



## State of New Jersey

Department of Environmental Protection  
Site Remediation Program  
Mailcode 401-06  
P.O. Box 420  
Trenton, NJ 08625-0420

CHRIS CHRISTIE  
Governor  
KIM GUADAGNO  
Lt. Governor

BOB MARTIN  
Commissioner

Maria Kaouris, Remediation Manager  
Honeywell International, Inc.  
101 Columbia Road  
Morristown, New Jersey 07962

Date: February 16, 2012

### Approval

Re: Classification Exception Area  
Study Areas 5, 6 and 7  
Hudson County Chromate Sites 73, 87, 88, 90, 115, 117, 120, 124, 125, 134, 140,  
153, 157, and 184  
Jersey City, Hudson County  
NJDEP PI # G000008789

Dear Ms. Kaouris:

The New Jersey Department of Environmental Protection (NJDEP) has reviewed the Groundwater Classification Exception Area (CEA) application dated 8 June 2009, prepared by HydroQual, Inc. The NJDEP has determined that the referenced document is in compliance with Section 7:26E-8.3 of the New Jersey Technical Requirements for Site Remediation, and the CEA Guidance Document (revised November 1998). NJDEP hereby approves the CEA request effective the date of this letter.

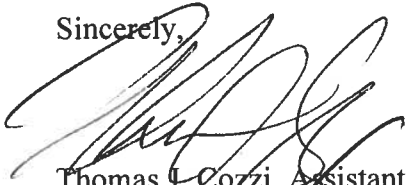
Honeywell is advised that the CEA does not specify monitoring requirements since it functions as a notification mechanism, not as a "stand alone" enforcement or regulatory document. The need and the extent of ground water monitoring required during the duration of the CEA will be determined as part of the Comprehensive Ground Water Monitoring Program. As specified in NJAC 7:26E-8.3(b)5, the Department will require Honeywell to notify external agencies/affected parties of the CEA designations according to the guidelines established in the CEA Guidance Document (11/98) which can be located at: <http://www.nj.gov/dep/srp/guidance/cea/ceaguid2.pdf>. Note that all property owners within the plume do not need to be notified as long as they are on public water. Honeywell must also comply with the Biennial Certification requirements at NJAC 7:26E-8.6.

The CEAs are for the ground water contamination in three distinct water bearing zones (Shallow, Deep Overburden, and Bedrock). Since the aerial extent of contamination is different for each of the three zones, three separate CEAs were prepared. Note that these

CEAs are only for total and hexavalent chromium. Any other ground water contamination areas within or nearby (e.g. organic compounds in Study Area 6 – North) will require a separate CEA.

If you have any questions, please contact Thomas J. Cozzi of the Site Remediation Program at (609) 984-2905.

Sincerely,



Thomas J. Cozzi, Assistant Director  
NJDEP Site Remediation

- C: Barbara A. Netchert, Hudson County Clerk  
Hudson County Regional Health Commission (CEHA)  
Robert Byrne, RMC, Jersey City Clerk  
Robert Vogt, Jersey City Division of Health  
Carol Ann Wilson, Hudson County Department of Health & Human Services  
Stephen D. Marks PP, AICP, Hudson County Division of Planning  
Bureau Chief, NJDEP Bureau of Safe Drinking Water  
Bureau Chief, NJDEP Bureau of Water Systems and Well Permitting  
David Doyle, NJDEP-SRP  
David Van Eck, NJDEP-BGWPA

## Ground Water Classification Exception Area Fact Sheet

### A. SITE INFORMATION

1. Program's Site Identification Number: 64070
2. Program Interest Number (Preferred ID): G000002548
3. Program Interest Name: Roosevelt Drive In (Site 115)
4. Street address: 425, 445 & 465 Route 440
5. City: Jersey City
6. County: Hudson
7. Block and Lots of the site (duplicate if the site is located in more than one municipality):
  - a. Name of the municipality in which the site is located: Jersey City
  - b. Block and Lots: Block: 1290.A Lots: 11W, 9L, 11H, 11J, 11K, 11L, 11Y, 11M, 11N, 11O, 11P, 11Q, 11R, 12B, 12A, 10Z, 10E, 10H, 10Y, 11T, 11U, 2D, 2E, 15D
  - c. Year of tax map: 1977
8. United States Geological Survey Quadrangle map, indicating the location of the site, presented as Exhibit A.
9. Site Contact:
  - a. Name of contact person: John J. Morris, P.E.
  - b. Company name: Honeywell International Inc.
  - c. Mailing address: 101 Columbia Road Morristown, NJ 07962
  - d. Phone number: (973) 455 - 4003

**B. PROPOSED CLASSIFICATION EXCEPTION AREA INFORMATION**

1. Narrative description of proposed classification exception area:

The proposed CEA boundary represents the maximum extent to which groundwater in the shallow water-bearing zone (fill material) contains total chromium in excess of the NJDEP Class II-A Ground Water Quality Standards (GWQS). With one exception, this delineation is based on prior subsurface investigations conducted in the vicinity of Hudson County Chromate Site 115 (Study Area 7). The basis for this delineation has been documented in Section 4 of the Final Groundwater Investigation Report (FGIR) prepared by HydroQual on behalf of Honeywell (HydroQual, February 2, 2007). The proposed CEA boundary therefore has been developed based on the extent of total chromium in the shallow zone as depicted on Figure 4.2-3 of the FGIR. The exception is that there is no longer groundwater present above the meadow mat within the boundary of Site 115, and thus this portion of the Study Area has been carved out of the CEA. The majority of this area has been excavated and replaced with clean fill. The remaining portion of Site 115 is currently being excavated and has been dewatered through pumping from headers installed within the COPR. Based on multiple lines of evidence (as further discussed in the FGIR), it is concluded that this plume has reached steady-state conditions and thus no further lateral expansion of the plume is expected.

2. Location of proposed classification exception area (duplicate if the site is located in more than one municipality):

- a. Name of the municipality in which the site is located: Jersey City
- b. Block and Lots: Block: 1290.A Lots: 9H, 11W, 9L, 11H, 11J, 11K, 11L, 11Y, 11M, 11N, 11O, 11P, 11Q, 11R, 12B, 12A, 10Z, 10E, 10H, 10Y, 11T, 11U, 2D, 2E, 15D; Block: 1290.B Lots: 9E, 10F, 10G; Block: 1288.2 Lot: C1; Block: 1275 Lot: 4; Block: 1285.5 Lot: 1; Block 1286 Lot: 5; Block: 1286.5 Lot: 1; Blocks: 1291 – 1292 Lot: 76
- c. Year of tax map: 1977

3. Affected aquifer(s):

Aquifer Name	Vertical Depth	Ground Water Classification
Fill	0 - 20 ft	Class II-A

4. Contaminant concentrations:

Contaminant	Concentration <sup>1</sup>	GWQS <sup>2</sup>	SWQS <sup>3</sup>
Chromium (Total)	229,000 ug/L	70 ug/L	750 ug/L
Chromium (Hexavalent)	115,000 ug/L	-----	50 ug/L

5. Proposed classification exception area boundaries:

Horizontal: Scaled map indicating projected areal extent of proposed classification exception area, as well as location of site, presented as Exhibit B.

Vertical: As stated in B.3., above.

Locational coordinates of boundary of proposed classification exception area as New Jersey State Plane Coordinates. A minimum of four coordinates shall be submitted, in a format compatible with Department's geographic information system:

Northing	Easting	(New Jersey State Plane Coordinates)
683438	603172	
683814	603807	
684547	604214	
685701	604234	
685353	603400	
686111	602154	
685441	601413	
684256	602709	

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Latitude	Longitude
40.7090	-74.0994
40.7100	-74.0971
40.7120	-74.0956
40.7152	-74.0956
40.7143	-74.0986
40.7164	-74.1031
40.7145	-74.1057
40.7113	-74.1011

6. Estimated size of the proposed ground water classification exception area:

45.35 Acres

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7. Projected duration and expiration date of the proposed classification exception area:

a. Duration (in years and or days): Indeterminate

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**EVALUATION OF CURRENT AND FUTURE  
GROUNDWATER USE  
(RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)**

**EVALUATION OF CURRENT AND FUTURE GROUNDWATER USE  
(RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)  
(per 7:26E-8.3(b)4(ii) of the NJ Technical Requirements)**

No.	Required Contact	Results of Inquiry	Influence On CEA
1	New Jersey Water Supply Master Plan	Contacted Ian Snook, DEP Division of Water Supply – no need for reviewing the NJ Water Supply Master Plan (e-mail dated 02/06/2008).	None
2	DEP Bureau of Water Allocation	Completed well search indicated 5 water supply wells within 1-mile radius – for details see Table 1.	None
3	Municipal Master Plans – Hudson County	Contacted Barbara A. Netchert, County Clerk’s Office – was transferred to Neil Carroll, County Counsel’s office and to Willie J. Flood, Register’s office – no plans that would affect the groundwater	None
	Municipal Master Plans – Jersey City	Contacted Robert Byrne, City Clerk’s Office and Bob Cotter, Director of Planning – Master Plan does not affect the groundwater.	None
4	Zoning Plans – Hudson County	Contacted Neil Carroll, County Counsel’s office – no plans that would affect the groundwater	None
	Zoning Plans – Jersey City	Contacted Robert Byrne, City Clerk’s Office and Bob Cotter, Director of Planning – no Zoning Plans that would affect the groundwater.	None
5	Local Water Purveyor	Contacted Richard Henning, United Water NJ and Keh Liu, Jersey City Municipal Utilities Authority – no plans pertaining to installation of water lines that would affect the groundwater.	None
6	Planning Officials – Hudson County	Contacted Stephen Marks, County Director of Planning and Mariano Vega, County Dept. of Parks, Engineering and Planning – was transferred to Bob Jasek, County Engineer – no plans that would affect the groundwater	None
	Planning Officials – Jersey City	Contacted Bob Cotter, City Director of Planning and Brian O’Reilly, City Business Administrator – no plans that would affect the groundwater.	None



**EVALUATION OF CURRENT AND FUTURE GROUNDWATER USE  
 (RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)  
 (per 7:26E-8.3(b)4(ii) of the NJ Technical Requirements)**

<b>No.</b>	<b>Required Contact</b>	<b>Results of Inquiry</b>	<b>Influence On CEA</b>
7	Board of Health – Hudson County	Contacted Carol Ann Wilson, County Dept. of Health & Human Services – was transferred to Michael Walker, County Regional Health Commission – no plans that would affect the groundwater.	None
	Board of Health – Jersey City	Contacted Harry Melendez, City Dept. of Health & Human Services – was transferred to Joseph Castagna, County Health Officer – nothing that would affect the groundwater.	None
8	Ordinances Restricting Installation of Potable Wells – Hudson County	Contacted Barbara A. Netchert, County Clerk, Neil Carroll, County Counsel’s office, Stephen Marks, County Director of Planning, Mariano Vega, County Dept. of Parks, Engineering and Planning, Bob Jasek, County Engineer, and Michael Walker, County Regional Health Commission – no ordinances restricting installation of potable wells (no potable wells in Jersey City area).	None
	Ordinances Restricting Installation of Potable Wells – Jersey City	Contacted Robert Byrne, City Clerk, Bob Cotter, City Director of Planning, Brian O’Reilly, City Business Administrator, and Joseph Castagna, County Health Officer – no ordinances restricting installation of potable wells (no potable wells in Jersey City area).	None

Table 1  
Water Supply Wells  
Well Search Summary

The results of the well search found five (5) water supply wells within a 1-mile radius of the site. Three (3) of these wells are listed as industrial water supply wells and the other two as domestic and non-public. Although their current operational status is unknown, all five wells are completed in the bedrock rather than the Shallow zone. None of the wells are located within the proposed CEA boundary, and potable water is provided to all locations within a 1-mile radius of the site.

Permit No.	Owner Name	Well Depth	Capacity	Well Use	Permit Date
		feet	gpm		MM-YY-DD
2600004975	CELANESE CHEMICAL CO	200	20	Domestic	FEB-81-25
2600001731	SPEEDWAY AUTO LAUNDR	150	40	Industrial	OCT-57-11
2600040387	FOWLER EQUIPT. CO. I	300	40	Industrial	APR-95-18
2600043694	PARK, HEE	150	35	Industrial	FEB-96-26
2600002429	GAS INC	150	10	Non Public	JUN-61-20

**NAME AND ADDRESS COPY LIST**

## NAME AND ADDRESS COPY LIST

Barbara A. Netchert  
Hudson County Clerk's Office  
Brennan Court House  
583 Newark Ave.  
Jersey City, NJ 07306  
Tel (201) 795-6112

Robert Byrne, RMC  
Jersey City Clerk's Office  
280 Grove Street  
Jersey City, NJ 07302  
Tel (201) 547-5150

Carol Ann Wilson  
Hudson County Department of Health & Human Services  
Meadowview Campus  
595 County Road  
Secaucus, NJ 07094  
Tel (201) 271-4310

Harry Melendez  
Jersey City Department of Health & Human Services  
201 Cornelison Avenue  
Jersey City, NJ 07304  
Tel 201-547-6800

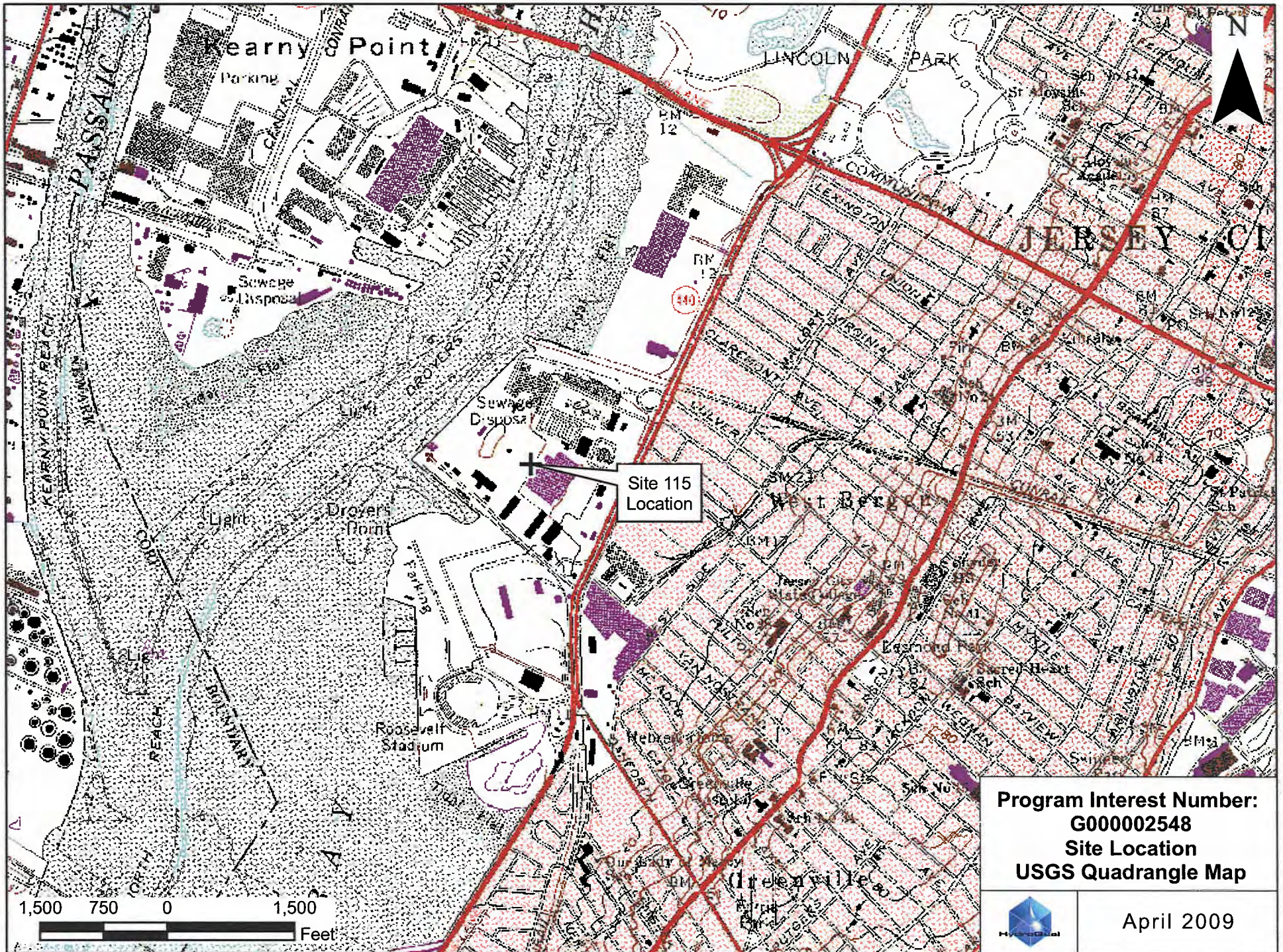
County Environmental Health Act  
Hudson County Regional Health Commission  
Meadowview Campus, Building 1  
595 County Avenue  
Secaucus, NJ 07094  
(201) 223-1133 - Environmental Coordinator

Stephen D. Marks PP, AICP  
Hudson County Division of Planning  
Brennan Court House  
583 Newark Avenue  
Jersey City, NJ 07306  
Tel (201) 217-5137

Bureau Chief  
Department of Environmental Protection  
Bureau of Safe Drinking Water  
401 E. State Street  
P.O. Box 426  
Trenton, NJ 08625-0426  
(609) 292-5550

Diane Zalaskus  
Department of Environmental Protection  
Bureau of Water Allocation  
401 E. State Street  
P.O. Box 426  
Trenton, NJ 08625-0426  
(609) 292-2957

**EXHIBIT A:**  
**USGS QUADRANGLE MAP**



**Program Interest Number:**  
**G00002548**  
**Site Location**  
**USGS Quadrangle Map**



April 2009



**EXHIBIT B:**  
**AERIAL EXTENT OF PROPOSED CEA**  
**AND SITE LOCATION MAPS**



**CEA BOUNDARY**

**EXTENT OF TOTAL CHROMIUM ABOVE THE NJDEP  
GROUNDWATER QUALITY STANDARDS (70 ppb)**

# Legend

-  Map Tiles
-  Proposed CEA Boundary





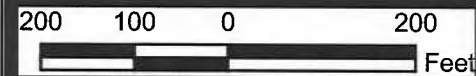
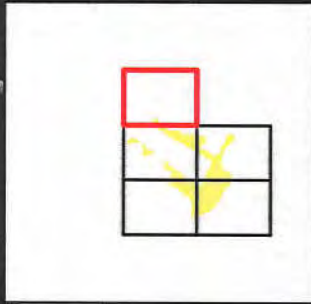
**Program Interest Number:  
G00002548  
Site Location  
Overview Map**



**Shallow Zone  
April 2009**

# Legend

-  Map Tiles
-  Proposed CEA Boundary





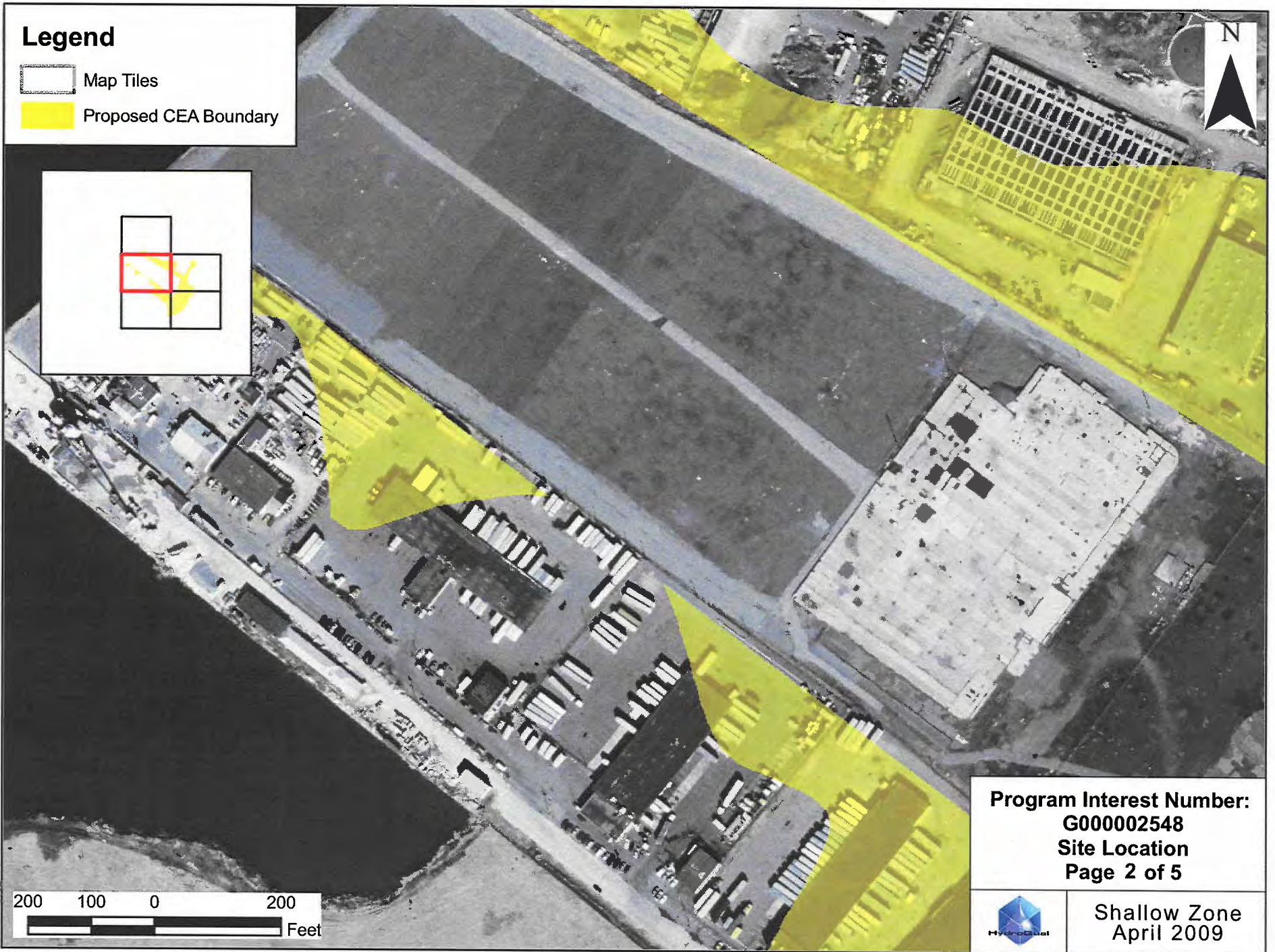
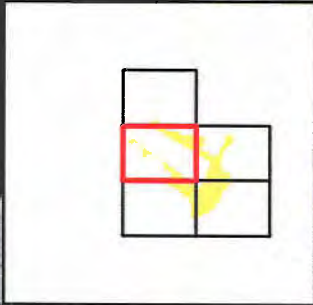
**Program Interest Number:**  
**G00002548**  
**Site Location**  
**Page 1 of 5**



**Shallow Zone**  
**April 2009**

# Legend

-  Map Tiles
-  Proposed CEA Boundary



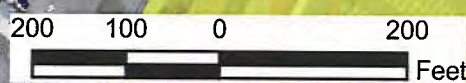
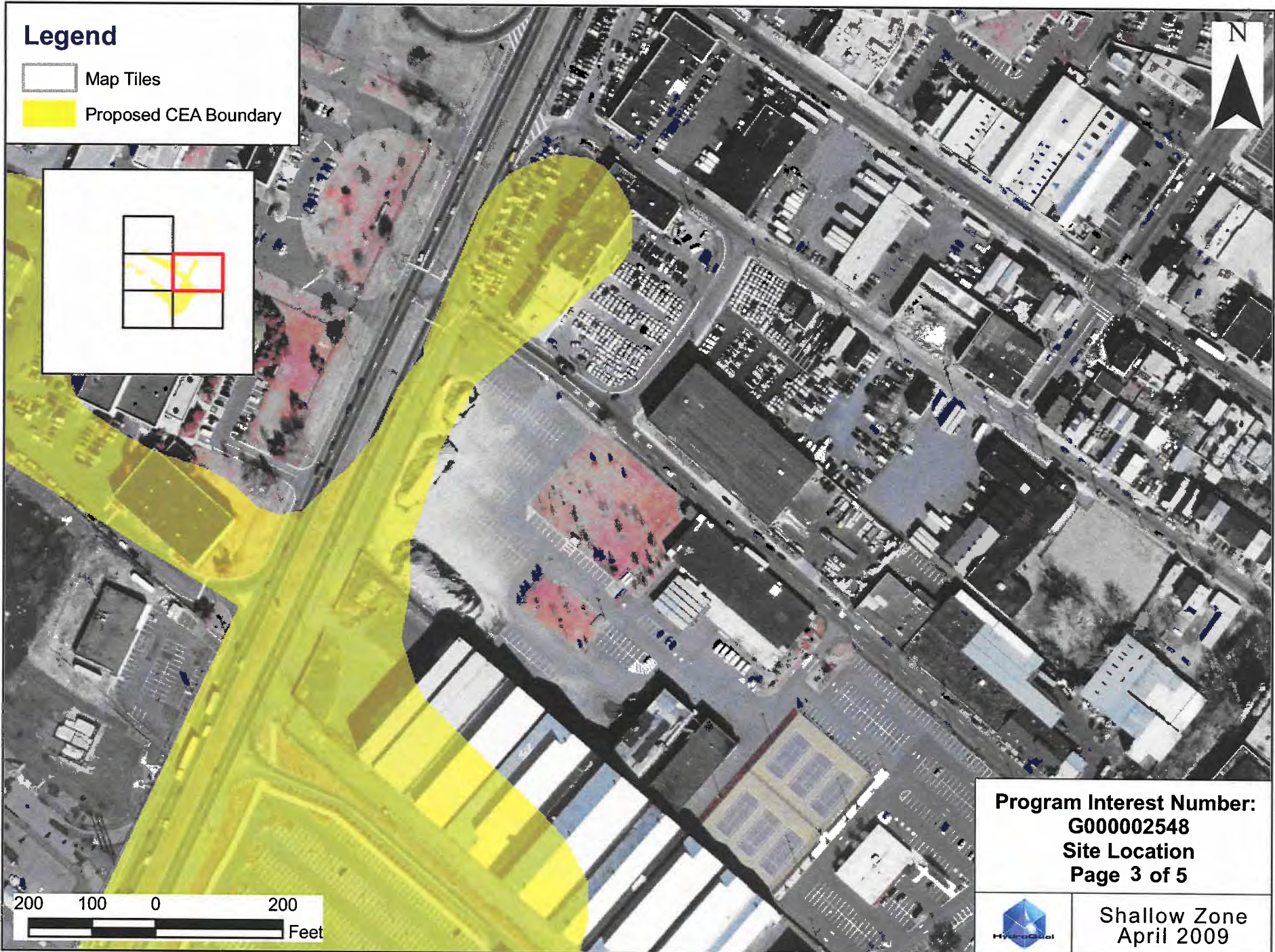
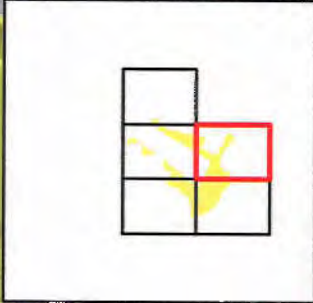
**Program Interest Number:**  
**G00002548**  
**Site Location**  
**Page 2 of 5**



**Shallow Zone**  
**April 2009**

# Legend

- Map Tiles
- Proposed CEA Boundary



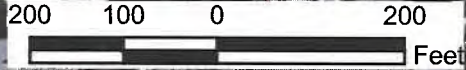
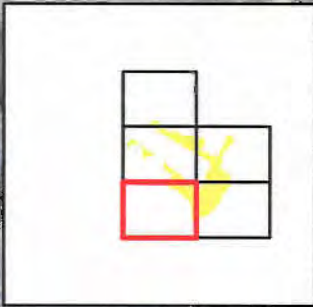
**Program Interest Number:**  
**G000002548**  
**Site Location**  
**Page 3 of 5**



