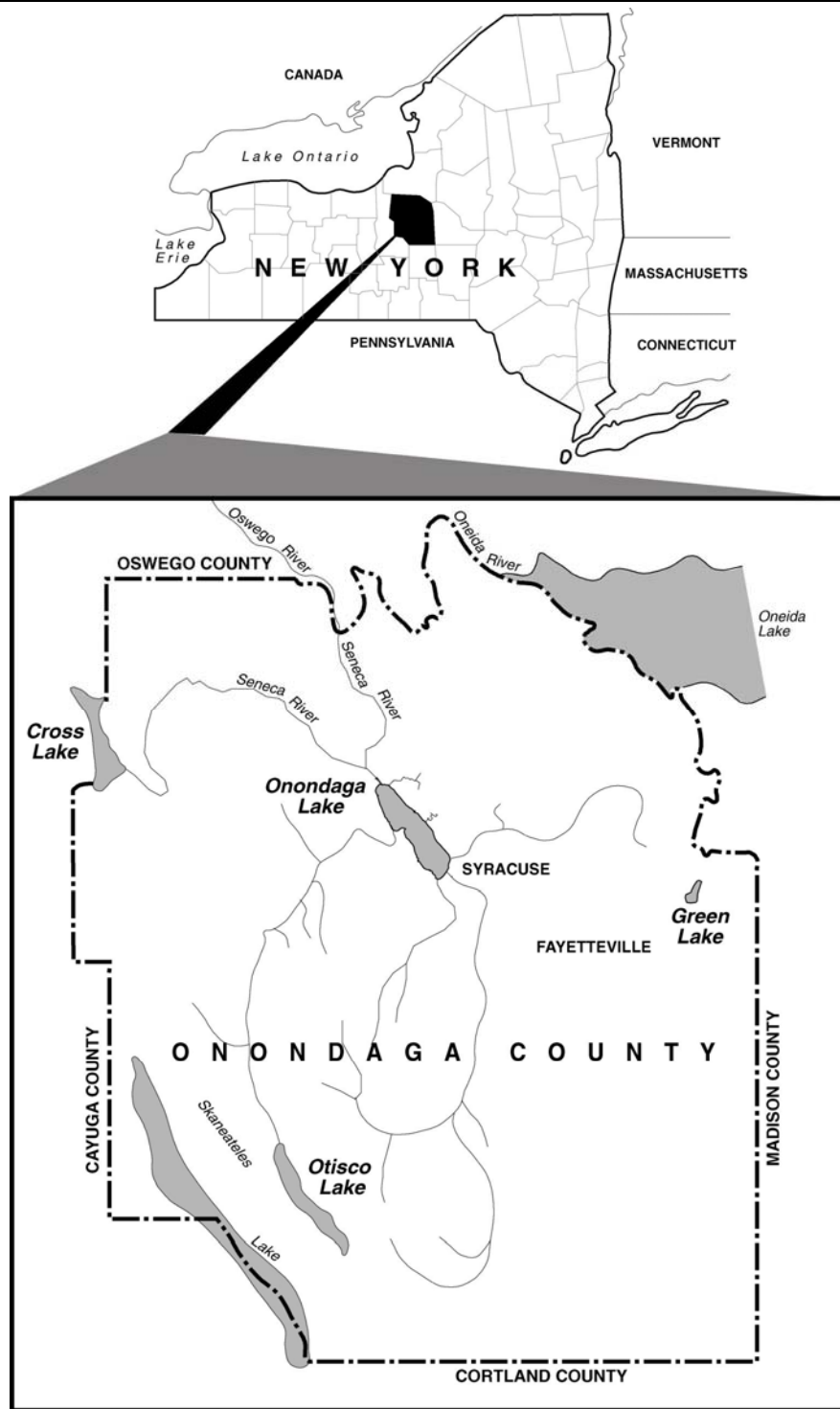




Source: Modified from TAMS 2002c.

FIGURE 1.1

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

LOCATION OF ONONDAGA LAKE

PARSONS

290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560

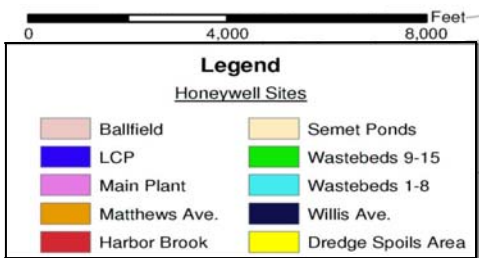
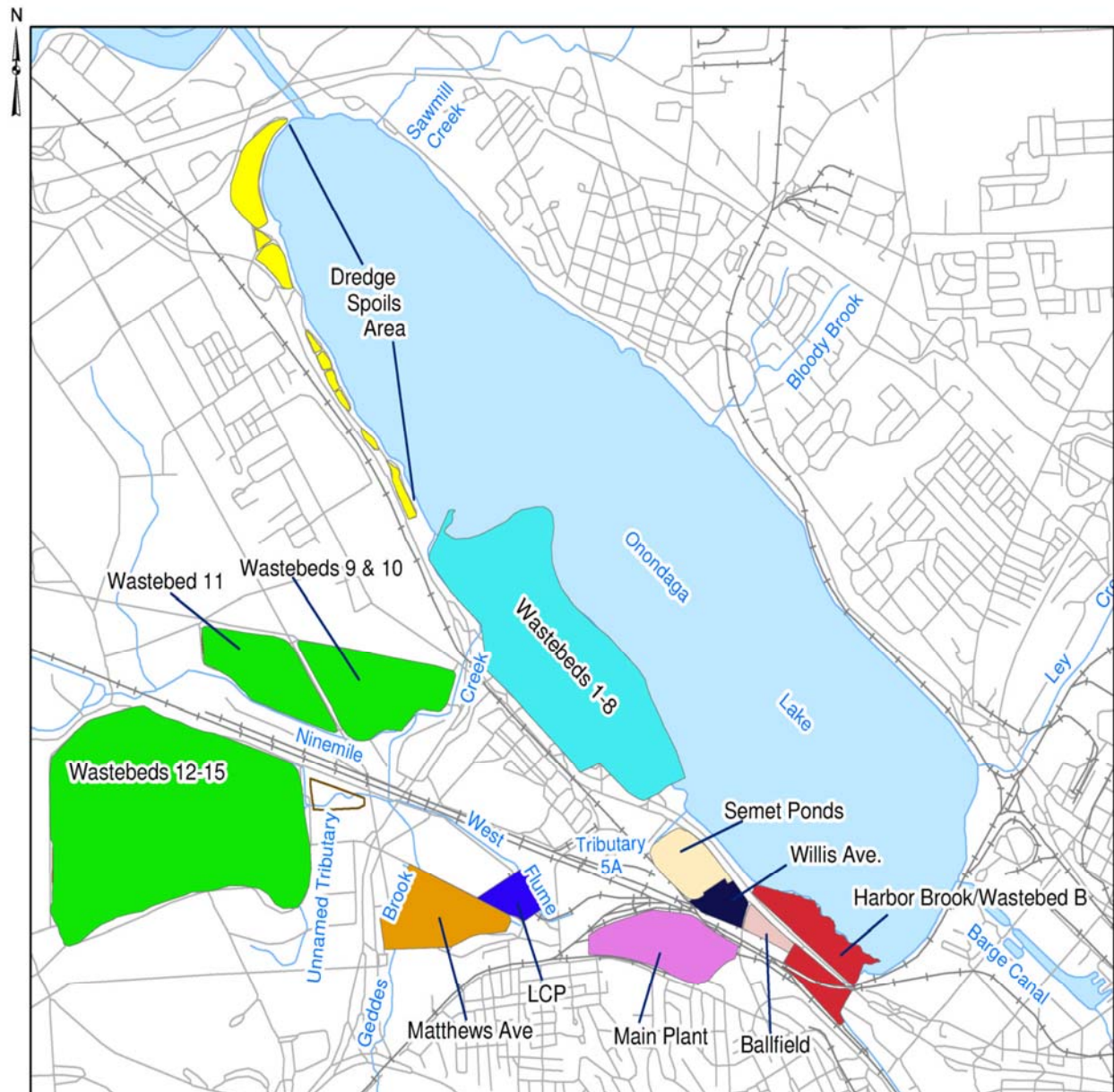


