

**APPENDIX A**

**PHOTO LOG OF NITRATE APPLICATION PROCEDURES**

PHOTOGRAPHIC LOG  
PARSONS

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PROJECT: Honeywell Nitrate Pilot Test  
PROJECT #: 446625

LOCATION: Syracuse, New York  
CLIENT: Honeywell



Status as of: 6/28/11

Description: Side view of the barge showing: (a) portions of both 2,500 gallon (white) tanks carrying calcium nitrate (CN-8), (b) both 2,500 gallon per minute dilution water pumps (orange), (c) the crane used to maneuver the 8-inch flexible discharge lines (left side), (d) the discharge manifold (left end) with the option to have up to eight discharge lines operating at one time, (e) the shed used for inside work space (right end), and (f) two spuds in the "up" position used to hold the barge in place when stored each evening.

Photo by: KMM



Status as of: 6/28/11

Description: Front view of the barge showing (a) one of the two CN-8 tanks (white), (b) both dilution water pumps (orange), (c) one of the two flexible 10-inch suction lines (orange at left), and (d) the discharge manifold (front)

Photo by: ATL

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PHOTOGRAPHIC LOG  
PARSONS

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PROJECT: Honeywell Nitrate Pilot Test  
PROJECT #: 446625

LOCATION: Syracuse, New York  
CLIENT: Honeywell



Status as of: 6/28/11

Description: Side view of the barge that includes the propulsion unit (right side)

Photo by: ATL



Status as of: 7/13/11

Description: Dilution water pump with rigid blue and white pipes carrying epilimnion water into and out of the pump, respectively.

Photo by: KMM

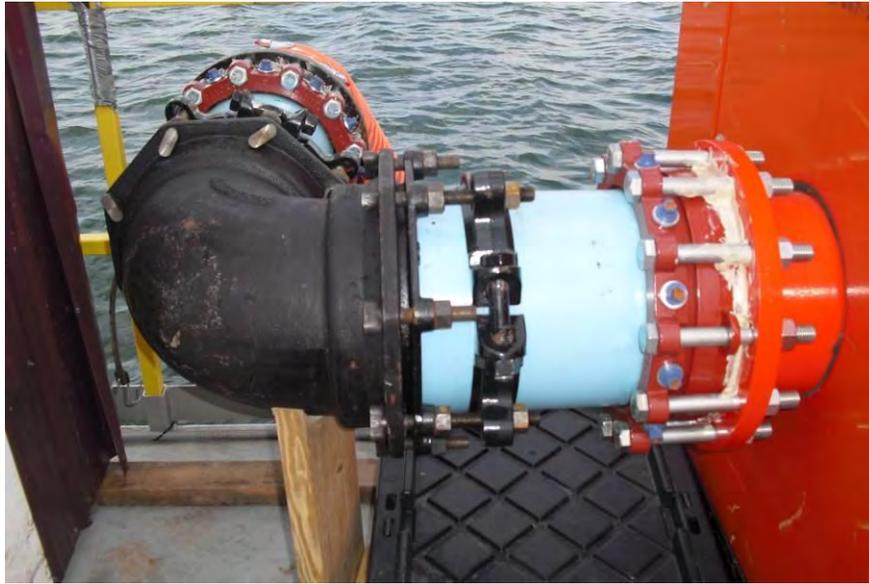
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PHOTOGRAPHIC LOG  
PARSONS

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PROJECT: Honeywell Nitrate Pilot Test  
PROJECT #: 446625

LOCATION: Syracuse, New York  
CLIENT: Honeywell



Status as of: 8/10/11

Description: 10" Ductile Iron Elbow with Mechanical Joints for the suction inlet.

Photo by: KMM



Status as of: 7/13/11

Description: 10-inch flexible orange pipe and 8-inch flexible green pipe upstream and downstream, respectively, of the one of the two dilution water pumps.

Photo by: KMM

PHOTOGRAPHIC LOG  
PARSONS

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PROJECT: Honeywell Nitrate Pilot Test  
PROJECT #: 446625

LOCATION: Syracuse, New York  
CLIENT: Honeywell



Status as of: 8/16/11

Description: Manifold with 6-inch diameter dosing pipe with hose connection from the front of the barge and two 8-inch flexible pipe extending downward into the water. The rest of the hose connectors are capped.

Photo by KMM



Status as of: 8/16/11

Description: White discharge line downstream of one of the dilution water pumps. The purpose of the three 90-degree bends is to provide sufficient straight pipe lengths so the flow meter can provide useable flow measurements.

Photo by: KMM

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PHOTOGRAPHIC LOG  
PARSONS

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PROJECT: Honeywell Nitrate Pilot Test  
PROJECT #: 446625

LOCATION: Syracuse, New York  
CLIENT: Honeywell



Status as of: 10/07/11

Description: Pressure and flow controls from the dilution water pump to the CN8 poly tank.

Photo by: KMM



Status as of: 8/08/11

Description: Pontoon (support) boat secured to the left of the barge.

Photo by: UFI

PHOTOGRAPHIC LOG  
PARSONS

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PROJECT: Honeywell Nitrate Pilot Test  
PROJECT #: 446625

LOCATION: Syracuse, New York  
CLIENT: Honeywell



Status as of: 9/06/11

Description: UFI in-situ ultraviolet spectroradiometer (ISUS) unit used to measure nitrate, sulfide and other parameters in water.

Photo by: UFI

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**APPENDIX B**

**EXAMPLE DAILY ISUS DATA REPORT**

# Onondaga Lake Gridding Summary Using an In-Situ Ultraviolet Spectrophotometer (ISUS):

## Nitrate Addition Pilot Monitoring

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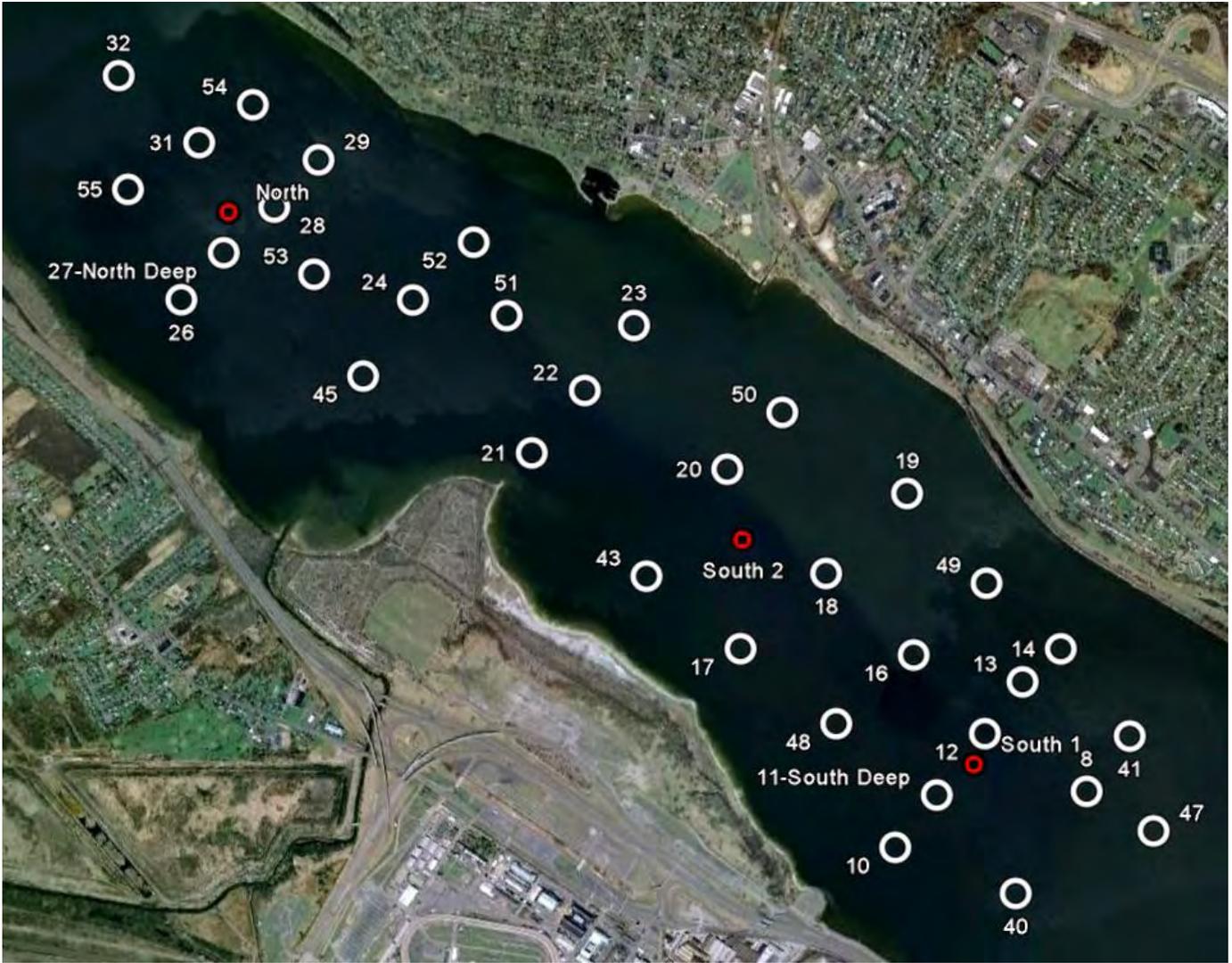
October 10, 2011



*Provisional Data Summary  
for discussion purposes only*

*Submitted October 10, 2011  
Anthony R. Prestigiacomo  
Research Scientist*

## Gridding Locations

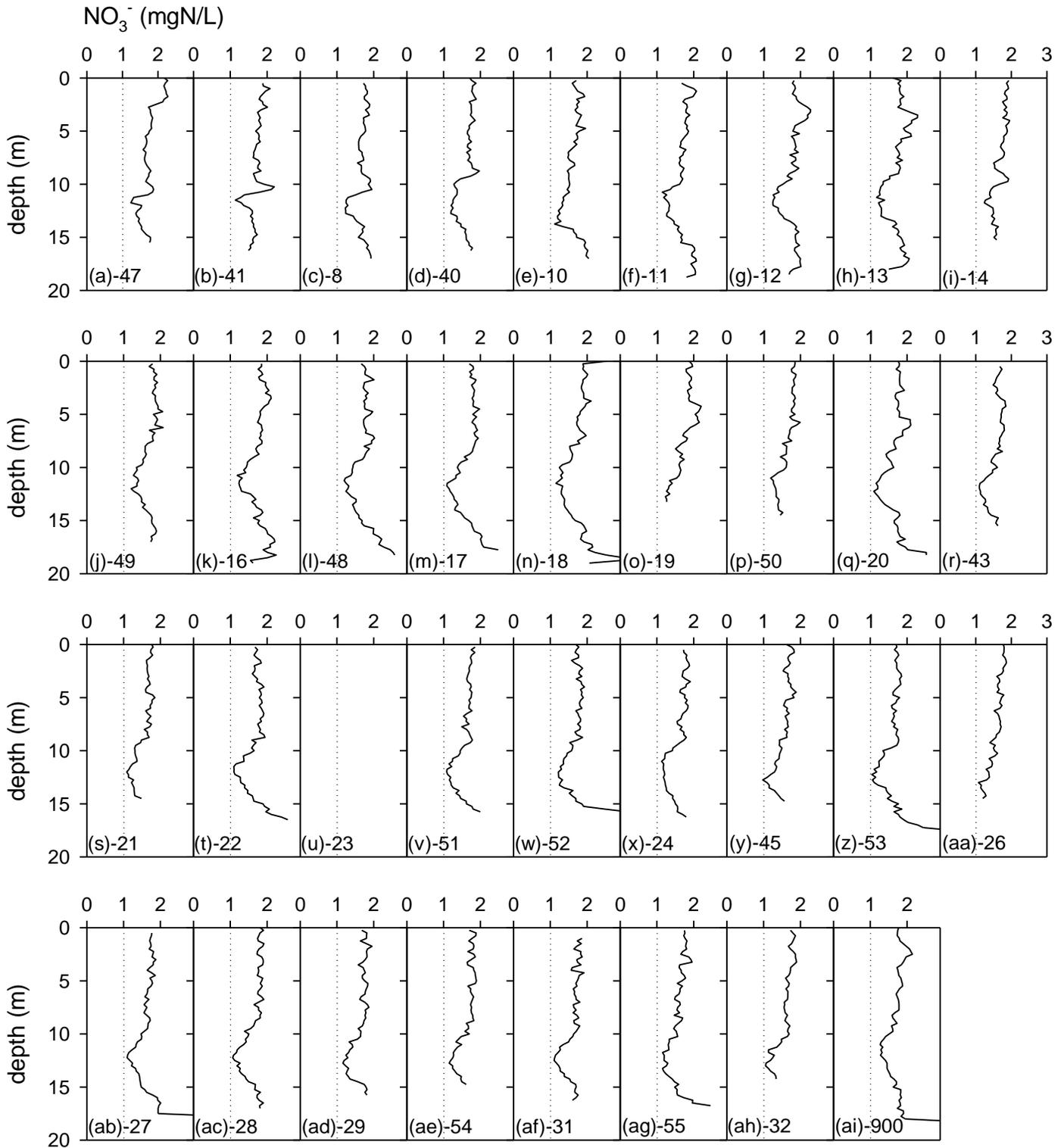


Today's injection: NORTH

white circle: gridding location

red circle: injection site

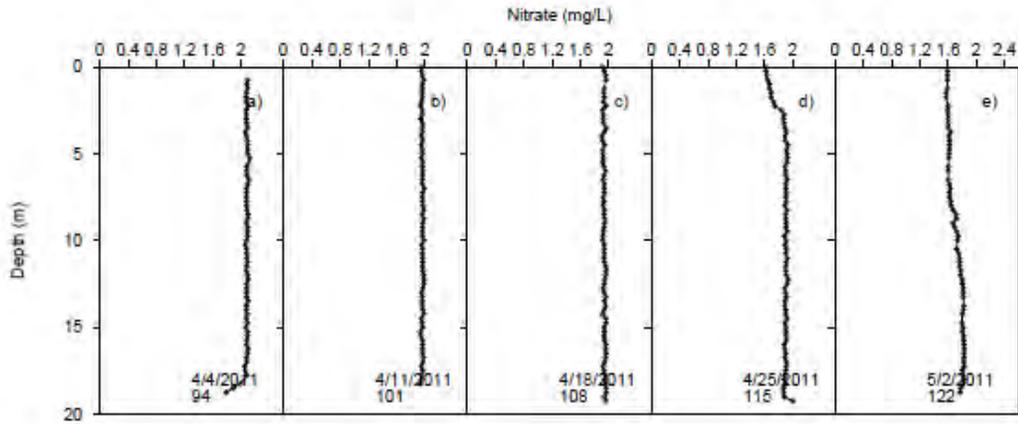
# Nitrate Profiles at Each Gridding Location (0-3 mgN/L)



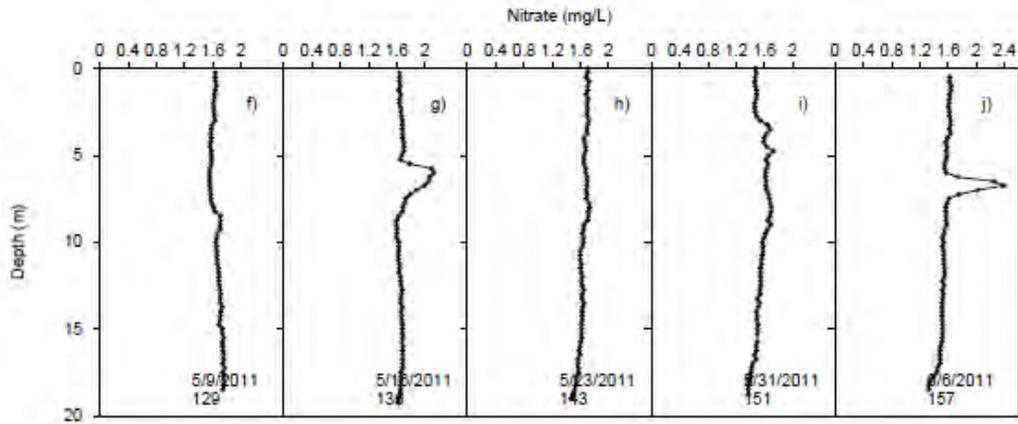


# Nitrate Profiles at South Deep, Time Series

## 2011 Nitrate Profiles for Onondaga Lake South Deep

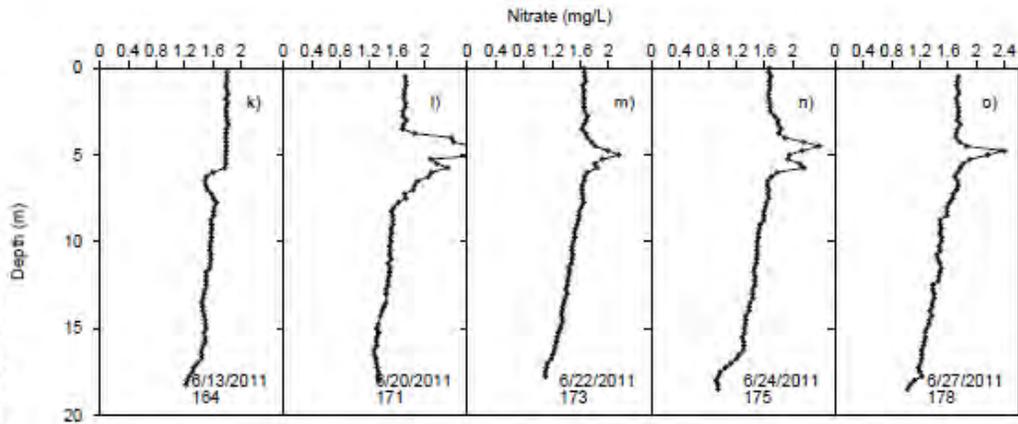


**Draft**



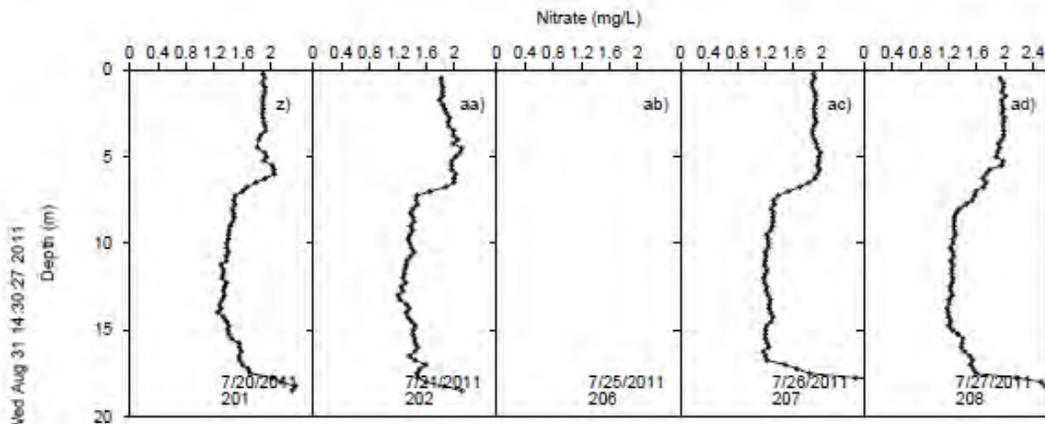
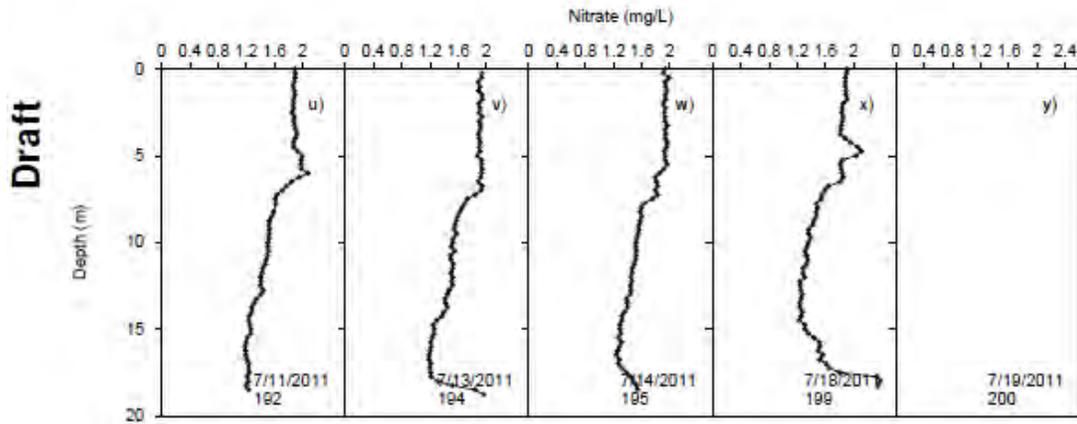
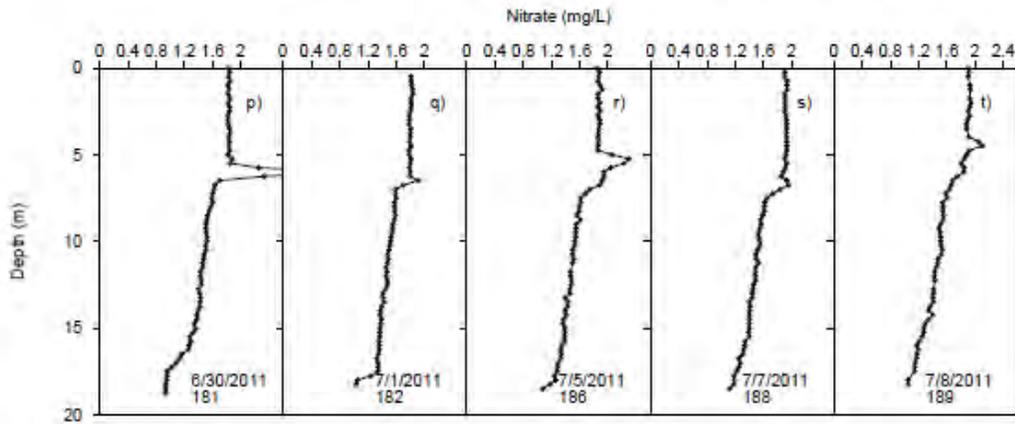
**Draft**