**Shallow Zone**  
**April 2009**

# Legend

- Map Tiles
- Proposed CEA Boundary





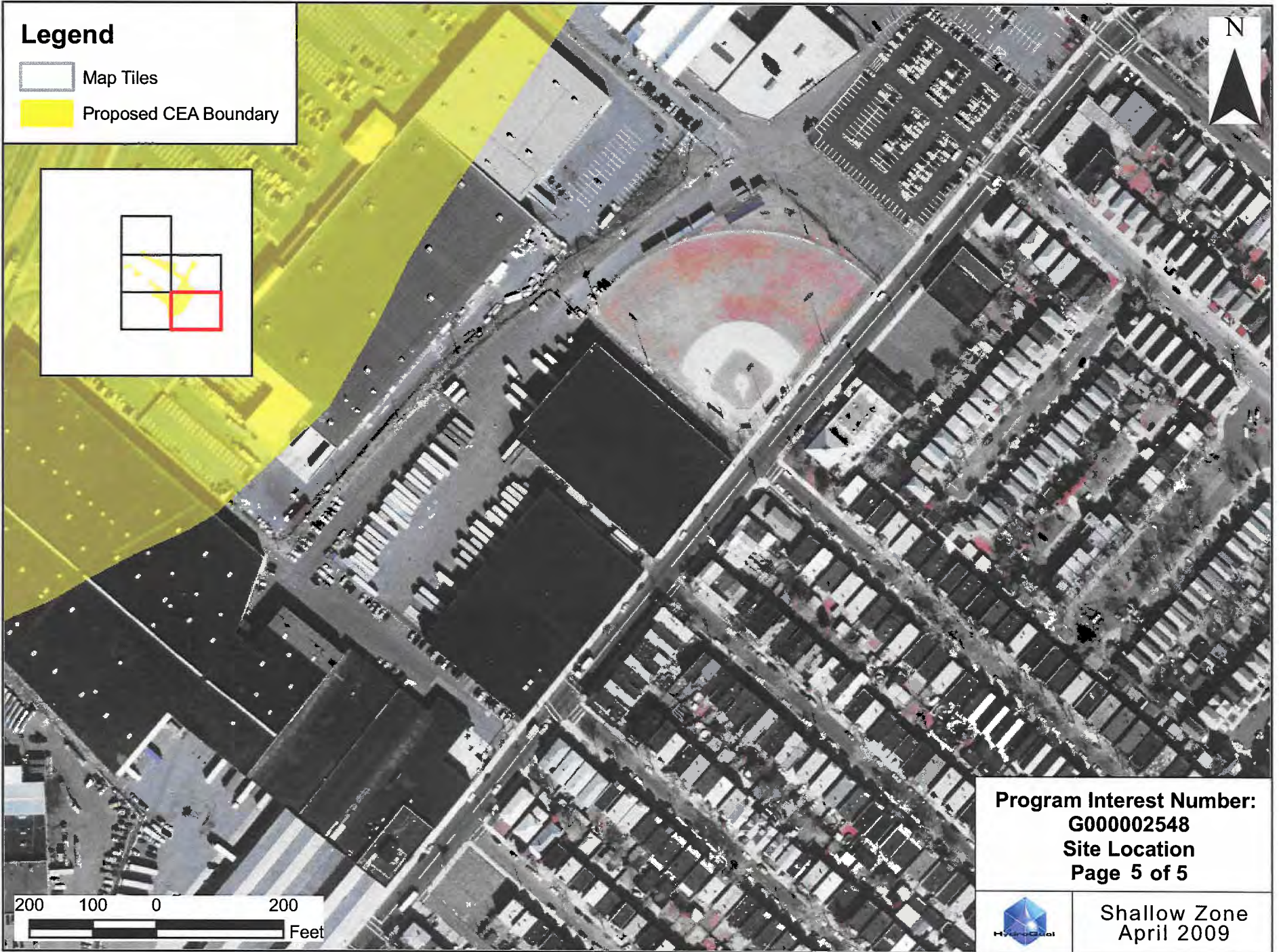
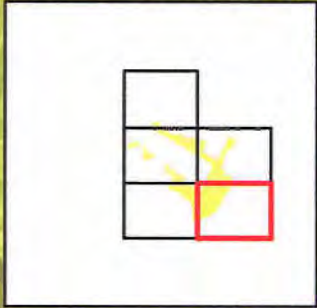
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**G00002548**  
**Site Location**  
**Page 4 of 5**



**Shallow Zone**  
**April 2009**

# Legend

-  Map Tiles
-  Proposed CEA Boundary



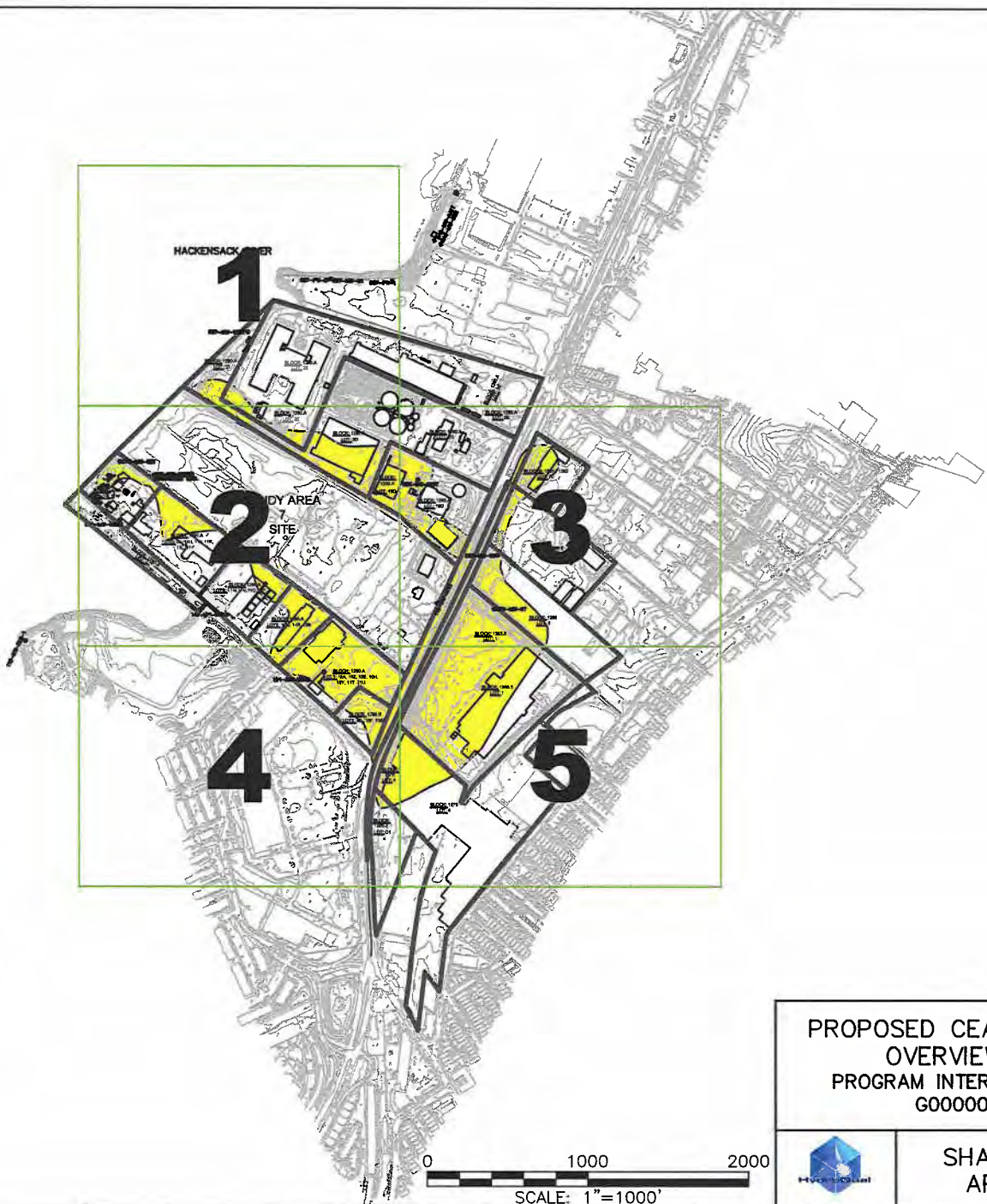
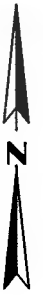
**Program Interest Number:**  
**G00002548**  
**Site Location**  
**Page 5 of 5**







**Shallow Zone**  
**April 2009**

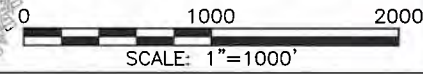
**CEA BOUNDARY**  
**EXISTING CONDITIONS AND**  
**BLOCK & LOT INFORMATION MAPS**





-  PROPOSED CEA BOUNDARY
-  1 TILE
-  EXISTING BUILDING
-  PROPERTY BOUNDARY

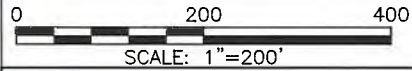
PROPOSED CEA BOUNDARY  
OVERVIEW MAP  
PROGRAM INTEREST NUMBER:  
G000002548



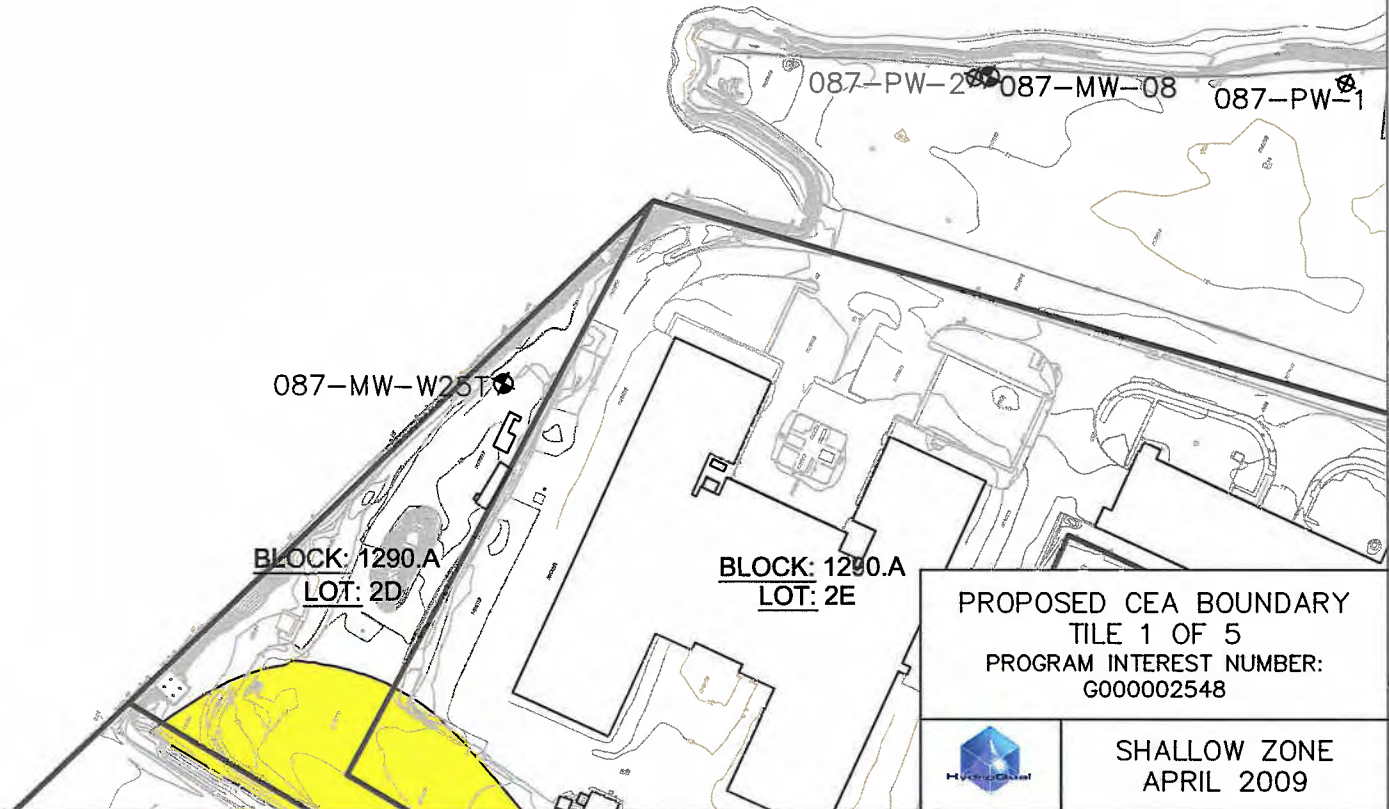
SHALLOW ZONE  
APRIL 2009



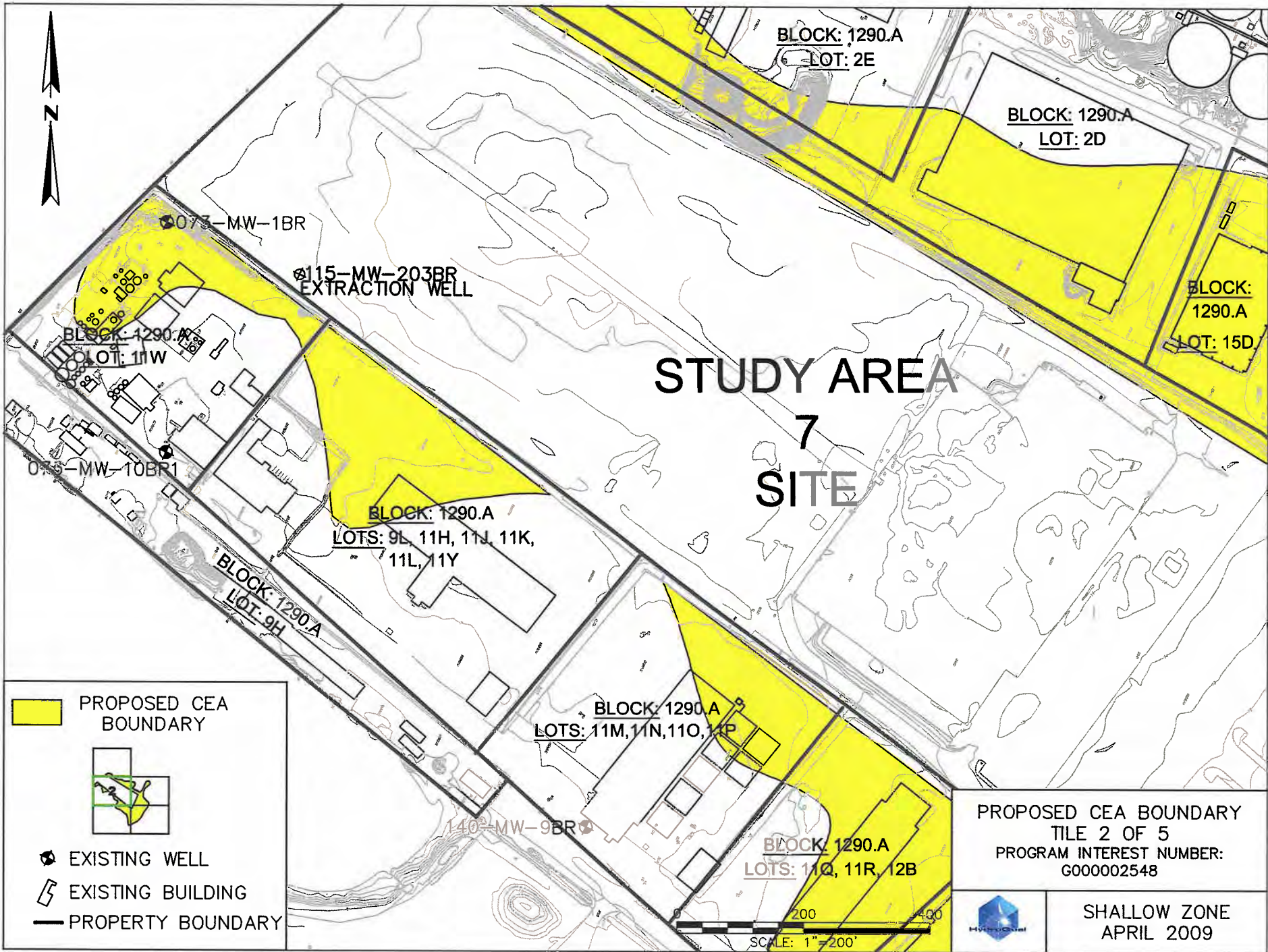
# HACKENSACK RIVER



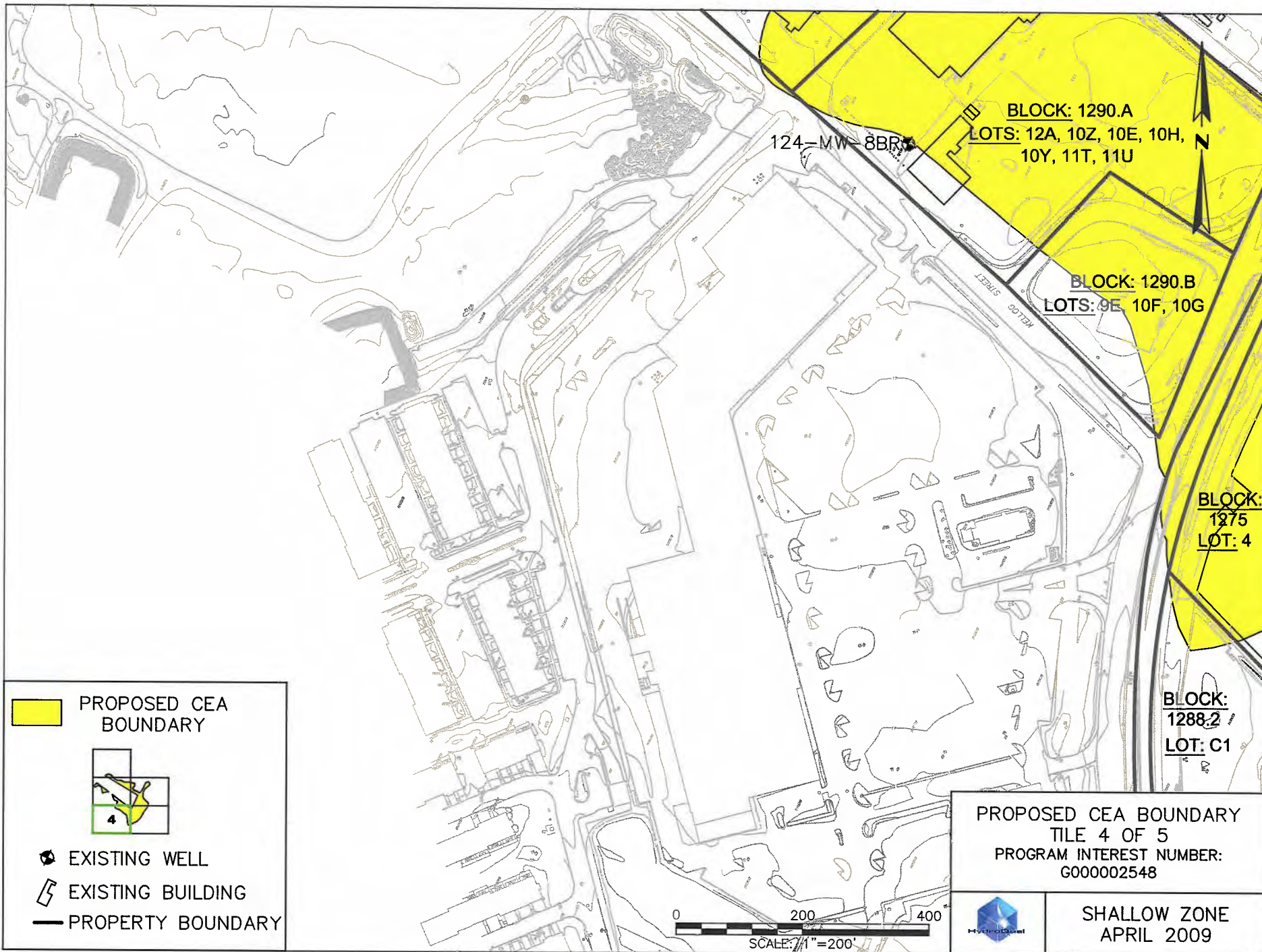
	PROPOSED CEA BOUNDARY
	EXISTING WELL
	EXISTING BUILDING
	PROPERTY BOUNDARY

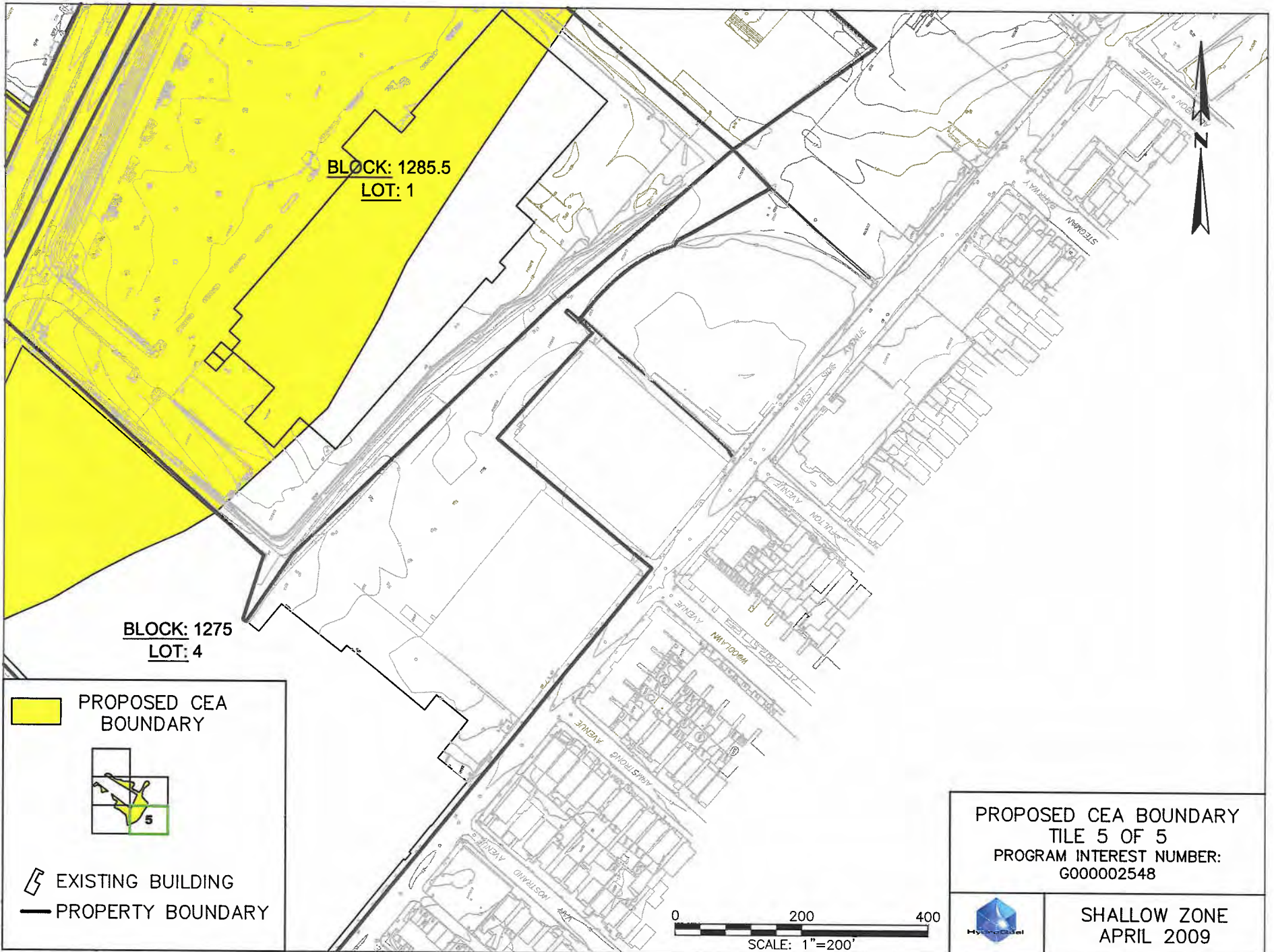


PROPOSED CEA BOUNDARY TILE 1 OF 5 PROGRAM INTEREST NUMBER: G000002548	
	SHALLOW ZONE APRIL 2009

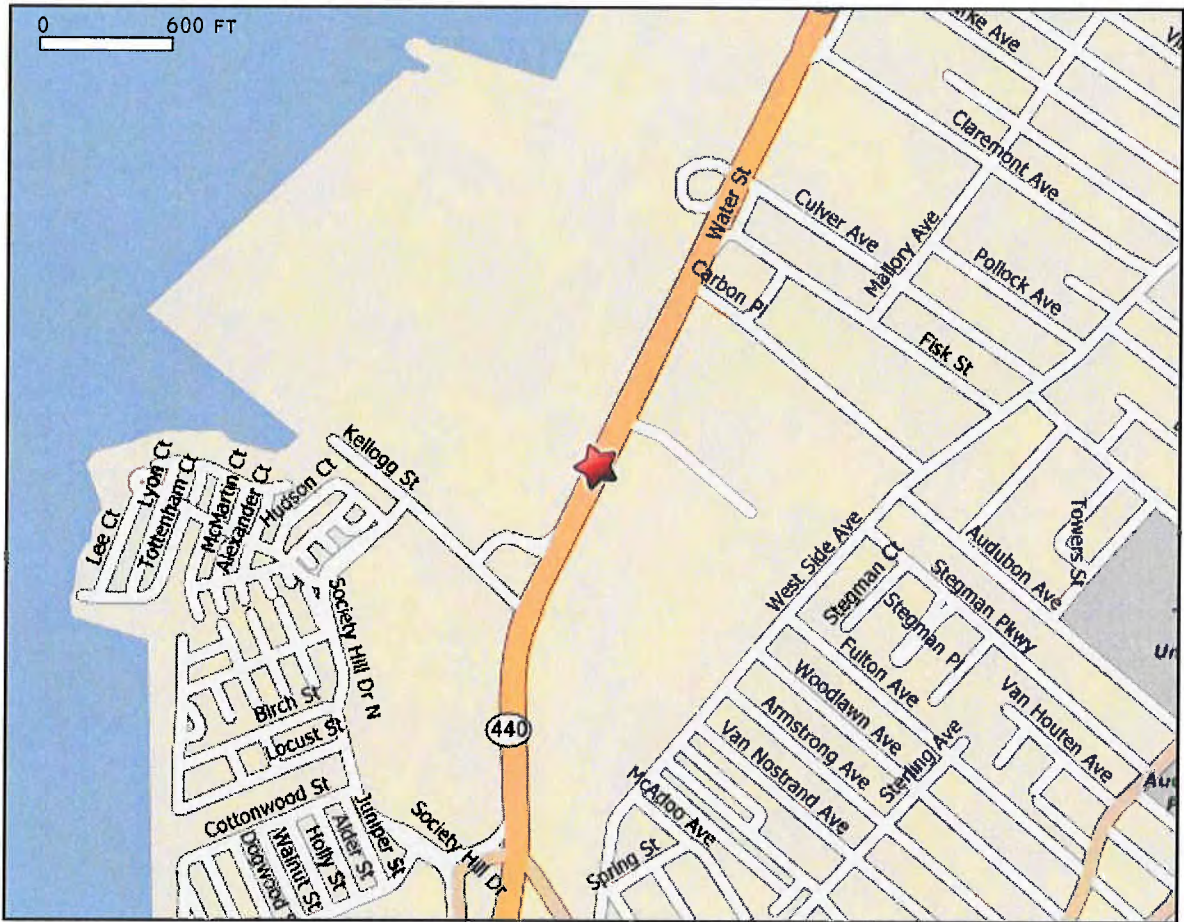








**STREET MAP**



© 2008 MAPQUEST, INC.  
 MAP DATA © 2008 NAVTEQ OR TELEATLAS



**HYDROQUAL, INC.**  
 1200 MACARTHUR BOULEVARD  
 MAHWAH, NEW JERSEY 07430  
 (201) 529-5151 F: 529-5728

**STREET MAP**  
**VICINITY OF SITE I15 CEA**  
 PROGRAM INTEREST NUMBER: G00002548

HONEYWELL STUDY AREA 7  
 JERSEY CITY, NJ



**DIGITAL MAP SUBMISSIONS  
SITE INFO FILE  
AND METADATA FILE**

Site Info File:

Site Name – Roosevelt Drive In (Site 115)

CSL ID# - G000002548

Lead Program ID# -

Lead Program – BCM

Street Address – 425, 445 & 465 Route 440

Municipality – Jersey City

County – Hudson

Start Date – 6/1/09

Duration – Indeterminate

Contaminants – Chromium (Total), Chromium (Hexavalent)

CEA Depth – 20 feet

**Metadata Information for Groundwater CEA (Shallow Fill)**  
**Program Interest Number: G000002548**  
**Jersey City, New Jersey**

1. IDENTIFICATION INFORMATION

1.1. DESCRIPTION

The maps represent the area on and adjacent to the Roosevelt Drive In (Site 115) in Jersey City, New Jersey for which a groundwater Classification Exception Area (CEA) has been proposed for the shallow fill aquifer. The site location and CEA boundary for shallow groundwater is illustrated on the identified maps.

CSL#: G000008742 (from KCSNJ)

Site Name (from KCSNJ): Roosevelt Drive In (Site 115); 425, 445 & 465 Route 440, Jersey City, New Jersey.

1.1.1. ABSTRACT

The "CEA\_shallow.xxx" are a set of four (4) ESRI Shapefiles that illustrate the boundaries of the Classification Exception Area (CEA) at Site 115 in Jersey City, New Jersey. The files contain the polygon shapefile and associated files showing the extent of the CEA boundary for groundwater in the shallow water-bearing zone (fill material) that contains total chromium in excess of the NJDEP Class II-A Ground Water Quality Standards (GWQS).

1.1.2. PURPOSE/BRIEF DESCRIPTION

The four (4) ESRI Shapefiles, "CEA\_shallow.xxx", illustrate the boundaries of the Classification Exception Area (CEA) for the shallow fill at Site 115 in Jersey City, New Jersey.

1.1.3. SUPPLEMENTAL INFORMATION

The following files are provided on the diskette:

CEA\_shallow.shp – ArcView shapefile  
CEA\_shallow.dbf – ArcView attribute table  
CEA\_shallow.prj – ArcView projection file  
CEA\_shallow.shx – ArcView index file

cea\_metafile\_shallow\_final.doc – metadata information for GIS maps.

cea\_site\_info\_file\_shallow.doc – support information for CEA

#### 1.1.4. CURRENTNESS REFERENCE

The maps are representative of current conditions as of June 2008.

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## 2. DATA QUALITY INFORMATION

### 2.1. ATTRIBUTE ACCURACY

The shapefile CEA\_shallow.shp was digitized using the 2002 orthophotography available from the State of New Jersey Office of Information Technology. The orthophotos and resulting CEA boundary are georeferenced to NJ State Plane, NAD 1983, Feet.

### 2.2. QUANTITATIVE ATTRIBUTE ACCURACY ASSESSMENT

The CEA boundary has been plotted on the georeferenced USGS topographic map to assess the positional accuracy of the files.

### 2.3. COMPLETENESS REPORT

There were no known omissions in the construction of the data sets.

### 2.4. LINEAGE

ESRI ArcGIS was used to view the orthophotos and digitize the CEA boundary based on measured values at sampling wells.

### 2.5. SOURCE SCALE DENOMINATOR

2400

### 2.6. TYPE OF SOURCE MEDIA

Online

### SOURCE CURRENTNESS REFERENCE

2002

### 2.7. PROCESS DATE

April 2009

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## 3. SPATIAL DATA ORGANIZATION INFORMATION

### 3.1. DIRECT SPATIAL REFERENCE METHOD

Vector data, with polygons.