FIGURE 1.2

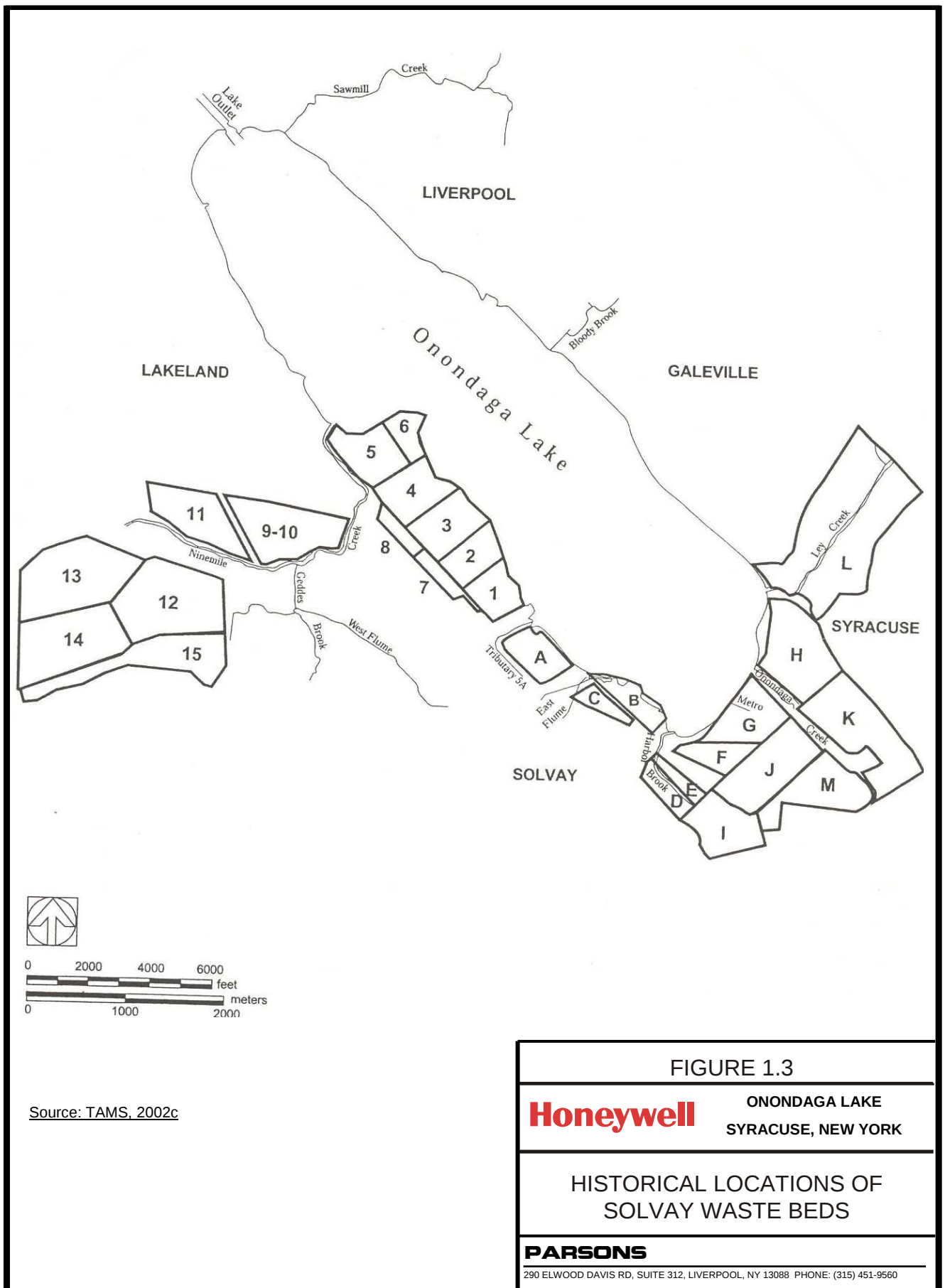
Honeywell

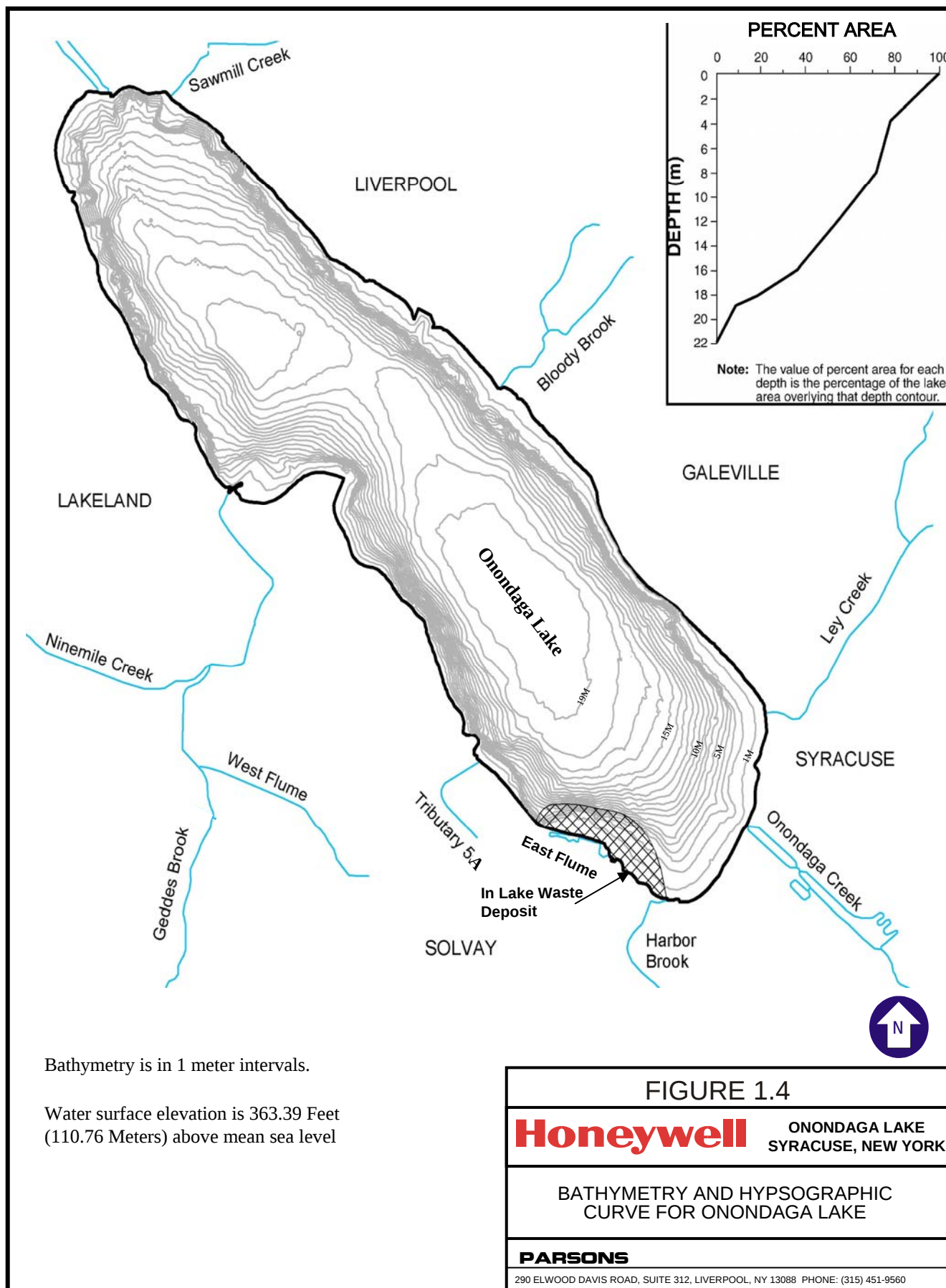
ONONDAGA LAKE
SYRACUSE, NEW YORK

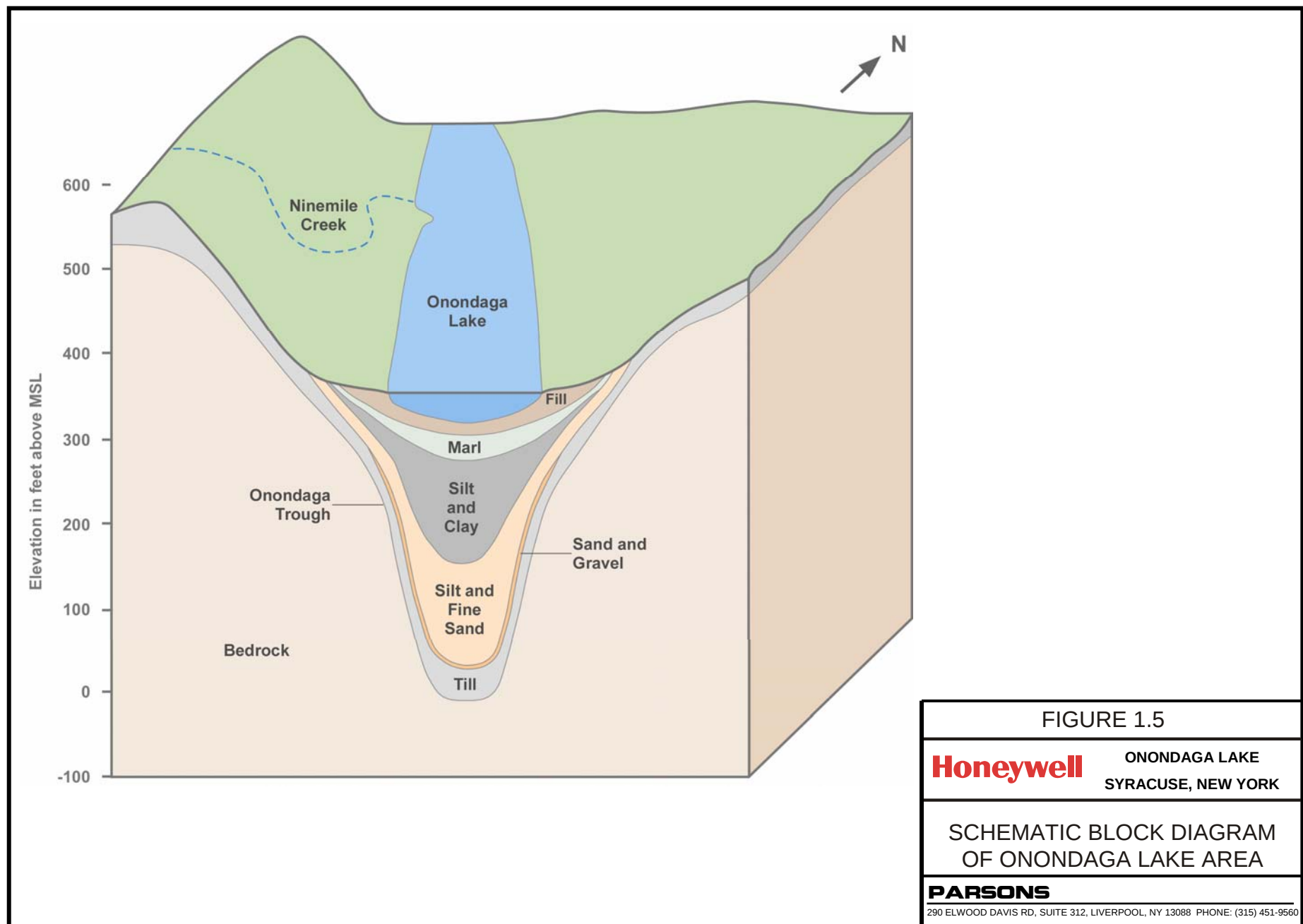
LOCATION OF FORMER HONEYWELL
FACILITIES AND DISPOSAL AREAS NEAR
ONONDAGA LAKE

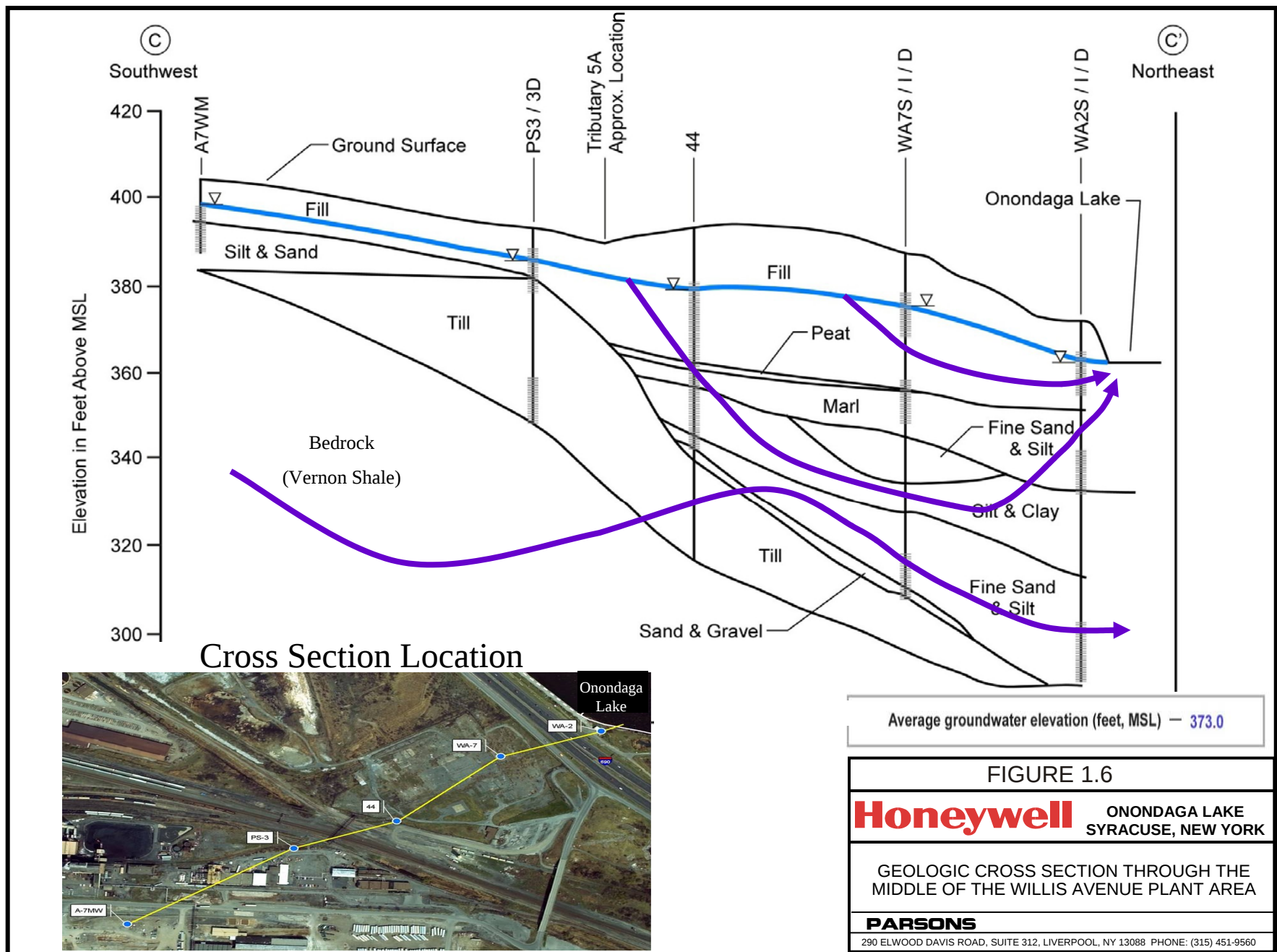
PARSONS

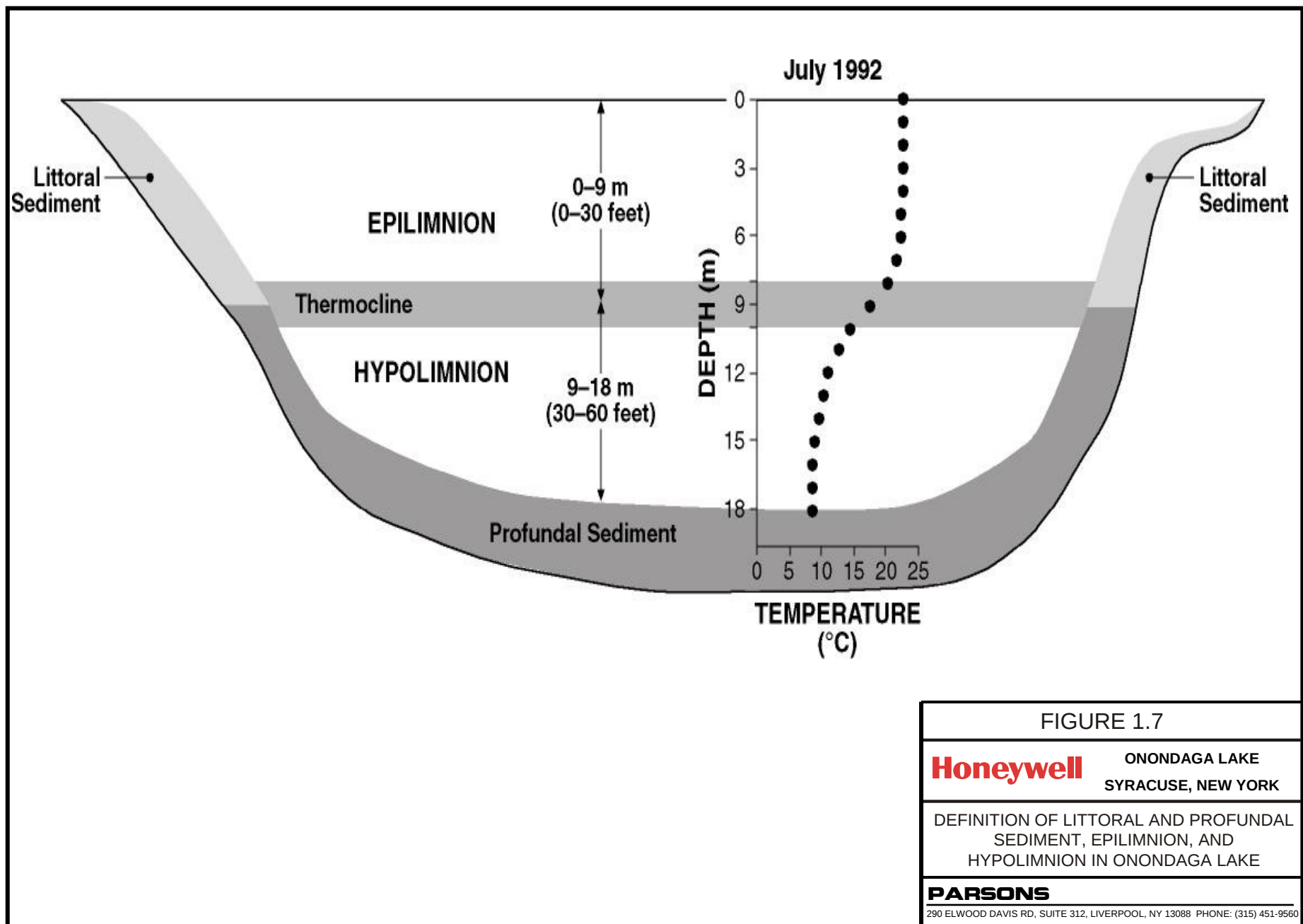
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560

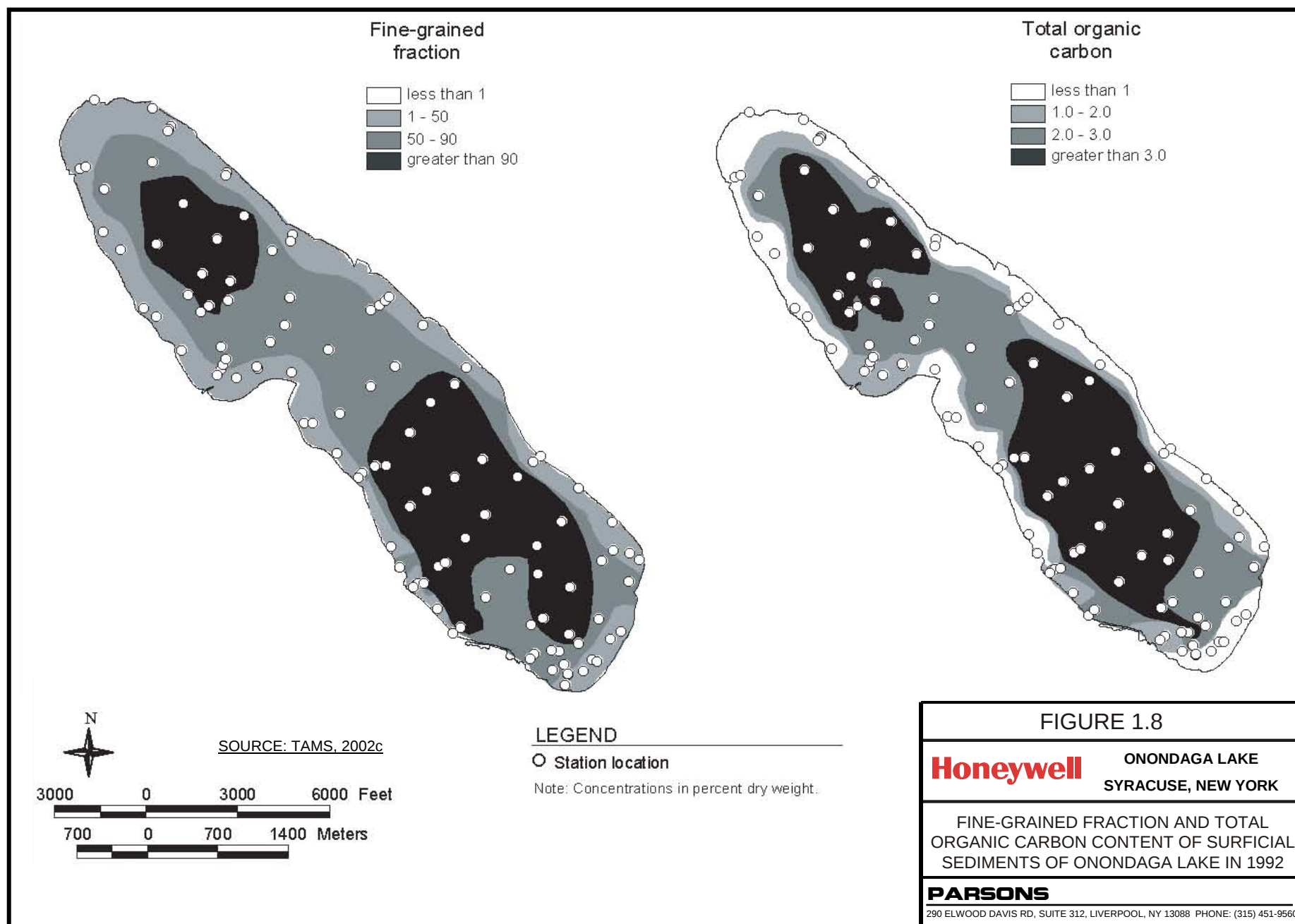














LEGEND

 9m contour

 Areas of Macrophytes

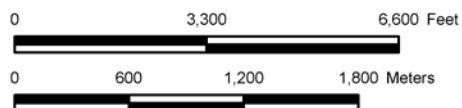


FIGURE 1.9

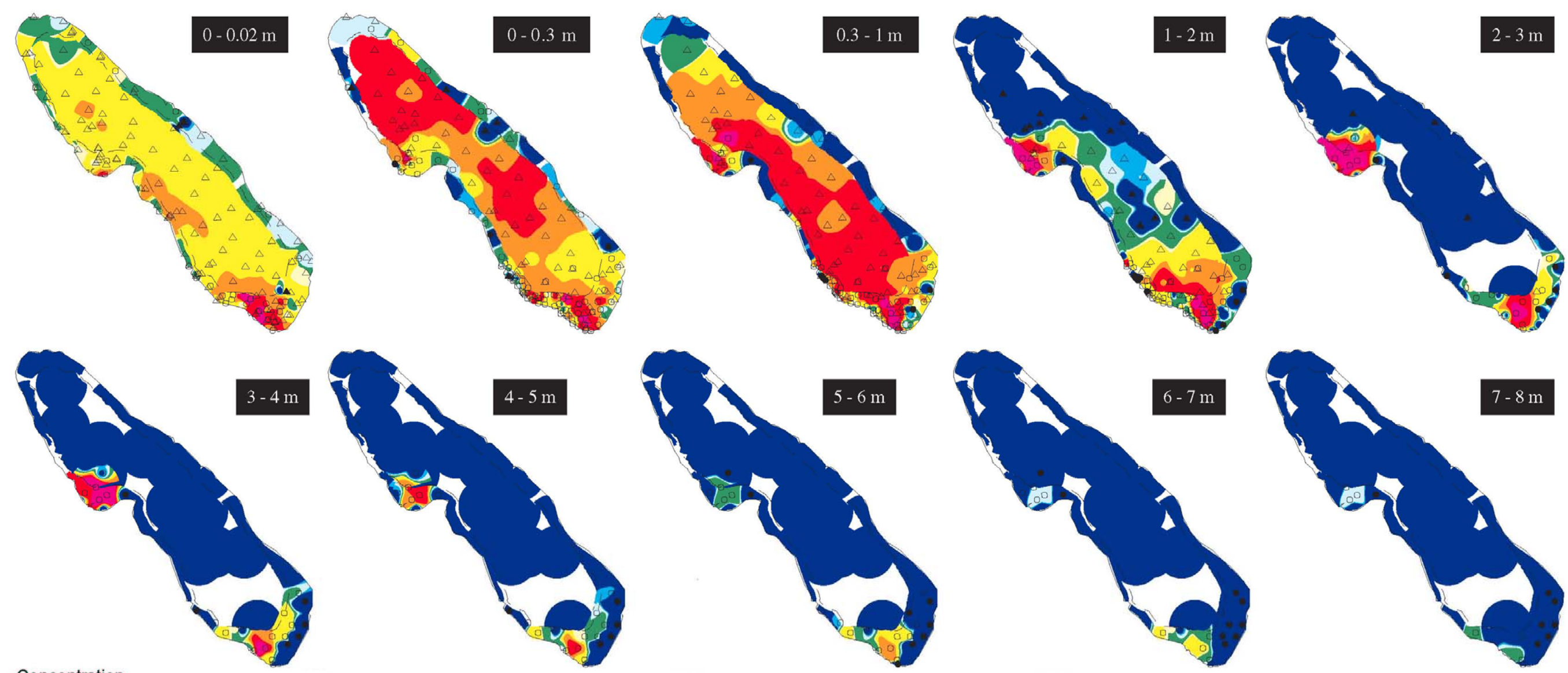
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

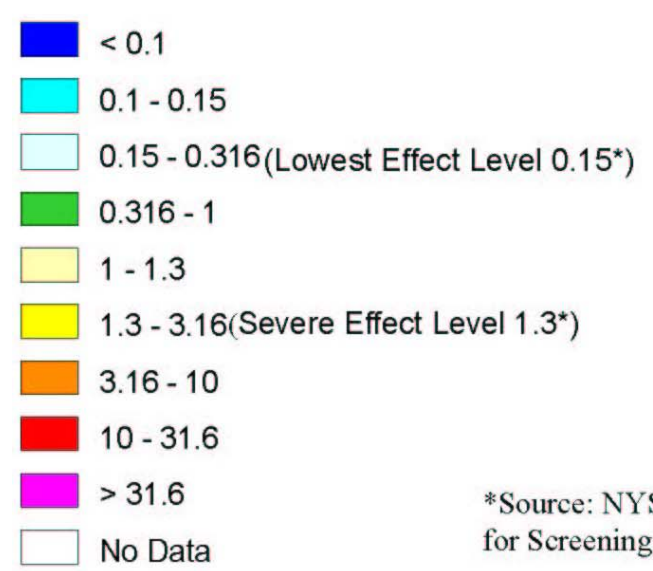
DISTRIBUTION OF MAJOR MACROPHYTE
BEDS IN ONONDAGA LAKE IN 2000

PARSONS

290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
(mg/kg dw)



- △ 1992 data, detect
- ▲ 1992 data, non-detect
- 2000 data, detect
- 2000 data, non-detect
- / / 9 meter bathymetric contour

*Source: NYSDEC Technical Guidance
for Screening Contaminated Sediments, 1999

Source: TAMS, 2002c

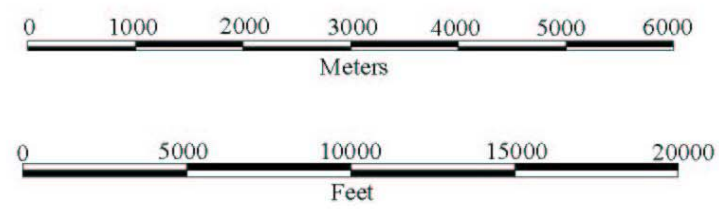
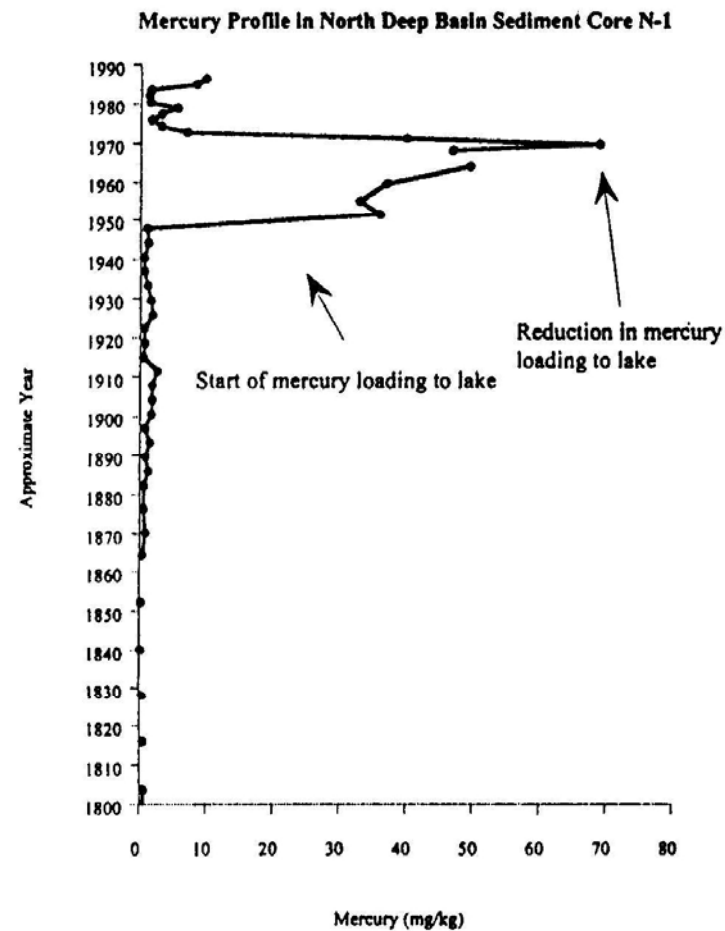
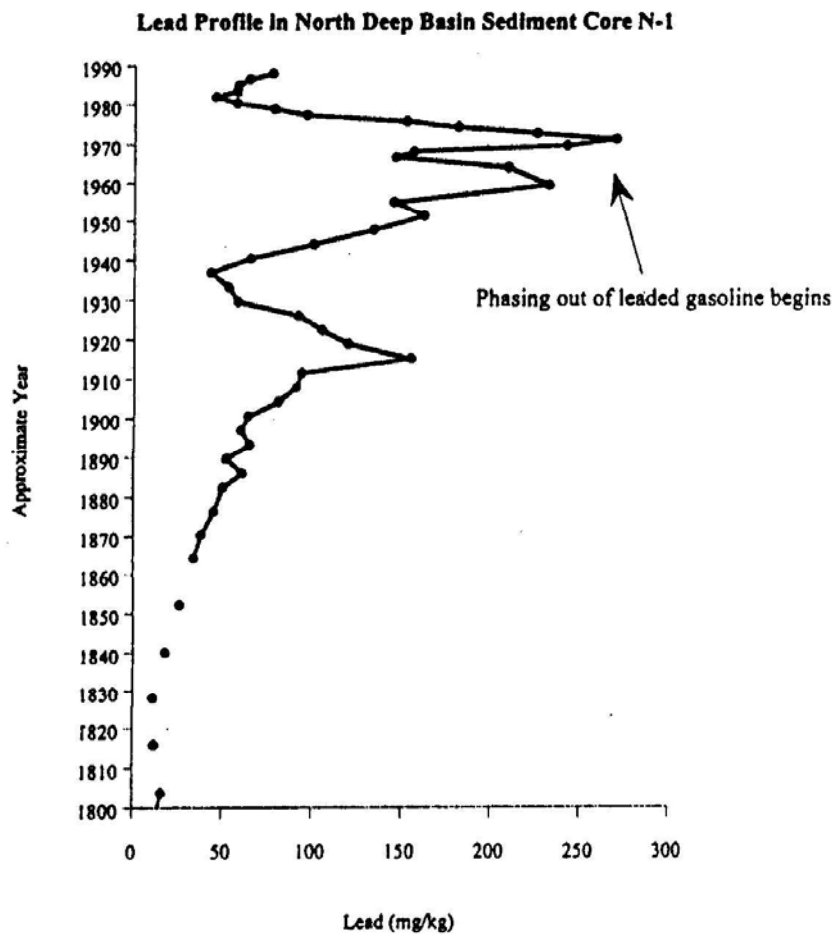


