



# Monitoring and Evaluation of Cyanobacteria in Lake Champlain

## Summer 2008

### Prepared by

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#### **Lake Champlain Basin Program Technical Reports**

1. *A Research and Monitoring Agenda for Lake Champlain.* Proceedings of a Workshop, December 17-19, 1991, Burlington, VT. Lake Champlain Research Consortium. May, 1992.
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(C) *GIS Data Inventory for the Lake Champlain Basin Program.* Vermont Center for Geographic Information, Inc. March, 1993.
4. (A) *Lake Champlain Economic Database Project. Executive Summary.* Holmes & Associates. March 1993.  
  
(B) *Socio-Economic Profile, Database, and Description of the Tourism Economy for the Lake Champlain Basin.* Holmes & Associates. March 1993  
  
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(C) *Potential Applications of Economic Instruments for Environmental Protection in the Lake Champlain Basin.* Anthony Artuso. March 1993.  
  
(D) *Conceptual Framework for Evaluation of Pollution Control Strategies and Water Quality Standards for Lake Champlain.* Anthony Artuso. March 1993.
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**MONITORING AND EVALUATION OF CYANOBACTERIA  
IN LAKE CHAMPLAIN**

**Summer 2008**

**Report to**

**Lake Champlain Basin Program**

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## EXECUTIVE SUMMARY

In 2008, monitoring for potential toxin-producing cyanobacteria continued on Lake Champlain with the following specific objectives:

- Continue monitoring of BGA at the Long-term Water Quality and Biological Monitoring Project sites in partnership with the Vermont DEC, and at selected stations in the greater Burlington area, St. Albans Bay and Missisquoi Bay.
- Continue to work with volunteer citizen monitors in Missisquoi Bay, the north lake and, and other selected sites (in partnership with the Lake Champlain Committee).
- Continue screening for the presence of toxins when potential toxin-producing BGA are observed.
- Continue to use a tiered BGA alert system framework, incorporating data and knowledge gained in previous years.
- Continue e-mail communication network among state and provincial agencies in Vermont, New York and Quebec to facilitate regular exchange of information about current BGA conditions and the potential for human exposure to toxins.

Collections of net and whole water plankton began in June in most locations, and continued into mid-October. Sample sites encompassed all of Lake Champlain, but a special effort was made in Missisquoi Bay, St. Albans Bay, and the north lake, areas known to have problems with toxic blooms in the past. Citizen monitors living around the lake near 18 specific sites were recruited to collect samples from shoreline locations where algae accumulated.

In 2008, bloom conditions were prevalent in Missisquoi Bay, several locations in the north lake, and in St. Albans Bay. Transient algal accumulations were found at scattered sites in the Main Lake. Microcystin concentrations ranged from 0.02 - 94.58 µg/L, with highest concentrations in Missisquoi Bay. No anatoxin-*a* was found at any site in 2008.

Once again, an e-mail notification system worked well to keep public health officials informed about algal and toxin conditions. In 2008, we continued to collaborate with Vermont Department of Health to post information about blue-green algae and the weekly results of our testing on their web site to improve communication with all users of Lake Champlain. Information from all locations where samples were tested was included on the website.

## INTRODUCTION

Lake Champlain is one of the largest lakes in the United States and is often called the "Sixth Great Lake." Although primarily a recreational lake, it also serves as a source of drinking water and a site for the disposal of municipal wastes in communities throughout the basin.

In response to a dog-poisoning attributed to cyanobacteria toxins in 1999, the LCBP initiated a study to investigate the occurrence of potential toxin-producing cyanobacteria and their toxins in Lake Champlain in 2000. Over the following years, this monitoring program has evolved to document the presence and extent of toxic cyanobacteria blooms in Lake Champlain, and the levels of cyanotoxins that have occurred.

In addition, a project supported through NOAA's MERHAB program began in 2002 and continued through 2007 on Lake Champlain, through a partnership between UVM, SUNY-ESF and SUNY-Plattsburgh. The project has multiple objectives, including documenting the distribution of cyanotoxins in the lake, developing a rapid screening method for anatoxin-*a*, and developing methods for monitoring throughout the lower Great Lakes (Lakes Erie, Ontario and Champlain). Data collected from this project are not available rapidly enough to drive the weekly public alert system, but data are regularly shared among the project investigators.

Beginning in 2003, regular monitoring has been conducted by UVM in partnership with the LCBP long-term monitoring program and with citizen monitors recruited with the assistance of the Lake Champlain Committee. In 2008 we continued this effort with the following specific objectives:

### Objectives:

- Continue monitoring of BGA at the Long-term Water Quality and Biological Monitoring Project sites in partnership with the Vermont DEC, and at selected stations in the greater Burlington area, St. Albans Bay and Missisquoi Bay.
- Continue to work with volunteer citizen monitors in Missisquoi Bay, the north lake and, and other selected sites (in partnership with the Lake Champlain Committee).
- Continue screening for the presence of toxins when potential toxin-producing BGA are observed.
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## METHODS

### Field Collection

To survey plankton populations lakewide, we established partnerships with the VT DEC and NY DEC staff conducting the LCBP long-term monitoring program. VT DEC staff collected plankton samples from the 15 LTMP sites during their routine collections (Figure 1). Working with the Lake Champlain Committee, we also recruited volunteers to sample shoreline locations in Missisquoi Bay, Maquam Bay, and other areas of the lake (Figure 1). We also sampled sites in Missisquoi Bay, St. Albans Bay, and Burlington Bay, where the highest population density of basin residents live and two large water supply systems draw their water.

Frequency. Monitoring for the presence of BGA began in June at the LTMP sites and at the UVM sites and in early July at the citizen monitoring sites. The LTMP sites were sampled approximately biweekly regardless of bloom conditions, as dictated by the state's regular program activities. Frequency of sample collection in Burlington Bay, Missisquoi Bay, and St. Albans Bay was bi-weekly or weekly, as determined following the tiered alert system framework (Table 1). This framework, based on recommendations in Chorus and Bartram (1999) calls for less frequent sampling initially, then weekly sampling once bloom conditions appear. Citizen monitors sampled weekly from July through August. In Missisquoi and St. Albans Bay, algal densities were much higher, and weekly sampling was initiated in early July and continued through October, when cell densities indicated the decline of the bloom.

Analytical Parameters. The following types of samples were collected in Burlington Bay, St. Albans Bay and Missisquoi Bay during 2008:

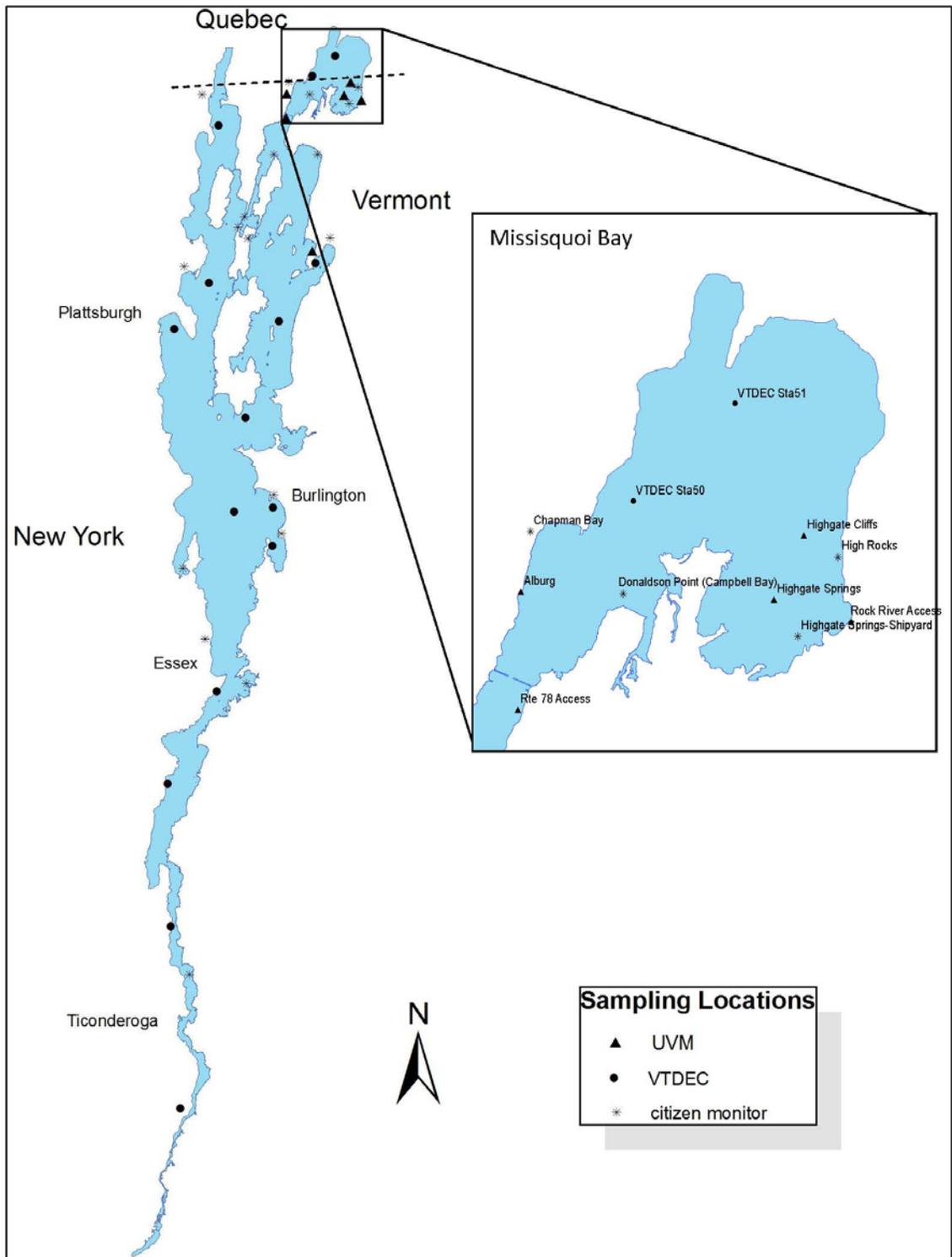
- whole water and net plankton
- whole water for total nitrogen
- whole water for total phosphorus
- whole water for chlorophyll *a*
- whole water for toxins (the analysis of this parameter began when microscopic analysis indicated potential toxin-producing taxa have reached densities of concern)

At the LTMP sites, only net plankton samples were collected for this project; however, total nitrogen, total phosphorus, and chlorophyll samples were collected as part of the Long-Term Biomonitoring Project.

