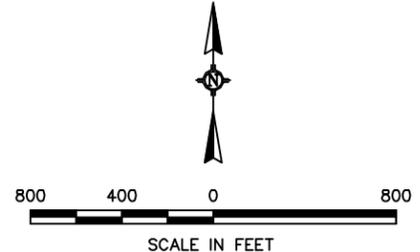


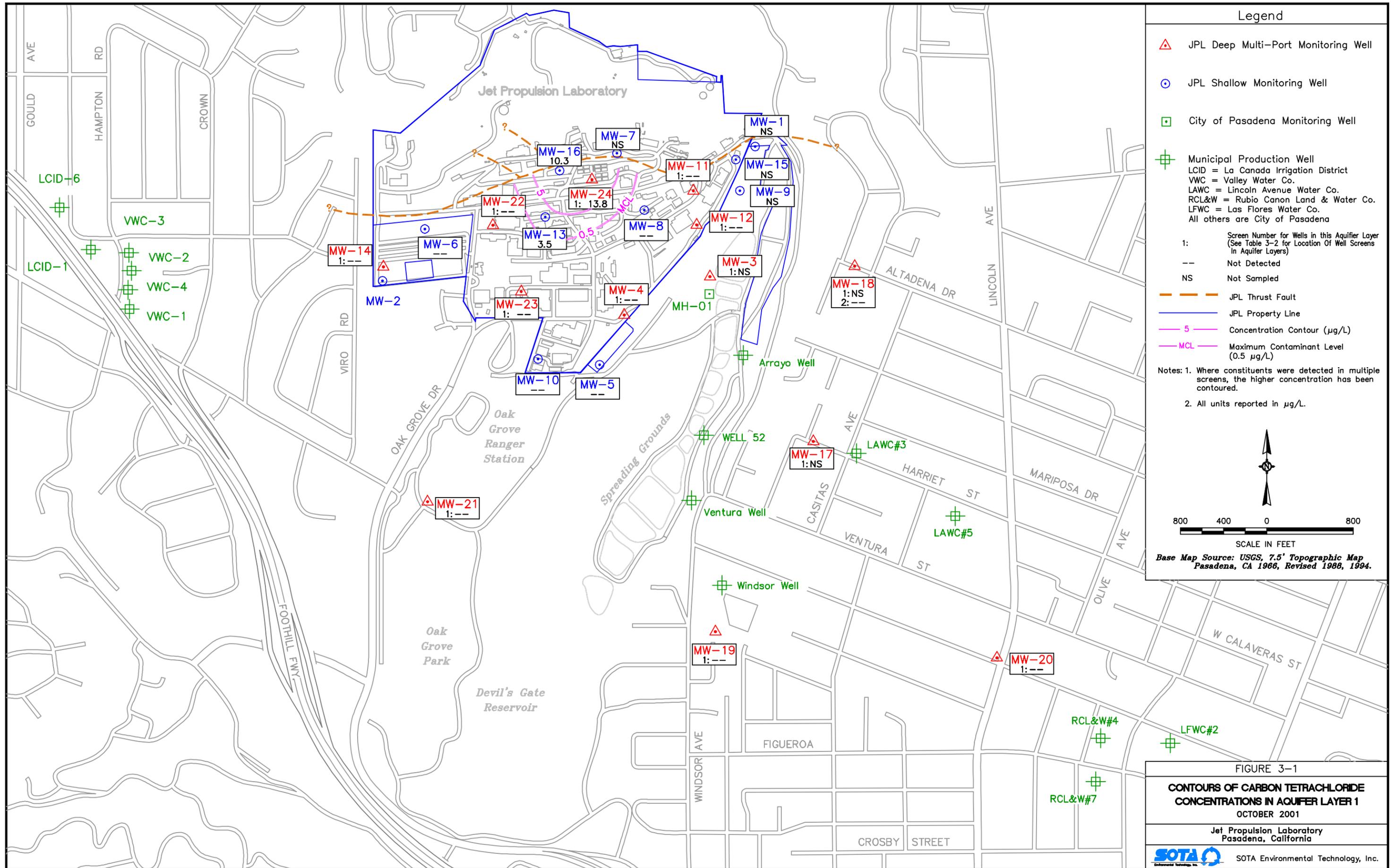
- Legend**
- ▲ JPL Deep Multi-Port Monitoring Well
  - JPL Shallow Monitoring Well
  - City of Pasadena Monitoring Well
  - ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 1-1  
**LOCATIONS OF JPL GROUNDWATER MONITORING WELLS AND NEARBY MUNICIPAL PRODUCTION WELLS**  
 Jet Propulsion Laboratory  
 Pasadena, California

**SOTA** Environmental Technology, Inc.



Legend

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWAC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)
- Not Detected
- NS Not Sampled
- JPL Thrust Fault
- JPL Property Line
- 5 Concentration Contour (µg/L)
- MCL Maximum Contaminant Level (0.5 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