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## 4. SPATIAL REFERENCE INFORMATION

### 4.1. GRID COORDINATE SYSTEM

NJ State Plane

### 4.2. HORIZONTAL DATUM NAME

NAD 83

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## 5. ATTRIBUTE INFORMATION

### 5.1. ATTRIBUTE LABEL: CEA\_shallow.shp

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## 6. METADATA REFERENCE INFORMATION

### 6.1. METADATA DATE: 4/20/09

### 6.2. METADATA CONTACT: William G. Soukup P.G.

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## 7. CITATION INFORMATION

### 7.1. ORIGINATOR

HydroQual Inc. – William G. Soukup P.G.

### 7.2. TITLE

CEA Boundary for Shallow Fill, Site 115, Jersey City, New Jersey

### 7.3. AUTHOR'S NOTES

Prepared by HydroQual, Inc., 1200 MacArthur Boulevard, Mahwah, NJ  
Prepared for Honeywell International Inc.

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8. CONTACT INFORMATION

8.1. CONTACT PERSON (PRIMARY)

John J. Morris, P.E.

8.2. CONTACT ORGANIZATION

Honeywell International Inc.

8.3. CONTACT ADDRESS

101 Columbia Road  
Morristown, NJ 07962

8.4. CONTACT VOICE TELEPHONE

(973) 455-4003  
[john.morris@honeywell.com](mailto:john.morris@honeywell.com)

8.5. CONTACT PERSON (SECONDARY)

Brian George  
HydroQual, Inc.  
1200 MacArthur Boulevard  
Mahwah, NJ 07430  
(201) 529-5151 x 7203

## Ground Water Classification Exception Area Fact Sheet

### A. SITE INFORMATION

1. Program's Site Identification Number: 64070
2. Program Interest Number (Preferred ID): G000002548
3. Program Interest Name: Roosevelt Drive In (Site 115)
4. Street address: 425, 445 & 465 Route 440
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7. Block and Lots of the site (duplicate if the site is located in more than one municipality):
  - a. Name of the municipality in which the site is located: Jersey City
  - b. Block and Lots: Block: 1290.A Lots: 11W, 9L, 11H, 11J, 11K, 11L, 11Y, 11M, 11N, 11O, 11P, 11Q, 11R, 12B, 12A, 10Z, 10E, 10H, 10Y, 11T, 11U, 2D, 2E, 15D
  - c. Year of tax map: 1977
8. United States Geological Survey Quadrangle map, indicating the location of the site, presented as Exhibit A.
9. Site Contact:
  - a. Name of contact person: John J. Morris, P.E.
  - b. Company name: Honeywell International Inc.
  - c. Mailing address: 101 Columbia Road Morristown, NJ 07962
  - d. Phone number: (973) 455 - 4003

B. PROPOSED CLASSIFICATION EXCEPTION AREA INFORMATION

1. Narrative description of proposed classification exception area:

The proposed CEA boundary represents the maximum extent to which groundwater in the deep overburden water-bearing zone contains total chromium in excess of the NJDEP Class II-A Ground Water Quality Standards (GWQS). The deep overburden is defined as the lacustrine deposits occurring between the bottom of the meadow mat (or below an elevation of approximately + 2 feet (msl) where the meadow mat is not present) and the top of the glacial till/ice contact deposits. This delineation is based on prior subsurface investigations conducted within, and in the vicinity of, Hudson County Chromate Site 115 (Study Area 7). The basis for this delineation has been documented in Section 4 of the Final Groundwater Investigation Report (FGIR) prepared by HydroQual on behalf of Honeywell (HydroQual, February 2, 2007). The proposed CEA boundary therefore has been developed based on the extent of total chromium in the deep and intermediate hydro-stratigraphic zones as depicted on Figures 4.4-5 and 4.5-6 of the FGIR. Based on multiple lines of evidence (as further discussed in the FGIR), it is concluded that this plume has reached steady-state conditions and thus no further lateral expansion of the plume is expected. Additionally, the approved groundwater extraction and treatment remedy began operation in December, 2008 and is designed to contain the plume from any further migration.

2. Location of proposed classification exception area (duplicate if the site is located in more than one municipality):

a. Name of the municipality in which the site is located: Jersey City

b. Block and Lots: Block: 1290.A Lots: 11Q, 11R, 12B, 12A, 10Z, 10E, 10H, 10Y, 11T, 11U, 14D, 14H, 14J, 2D, 2E, 15D, A1, A2; Block: 1290.B Lots: 9E, 10F, 10G; Block: 1288.1 Lot: 1M; Block: 1751 Lots: 11, 10K1, 10K2, 10N; Block: 1285.5 Lot: 1; Block 1286 Lot: 5; Block: 1286.5 Lots: 1, 2; Block: 1287-A Lot: 2C; Blocks: 1291 – 1292 Lot: 76; Block: 1292.1 Lots: 3, 4

c. Year of tax map: 1977

3. Affected aquifer(s):

Aquifer Name	Vertical Depth	Ground Water Classification
Quaternary Lacustrine (locally referred to as "deep overburden")	20 - 90 ft	Class II-A

4. Contaminant concentrations:

Contaminant	Concentration <sup>1</sup>	GWQS <sup>2</sup>	SWQS <sup>3</sup>
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Chromium (Total)	7,330,000 ug/L	70 ug/L	750 ug/L
Chromium (Hexavalent)	6,920,000 ug/L	-----	50 ug/L

5. Proposed classification exception area boundaries:

Horizontal: Scaled map indicating projected areal extent of proposed classification exception area, as well as location of site, presented as Exhibit B.

Vertical: As stated in B.3., above.

Locational coordinates of boundary of proposed classification exception area as New Jersey State Plane Coordinates. A minimum of four coordinates shall be submitted, in a format compatible with Department's geographic information system:

Northing	Easting	(New Jersey State Plane Coordinates)
683955	602771	
684052	603284	
684412	603121	
684130	603576	
684492	604459	
687889	602753	
684478	602556	
684531	602864	

Latitude	Longitude
40.7104	-74.1009
40.7107	-74.0990
40.7117	-74.0996
40.7109	-74.0980
40.7119	-74.0948
40.7212	-74.1009
40.7119	-74.1016
40.7120	-74.1005

6. Estimated size of the proposed ground water classification exception area:

113.27 Acres

7. Projected duration and expiration date of the proposed classification exception area:

a. Duration (in years and or days): Indeterminate

Data from prior investigations indicate that the presence of elevated chromium in the deep overburden groundwater was likely caused by historic releases of chromate solutions from

various processes at the former Mutual Chemical Company production plant located east of Route 440. The plume is currently in steady-state conditions and is being sustained by the slow diffusion of chromium out of low permeability silts and clays at depth. Leaching studies of these materials indicate that over 40 pore-volume exchanges would be required to significantly lower chromium concentrations in groundwater. Based on these results and considering the slow rate of groundwater flow through the low permeability deposits, concentrations are expected to remain above the NJ GWQS in excess of 50 years. Thus, with one exception, the duration of the proposed CEA is considered indeterminate.

The exception is with respect to the discharge area of the deep overburden plume beneath the Hackensack River. The approved deep overburden groundwater pump and treatment remedy for SA-7 began operation in December, 2008 and has been designed to pull this portion of the plume back from beneath the river through pumping of the two deep overburden downgradient extraction wells. Details of the approved pump and treat system are presented in the "Engineering Report, Deep Overburden and Bedrock Groundwater Extraction and Treatment, Honeywell Study Area 7" (HydroQual, December, 2007). This remedial action therefore will be effective at restoring chromium concentrations to below NJ GWQS within this portion of the plume. Once this is confirmed through monitoring, a proposal will be submitted to modify the CEA boundary accordingly.

b. Expiration date (as calendar date):           N/A          

Footnotes

1 Maximum concentration detected at the time Classification Exception Area information submitted to the Department. For a complete list of sampling points in which chromium was detected above applicable standards, refer to the Final Groundwater Investigation Report-Honeywell Study Area 7 Site (HydroQual, February 2007).

2 New Jersey Ground Water Quality Standards, N.J.A.C. 7:9-6.

3 New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B.

**EVALUATION OF CURRENT AND FUTURE  
GROUNDWATER USE  
(RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)**

**EVALUATION OF CURRENT AND FUTURE GROUNDWATER USE  
(RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)  
(per 7:26E-8.3(b)4(ii) of the NJ Technical Requirements)**

No.	Required Contact	Results of Inquiry	Influence On CEA
1	New Jersey Water Supply Master Plan	Contacted Ian Snook, DEP Division of Water Supply – no need for reviewing the NJ Water Supply Master Plan (e-mail dated 02/06/2008).	None
2	DEP Bureau of Water Allocation	Completed well search indicated 5 water supply wells within 1-mile radius – for details see Table 1.	None
3	Municipal Master Plans – Hudson County	Contacted Barbara A. Netchert, County Clerk’s Office – was transferred to Neil Carroll, County Counsel’s office and to Willie J. Flood, Register’s office – no plans that would affect the groundwater	None
	Municipal Master Plans – Jersey City	Contacted Robert Byrne, City Clerk’s Office and Bob Cotter, Director of Planning – Master Plan does not affect the groundwater.	None
4	Zoning Plans – Hudson County	Contacted Neil Carroll, County Counsel’s office – no plans that would affect the groundwater	None
	Zoning Plans – Jersey City	Contacted Robert Byrne, City Clerk’s Office and Bob Cotter, Director of Planning – no Zoning Plans that would affect the groundwater.	None
5	Local Water Purveyor	Contacted Richard Henning, United Water NJ and Keh Liu, Jersey City Municipal Utilities Authority – no plans pertaining to installation of water lines that would affect the groundwater.	None
6	Planning Officials – Hudson County	Contacted Stephen Marks, County Director of Planning and Mariano Vega, County Dept. of Parks, Engineering and Planning – was transferred to Bob Jasek, County Engineer – no plans that would affect the groundwater	None
	Planning Officials – Jersey City	Contacted Bob Cotter, City Director of Planning and Brian O’Reilly, City Business Administrator – no plans that would affect the groundwater.	None

**EVALUATION OF CURRENT AND FUTURE GROUNDWATER USE  
(RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)  
(per 7:26E-8.3(b)4(ii) of the NJ Technical Requirements)**

<b>No.</b>	<b>Required Contact</b>	<b>Results of Inquiry</b>	<b>Influence On CEA</b>
7	Board of Health – Hudson County	Contacted Carol Ann Wilson, County Dept. of Health & Human Services – was transferred to Michael Walker, County Regional Health Commission – no plans that would affect the groundwater.	None
	Board of Health – Jersey City	Contacted Harry Melendez, City Dept. of Health & Human Services – was transferred to Joseph Castagna, County Health Officer – nothing that would affect the groundwater.	None
8	Ordinances Restricting Installation of Potable Wells – Hudson County	Contacted Barbara A. Netchert, County Clerk, Neil Carroll, County Counsel’s office, Stephen Marks, County Director of Planning, Mariano Vega, County Dept. of Parks, Engineering and Planning, Bob Jasek, County Engineer, and Michael Walker, County Regional Health Commission – no ordinances restricting installation of potable wells (no potable wells in Jersey City area).	None
	Ordinances Restricting Installation of Potable Wells – Jersey City	Contacted Robert Byrne, City Clerk, Bob Cotter, City Director of Planning, Brian O’Reilly, City Business Administrator, and Joseph Castagna, County Health Officer – no ordinances restricting installation of potable wells (no potable wells in Jersey City area).	None

Table 1  
Water Supply Wells  
Well Search Summary

The results of the well search found five (5) water supply wells within a 1-mile radius of the site. Three (3) of these wells are listed as industrial water supply wells and the other two as domestic and non-public. Although their current operational status is unknown, all five wells are completed in the bedrock rather than the Deep Overburden zone. None of the wells are located within the proposed CEA boundary and potable water is provided to all locations within a 1-mile radius of the site.

Permit No.	Owner Name	Well Depth	Capacity	Well Use	Permit Date
		feet	gpm		MM-YY-DD
2600004975	CELANESE CHEMICAL CO	200	20	Domestic	FEB-81-25
2600001731	SPEEDWAY AUTO LAUNDR	150	40	Industrial	OCT-57-11
2600040387	FOWLER EQUIPT. CO. I	300	40	Industrial	APR-95-18
2600043694	PARK, HEE	150	35	Industrial	FEB-96-26
2600002429	GAS INC	150	10	Non Public	JUN-61-20

**NAME AND ADDRESS COPY LIST**

## NAME AND ADDRESS COPY LIST

Barbara A. Netchert  
Hudson County Clerk's Office  
Brennan Court House  
583 Newark Ave.  
Jersey City, NJ 07306  
Tel (201) 795-6112

Robert Byrne, RMC  
Jersey City Clerk's Office  
280 Grove Street  
Jersey City, NJ 07302  
Tel (201) 547-5150

Carol Ann Wilson  
Hudson County Department of Health & Human Services  
Meadowview Campus  
595 County Road  
Secaucus, NJ 07094  
Tel (201) 271-4310

Harry Melendez  
Jersey City Department of Health & Human Services  
201 Cornelison Avenue  
Jersey City, NJ 07304  
Tel 201-547-6800

County Environmental Health Act  
Hudson County Regional Health Commission  
Meadowview Campus, Building 1  
595 County Avenue  
Secaucus, NJ 07094  
(201) 223-1133 - Environmental Coordinator

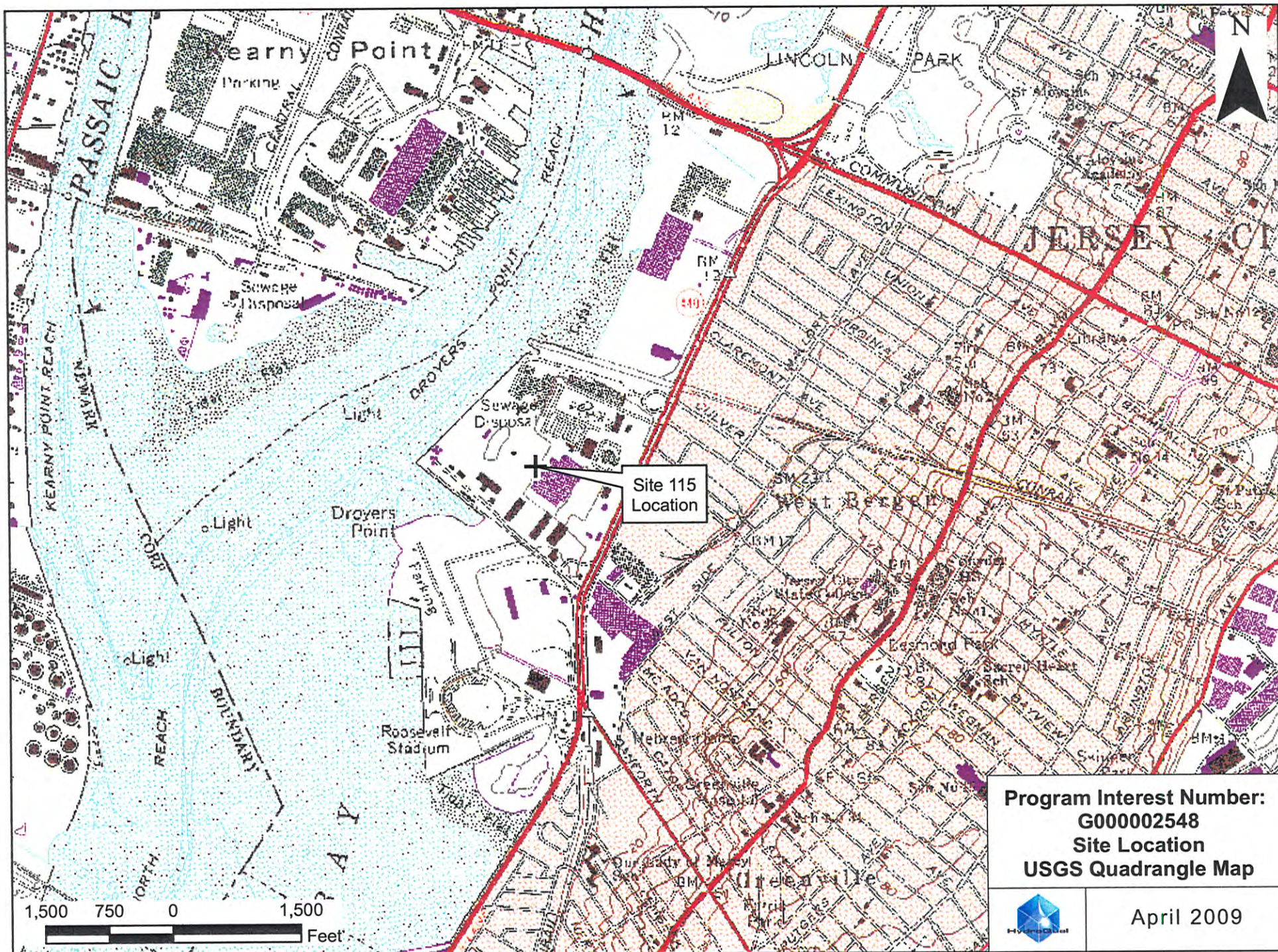
Stephen D. Marks PP, AICP  
Hudson County Division of Planning  
Brennan Court House  
583 Newark Avenue  
Jersey City, NJ 07306  
Tel (201) 217-5137



Bureau Chief  
Department of Environmental Protection  
Bureau of Safe Drinking Water  
401 E. State Street  
P.O. Box 426  
Trenton, NJ 08625-0426  
(609) 292-5550

Diane Zalaskus  
Department of Environmental Protection  
Bureau of Water Allocation  
401 E. State Street  
P.O. Box 426  
Trenton, NJ 08625-0426  
(609) 292-2957

**EXHIBIT A:**  
**USGS QUADRANGLE MAP**

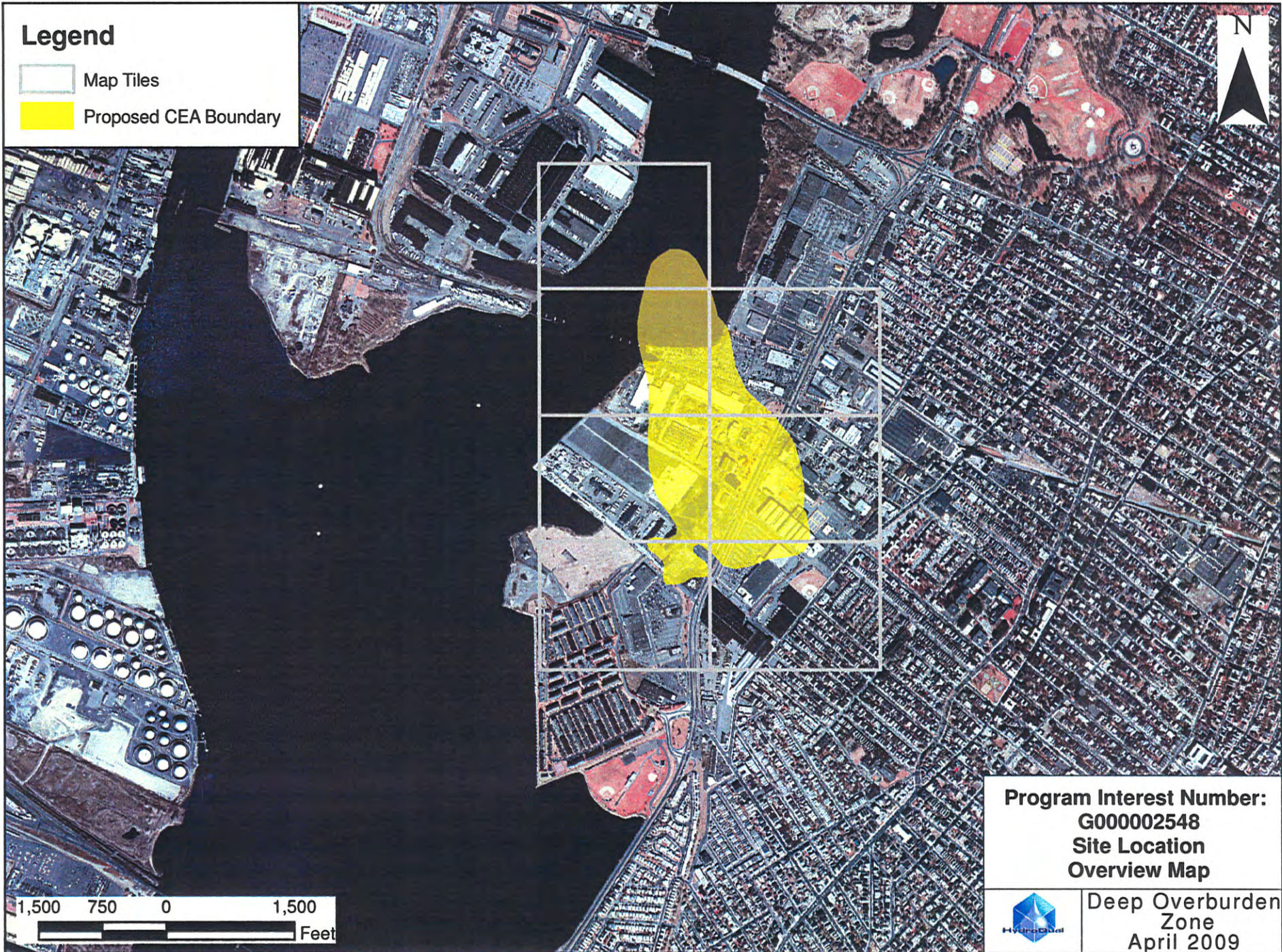


Data Source: USGS Digital Raster Graphic, Jersey City

**EXHIBIT B:**  
**AERIAL EXTENT OF PROPOSED CEA**  
**AND SITE LOCATION MAPS**

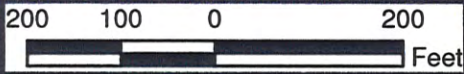
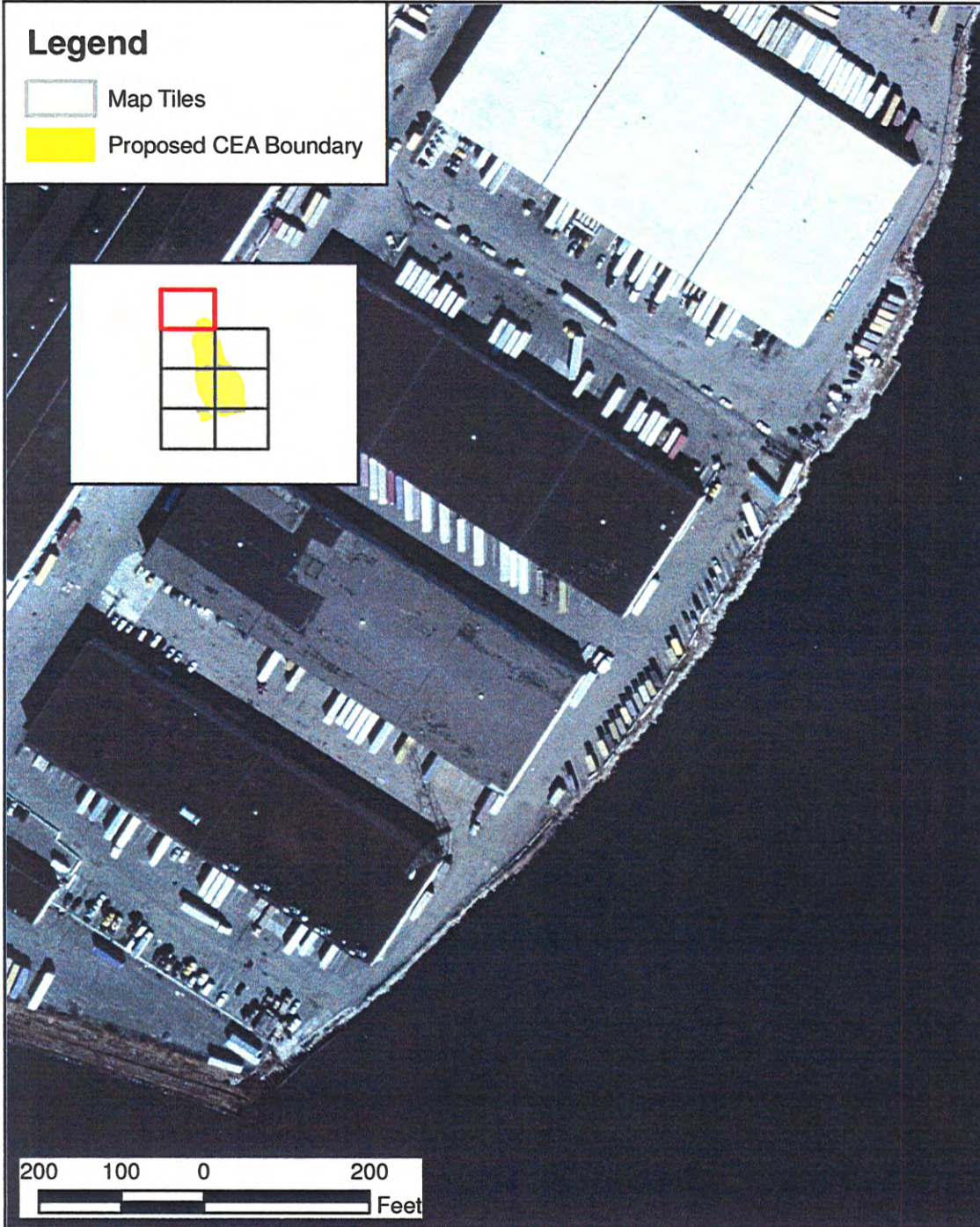
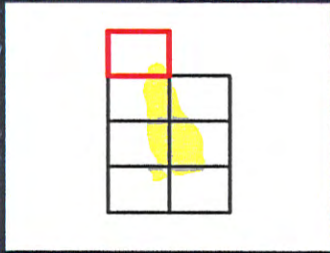
**CEA BOUNDARY**


**EXTENT OF TOTAL CHROMIUM ABOVE THE NJDEP  
GROUNDWATER QUALITY STANDARDS (70 ppb)**



# Legend

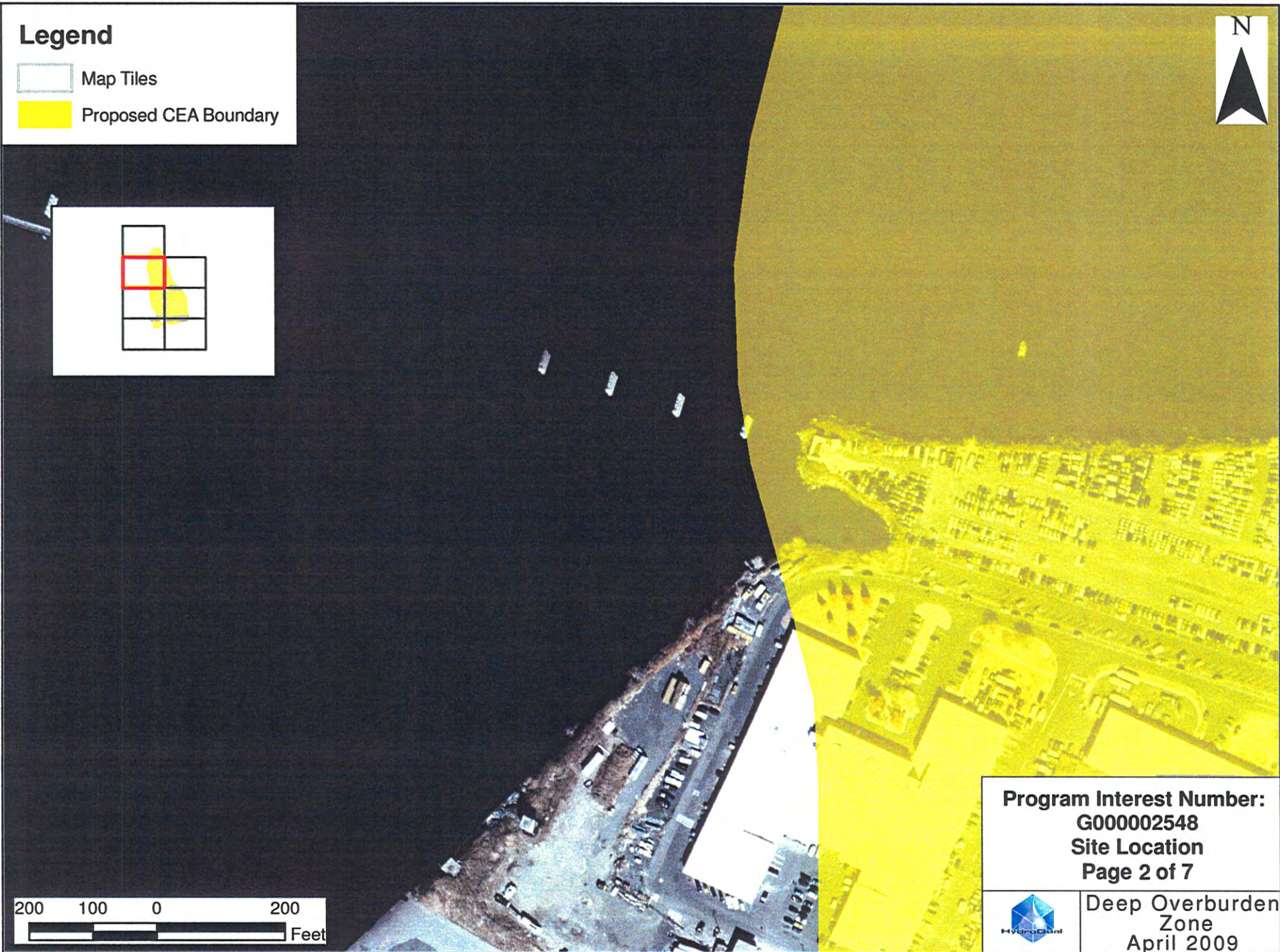
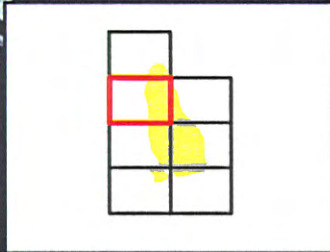
- Map Tiles
- Proposed CEA Boundary