Sample Collection. Net plankton samples were obtained using a 63- $\mu$ m Wisconsin net. A single 3 m tow was collected, placed in a cooler, and transported back to the laboratory where the total volume was recorded and a subsample was preserved for analysis.

Total nitrogen, total phosphorus, chlorophyll *a*, and whole water plankton samples were collected by surface grab sampling. Two replicates were collected for each parameter.

Figure 1. Location of the 2008 sampling sites



**Table 1. Outline of our prototype tiered sampling and alert framework.**

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**Qualitative Sampling**

Frequency: 2/month

Collect: Vertical plankton tows (63- $\mu$ m net, upper 3 m)  
Screened within 48 hours

Conclusions: If potential toxin-producing taxa observed,  
proceed to *Quantitative sampling*

**Quantitative Sampling**

Frequency: 2/month

Collect: Vertical plankton tow (63- $\mu$ m net, upper 3m)  
Full enumeration within 48 hours

Conclusions: If BGA reaches densities reach 2000 cells/mL,  
proceed to *Vigilance level*

**Vigilance Level**

Frequency: 1/wk at midday

Collect: Vertical plankton tow (63- $\mu$ m net, upper 3m)  
Full enumeration within 48 hours

Conclusions: If BGA exceed 4,000 cells/mL, proceed to *Alert Level 1*  
Return to *Quantitative sampling* if densities fall below 2,000 BGA cells/mL  
Notify public health officials that BGA are abundant and blooms could form

**Alert Level 1**

Frequency: 1/wk at midday (or more frequently as needed)

Collect: Whole water phytoplankton samples  
Whole water chlorophyll *a*  
Whole water toxin samples

Conclusions: If microcystin concentration exceeds 6  $\mu$ g/L (VDH recreational standard),  
proceed to *Alert Level 2*  
Notify public health officials of potential risks to humans and animals

**Alert Level 2**

Frequency: 1/wk at mid-day (or more frequently as weather conditions dictate)

Collect: As for Alert Level 1

Conclusions: Return to *Alert Level 1* if microcystin concentration drops below 6  $\mu$ g/L  
Notify public health officials that significant risk to humans and animals exists.  
Public Health Advisories should be issued by appropriate agencies.

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Preservation and storage. Nalgene high-density polyethylene bottles were used for all samples, excluding total nitrogen samples which were collected in 50 mL polypropylene centrifuge tubes. Total phosphorus containers were cleaned with 20% hydrochloric acid solution prior to use. Nitrogen samples were preserved with sulfuric acid to a pH less than 2 and stored at 4°C until analysis. Total phosphorus samples were frozen until analysis. Plankton samples were preserved with 1% Lugols iodine solution and stored in the dark until analysis. Chlorophyll samples were filtered within 24 hours and frozen prior to analysis. Lake water samples for toxin analysis were preserved in one of three ways: filtered and frozen upon return to the lab, filtered and delivered for analysis to Vermont Department of Health (VDH).

## **Sample Analysis**

Chlorophyll. All samples were thoroughly mixed and then filtered onto glass fiber filters (Whatman 934-AH; retention size ~1.5 µm) under low vacuum. After sufficient material was filtered to leave a visible green layer, filters were placed in clean 15 mL plastic centrifuge tubes and frozen. For chlorophyll extraction, 8 mL of 95% ethanol was added to each tube, all tubes were placed in an 80°C water bath for 8 minutes. Then samples were covered in foil and placed in a refrigerator overnight. After the extraction, samples were brought to room temperature, shaken to homogenize the extract, and centrifuged at 3000 rpm for 10 minutes. Non-acidified and acidified extract absorbance was measured at 665 and 750 nm.

Net and whole water plankton. Plankton were analyzed either as qualitative or quantitative samples. Initially samples were evaluated qualitatively: all taxa present were noted and recorded. Once potentially toxic cyanobacteria were identified in the samples, evaluation became quantitative; individual algal units in the samples were identified and enumerated, and densities were calculated for each taxon. Whole water samples were collected when blooms were too dense to sample effectively by net samples; the same quantitative counting method, described below, was applied to both sample types.

For both sample types, an aliquot of well-mixed sample was placed in a Sedgwick Rafter cell and allowed to settle for 10 minutes. Slides were examined at 100X with phase contrast using an inverted Olympus IX70 microscope. For qualitative screening, the entire chamber was scanned and algal taxa present were recorded. For quantitative screening, algal units were identified and enumerated. Counting continued until 100 cells of the most abundant genus had been observed or at least 10 fields had been examined. Algal units were categorized by size (single cells, fragments of colonies or filaments, small, medium, or large colonies or filaments). The enumerated natural units were multiplied by a cell factor to estimate cell densities (Table 2). Cell densities were extrapolated to reflect plankton populations in the original lake water.

Total Phosphorus. Total phosphorus samples were thawed and mixed thoroughly. An aliquot (generally 50 mL) was digested using ammonium persulfate (1998) and analyzed following Quikchem™ Method 10-115-01-1-F using a Lachat Quikchem™ 8000 Series Flow Injection Analyzer.

Total Nitrogen. Total nitrogen samples were analyzed using persulfate digestion (APHA 1998) and cadmium reduction following Quikchem™ Method 10-107-06-2-H using a Lachat Quikchem™ 8000 Series Flow Injection Analyzer.

**Table 2. Cell factors used to estimate field densities of colonial algae.**

| Taxon   | Unit Category | Estimated Cells/Unit                   | Cell Factor |
|---|---------------|--|-------------|
| <i>Anabaena spp.</i> , <i>Aulacoseira spp.</i> , <i>Fragilaria spp.</i> | fragment      | 1 – 20                                 | 10          |
|   | small         | 20 – 100                               | 60          |
|   | medium        | 100 – 1000                             | 500         |
|   | large         | >1000                                  | 1000        |
| <i>Microcystis spp.</i> , <i>Coelosphaerium spp.</i>                    | small         | <100                                   | 50          |
|   | medium        | 100 - 1000                             | 500         |
|   | large         | >1000                                  | 1000        |
| <i>Gloeotrichia spp.</i>  | fragment      | single trichome<br>quarter of a colony | 20          |
|   | small         | half of a colony                       | 2500        |
|   | medium        | entire colony                          | 5000        |
| <i>Aphanizomenon spp.</i>   | large         | entire colony                          | 10,000      |
|   | fragment      | single trichome                        | measured    |
|   | small         | small flake                            | 200         |
|   | medium        | medium flake                           | 500         |
|   | large         | large flake                            | 1000        |

Toxin Sample Preparation. Filters for analysis of toxins by high performance liquid chromatography (HPLC) at the Vermont Department of Health were placed on dry ice and delivered to the lab within 24 hours. Filters for ELISA assay by UVM were placed in 15 mL glass centrifuge tubes with Teflon-lined caps in 8 mL of 50% methanol, shaken well and stored at – 80°C until analysis.

Microcystin(s) by ELISA. Toxin samples in 50% methanol were thawed, shaken and re-frozen two times before beginning analysis. Extracted samples were diluted with deionized water until methanol represented less than 5% of the total volume, following recommendations to improve the accuracy of the method (Metcalf et al. 2000). Microcystin plate kits were purchased from Envirologix Inc. (Portland, ME).

Samples were run in duplicate following manufacturer’s instructions on a KC Jr. plate reader (Biotek Instruments), utilizing standards provided in the kit. Mean values were used to determine the toxin concentration of each pair of samples. Samples exceeding the range recommended by the kit were diluted and re-analyzed. Samples below the range were also re-analyzed using manufacturer recommended dilution procedures for the standards.

Anatoxin-a by HPLC. At Vermont Department of Health, algal material was freeze-dried and then extracted with acidified methanol. Solid phase extraction cartridges were eluted with 100% methanol. Samples were analyzed following James et al. (1997).

## RESULTS

### Cyanobacteria and Toxins at the Monitoring Sites

While many of the samples collected at the Long Term Monitoring Sites were analyzed qualitatively until mid summer, almost all of the samples collected by UVM and the citizen monitors were analyzed quantitatively. The total number of samples collected and screened for phytoplankton densities and toxin analysis was about 500 in 2008 (Table 3).

**Table 3. Number of quantitative samples collected and analyzed in the cyanobacteria monitoring program in 2008.**

| Sample Type                           | Phytoplankton* |             | Microcystin          | Anatoxin**           | Chlorophyll $\alpha$ |
|---------------------------------------|----------------|-------------|----------------------|----------------------|----------------------|
|                                       | Net            | Whole Water | Whole Water Plankton | Whole Water Plankton | Whole Water Plankton |
| <b>Number of Samples Collected</b>    | 265            | 250         | 404                  | 11                   | 391                  |
| <b>Number of Samples Analyzed</b>     | 260            | 228         | 104                  | 45                   | 323                  |
| * Analyzed using Rapid Count Protocol |                |             |                      |                      |                      |
| **Analyzed at VDH                     |                |             |                      |                      |                      |

The alert status reached and the maximum density of potentially toxic cyanobacteria cells at each site monitored are listed in Table 4. *Aphanizomenon* spp., *Microcystis* spp. and *Anabaena flos-aquae* were all widely distributed at sites across Lake Champlain.

In 2008, the only Long Term Monitoring sites that reached Alert status were Stations 50 and 51 in Missisquoi Bay and Station 4 in the South Lake. All of the UVM Monitoring Sites, including an occasional site in the Melosira boat slip on the Burlington waterfront, reached Alert status. Many of the citizen sampling sites reached Alert status, including sites in Missisquoi Bay, the northwestern portions of the Main Lake, the Northeast Arm, St. Albans Bay, and a few sites in the central section of the Main Lake.

