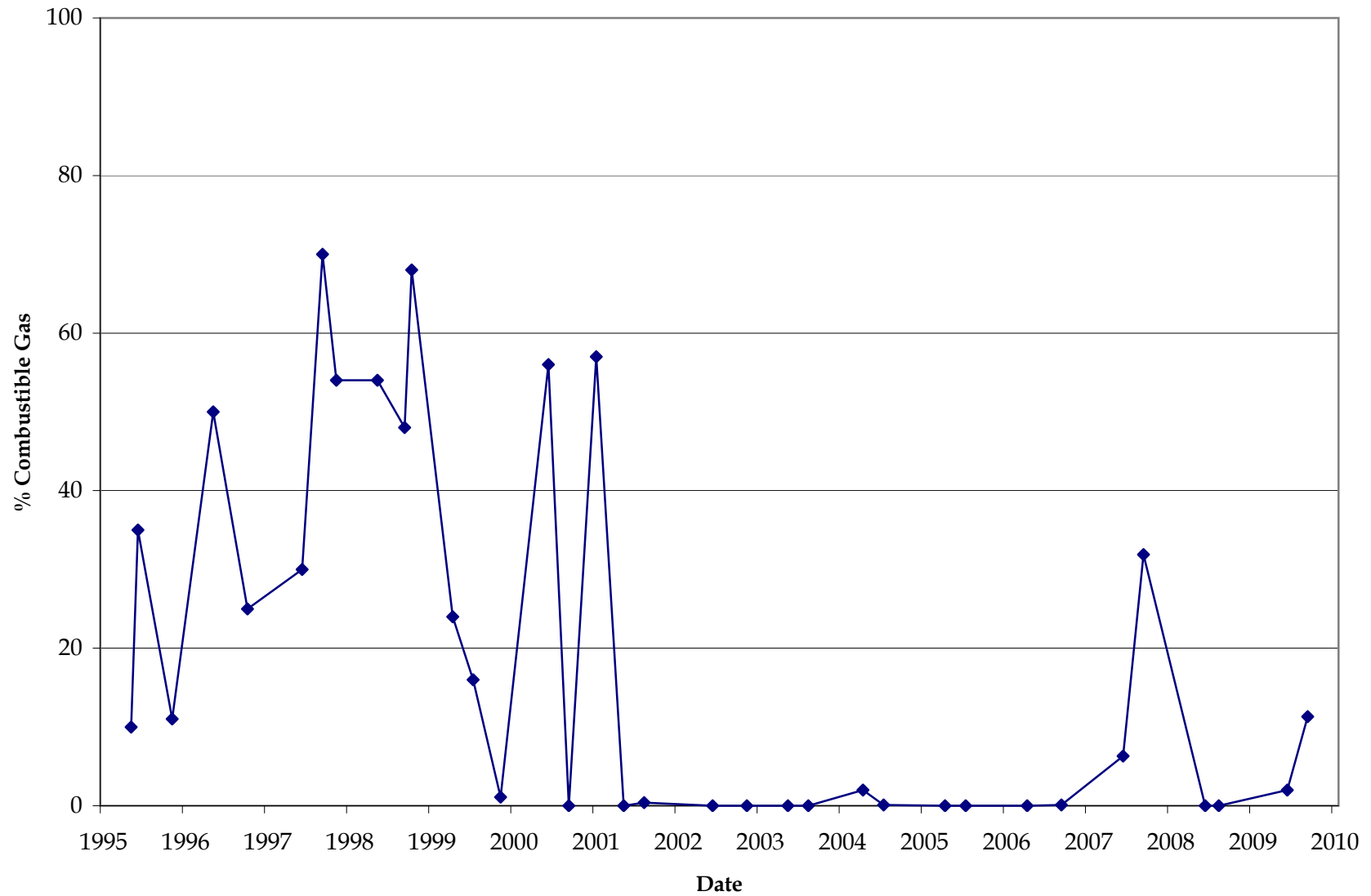


FIGURE 5.3
% COMBUSTIBLE GAS CONCENTRATIONS
GP2
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