FIGURE 1.10

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

TOTAL MERCURY CONCENTRATIONS IN
ONONDAGA LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Source: TAMS, 2002c

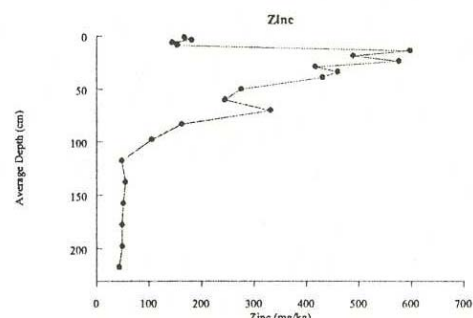
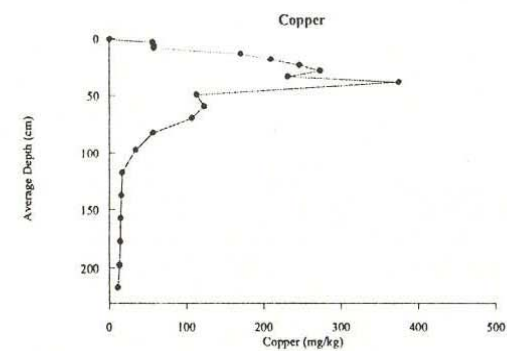
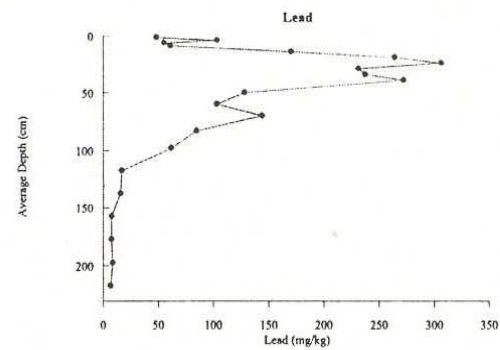
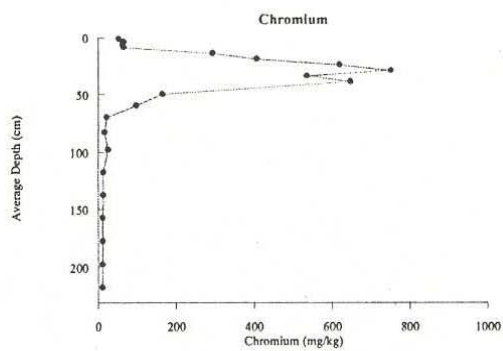
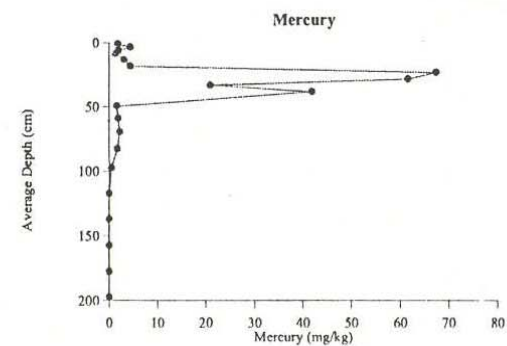
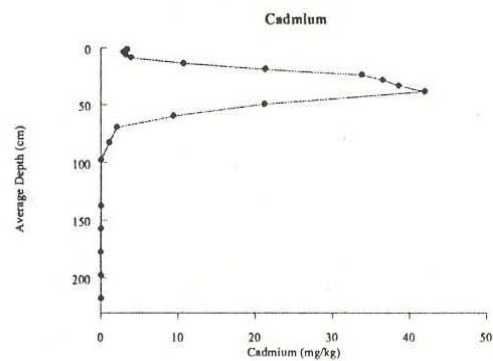
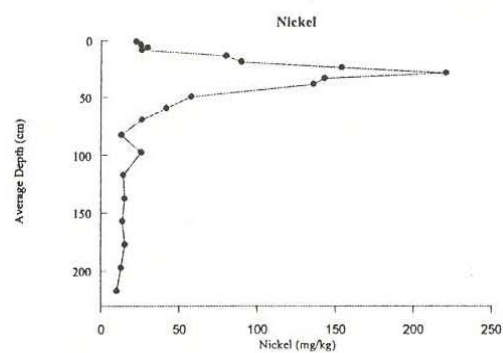
FIGURE 1.11

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

LEAD AND MERCURY PROFILES IN
SEDIMENT CORES FROM THE NORTH
DEEP BASIN OF ONONDAGA LAKE (1988)

PARSONS

290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Source: TAMS, 2002c

FIGURE 1.12

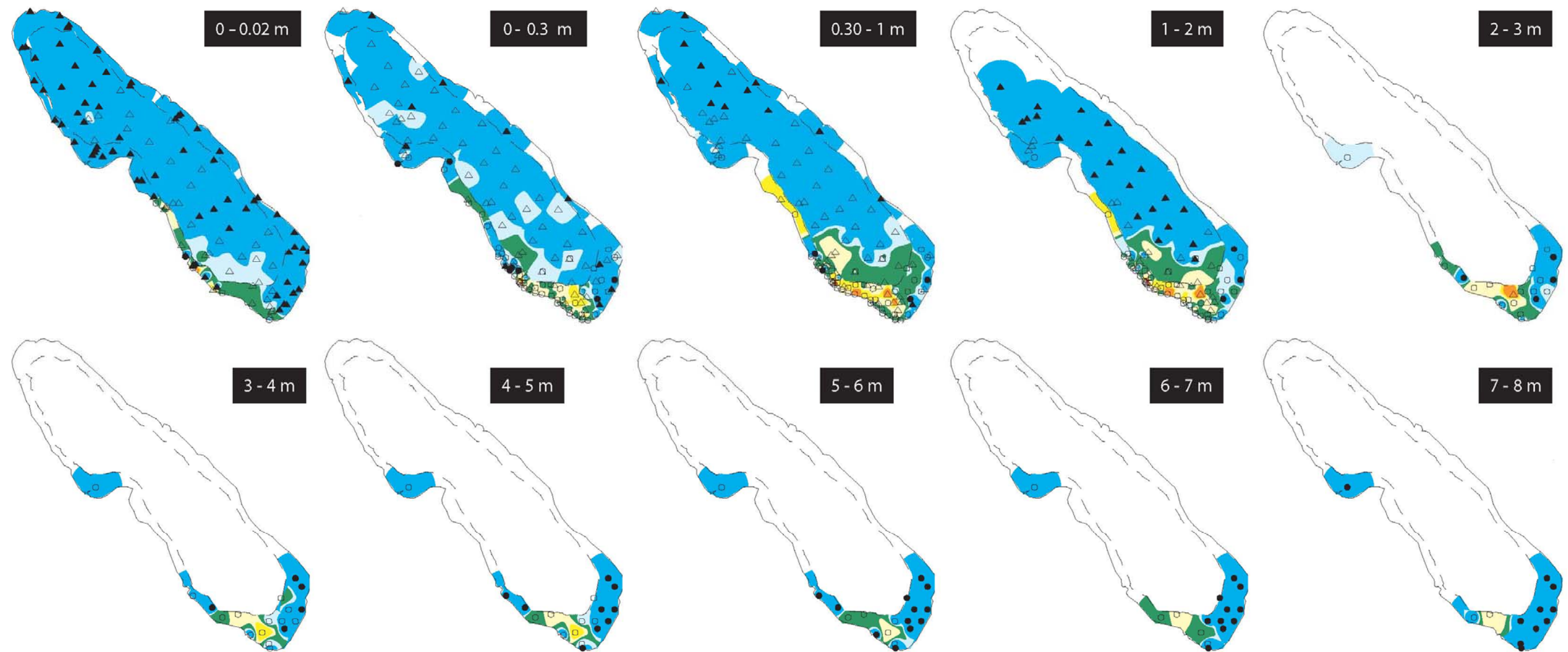
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

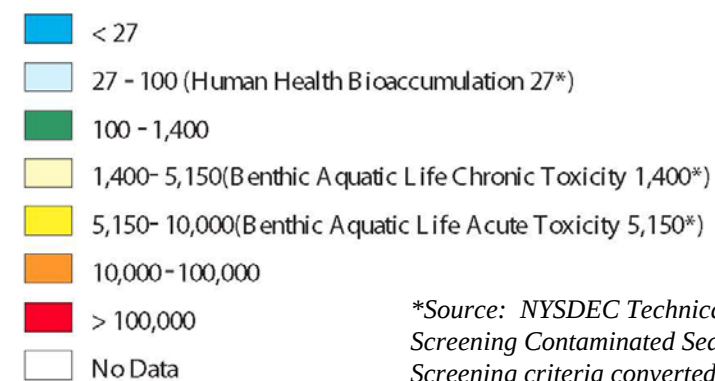
METALS IN SEDIMENT CORE S51
(1992, SOUTH DEEP BASIN)

PARSONS

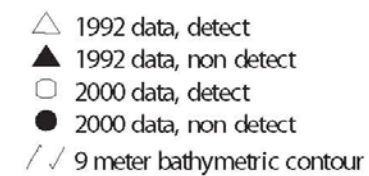
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to $\mu\text{g/kg dw}$
based on 5% total organic carbon



Source: TAMS, 2002c

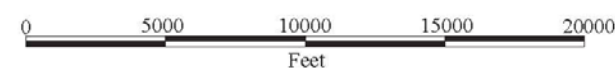
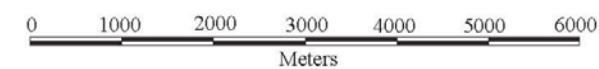
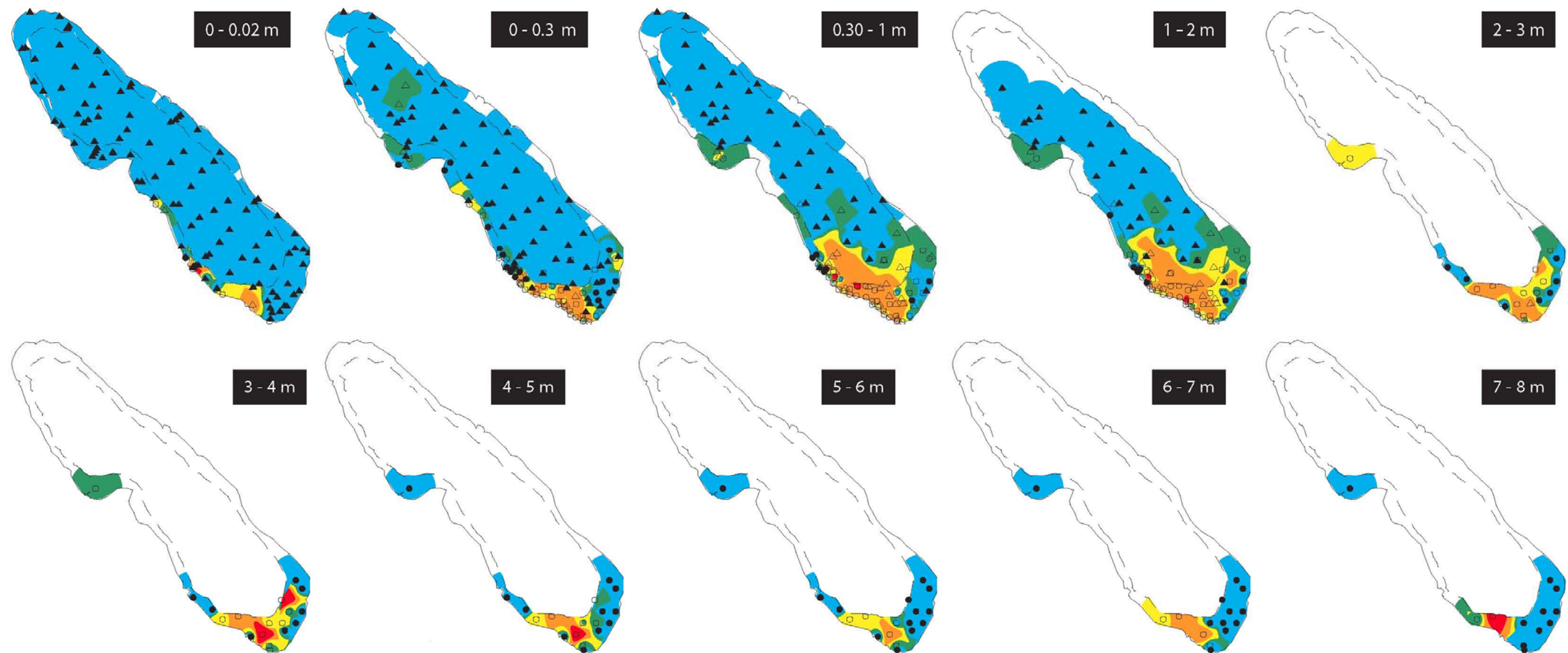


FIGURE 1.13

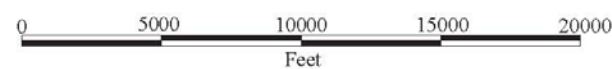
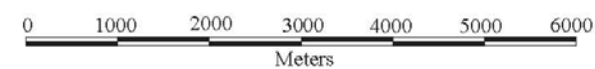
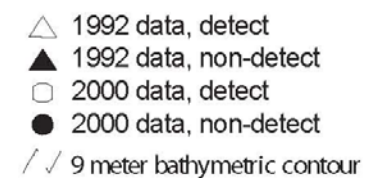
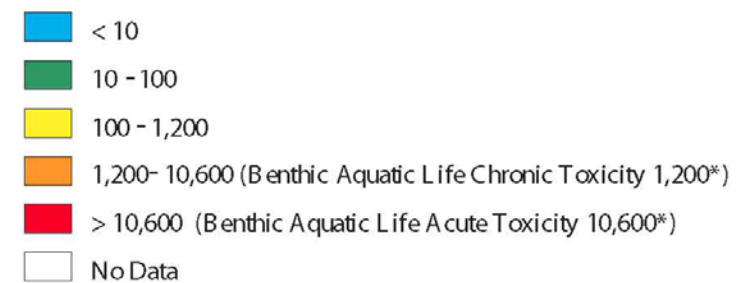
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

BENZENE CONCENTRATIONS IN ONONDAGA
LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to $\mu\text{g/kg dw}$ based
on 5% total organic carbon

Source: TAMS, 2002c

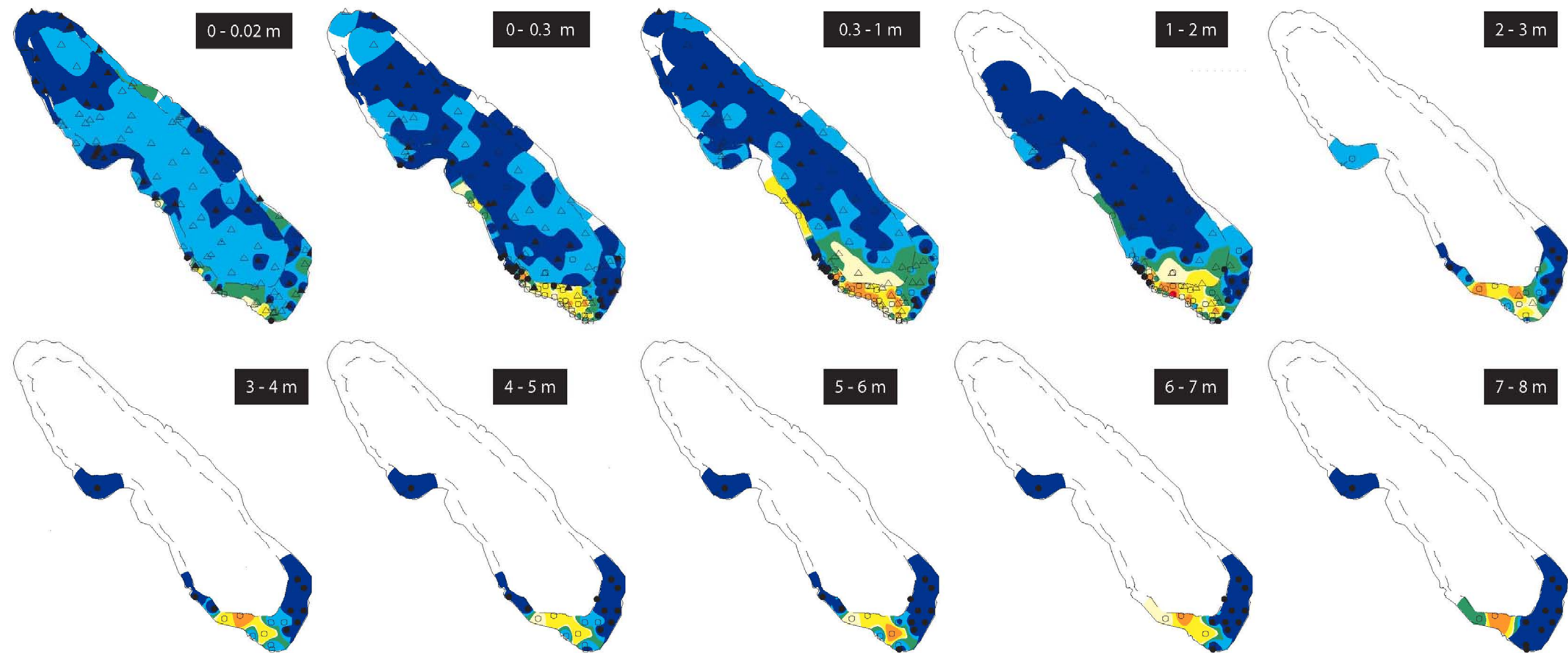


FIGURE 1.14

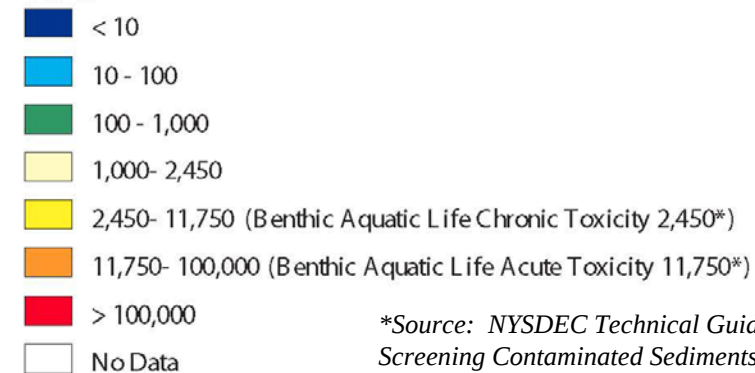
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

ETHYLBENZENE CONCENTRATIONS IN
ONONDAGA LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

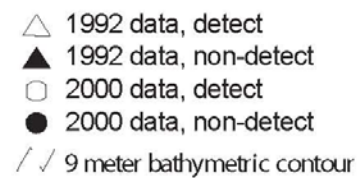
PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to $\mu\text{g/kg dw}$
based on 5% total organic carbon