<b>Program Interest Number:</b> G000002548	
<b>Site Location</b> Page 1 of 7	
	<b>Deep Overburden Zone</b> April 2009

# Legend

- Map Tiles
- Proposed CEA Boundary



**Program Interest Number:**  
**G00002548**  
**Site Location**  
**Page 2 of 7**

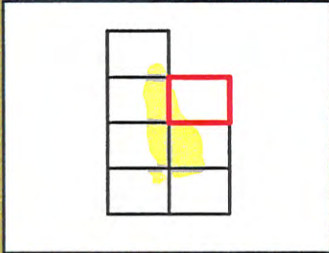


**Deep Overburden**  
**Zone**  
**April 2009**




# Legend

- Map Tiles
- Proposed CEA Boundary



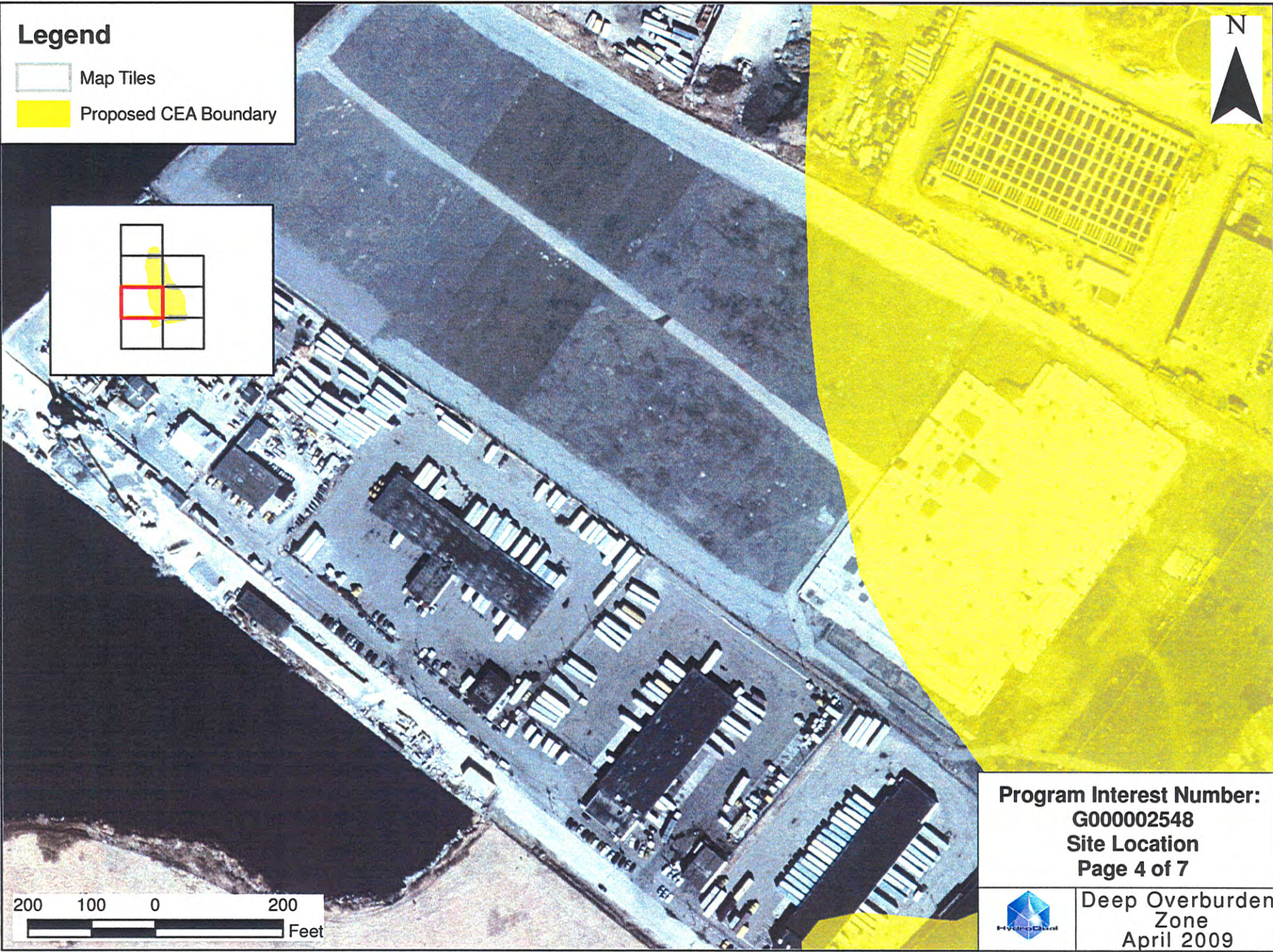
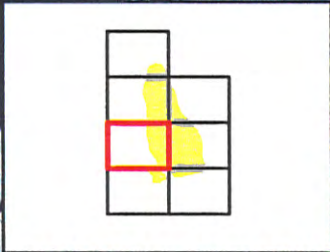
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G00002548  
**Site Location**  
Page 3 of 7



**Deep Overburden  
Zone**  
April 2009

# Legend

- Map Tiles
- Proposed CEA Boundary



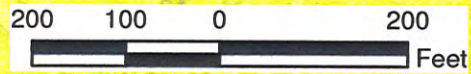
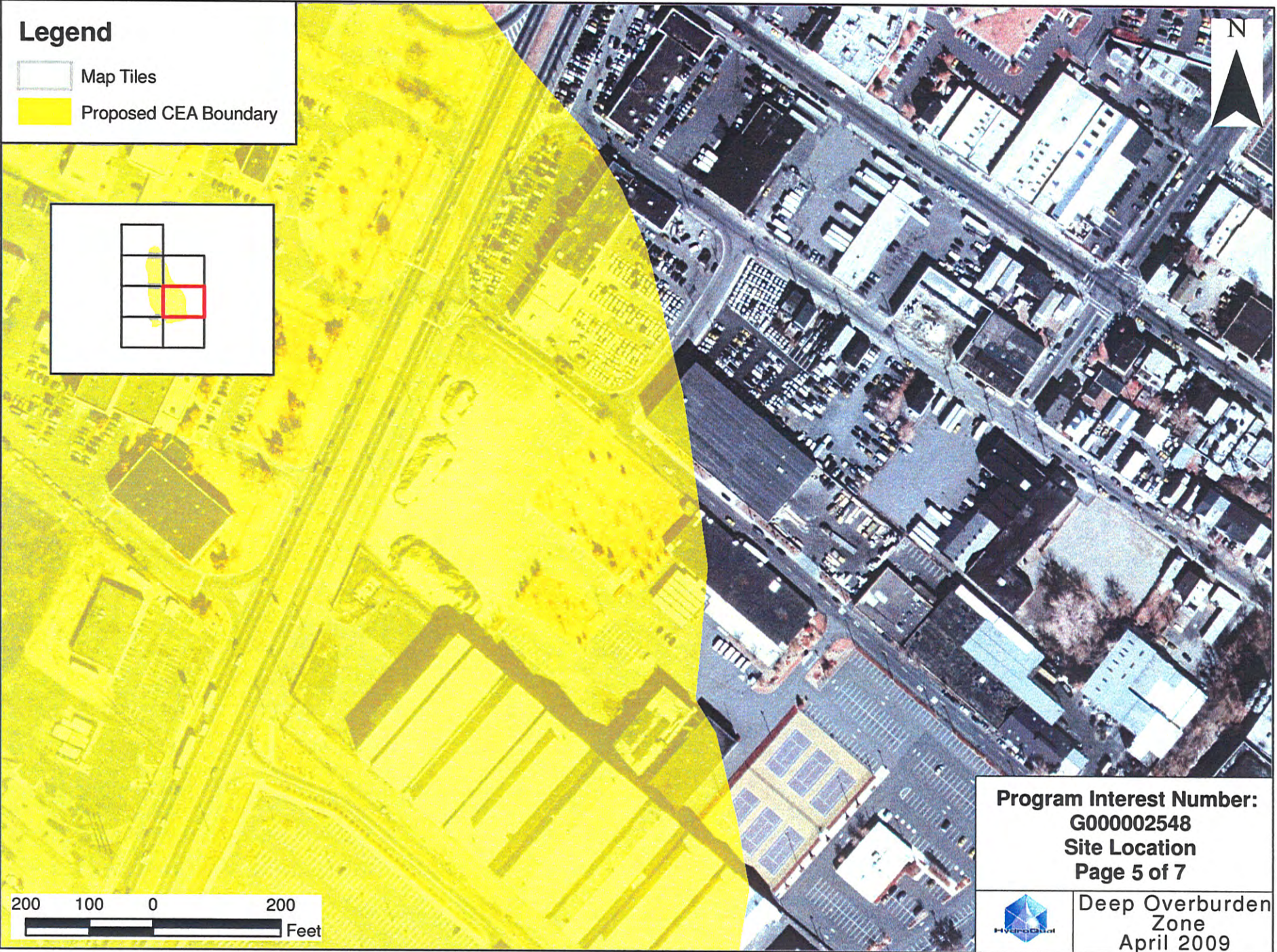
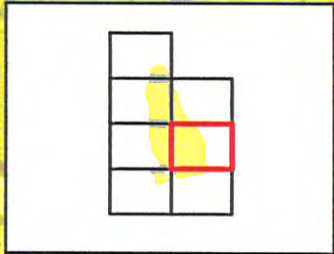
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G000002548  
**Site Location**  
Page 4 of 7



**Deep Overburden  
Zone**  
April 2009

# Legend

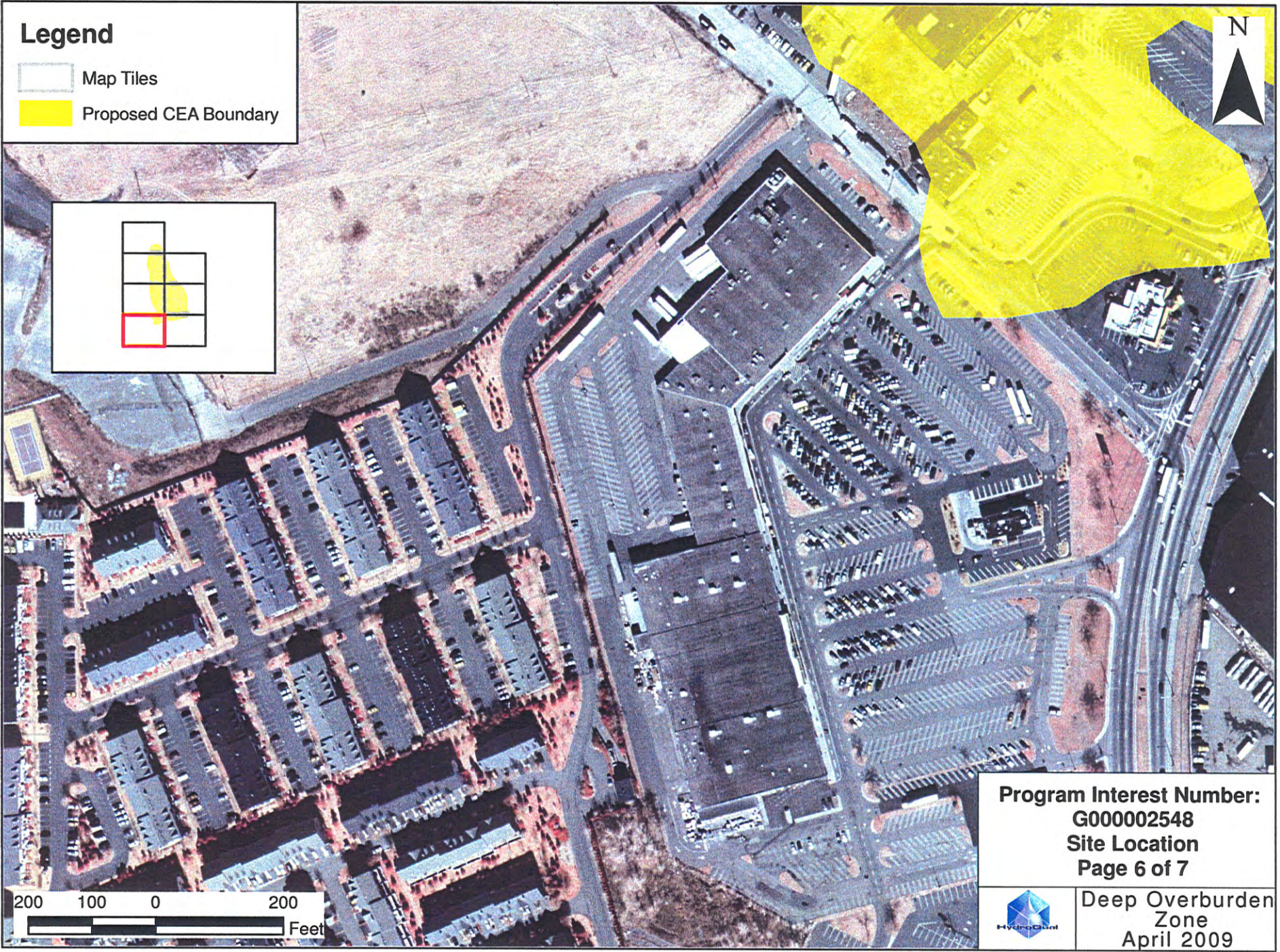
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- Proposed CEA Boundary



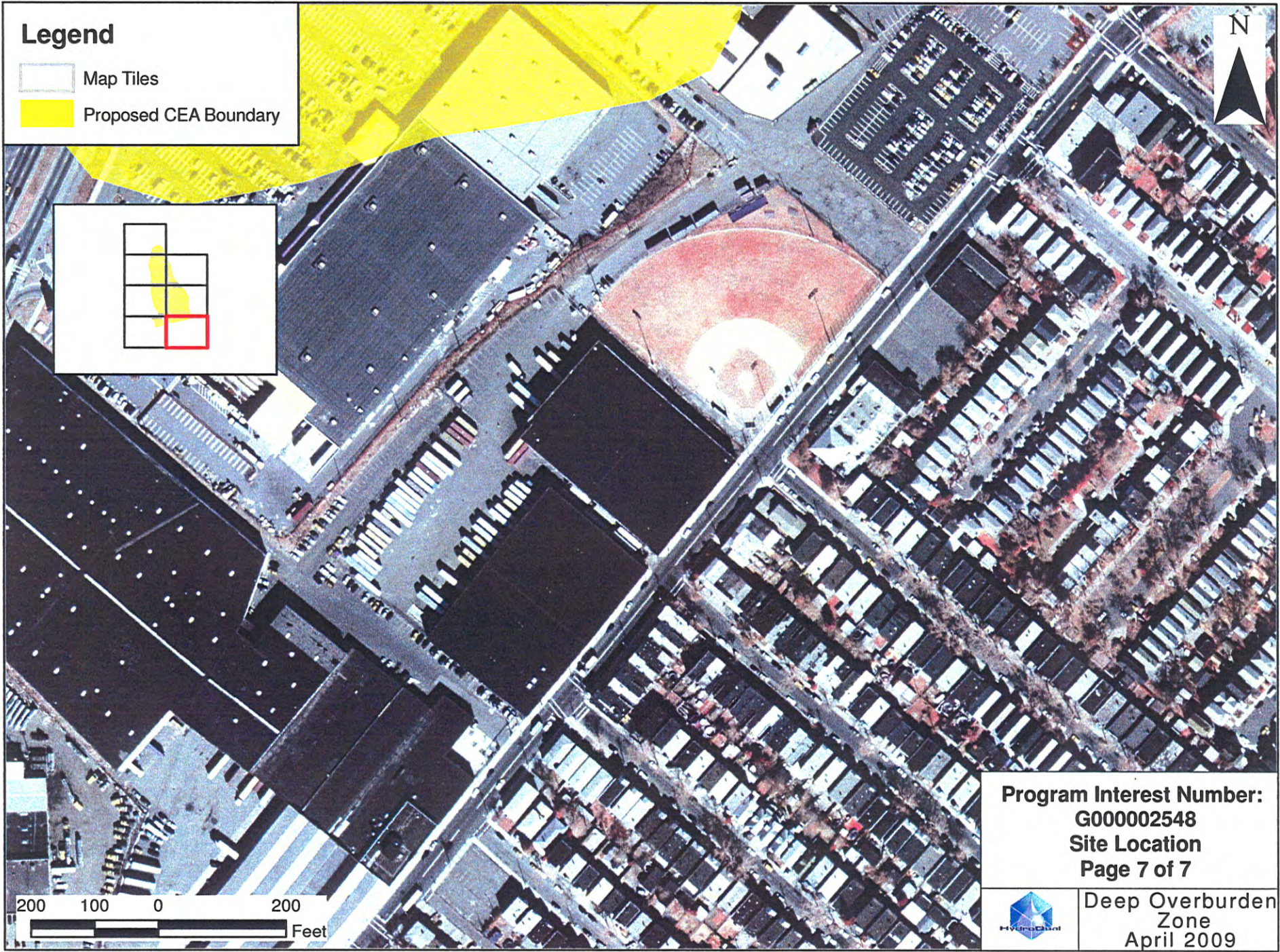
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**Site Location**  
**Page 5 of 7**



**Deep Overburden**  
**Zone**  
**April 2009**

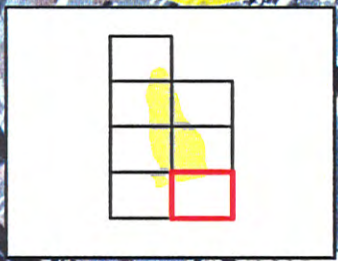


Aerial Source: State of New Jersey Office of Information Technology, Office of Geographic Information Systems, 2002



**Legend**


- Map Tiles
- Proposed CEA Boundary



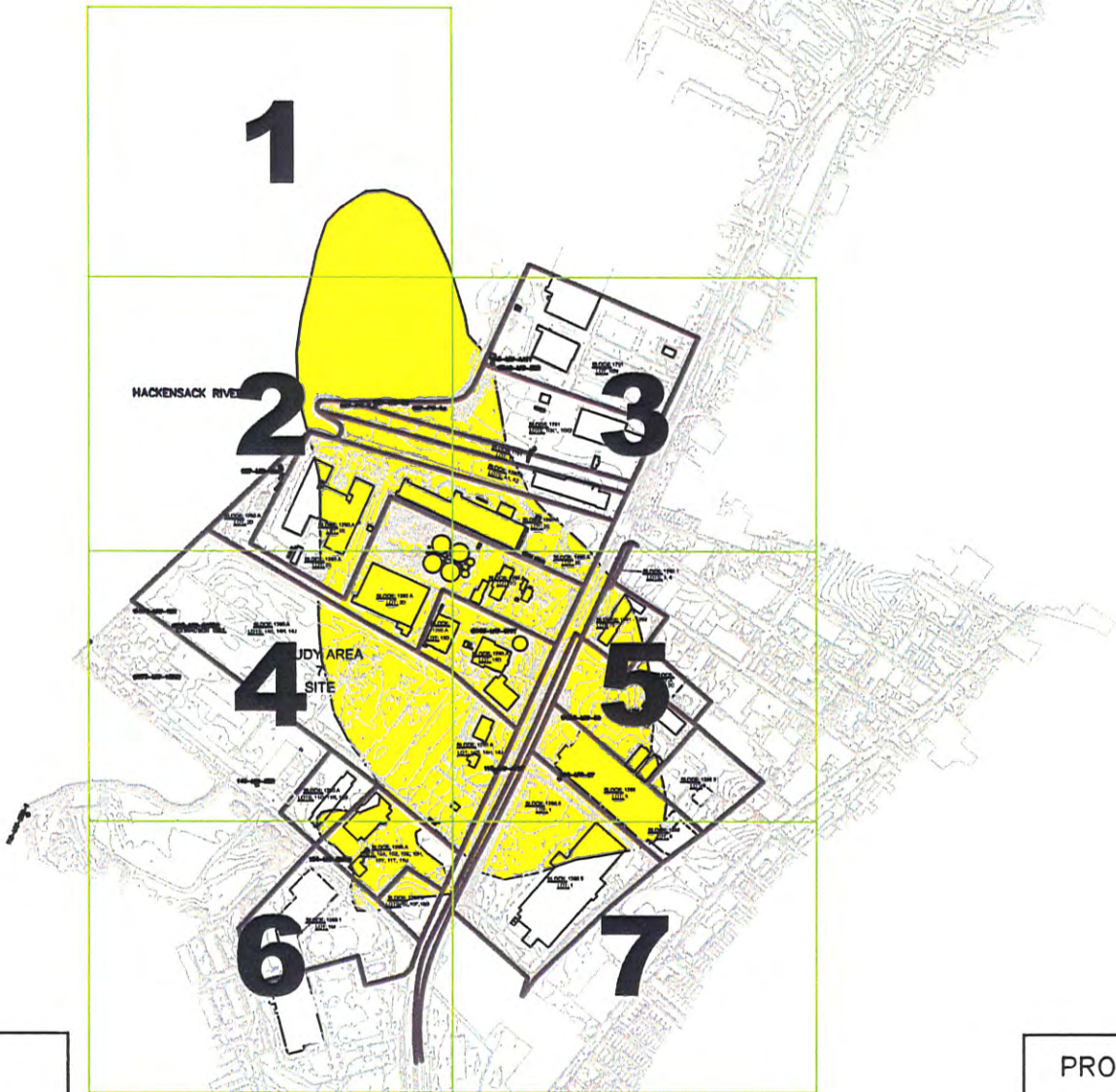
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Feet

**Program Interest Number:**  
G00002548  
**Site Location**  
Page 7 of 7

**Deep Overburden Zone**  
April 2009

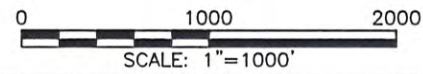


**CEA BOUNDARY**  
**EXISTING CONDITIONS AND**  
**BLOCK & LOT INFORMATION MAPS**



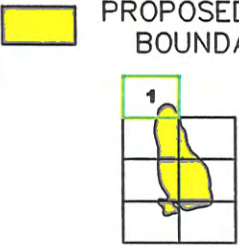
- 1 TILE
- PROPOSED CEA BOUNDARY
- EXISTING BUILDING
- PROPERTY BOUNDARY

PROPOSED CEA BOUNDARY  
 OVERVIEW MAP  
 PROGRAM INTEREST NUMBER:  
 G000002548

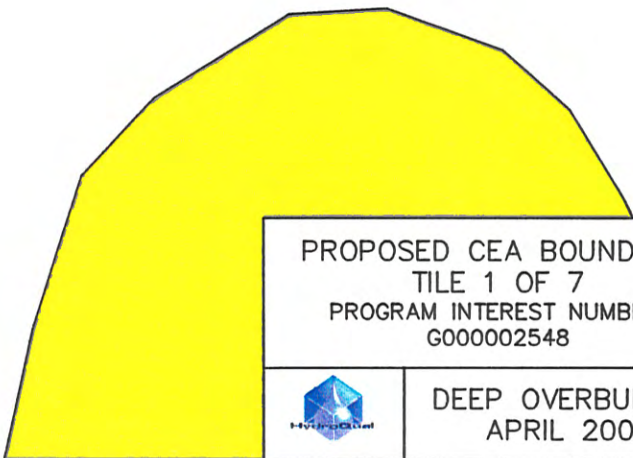


DEEP OVERBURDEN  
 APRIL 2009

PROPOSED CEA  
BOUNDARY



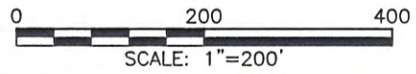
HACKENSACK RIVER




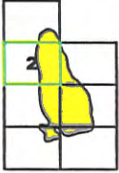



PROPOSED CEA BOUNDARY  
TILE 1 OF 7  
PROGRAM INTEREST NUMBER:  
G000002548



DEEP OVERBURDEN  
APRIL 2009





 PROPOSED CEA BOUNDARY  
  
 EXISTING WELL  
 EXISTING BUILDING  
 PROPERTY BOUNDARY

HACKENSACK RIVER



087-PW-2  
 087-MW-08  
 087-PW-1  
 BLOCK: 1751  
 LOT: 11  
 BLOCK: 1751  
 LOTS: 10K1, 10K2

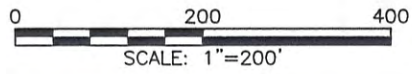
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 LOTS: A1, A2

087-MW-W251

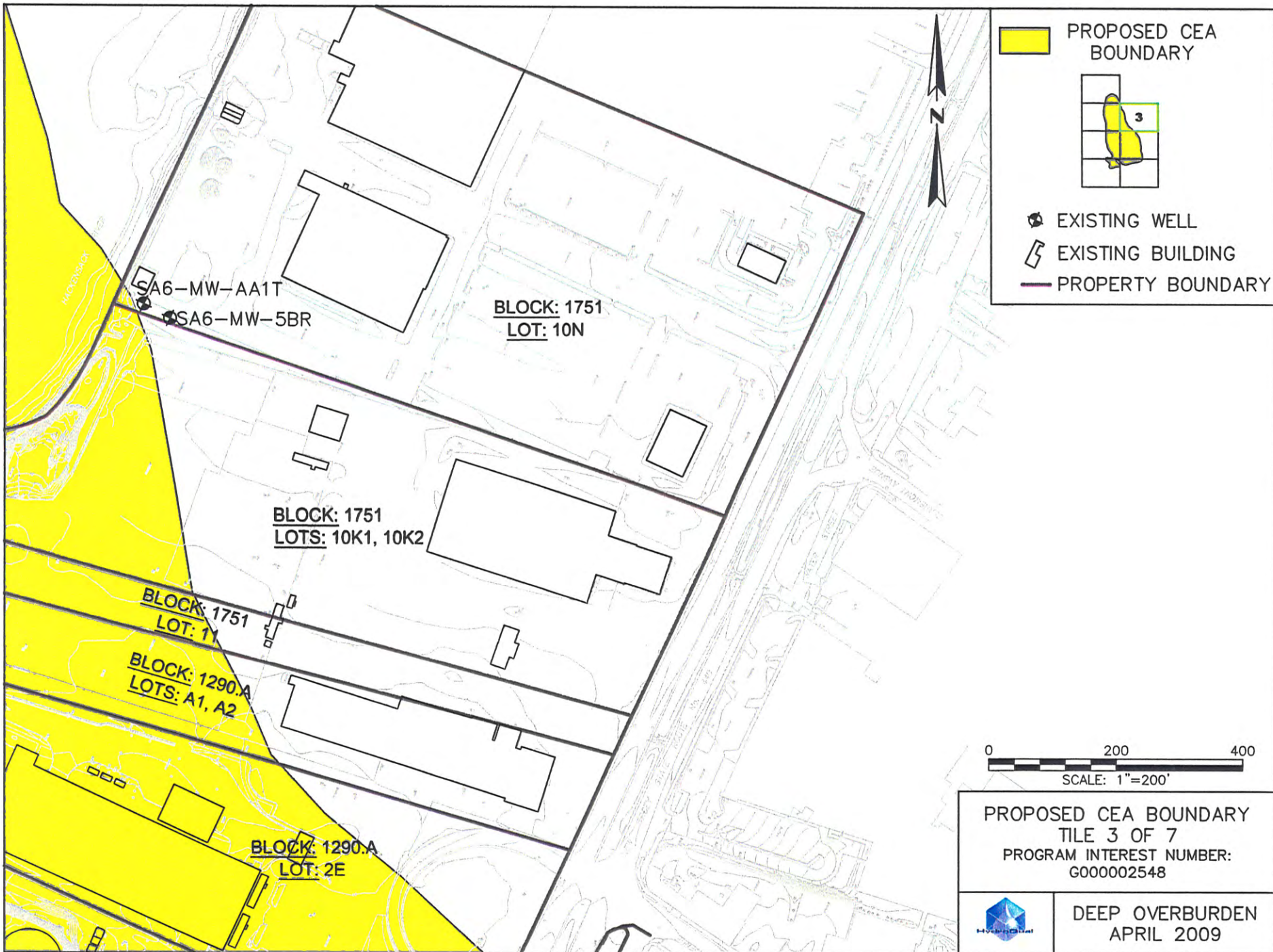
BLOCK: 1290.A  
 LOT: 2D

BLOCK: 1290.A  
 LOT: 2E

PROPOSED CEA BOUNDARY  
 TILE 2 OF 7  
 PROGRAM INTEREST NUMBER:  
 G00002548



DEEP OVERBURDEN  
 APRIL 2009



**PROPOSED CEA BOUNDARY**

**EXISTING WELL**

**EXISTING BUILDING**

**PROPERTY BOUNDARY**

SA6-MW-AA1T  
SA6-MW-5BR

**BLOCK: 1751**  
**LOT: 10N**

**BLOCK: 1751**  
**LOTS: 10K1, 10K2**

**BLOCK: 1751**  
**LOT: 11**

**BLOCK: 1290.A**  
**LOTS: A1, A2**

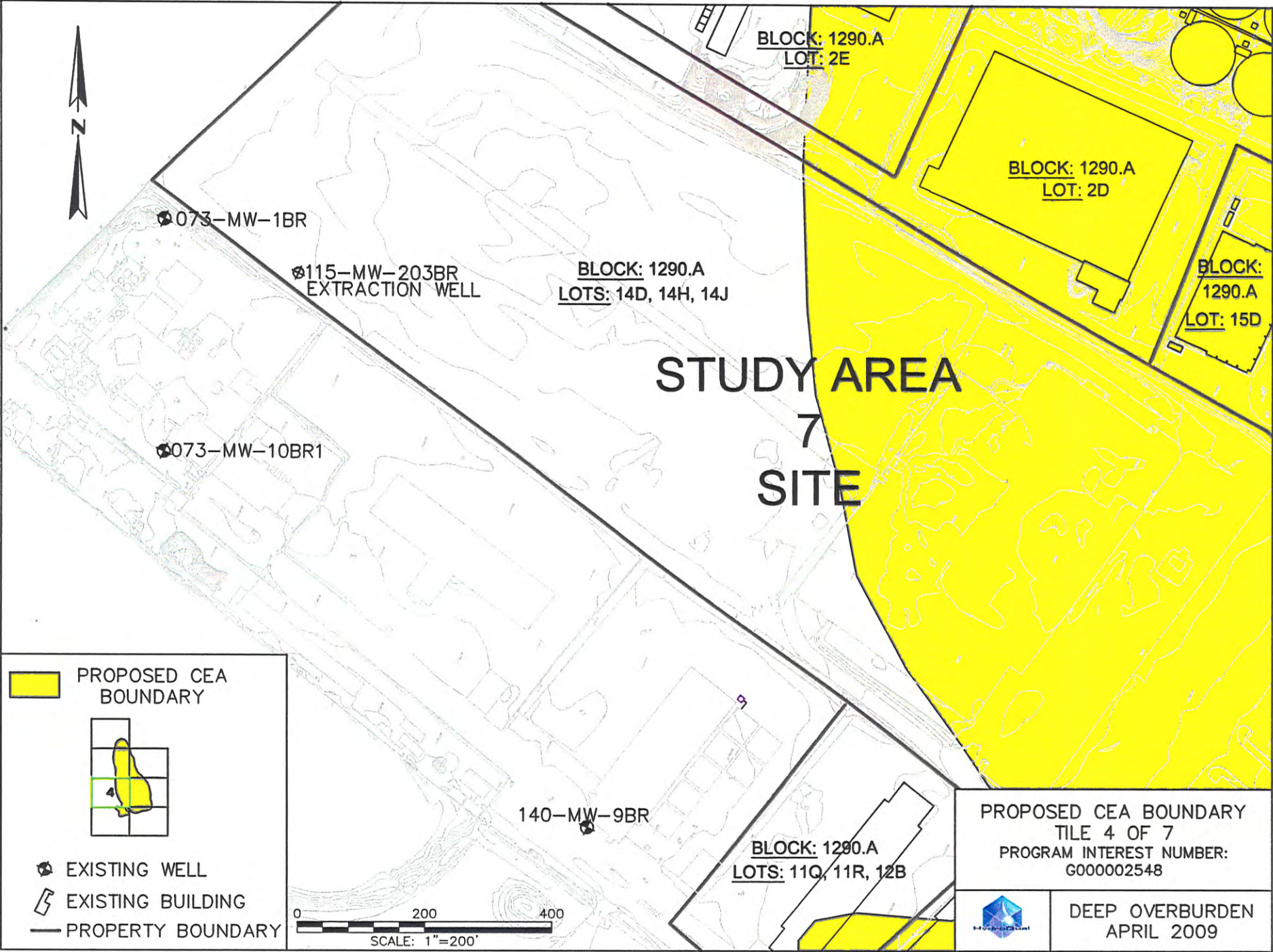
**BLOCK: 1290.A**  
**LOT: 2E**

0 200 400  
SCALE: 1"=200'