**Table 4. Summary of monitoring status achieved and cyanobacteria generic composition at monitoring stations in 2008.**

#### LCBP Long Term Monitoring Program Sites

| Region | Station/Location  | Monitoring Status | Date Achieved | Cyanobacteria Present                                       | Maximum Density of Potentially Toxic Cells/mL |
|--------|-------------------|-------------------|---------------|---|---|
| South  | 2. Benson Landing | Quantitative      | 7/7/2008      | <i>Anabaena</i> , <i>Microcystis</i> , <i>Aphanizomenon</i> | 1781 (8/28/08)                                |
|        | 4. Crown Point    | Alert 1           | 9/10/2008     | <i>Anabaena</i> , <i>Microcystis</i> , <i>Aphanizomenon</i> | 4087 (9/10/08)                                |

|                |                       |              |           |   |                 |
|----------------|-----------------------|--------------|-----------|---|-----------------|
|                | 7. Cole Bay           | Quantitative | 7/14/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 1540 (8/22/08)  |
|                | 9. Diamond Island     | Quantitative | 6/10/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 957 (8/22/08)   |
| Main           | 16. Shelburne Bay     | Quantitative | 6/17/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 1070 (7/30/08)  |
|                | 19. Main Lake         | Quantitative | 6/17/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 905 (9/4/08)    |
|                | 21. Burlington Harbor | Quantitative | 6/17/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 948 (9/4/08)    |
|                | 25. Malletts Bay      | Quantitative | 6/17/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 76 (6/30/08)    |
| Northwest      | 33. Cumberland Bay    | Quantitative | 6/11/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 430 (9/4/08)    |
|                | 36. Point au Roche    | Quantitative | 6/11/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 224 (9/4/08)    |
|                | 46. Alburg Center     | Quantitative | 6/17/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 185 (9/10/08)   |
| Northeast      | 34. Inland Sea        | Quantitative | 6/5/2008  | <i>Anabaena, Microcystis, Aphanizomenon</i> | 947 (8/28/08)   |
|                | 40. St. Albans Bay    | Vigilance    | 8/28/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 2272 (8/28/08)  |
| Missisquoi Bay | 50. Missisquoi Bay    | Alert 1      | 8/22/2008 | <i>Anabaena, Microcystis, Aphanizomenon</i> | 15467 (8/22/08) |
|                | 51. Missisquoi Bay    | Alert 1      | 8/8/2008  | <i>Anabaena, Microcystis, Aphanizomenon</i> | 9017 (8/8/08)   |

### UVM Monitoring Sites

| Region         | Location              | Monitoring Status | Date Achieved | Highest Microcystin ( $\mu\text{g/L}$ ) Observed | Cyanobacteria Present                       | Maximum Density of Potentially Toxic Cells/mL |
|----------------|-----------------------|-------------------|---------------|--|---|---|
| Main           | Melosira Boat Slip    | Alert 1           | 10/10/2008    | 0.47 (10/10/08)                                  | <i>Anabaena</i>                             | 19263 (10/10/08)                              |
| Northeast      | St. Albans Boatlaunch | Alert 1           | 8/5/2008      | .05 (9/2/08)                                     | <i>Anabaena, Microcystis, Aphanizomenon</i> | 14924 (9/3/08)                                |
| Missisquoi Bay | Rte. 78 Access        | Alert 1           | 7/30/2008     | 4.76 (8/26/08)                                   | <i>Anabaena, Microcystis, Aphanizomenon</i> | 101181 (8/20/08)                              |
|                | Alburgh               | Alert 1           | 8/20/2008     | 4.19 (9/2/08)                                    | <i>Anabaena, Microcystis, Aphanizomenon</i> | 42135 (9/3/08)                                |
|                | Highgate Cliffs       | Alert 2           | 7/30/2008     | 13.59 (8/26/08)                                  | <i>Anabaena, Microcystis, Aphanizomenon</i> | 34777 (8/5/08)                                |
|                | Highgate Springs      | Alert 2           | 8/5/2008      | 11.37 (8/26/08)                                  | <i>Anabaena, Microcystis, Aphanizomenon</i> | 15545 (8/20/08)                               |

|  |                               |         |           |                    |   |                     |
|--|-------------------------------|---------|-----------|--------------------|---|---------------------|
|  | Rock River Access             | Alert 2 | 8/19/2008 | 66.08<br>(8/19/08) | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 128575<br>(8/19/08) |
|  | Rt 78 Access<br>Shore/Surface | Alert 2 | 8/21/2008 | 12.62<br>(8/12/08) | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 105733<br>(8/21/08) |

### Citizen Monitoring Sites

| Region              | Location          | Monitoring Status | Date Achieved     | Highest Microcystin (µg/L) Observed      | Cyanobacteria Present   | Maximum Density of Potentially Toxic Cells/mL |
|---------------------|-------------------|-------------------|-------------------|--|---|---|
| South               | Littlefield Shore | Vigilance         | 8/26/2008         | Not Measured                             | <i>Anabaena,</i><br><i>Aphanizomenon</i>                        | 2895 (8/26/08)                                |
| Main                | North Beach       | Quantitative      | 6/9/2008          | Not Measured                             | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 2000 (9/3/08)                                 |
|                     | Red Rocks Beach   | Alert 1           | 8/11/2008         | 1.49<br>(9/2/08)                         | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 23668 (9/3/08)                                |
|                     | Long Point        | Quantitative      | 7/1/2008          | Not Measured                             | <i>Anabaena,</i><br><i>Aphanizomenon</i>                        | 1833 (8/12/08)                                |
|                     | Beggs Park        | Quantitative      | 9/3/2008          | Not Measured                             | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 1263 (9/3/2008)                               |
|                     | Willsboro Bay     | Alert 1           | 7/22/2008         | 0.03<br>(7/22/08)                        | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 85987 (7/22/08)                               |
| Northwest           | Point Au Roche    | Quantitative      | 7/8/2008          | Not Measured                             | <i>Aphaizomenon</i>   | 825 (8/13/08)                                 |
|                     | Rouses Point      | Quantitative      | 7/22/2008         | Not Measured                             | <i>Anabaena,</i><br><i>Aphanizomenon</i>                        | 632 (8/19/08)                                 |
| Northeast           | Carry Bay         | Vigilance         | 8/19/2008         | Not Measured                             | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 2505 (8/19/08)                                |
|                     | City Bay          | Quantitative      | 7/15/2008         | Not Measured                             | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 564 (7/29/08)                                 |
|                     | Maquam Bay        | Alert 1           | 8/20/2008         | 0.08<br>(8/18/08)                        | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 47094 (8/20/08)                               |
|                     | North Hero        | Alert 1           | 8/5/2008          | 0.51<br>(8/8/08)                         | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 232533 (8/5/08)                               |
|                     | State Park        |                   |                   |  |   |   |
|                     | Pelots Bay        | Quantitative      | 7/1/2008          | Not Measured                             | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 1747 (8/19/08)                                |
| St. Albans Bay Park | Alert 1           | 7/23/2008         | 0.12<br>(8/26/08) | <i>Anabaena,</i><br><i>Aphanizomenon</i> | 98263 (8/13/08)   |   |
| Missisquoi Bay      | Chapman Bay       | Alert 1           | 8/13/2008         | 0.26<br>(8/31/08)                        | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 6421 (8/13/08)                                |

|  |                              |         |           |                   |   |                     |
|--|------------------------------|---------|-----------|-------------------|---|---------------------|
|  | High Rocks                   | Alert 2 | 8/6/2008  | 71.98<br>(9/1/08) | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 111382 (9/3/08)     |
|  | Highgate Springs<br>Shipyard | Alert 1 | 8/12/2008 | 94.56<br>(9/1/08) | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 147992 (9/3/08)     |
|  | Donaldson Point              | Alert 1 | 8/6/2008  | 4.60<br>(9/1/08)  | <i>Anabaena,</i><br><i>Microcystis,</i><br><i>Aphanizomenon</i> | 2354000<br>(9/3/08) |

**Supplemental shoreline samples collected when bloom conditions were apparent.**

| Location                  | Monitoring Status | Date Achieved | Highest Microcystin (µg/L) Observed | Cyanobacteria Present                                 | Maximum Density of Potentially Toxic Cells/mL |
|---------------------------|-------------------|---------------|-------------------------------------|---|---|
| Westport                  | Vigilance         | 8/12/2008     | Not Measured                        | <i>Anabaena,</i><br><i>Aphanizomenon</i>              | 2105 (8/12/08)                                |
| Keeler Bay                | Quantitative      | 8/12/2008     | Not Measured                        | <i>Anabaena</i>                                       | 211 (8/12/08)                                 |
| Knight Point              | Quantitative      | 9/3/2008      | Not Measured                        | <i>Microcystis,</i><br><i>Aphanizomenon</i>           | 1096 (9/3/08)                                 |
| St. Alban's Bay Town Dock | Quantitative      | 7/8/2008      | Not Measured                        | <i>Anabaena, Microcystis</i>                          | 48 (7/8/08)                                   |
| Dunham Bay                | Alert 2           | 8/19/2008     | 22.50<br>(9/2/08)                   | <i>Anabaena, Microcystis,</i><br><i>Aphanizomenon</i> | 1869667 (9/3/08)                              |
| Alburg Shoreline          | Vigilance         | 8/13/2008     | Not Measured                        | <i>Microcystis</i>                                    | 2737  |
| Campbell Bay              | Quantitative      | 7/1/2008      | Not Measured                        | <i>Anabaena</i>                                       | 146   |
| Rt 78 SE of RR Bridge     | Alert 1           | 7/31/2008     | 5.82<br>(8/5/08)                    | <i>Anabaena, Microcystis,</i><br><i>Aphanizomenon</i> | 1404000 (7/31/08)                             |
| Ferrisburgh               | Quantitative      | 7/30//08      | Not Measured                        | <i>Anabaena, Microcystis,</i><br><i>Aphanizomenon</i> | 0   |
| Van Tines                 | Alert 1           | 9/3/2008      |                                     | <i>Anabaena, Microcystis</i>                          | 69433 (9/3/08)                                |

The highest concentrations of microcystins in 2008 were found in the eastern part of Missisquoi Bay, at the Highgate Springs–Shipyard shoreline (Table 5), but concentrations reaching Alert Level 2 occurred across a number of Missisquoi Bay sites, and at Dunham Bay in the Northeast Arm. Low concentrations of microcystins were found at several sites in the Main Lake, in St. Albans Bay, and in Missisquoi Bay and the Northeast Arm.