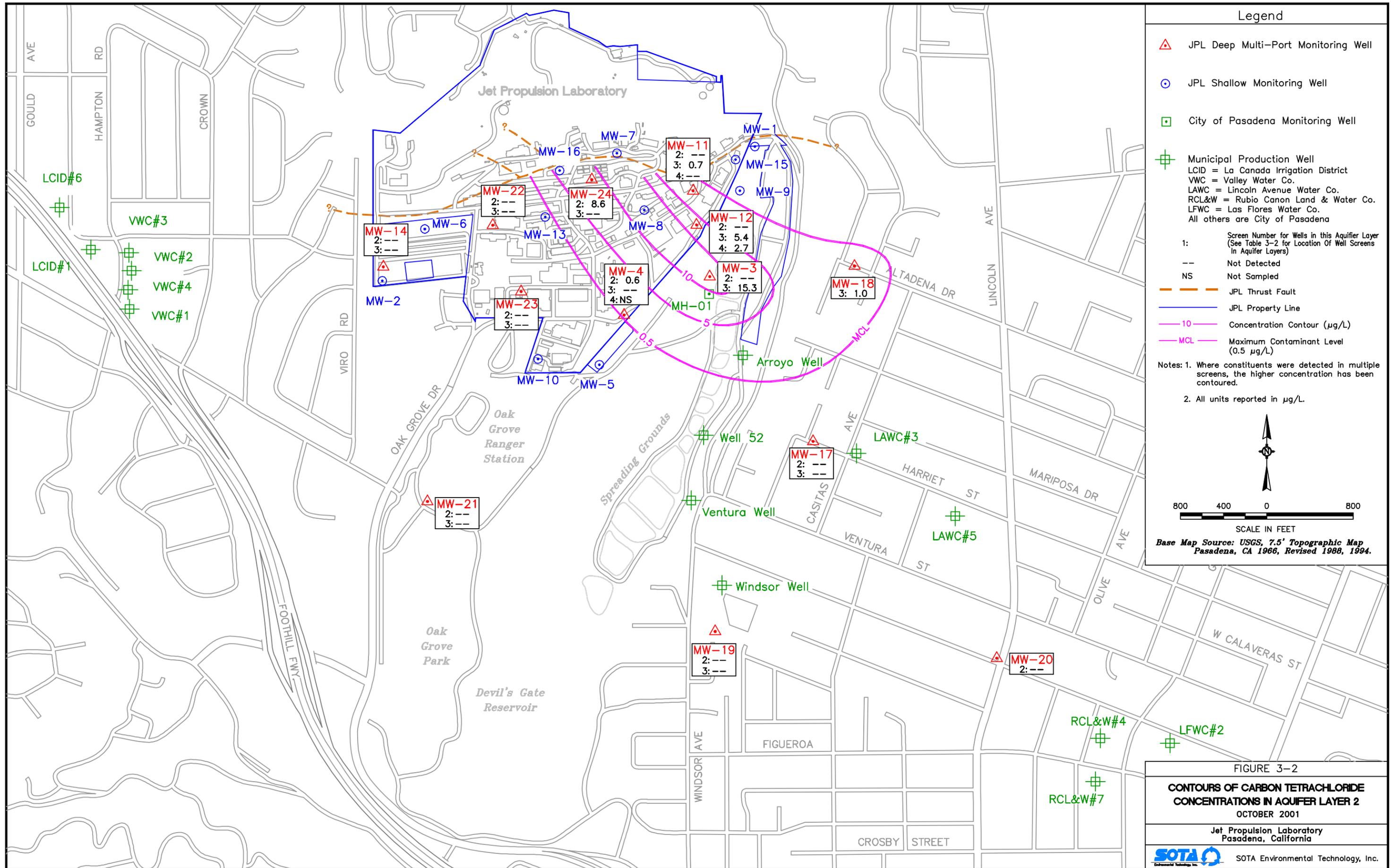


800 400 0 800  
SCALE IN FEET

*Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.*

FIGURE 3-1  
**CONTOURS OF CARBON TETRACHLORIDE  
 CONCENTRATIONS IN AQUIFER LAYER 1**  
 OCTOBER 2001  
 Jet Propulsion Laboratory  
 Pasadena, California

 SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- ⊙ JPL Shallow Monitoring Well
- ⊕ City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWLC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

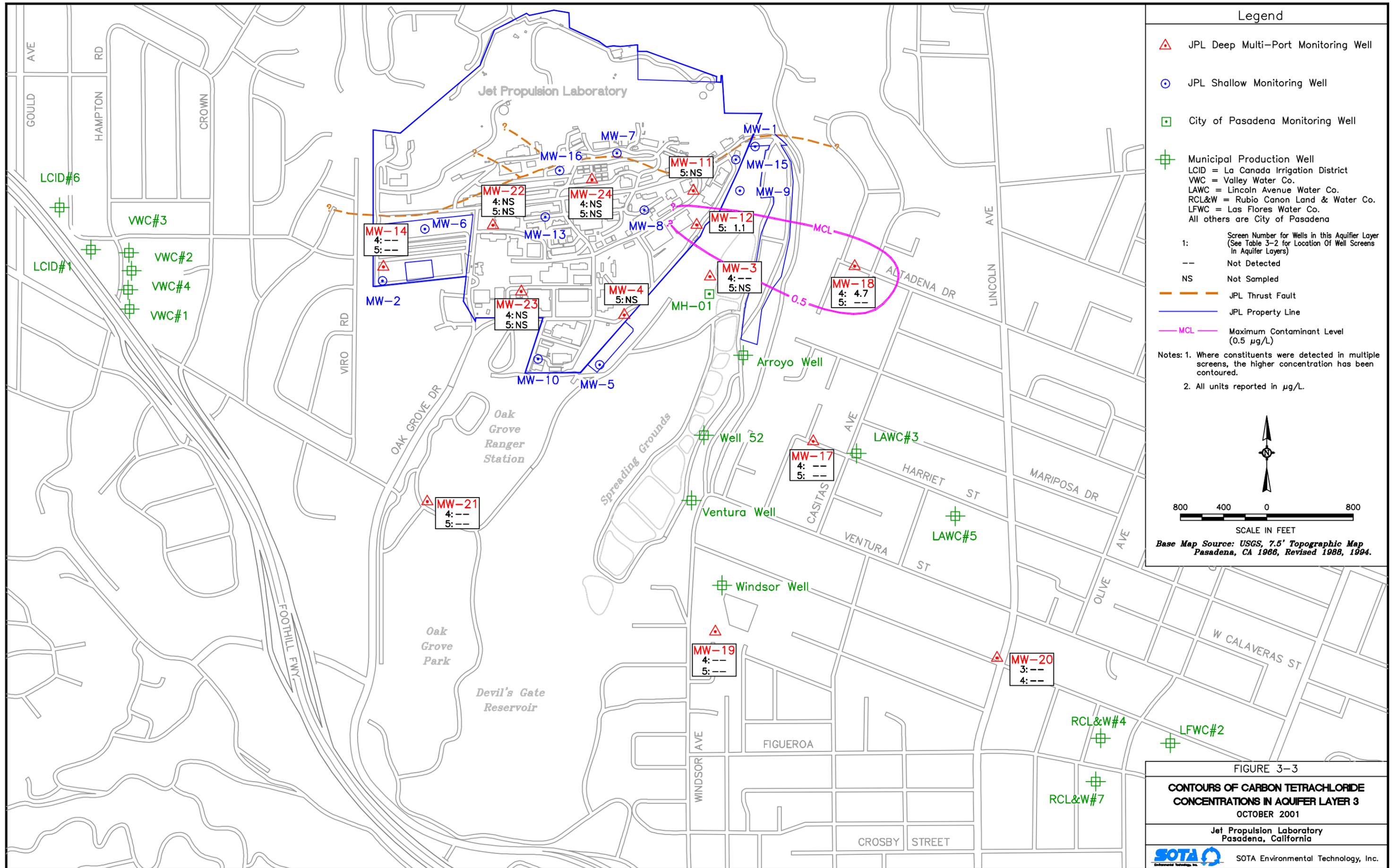
1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)  
 -- Not Detected  
 NS Not Sampled

--- JPL Thrust Fault  
--- JPL Property Line  
--- 10 Concentration Contour (µg/L)  
--- MCL Maximum Contaminant Level (0.5 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

800 400 0 800  
 SCALE IN FEET  
 Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-2  
**CONTOURS OF CARBON TETRACHLORIDE CONCENTRATIONS IN AQUIFER LAYER 2**  
 OCTOBER 2001  
 Jet Propulsion Laboratory  
 Pasadena, California  
 SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWLC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)

-- Not Detected

NS Not Sampled

--- JPL Thrust Fault

— JPL Property Line

— MCL Maximum Contaminant Level (0.5 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.