Wed Aug 31 14:30:27 2011



# Nitrate Profiles at South Deep, Time Series continued

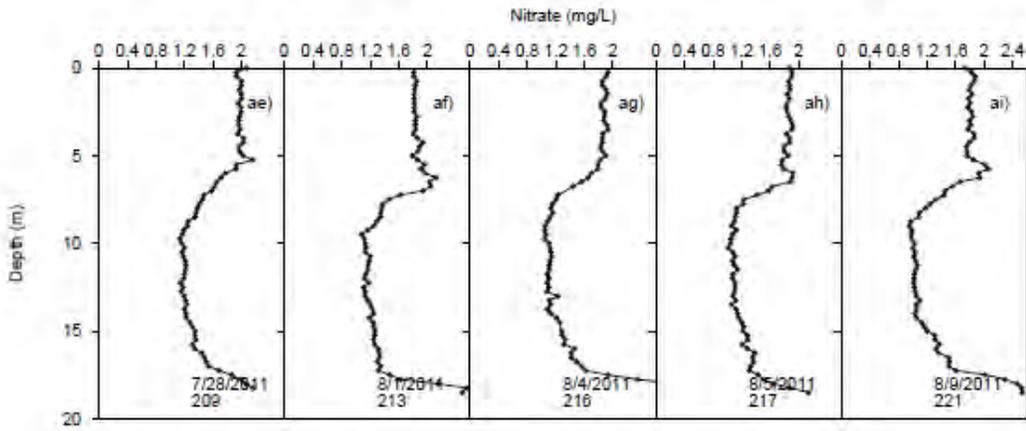
## 2011 Nitrate Profiles for Onondaga Lake South Deep



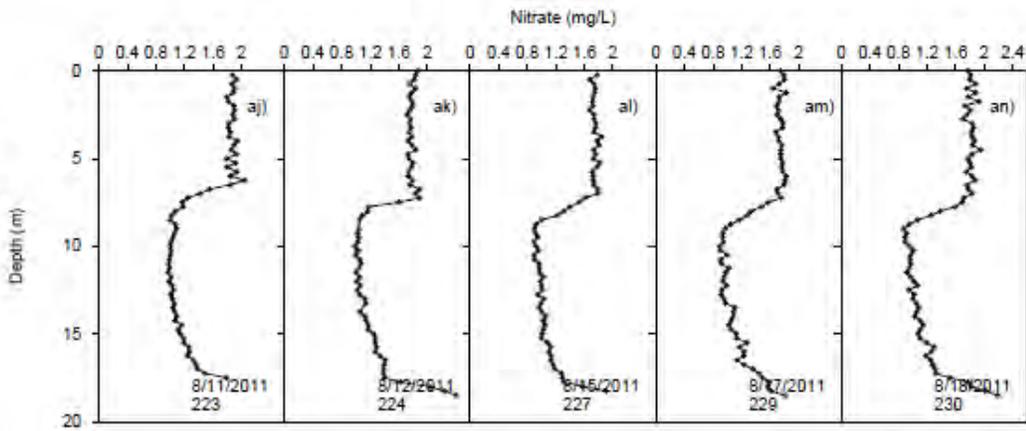
Wed Aug 31 14:30:27 2011

# Nitrate Profiles at South Deep, Time Series continued

2011 Nitrate Profiles for Onondaga Lake South Deep

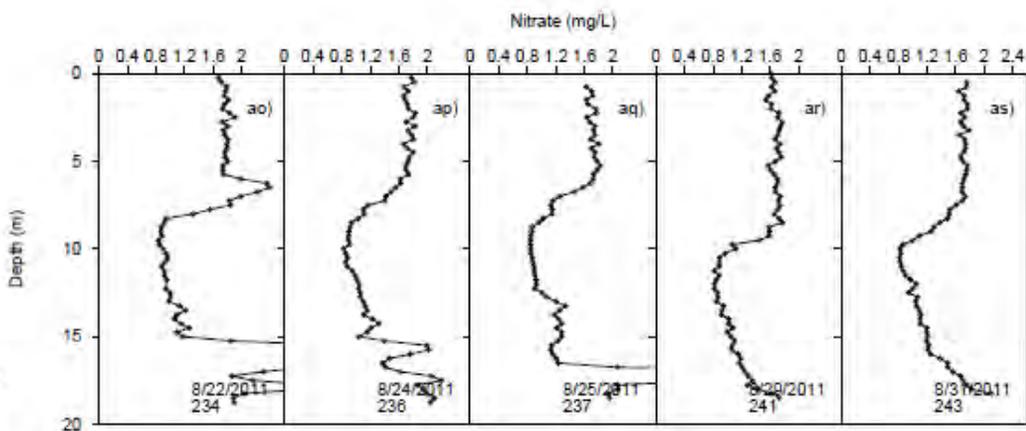


Draft



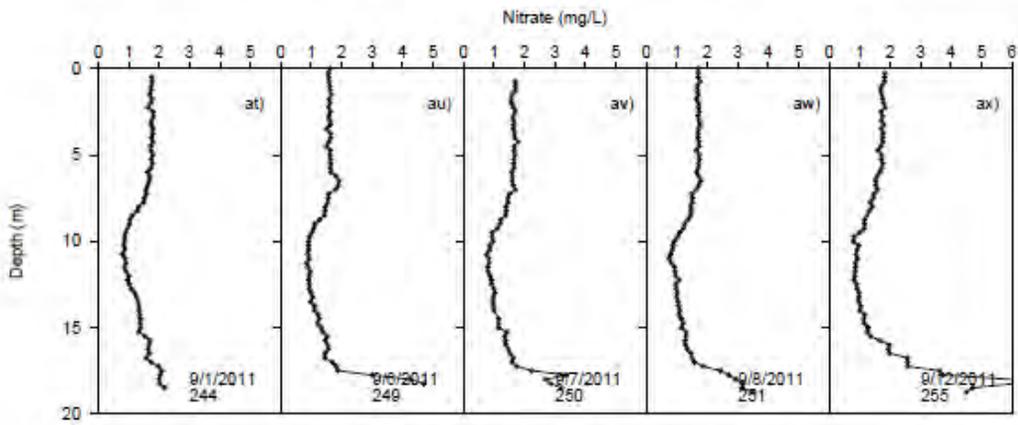
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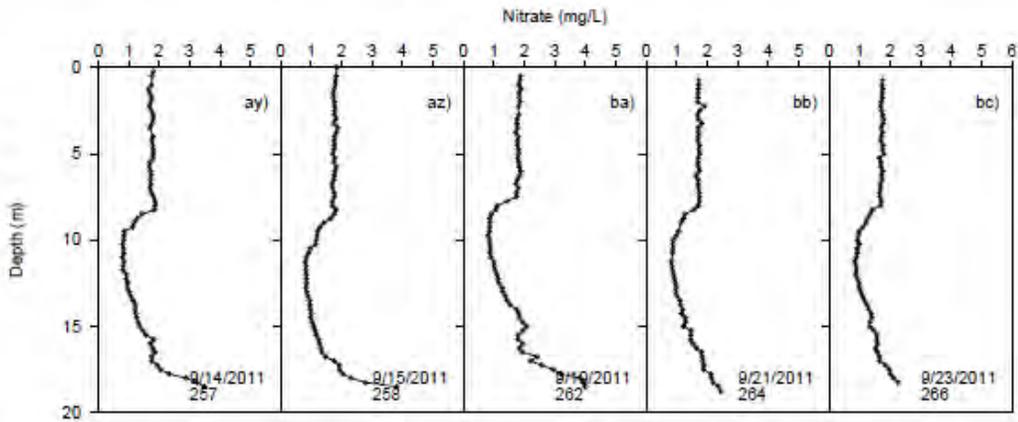