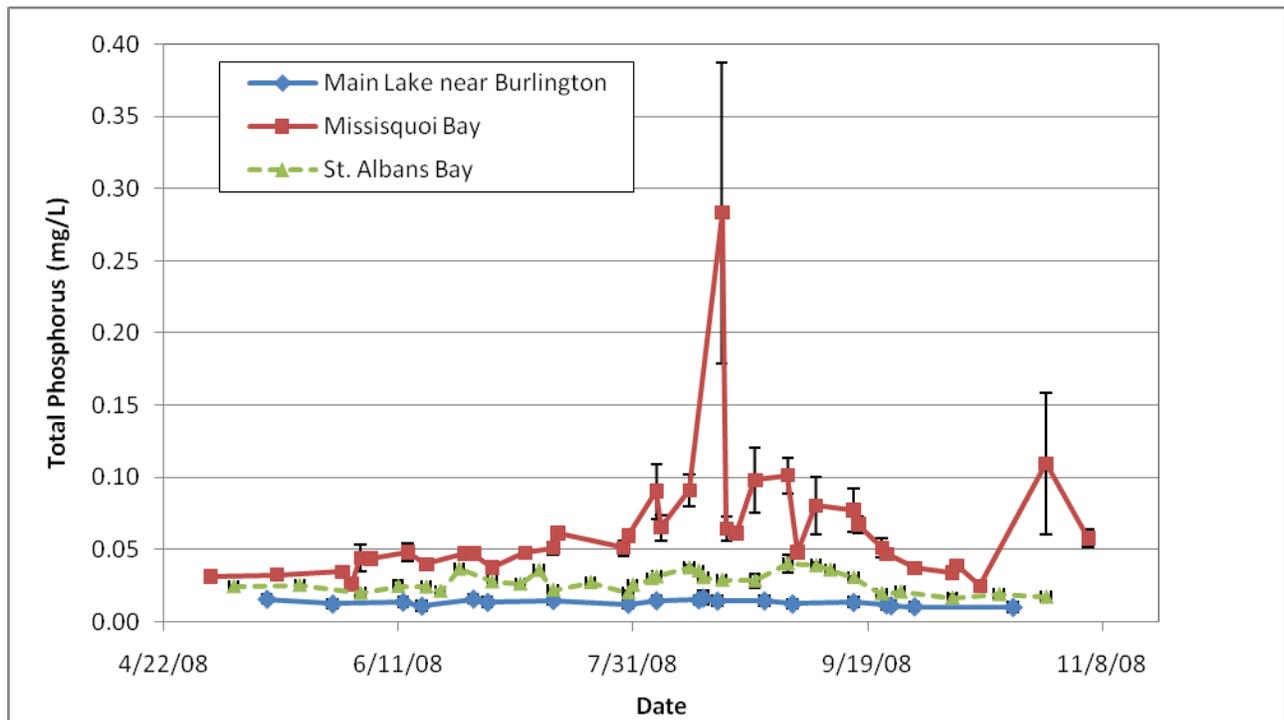
**Table 5. Number of samples tested and maximum concentration of microcystins measured in 2008.**

| <b>Region</b>               | <b>Collected by</b> | <b>Location</b>            | <b>No. Samples Tested</b> | <b>Maximum Microcystin Conc. (µg/L)</b> |
|-----------------------------|---------------------|----------------------------|---------------------------|---|
| South Lake                  | Citizen Monitor     | Littlefield Shore          | 0                         |   |
| Main Lake                   | Citizen Monitor     | Beggs Park                 | 0                         |   |
|                             |                     | Long Point                 | 0                         |   |
|                             |                     | North Beach shoreline      | 0                         |   |
|                             |                     | Red Rocks Beach shoreline  | 1                         | 1.49                                    |
|                             |                     | Westport boatlaunch        | 0                         |   |
|                             |                     | Whallons Bay               | 0                         |   |
|                             |                     | Willsboro Bay              | 1                         | 0.03                                    |
|                             | UVM                 | Melo Boat Slip             | 1                         | 0.47                                    |
|                             |                     | North Beach shoreline      | 0                         |   |
|                             |                     | Red Rocks Beach shoreline  | 0                         |   |
| Northwest Lake              | Citizen Monitor     | Cumberland Bay State Park  | 0                         |   |
|                             |                     | Point Au Roche State Park  | 0                         |   |
|                             |                     | Rouses Point               | 0                         |   |
| Northeast Lake              | Citizen Monitor     | Carry Bay                  | 0                         |   |
|                             |                     | City Bay                   | 0                         |   |
|                             |                     | Dunham Bay                 | 1                         | 22.50                                   |
|                             |                     | Keeler Bay                 | 0                         |   |
|                             |                     | Knight Point               | 0                         |   |
|                             |                     | Maquam Bay                 | 1                         | 0.08                                    |
|                             |                     | North Hero State Park      | 2                         | 0.51                                    |
|                             |                     | Pelots Bay                 | 0                         |   |
| St. Albans Bay              | Citizen Monitor     | St. Albans Bay Park        | 3                         | 0.08                                    |
|                             | UVM                 | St. Albans Bay Park        | 1                         | 0.12                                    |
|                             | UVM                 | St. Albans Boat Launch     | 6                         | 0.05                                    |
| Missisquoi Bay              | Citizen Monitor     | Chapman Bay                | 2                         | 0.26                                    |
|                             |                     | Donaldson Point            | 7                         | 4.60                                    |
|                             |                     | High Rocks                 | 7                         | 71.98                                   |
|                             |                     | Highgate Springs- Shipyard | 6                         | 94.58                                   |
|                             |                     | Southeast of Rte 78 Bridge | 6                         | 5.82                                    |
|                             |                     | Alburgh                    | 8                         | 4.19                                    |
|                             | UVM                 | Highgate Cliffs            | 11                        | 13.49                                   |
|                             |                     | Highgate Springs           | 10                        | 11.37                                   |
|                             |                     | Highgate Springs- Shipyard | 2                         | 7.82                                    |
|                             |                     | Rock River Access          | 8                         | 66.08                                   |
|                             |                     | Rte 78 Access              | 1                         | 2.98                                    |
|                             |                     | Rte 78 Access- shore       | 2                         | 12.62                                   |
|                             |                     | Southeast of Rte 78 Bridge | 1                         | 3.62                                    |
| Vicinity of Highgate Cliffs | 1                   | 51.99                      |                           |   |

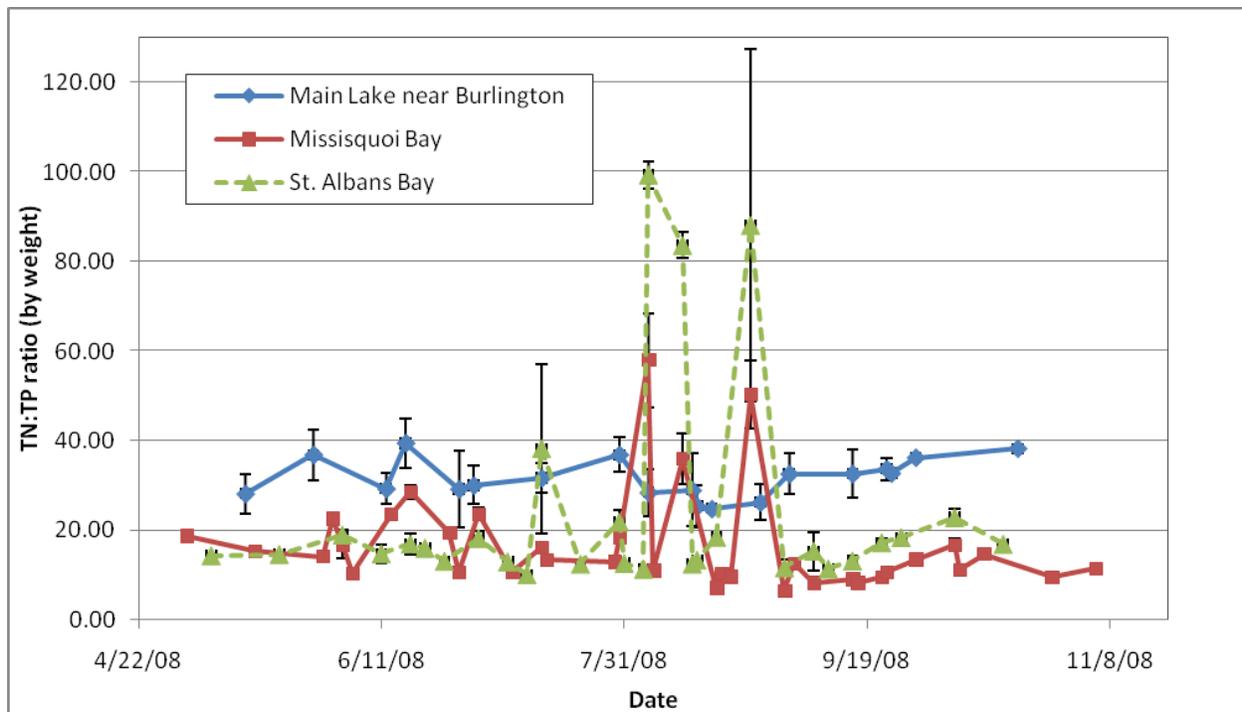
## Nutrients at the Cyanobacteria Monitoring Sites

Concentrations of total phosphorus (TP) and total nitrogen (TN) were averaged by date for monitoring sites in Burlington Bay, St. Albans Bay, and Missisquoi Bay. Mean concentrations of both nutrients were almost always highest in Missisquoi Bay, intermediate in St. Albans Bay, and lowest at Burlington Bay (Figure 2). This pattern is consistent with previous years.

We also calculated the ratio of TN:TP in Burlington Bay, St. Albans Bay, and Missisquoi Bay (Figure 3). As in previous years, this ratio tended to be lowest in Missisquoi Bay, however, in 2008, there were several mid-summer spikes in the ratio in St. Albans Bay.



**Figure 1. Total phosphorus concentrations (mg/L) in Missisquoi Bay, St. Albans Bay, and Burlington Bay over the 2008 growing season.**



**Figure 2. TN:TP ratios across all stations sampled in Burlington Bay, St. Albans Bay and Missisquoi Bay in 2008.**

## Coordination

Coordination meetings were held with Vermont Department of Health officials in May 2008, and an e-mail distribution list that included about 40 partner organizations and individuals was again established for regular information sharing over the summer season. Beginning in June, weekly or bi-weekly e-mail updates on monitoring results were distributed to these officials and to other professionals with an interest in bloom conditions and public health. Working with the Vermont Department of Health, we also posted background information about cyanobacteria and cyanotoxins, and provided information for a map depicting bloom conditions across the lake on their website ([http://healthvermont.gov/enviro/bg\\_algae/weekly\\_status.aspx](http://healthvermont.gov/enviro/bg_algae/weekly_status.aspx)). Information on bloom conditions was updated on a weekly basis from early July through September.