0 1000 2000 3000 4000 5000 6000
Meters

0 5000 10000 15000 20000
Feet

Source: TAMS, 2002c

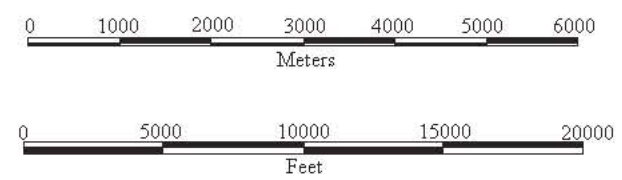
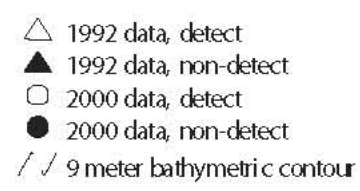
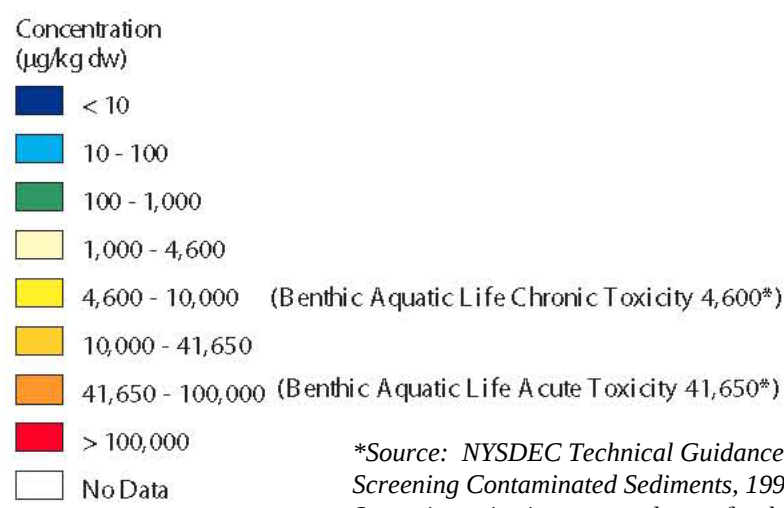
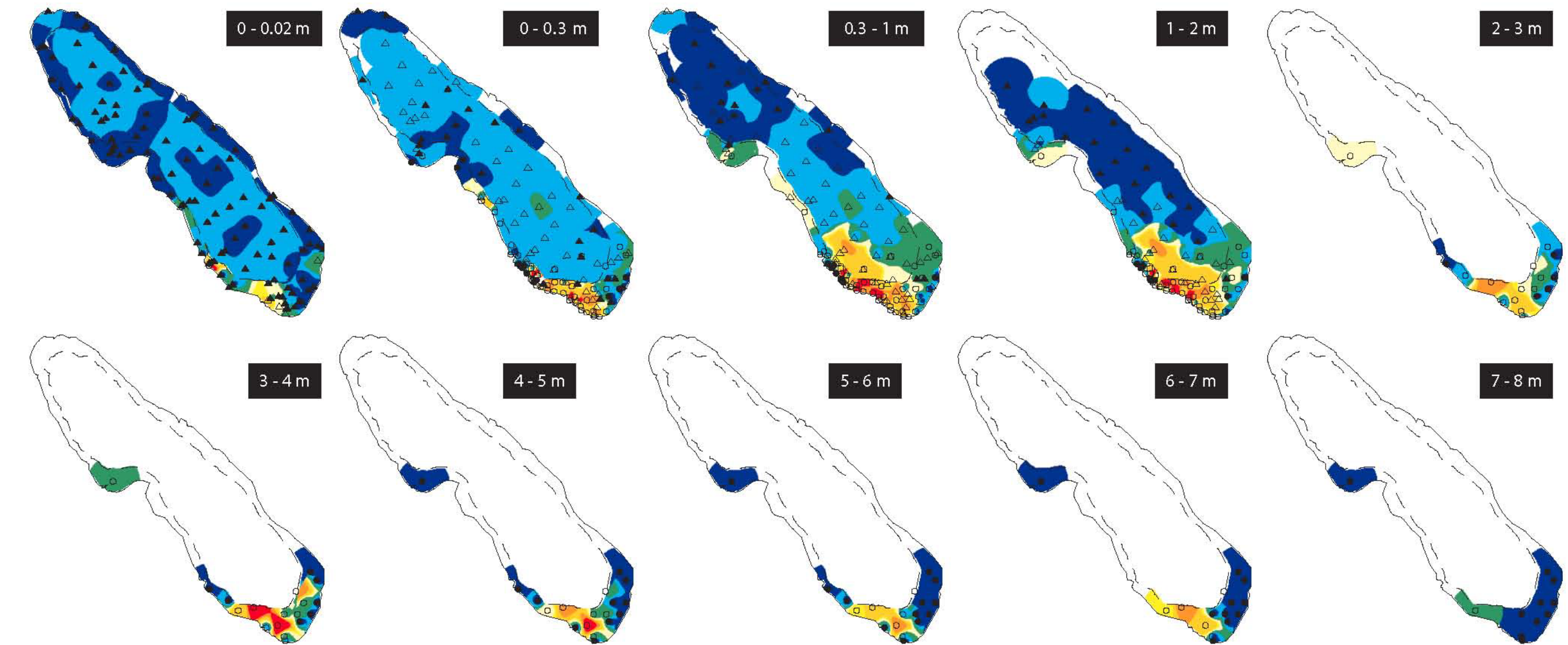


FIGURE 1.15

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

TOLUENE CONCENTRATIONS IN ONONDAGA
LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Source: TAMS, 2002c

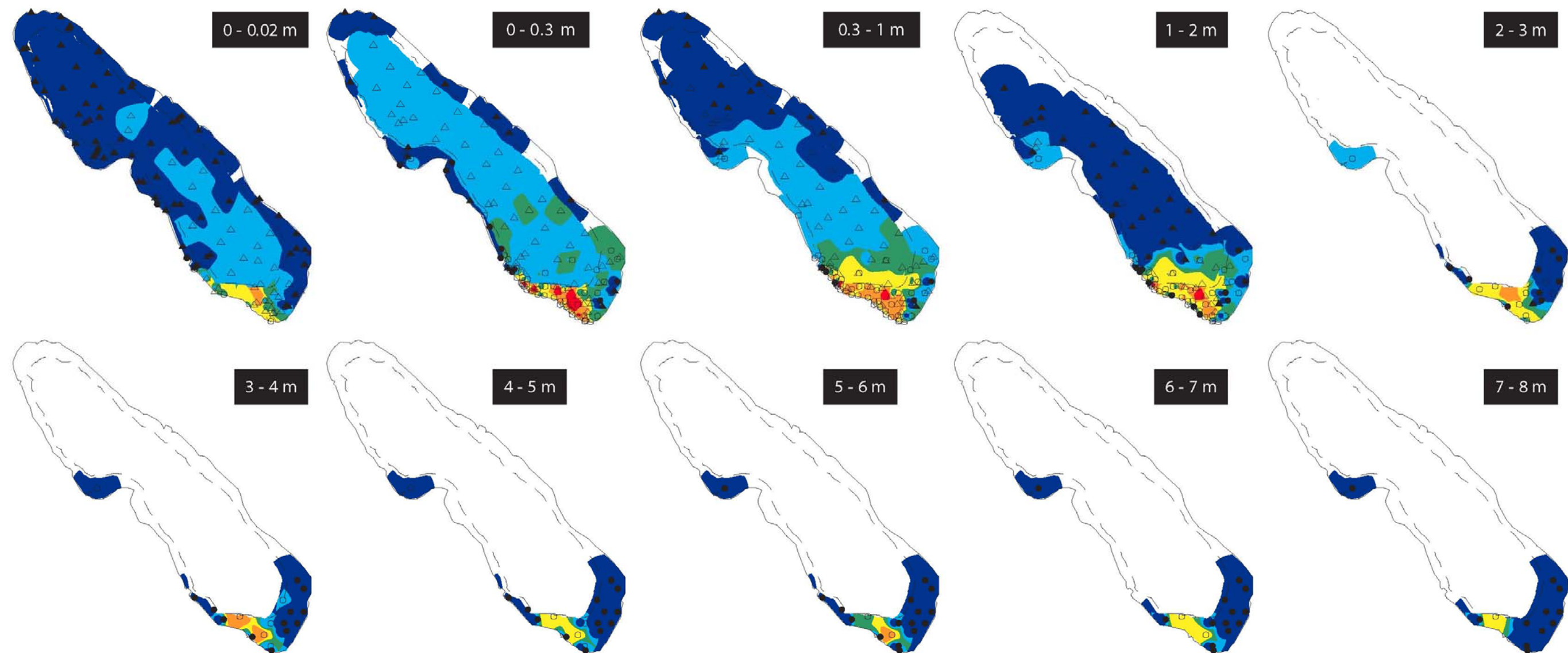


FIGURE 1.16

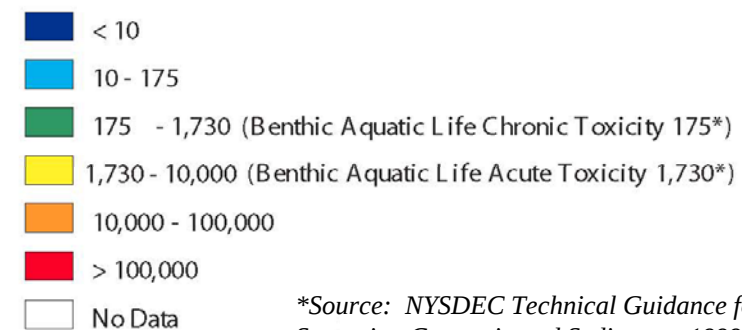
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

XYLENE CONCENTRATIONS IN ONONDAGA
LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

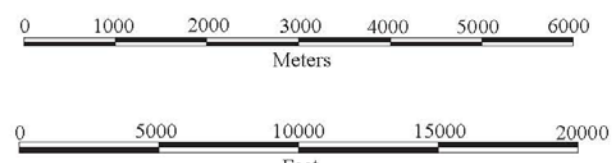
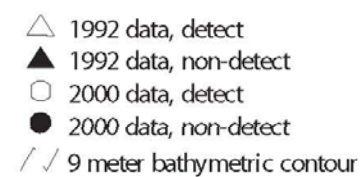
PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to $\mu\text{g/kg dw}$ based on
5% total organic carbon



Source: TAMS, 2002c

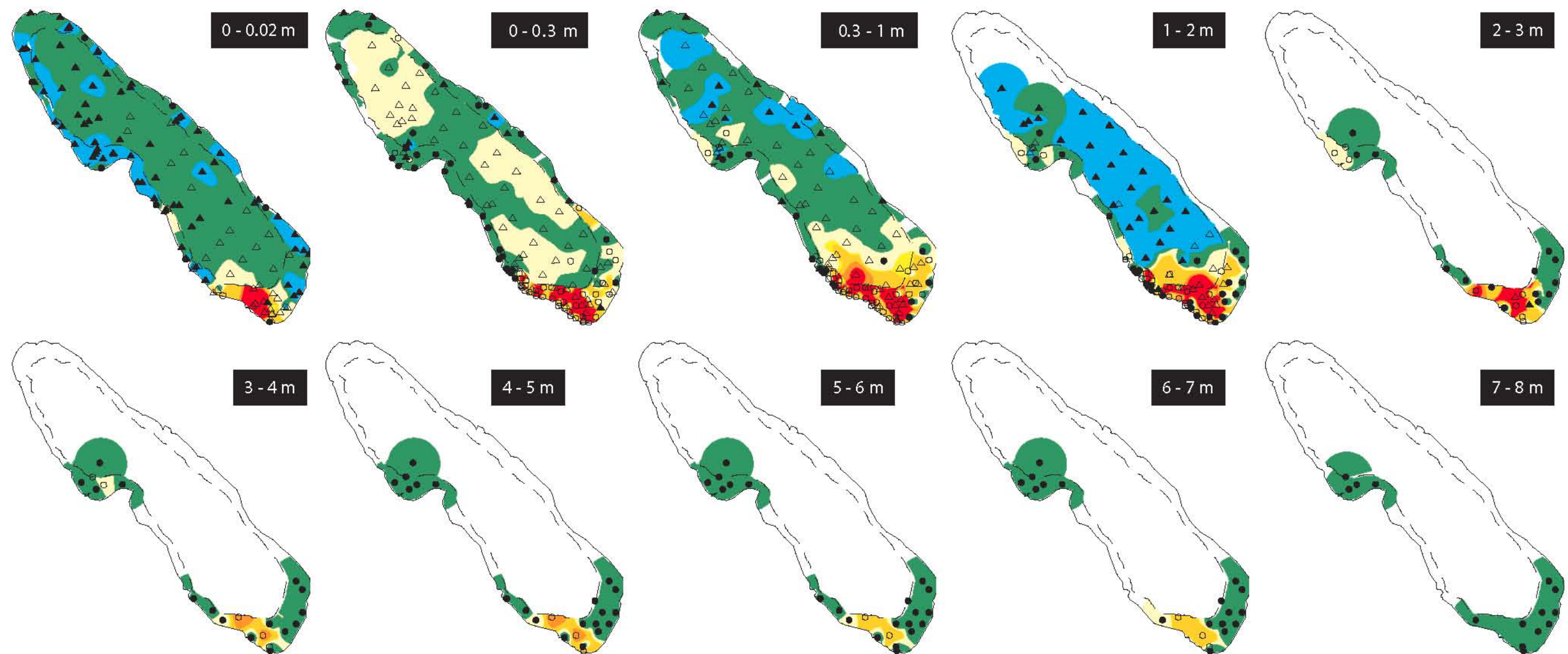


FIGURE 1.17

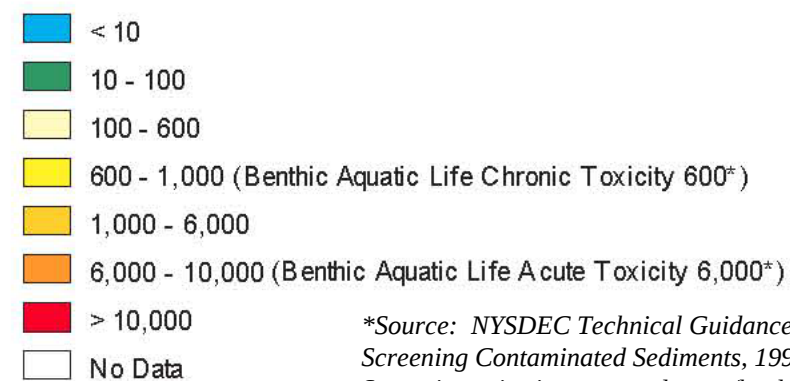
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

CHLOROBENZENE CONCENTRATIONS IN
ONONDAGA LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

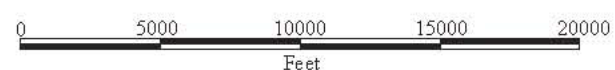
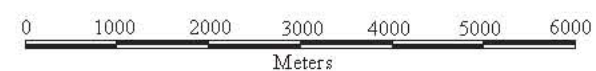
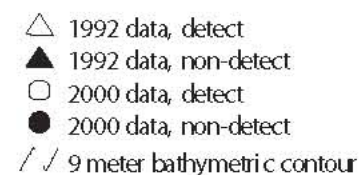
PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to $\mu\text{g/kg dw}$
based on 5% total organic carbon



Source: TAMS, 2002c

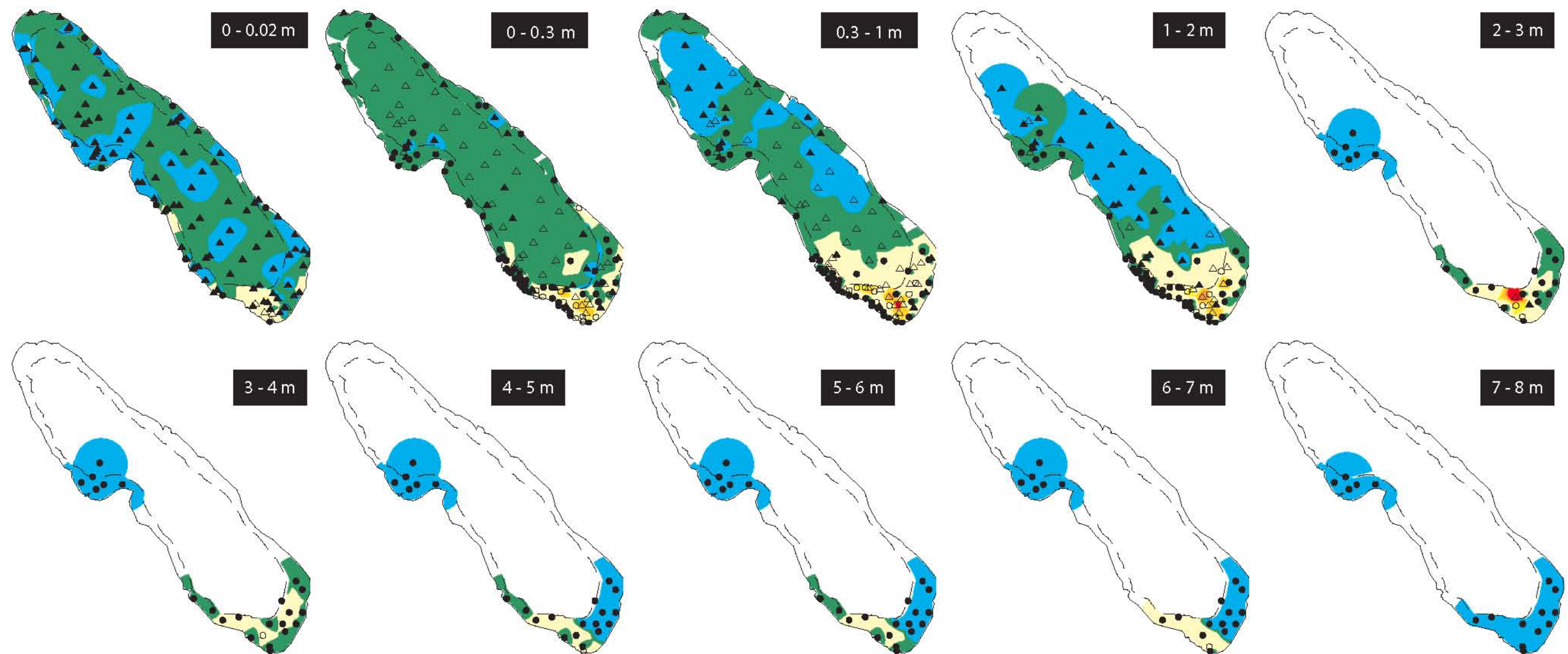


FIGURE 1.18

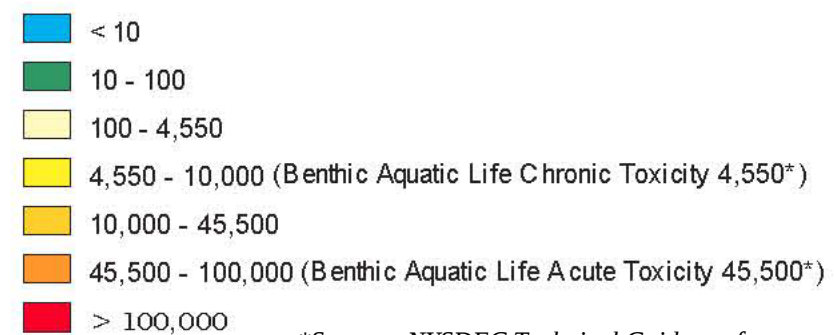
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

DICHLOROBENZENE CONCENTRATIONS IN
ONONDAGA LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

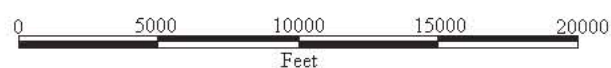
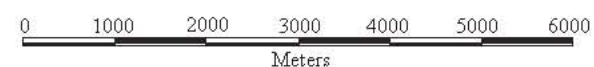
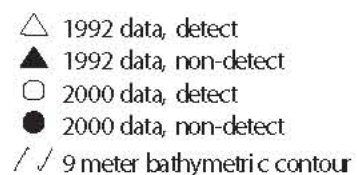
PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to $\mu\text{g/kg dw}$
based on 5% total organic carbon