**PROPOSED CEA BOUNDARY**  
**TILE 3 OF 7**  
PROGRAM INTEREST NUMBER:  
G000002548



**DEEP OVERBURDEN**  
**APRIL 2009**



**STUDY AREA  
7  
SITE**

BLOCK: 1290.A  
LOT: 2E

BLOCK: 1290.A  
LOT: 2D

BLOCK: 1290.A  
LOT: 15D

BLOCK: 1290.A  
LOTS: 14D, 14H, 14J


BLOCK: 1290.A  
LOTS: 11Q, 11R, 12B

073-MW-1BR


115-MW-203BR  
EXTRACTION WELL


073-MW-10BR1

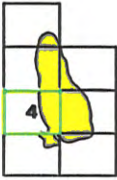
140-MW-9BR

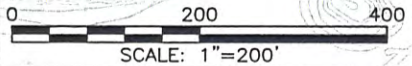
 PROPOSED CEA BOUNDARY

 EXISTING WELL


 EXISTING BUILDING

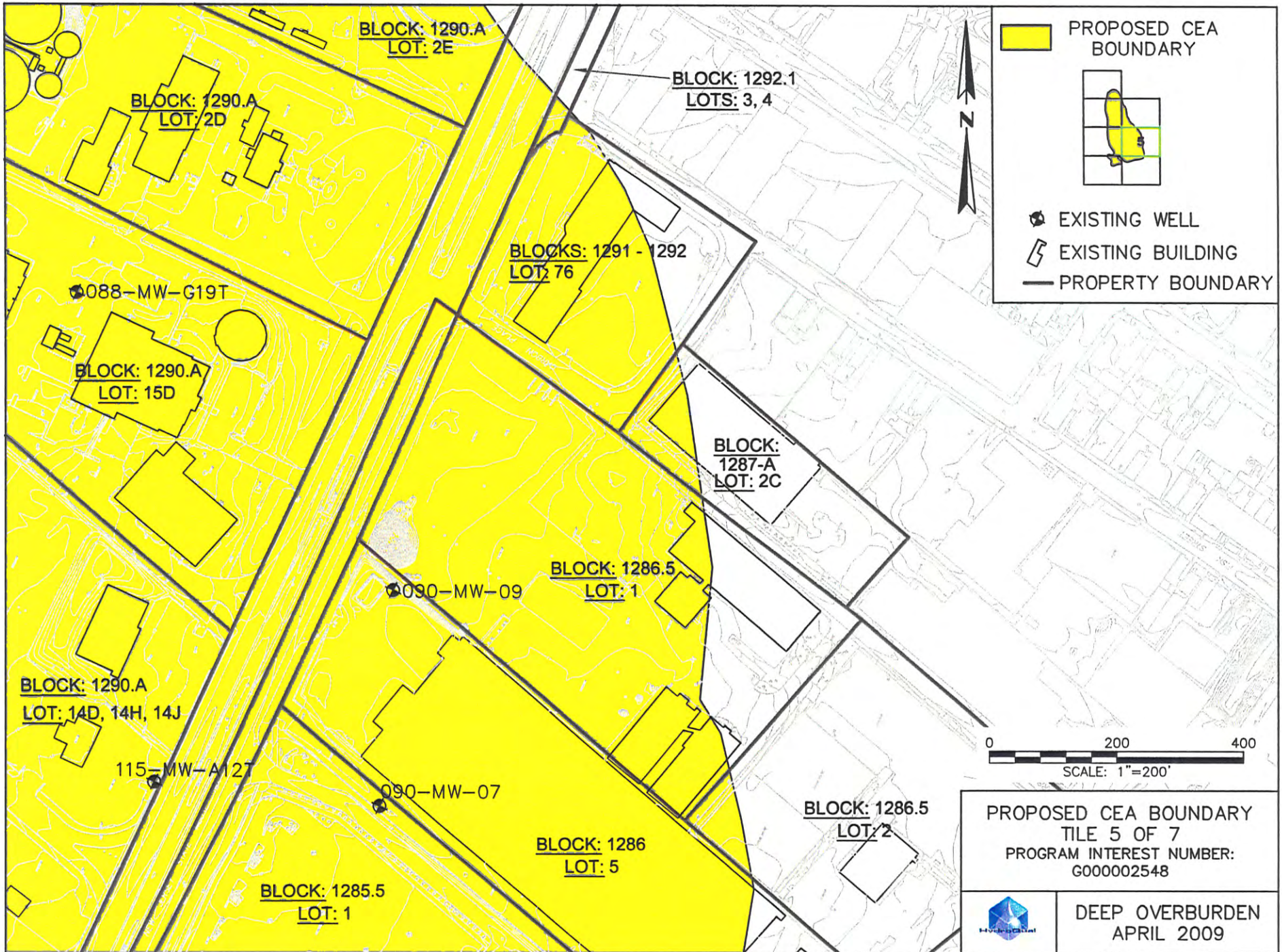
 PROPERTY BOUNDARY





PROPOSED CEA BOUNDARY  
TILE 4 OF 7  
PROGRAM INTEREST NUMBER:  
G000002548

 DEEP OVERBURDEN  
APRIL 2009



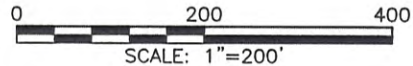
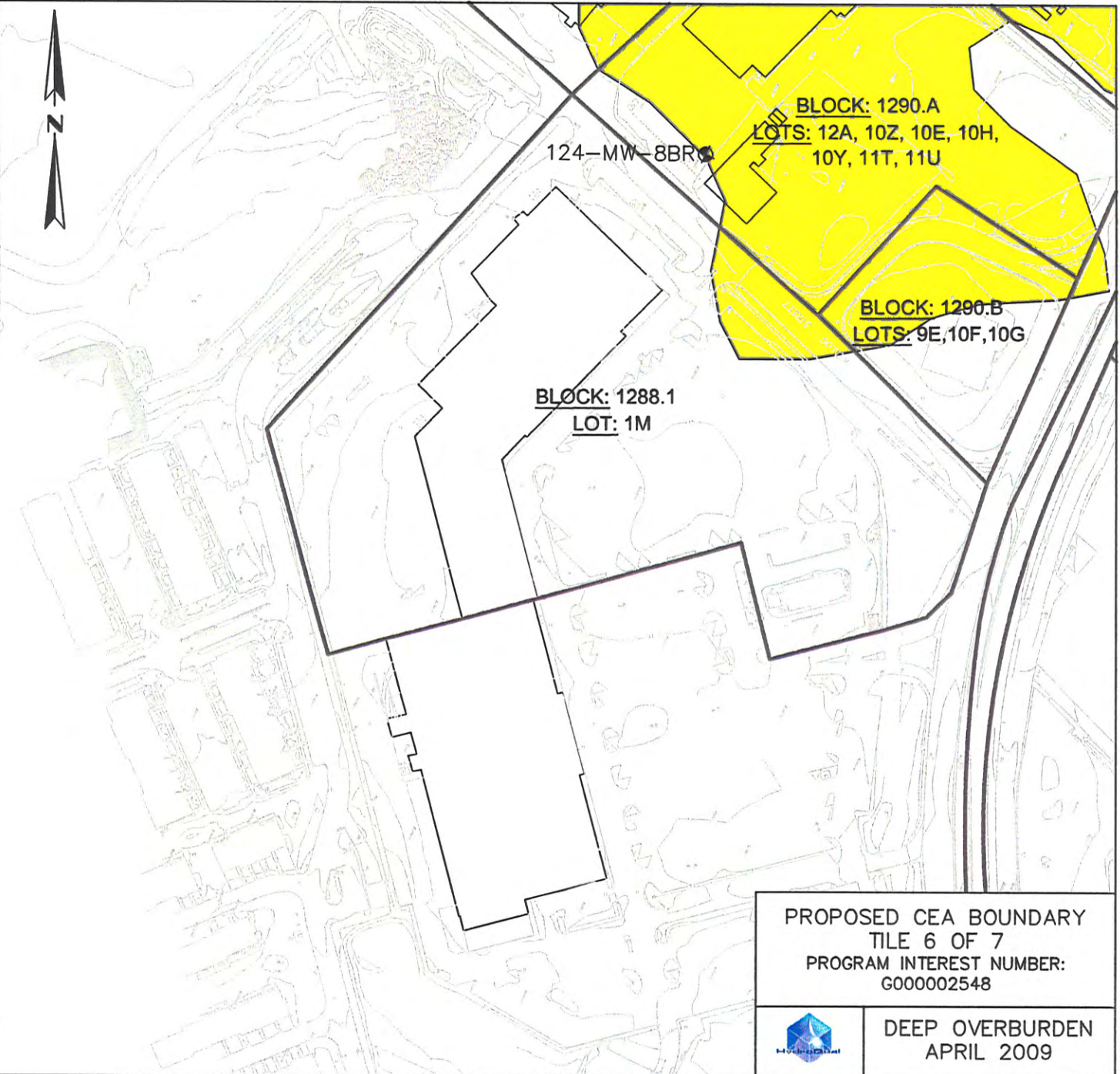
 PROPOSED CEA BOUNDARY




 EXISTING WELL

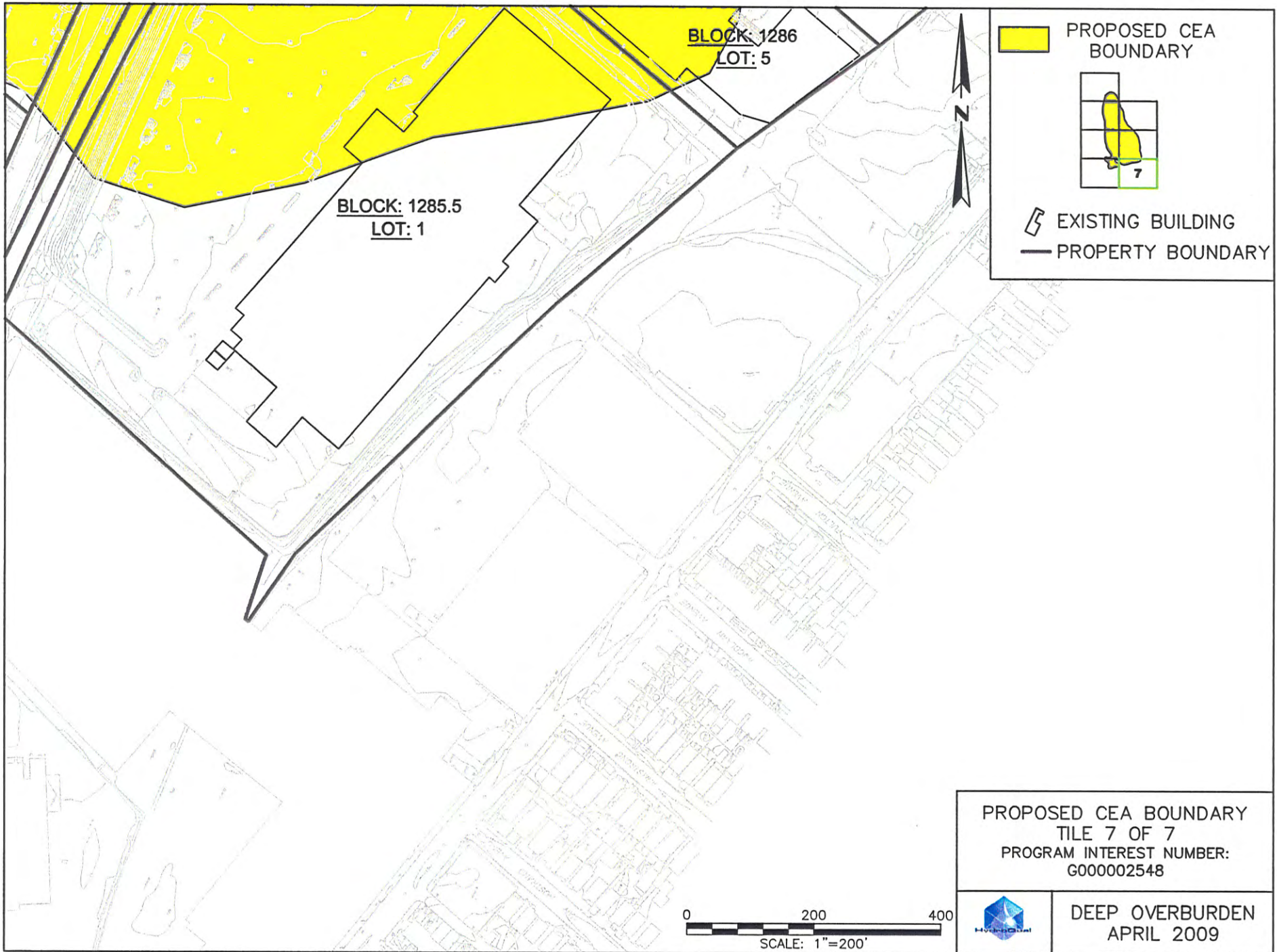
 EXISTING BUILDING

 PROPERTY BOUNDARY



PROPOSED CEA BOUNDARY  
TILE 6 OF 7  
PROGRAM INTEREST NUMBER:  
G000002548

 DEEP OVERBURDEN  
APRIL 2009



## **STREET MAP**





**DIGITAL MAP SUBMISSIONS  
SITE INFO FILE  
AND METADATA FILE**

Site Info File:

Site Name – Roosevelt Drive In (Site 115)

CSL ID# - G000002548

Lead Program ID# -

Lead Program – BCM

Street Address – 425, 445 & 465 Route 440

Municipality – Jersey City

County – Hudson

Start Date – 6/1/09

Duration – Indeterminate

Contaminants – Chromium (Total), Chromium (Hexavalent)

CEA Depth – 90 feet

**Metadata Information for Groundwater CEA (Deep Overburden)**  
**Program Interest Number: G000002548**  
**Jersey City, New Jersey**

1. IDENTIFICATION INFORMATION

1.1. DESCRIPTION

The maps represent the area on and adjacent to the Roosevelt Drive In (Site 115) in Jersey City, New Jersey for which a groundwater Classification Exception Area (CEA) has been proposed for the deep overburden aquifer. The site location and CEA boundary for the deep overburden groundwater is illustrated on the identified maps.

CSL#: G000008742 (from KCSNJ)

Site Name (from KCSNJ): Roosevelt Drive In (Site 115); 425, 445 & 465 Route 440, Jersey City, New Jersey.

1.1.1. ABSTRACT

The "CEA\_DeepOB.xxx" are a set of four (4) ESRI Shapefiles that illustrate the boundaries of the Classification Exception Area (CEA) at Site 115 in Jersey City, New Jersey. The files contain the polygon shapefile and associated files showing the extent of the CEA boundary for groundwater in the deep overburden aquifer that contains total chromium in excess of the NJDEP Class II-A Ground Water Quality Standards (GWQS).

1.1.2. PURPOSE/BRIEF DESCRIPTION

The four (4) ESRI Shapefiles, "CEA\_DeepOB.xxx", illustrate the boundaries of the Classification Exception Area (CEA) for the deep overburden at Site 115 in Jersey City, New Jersey.

1.1.3. SUPPLEMENTAL INFORMATION

The following files are provided on the diskette:

CEA\_DeepOB.shp – ArcView shapefile  
CEA\_DeepOB.dbf – ArcView attribute table  
CEA\_DeepOB.prj – ArcView projection file  
CEA\_DeepOB.shx – ArcView index file

cea\_metafile\_DeepOB\_final.doc – metadata information for GIS maps.

cea\_site\_info\_file\_DeepOB.doc – support information for CEA

1.1.4. CURRENTNESS REFERENCE

The maps are representative of current conditions as of June 2008.

---

## 2. DATA QUALITY INFORMATION

### 2.1. ATTRIBUTE ACCURACY

The shapefile CEA\_DeepOB.shp was digitized using the 2002 orthophotography available from the State of New Jersey Office of Information Technology. The orthophotos and resulting CEA boundary are georeferenced to NJ State Plane, NAD 1983, Feet.

### 2.2. QUANTITATIVE ATTRIBUTE ACCURACY ASSESSMENT

The CEA boundary has been plotted on the georeferenced USGS topographic map to assess the positional accuracy of the files.

### 2.3. COMPLETENESS REPORT

There were no known omissions in the construction of the data sets.

### 2.4. LINEAGE

ESRI ArcGIS was used to view the orthophotos and digitize the CEA boundary based on measured values at sampling wells.

### 2.5. SOURCE SCALE DENOMINATOR

2400

### 2.6. TYPE OF SOURCE MEDIA

Online

### SOURCE CURRENTNESS REFERENCE

2002

### 2.7. PROCESS DATE

June 2008

---

## 3. SPATIAL DATA ORGANIZATION INFORMATION

### 3.1. DIRECT SPATIAL REFERENCE METHOD

Vector data, with polygons.

.....

## 4. SPATIAL REFERENCE INFORMATION

### 4.1. GRID COORDINATE SYSTEM

NJ State Plane

### 4.2. HORIZONTAL DATUM NAME

NAD 83

.....

## 5. ATTRIBUTE INFORMATION

### 5.1. ATTRIBUTE LABEL: CEA\_DeepOB.shp

.....

## 6. METADATA REFERENCE INFORMATION

### 6.1. METADATA DATE: 6/5/08

### 6.2. METADATA CONTACT: William G. Soukup P.G.

.....

## 7. CITATION INFORMATION

### 7.1. ORIGINATOR

HydroQual Inc. – William G. Soukup P.G.

### 7.2. TITLE

CEA Boundary for Deep Overburden, Site 115, Jersey City, New Jersey

### 7.3. AUTHOR'S NOTES

Prepared by HydroQual, Inc., 1200 MacArthur Boulevard, Mahwah, NJ  
Prepared for Honeywell International Inc.

---

8. CONTACT INFORMATION

8.1. CONTACT PERSON (PRIMARY)

John J. Morris, P.E.

8.2. CONTACT ORGANIZATION

Honeywell International Inc.

8.3. CONTACT ADDRESS

101 Columbia Road  
Morristown, NJ 07962

8.4. CONTACT VOICE TELEPHONE

(973) 455-4003  
[john.morris@honeywell.com](mailto:john.morris@honeywell.com)

8.5. CONTACT PERSON (SECONDARY)

Brian George  
HydroQual, Inc.  
1200 MacArthur Boulevard  
Mahwah, NJ 07430  
(201) 529-5151 x 7203

## Ground Water Classification Exception Area Fact Sheet

### A. SITE INFORMATION

1. Program's Site Identification Number: 64070
2. Program Interest Number (Preferred ID): G000002548
3. Program Interest Name: Roosevelt Drive In (Site 115)
4. Street address: 425, 445 & 465 Route 440
5. City: Jersey City
6. County: Hudson
7. Block and Lots of the site (duplicate if the site is located in more than one municipality):
  - a. Name of the municipality in which the site is located: Jersey City
  - b. Block and Lots: Block: 1290.A Lots: 11W, 9L, 11H, 11J, 11K, 11L, 11Y, 11M, 11N, 11O, 11P, 11Q, 11R, 12B, 12A, 10Z, 10E, 10H, 10Y, 11T, 11U, 2D, 2E, 15D
  - c. Year of tax map: 1977
8. United States Geological Survey Quadrangle map, indicating the location of the site, presented as Exhibit A.
9. Site Contact:
  - a. Name of contact person: John J. Morris, P.E.
  - b. Company name: Honeywell International Inc.
  - c. Mailing address: 101 Columbia Road Morristown, NJ 07962
  - d. Phone number: (973) 455 - 4003

**B. PROPOSED CLASSIFICATION EXCEPTION AREA INFORMATION**

1. Narrative description of proposed classification exception area:

The proposed CEA boundary represents the maximum extent to which groundwater in the bedrock water-bearing zone contains total chromium in excess of the NJDEP Class II-A Ground Water Quality Standards (GWQS). This delineation is based on prior subsurface investigations conducted within, and in the vicinity of, Hudson County Chromate Site 115 (Study Area 7). The basis for this delineation has been documented in Section 5 of the Final Groundwater Investigation Report (FGIR) prepared by HydroQual on behalf of Honeywell (HydroQual, February 2, 2007). With one exception, the proposed CEA boundary has been developed based on the extent of total chromium in the bedrock as depicted on Figure 5.5-2 of the FGIR. The exception is more recent data provided from the re-sampling bedrock well 090-MW-18BR in which hexavalent chromium was not detected above the reporting limit of 0.010 ppm. The CEA boundary has thus been modified accordingly in this area. Based on multiple lines of evidence (as further discussed in the FGIR), it is concluded that this plume has reached steady-state conditions and thus no further lateral expansion of the plume is expected. Additionally, the approved groundwater extraction and treatment remedy began operation in December, 2008 and is designed to contain the plume from any further migration.

2. Location of proposed classification exception area (duplicate if the site is located in more than one municipality):

a. Name of the municipality in which the site is located: Jersey City

b. Block and Lots: Block: 1290.A Lots: 9H, 11W, 9L, 11H, 11J, 11K, 11L, 11Y, 11M, 11N, 11O, 11P, 11Q, 11R, 12B, 12A, 10Z, 10E, 10H, 10Y, 11T, 11U, 14D, 14H, 14J, 2D, 2E, 15D, A1, A2; Block: 1751 Lots: 11, 10K1, 10K2, 10N; Block: 1285.5 Lot: 1; Block: Block 1286 Lot: 5; Block: 1286.5 Lots: 1, 2; Block: 1287-A Lot: 2C; Block: 1293 Lot: 1F; Blocks: 1291 – 1292 Lot: 76; Block: 1295 Lots: 29 – 33; Block: 1292.1 Lots: 3, 4, 5

c. Year of tax map: 1977

3. Affected aquifer(s):

Aquifer Name	Vertical Depth	Ground Water Classification
Passaic and Lockatong Formations	90 - 110 ft	Class II-A

4. Contaminant concentrations:

Contaminant	Concentration <sup>1</sup>	GWQS <sup>2</sup>	SWQS <sup>3</sup>
Chromium (Total)	440,000 ug/L	70 ug/L	750 ug/L



Chromium (Hexavalent) 446,000 ug/L ----- 50 ug/L

5. Proposed classification exception area boundaries:

Horizontal: Scaled map indicating projected areal extent of proposed classification exception area, as well as location of site, presented as Exhibit B.

Vertical: As stated in B.3., above.

Locational coordinates of boundary of proposed classification exception area as New Jersey State Plane Coordinates. A minimum of four coordinates shall be submitted, in a format compatible with Department's geographic information system:

Northing	Easting	(New Jersey State Plane Coordinates)
682503	599862	
685612	602512	
684914	602361	
684330	604346	
687172	603894	
687940	602347	
685939	600206	
684448	599974	
684337	600280	

Latitude	Longitude
40.7065	-74.1114
40.7150	-74.1018
40.7131	-74.1023
40.7114	-74.0952
40.7192	-74.0968
40.7214	-74.1023
40.7159	-74.1101
40.7118	-74.1109
40.7115	-74.1098

6. Estimated size of the proposed ground water classification exception area:

273.42 Acres

7. Projected duration and expiration date of the proposed classification exception area:

a. Duration (in years and or days): Indeterminate

Data from prior investigations indicate that the presence of elevated chromium in the bedrock groundwater is caused by the downward migration of chromium from the overlying deep overburden plume. Thus, the duration of the bedrock plume is expected to be at least as long as that for the overlying deep overburden plume, which as been estimated in excess of 50 years due to the slow rate of groundwater flow through the low permeability deposits. In addition, it is highly likely that chromium has diffused into the rock matrix and thus even if the overburden plume were not present as a source of chromium, matrix diffusion from the rock matrix into the fractures would likely maintain chromium concentrations above NJ GWQS for decades. Thus, the duration of the proposed CEA is considered indeterminate.

b. Expiration date (as calendar date):           N/A          

Footnotes

1 Maximum concentration detected at the time Classification Exception Area information submitted to the Department. For a complete list of sampling points in which chromium was detected above applicable standards, refer to the Final Groundwater Investigation Report-Honeywell Study Area 7 Site (HydroQual, February 2007).

2 New Jersey Ground Water Quality Standards, N.J.A.C. 7:9-6.

3 New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B.

**EVALUATION OF CURRENT AND FUTURE  
GROUNDWATER USE  
(RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)**

**EVALUATION OF CURRENT AND FUTURE GROUNDWATER USE  
(RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)  
(per 7:26E-8.3(b)4(ii) of the NJ Technical Requirements)**

No.	Required Contact	Results of Inquiry	Influence On CEA
1	New Jersey Water Supply Master Plan	Contacted Ian Snook, DEP Division of Water Supply – no need for reviewing the NJ Water Supply Master Plan (e-mail dated 02/06/2008).	None
2	DEP Bureau of Water Allocation	Completed well search indicated 5 water supply wells within 1-mile radius – for details see Table 1.	None
3	Municipal Master Plans – Hudson County	Contacted Barbara A. Netchert, County Clerk’s Office – was transferred to Neil Carroll, County Counsel’s office and to Willie J. Flood, Register’s office – no plans that would affect the groundwater	None
	Municipal Master Plans – Jersey City	Contacted Robert Byrne, City Clerk’s Office and Bob Cotter, Director of Planning – Master Plan does not affect the groundwater.	None
4	Zoning Plans – Hudson County	Contacted Neil Carroll, County Counsel’s office – no plans that would affect the groundwater	None
	Zoning Plans – Jersey City	Contacted Robert Byrne, City Clerk’s Office and Bob Cotter, Director of Planning – no Zoning Plans that would affect the groundwater.	None
5	Local Water Purveyor	Contacted Richard Henning, United Water NJ and Keh Liu, Jersey City Municipal Utilities Authority – no plans pertaining to installation of water lines that would affect the groundwater.	None
6	Planning Officials – Hudson County	Contacted Stephen Marks, County Director of Planning and Mariano Vega, County Dept. of Parks, Engineering and Planning – was transferred to Bob Jasek, County Engineer – no plans that would affect the groundwater	None
	Planning Officials – Jersey City	Contacted Bob Cotter, City Director of Planning and Brian O’Reilly, City Business Administrator – no plans that would affect the groundwater.	None

**EVALUATION OF CURRENT AND FUTURE GROUNDWATER USE  
 (RESULTS OF THE 25-YEAR WATER USE PLANNING REVIEW)  
 (per 7:26E-8.3(b)4(ii) of the NJ Technical Requirements)**

<b>No.</b>	<b>Required Contact</b>	<b>Results of Inquiry</b>	<b>Influence On CEA</b>
7	Board of Health – Hudson County	Contacted Carol Ann Wilson, County Dept. of Health & Human Services – was transferred to Michael Walker, County Regional Health Commission – no plans that would affect the groundwater.	None
	Board of Health – Jersey City	Contacted Harry Melendez, City Dept. of Health & Human Services – was transferred to Joseph Castagna, County Health Officer – nothing that would affect the groundwater.	None
8	Ordinances Restricting Installation of Potable Wells – Hudson County	Contacted Barbara A. Netchert, County Clerk, Neil Carroll, County Counsel’s office, Stephen Marks, County Director of Planning, Mariano Vega, County Dept. of Parks, Engineering and Planning, Bob Jasek, County Engineer, and Michael Walker, County Regional Health Commission – no ordinances restricting installation of potable wells (no potable wells in Jersey City area).	None
	Ordinances Restricting Installation of Potable Wells – Jersey City	Contacted Robert Byrne, City Clerk, Bob Cotter, City Director of Planning, Brian O’Reilly, City Business Administrator, and Joseph Castagna, County Health Officer – no ordinances restricting installation of potable wells (no potable wells in Jersey City area).	None

Table 1  
Water Supply Wells  
Well Search Summary

The results of the well search found five (5) water supply wells within a 1-mile radius of the site. Three (3) of these wells are listed as industrial water supply wells and the other two as domestic and non-public. All five wells are completed in the bedrock although their current operational status is unknown. None of the wells are located within the proposed CEA boundary. Potable water is provided to all locations within a 1-mile radius of the site.