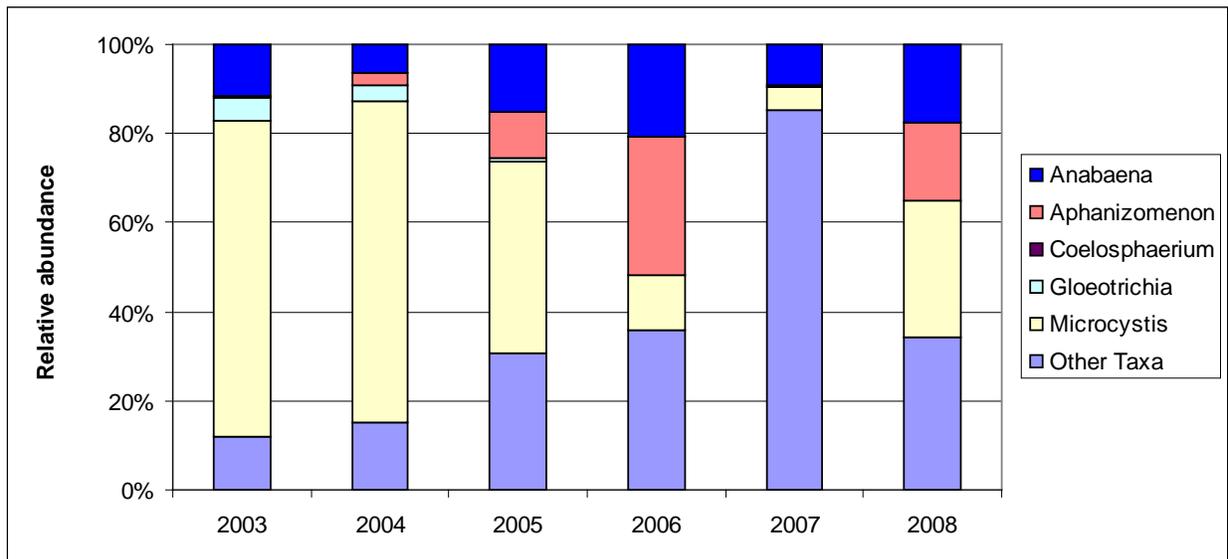
## DISCUSSION AND CONCLUSIONS

### Comparison of Patterns of Cyanobacteria and Toxins 2003-2008

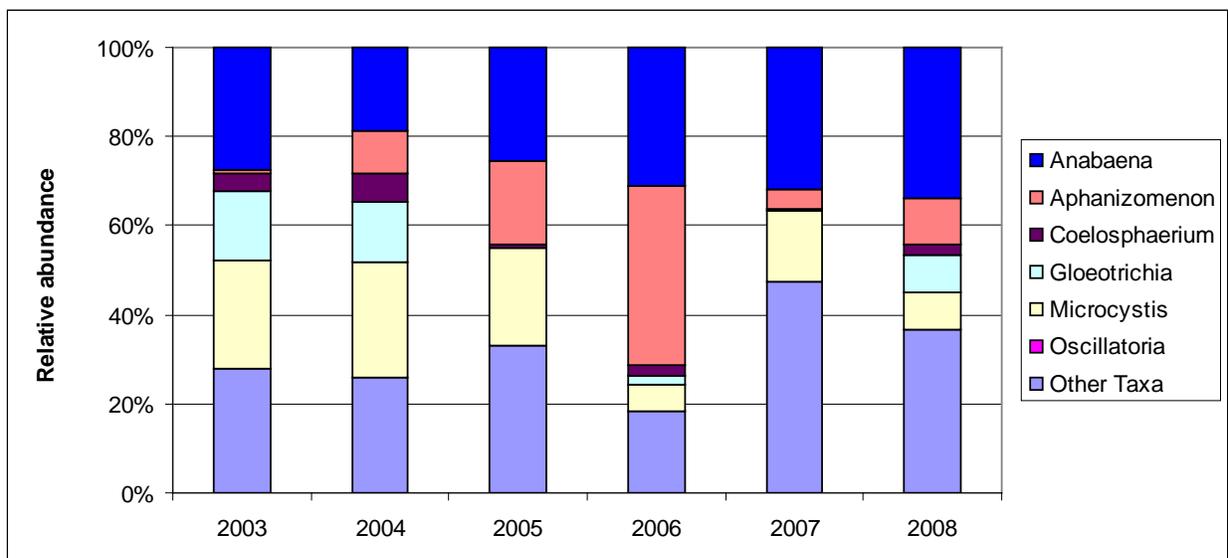
Once again, there were significant differences in the phytoplankton community composition between Missisquoi Bay, St. Albans Bay, and Burlington Bay (Figures 4-6). In Missisquoi Bay, cyanobacteria once again dominated the phytoplankton, and *Microcystis* was the most abundant cyanobacteria taxon. *Aphanizomenon* and *Anabaena* also comprised a significant percentage of the community composition (Figure 4). In St. Albans Bay (Figure 5), *Anabaena* was the most

abundant cyanobacteria taxon, while in Burlington Bay, cyanobacteria comprised less than 50% of the phytoplankton, as they did in previous years (Figure 6).

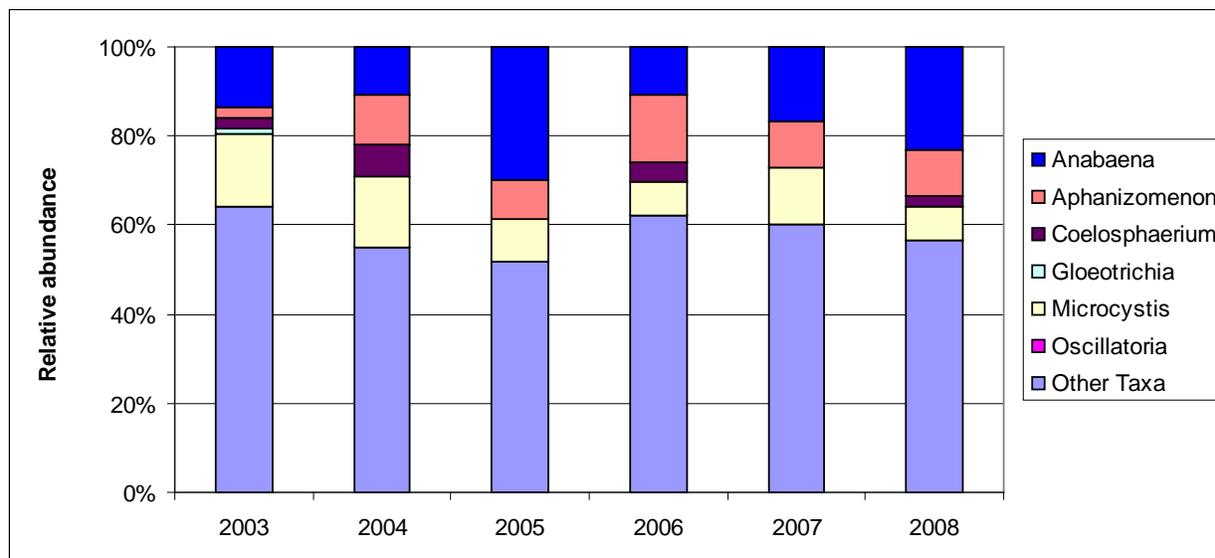
**Figure 3. Seasonal mean percent generic composition of phytoplankton in Missisquoi Bay, 2003-2008.**



**Figure 4. Seasonal mean percent generic composition of phytoplankton in St. Albans Bay, 2003-2008.**



**Figure 5. Seasonal mean percent generic composition of phytoplankton in Burlington Bay, 2003-2008.**



The median microcystin concentration measured in most lake regions was similar to those measured in 2003 – 2006, except in Missisquoi Bay, where the median was slightly higher (Table 6), and the number of samples reaching Alert level was slightly lower. The results in 2008 suggest that 2007 was an outlier year.

**Table 6. Microcystin concentrations (µg/L) in various lake segments, 2003 – 2008.**

| Lake Region               |              | 2003       | 2004       | 2005        | 2006         | 2007      | 2008         |
|---------------------------|--------------|------------|------------|-------------|--------------|-----------|--------------|
| Burlington Bay, Main Lake | Median       | 0.02       |            | 7.42        | 0.04         | 2.82      | 0.47         |
|                           | Range        | ND - 0.12  |            | 6.04 - 8.80 | 0.04 - 3.47  | 0.02-5.61 | 0.03 - 1.49  |
|                           | # of Samples | 9          |            | 2           | 6            | 2         | 3            |
| Missisquoi Bay            | Median       | 0.20       | 0.88       | 0.74        | 0.64         |           | 2.30         |
|                           | Range        | ND - 23.90 | ND - 6490  | ND - 22.10  | 0.03 - 21.29 |           | 0.06 - 94.58 |
|                           | # of Samples | 160        | 142        | 125         | 134          |           | 86           |
| Northeast Bays            | Median       | 0.05       | 0.51       | 0.08        | 0.27         | 0.05      | 0.30         |
|                           | Range        | ND - 0.18  | ND - 17.50 | ND - 0.19   | 0.04 - 42.14 | 0.04-0.07 | 0.03 - 22.50 |
|                           | # of Samples | 6          | 8          | 7           | 14           | 4         | 4            |
| South Lake                | Median       | 0.53       |            | 0.05        |              |           |              |
|                           | Range        | ND - 1.4   |            | ND - 0.067  |              |           |              |
|                           | # of Samples | 3          |            | 3           |              |           |              |
| St. Albans Bay            | Median       | 0.05       | 0.04       | 0.44        | 0.06         | 0.05      | 0.04         |
|                           | Range        | ND - 0.46  | ND - 22.50 | 0.06 - 0.94 | 0.01 - 0.43  | 0.03-0.54 | 0.02 - 0.12  |
|                           | # of Samples | 16         | 22         | 15          | 34           | 40*       | 10           |

\* includes extra samples as part of the SolarBee monitoring effort

## **Coordination**

The e-mail notification system again worked well in 2008 for rapid communication among the professional community. Our partnership with the Vermont Department of Health to post weekly information about bloom conditions on their website also continued to work well.

Our volunteer citizen monitoring effort also continues to be highly successful. In 2008, our volunteer effort included 17 volunteers across all sections of the lake providing a good perspective on shoreline conditions lake-wide. In addition, through our partnership with the Lake Champlain Committee, we were able to catch several transitory bloom events along shorelines in New York and in the Islands.

## **ACKNOWLEDGMENTS**

Principal funding for this project was provided by the Lake Champlain Basin Program, but some additional support was provided by gifts to the Rubenstein Ecosystem Science Laboratory. We gratefully acknowledge the assistance provided by Dr. Bob Drawbaugh, Vermont Department of Health, who conducted the anatoxin-*a* analyses for us. We also thank Angela Shambaugh, Pete Stangel, and other staff of Vermont and New York DEC for assistance in the field. We thank Mike Winslow, and Lori Fisher, the Lake Champlain Committee; and Mark Sweeney, US Fish and Wildlife Service, who assisted with citizen monitoring effort. And finally, none of the shoreline data collection would have been possible without our dedicated group of volunteer monitors.