Source: TAMS, 2002c



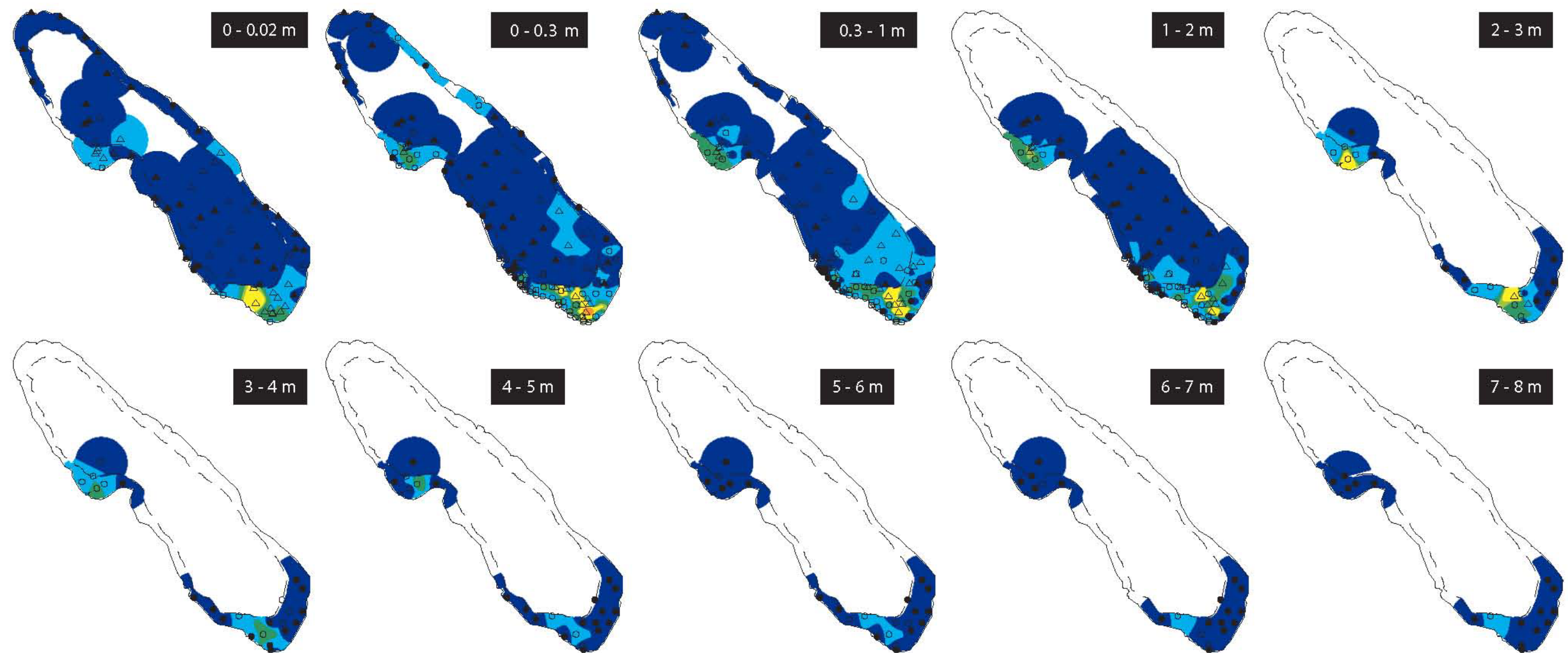
FIGURE 1.19

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

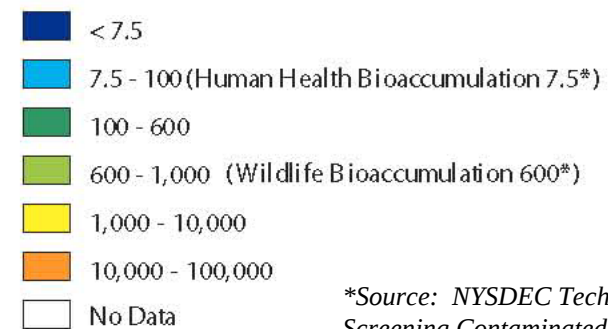
TRICHLOROBENZENE CONCENTRATIONS IN
ONONDAGA LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

PARSONS

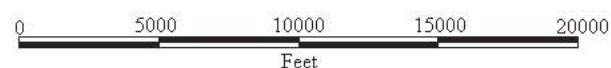
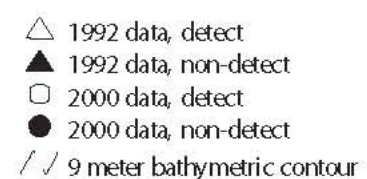
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
(µg/kg dw)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to µg/kg dw
based on 5% total organic carbon



Source: TAMS, 2002c

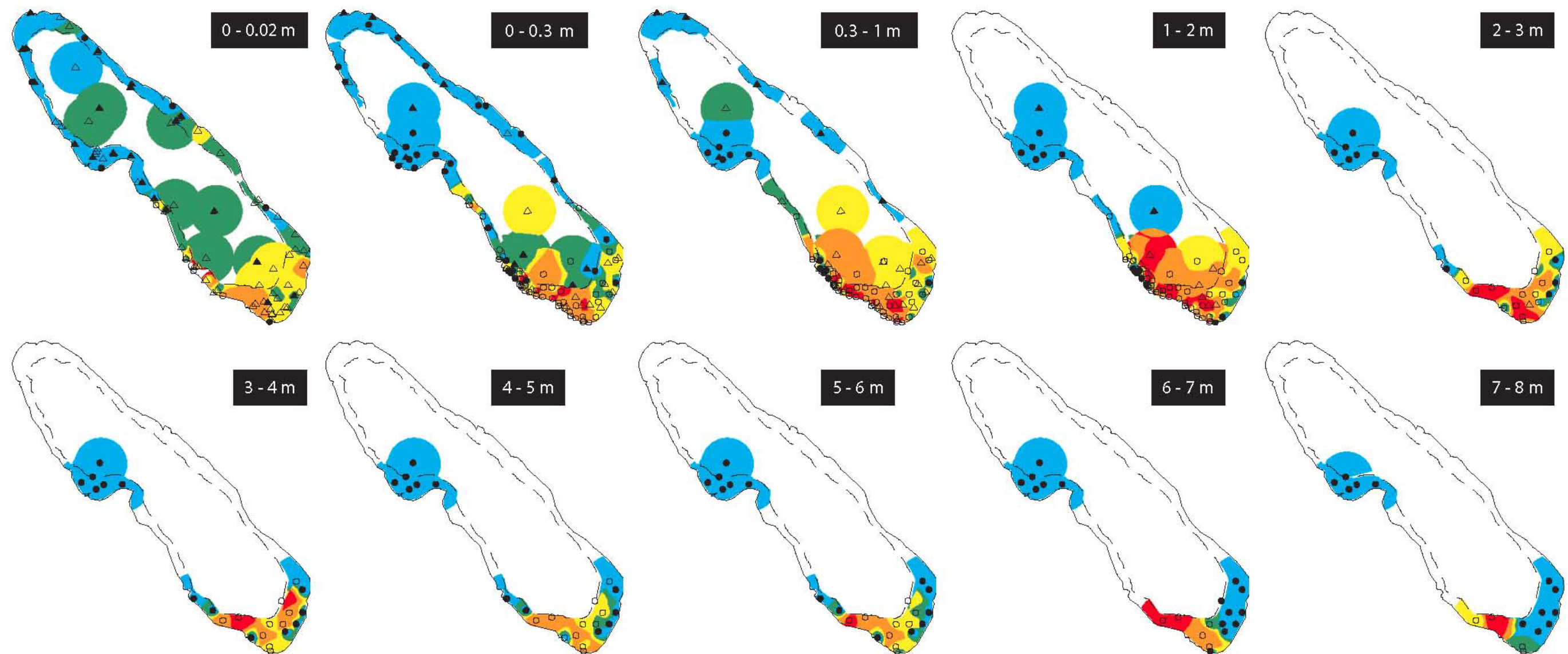


FIGURE 1.20

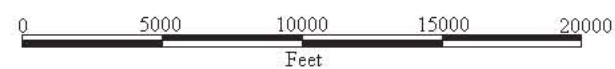
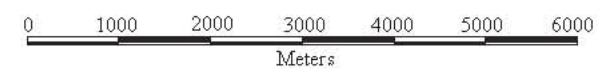
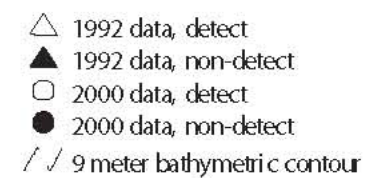
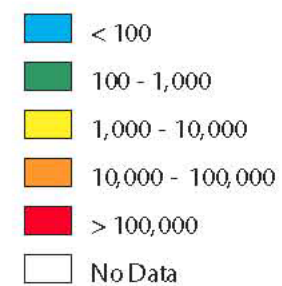
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

HEXACHLOROBENZENE CONCENTRATIONS IN
ONONDAGA LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



Source: TAMS, 2002c

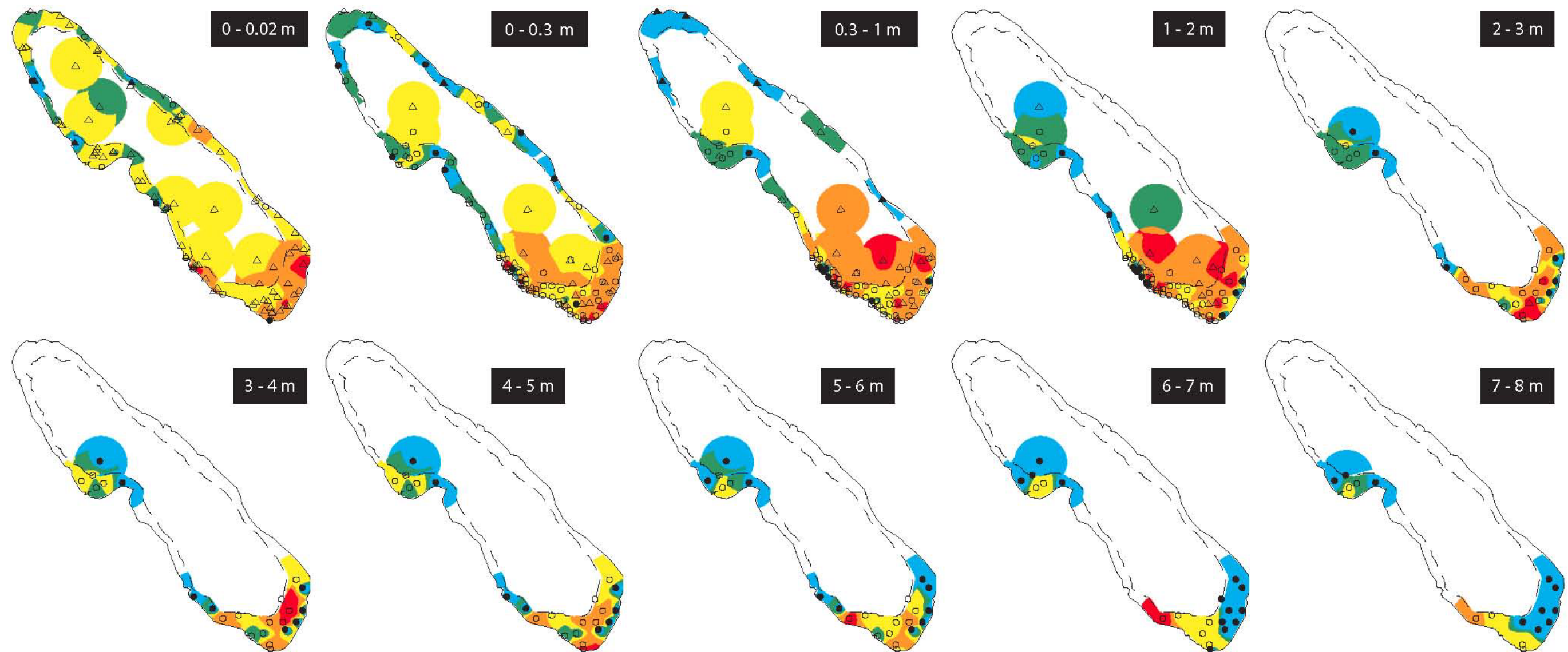


FIGURE 1.21

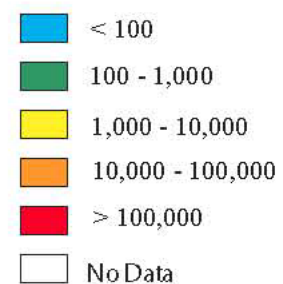
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

LPAH CONCENTRATIONS IN ONONDAGA LAKE
SEDIMENTS
0 TO 8m DEPTH INTERVALS

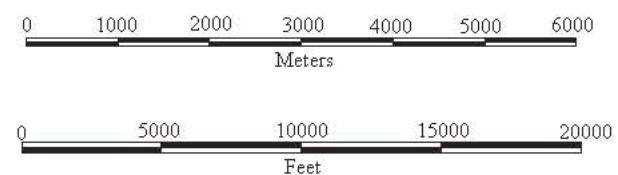
PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560



Concentration
($\mu\text{g/kg dw}$)



△ 1992 data, detect
▲ 1992 data, non-detect
○ 2000 data, detect
● 2000 data, non-detect
— 9 meter bathymetric contour



Source: TAMS, 2002c

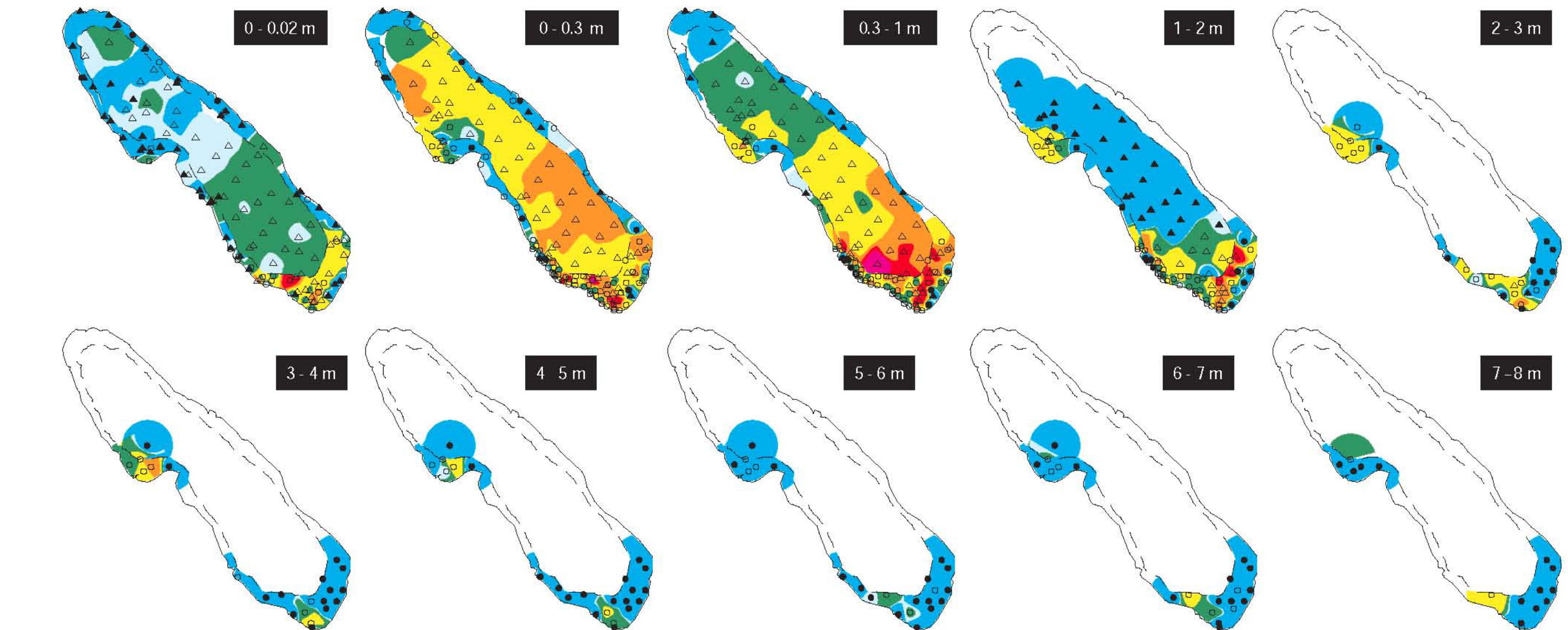


FIGURE 1.22

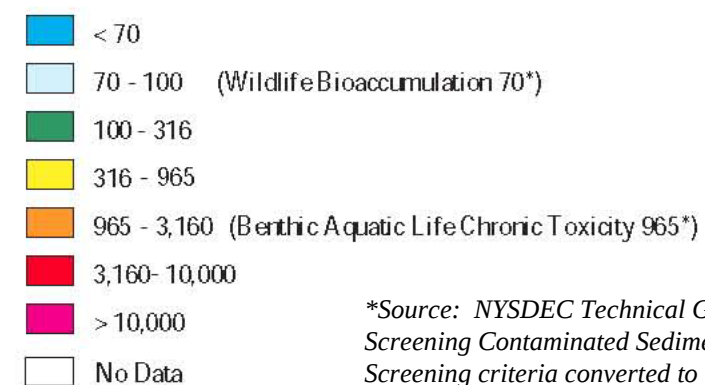
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

HPAH CONCENTRATIONS IN ONONDAGA LAKE
SEDIMENTS
0 TO 8m DEPTH INTERVALS

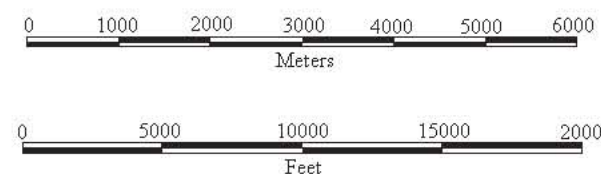
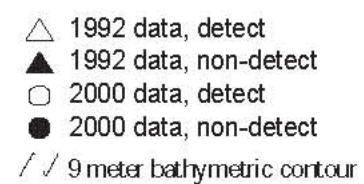
PARSONS
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Concentration
($\mu\text{g/kg dw}$)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to $\mu\text{g/kg dw}$
based on 5% total organic carbon



Source: TAMS, 2002c



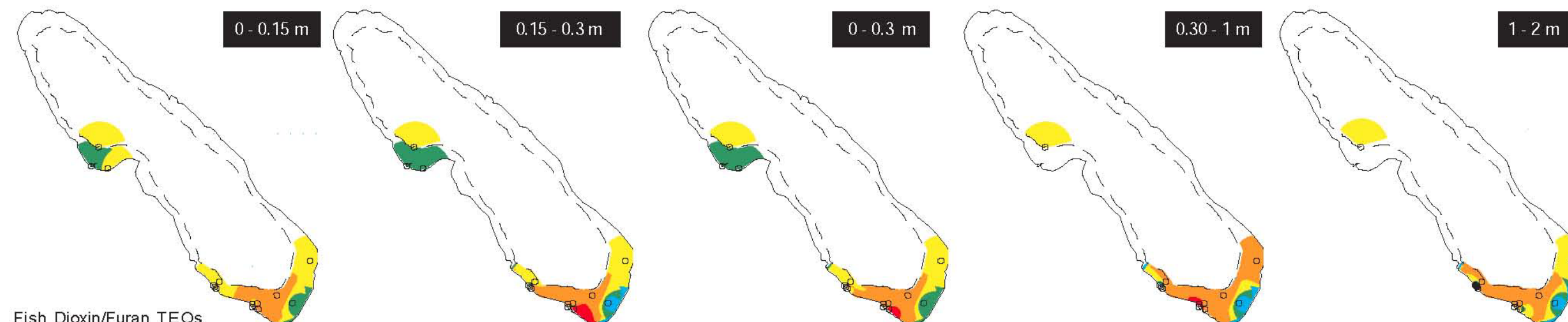
FIGURE 1.23

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

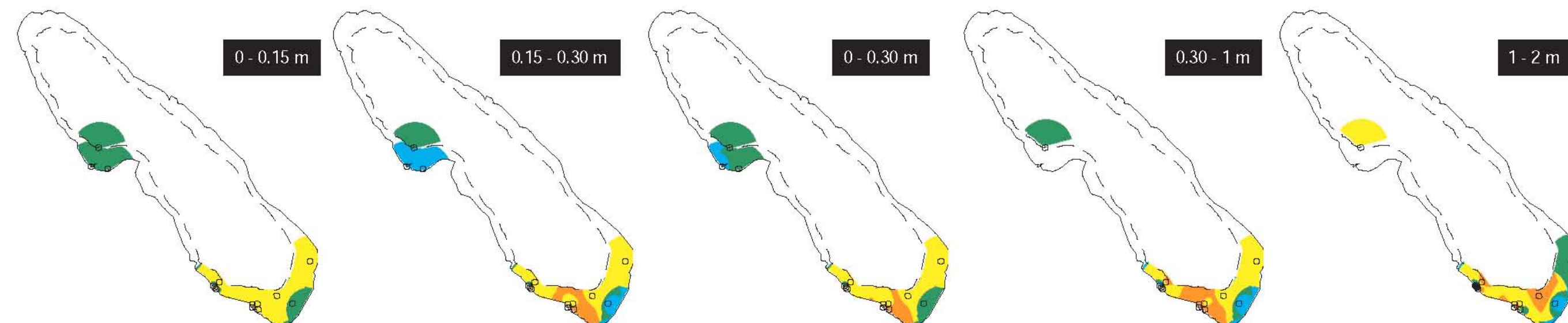
TOTAL PCB CONCENTRATIONS IN ONONDAGA
LAKE SEDIMENTS
0 TO 8m DEPTH INTERVALS

PARSONS
290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560

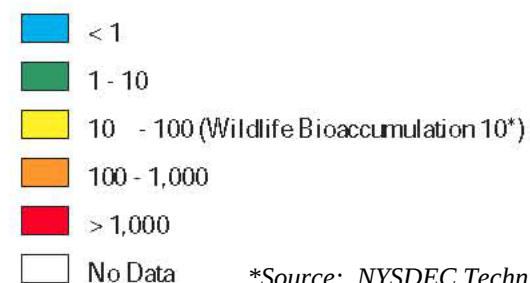
Bird Dioxin/Furan TEQs



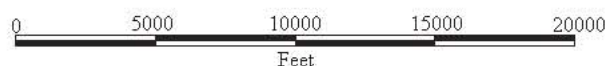
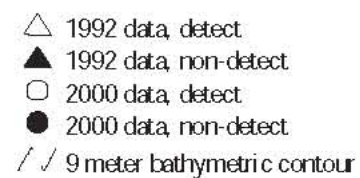
Fish Dioxin/Furan TEQs