Permit No.	Owner Name	Well Depth	Capacity	Well Use	Permit Date
		feet	gpm		MM-YY-DD
2600004975	CELANESE CHEMICAL CO	200	20	Domestic	FEB-81-25
2600001731	SPEEDWAY AUTO LAUNDR	150	40	Industrial	OCT-57-11
2600040387	FOWLER EQUIPT. CO. I	300	40	Industrial	APR-95-18
2600043694	PARK, HEE	150	35	Industrial	FEB-96-26
2600002429	GAS INC	150	10	Non Public	JUN-61-20

**NAME AND ADDRESS COPY LIST**

## NAME AND ADDRESS COPY LIST

Barbara A. Netchert  
Hudson County Clerk's Office  
Brennan Court House  
583 Newark Ave.  
Jersey City, NJ 07306  
Tel (201) 795-6112

Robert Byrne, RMC  
Jersey City Clerk's Office  
280 Grove Street  
Jersey City, NJ 07302  
Tel (201) 547-5150

Carol Ann Wilson  
Hudson County Department of Health & Human Services  
Meadowview Campus  
595 County Road  
Secaucus, NJ 07094  
Tel (201) 271-4310

Harry Melendez  
Jersey City Department of Health & Human Services  
201 Cornelison Avenue  
Jersey City, NJ 07304  
Tel 201-547-6800

County Environmental Health Act  
Hudson County Regional Health Commission  
Meadowview Campus, Building 1  
595 County Avenue  
Secaucus, NJ 07094  
(201) 223-1133 - Environmental Coordinator

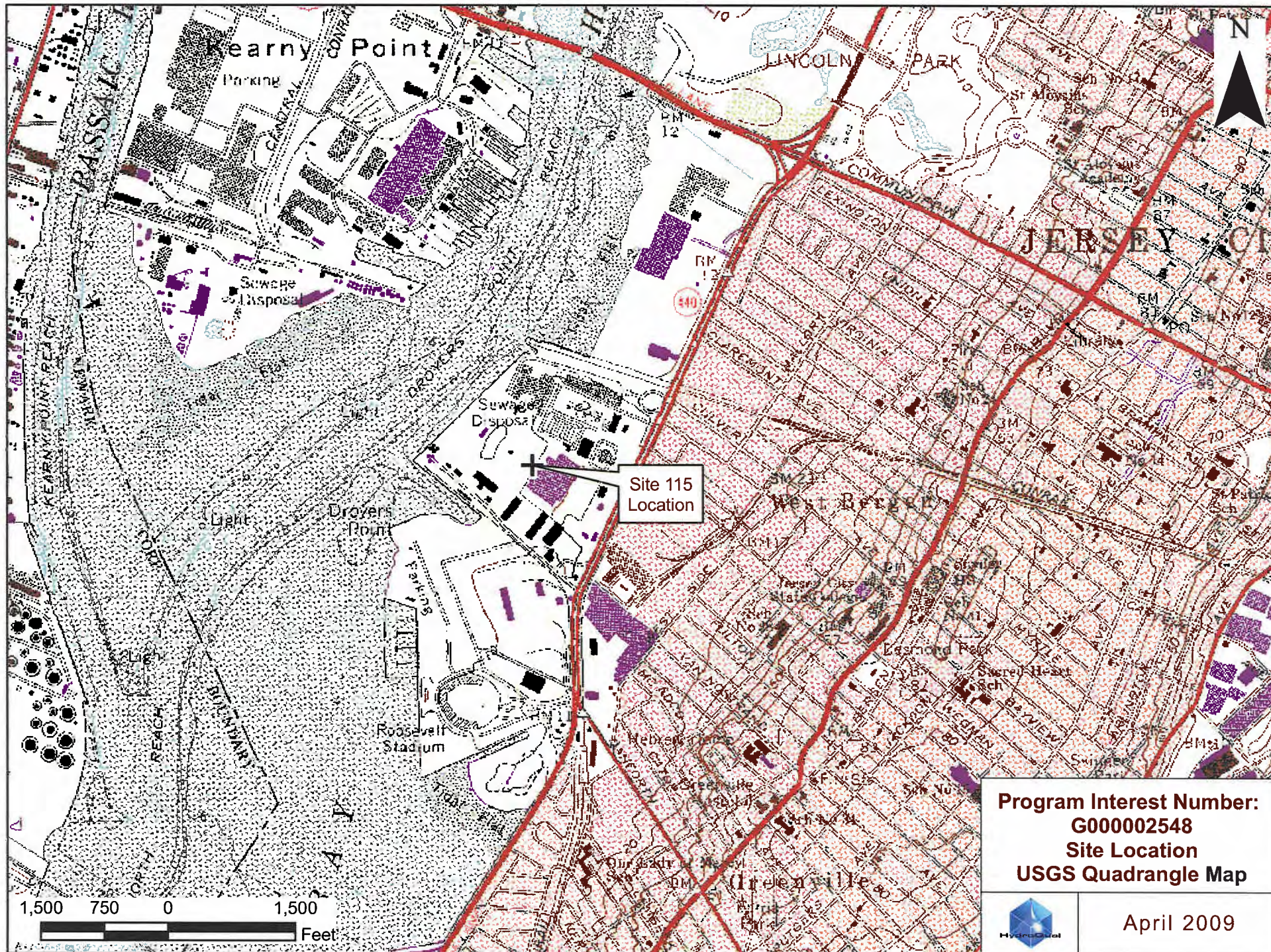
Stephen D. Marks PP, AICP  
Hudson County Division of Planning  
Brennan Court House  
583 Newark Avenue  
Jersey City, NJ 07306  
Tel (201) 217-5137



Bureau Chief  
Department of Environmental Protection  
Bureau of Safe Drinking Water  
401 E. State Street  
P.O. Box 426  
Trenton, NJ 08625-0426  
(609) 292-5550

Diane Zalaskus  
Department of Environmental Protection  
Bureau of Water Allocation  
401 E. State Street  
P.O. Box 426  
Trenton, NJ 08625-0426  
(609) 292-2957

**EXHIBIT A:**  
**USGS QUADRANGLE MAP**



Data Source: USGS Digital Raster Graphic, Jersey City

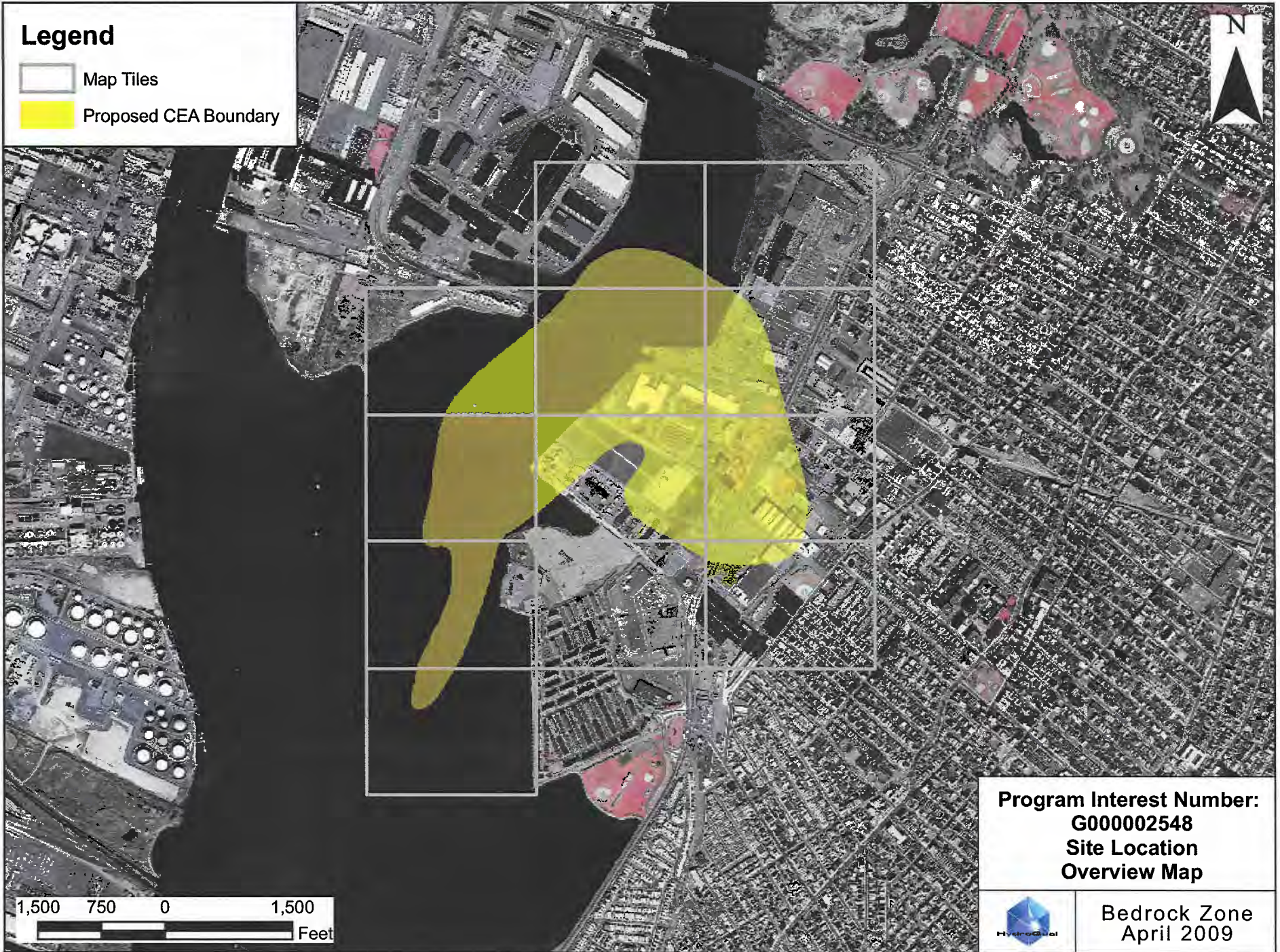
**EXHIBIT B:**  
**AERIAL EXTENT OF PROPOSED CEA**  
**AND SITE LOCATION MAPS**

**CEA BOUNDARY**

**EXTENT OF TOTAL CHROMIUM ABOVE THE NJDEP  
GROUNDWATER QUALITY STANDARDS (70 ppb)**



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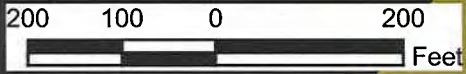
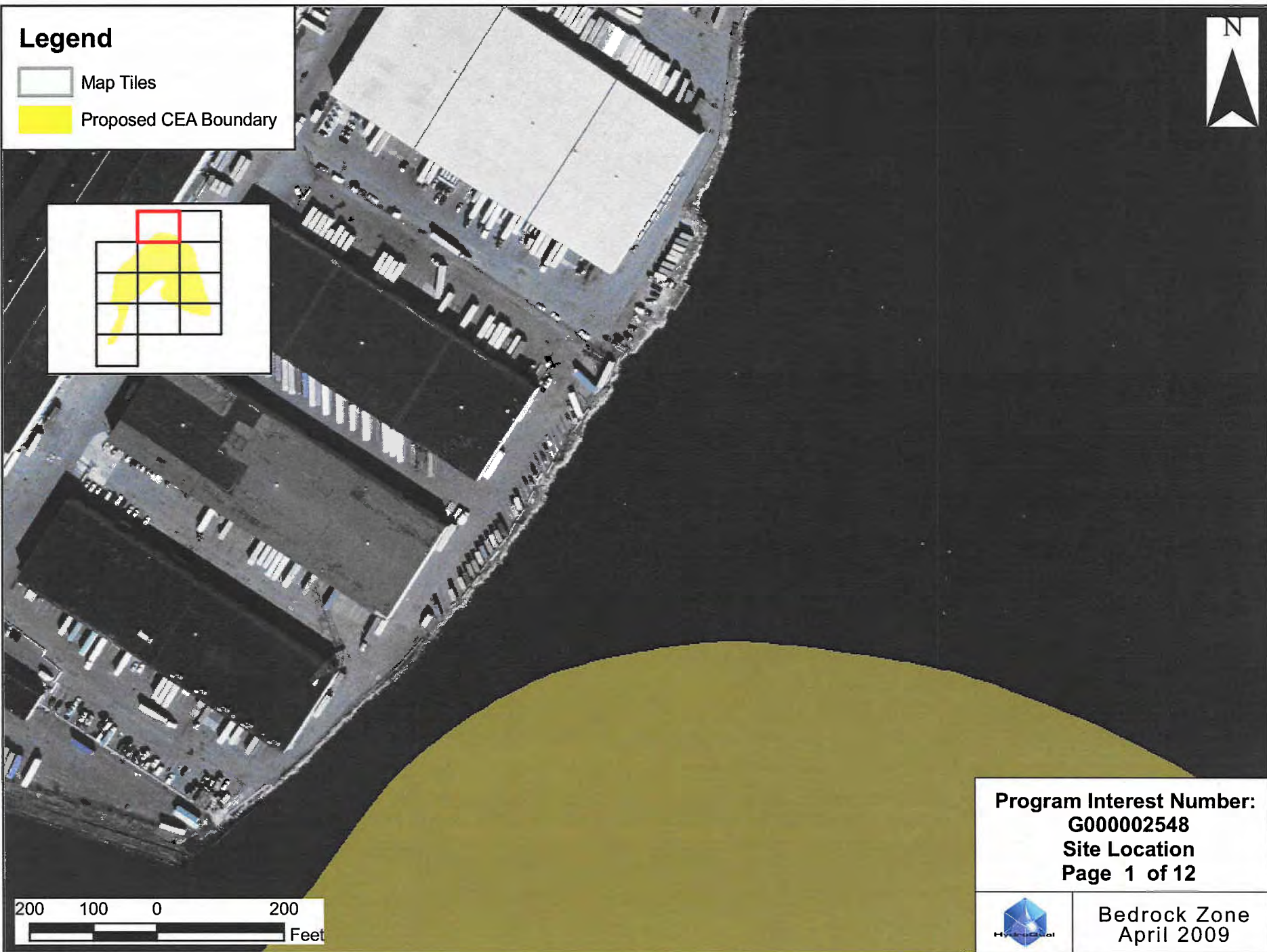
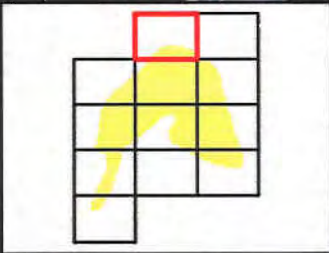
- Map Tiles
- Proposed CEA Boundary




Aerial Source: State of New Jersey Office of Information Technology, Office of Geographic Information Systems, 2002

# Legend


-  Map Tiles
-  Proposed CEA Boundary

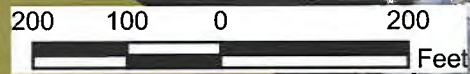
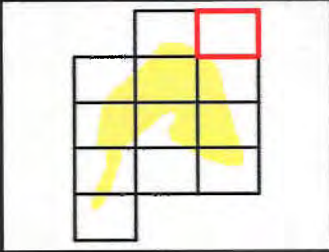


<b>Program Interest Number:</b> G000002548	
<b>Site Location</b> Page 1 of 12	
	<b>Bedrock Zone</b> April 2009

# Legend

 Map Tiles

 Proposed CEA Boundary





**Program Interest Number:**  
**G00002548**  
**Site Location**  
**Page 2 of 12**

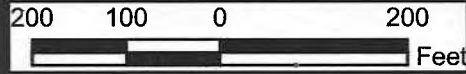
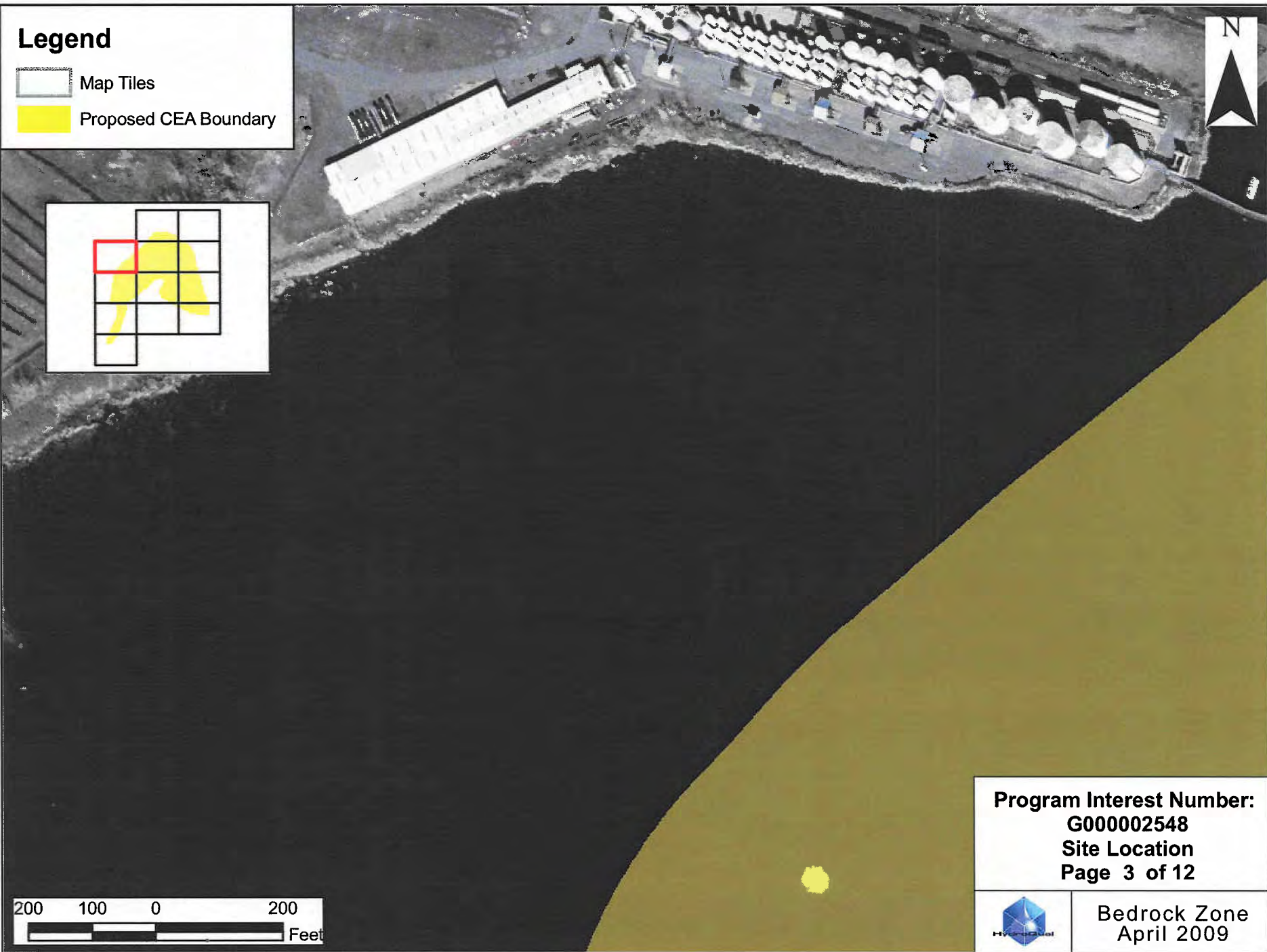
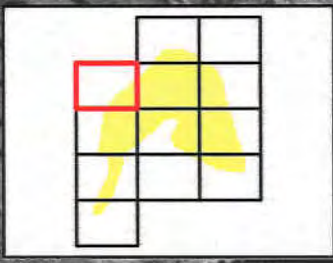


**Bedrock Zone**  
**April 2009**



# Legend

-  Map Tiles
-  Proposed CEA Boundary





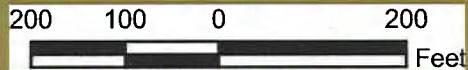
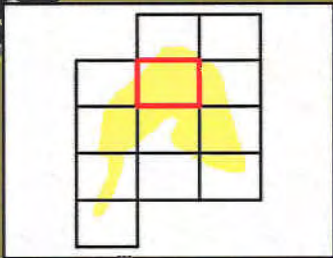
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**G000002548**  
**Site Location**  
**Page 3 of 12**



**Bedrock Zone**  
**April 2009**

# Legend

-  Map Tiles
-  Proposed CEA Boundary



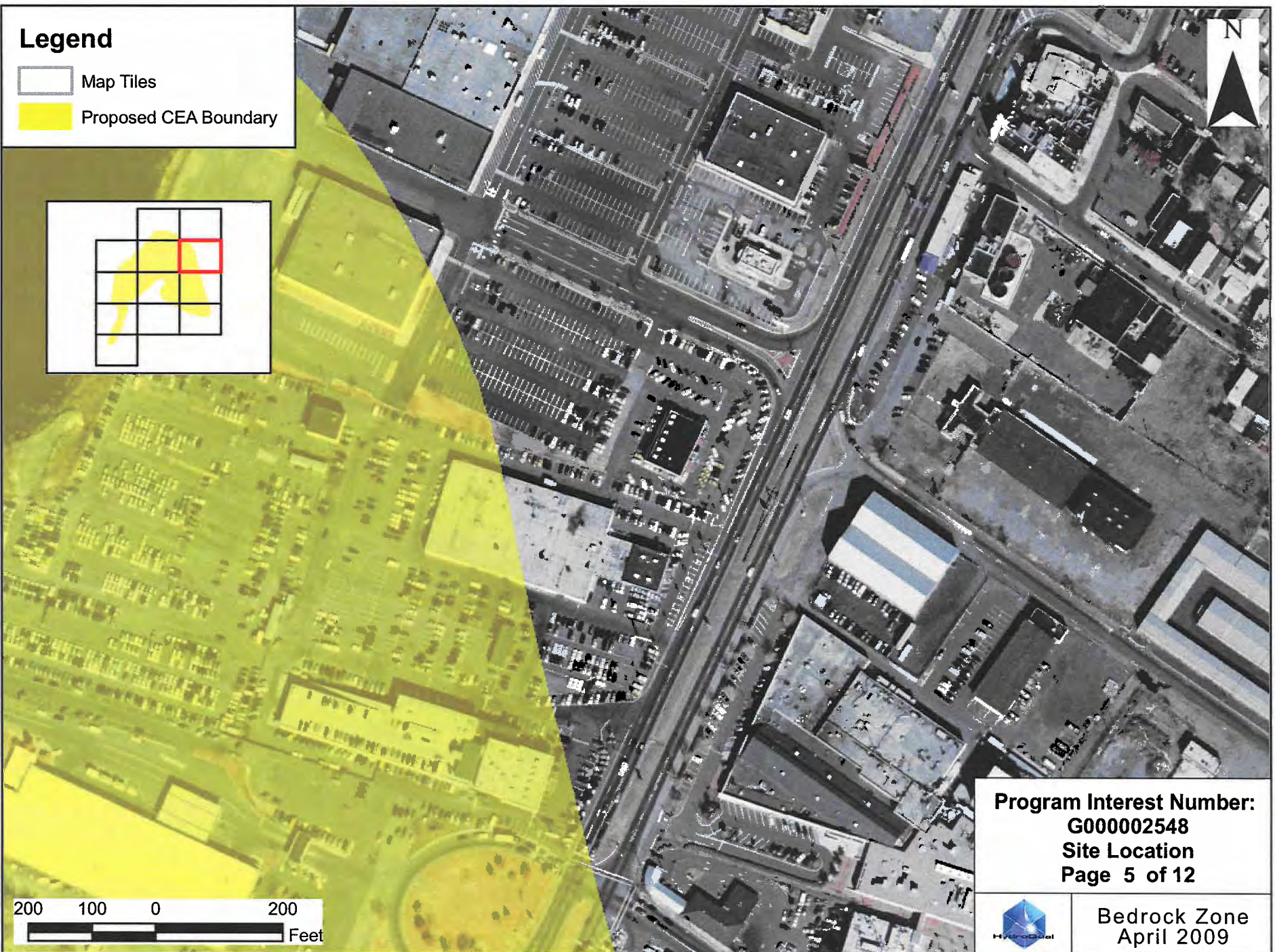
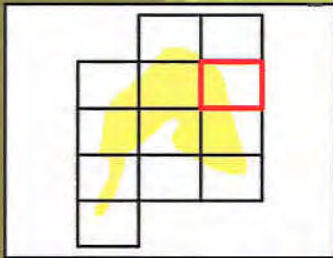
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**G00002548**  
**Site Location**  
**Page 4 of 12**



**Bedrock Zone**  
**April 2009**

# Legend

- Map Tiles
- Proposed CEA Boundary





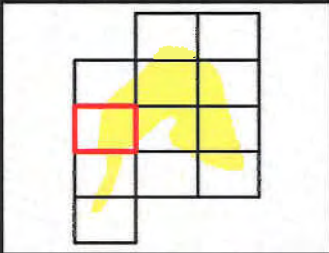
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**Site Location**  
**Page 5 of 12**




**Bedrock Zone**  
**April 2009**

# Legend

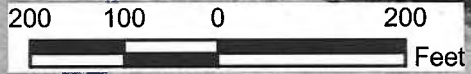
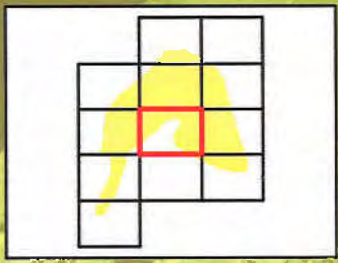
-  Map Tiles
-  Proposed CEA Boundary




<b>Program Interest Number:</b> <b>G000002548</b>	
<b>Site Location</b>	
<b>Page 6 of 12</b>	
	<b>Bedrock Zone</b> <b>April 2009</b>

# Legend

- Map Tiles
- Proposed CEA Boundary

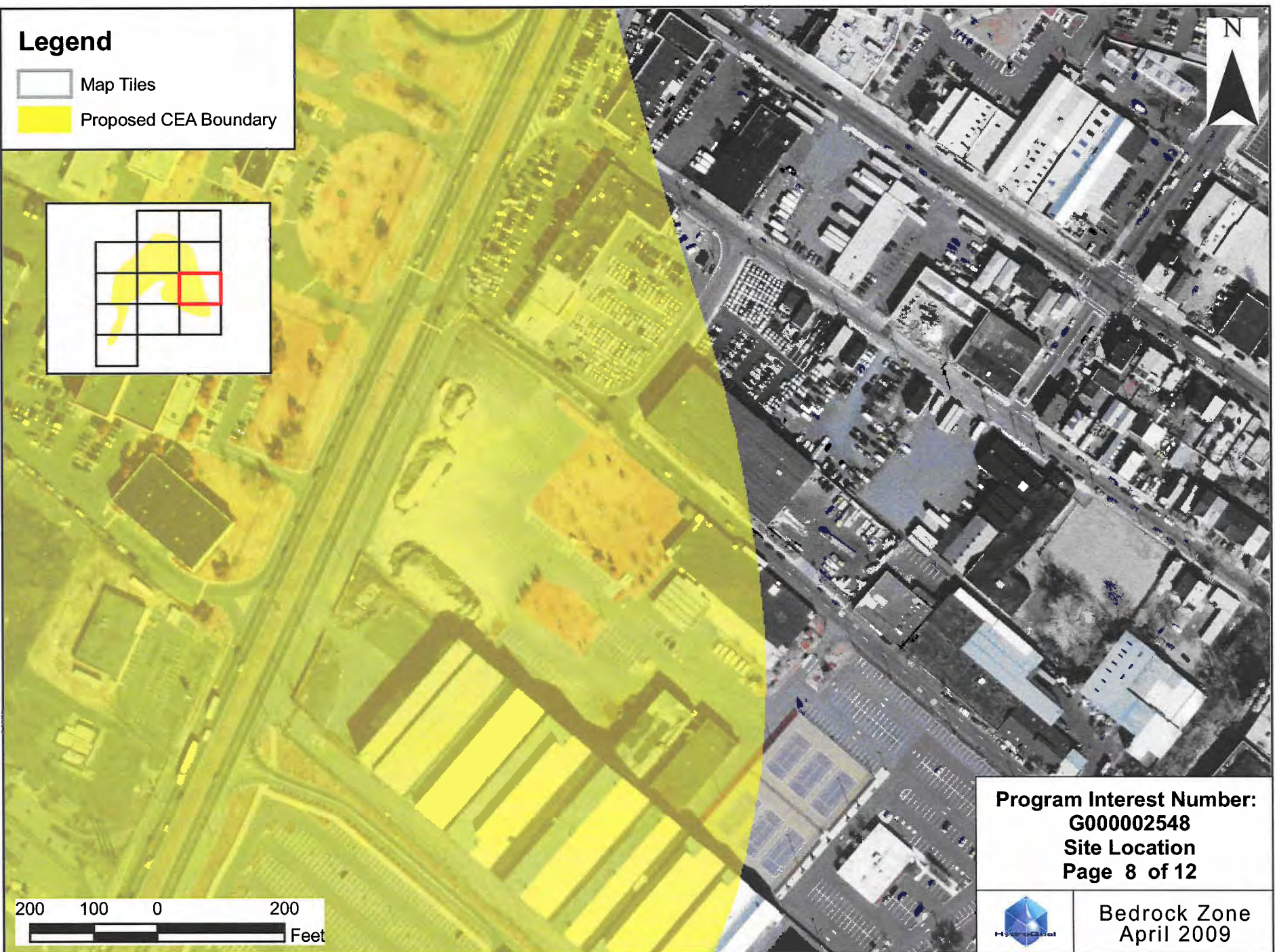
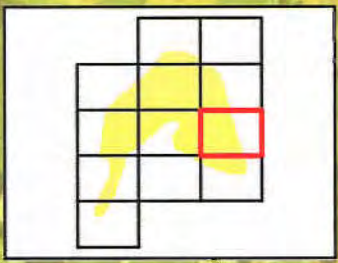