2. All units reported in µg/L.

800 400 0 800

SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

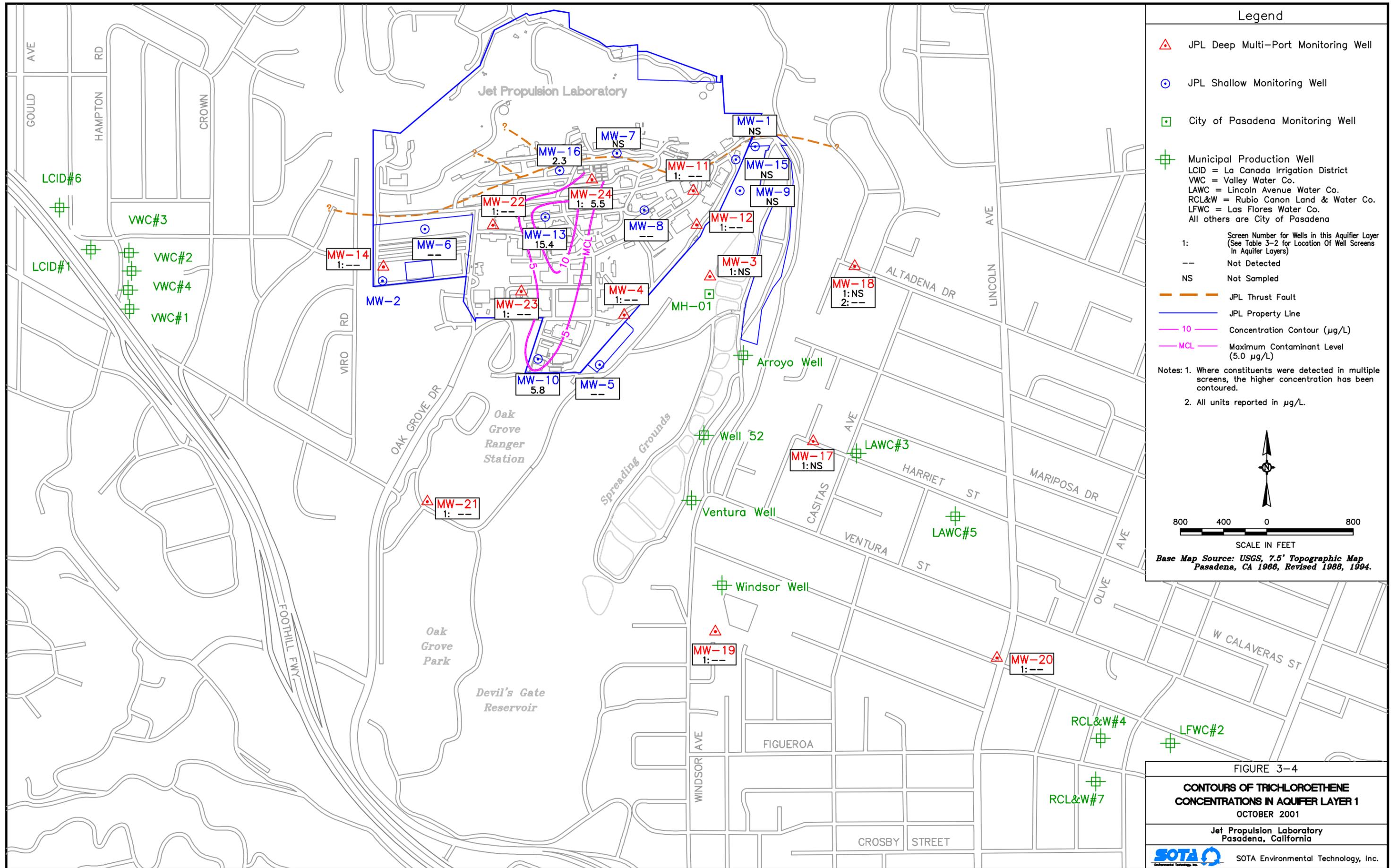
FIGURE 3-3

**CONTOURS OF CARBON TETRACHLORIDE CONCENTRATIONS IN AQUIFER LAYER 3**

OCTOBER 2001

Jet Propulsion Laboratory  
Pasadena, California

SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- ⊙ JPL Shallow Monitoring Well
- ⊠ City of Pasadena Monitoring Well
- ⊞ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)
- Not Detected
- NS Not Sampled
- JPL Thrust Fault
- JPL Property Line
- 10 Concentration Contour (µg/L)
- MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

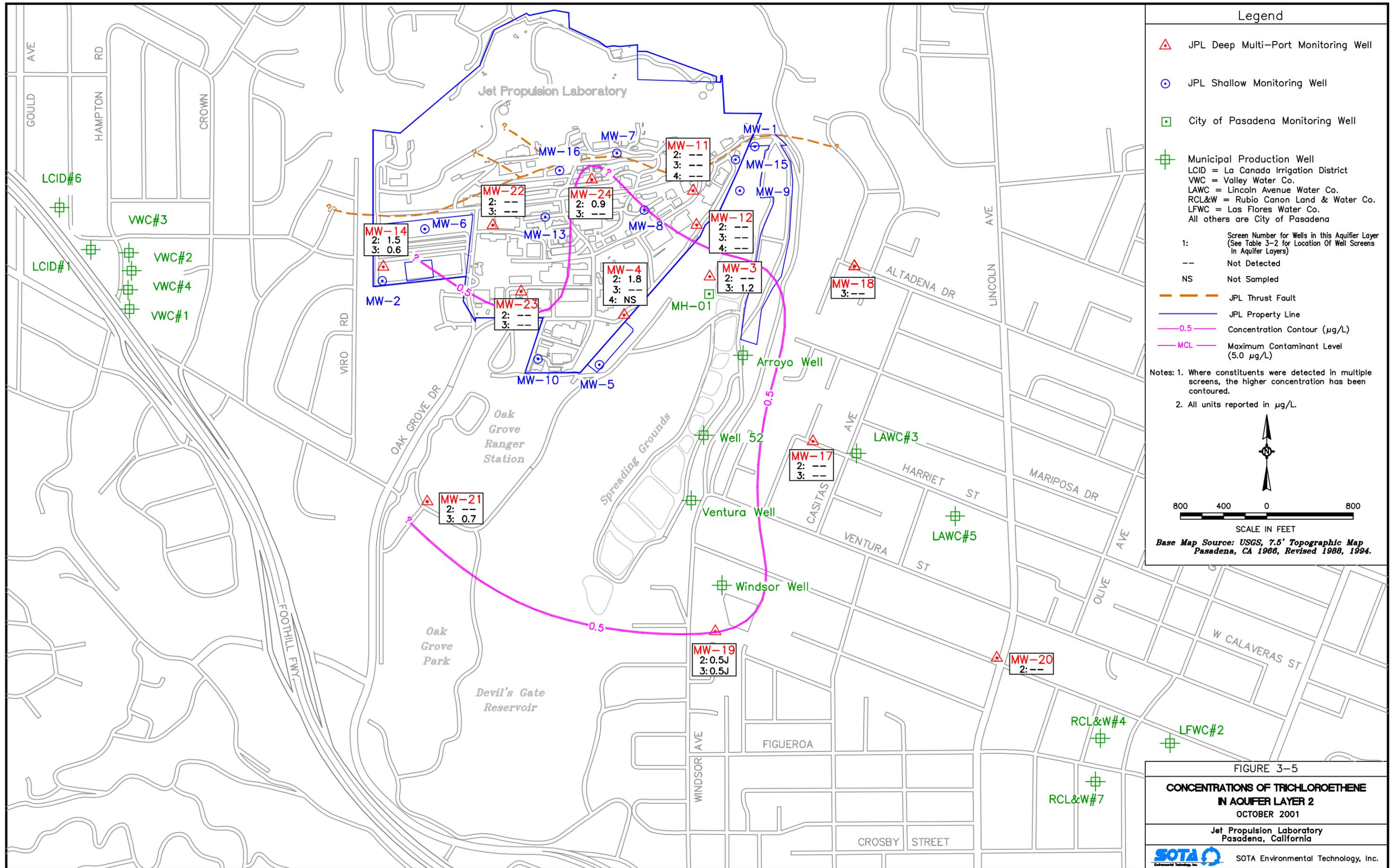
800 400 0 800  
 SCALE IN FEET  
 Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1968, Revised 1988, 1994.