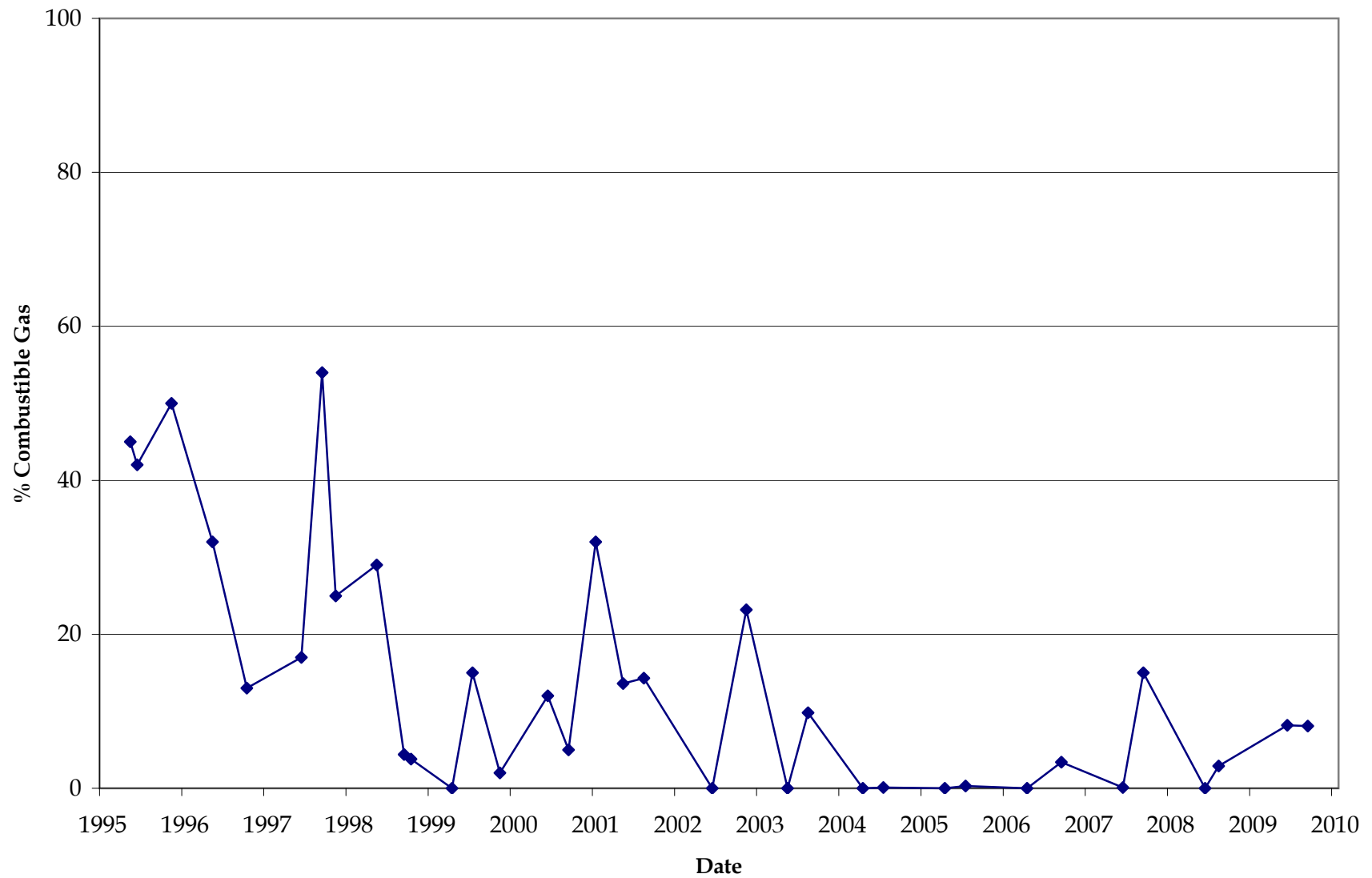


FIGURE 5.4
% COMBUSTIBLE GAS CONCENTRATIONS
GP3
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