Concentration
(ng/kg dw)



*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to ng/kg dw based on
5% total organic carbon



Source: TAMS, 2002c



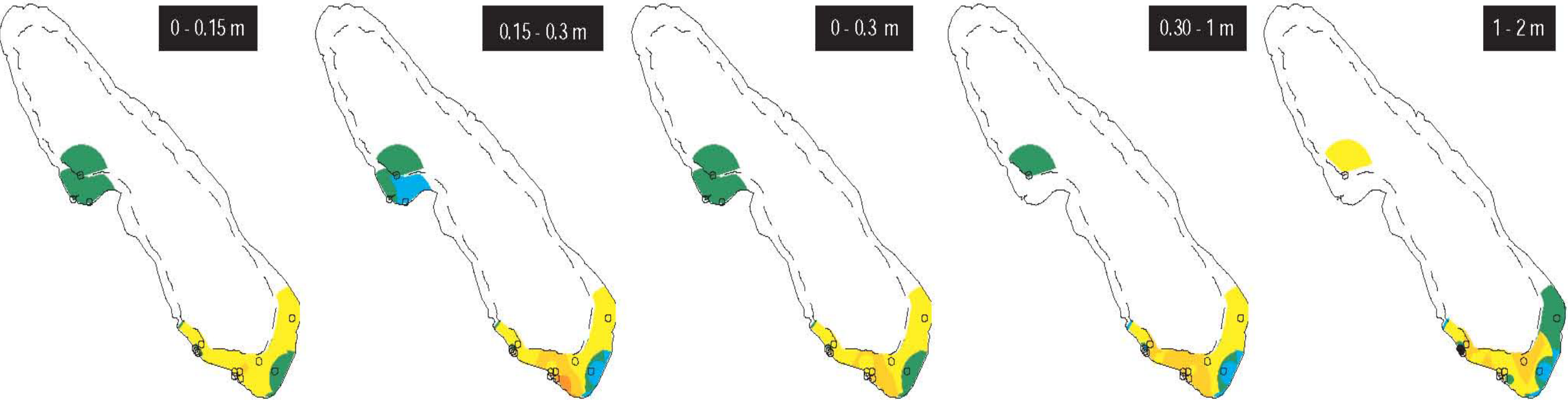
FIGURE 1.24

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

BIRD AND FISH TEQ CONCENTRATIONS IN
ONONDAGA LAKE SEDIMENTS
0 TO 2m DEPTH INTERVALS

PARSONS
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Human/Mammal Dioxin/Furan TEQs

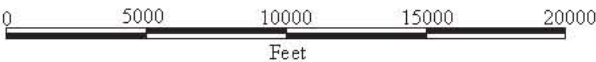


Concentration
(ng/kg dw)

- < 1
- 1 - 10
- 10 - 100
- 100 - 500
- 500 - 1,000 (Human Health Bioaccumulation 500*)
- > 1,000
- No Data

*Source: NYSDEC Technical Guidance for
Screening Contaminated Sediments, 1999
Screening criteria converted to ng/kg dw
based on 5% total organic carbon

- △ 1992 data, detect
- ▲ 1992 data, non-detect
- 2000 data, detect
- 2000 data, non-detect
- / / 9 meter bathymetric contour



Source: TAMS, 2002c

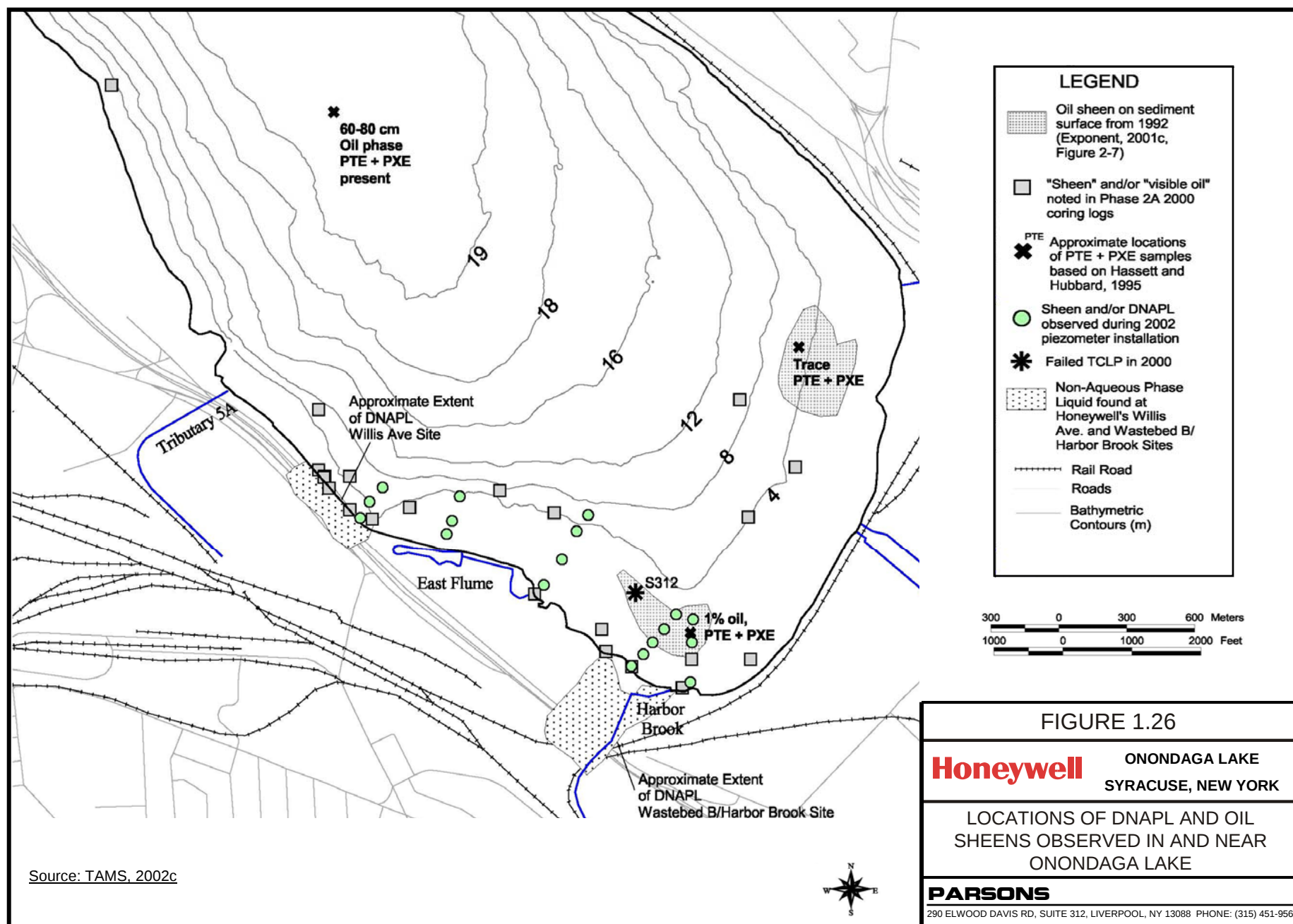


FIGURE 1.25

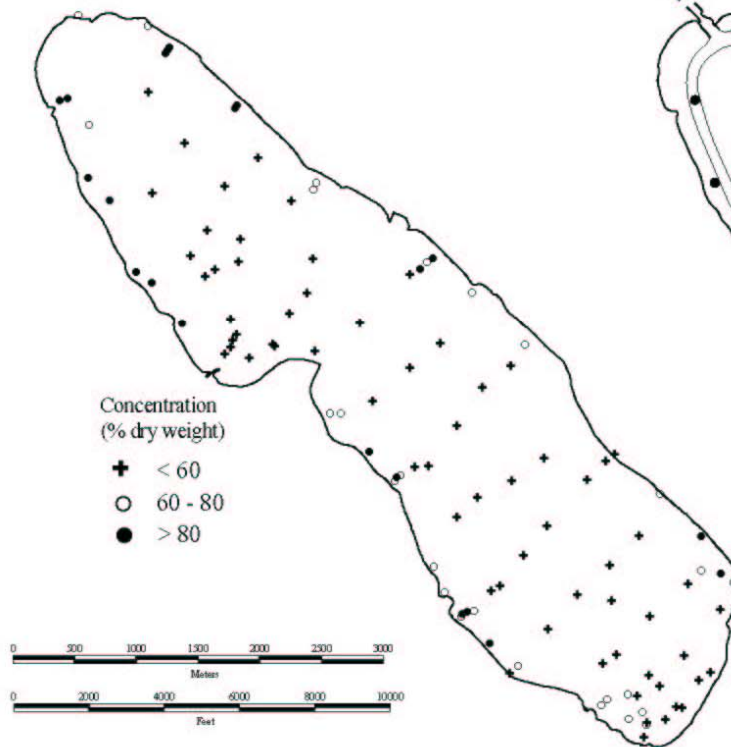
Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

HUMAN AND MAMMAL TEQ CONCENTRATIONS
IN ONONDAGA LAKE SEDIMENTS
0 TO 2m DEPTH INTERVALS

PARSONS
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Calcium Carbonate



Source: TAMS, 2002c

Oncolites

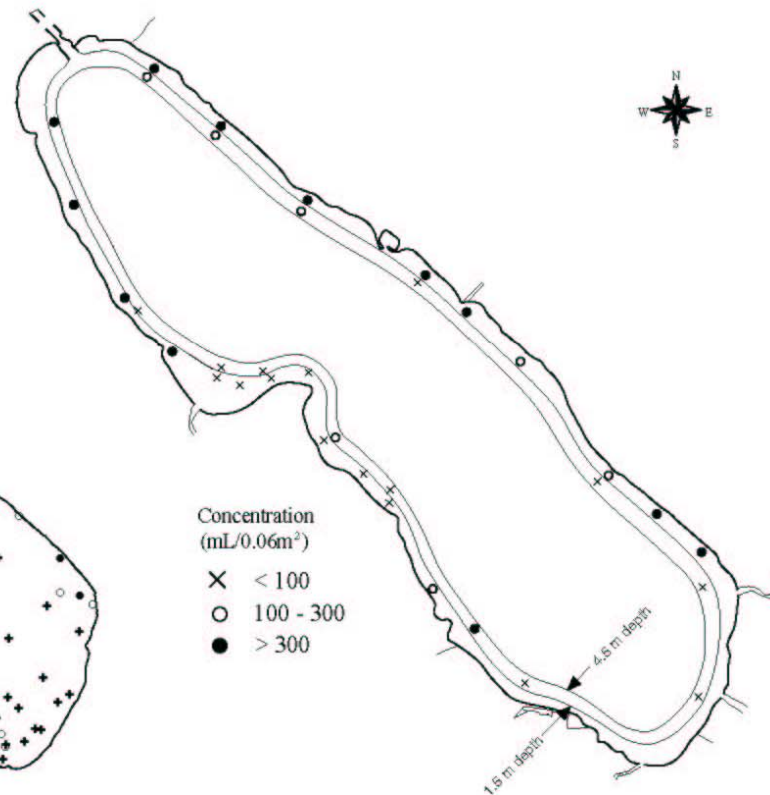


FIGURE 1.27

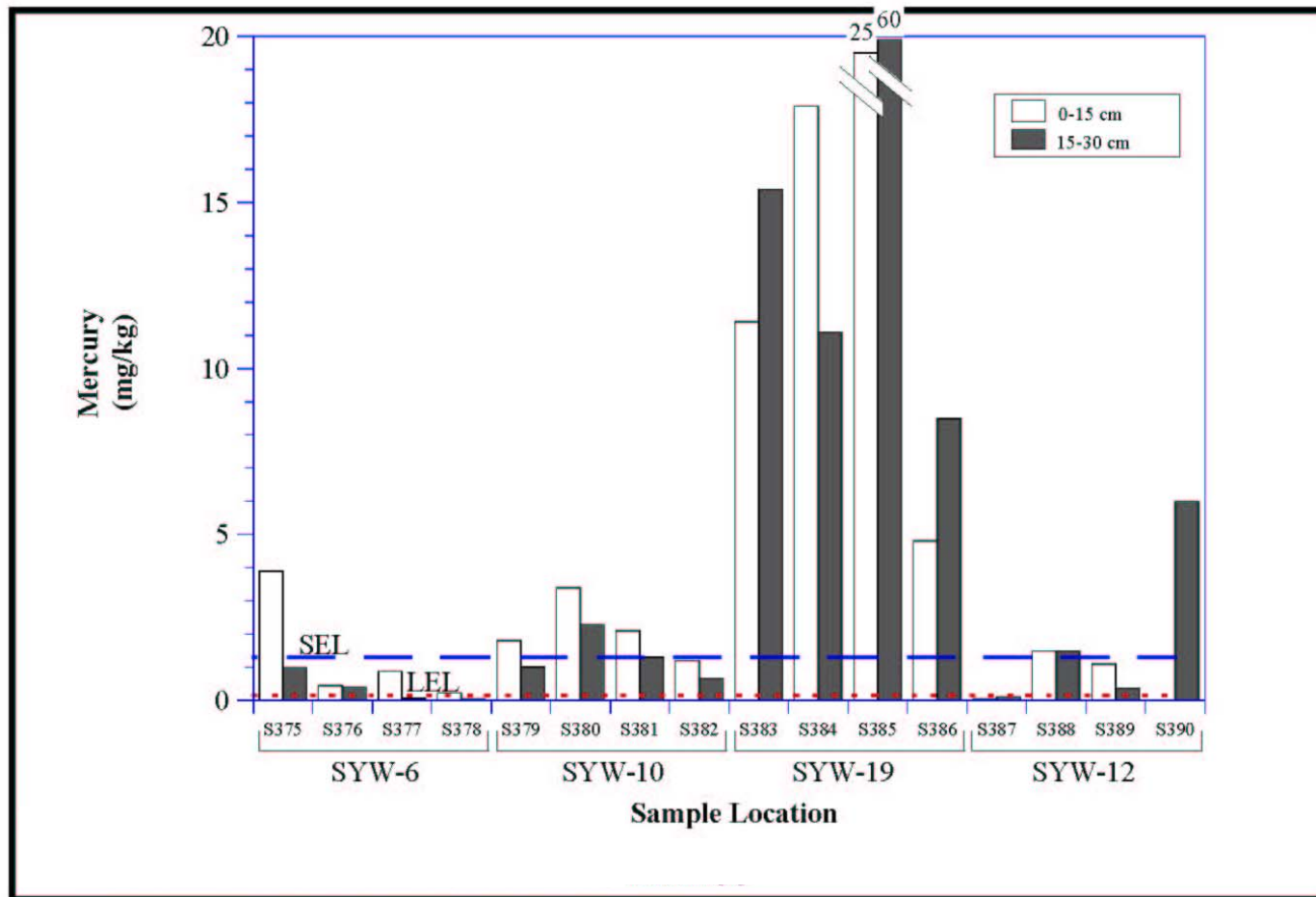
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

DISTRIBUTION OF CALCIUM CARBONATE
AND ONCOLITES IN SURFACE SEDIMENT
OF ONONDAGA LAKE IN 1992

PARSONS

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Notes:

- 1) NYSEC Technical Guidance for Screening Contaminated Sediment:
Lowest Effect Level (LEL) 0.15 mg/kg and Severe Effect Level (SEL) 1.3 mg/kg.
- 2) In twelve sediment samples from the reference lake (Otisco), ten were non-detects with detection limits ranging from 0.06 to 0.19 mg/kg, and two samples were detected at 0.13 and 0.22 mg/kg.

Source: TAMS, 2002c

FIGURE 1.28

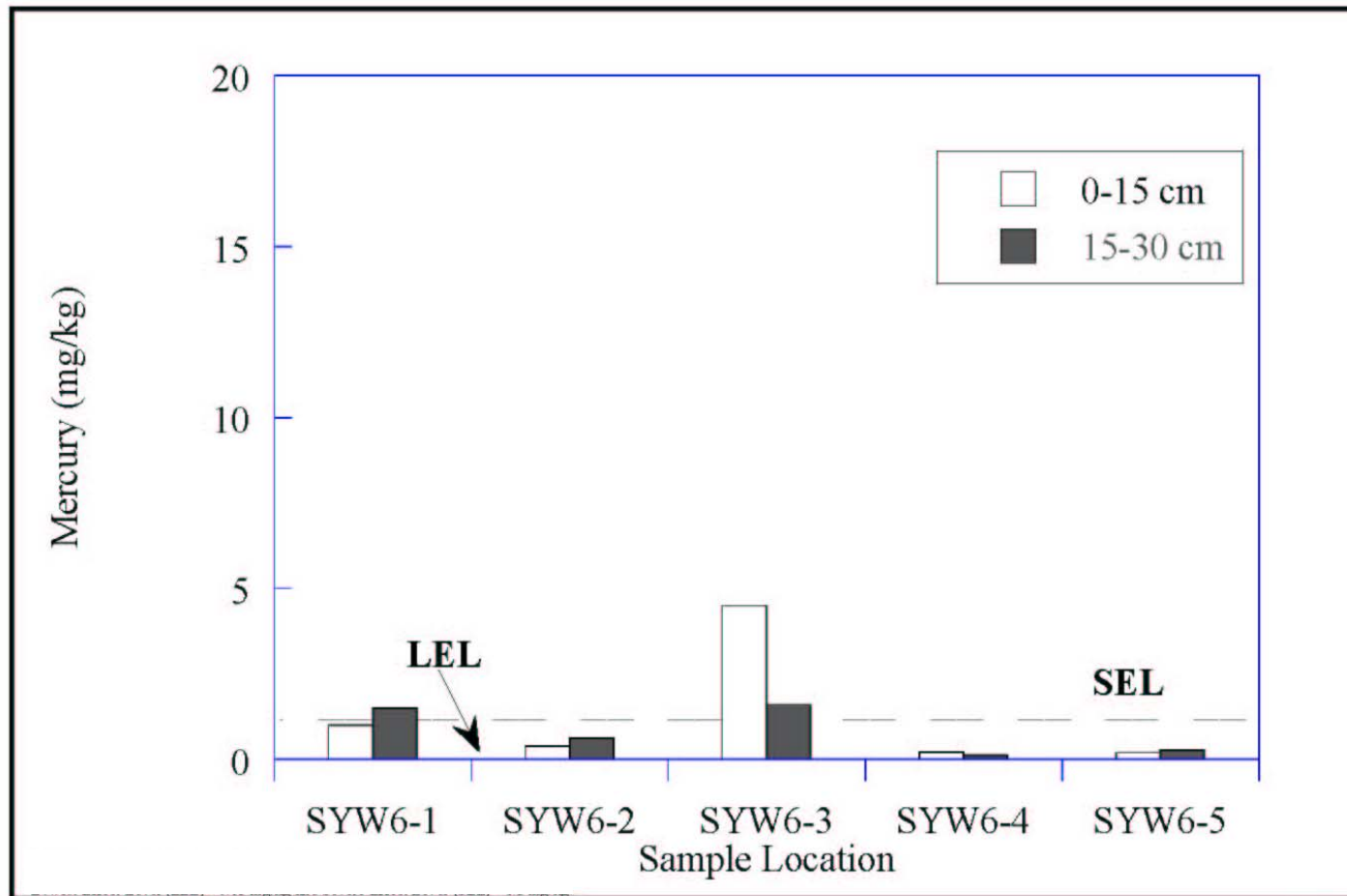
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

MERCURY IN ONONDAGA LAKE
WETLAND SEDIMENT IN 2000

PARSONS

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Note: NYSDEC Technical Guidance for Screening Contaminated Sediment Lowest Effect Level (LEL) – 0.15 mg/kg and Severe Effect Level (SEL) – 1.3 mg/kg.