FIGURE 3-4

**CONTOURS OF TRICHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 1**  
 OCTOBER 2001

Jet Propulsion Laboratory  
 Pasadena, California

SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWLC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)  
 -- Not Detected  
 NS Not Sampled

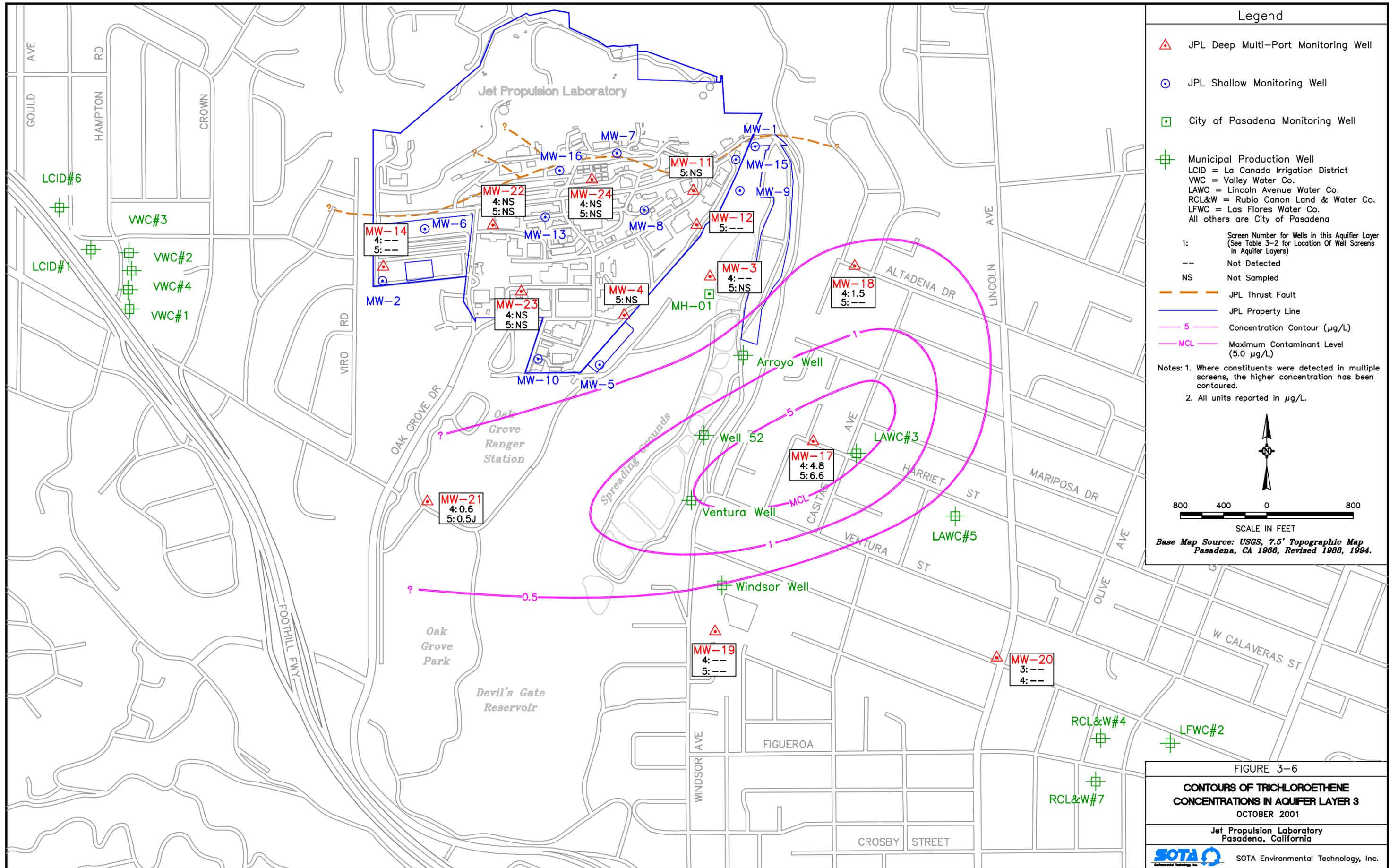
- JPL Thrust Fault
- JPL Property Line
- 0.5 Concentration Contour (µg/L)
- MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

800 400 0 800  
 SCALE IN FEET  
 Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-5  
**CONCENTRATIONS OF TRICHLOROETHENE  
 IN AQUIFER LAYER 2**  
 OCTOBER 2001  
 Jet Propulsion Laboratory  
 Pasadena, California

SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- ⊕ City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAW C = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)