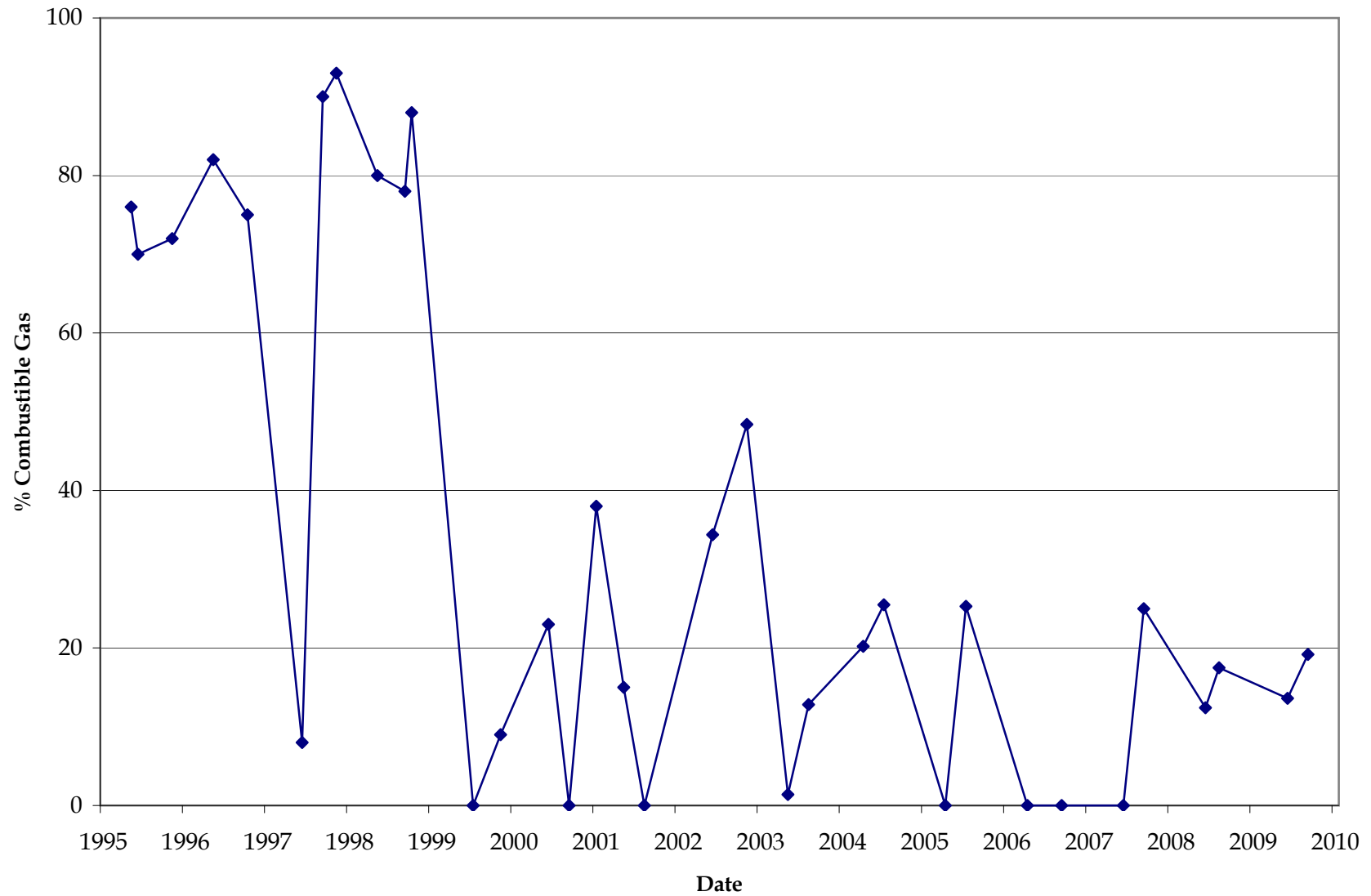


FIGURE 5.5
% COMBUSTIBLE GAS CONCENTRATIONS
GP4
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