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## Appendix A. Results of Qualitative Sample Screening – Data Summary 2008

| Date     | UVM Sample No. | Sample Location           | BGA? | Microcystis | Aphanizomenon | Gloeotrichia | Anabaena | Coelospherium | Nodularia | Status                |
|----------|----------------|---------------------------|------|-------------|---------------|--------------|----------|---------------|-----------|-----------------------|
| 06/03/08 | 4711           | St. Albans Boatlaunch     | NO   |             |               |              |          |               |           | Remain at qualitative |
|          | 4701           | Rte 78 Access             | NO   |             |               |              |          |               |           | Remain at qualitative |
|          | 4703           | Alburghh                  | NO   |             |               |              |          |               |           | Remain at qualitative |
|          | 4707           | Highgate Springs          | YES  |             |               |              | X        | X             |           | Go to quantitative    |
|          | 4709           | Rock River Access         | YES  |             |               |              | X        |               |           | Go to quantitative    |
|          | 4705           | Highgate Cliffs           | YES  | X           |               |              | X        |               |           | Go to quantitative    |
| 06/04/08 | 4712           | St. Albans Boatlaunch     | YES  | X           |               |              | X        |               |           | Go to quantitative    |
|          | 4702           | Rte 78 Access             | YES  |             |               |              | X        |               |           | Go to quantitative    |
|          | 4704           | Alburghh                  | NO   |             |               |              |          |               |           | Remain at qualitative |
|          | 4713           | Sta 34                    | YES  | X           | X             |              | X        |               |           | Go to quantitative    |
|          | 4714           | Sta 40                    | YES  | X           | X             |              | X        |               |           | Go to quantitative    |
| 06/09/08 | 4715           | North Beach-shoreline     | YES  |             | X             |              |          |               |           | Go to quantitative    |
|          | 4717           | Red Rocks Beach-shoreline | NO   |             |               |              |          |               |           | Remain at qualitative |
|          | 4718           | Red Rocks Beach-shoreline | NO   |             |               |              |          |               |           | Remain at qualitative |
| 06/10/08 | 4722           | Sta 09                    | YES  |             | X             |              |          |               |           | Go to quantitative    |
|          | 4721           | Sta 07                    | NO   |             |               |              |          |               |           | Remain at qualitative |
|          | 4720           | Sta 36                    | YES  |             | X             |              |          |               |           | Go to quantitative    |
| 06/17/08 | 4735           | Sta 25                    | YES  |             | X             |              | X        | X             |           | Go to quantitative    |
|          | 4736           | Sta 46                    | YES  |             | X             |              | X        |               |           | Go to quantitative    |
|          | 4737           | Sta 50                    | YES  |             | X             |              | X        |               |           | Go to quantitative    |
|          | 4741           | Sta 21                    | YES  | X           | X             |              | X        |               |           | Go to quantitative    |
|          | 4738           | Sta 51                    | YES  |             | X             |              |          |               |           | Go to quantitative    |
|          | 4739           | Sta 16                    | YES  | X           |               |              |          |               |           | Go to quantitative    |
|          | 4725           | Alburghh                  | YES  |             | X             |              |          |               |           | Go to quantitative    |
| 06/19/08 | 4742           | Sta 2                     | NO   |             |               |              |          |               |           | Remain at qualitative |
|          | 4743           | Sta 4                     | NO   |             |               |              |          |               |           | Remain at qualitative |

|          |      |                           |     |   |   |  |   |   |  |                       |
|----------|------|---------------------------|-----|---|---|--|---|---|--|-----------------------|
| 06/24/08 | 4746 | Red Rocks Beach-shoreline | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4747 | Red Rocks Beach-shoreline | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4762 | Sta 07                    | YES | X |   |  |   |   |  | Go to quantitative    |
| 06/30/08 | 4767 | North Hero State Park     | YES |   | X |  | X |   |  | Go to quantitative    |
| 07/01/08 | 4774 | Beggs Park                | YES |   | X |  | X |   |  | Go to quantitative    |
|          | 4772 | Littlefield Shore         | YES |   |   |  | X |   |  | Go to quantitative    |
|          | 4773 | Long Poing                | YES |   | X |  |   |   |  | Go to quantitative    |
|          | 4776 | Pelots Bay                | YES |   |   |  | X |   |  | Go to quantitative    |
|          | 4779 | North Beach-shoreline     | No  |   |   |  |   |   |  | Remain at qualitative |
|          | 4785 | Highgate Springs-shipyard | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4783 | Chapman Bay               | YES |   | X |  | X |   |  | Go to quantitative    |
|          | 4781 | Campbell Bay              | YES |   |   |  | X |   |  | Go to quantitative    |
|          | 4786 | Whallons Bay              | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4775 | Rouses Point              | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4777 | North Hero City Bay       | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4778 | Carry Bay                 | YES |   | X |  |   |   |  | Go to quantitative    |
|          | 4780 | Red Rocks Beach-shoreline | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4784 | High Rocks                | NO  |   |   |  |   |   |  | Remain at qualitative |
| 07/02/08 | 4782 | Maquam Bay                | YES |   |   |  |   | X |  | Go to quantitative    |
| 07/07/08 | 4789 | Sta 02                    | YES |   |   |  | X |   |  | Go to quantitative    |
|          | 4790 | Sta 04                    | YES |   | X |  |   |   |  | Go to quantitative    |
|          | 4793 | Red Rocks Beach-shoreline | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4795 | High Rocks                | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4802 | Willisboro Bay            | NO  |   |   |  |   |   |  | Remain at qualitative |
| 07/08/08 | 4804 | Point au Roche            | YES |   |   |  | X |   |  | Go to quantitative    |
|          | 4796 | North Hero City Bay       | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4797 | Highgate Springs-shipyard | NO  |   |   |  |   |   |  | Remain at qualitative |
|          | 4805 | Rouses Point              | NO  |   |   |  |   |   |  | Remain at qualitative |

|          |      |                           |     |   |   |  |   |  |  |                       |
|----------|------|---------------------------|-----|---|---|--|---|--|--|-----------------------|
|          | 4809 | St. Albans Bay            | YES |   |   |  | X |  |  | Go to quantitative    |
| 07/09/08 | 4810 | Dunham Bay                | NO  |   |   |  |   |  |  | Remain at qualitative |
|          | 4812 | Whallons Bay              | NO  |   |   |  |   |  |  | Remain at qualitative |
|          | 4811 | Point au Roche            | NO  |   |   |  |   |  |  | Remain at qualitative |
| 07/15/08 | 4836 | Willisboro Bay            | NO  |   |   |  |   |  |  | Remain at qualitative |
|          | 4838 | Rouses Point              | NO  |   |   |  |   |  |  | Remain at qualitative |
|          | 4841 | North Hero City Bay       | YES |   |   |  | X |  |  | Go to quantitative    |
|          | 4842 | Highgate Springs-shipyard | YES | X |   |  |   |  |  | Go to quantitative    |
|          | 4846 | Red Rocks Beach-shoreline | NO  |   |   |  |   |  |  | Remain at qualitative |
| 07/22/08 | 4858 | High Rocks                | YES | X |   |  | X |  |  | Go to quantitative    |
|          | 4855 | Willisboro Bay            | YES |   | X |  | X |  |  | Go to quantitative    |
|          | 4857 | Rouses Point              | YES |   |   |  | X |  |  | Go to quantitative    |
|          | 4864 | Red Rocks Beach-shoreline | YES |   |   |  | X |  |  | Go to quantitative    |

## Appendix B. Counts of Algae in Quantitative Samples – Data Summary 2008

| Location               | Sample Type       | Date     | Rep | Count Replicate | Bacillariophyceae | Chlorophyceae | Chrysohyceae | Cryptophyceae | Dinophyceae | Euglenophyceae | Myxophyceae | Potential Toxin Producers | Total  | Collection Source |
|------------------------|-------------------|----------|-----|-----------------|-------------------|---------------|--------------|---------------|-------------|----------------|-------------|---------------------------|--------|-------------------|
| Rte 78 Access          | net               | 6/3/2008 | 1   | 1               | 33.9              | 1.1           |              | 1.1           |             |                | 0.9         |                           | 37.1   | UVM               |
| Rte 78 Access          | net               | 6/3/2008 | 2   | 1               | 167.9             |               |              | 19.5          |             |                |             |                           | 187.4  | UVM               |
| Highgate Cliffs        | net               | 6/3/2008 | 1   | 1               | 2.4               |               | 0.6          | 0.0           |             |                | 1.1         | 1.1                       | 4.1    | UVM               |
| Highgate Cliffs        | net               | 6/3/2008 | 2   | 1               | 0.2               |               | 0.0          | 0.3           |             |                |             |                           | 0.5    | UVM               |
| Highgate Springs       | net               | 6/3/2008 | 1   | 1               |                   |               | 9.8          |               |             |                |             |                           | 9.8    | UVM               |
| Highgate Springs       | net               | 6/3/2008 | 2   | 1               | 0.6               |               |              | 9.6           |             |                |             |                           | 10.2   | UVM               |
| Rock River Access      | ww counted as net | 6/3/2008 | 1   | 1               |                   |               | 673.4        | 52.6          |             |                | 105.2       | 105.2                     | 831.3  | UVM               |
| Rock River Access      | ww counted as net | 6/3/2008 | 2   | 1               | 11.0              |               | 317.9        | 65.8          |             |                |             |                           | 394.6  | UVM               |
| St. Albans Boat Launch | ww counted as net | 6/3/2008 | 1   | 1               |                   |               | 151.8        | 890.4         |             |                |             |                           | 1042.1 | UVM               |
| St. Albans Boat Launch | ww counted as net | 6/3/2008 | 2   | 1               | 105.2             |               |              | 1336.4        |             |                | 105.2       | 105.2                     | 1546.8 | UVM               |
| VTDEC Sta34            | net               | 6/3/2008 | 1   | 1               | 0.7               |               | 0.1          | 0.0           | 0.0         |                | 17.9        | 17.9                      | 18.8   | VT DEC            |
| VTDEC Sta40            | net               | 6/3/2008 | 1   | 1               | 1.3               | 0.4           | 0.2          | 0.5           | 0.0         |                | 6.7         | 6.7                       | 9.1    | VT DEC            |
| North Beach shoreline  | ww counted as net | 6/9/2008 | 1   | 1               |                   |               | 52.6         | 242.0         |             |                | 1010.2      | 1010.2                    | 1304.8 | UVM               |