-- Not Detected

NS Not Sampled

--- JPL Thrust Fault

--- JPL Property Line

5 Concentration Contour (µg/L)

MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

800 400 0 800

SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

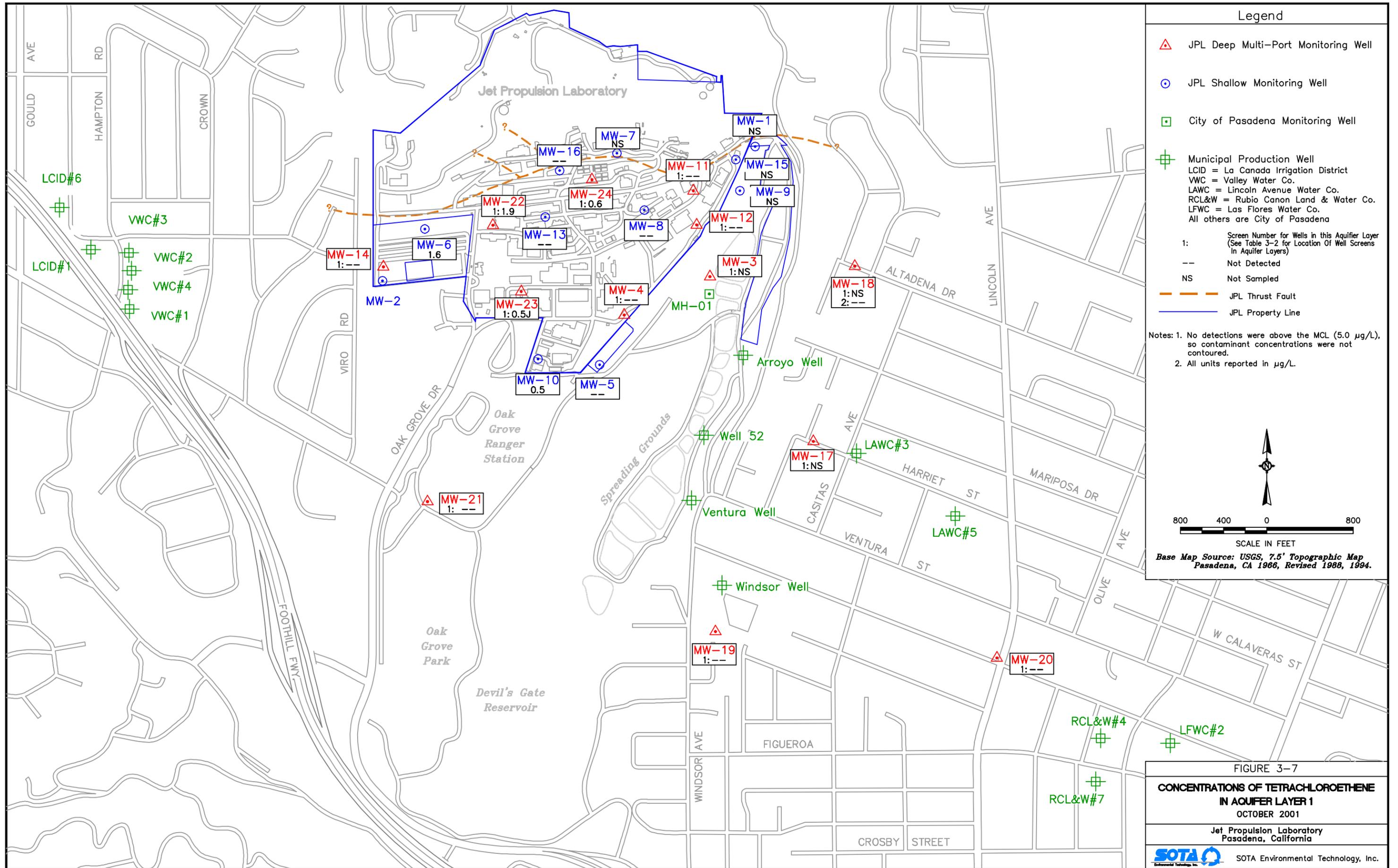
FIGURE 3-6

**CONTOURS OF TRICHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3**

OCTOBER 2001

Jet Propulsion Laboratory  
Pasadena, California

SOTA Environmental Technology, Inc.



Legend

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAW = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFW = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)
- Not Detected
- NS Not Sampled
- - - - JPL Thrust Fault
- JPL Property Line

Notes: 1. No detections were above the MCL (5.0 µg/L), so contaminant concentrations were not contoured.  
 2. All units reported in µg/L.

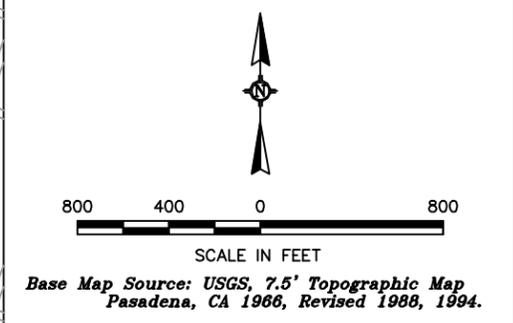
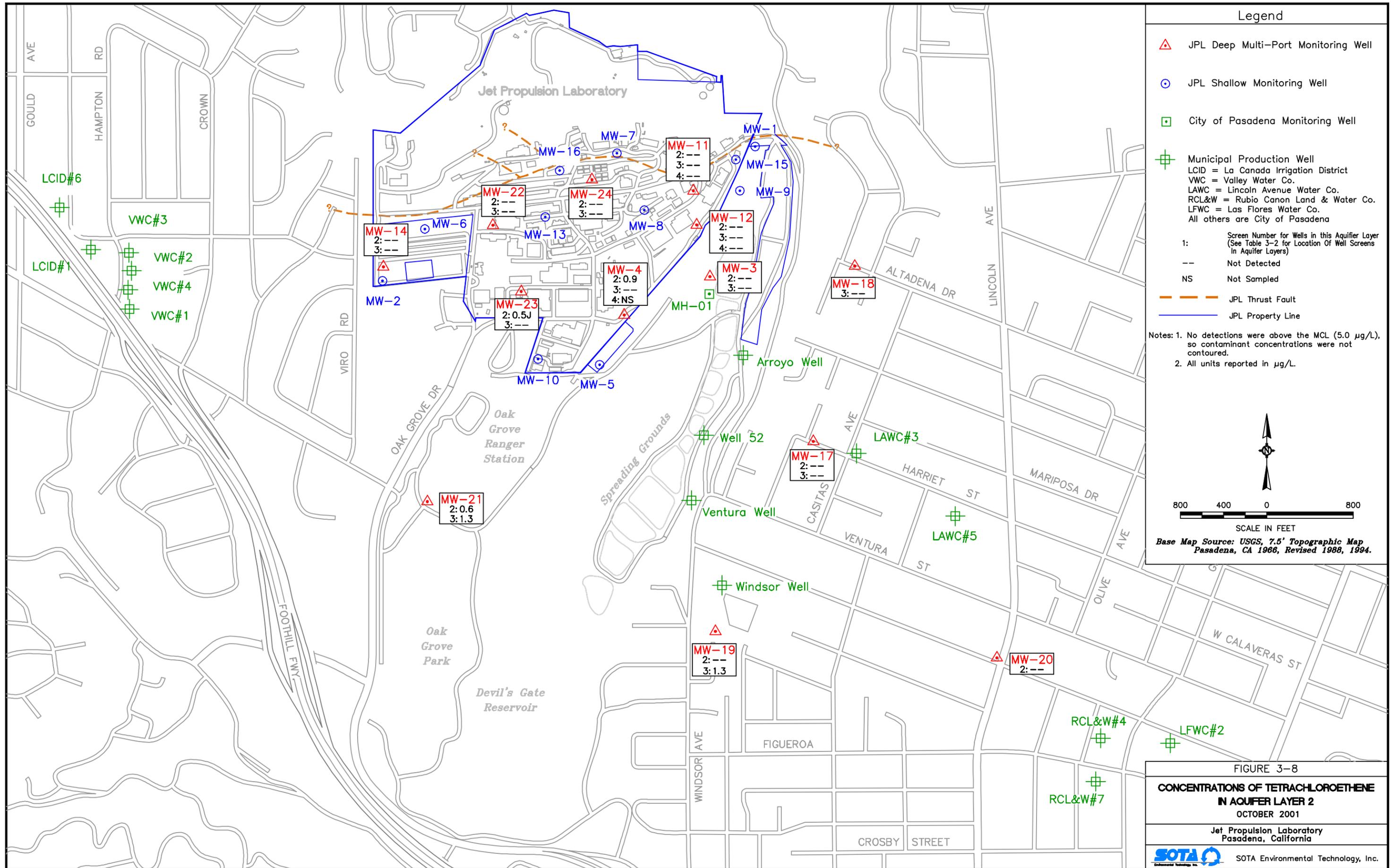