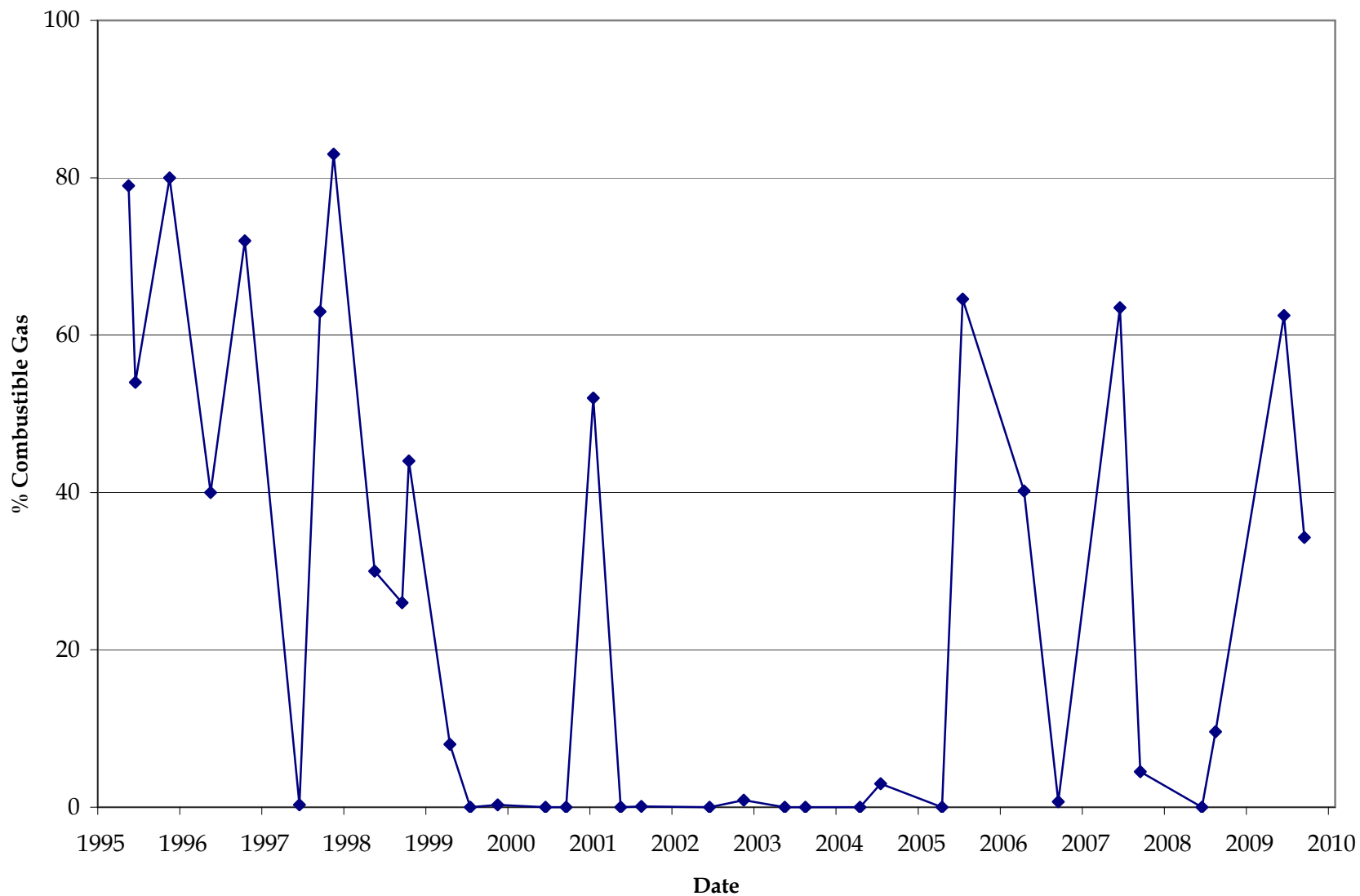


FIGURE 5.6
% COMBUSTIBLE GAS CONCENTRATIONS
GP5
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