|                        |                   |           |   |   |         |        |       |       |     |       |  |       |         |        |
|------------------------|-------------------|-----------|---|---|---------|--------|-------|-------|-----|-------|--|-------|---------|--------|
| North Beach shoreline  | ww counted as net | 6/9/2008  | 2 | 1 |         |        | 105.2 | 357.8 |     |       |  |       | 463.0   | UVM    |
| VTDEC Sta33            | net               | 6/5/2008  | 1 | 1 | 28.3    |        | 1.9   |       |     | 2.8   |  | 2.8   | 33.1    | VT DEC |
| VTDEC Sta36            | net               | 6/5/2008  | 1 | 1 | 6.1     |        | 1.4   | 0.2   | 0.0 |       |  |       | 7.6     | VT DEC |
| VTDEC Sta09            | net               | 6/9/2008  | 1 | 1 | 22.1    |        | 1.6   |       |     | 0.2   |  | 0.2   | 24.0    | VT DEC |
| Rte 78 Access          | net               | 6/17/2008 | 1 | 1 | 962.8   | 7.0    | 45.1  |       |     | 1.1   |  | 1.1   | 1016.0  | UVM    |
| Rte 78 Access          | net               | 6/17/2008 | 2 | 1 | 2.2     |        | 0.1   |       |     |       |  |       | 2.3     | UVM    |
| Alburgh                | net               | 6/17/2008 | 1 | 1 | 7.3     | 1.9    | 0.4   |       |     | 5.2   |  | 5.2   | 14.8    | UVM    |
| Alburgh                | net               | 6/17/2008 | 2 | 1 | 1.9     |        | 0.2   |       |     | 6.5   |  | 6.5   | 8.6     | UVM    |
| Highgate Cliffs        | net               | 6/17/2008 | 1 | 1 | 60.5    | 3.5    | 3.9   |       | 0.1 | 4.3   |  | 4.3   | 72.4    | UVM    |
| Highgate Cliffs        | net               | 6/17/2008 | 2 | 1 | 71.6    | 9.3    | 1.1   |       |     | 6.1   |  | 6.1   | 88.0    | UVM    |
| Highgate Springs       | net               | 6/17/2008 | 1 | 1 | 14.2    | 8.8    | 0.3   | 5.4   |     | 7.0   |  | 7.0   | 35.6    | UVM    |
| Highgate Springs       | net               | 6/17/2008 | 2 | 1 | 33.0    | 12.0   | 0.7   |       | 0.0 | 12.8  |  | 12.8  | 58.4    | UVM    |
| Rock River Access      | ww counted as net | 6/17/2008 | 1 | 1 |         |        | 21.0  |       |     |       |  |       | 21.0    | UVM    |
| Rock River Access      | ww counted as net | 6/17/2008 | 2 | 1 | 10207.0 | 1904.6 | 168.4 |       |     | 978.6 |  | 978.6 | 13258.5 | UVM    |
| St. Albans Boat Launch | net               | 6/17/2008 | 1 | 1 |         | 0.7    | 3.3   |       |     | 3.1   |  | 3.1   | 7.1     | UVM    |
| St. Albans Boat Launch | net               | 6/17/2008 | 2 | 1 | 4.2     | 10.4   | 8.3   |       |     | 3.3   |  | 3.3   | 26.3    | UVM    |
| VTDEC Sta25            | net               | 6/12/2008 | 1 | 1 | 47.5    |        | 4.7   |       | 0.1 | 17.8  |  | 17.8  | 70.1    | VT DEC |
| VTDEC Sta46            | net               | 6/13/2008 | 1 | 1 | 4.4     | 1.5    | 1.3   |       | 0.0 | 0.6   |  | 0.6   | 7.8     | VT DEC |
| VTDEC Sta50            | net               | 6/13/2008 | 1 | 1 | 5.7     | 0.8    | 16.0  | 0.0   |     | 0.4   |  | 0.4   | 23.0    | VT DEC |
| VTDEC Sta51            | net               | 6/13/2008 | 1 | 1 | 2.2     |        | 21.5  | 0.5   |     | 0.4   |  | 0.4   | 24.6    | VT DEC |
| VTDEC Sta16            | net               | 6/16/2008 | 1 | 1 | 11.2    | 0.1    | 0.6   |       |     |       |  |       | 11.9    | VT DEC |
| VTDEC Sta19            | net               | 6/16/2008 | 1 | 1 | 14.3    | 0.0    | 0.5   |       | 0.0 | 0.6   |  |       | 15.4    | VT DEC |
| VTDEC Sta21            | net               | 6/16/2008 | 1 | 1 | 15.5    |        | 0.7   |       |     | 4.5   |  | 4.5   | 20.7    | VT DEC |
| North Beach shoreline  | ww counted as net | 6/23/2008 | 1 | 1 | 157.8   |        | 315.7 | 463.0 |     |       |  |       | 936.5   | UVM    |

|                        |                   |           |   |   |       |       |        |        |     |  |       |       |        |           |
|------------------------|-------------------|-----------|---|---|-------|-------|--------|--------|-----|--|-------|-------|--------|-----------|
| North Beach shoreline  | ww counted as net | 6/23/2008 | 2 | 1 | 641.9 |       | 347.2  | 620.8  |     |  |       |       | 1610.0 | UVM       |
| Rte 78 Access          | net               | 6/1/2008  | 1 | 1 | 343.3 | 12.4  | 1.1    | 12.4   |     |  | 1.6   | 1.6   | 370.9  | UVM       |
| Rte 78 Access          | net               | 7/1/2008  | 2 | 1 | 214.9 | 3.3   | 0.1    |        |     |  |       |       | 218.4  | UVM       |
| Alburgh                | net               | 7/1/2008  | 1 | 1 | 277.0 | 3.7   |        |        |     |  |       |       | 280.7  | UVM       |
| Alburgh                | net               | 7/1/2008  | 2 | 1 | 160.9 | 2.0   | 0.6    | 0.5    |     |  |       |       | 164.0  | UVM       |
| Highgate Cliffs        | net               | 7/1/2008  | 1 | 1 | 145.0 | 3.9   |        |        | 0.0 |  |       |       | 149.0  | UVM       |
| Highgate Cliffs        | net               | 7/1/2008  | 2 | 1 | 134.2 | 3.7   | 0.1    | 0.1    |     |  | 0.6   | 0.6   | 138.7  | UVM       |
| Highgate Springs       | net               | 7/1/2008  | 1 | 1 | 168.8 | 11.8  |        |        |     |  | 2.9   | 2.9   | 183.6  | UVM       |
| Highgate Springs       | net               | 7/1/2008  | 2 | 1 | 76.5  | 2.5   | 0.1    | 0.1    |     |  |       |       | 79.2   | UVM       |
| Rock River Access      | ww counted as net | 7/1/2008  | 2 | 1 |       | 589.3 | 694.5  | 1136.4 |     |  |       |       | 2420.2 | UVM       |
| St. Albans Boat Launch | net               | 7/1/2008  | 1 | 1 | 18.8  | 1.0   | 8.1    | 12.9   | 3.5 |  | 91.5  | 91.5  | 135.9  | UVM       |
| St. Albans Boat Launch | net               | 7/1/2008  | 2 | 1 | 14.4  | 5.7   | 1.1    |        | 3.4 |  | 89.7  | 83.1  | 114.2  | UVM       |
| VTDEC Sta34            | net               | 6/20/2008 | 1 | 1 | 0.1   |       | 0.1    | 0.1    | 0.1 |  | 1.7   | 1.0   | 2.0    | VT DEC    |
| VTDEC Sta40            | net               | 6/20/2008 | 1 | 1 | 0.9   |       | 0.4    | 0.0    | 0.1 |  | 6.5   | 6.5   | 7.9    | VT DEC    |
| VTDEC Sta07            | net               | 6/23/2008 | 1 | 1 | 39.6  | 0.1   | 0.3    | 0.2    | 0.0 |  | 0.2   | 0.2   | 40.4   | VT DEC    |
| VTDEC Sta09            | net               | 6/23/2008 | 1 | 1 | 16.9  |       | 1.4    | 0.0    |     |  | 0.5   | 0.5   | 18.9   | VT DEC    |
| VTDEC Sta46            | net               | 6/25/2008 | 1 | 1 | 0.4   |       | 0.1    | 1.6    |     |  | 3.9   | 3.9   | 6.1    | VT DEC    |
| VTDEC Sta50            | net               | 6/25/2008 | 1 | 1 | 94.7  |       | 2.9    | 3.2    |     |  |       |       | 100.8  | VT DEC    |
| VTDEC Sta51            | net               | 6/25/2008 | 1 | 1 | 129.0 | 47.1  | 5.1    | 23.2   |     |  |       |       | 204.5  | VT DEC    |
| North Hero State Park  | ww counted as net | 6/29/2008 | 1 | 1 |       |       | 1859.0 | 1525.8 |     |  | 175.4 | 175.4 | 3560.2 | BGA VLNTR |
| VTDEC Sta25            | net               | 6/26/2008 | 1 | 1 | 8.3   |       | 2.1    |        | 0.6 |  | 75.8  | 75.8  | 86.8   | VT DEC    |
| VTDEC Sta16            | net               | 6/30/2008 | 1 | 1 | 172.7 |       | 3.9    | 4.0    |     |  | 10.0  | 8.6   | 190.6  | VT DEC    |
| VTDEC Sta19            | net               | 6/30/2008 | 1 | 1 | 53.1  |       | 2.4    | 0.2    | 0.0 |  | 3.0   | 3.0   | 58.7   | VT DEC    |
| VTDEC Sta21            | net               | 6/30/2008 | 1 | 1 | 139.4 |       | 1.0    | 2.6    |     |  | 18.0  | 18.0  | 161.0  | VT DEC    |