# Nitrate Profiles at South Deep, Time Series continued

## 2011 Nitrate Profiles for Onondaga Lake South Deep

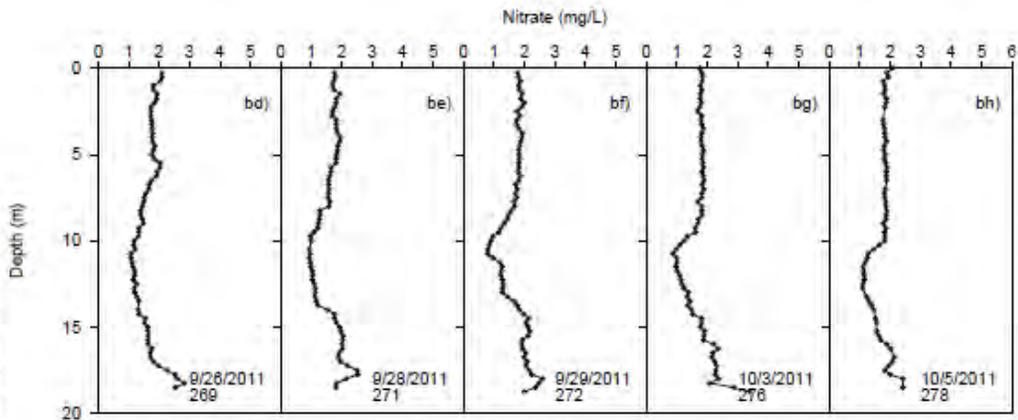


Draft



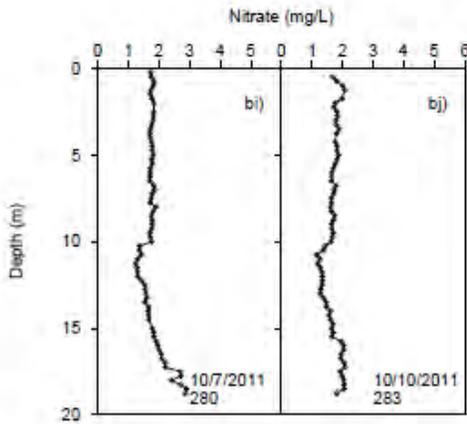
Draft

Wed Oct 05 13:39:44 2011



# Nitrate Profiles at South Deep, Time Series continued

2011 Nitrate Profiles for Onondaga Lake South Deep

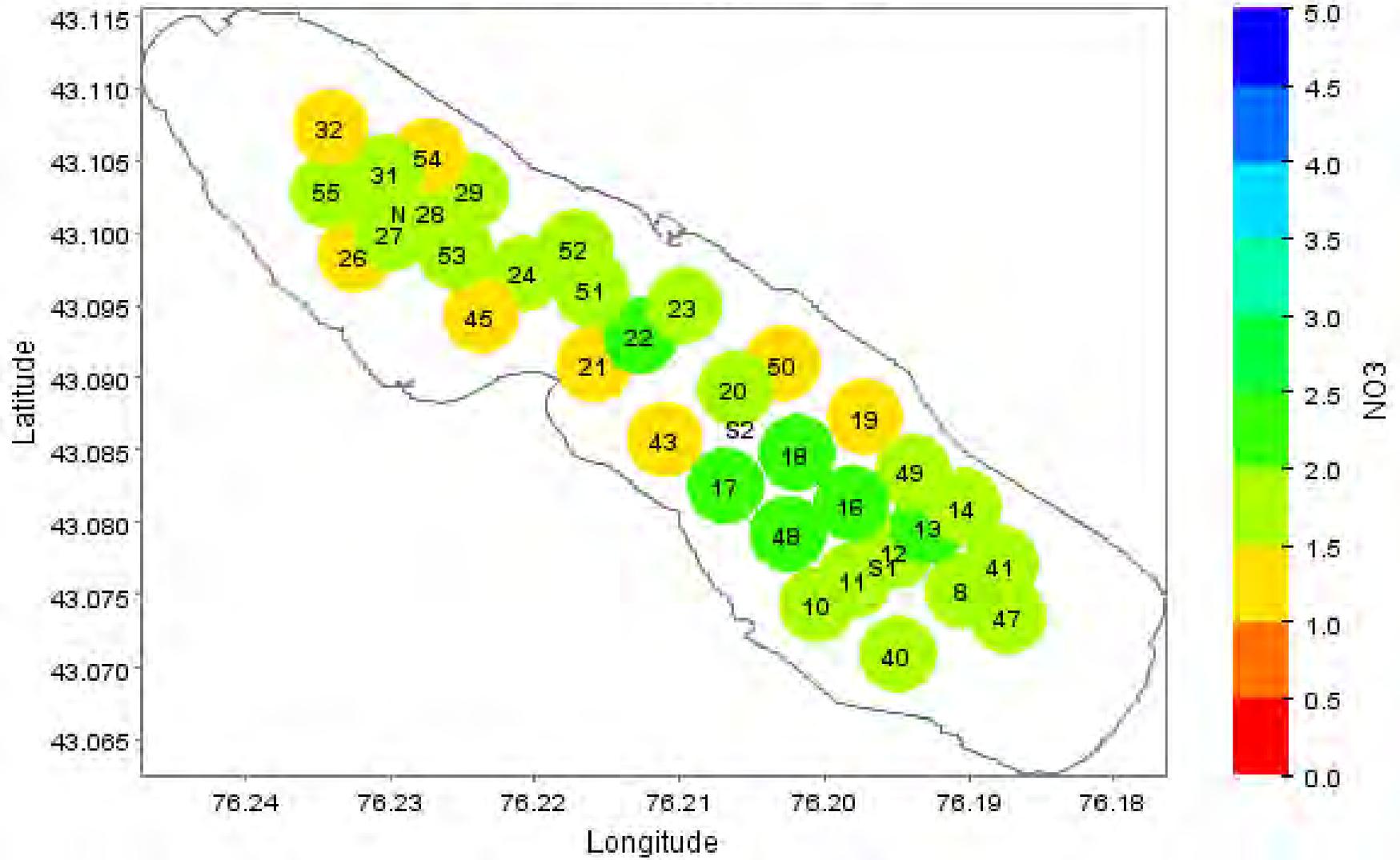


Uran

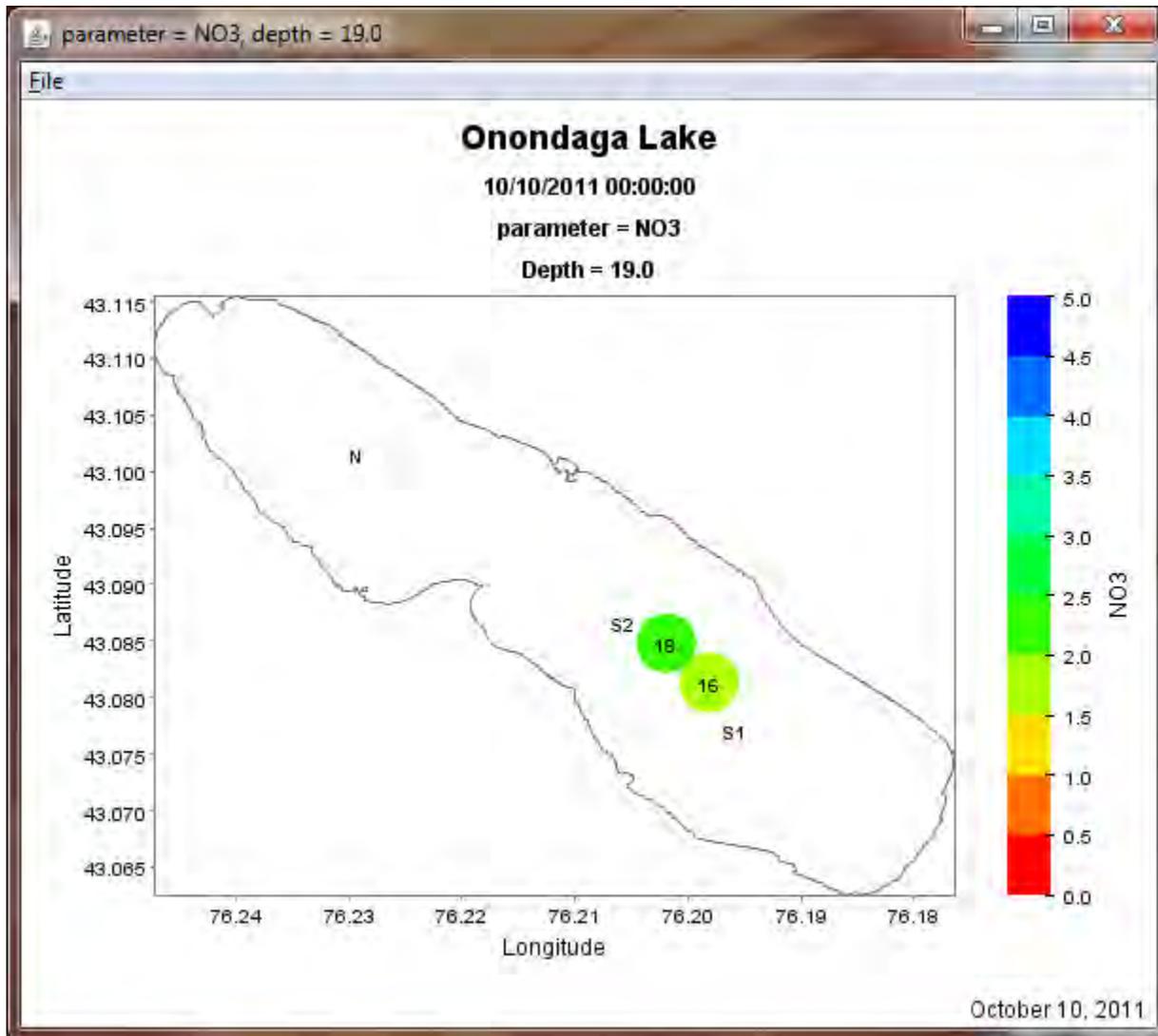
Draft

Mon Oct 10 14:45:10 2011

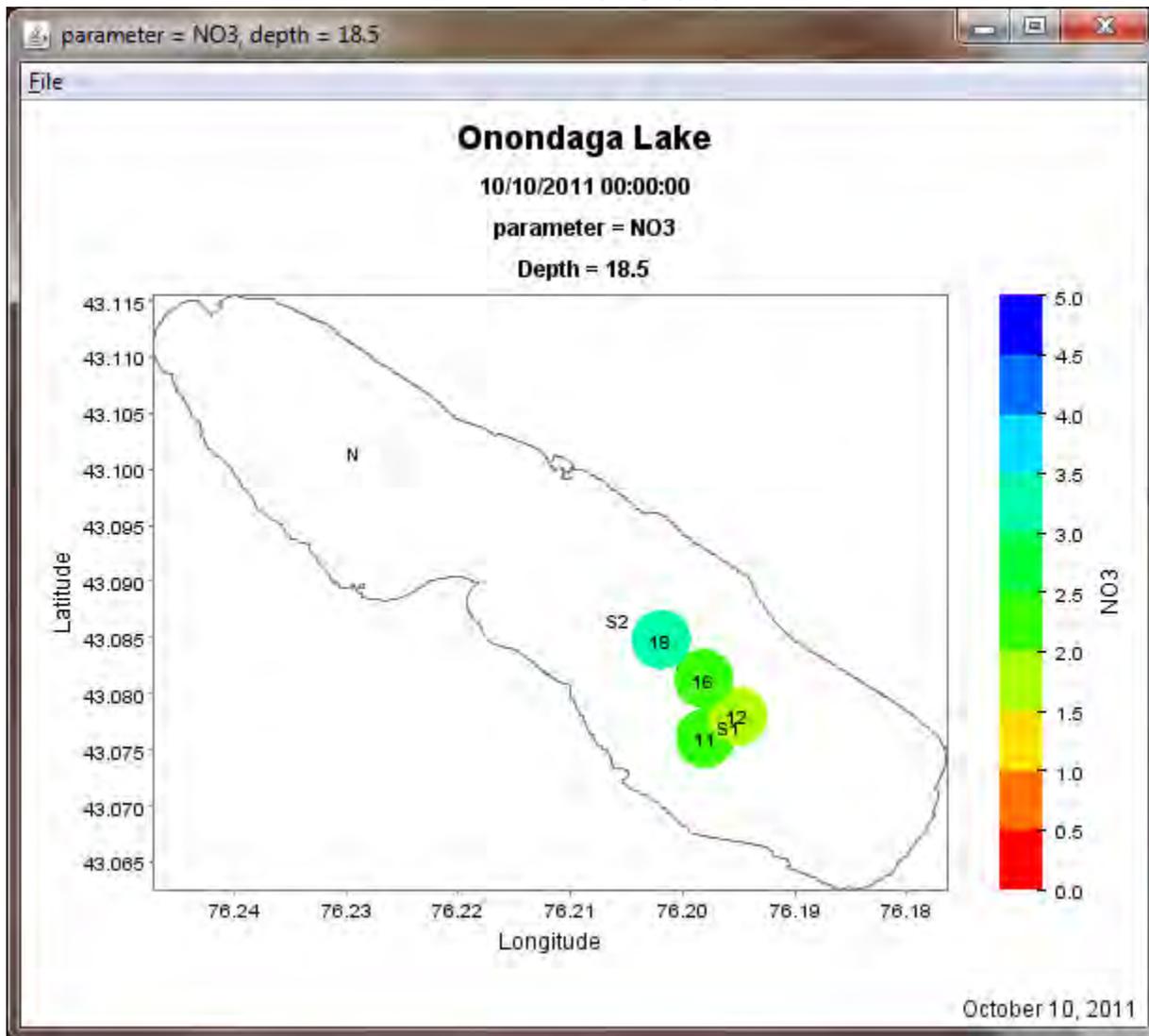
### Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)



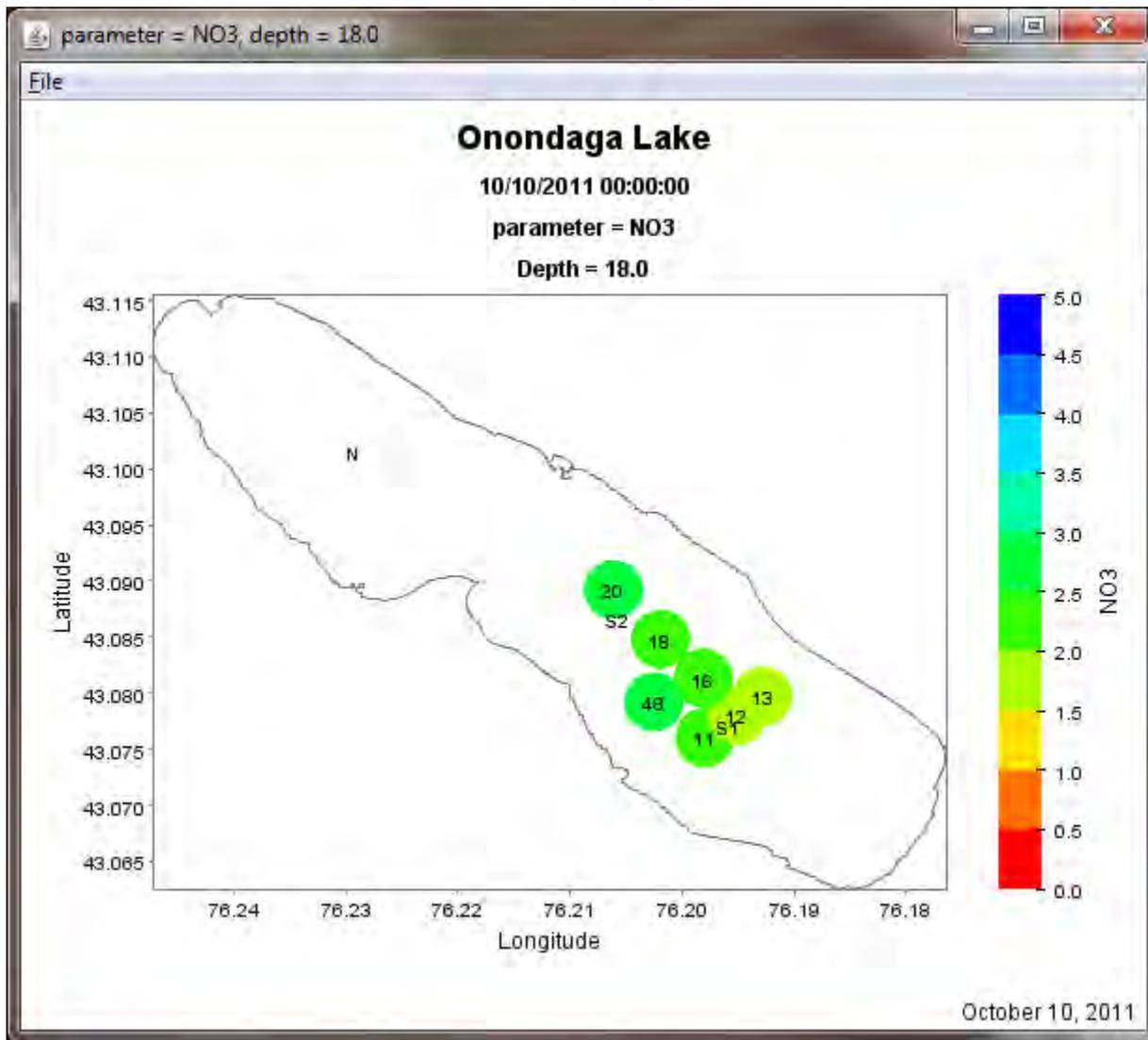
## Color Bubble Plots at 19m, Nitrate (mgN/L)



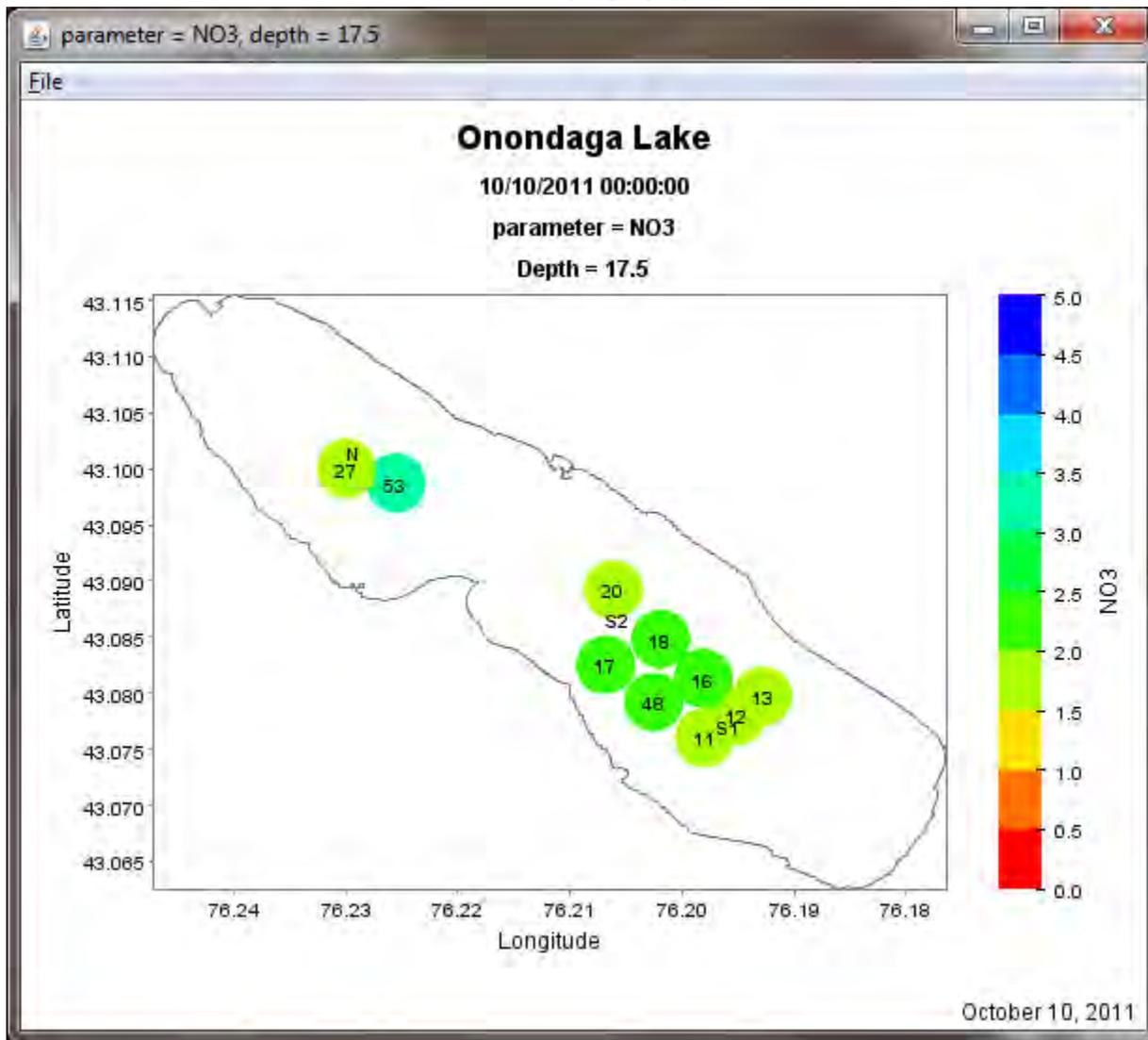
## Color Bubble Plots at 18.5m, Nitrate (mgN/L)



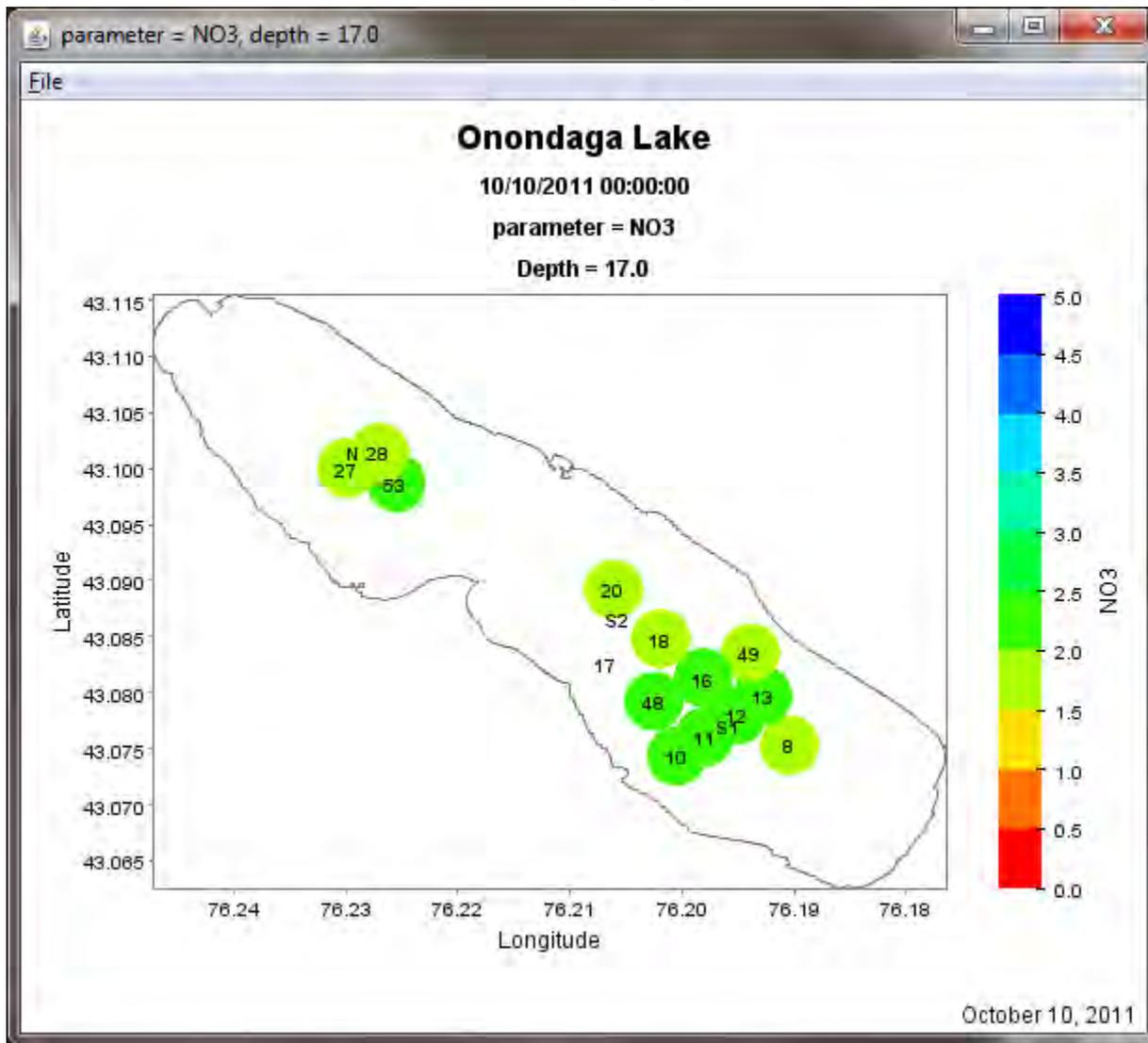
## Color Bubble Plots at 18m, Nitrate (mgN/L)



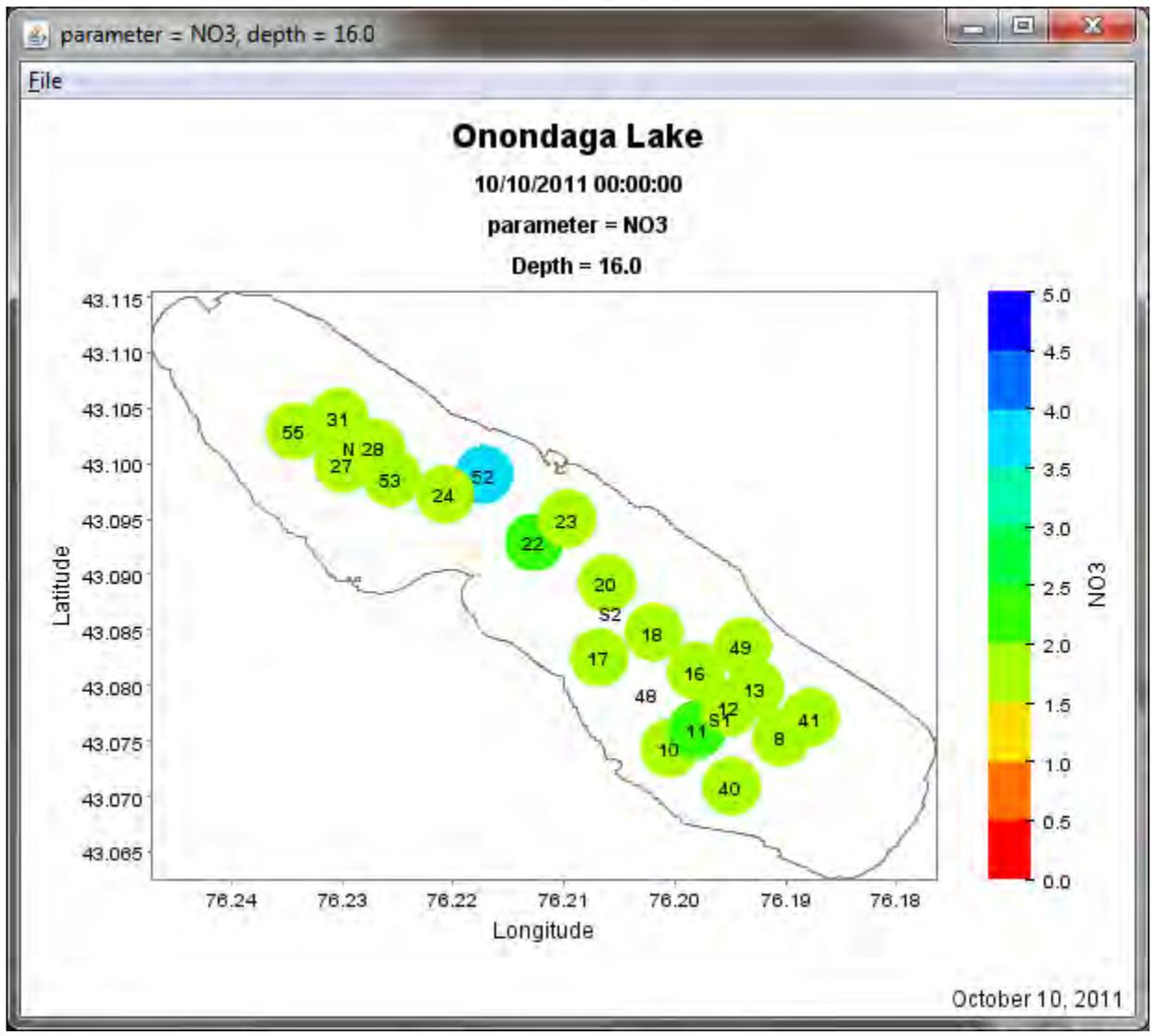
## Color Bubble Plots at 17.5, Nitrate (mgN/L)