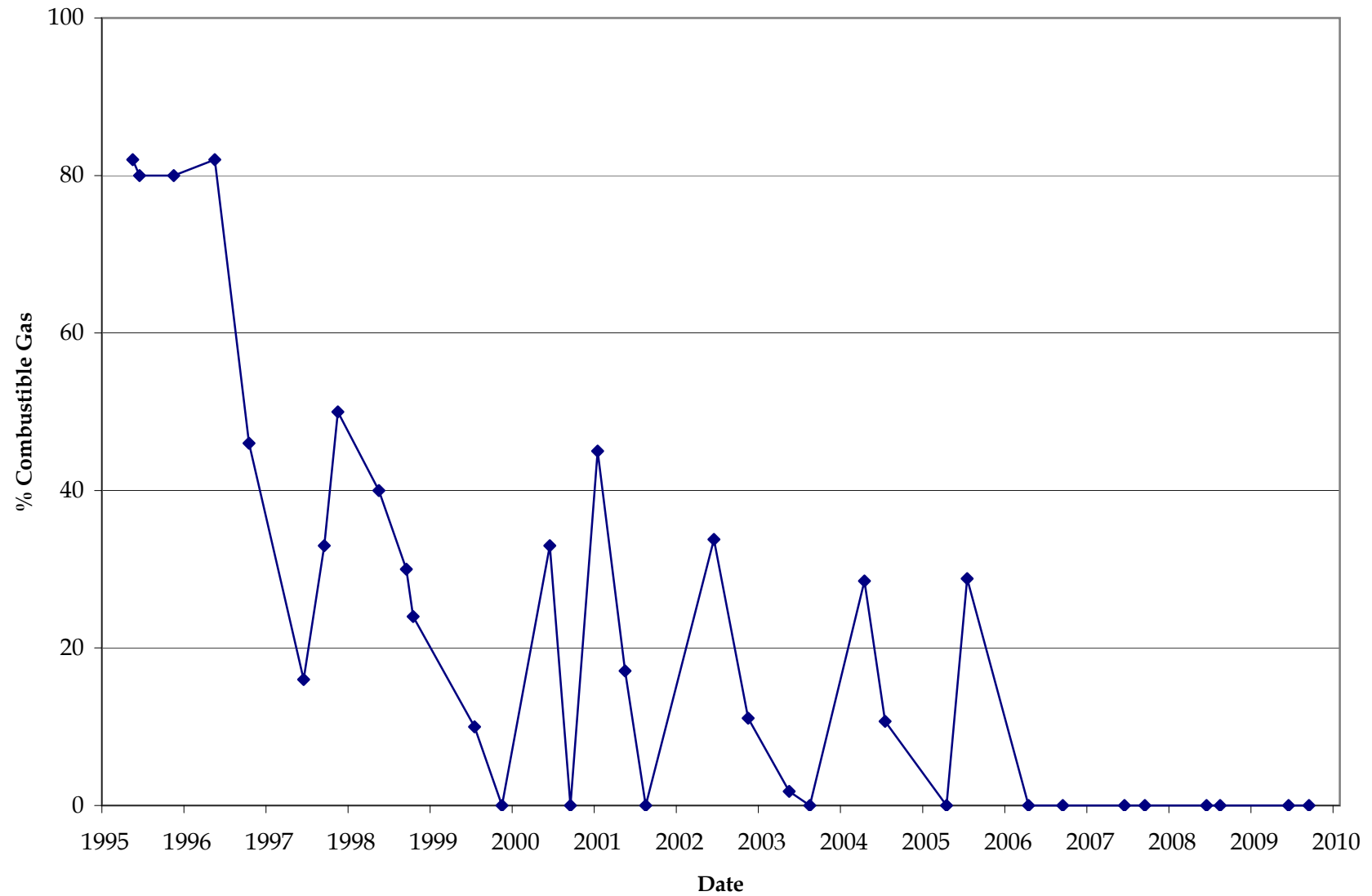


FIGURE 5.7
% COMBUSTIBLE GAS CONCENTRATIONS
GP6
HIGHWAY 96 SITE
WHITE BEAR TOWNSHIP, MINNESOTA