FIGURE 3-7  
**CONCENTRATIONS OF TETRACHLOROETHENE  
 IN AQUIFER LAYER 1**  
 OCTOBER 2001  
 Jet Propulsion Laboratory  
 Pasadena, California  
 SOTA Environmental Technology, Inc.



### Legend

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)  
 -- Not Detected  
 NS Not Sampled

--- JPL Thrust Fault  
--- JPL Property Line

Notes: 1. No detections were above the MCL (5.0 µg/L), so contaminant concentrations were not contoured.  
 2. All units reported in µg/L.



800 400 0 800

SCALE IN FEET

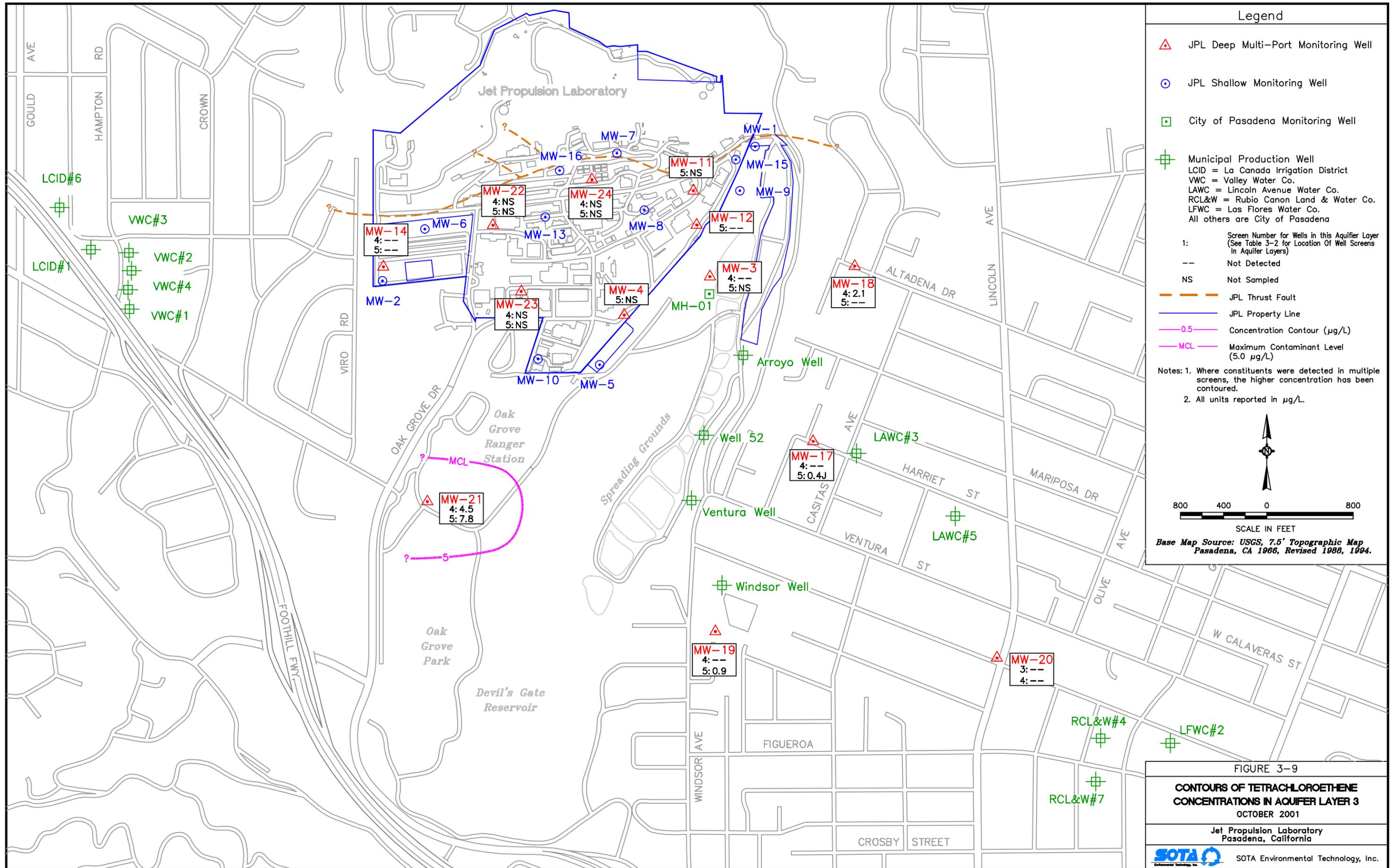
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-8

**CONCENTRATIONS OF TETRACHLOROETHENE  
 IN AQUIFER LAYER 2  
 OCTOBER 2001**

Jet Propulsion Laboratory  
 Pasadena, California

 SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- ⊕ City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWLC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)

-- Not Detected

NS Not Sampled

--- JPL Thrust Fault

— JPL Property Line

0.5 Concentration Contour (µg/L)

MCL Maximum Contaminant Level (5.0 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