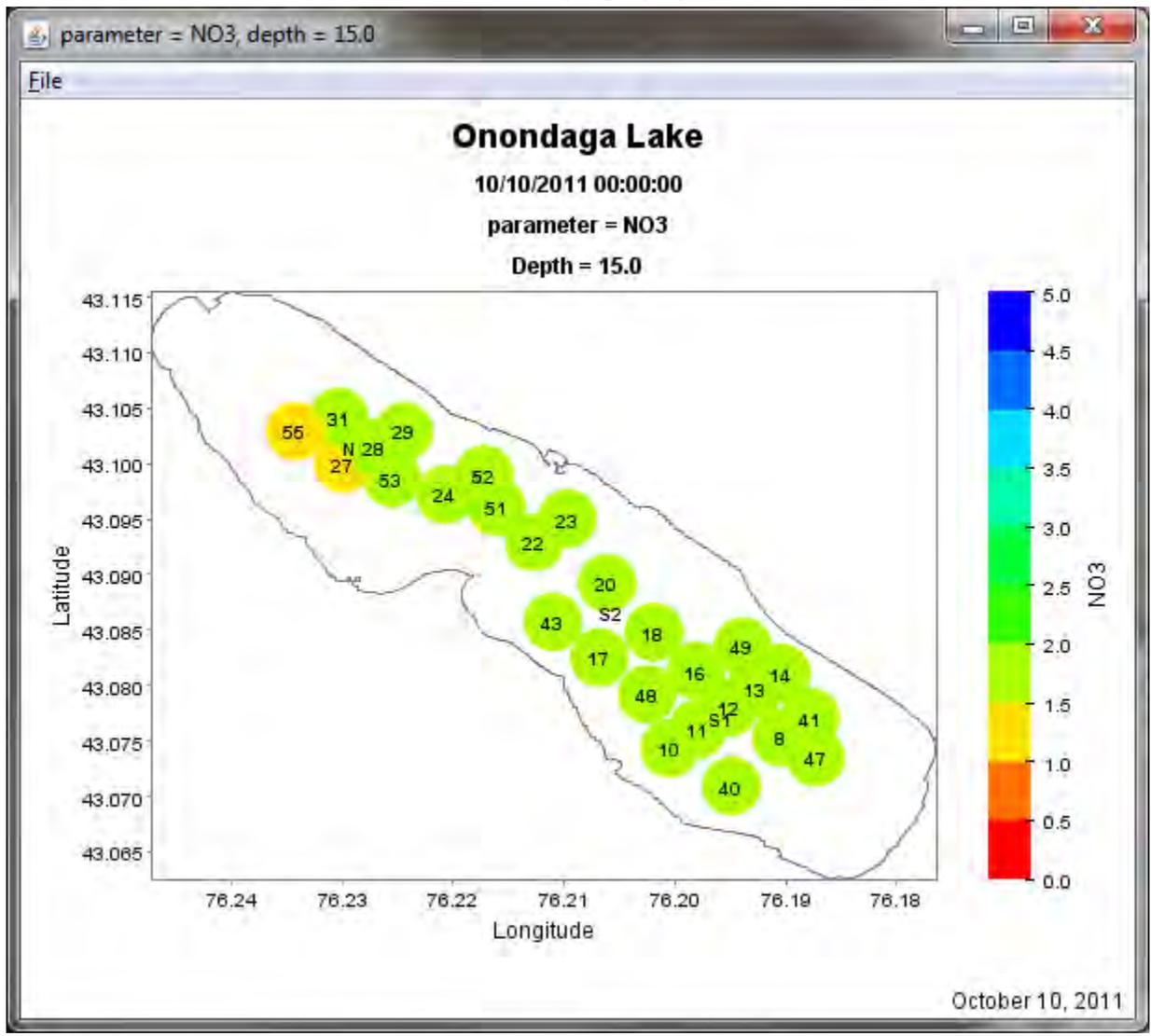
## Color Bubble Plots at 17m, Nitrate (mgN/L)



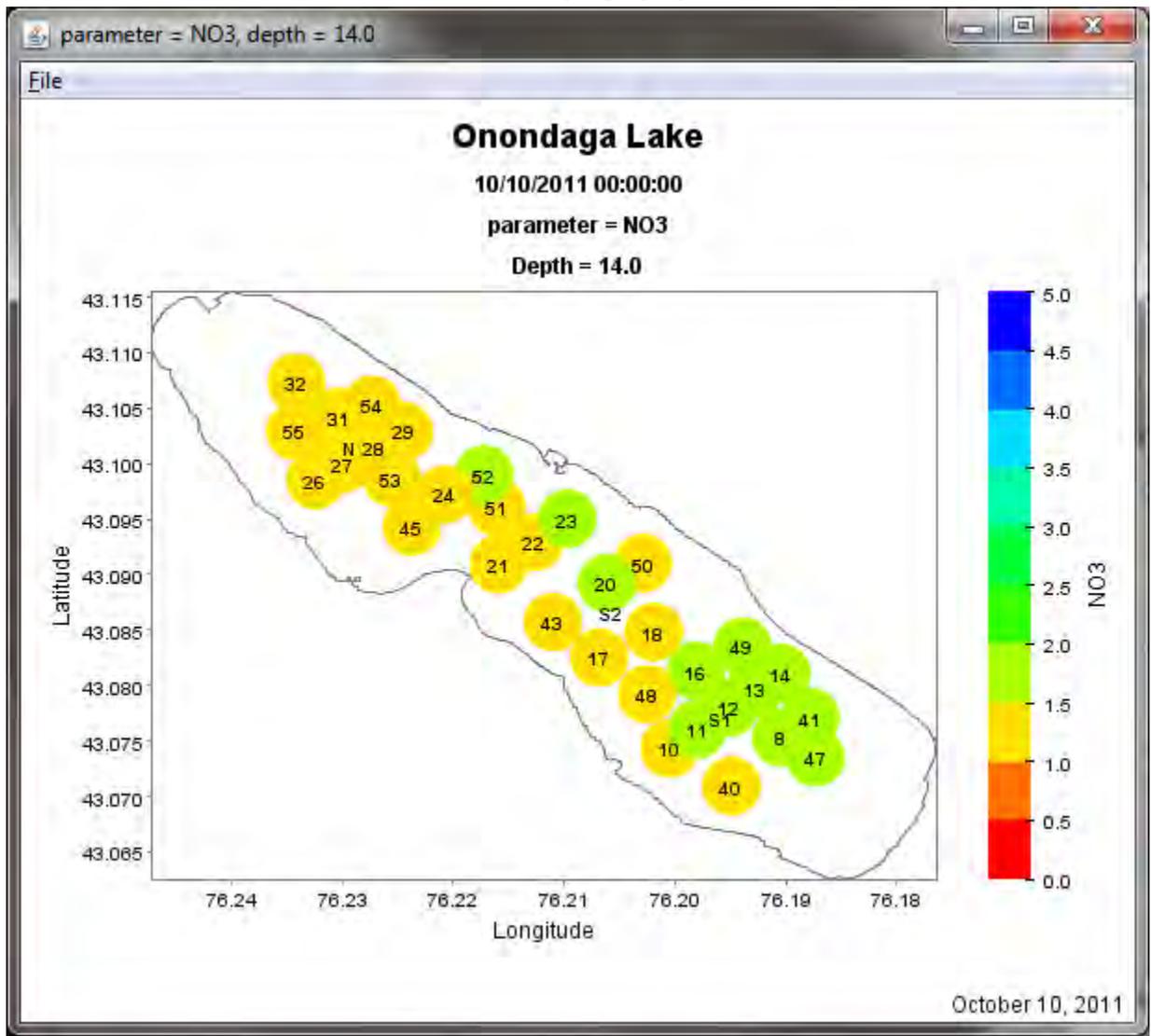
# Color Bubble Plots at 16m, Nitrate (mgN/L)



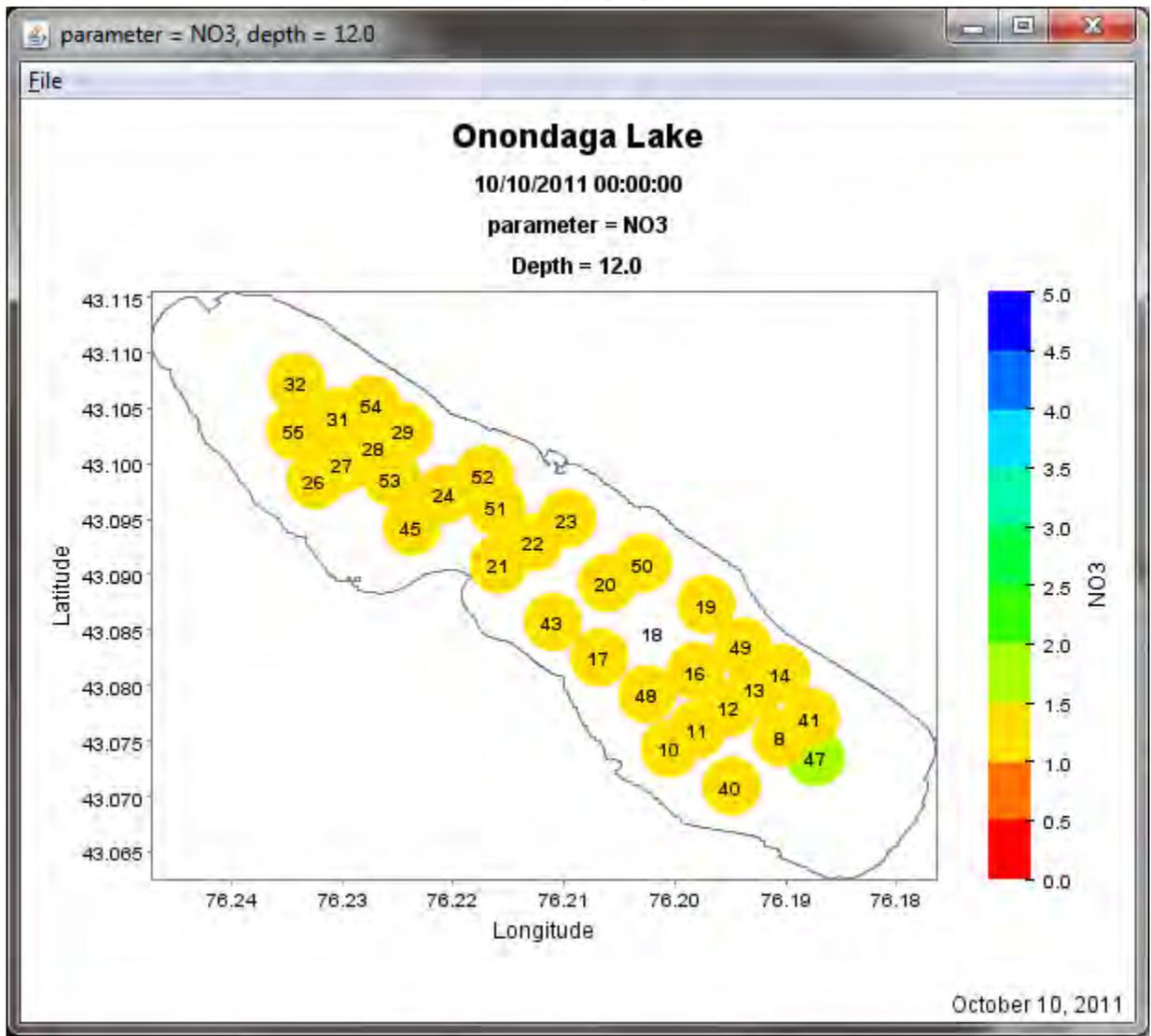
# Color Bubble Plots at 15m, Nitrate (mgN/L)



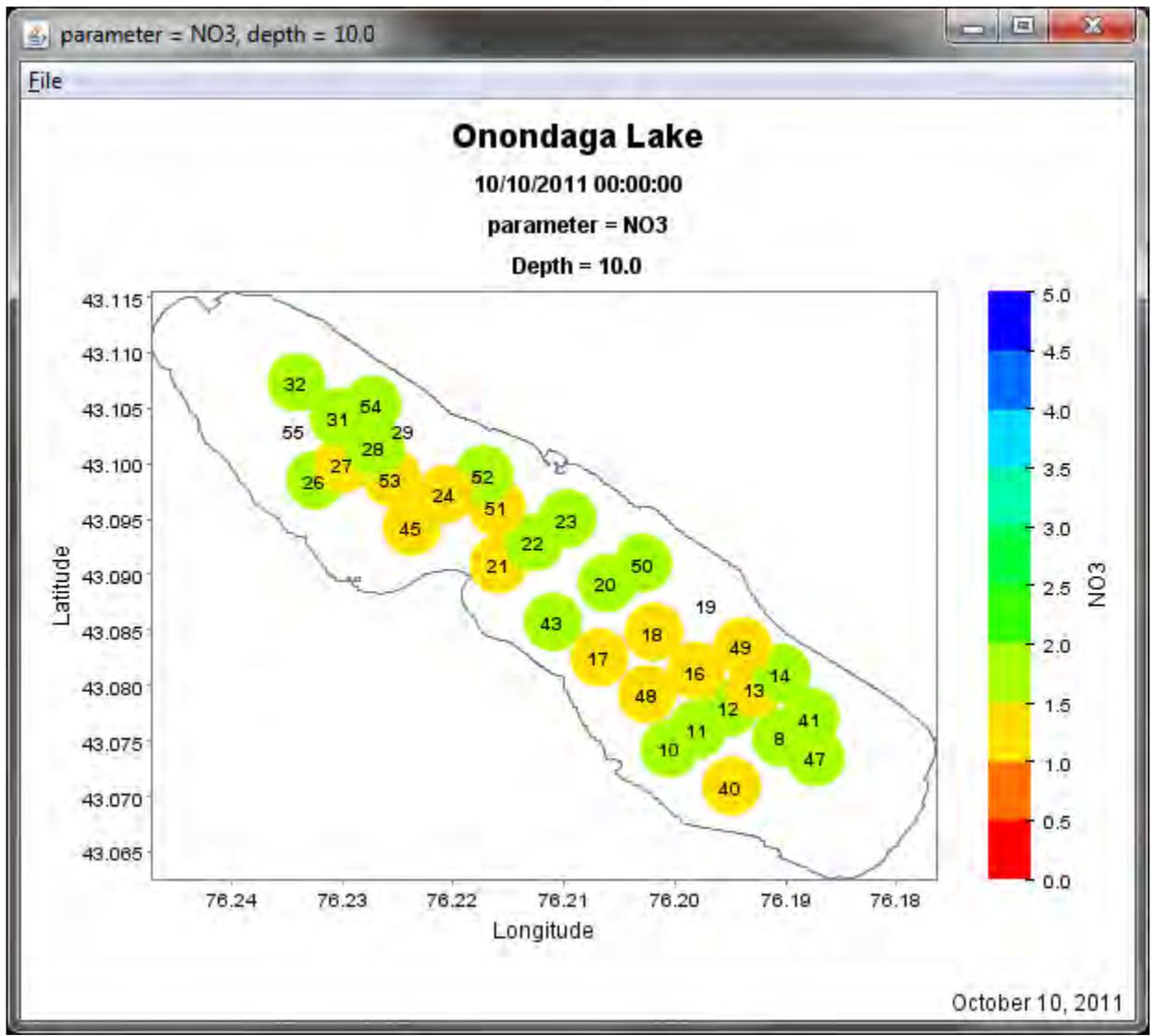
# Color Bubble Plots at 14m, Nitrate (mgN/L)



# Color Bubble Plots at 12m, Nitrate (mgN/L)



# Color Bubble Plots at 10m, Nitrate (mgN/L)



**APPENDIX C**

**NITRATE DATA SUMMARIES FOR ONE METER  
ABOVE THE LAKE BOTTOM**

# Onondaga Lake Gridding Summary Using an In-Situ Ultraviolet Spectrophotometer (ISUS):

## Nitrate Addition Pilot Monitoring

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Weekly Summaries One Meter Above Lake Bottom