Source: TAMS, 2002c

FIGURE 1.29

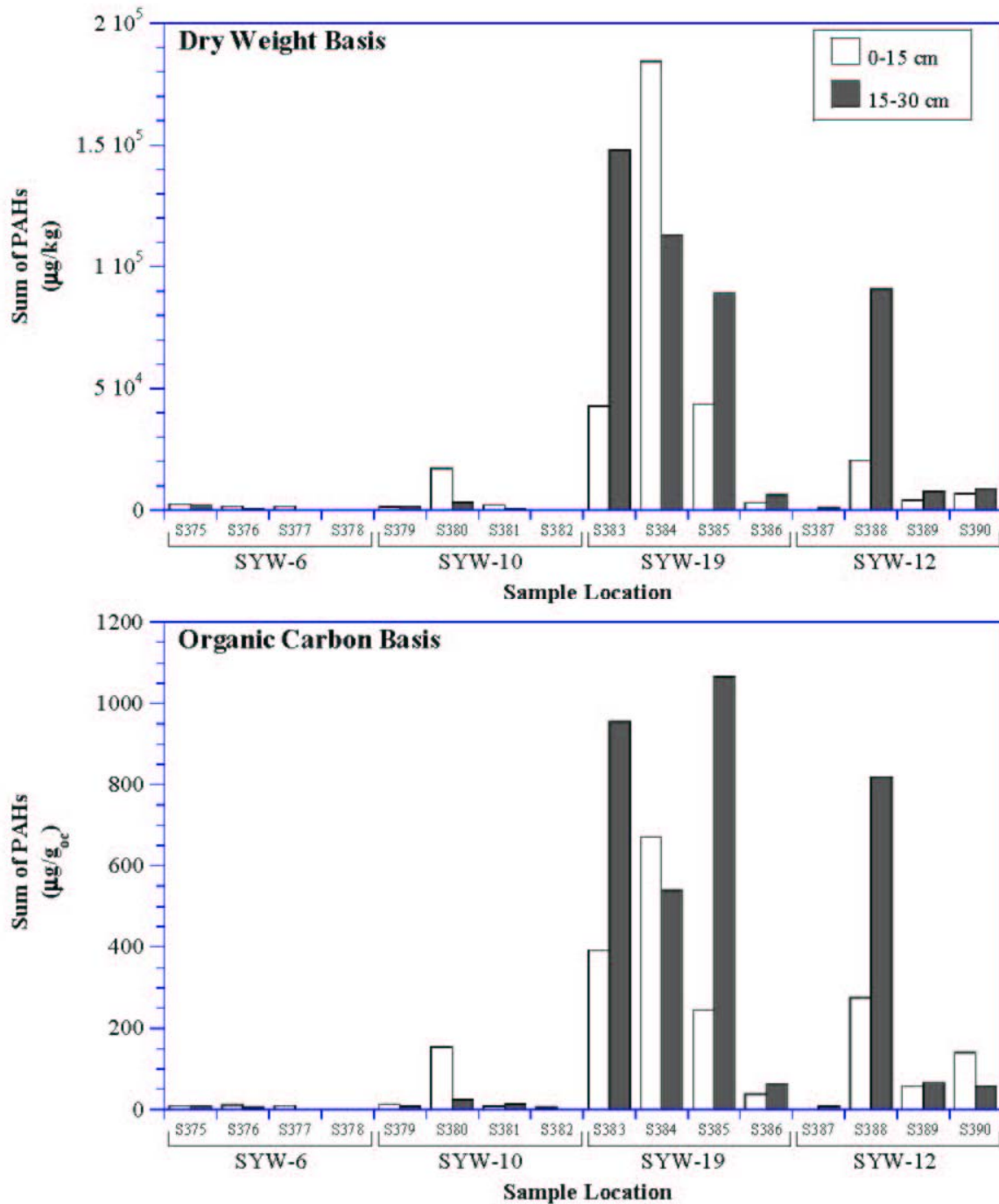
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

MERCURY IN ONONDAGA LAKE
WETLAND SYW-6 SEDIMENT IN 2002

PARSONS

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Notes:

- 1) Half the detection limits are shown for non-detects.
- 2) The sum is calculated as the sum of detected values or the minimum detection limit.

Source: TAMS, 2002c

FIGURE 1.30

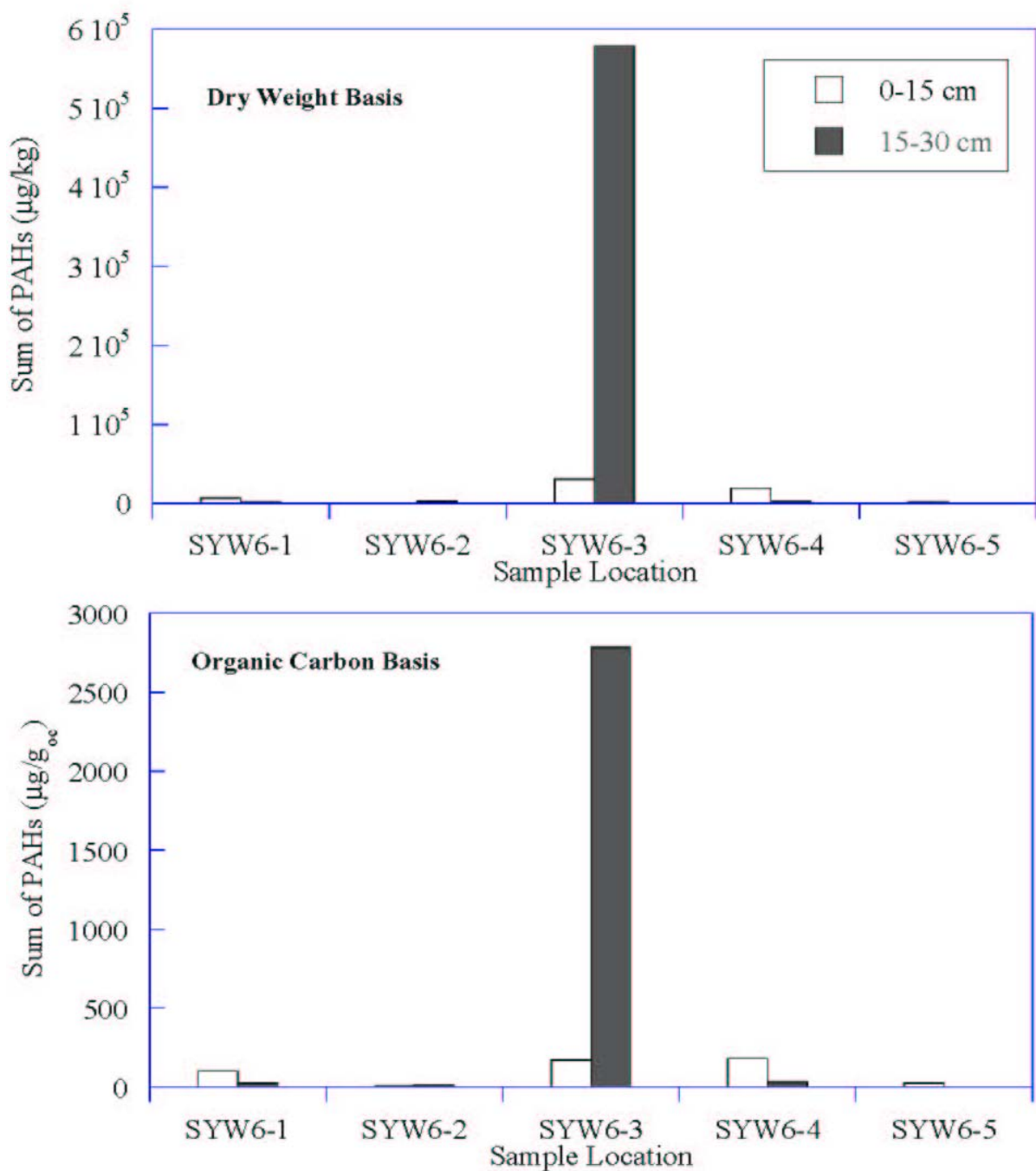
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

SUM OF PAHs IN ONONDAGA LAKE
WETLAND SEDIMENT IN 2000

PARSONS

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Note: The sum is calculated as the sum of detected values.

Source: TAMS, 2002c

FIGURE 1.31

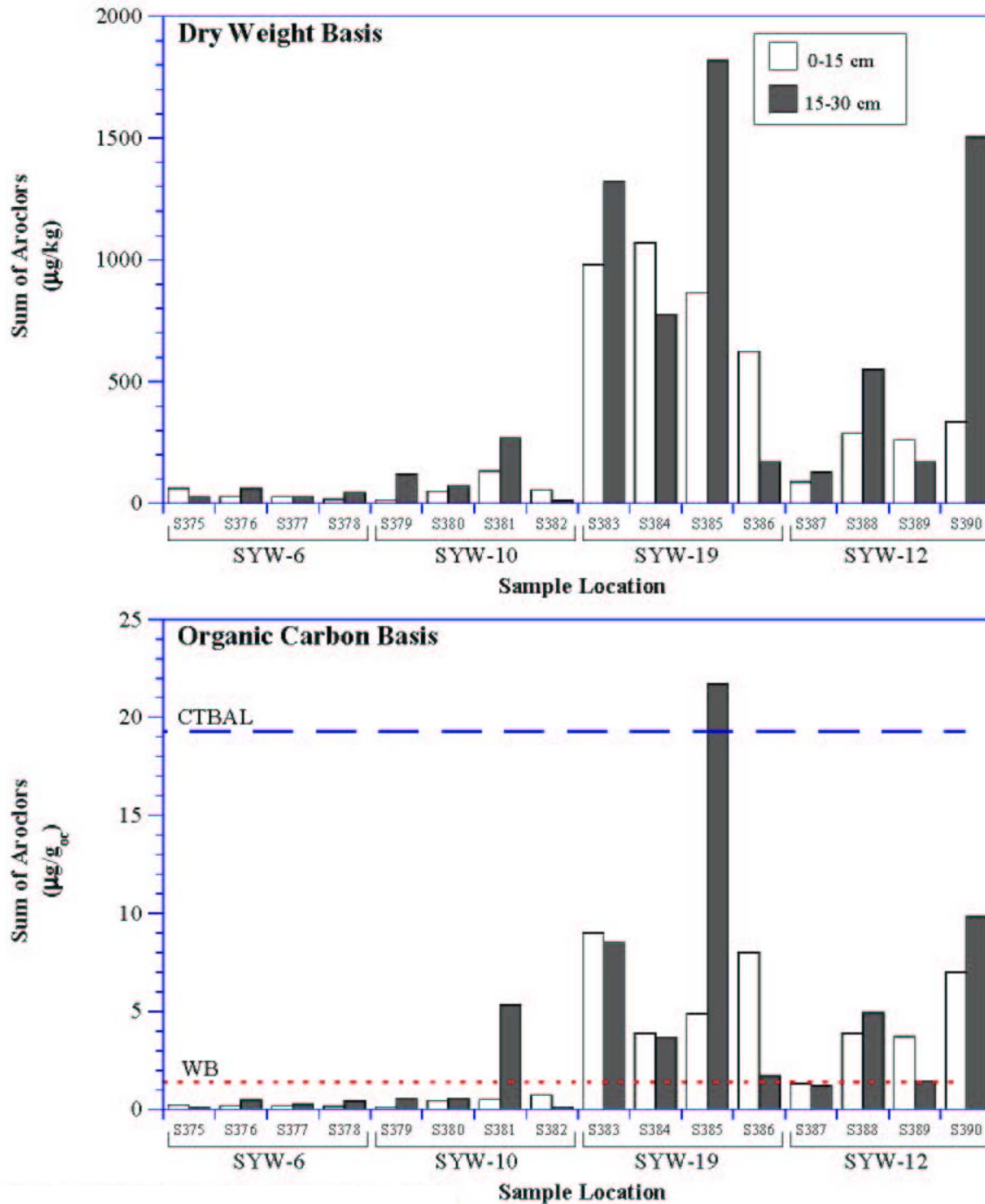
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

SUM OF PAHs IN ONONDAGA LAKE
WETLAND SYW-6 SEDIMENT IN 2002

PARSONS

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Notes:

- 1) Half the detection limits are shown for non-detects.
- 2) NYSDEC Technical Guidance for Screening Contaminated Sediments – PCBs. Acute Toxicity Benthic Aquatic Life – 2,708 µg/g - Chronic Toxicity Benthic Aquatic Life (CTBAL) – 19.3 µg/g and Wildlife Bioaccumulation (WB) – 1.4 µg/g
- 3) Sum is calculated as the sum of detected values or the minimum detection limit.

Source: TAMS, 2002c

FIGURE 1.32

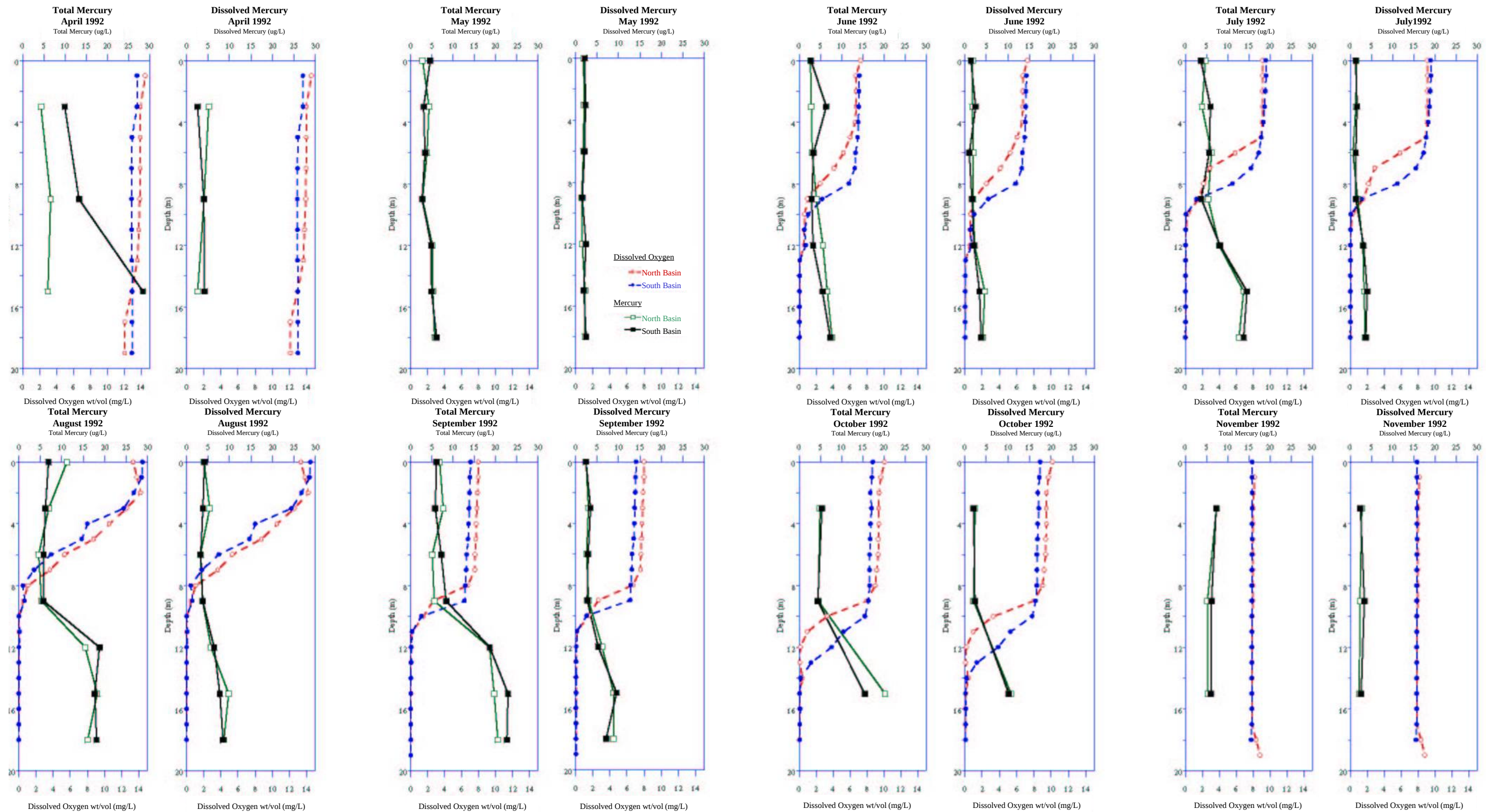
Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