800 400 0 800  
 SCALE IN FEET

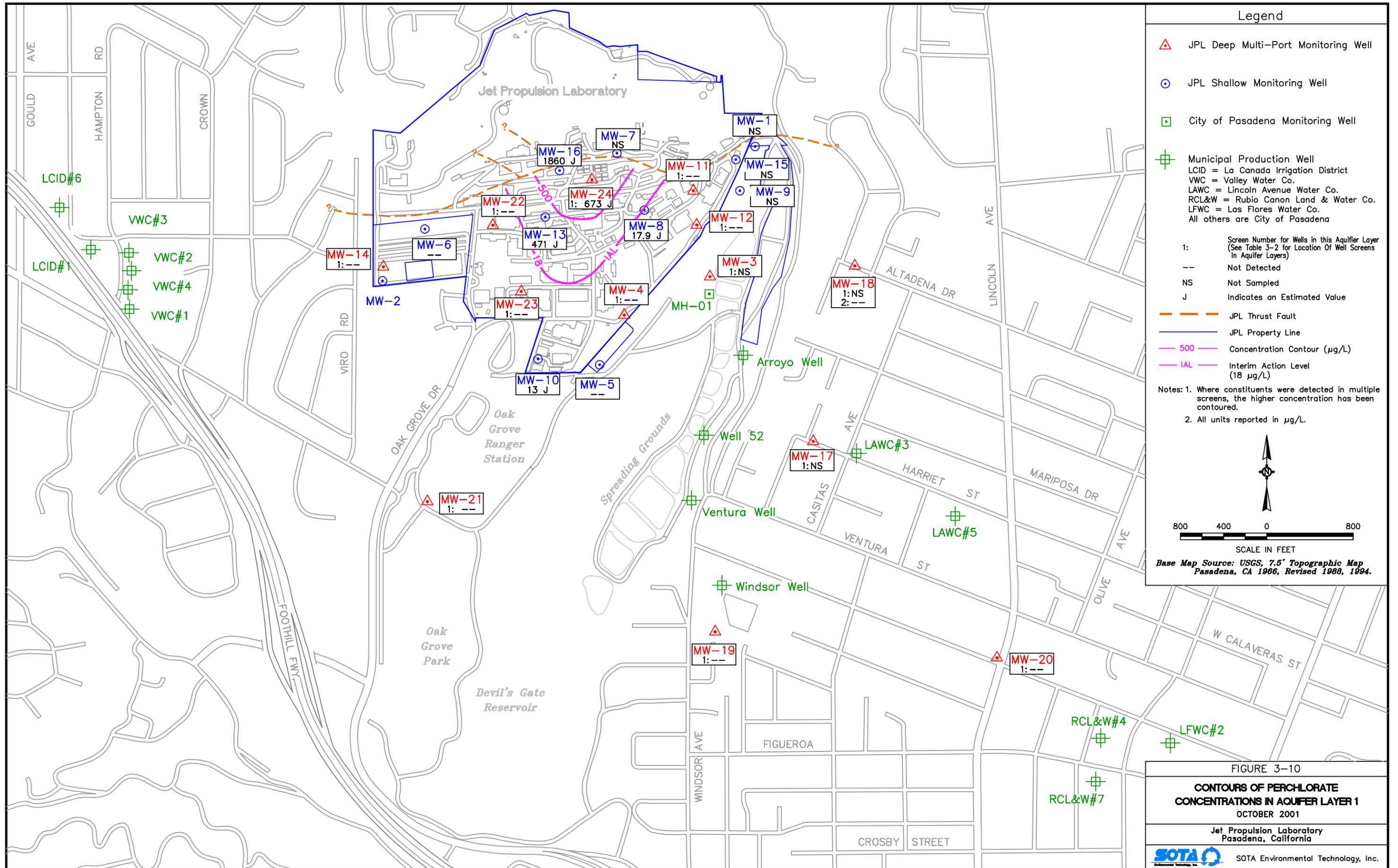
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-9

**CONTOURS OF TETRACHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3**  
 OCTOBER 2001

Jet Propulsion Laboratory  
 Pasadena, California

SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- ⊙ JPL Shallow Monitoring Well
- ⊠ City of Pasadena Monitoring Well
- ⊞ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWLC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)

-- Not Detected

NS Not Sampled

J Indicates an Estimated Value

- JPL Thrust Fault
- JPL Property Line
- 500 Concentration Contour (µg/L)
- IAL Interim Action Level (18 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