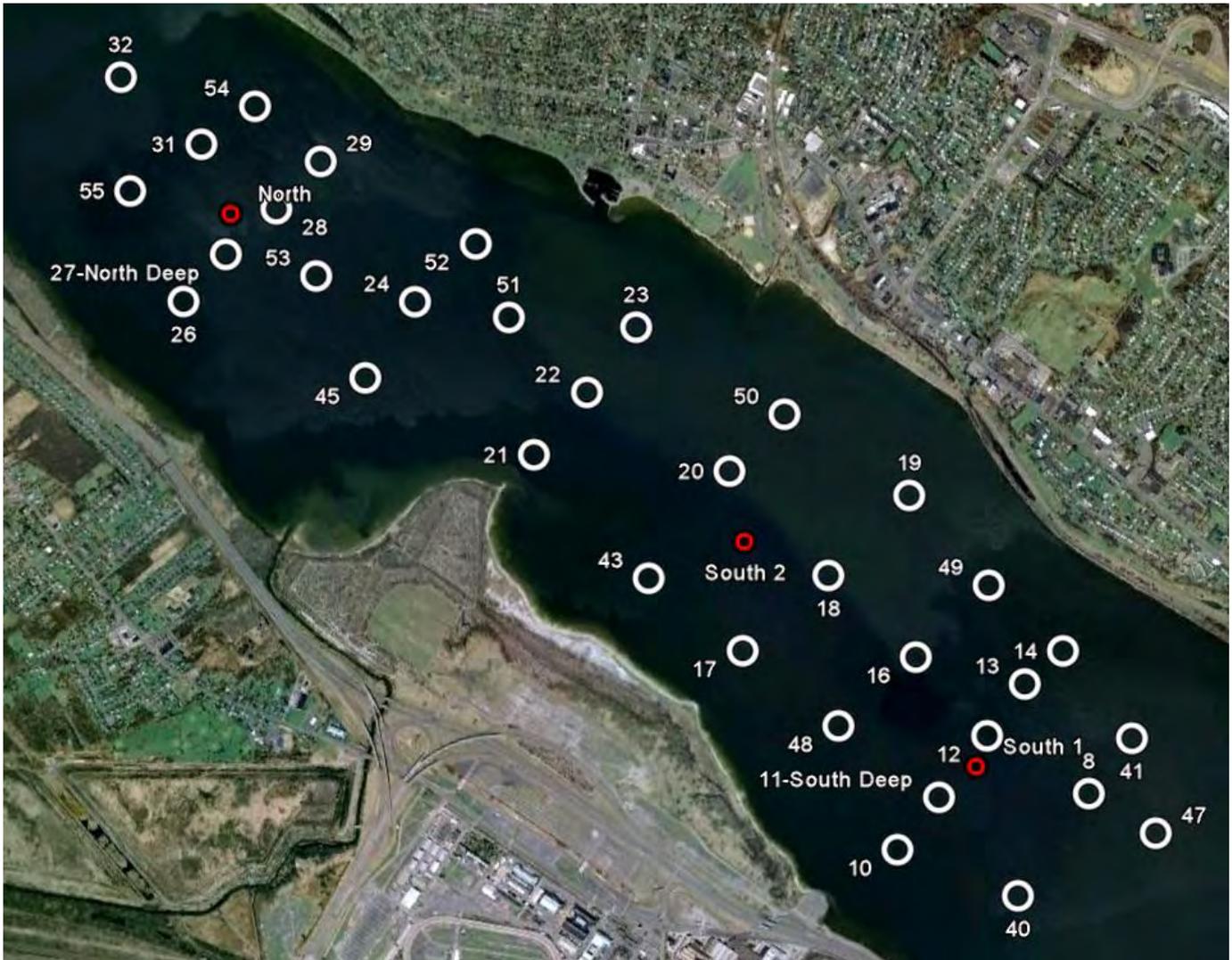
June 24 to November 7, 2011



*Provisional Data Summary  
for discussion purposes only*

*Submitted December 14, 2011  
Anthony R. Prestigiacomo  
Research Scientist*

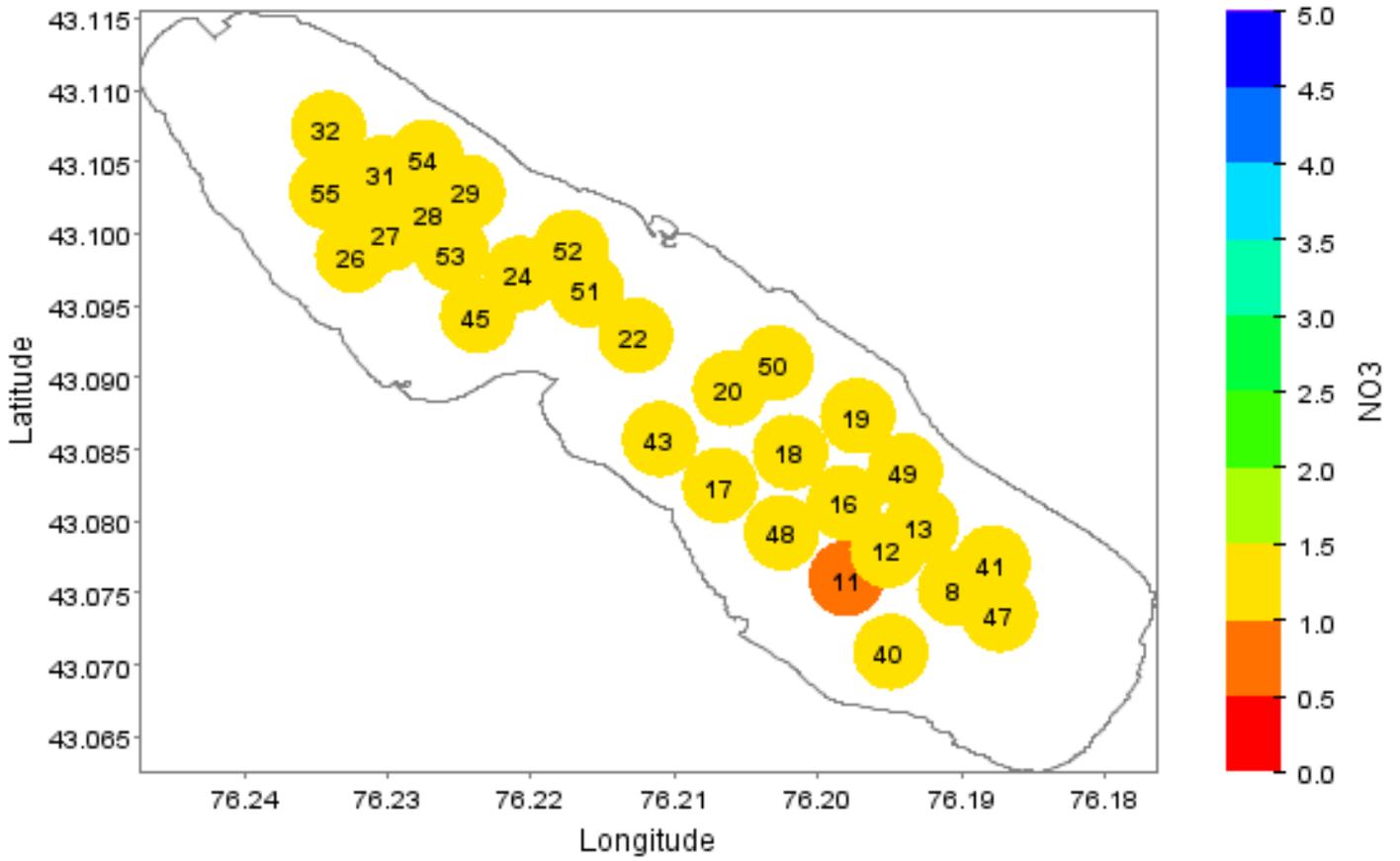
## Gridding Locations



white circle: ISUS monitoring location  
red circle: nitrate application location

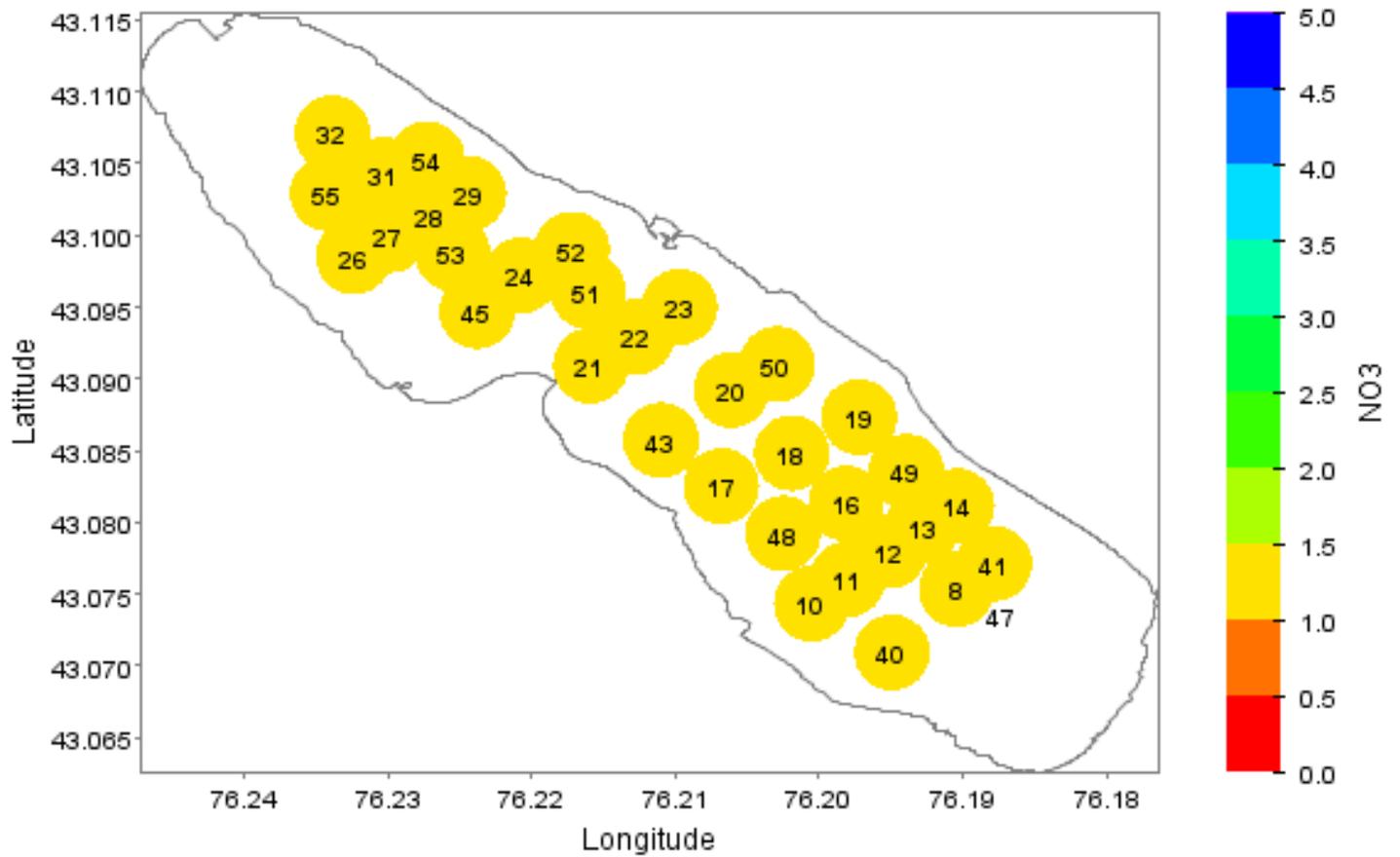
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

June 24, 2011



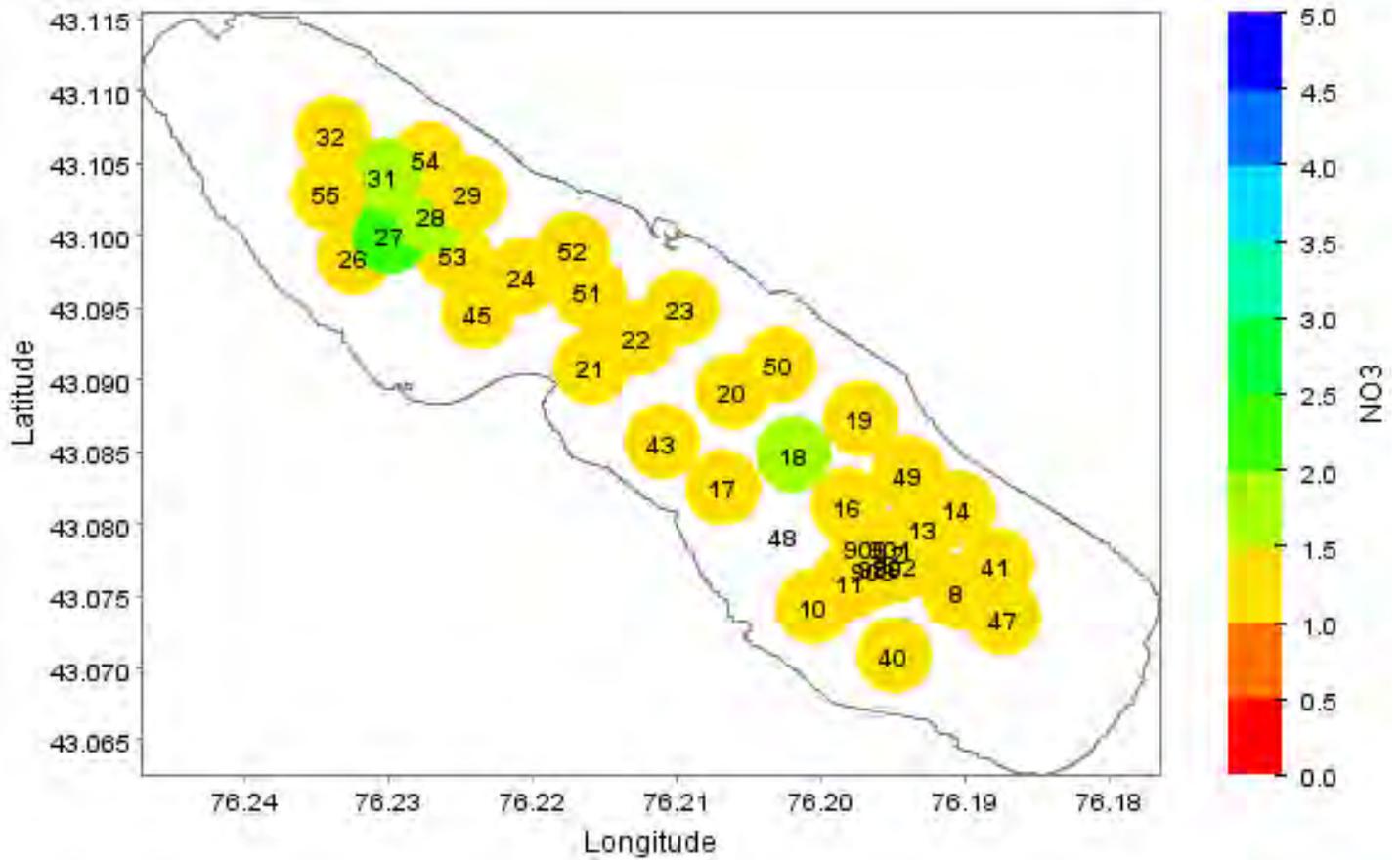
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

July 1, 2011



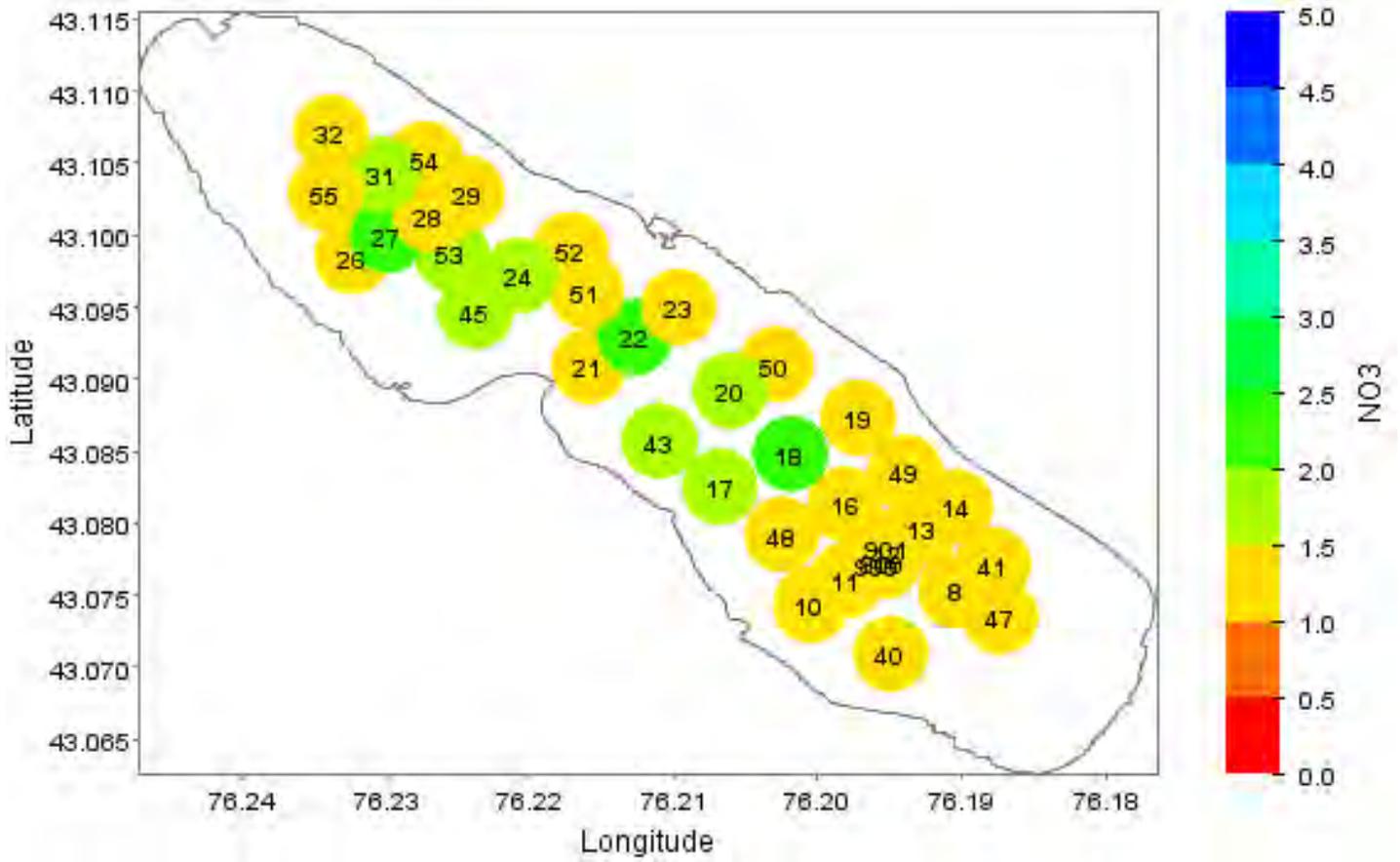
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

July 8, 2011



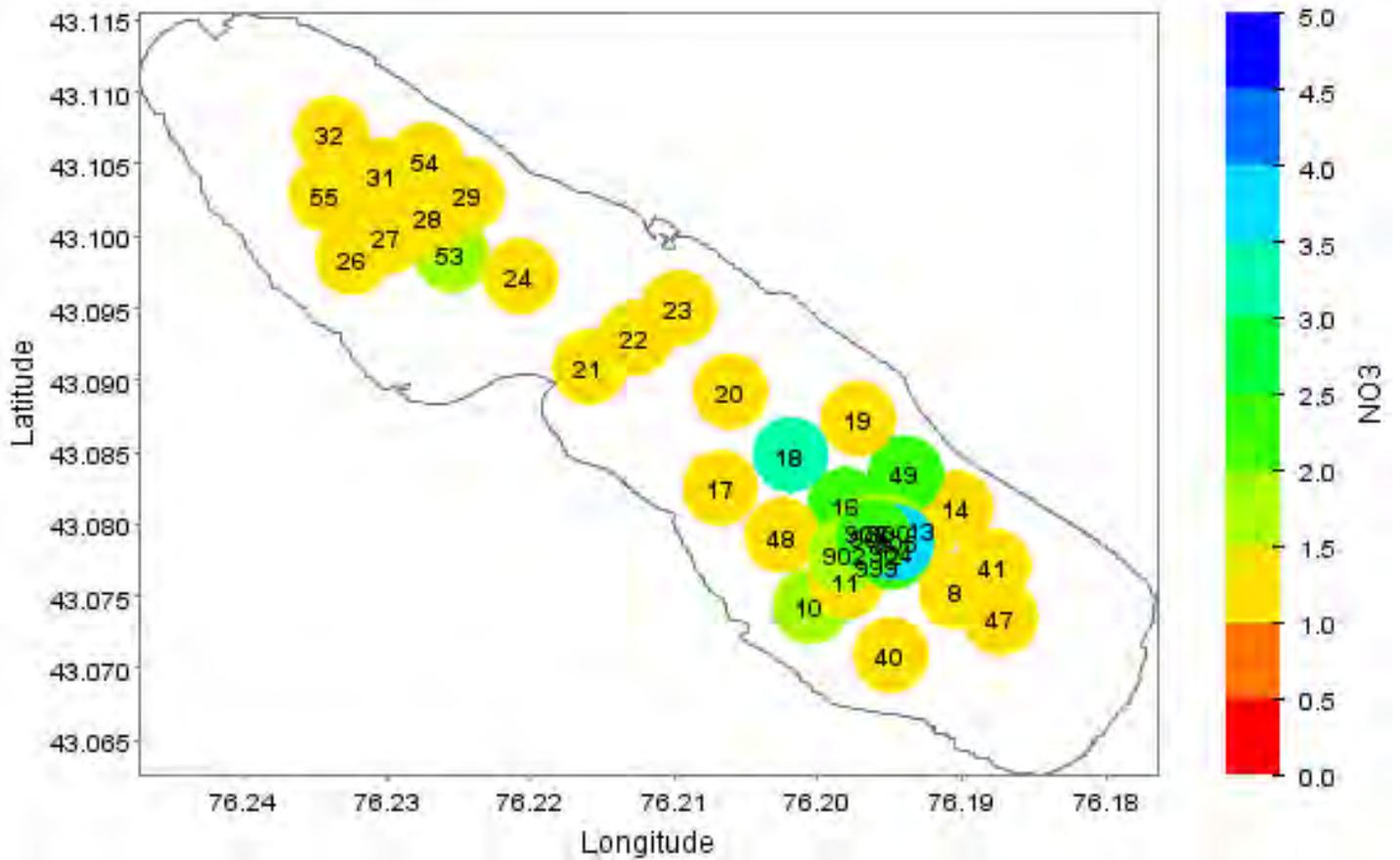
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