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**G00002548**  
**Site Location**  
**Page 7 of 12**

 **Bedrock Zone**  
**April 2009**

# Legend

- Map Tiles
- Proposed CEA Boundary




**Program Interest Number:**  
**G00002548**  
**Site Location**  
**Page 8 of 12**

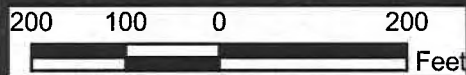
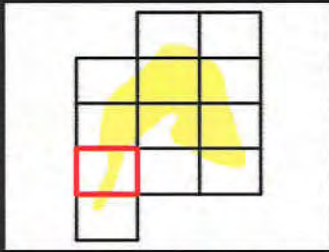


**Bedrock Zone**  
**April 2009**

# Legend

 Map Tiles

 Proposed CEA Boundary



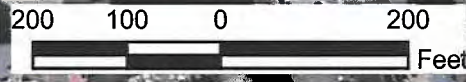
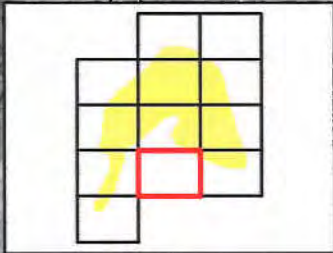
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**Site Location**  
**Page 9 of 12**



**Bedrock Zone**  
**April 2009**

# Legend

- Map Tiles
- Proposed CEA Boundary



**Program Interest Number:**  
**G00002548**  
**Site Location**  
**Page 10 of 12**

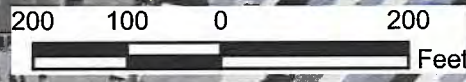
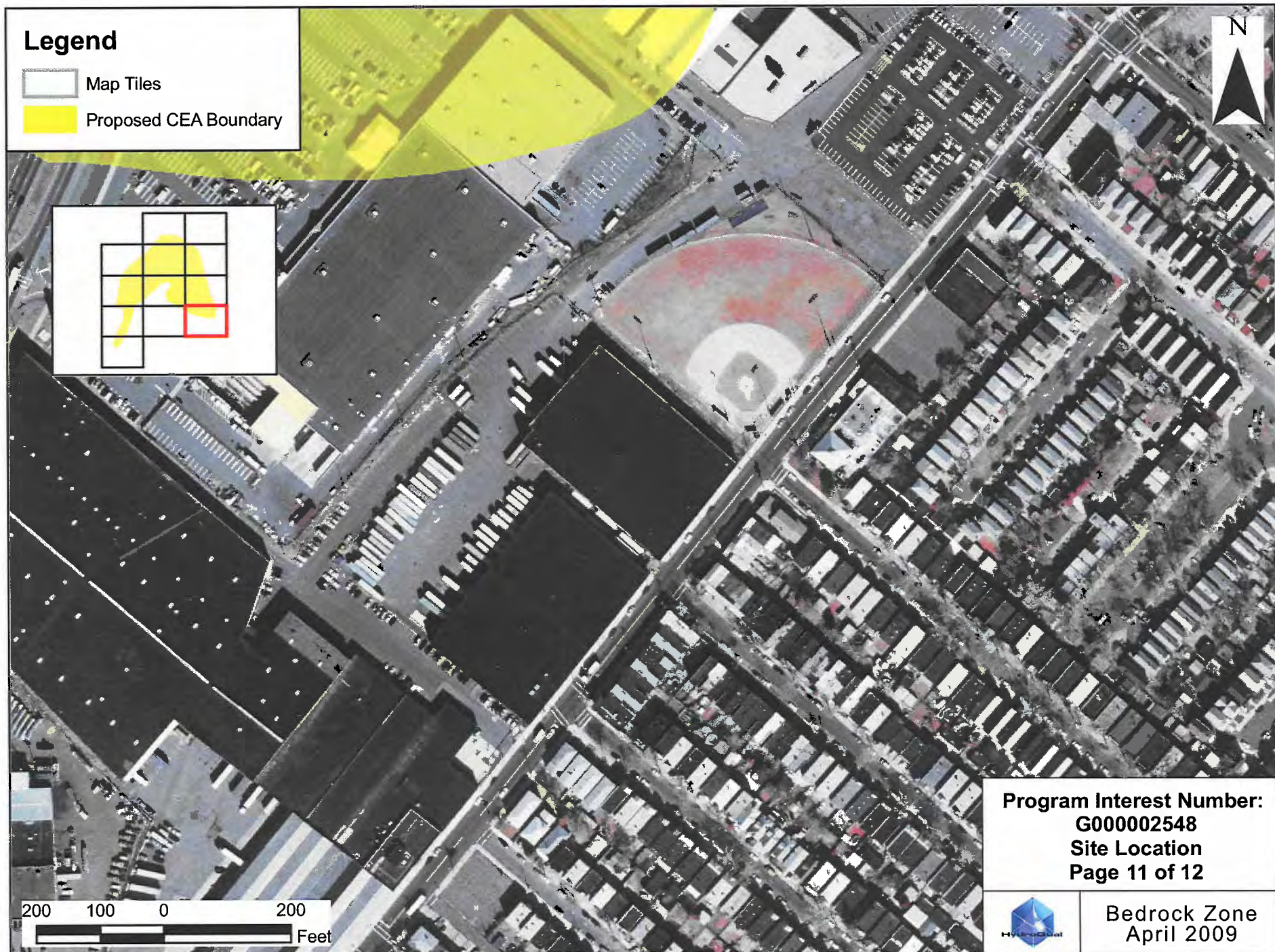
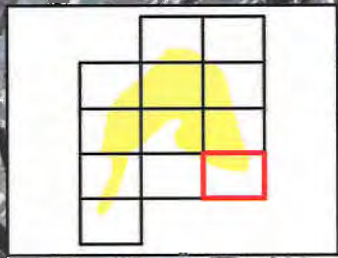


**Bedrock Zone**  
**April 2009**



# Legend

- Map Tiles
- Proposed CEA Boundary





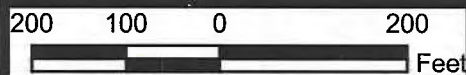
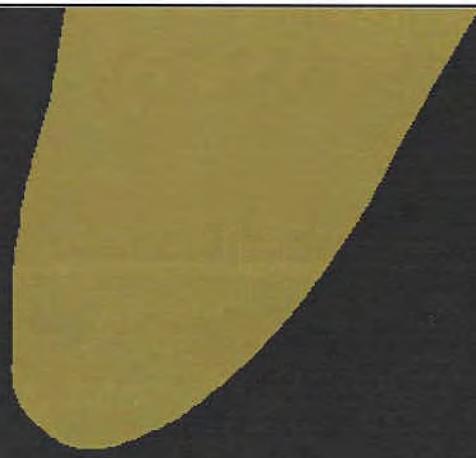
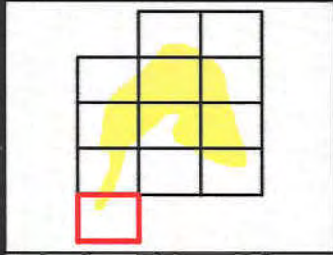
**Program Interest Number:**  
G00002548  
**Site Location**  
Page 11 of 12



**Bedrock Zone**  
April 2009

# Legend

-  Map Tiles
-  Proposed CEA Boundary



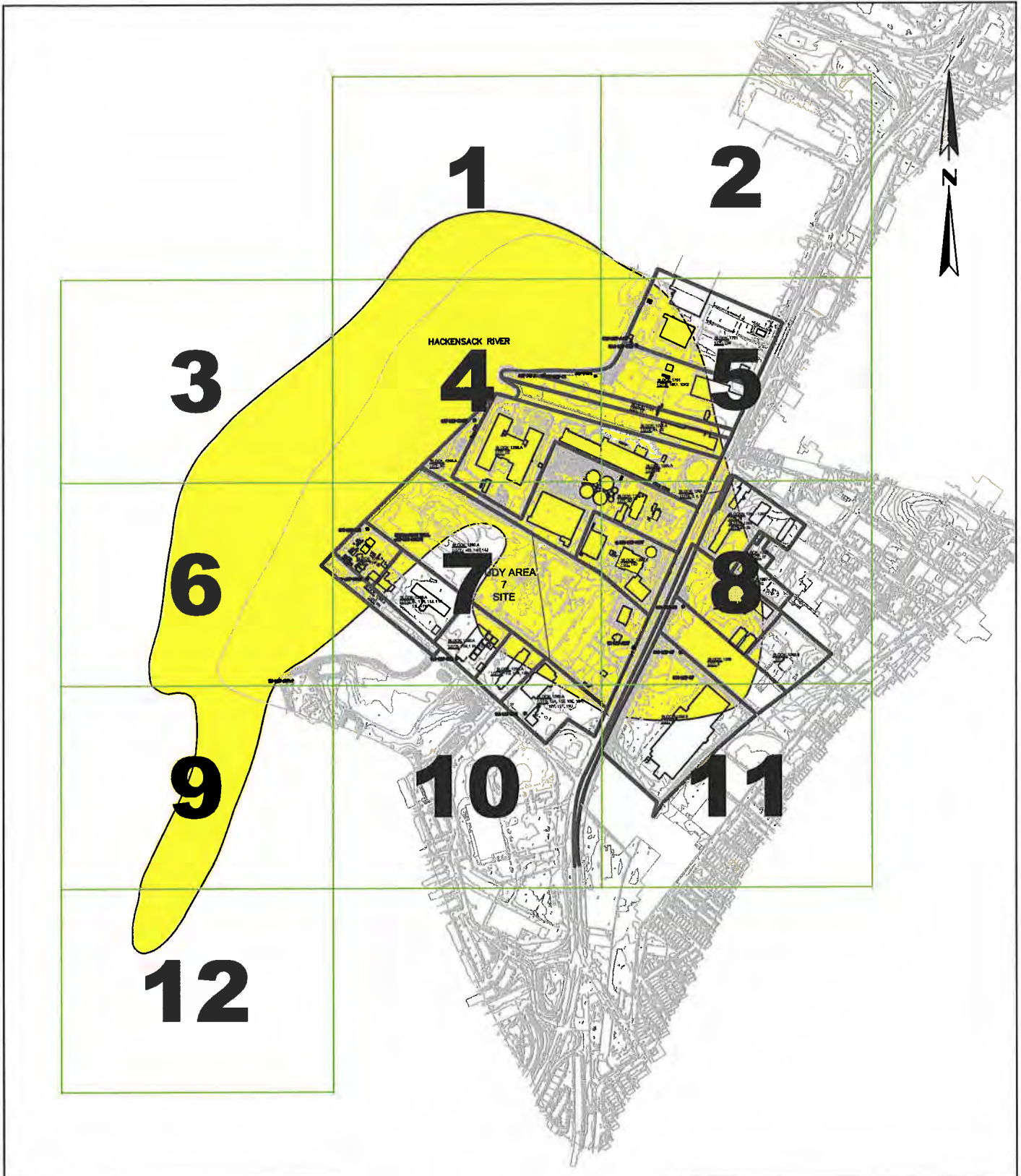
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**G000002548**  
**Site Location**  
**Page 12 of 12**



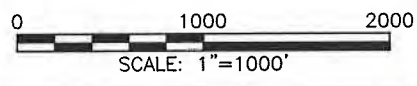
**Bedrock Zone**  
**April 2009**

**CEA BOUNDARY**


**EXISTING CONDITIONS AND  
BLOCK & LOT INFORMATION MAPS**



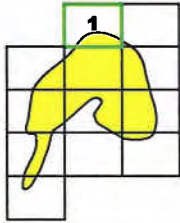
- 1 TILE
- PROPOSED CEA BOUNDARY
- PROPERTY LINE



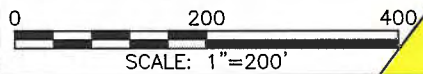
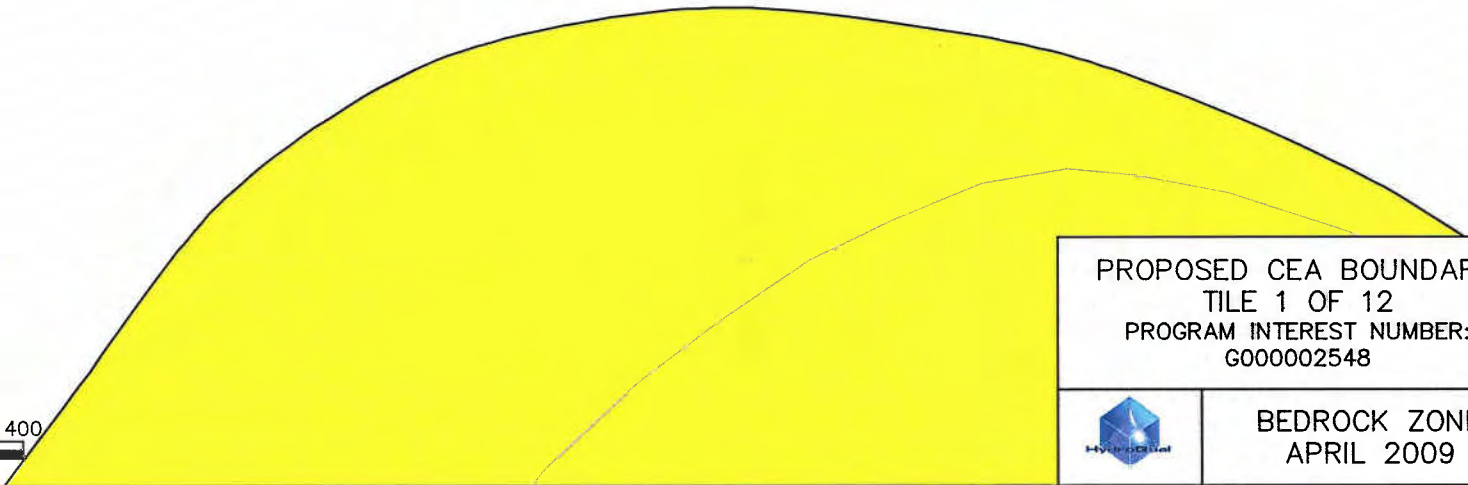
PROPOSED CEA BOUNDARY  
OVERVIEW MAP  
PROGRAM INTEREST NUMBER:  
G000002548

 BEDROCK ZONE  
APRIL 2009

PROPOSED CEA  
BOUNDARY




HACKENSACK RIVER

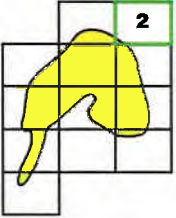



PROPOSED CEA BOUNDARY  
TILE 1 OF 12  
PROGRAM INTEREST NUMBER:  
G000002548

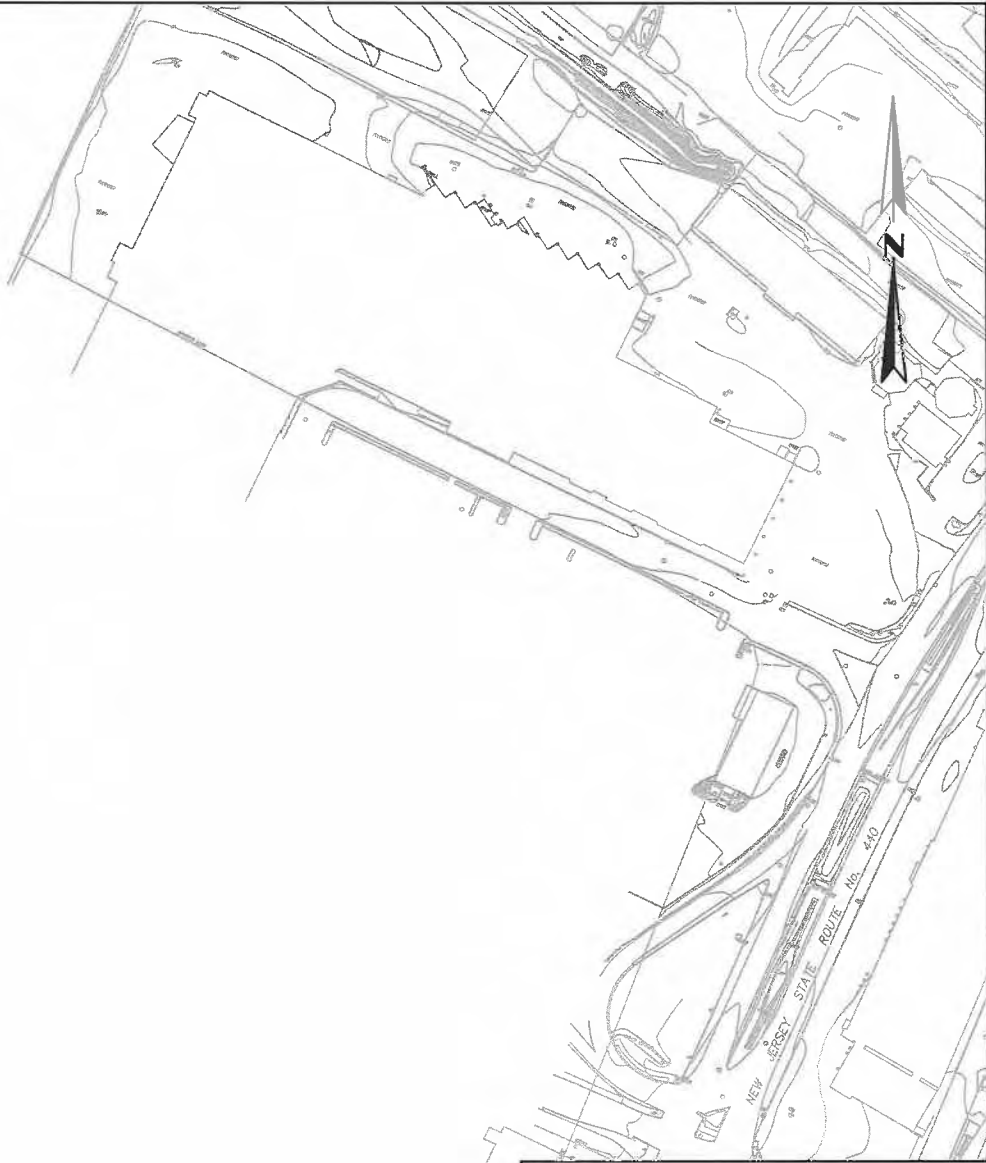


BEDROCK ZONE  
APRIL 2009

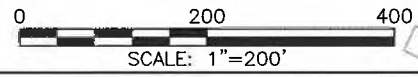
 PROPOSED CEA  
BOUNDARY



 PROPERTY BOUNDARY

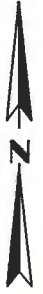
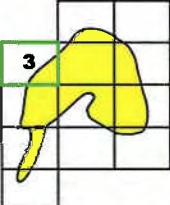


PROPOSED CEA BOUNDARY  
TILE 2 OF 12  
PROGRAM INTEREST NUMBER:  
G000002548

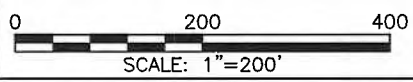
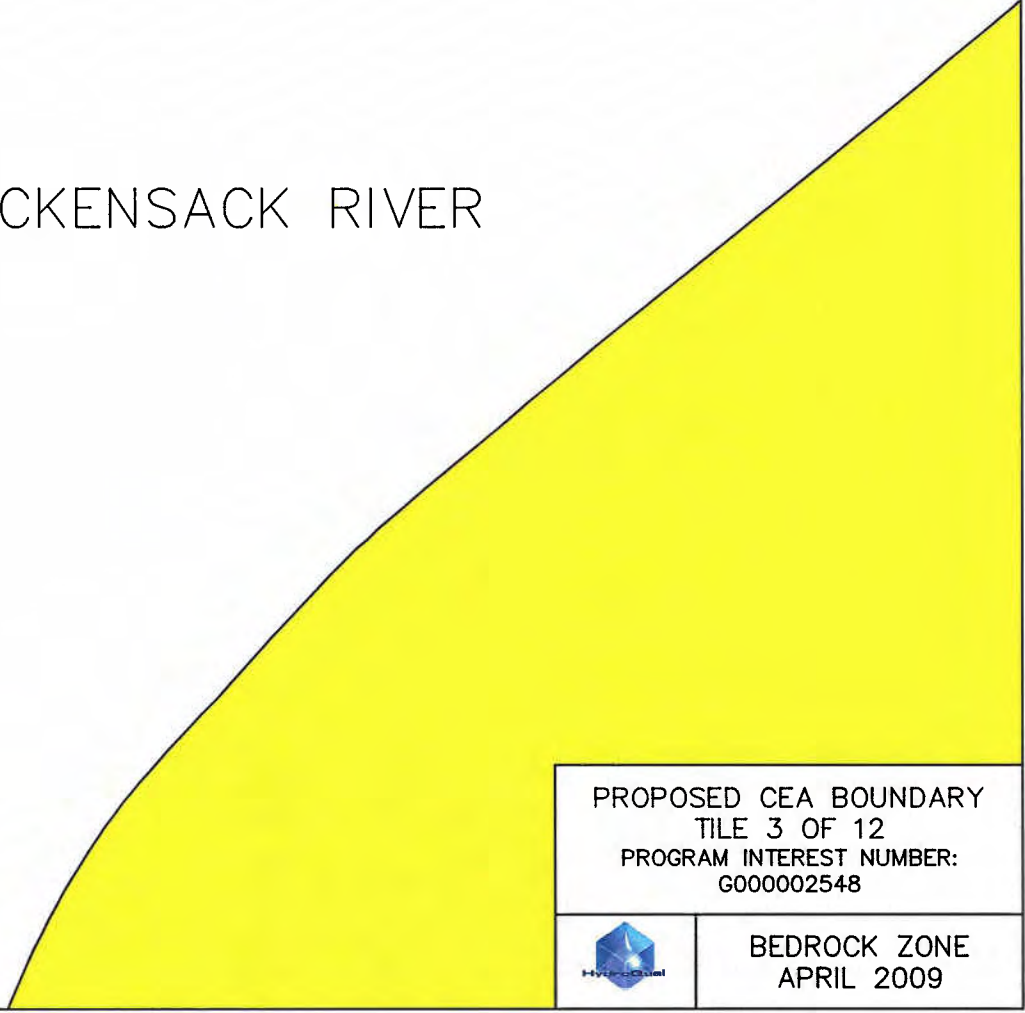