SUM OF AROCLORS IN ONONDAGA LAKE
WETLAND SEDIMENT IN 2000

PARSONS

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Source: TAMS, 2002c

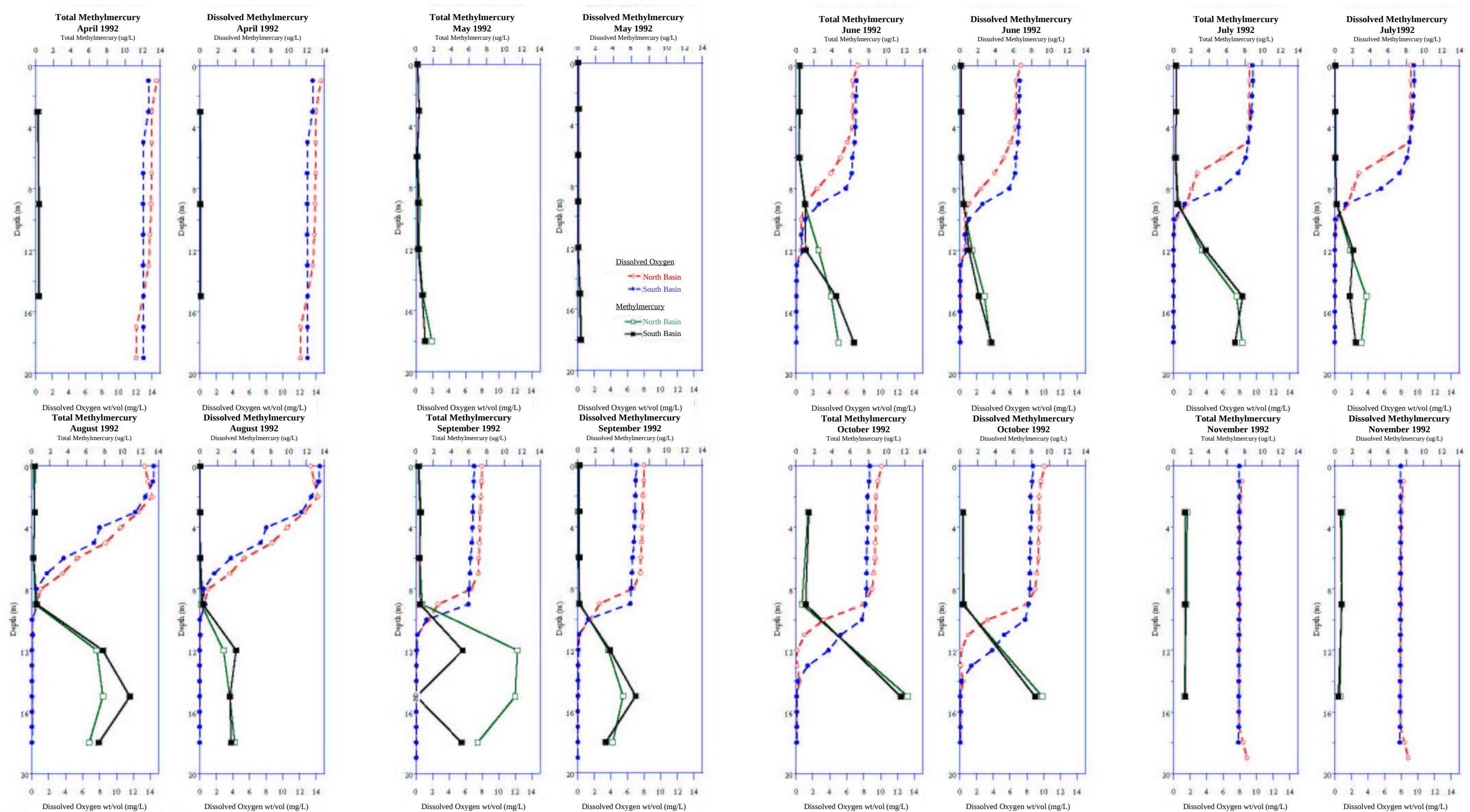


FIGURE 1.33

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

MERCURY AND DISSOLVED OXYGEN
IN SURFACE WATER OF ONONDAGA
LAKE DURING 1992

PARSONS
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Source: TAMS, 2002c

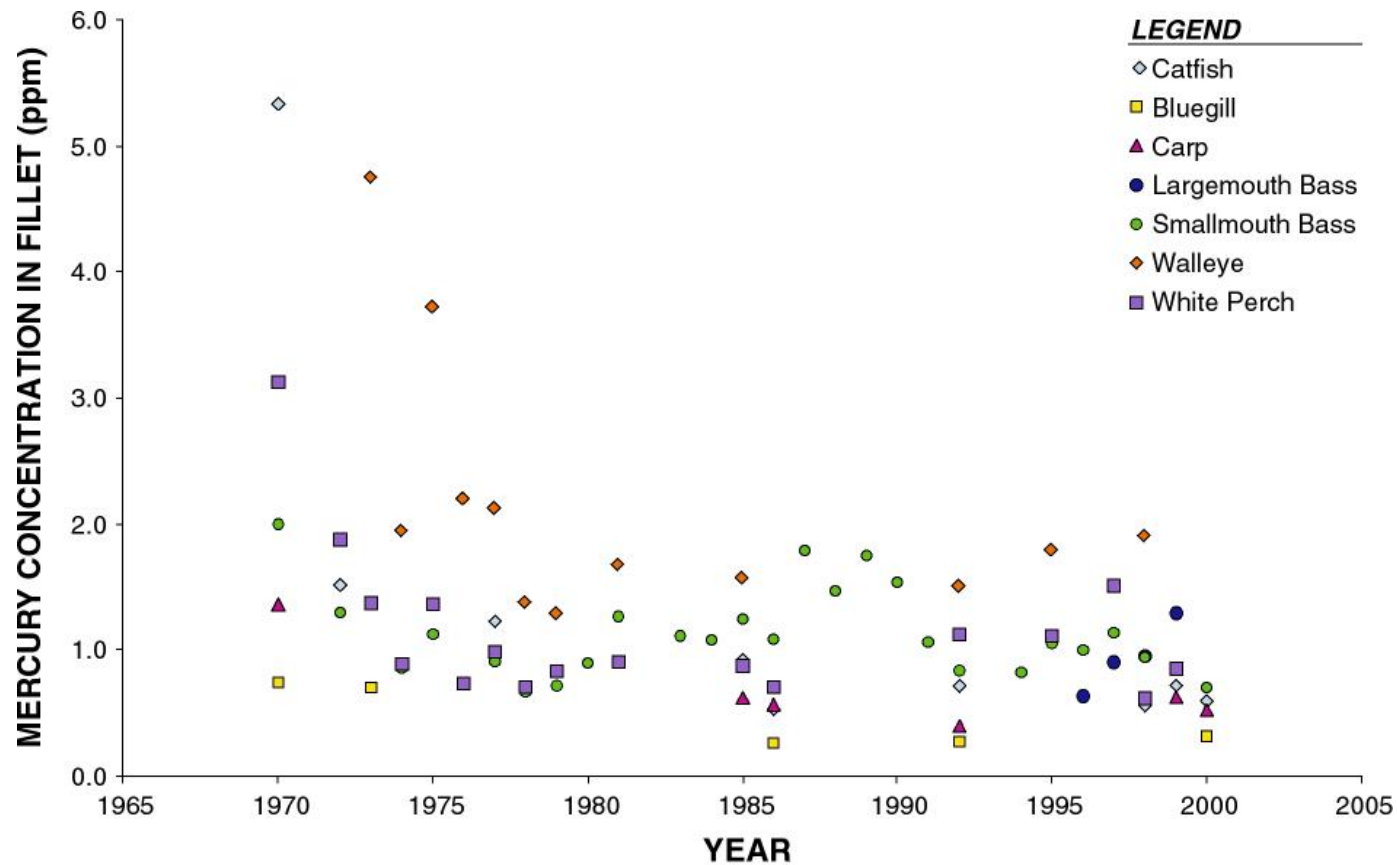


FIGURE 1.34

Honeywell ONONDAGA LAKE
SYRACUSE, NEW YORK

METHYLMERCURY AND DISSOLVED
OXYGEN IN SURFACE WATER OF
ONONDAGA LAKE DURING 1992

PARSONS
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Sources: NYSDEC, unpublished analyses 1990–2000
 PTI 1993
 Stearns & Wheeler 1993
 TAMS 2002c

FIGURE 1.35

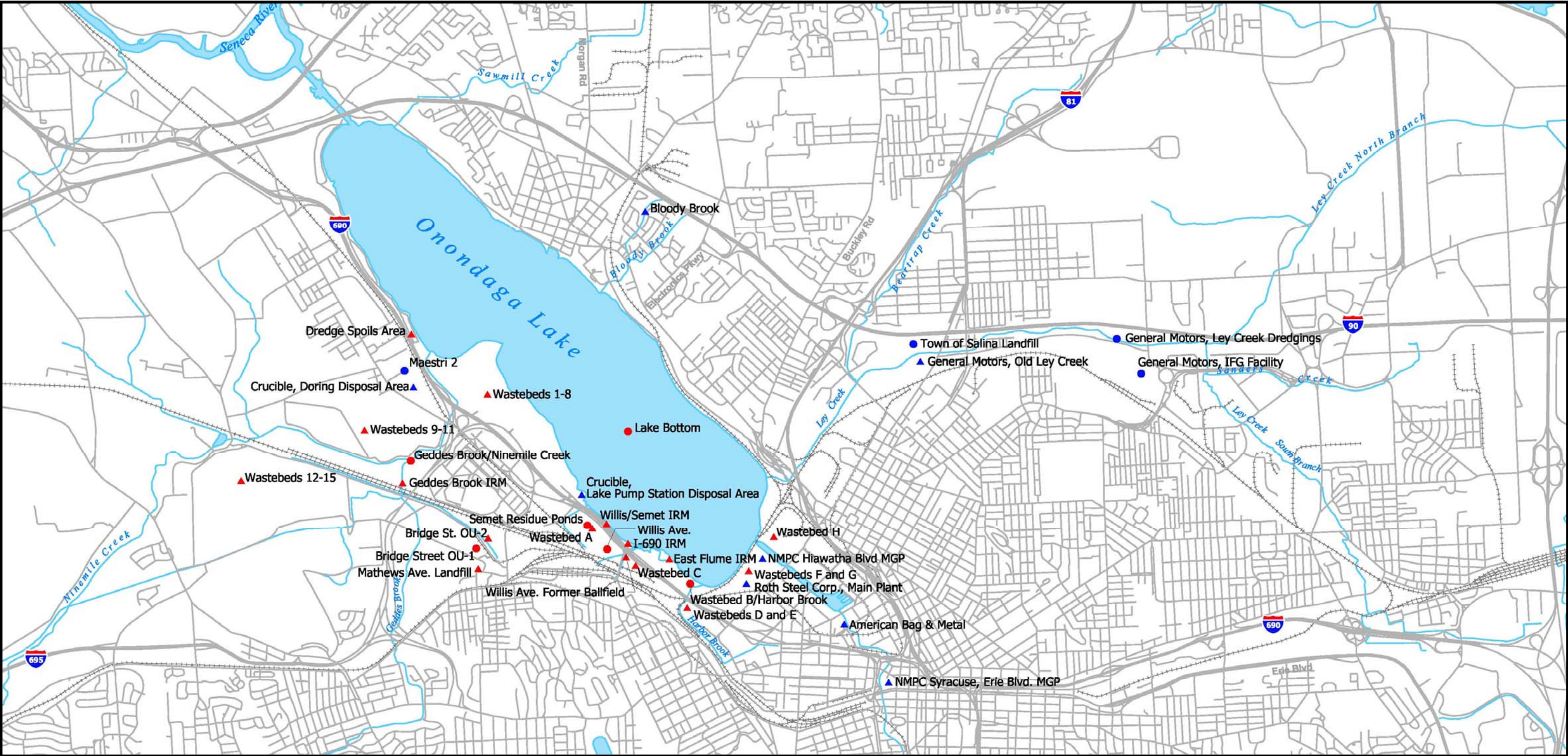
Honeywell

ONONDAGA LAKE
 SYRACUSE, NEW YORK

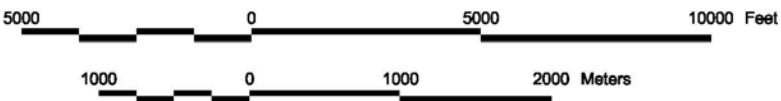
MERCURY CONCENTRATIONS IN THE
 TISSUE OF FISH FROM
 ONONDAGA LAKE

PARSONS

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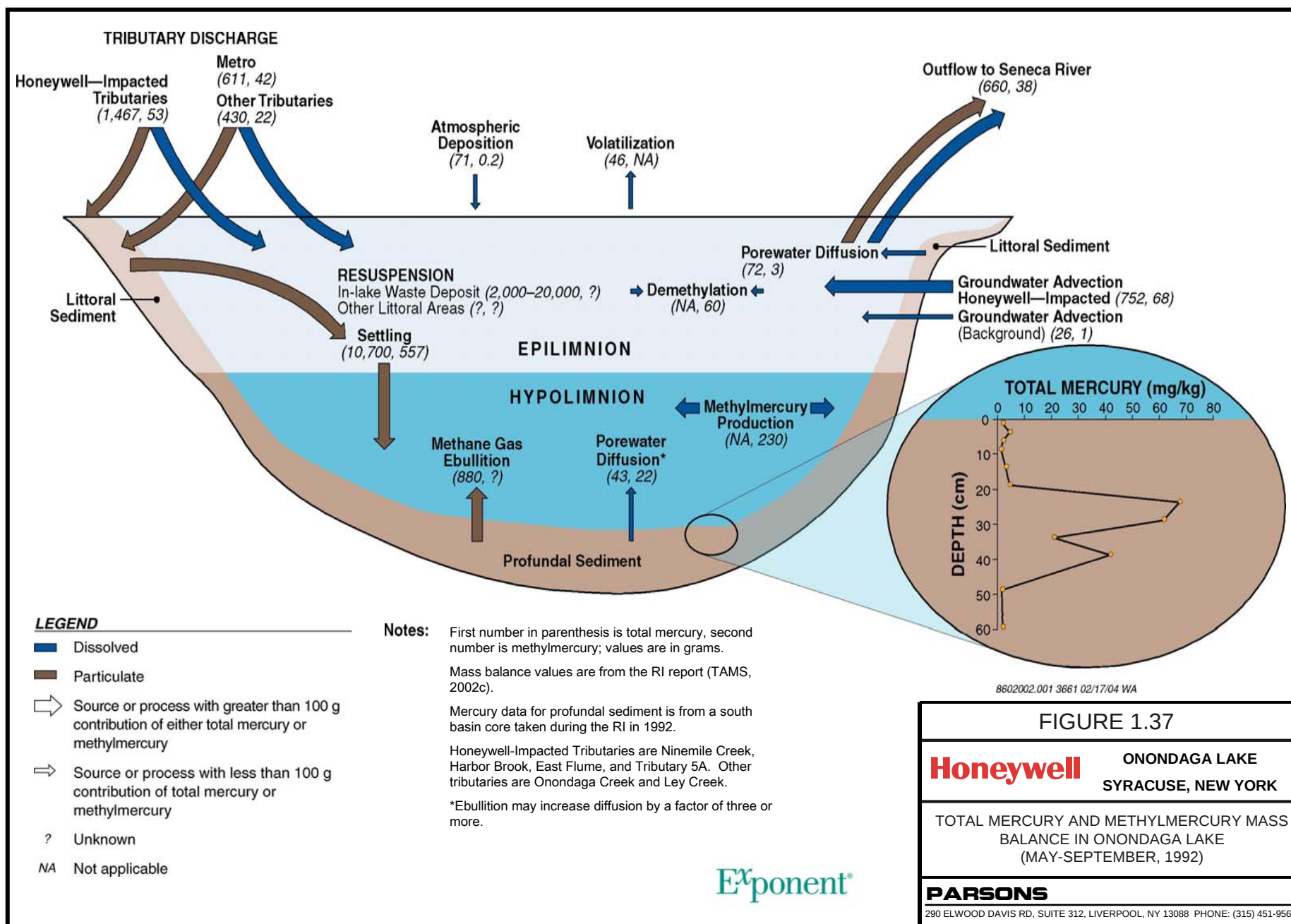


- Honeywell National Priorities List (NPL) Subsite
- ▲ Other Honeywell Site
- Non-Honeywell NPL Subsite
- ▲ Other Non-Honeywell Site



Source: TAMS, 2002c

FIGURE 1.36	
Honeywell	ONONDAGA LAKE SYRACUSE, NEW YORK
LOCATION OF FORMER HONEYWELL OPERATIONS AND OTHER REFERENCED SITES	
PARSONS 290 ELWOOD DAVIS RD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560	



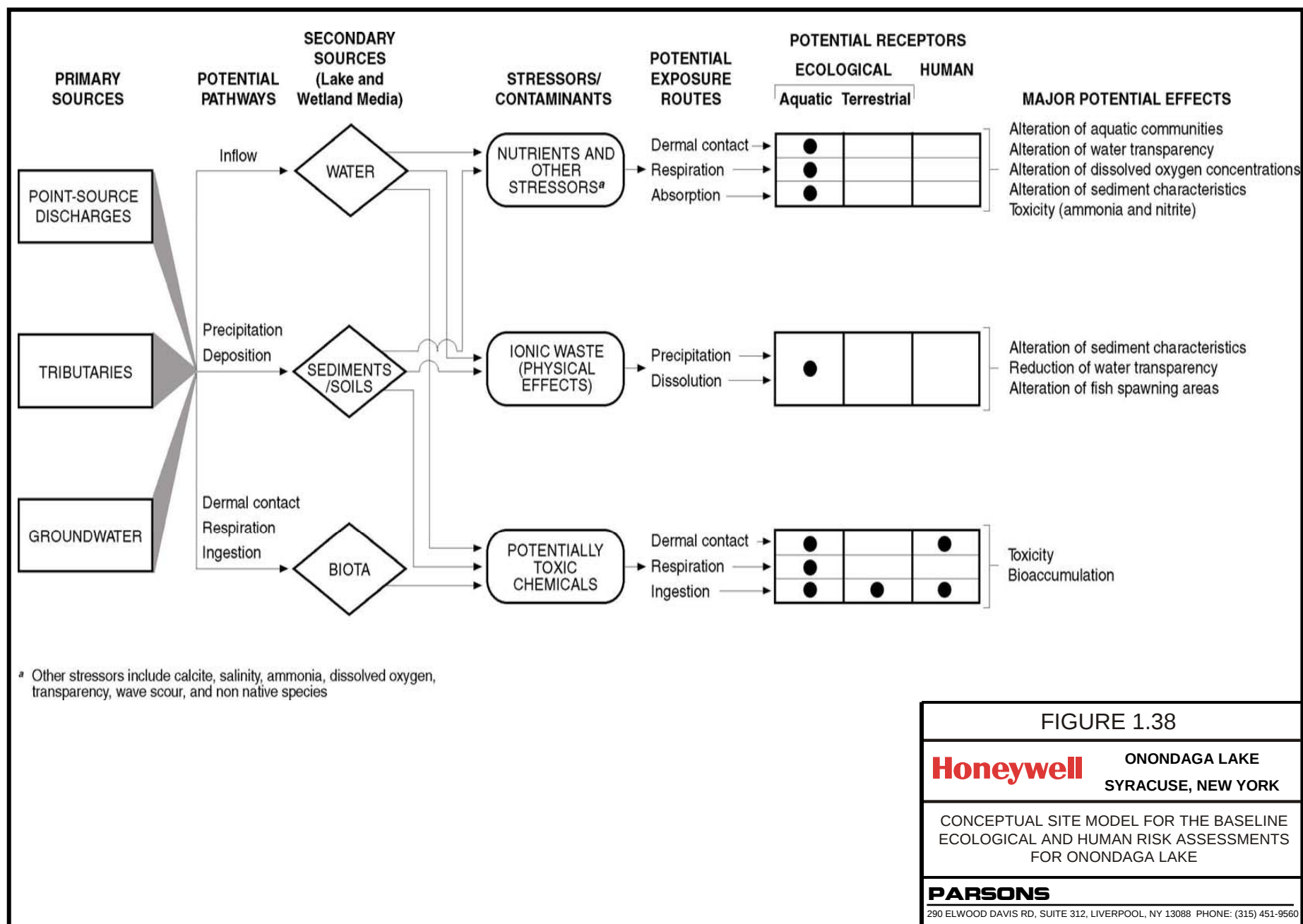


FIGURE 1.38

Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

CONCEPTUAL SITE MODEL FOR THE BASELINE
ECOLOGICAL AND HUMAN RISK ASSESSMENTS
FOR ONONDAGA LAKE

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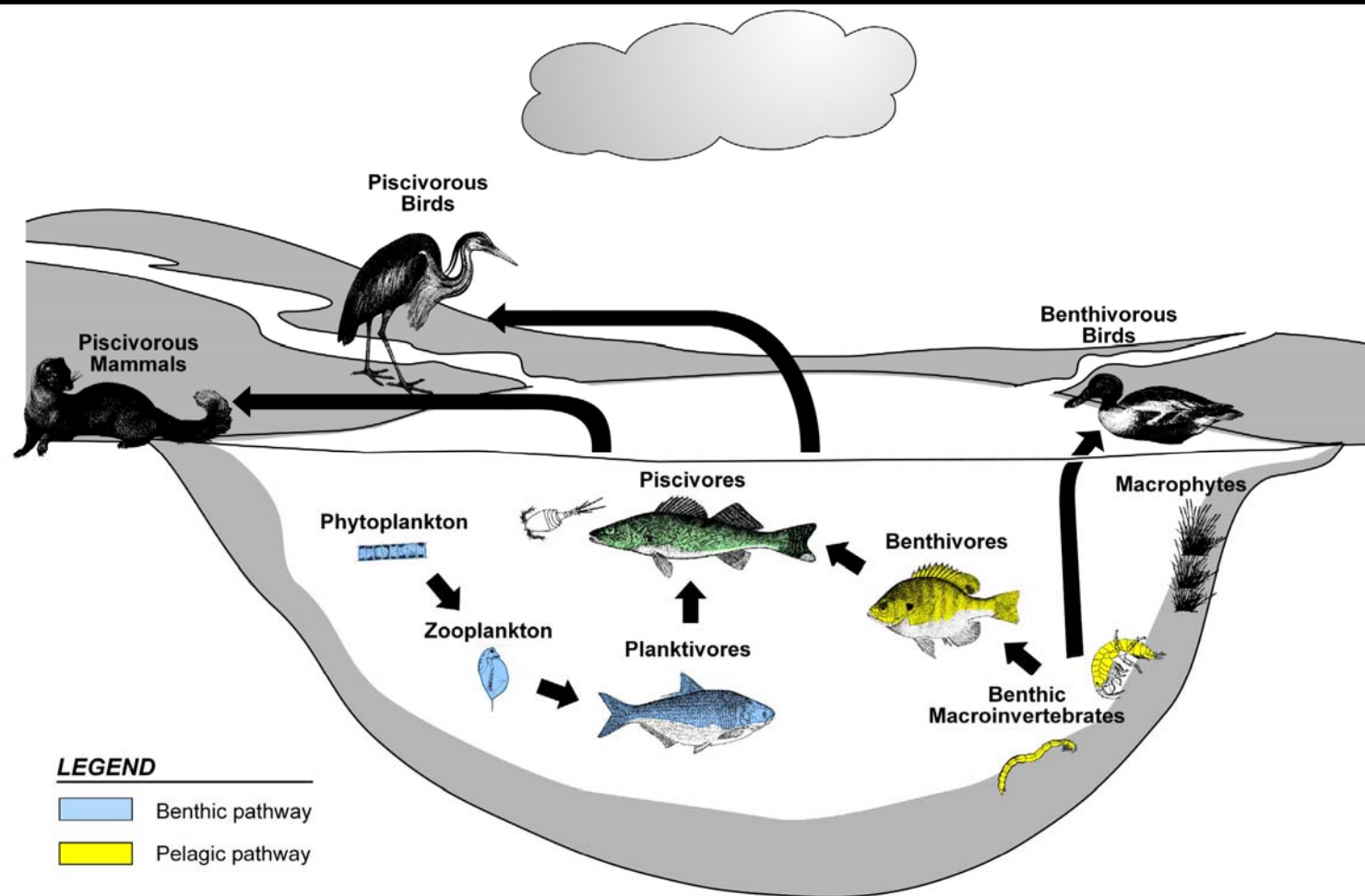


FIGURE 1.39

Honeywell

ONONDAGA LAKE
SYRACUSE, NEW YORK

ECOLOGICAL FOOD WEB IN
ONONDAGA LAKE

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