July 14, 2011



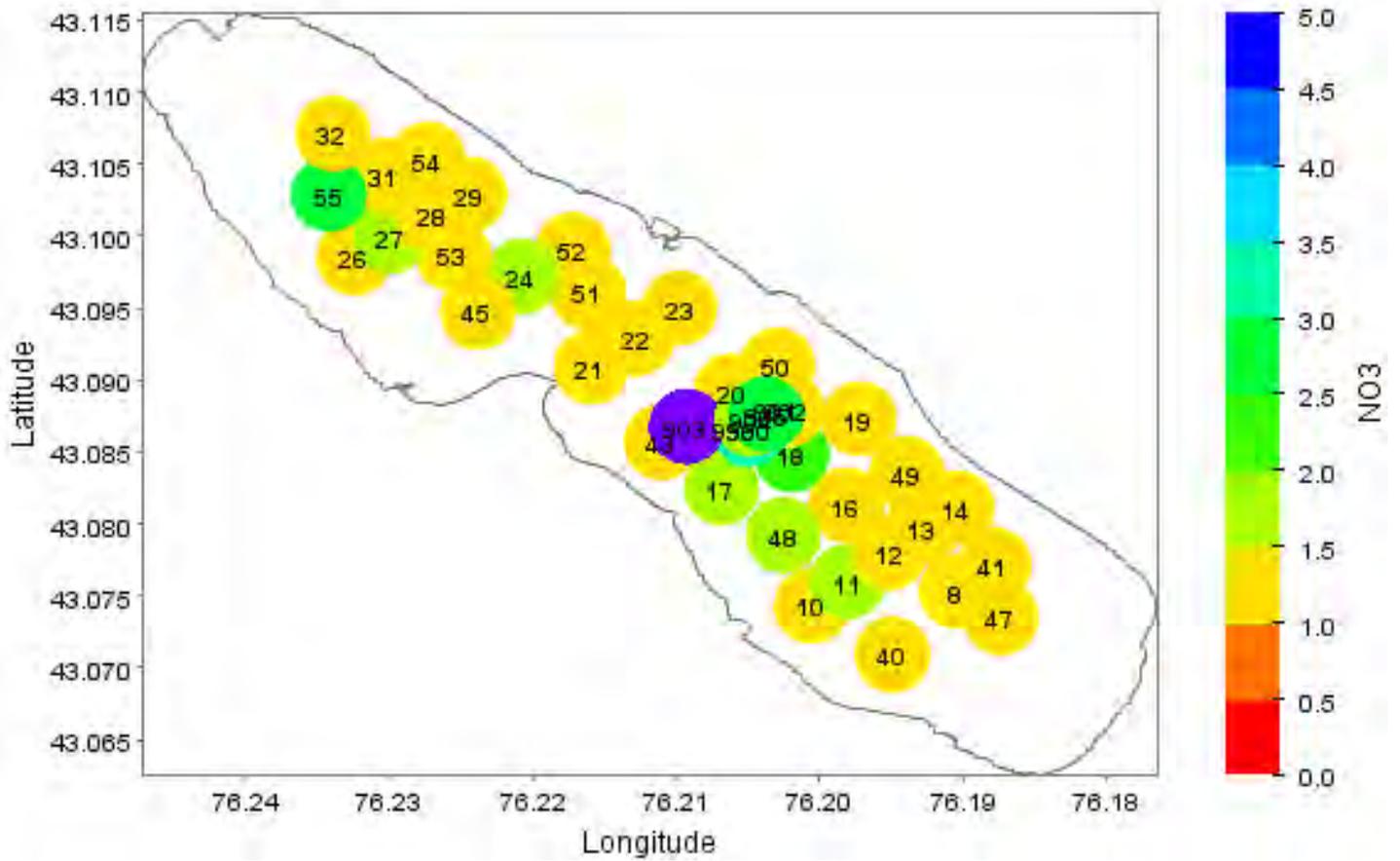
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

July 21, 2011



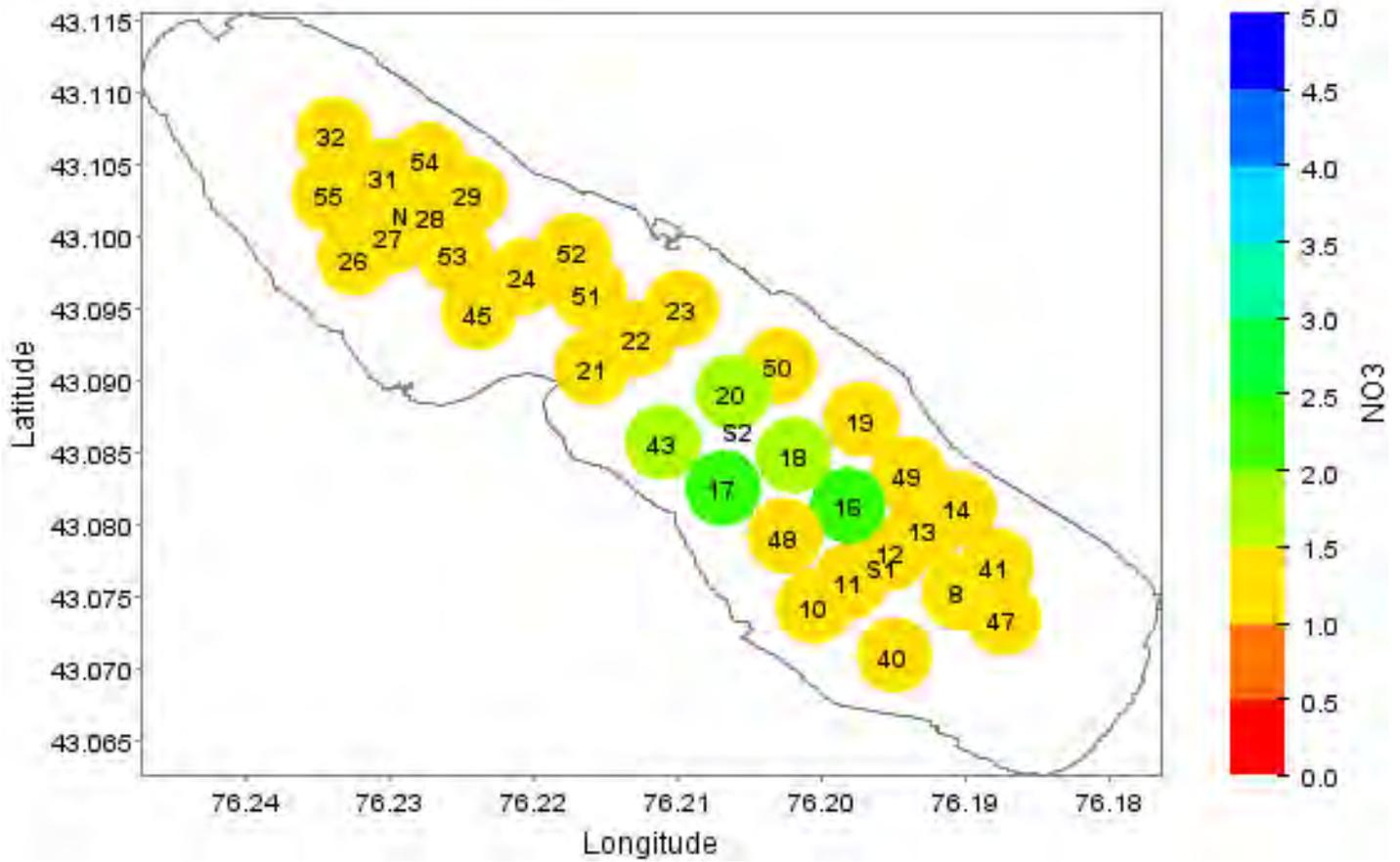
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

July 28, 2011



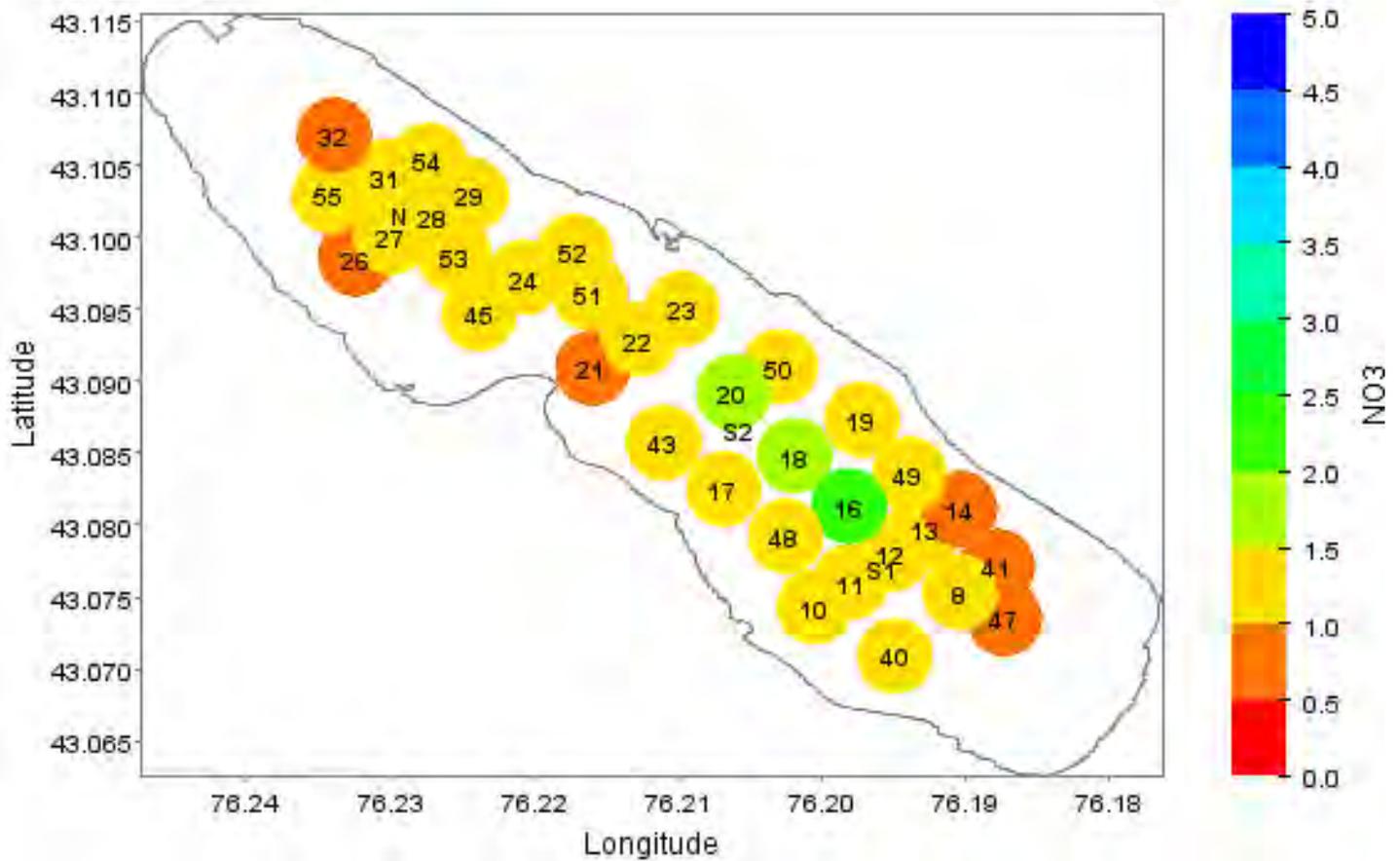
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

August 5, 2011



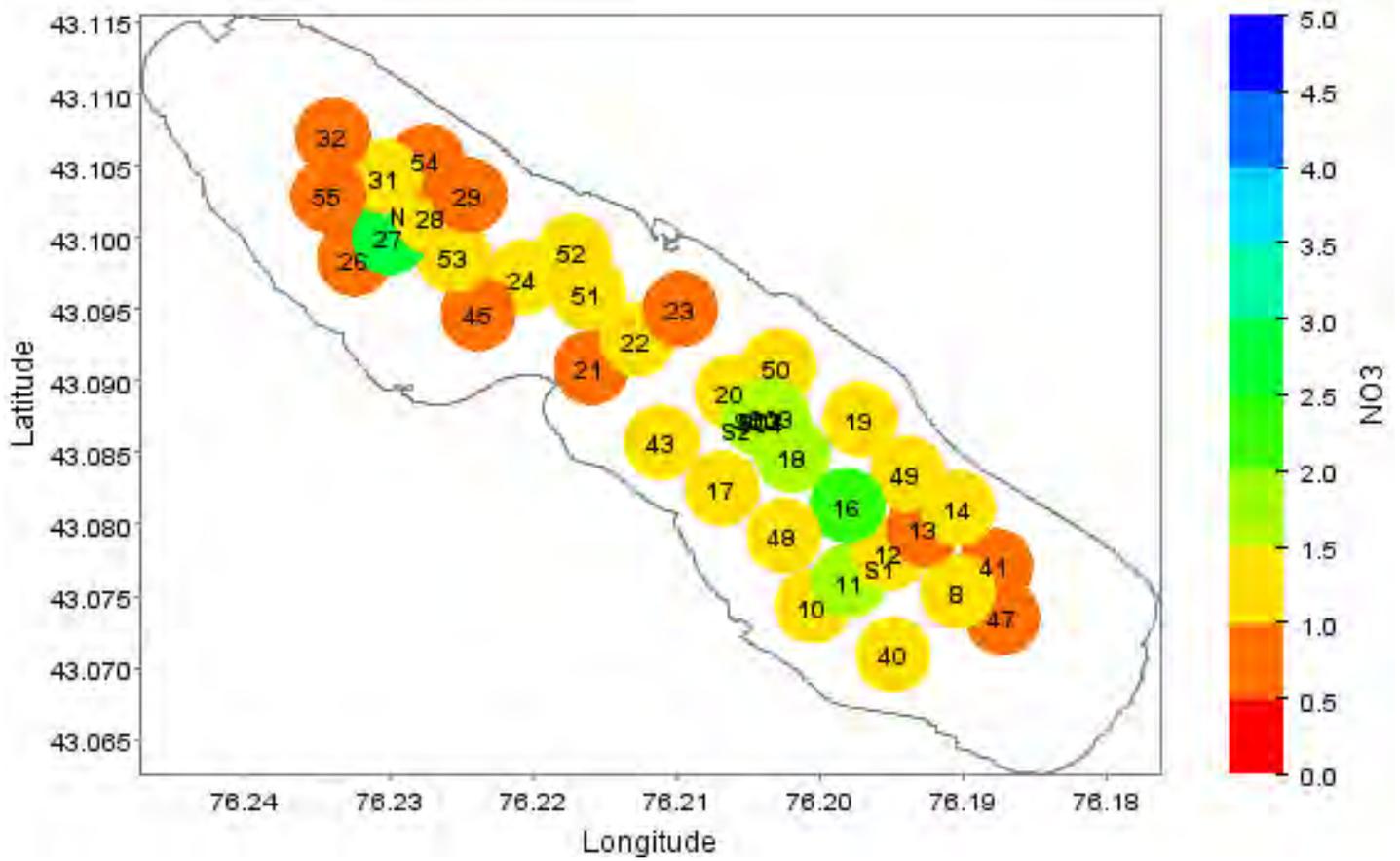
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

August 12, 2011



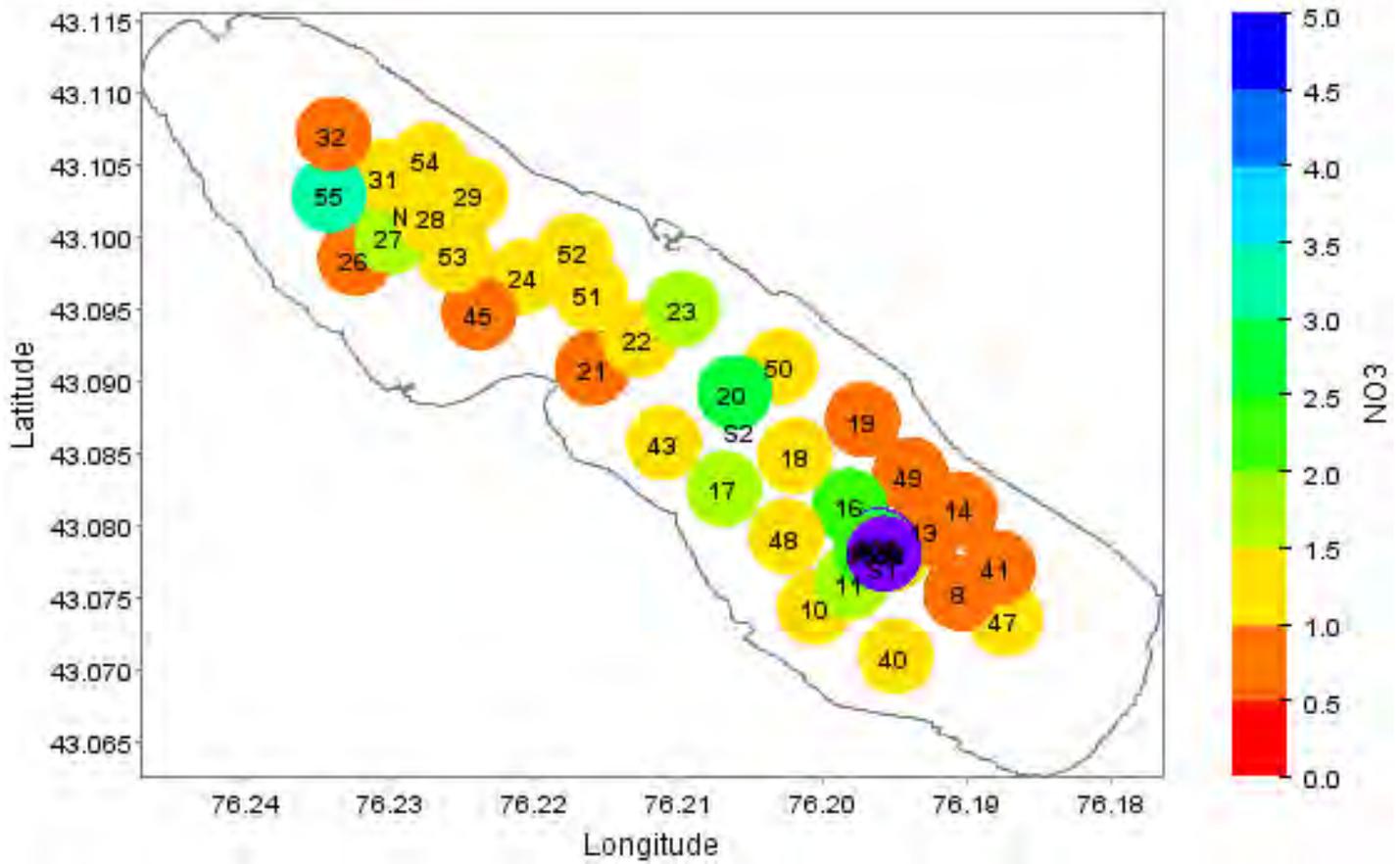
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