800 400 0 800

SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

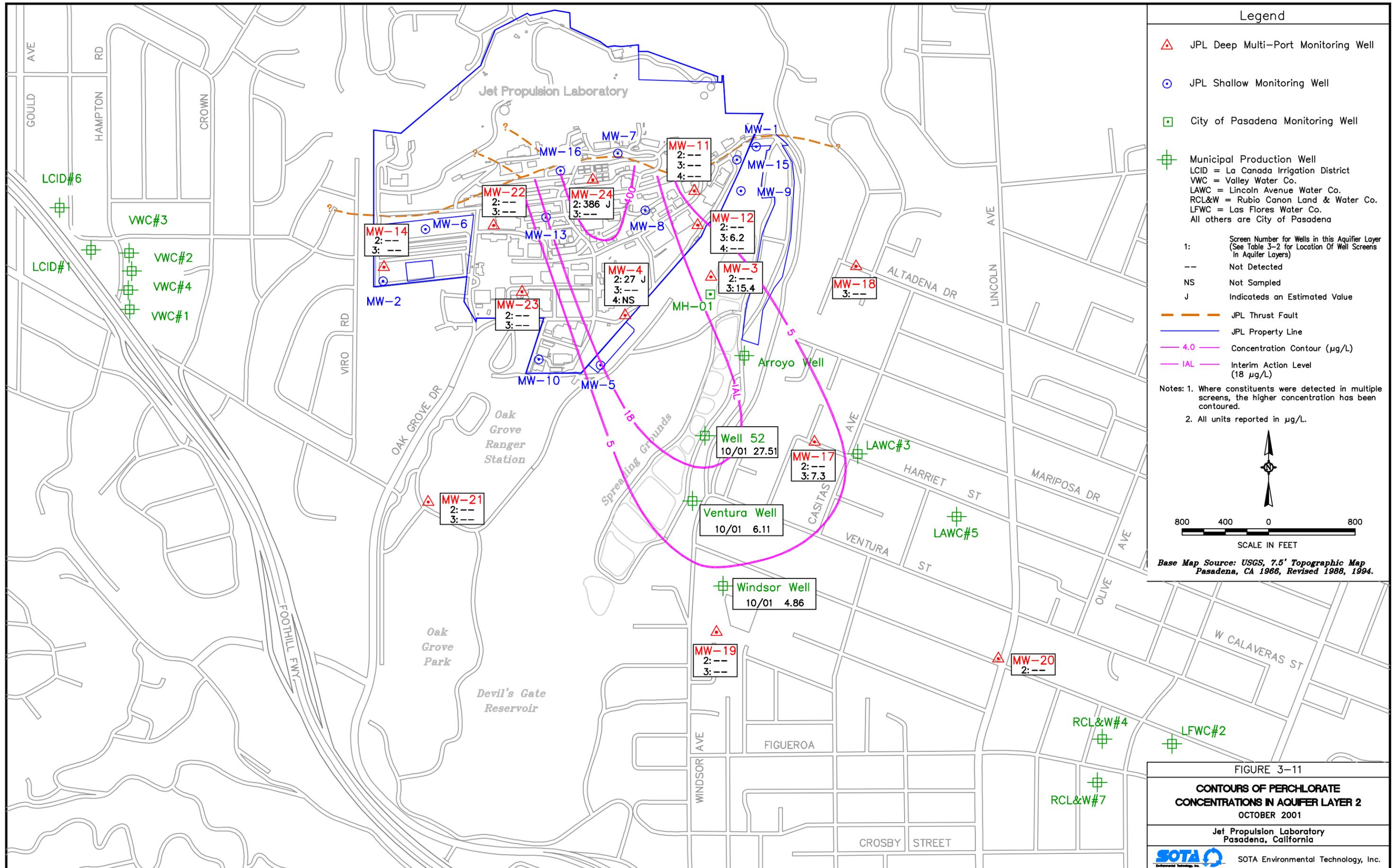
FIGURE 3-10

**CONTOURS OF PERCHLORATE CONCENTRATIONS IN AQUIFER LAYER 1**

OCTOBER 2001

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Pasadena, California

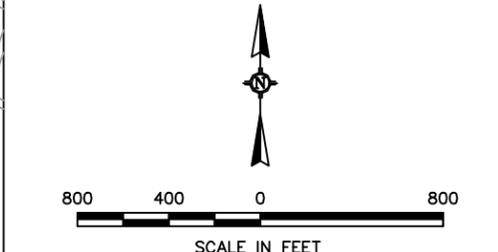
SOTA Environmental Technology, Inc.



Legend

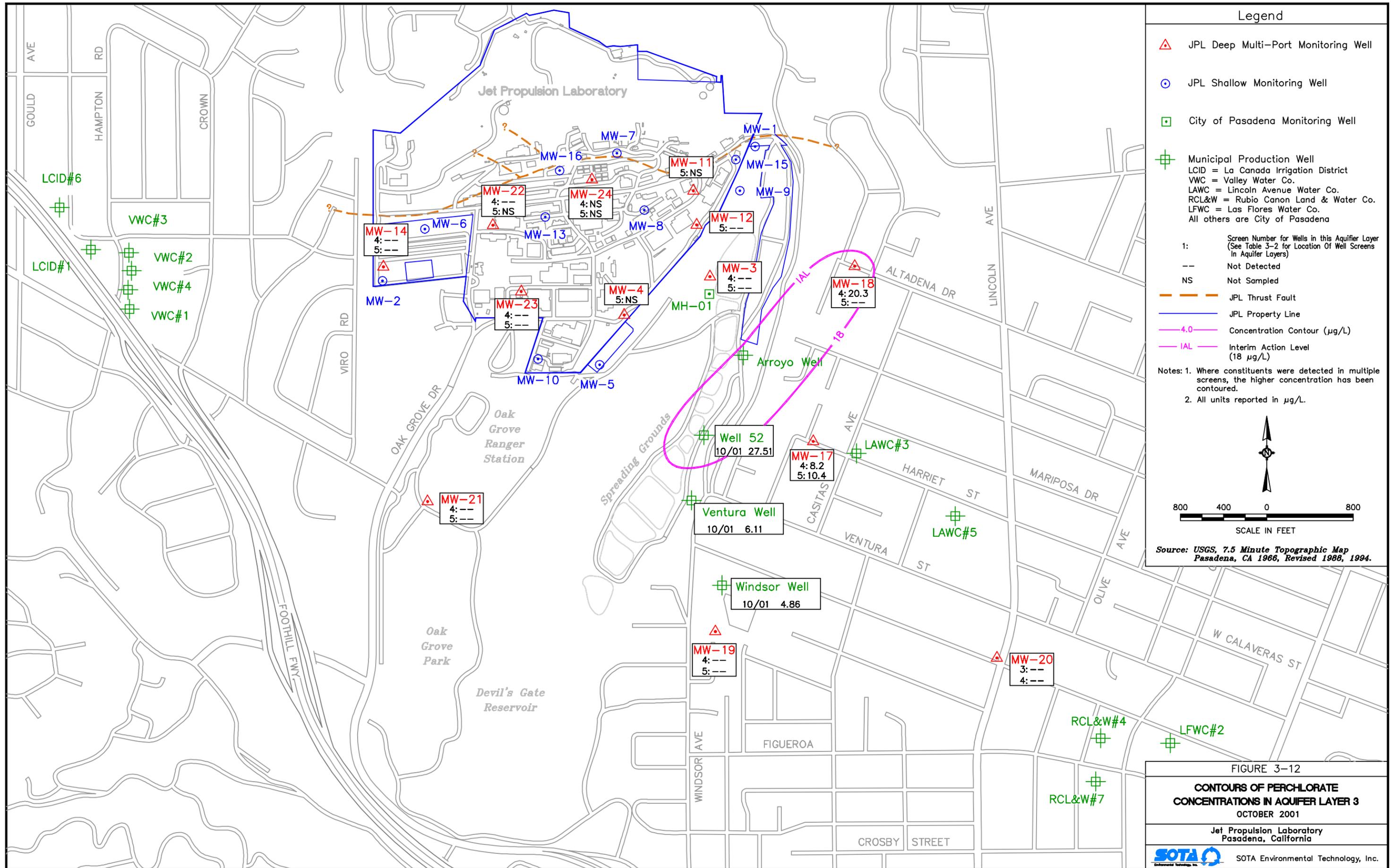
- △ JPL Deep Multi-Port Monitoring Well
  - JPL Shallow Monitoring Well
  - City of Pasadena Monitoring Well
  - ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWC = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena
- 1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)  
 -- Not Detected  
 NS Not Sampled  
 J Indicates an Estimated Value
- JPL Thrust Fault
  - JPL Property Line
  - 4.0 Concentration Contour (µg/L)
  - IAL Interim Action Level (18 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-11  
**CONTOURS OF PERCHLORATE CONCENTRATIONS IN AQUIFER LAYER 2**  
 OCTOBER 2001  
 Jet Propulsion Laboratory  
 Pasadena, California  
 SOTA Environmental Technology, Inc.



**Legend**

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well  
 LCID = La Canada Irrigation District  
 VWC = Valley Water Co.  
 LAWG = Lincoln Avenue Water Co.  
 RCL&W = Rubio Canon Land & Water Co.  
 LFWC = Las Flores Water Co.  
 All others are City of Pasadena

1: Screen Number for Wells in this Aquifer Layer (See Table 3-2 for Location Of Well Screens In Aquifer Layers)

-- Not Detected

NS Not Sampled

--- JPL Thrust Fault

--- JPL Property Line

--- 4.0 Concentration Contour (µg/L)

--- IAL Interim Action Level (18 µg/L)

Notes: 1. Where constituents were detected in multiple screens, the higher concentration has been contoured.  
 2. All units reported in µg/L.

800 400 0 800

SCALE IN FEET

Source: USGS, 7.5 Minute Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-12

**CONTOURS OF PERCHLORATE CONCENTRATIONS IN AQUIFER LAYER 3**  
 OCTOBER 2001

Jet Propulsion Laboratory  
 Pasadena, California

SOTA Environmental Technology, Inc.