BEDROCK ZONE  
APRIL 2009

PROPOSED CEA  
BOUNDARY




HACKENSACK RIVER

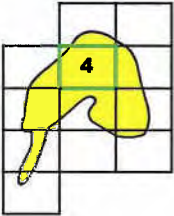



PROPOSED CEA BOUNDARY TILE 3 OF 12 PROGRAM INTEREST NUMBER: G000002548	
	BEDROCK ZONE APRIL 2009


# HACKENSACK RIVER




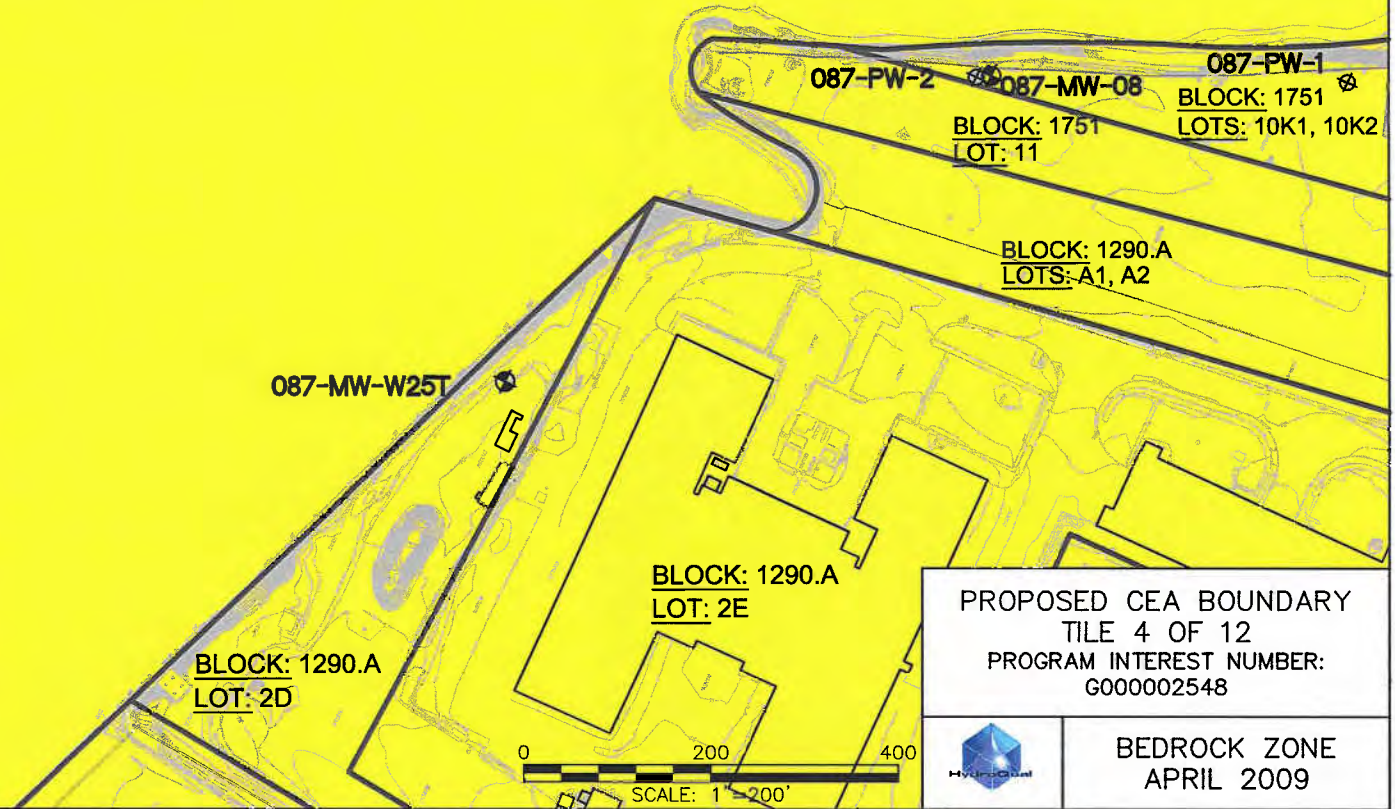
 PROPOSED CEA BOUNDARY




 EXISTING WELL

 EXISTING BUILDING

 PROPERTY BOUNDARY

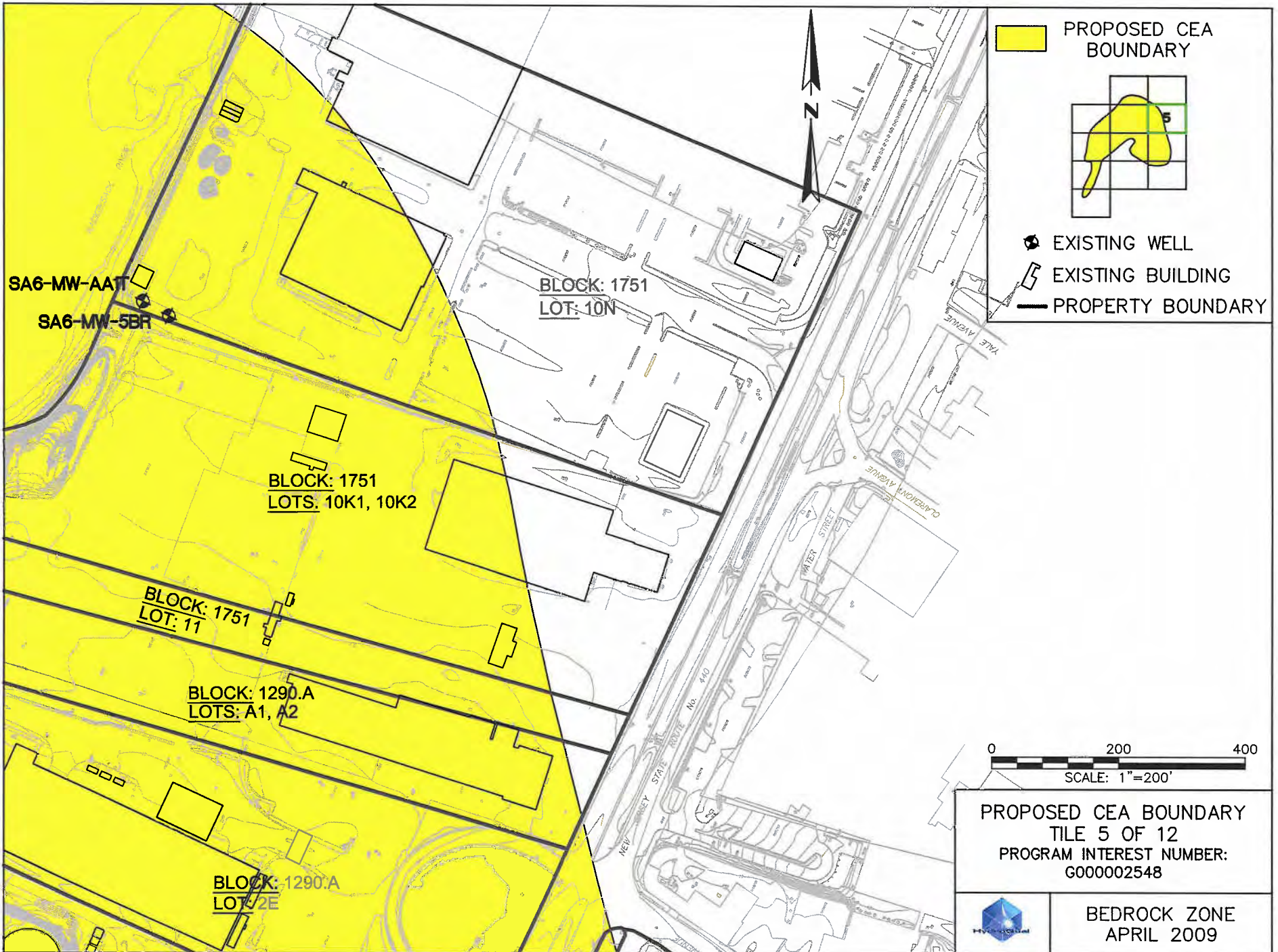


PROPOSED CEA BOUNDARY  
TILE 4 OF 12  
PROGRAM INTEREST NUMBER:  
G000002548

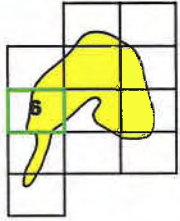


BEDROCK ZONE  
APRIL 2009





PROPOSED CEA  
BOUNDARY



PROPERTY BOUNDARY

HACKENSACK RIVER

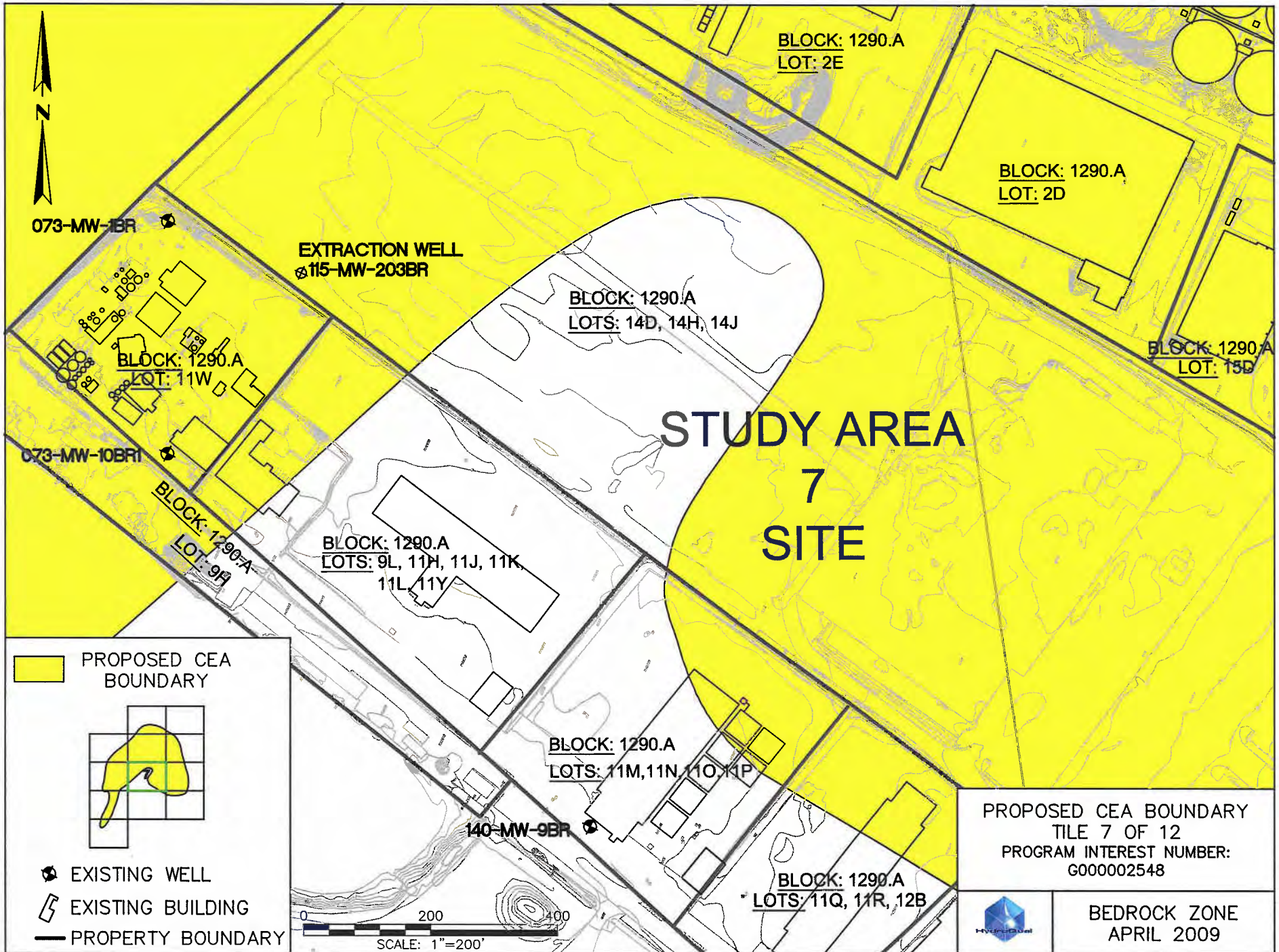


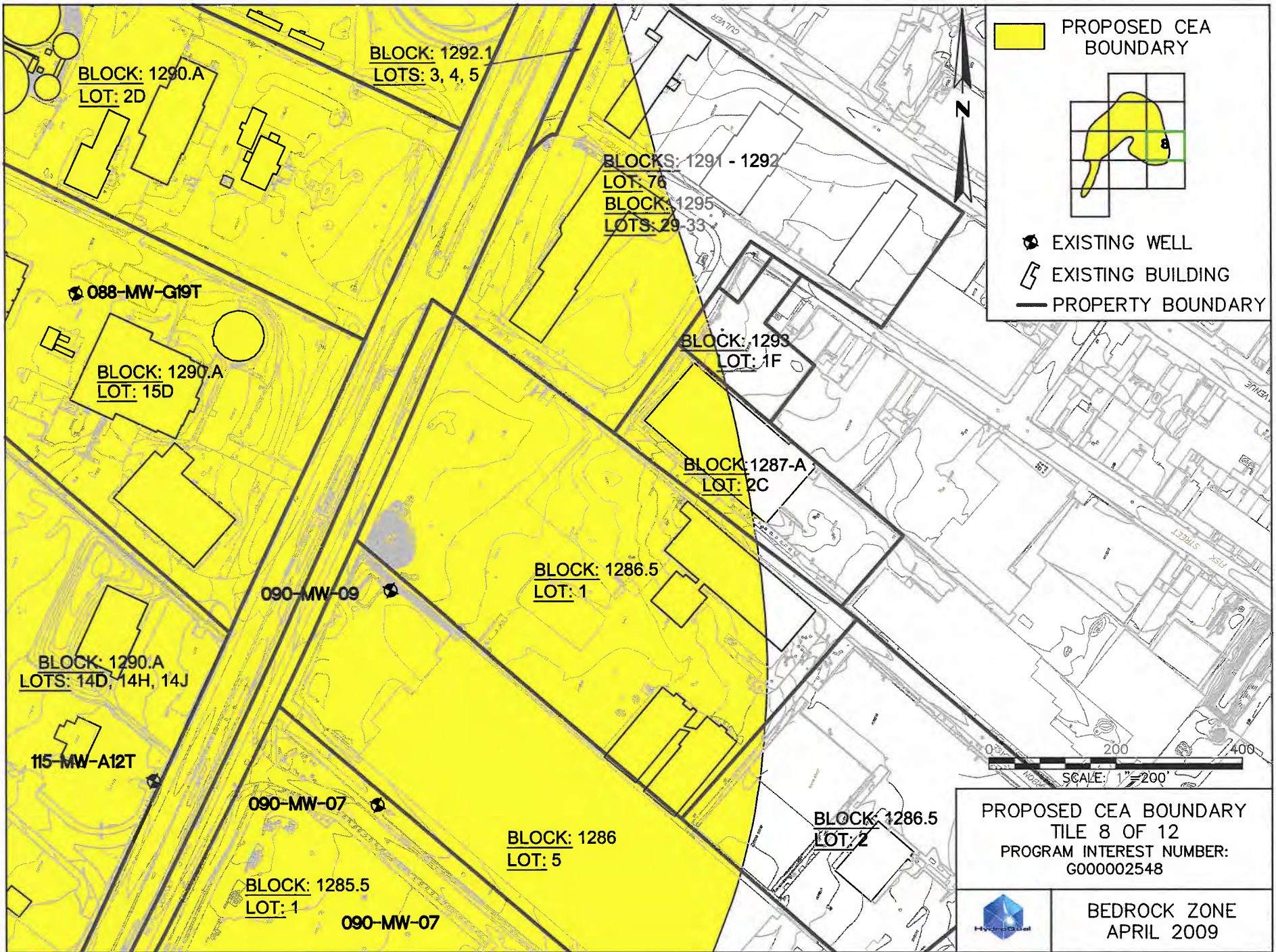
PROPOSED CEA BOUNDARY  
TILE 6 OF 12  
PROGRAM INTEREST NUMBER:  
G000002548

0 200 400  
SCALE: 1"=200'

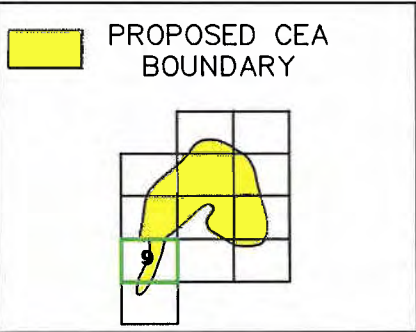


BEDROCK ZONE  
APRIL 2009

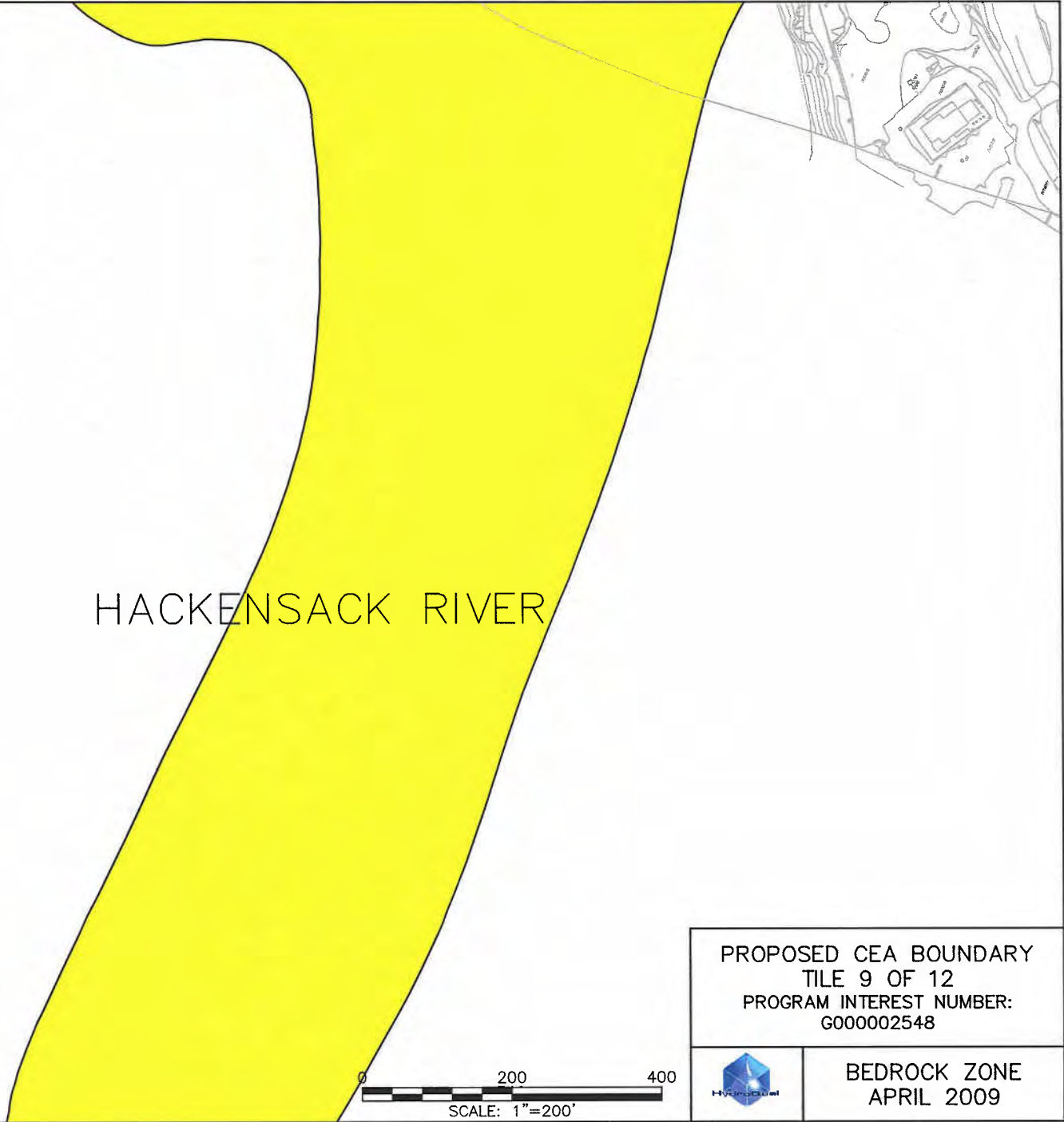




PROPOSED CEA  
BOUNDARY

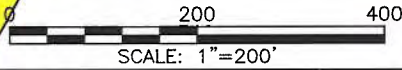


The legend shows a yellow rectangle representing the 'PROPOSED CEA BOUNDARY'. Below it is a 3x3 grid with a yellow shape in the center, and the bottom-left cell of the grid is highlighted in green and labeled with the number '9'.

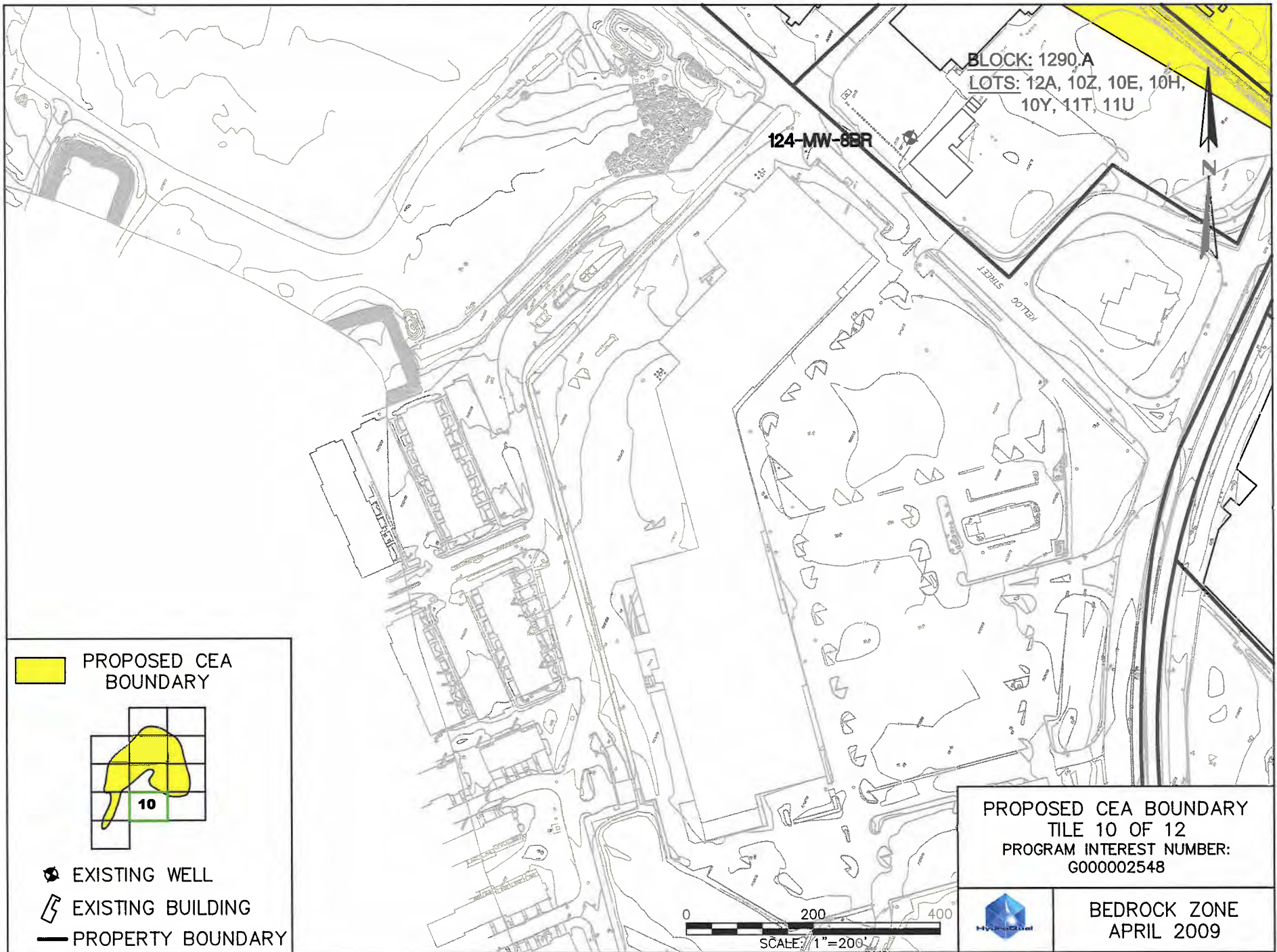


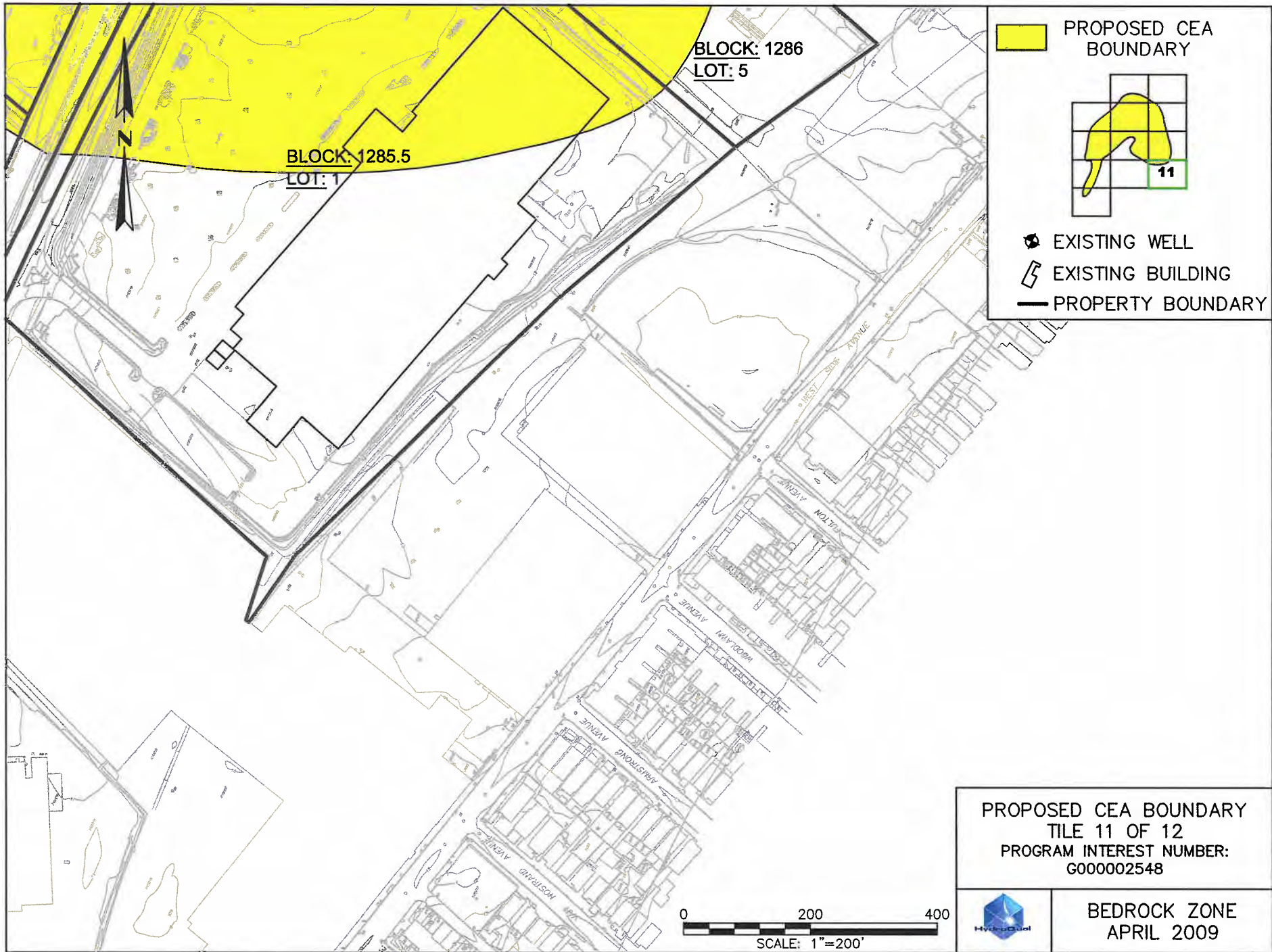
HACKENSACK RIVER

PROPOSED CEA BOUNDARY  
TILE 9 OF 12  
PROGRAM INTEREST NUMBER:  
G00002548



BEDROCK ZONE  
APRIL 2009





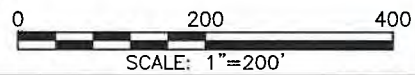
**BLOCK: 1286**  
**LOT: 5**

**BLOCK: 1285.5**  
**LOT: 1**

**PROPOSED CEA BOUNDARY**

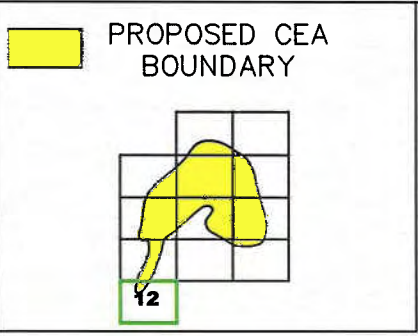
**EXISTING WELL**  
**EXISTING BUILDING**  
**PROPERTY BOUNDARY**

**PROPOSED CEA BOUNDARY**  
**TILE 11 OF 12**  
**PROGRAM INTEREST NUMBER:**  
**G00002548**

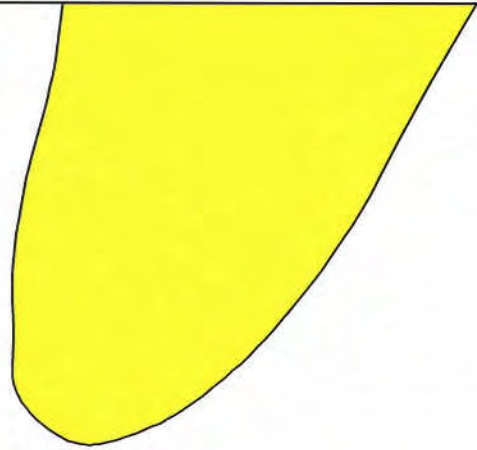


**BEDROCK ZONE**  
**APRIL 2009**

PROPOSED CEA  
BOUNDARY




The legend consists of a yellow rectangular box. Below it is an inset map showing a 3x3 grid. A yellow, irregularly shaped area is overlaid on the grid, representing the proposed CEA boundary. A small box labeled '12' is located at the bottom-left corner of the grid, indicating the current tile's position.

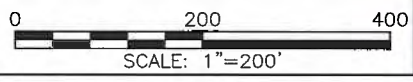


HACKENSACK RIVER

PROPOSED CEA BOUNDARY  
TILE 12 OF 12  
PROGRAM INTEREST NUMBER:  
G000002548



BEDROCK ZONE  
APRIL 2009





**STREET MAP**



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 MAP DATA © 2008 NAVTEQ OR TELEATLAS



**HYDROQUAL, INC.**  
 1200 MACARTHUR BOULEVARD  
 MAHWAH, NEW JERSEY 07430  
 (201) 529-5151 F: 529-5728

**STREET MAP**  
**VICINITY OF SITE I15 CEA**  
 PROGRAM INTEREST NUMBER: G000002548

HONEYWELL STUDY AREA 7  
 JERSEY CITY, NJ

**DIGITAL MAP SUBMISSIONS  
SITE INFO FILE  
AND METADATA FILE**

Site Info File:

Site Name – Roosevelt Drive In (Site 115)

CSL ID# - G000002548

Lead Program ID# -

Lead Program – BCM

Street Address – 425, 445 & 465 Route 440

Municipality – Jersey City

County – Hudson

Start Date – 6/1/09

Duration – Indeterminate

Contaminants – Chromium (Total), Chromium (Hexavalent)

CEA Depth – 110 feet

**Metadata Information for Groundwater CEA (Bedrock)**  
**Program Interest Number: G000002548**  
**Jersey City, New Jersey**

1. IDENTIFICATION INFORMATION

1.1. DESCRIPTION

The maps represent the area on and adjacent to the Roosevelt Drive In (Site 115) in Jersey City, New Jersey for which a groundwater Classification Exception Area (CEA) has been proposed for the bedrock aquifer. The site location and CEA boundary for the bedrock groundwater is illustrated on the identified maps.

CSL#: G000008742 (from KCSNJ)

Site Name (from KCSNJ): Roosevelt Drive In (Site 115); 425, 445 & 465 Route 440, Jersey City, New Jersey.

1.1.1. ABSTRACT

The "CEA\_bedrock.xxx" are a set of four (4) ESRI Shapefiles that illustrate the boundaries of the Classification Exception Area (CEA) at Site 115 in Jersey City, New Jersey. The files contain the polygon shapefile and associated files showing the extent of the CEA boundary for groundwater in the bedrock aquifer that contains total chromium in excess of the NJDEP Class II-A Ground Water Quality Standards (GWQS).

1.1.2. PURPOSE/BRIEF DESCRIPTION

The four (4) ESRI Shapefiles, "CEA\_bedrock.xxx", illustrate the boundaries of the Classification Exception Area (CEA) for the bedrock at Site 115 in Jersey City, New Jersey.

1.1.3. SUPPLEMENTAL INFORMATION

The following files are provided on the diskette:

CEA\_bedrock.shp – ArcView shapefile  
CEA\_bedrock.dbf – ArcView attribute table  
CEA\_bedrock.prj – ArcView projection file  
CEA\_bedrock.shx – ArcView index file

cea\_metafile\_bedrock.doc – metadata information for GIS maps.

cea\_site\_info\_file\_bedrock.doc – support information for CEA

1.1.4. CURRENTNESS REFERENCE

The maps are representative of current conditions as of June 2008.

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## 2. DATA QUALITY INFORMATION

### 2.1. ATTRIBUTE ACCURACY

The shapefile CEA\_bedrock.shp was digitized using the 2002 orthophotography available from the State of New Jersey Office of Information Technology. The orthophotos and resulting CEA boundary are georeferenced to NJ State Plane, NAD 1983, Feet.

### 2.2. QUANTITATIVE ATTRIBUTE ACCURACY ASSESSMENT

The CEA boundary has been plotted on the georeferenced USGS topographic map to assess the positional accuracy of the files.

### 2.3. COMPLETENESS REPORT

There were no known omissions in the construction of the data sets.

### 2.4. LINEAGE

ESRI ArcGIS was used to view the orthophotos and digitize the CEA boundary based on measured values at sampling wells.

### 2.5. SOURCE SCALE DENOMINATOR

2400

### 2.6. TYPE OF SOURCE MEDIA

Online

### SOURCE CURRENTNESS REFERENCE

2002

### 2.7. PROCESS DATE

April 2009

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## 3. SPATIAL DATA ORGANIZATION INFORMATION

### 3.1. DIRECT SPATIAL REFERENCE METHOD

Vector data, with polygons.

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## 4. SPATIAL REFERENCE INFORMATION

### 4.1. GRID COORDINATE SYSTEM

NJ State Plane

### 4.2. HORIZONTAL DATUM NAME

NAD 83

---

## 5. ATTRIBUTE INFORMATION

5.1. ATTRIBUTE LABEL: CEA\_bedrock.shp

---

## 6. METADATA REFERENCE INFORMATION

6.1. METADATA DATE: 4/20/09

6.2. METADATA CONTACT: William G. Soukup P.G.

---

## 7. CITATION INFORMATION

### 7.1. ORIGINATOR

HydroQual Inc. – William G. Soukup P.G.

### 7.2. TITLE

CEA Boundary for Bedrock, Site 115, Jersey City, New Jersey

### 7.3. AUTHOR'S NOTES

Prepared by HydroQual, Inc., 1200 MacArthur Boulevard, Mahwah, NJ

Prepared for Honeywell International Inc.

---

8. CONTACT INFORMATION

8.1. CONTACT PERSON (PRIMARY)

John J. Morris, P.E.

8.2. CONTACT ORGANIZATION

Honeywell International Inc.

8.3. CONTACT ADDRESS

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Morristown, NJ 07962

8.4. CONTACT VOICE TELEPHONE

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[john.morris@honeywell.com](mailto:john.morris@honeywell.com)

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