August 18, 2011



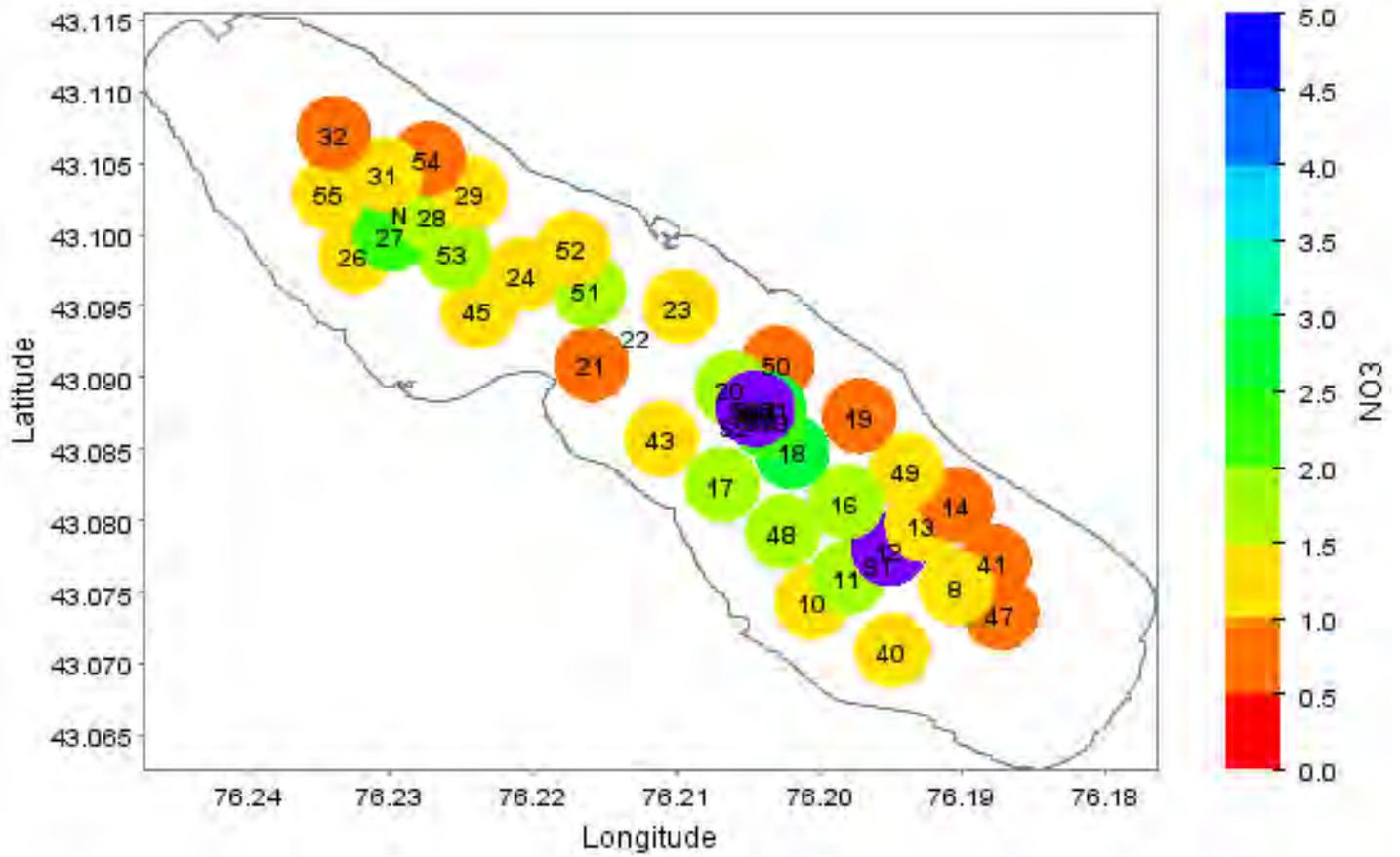
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

August 24, 2011



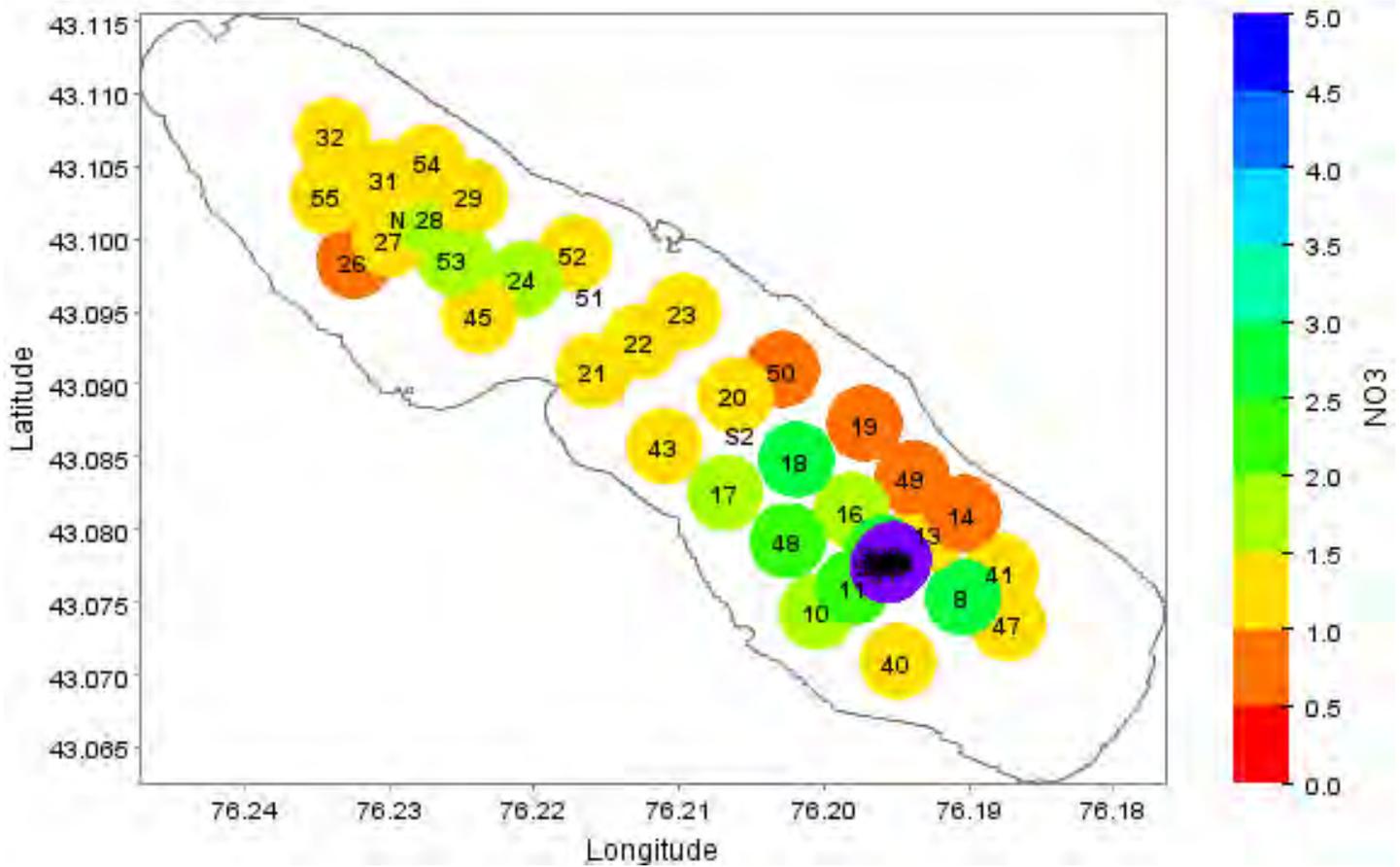
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

August 31, 2011



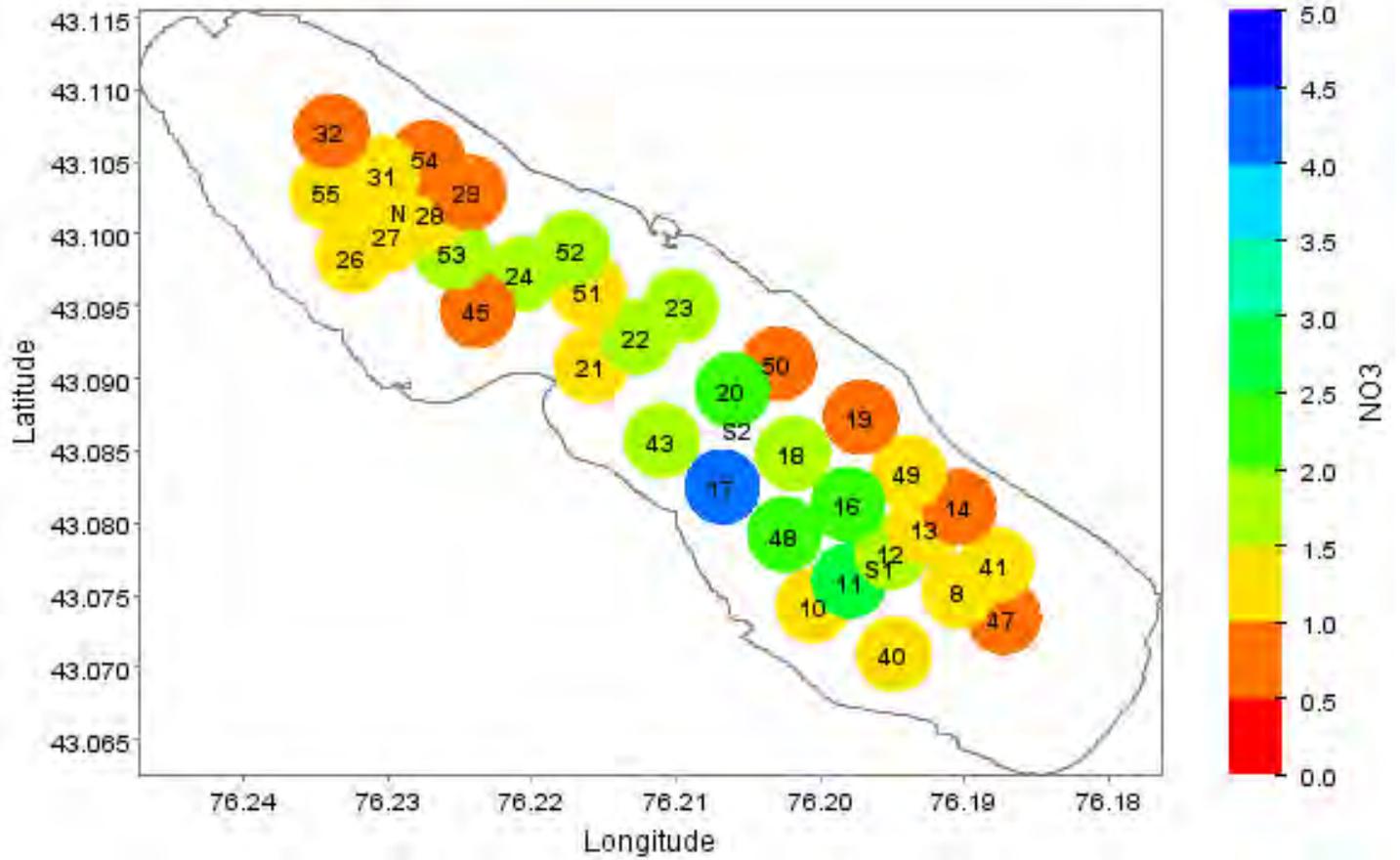
## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

September 1, 2011



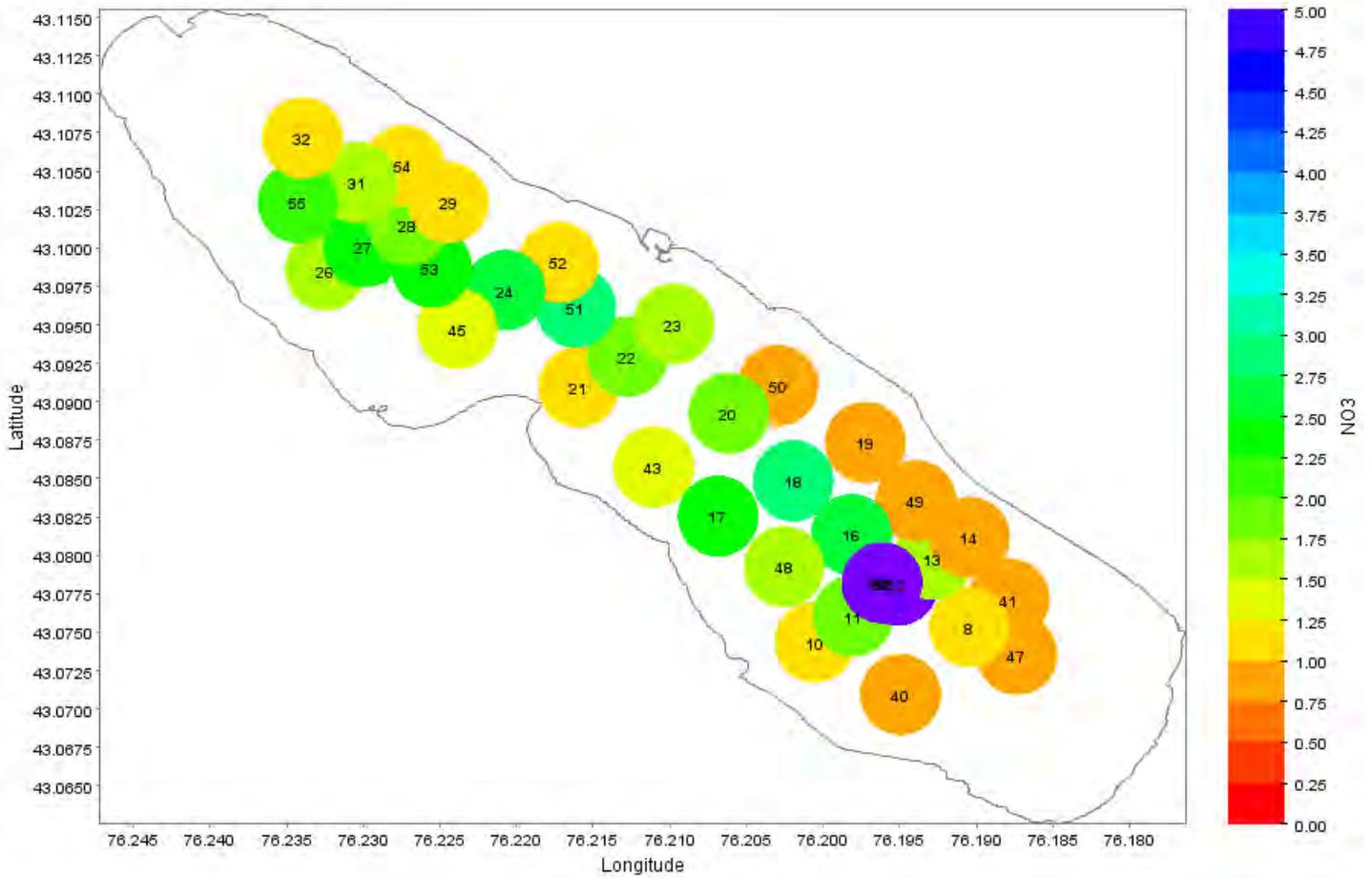
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

September 8, 2011



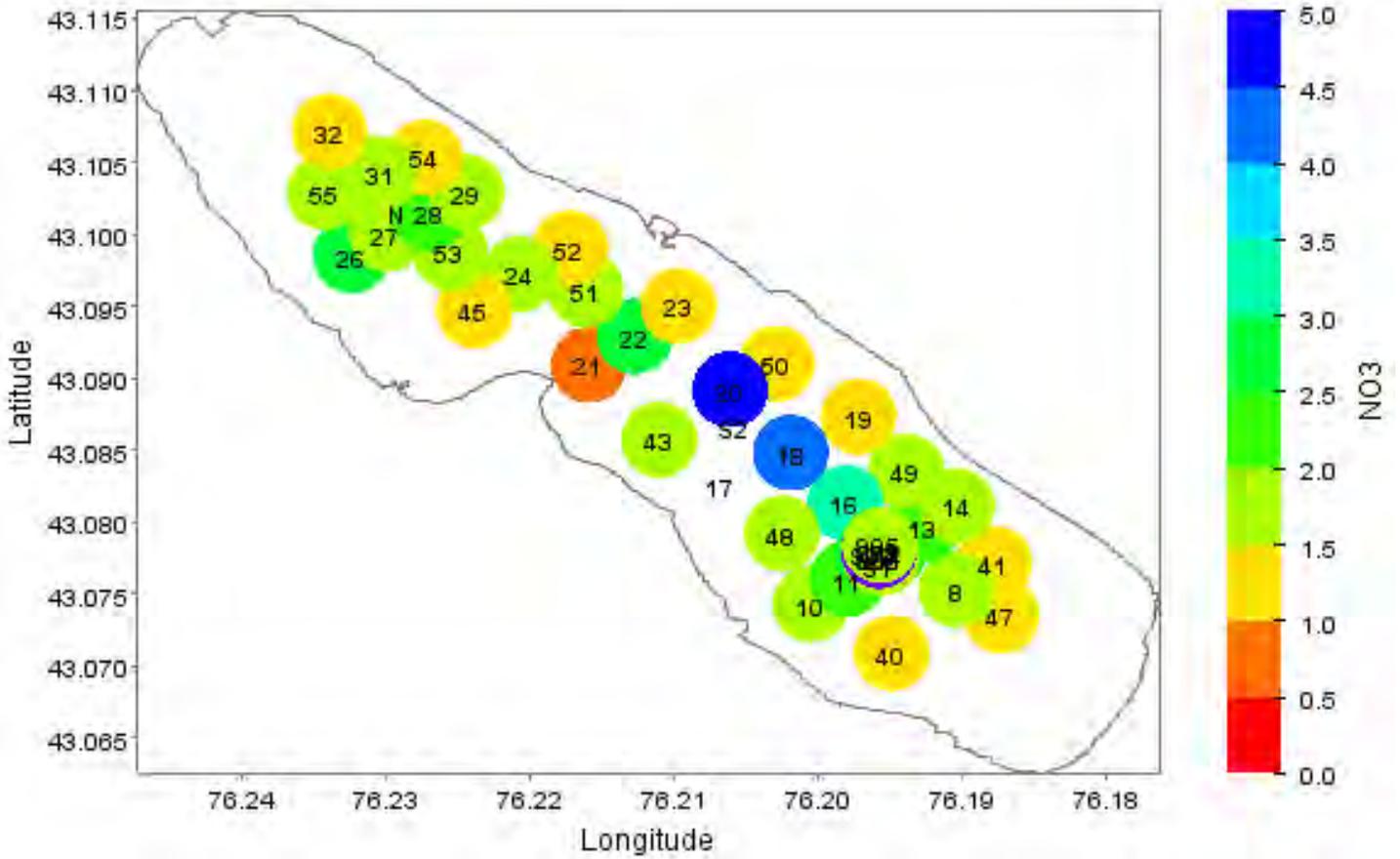
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

September 15, 2011



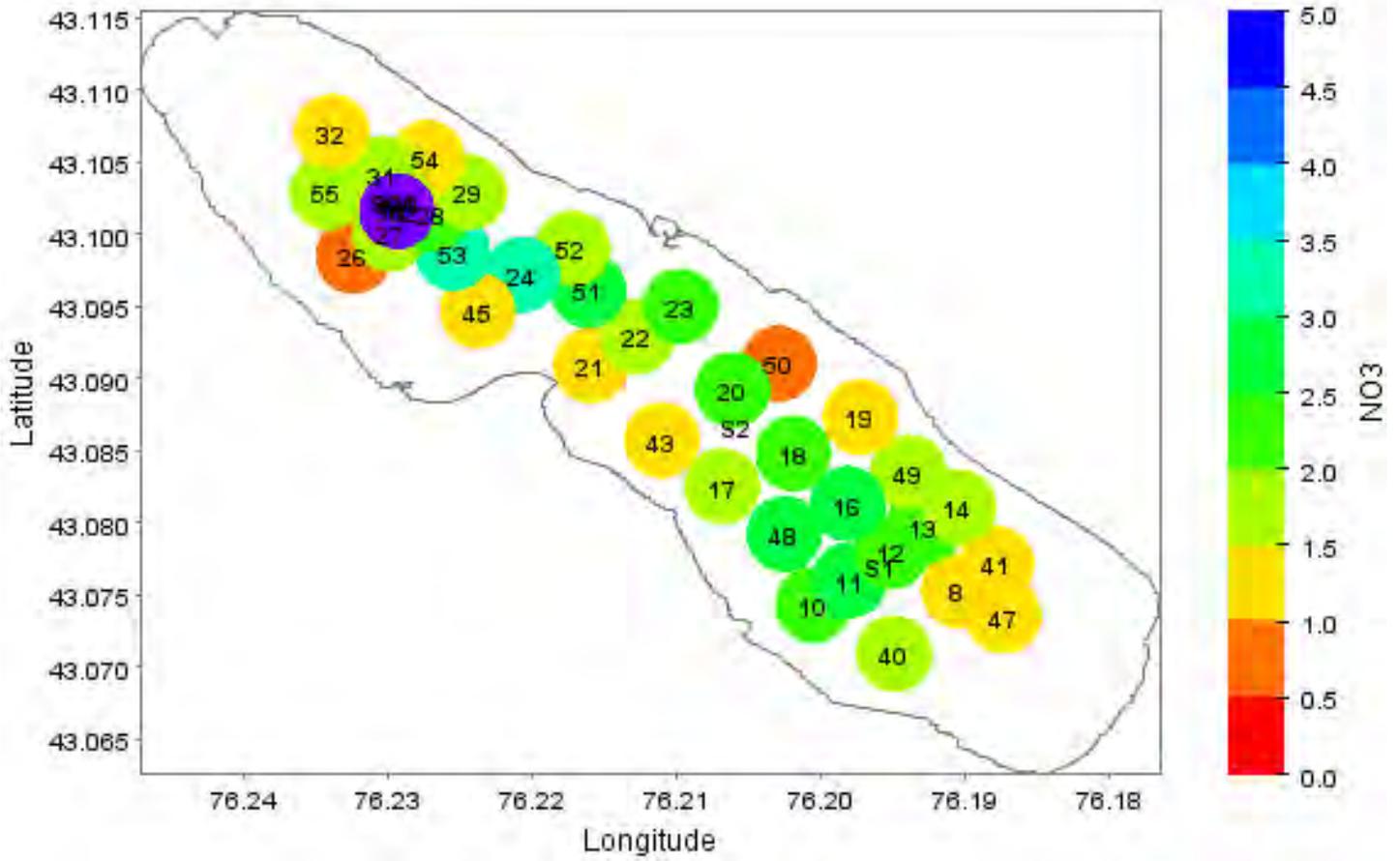
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

September 21, 2011



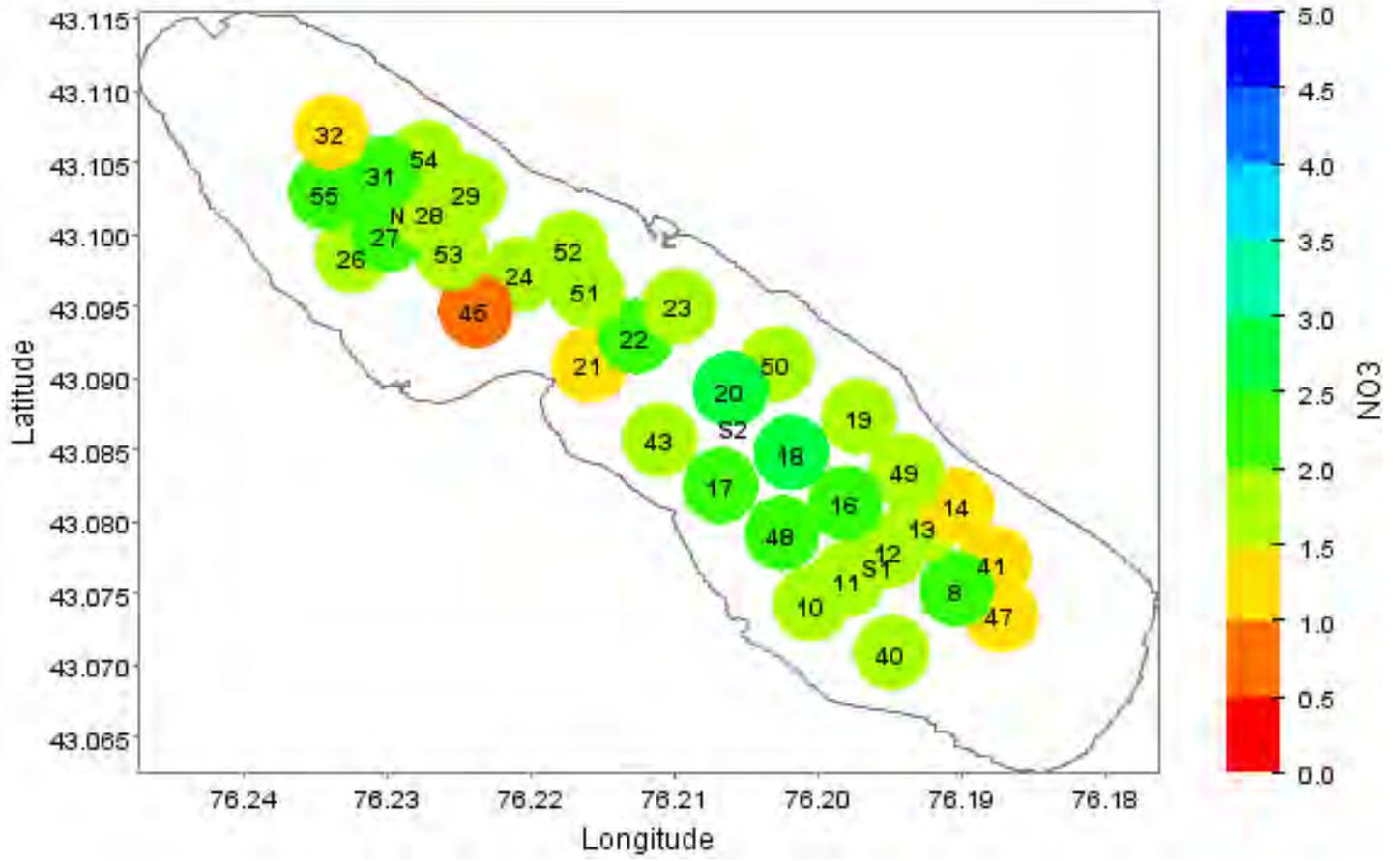
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

September 28, 2011



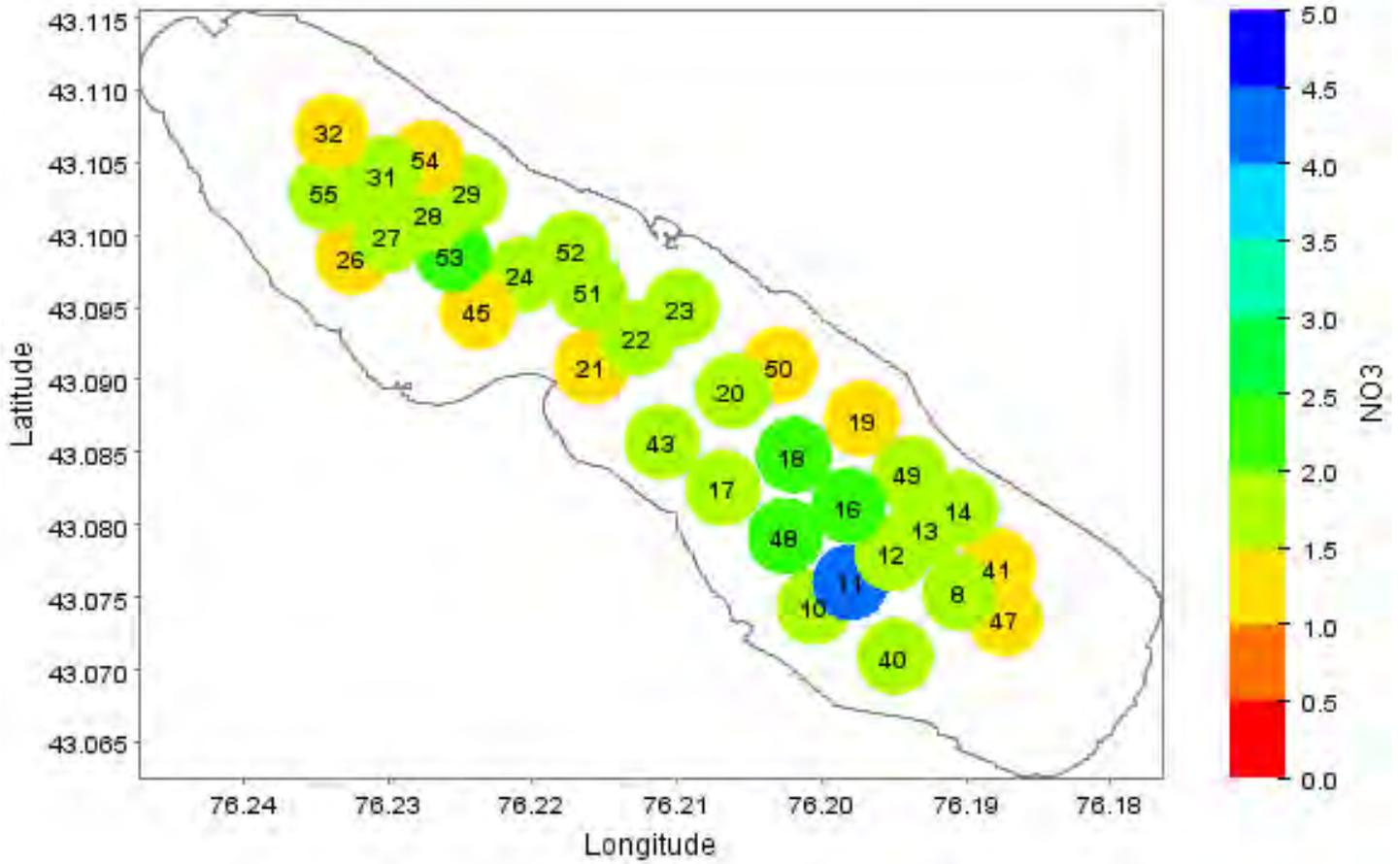
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

October 5, 2011



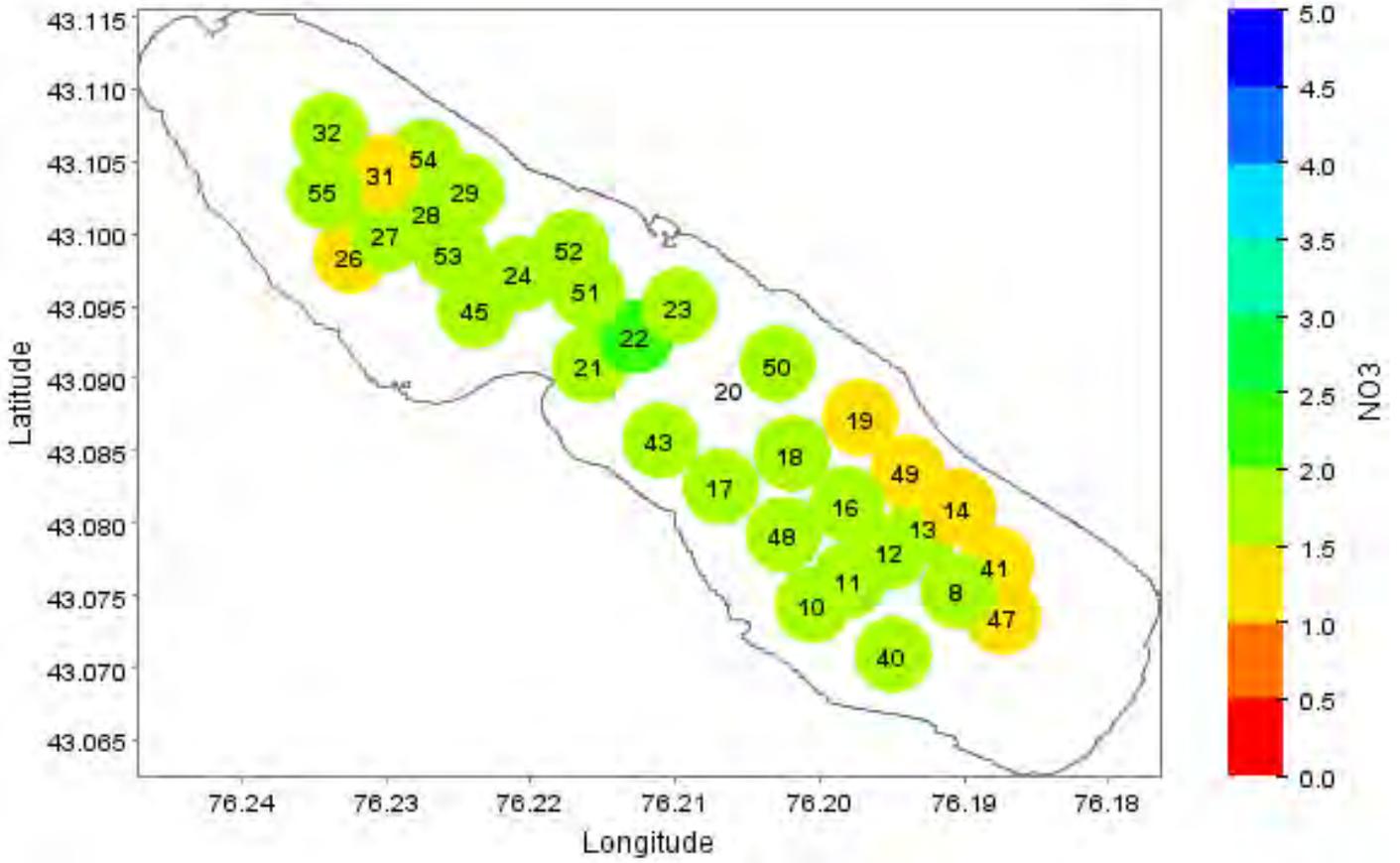
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

October 13, 2011



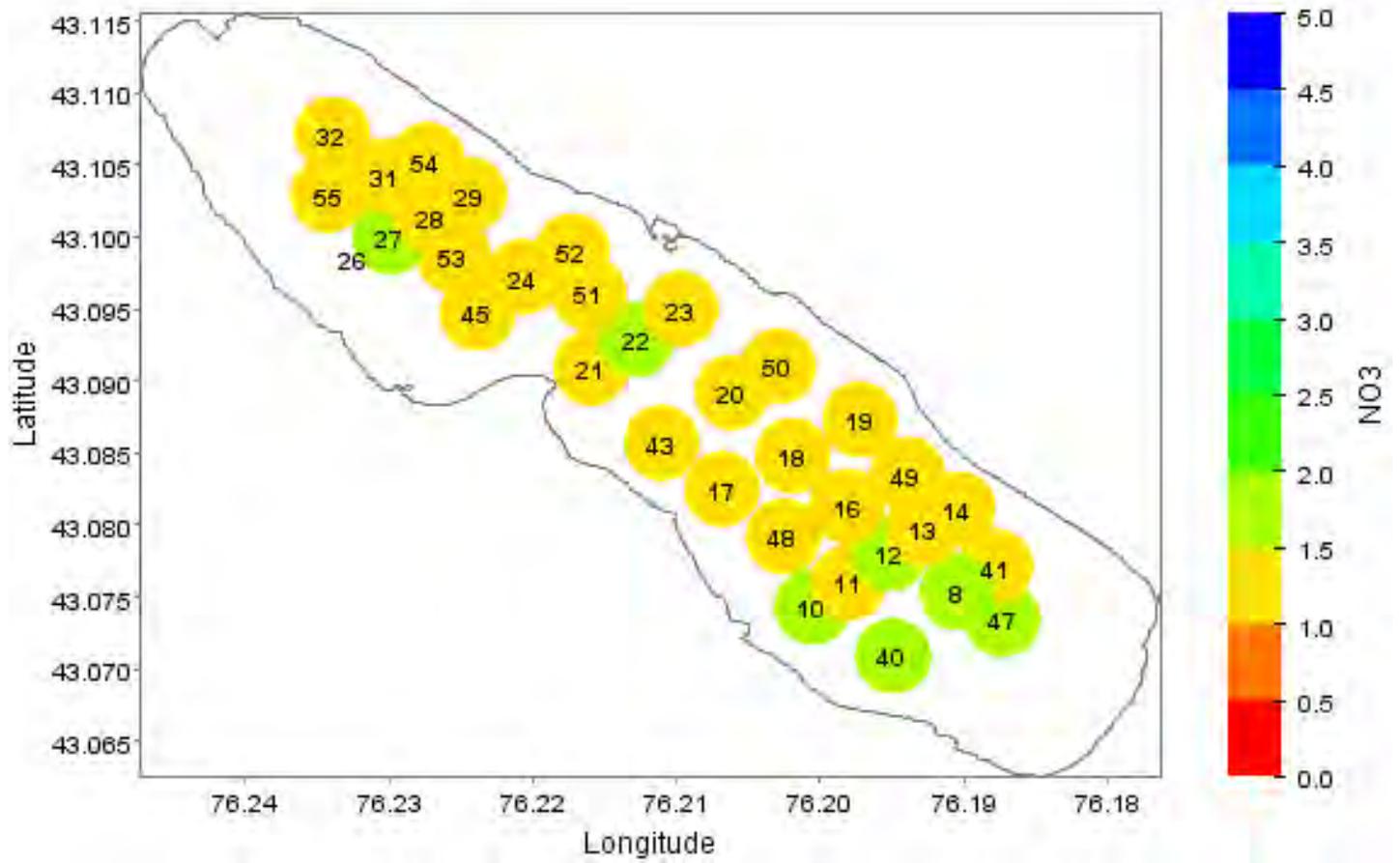
# Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

October 20, 2011



## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

October 27, 2011



## Color Bubble Plots at ~1.0 m off Bottom, Nitrate (mgN/L)

November 7, 2011