|                       |                   |           |   |   |       |       |        |       |     |     |        |       |        |           |
|-----------------------|-------------------|-----------|---|---|-------|-------|--------|-------|-----|-----|--------|-------|--------|-----------|
| Littlefield Shore     | ww counted as net | 6/29/2008 | 1 | 1 |       |       | 26.3   |       |     |     | 43.8   |       | 70.2   | BGA VLNTR |
| Long Point            | ww counted as net | 6/29/2008 | 1 | 1 |       |       | 210.5  | 52.6  |     |     | 43.8   | 43.8  | 306.9  | BGA VLNTR |
| Beggs Park            | ww counted as net | 6/30/2008 | 1 | 1 |       |       | 94.7   | 410.4 |     |     | 315.7  | 315.7 | 820.8  | BGA VLNTR |
| Pelots Bay            | ww counted as net | 6/30/2008 | 1 | 1 | 87.7  | 43.8  | 201.7  | 26.3  |     |     | 263.1  | 263.1 | 622.6  | BGA VLNTR |
| Carry Bay             | ww counted as net | 6/30/2008 | 1 | 1 | 105.2 | 63.1  | 420.9  | 94.7  |     |     | 105.2  | 105.2 | 789.2  | BGA VLNTR |
| North Beach shoreline | ww counted as net | 6/30/2008 | 1 | 1 | 252.5 | 21.0  |        | 10.5  |     |     | 105.2  | 105.2 | 389.3  | BGA VLNTR |
| Campbell Bay          | ww counted as net | 6/29/2008 | 1 | 1 | 29.2  |       | 3039.9 | 950.0 |     |     | 146.1  | 146.1 | 4165.2 | BGA VLNTR |
| Maquam Bay            | ww counted as net | 6/30/2008 | 1 | 1 |       |       | 17.5   | 552.4 |     |     |        |       | 570.0  | BGA VLNTR |
| Chapman Bay           | ww counted as net | 6/29/2008 | 1 | 1 | 31.6  |       | 147.3  | 873.4 |     |     | 305.2  | 305.2 | 1357.4 | BGA VLNTR |
| North Hero State Park | ww counted as net | 7/7/2008  | 1 | 1 | 20.2  | 91.1  | 30.4   | 242.8 |     |     | 10.1   |       | 394.6  | BGA VLNTR |
| St. Albans Bay Park   | net               | 7/7/2008  | 1 | 1 | 224.8 | 187.1 | 4.2    | 0.4   | 1.1 |     | 3849.2 | 45.6  | 4266.8 | VT DEC    |
| VTDEC Sta02           | net               | 7/7/2008  | 1 | 1 | 23.5  | 0.1   | 3.6    |       | 0.1 | 0.0 |        |       | 27.4   | VT DEC    |
| VTDEC Sta04           | net               | 7/1/2008  | 1 | 1 | 78.7  | 8.6   | 9.3    |       | 0.0 |     | 1.1    | 1.1   | 97.7   | VT DEC    |
| VTDEC Sta34           | net               | 7/7/2008  | 1 | 1 | 33.6  | 1.8   | 0.1    | 0.8   | 0.1 |     | 38.8   | 26.8  | 75.2   | VT DEC    |
| VTDEC Sta40           | net               | 7/7/2008  | 1 | 1 | 247.3 | 91.1  | 0.6    | 0.9   | 4.3 |     | 137.1  | 122.8 | 481.3  | VT DEC    |

|                           |                   |           |   |   |        |       |       |       |      |      |          |        |          |           |
|---------------------------|-------------------|-----------|---|---|--------|-------|-------|-------|------|------|----------|--------|----------|-----------|
| North Beach shoreline     | ww counted as net | 7/1/2008  | 1 | 1 | 1666.1 | 105.2 | 228.0 | 35.1  |      |      |          |        | 2034.4   | VT DEC    |
| Long Point                | ww counted as net | 7/6/2008  | 1 | 1 | 1497.5 |       | 182.1 | 10.1  |      |      |          |        | 1689.7   | BGA VLNTR |
| Pelots Bay                | ww counted as net | 7/7/2008  | 1 | 1 | 58.5   | 58.5  | 87.7  |       |      | 14.6 |          |        | 219.2    | BGA VLNTR |
| Carry Bay                 | ww counted as net | 7/7/2008  | 1 | 1 | 378.8  | 652.4 | 31.6  | 21.0  |      |      |          |        | 1083.8   | BGA VLNTR |
| Beggs Park                | ww counted as net | 7/7/2008  | 1 | 1 | 231.5  |       | 42.1  | 52.6  |      |      |          |        | 326.2    | BGA VLNTR |
| Cumberland Bay State Park | ww counted as net | 7/6/2008  | 1 | 1 | 13.2   |       | 394.6 | 52.6  |      |      |          |        | 460.4    | BGA VLNTR |
| Point Au Roche State Park | ww counted as net | 7/7/2008  | 1 | 1 |        | 13.8  | 540.0 | 152.3 |      |      |          |        | 706.1    | BGA VLNTR |
| Maquam Bay                | ww counted as net | 7/7/2008  | 1 | 1 |        | 242.8 | 40.5  | 283.3 |      |      | 103557.0 | 2074.2 | 104123.6 | BGA VLNTR |
| Chapman Bay               | ww counted as net | 7/6/2008  | 1 | 1 |        |       | 10.5  | 52.6  |      |      |          |        | 63.1     | BGA VLNTR |
| Littlefield Shore         | ww counted as net | 7/6/2008  | 1 | 1 |        |       | 10.1  |       | 50.6 |      | 910.6    | 910.6  | 971.3    | BGA VLNTR |
| St. Albans Bay Park       | ww counted as net | 7/7/2008  | 1 | 1 | 136.8  |       | 10.5  |       |      |      | 526.1    | 526.1  | 673.4    | BGA VLNTR |
| Rte 78 Access             | net               | 7/14/2008 | 1 | 1 | 245.4  | 4.4   |       |       |      |      |          |        | 249.8    | UVM       |
| Rte 78 Access             | net               | 7/14/2008 | 2 | 1 | 242.6  | 11.5  |       |       |      |      | 5.8      | 5.8    | 259.9    | UVM       |

|                        |                   |           |   |   |        |       |       |       |      |     |       |       |        |           |
|------------------------|-------------------|-----------|---|---|--------|-------|-------|-------|------|-----|-------|-------|--------|-----------|
| Alburgh                | net               | 7/14/2008 | 1 | 1 | 35.0   | 0.9   | 0.1   | 0.1   | 0.1  |     |       |       | 36.0   | UVM       |
| Alburgh                | net               | 7/14/2008 | 2 | 1 | 52.2   | 5.2   | 0.1   |       |      |     | 0.7   | 0.7   | 58.2   | UVM       |
| Highgate Cliffs        | net               | 7/14/2008 | 1 | 1 | 6.8    | 10.9  |       |       | 0.2  |     | 21.2  | 21.2  | 39.1   | UVM       |
| Highgate Cliffs        | net               | 7/14/2008 | 2 | 1 | 6.8    | 7.3   |       |       | 0.0  |     | 17.5  | 17.5  | 31.6   | UVM       |
| Highgate Springs       | net               | 7/14/2008 | 1 | 1 | 0.4    | 8.4   |       |       | 0.1  |     | 39.9  | 39.9  | 48.9   | UVM       |
| Highgate Springs       | net               | 7/14/2008 | 2 | 1 | 0.1    | 7.3   |       |       | 0.1  |     | 15.4  | 15.4  | 22.9   | UVM       |
| Rock River Access      | ww counted as net | 7/14/2008 | 1 | 1 | 175.4  | 35.1  | 210.5 |       |      |     |       |       | 420.9  | UVM       |
| Rock River Access      | ww counted as net | 7/14/2008 | 2 | 1 |        | 245.5 | 403.4 | 184.1 |      |     |       |       | 833.0  | UVM       |
| St. Albans Boat Launch | net               | 7/14/2008 | 1 | 1 | 30.3   | 63.2  | 2.3   | 0.1   | 0.1  |     | 21.9  | 14.6  | 118.0  | UVM       |
| St. Albans Boat Launch | net               | 7/14/2008 | 2 | 1 | 37.2   | 33.8  | 4.1   |       | 0.2  |     | 29.3  | 17.6  | 104.7  | UVM       |
| VTDEC Sta07            | net               | 7/8/2008  | 1 | 1 | 2098.6 | 11.7  | 0.6   |       |      |     |       |       | 2110.9 | VT DEC    |
| VTDEC Sta09            | net               | 7/8/2008  | 1 | 1 | 2059.0 |       |       |       |      |     | 55.5  | 55.5  | 2114.5 | VT DEC    |
| VTDEC Sta33            | net               | 7/10/2008 | 1 | 1 | 2364.5 | 27.4  | 1.1   | 0.5   |      |     | 11.0  | 11.0  | 2404.6 | VT DEC    |
| VTDEC Sta36            | net               | 7/10/2008 | 1 | 1 | 1267.0 |       | 1.6   |       |      | 1.0 | 28.5  | 28.5  | 1298.1 | VT DEC    |
| VTDEC Sta46            | net               | 7/10/2008 | 1 | 1 | 42.9   | 3.9   | 1.6   | 0.0   | 0.0  |     | 12.4  | 11.6  | 60.9   | VT DEC    |
| VTDEC Sta25            | net               | 7/11/2008 | 1 | 1 | 1.8    | 1.9   | 5.8   |       | 0.2  |     | 15.1  | 14.5  | 24.9   | VT DEC    |
| Maquam Bay             | ww counted as net | 7/14/2008 | 1 | 1 | 375.8  |       |       | 150.3 | 12.5 |     | 250.5 | 250.5 | 789.2  | BGA VLNTR |
| Chapman Bay            | ww counted as net | 7/13/2008 | 1 | 1 | 2709.6 |       | 17.5  | 17.5  |      |     |       |       | 2744.7 | BGA VLNTR |
| Long Point             | ww counted as net | 7/13/2008 | 1 | 1 | 1403.0 | 324.4 | 8.8   |       |      |     | 263.1 | 263.1 | 1999.3 | BGA VLNTR |
| Littlefield Shore      | ww counted as net | 7/13/2008 | 1 | 1 | 17.5   |       |       |       |      |     | 263.1 | 263.1 | 280.6  | BGA VLNTR |

|                           |                   |           |   |   |        |        |       |       |      |  |       |       |        |           |
|---------------------------|-------------------|-----------|---|---|--------|--------|-------|-------|------|--|-------|-------|--------|-----------|
| Beggs Park                | ww counted as net | 7/13/2008 | 1 | 1 | 929.5  |        | 8.8   | 8.8   |      |  | 613.8 | 613.8 | 1560.9 | BGA VLNTR |
| Carry Bay                 | ww counted as net | 7/14/2008 | 1 | 1 | 114.0  |        | 87.7  | 8.8   |      |  |       |       | 210.5  | BGA VLNTR |
| Pelots Bay                | ww counted as net | 7/14/2008 | 1 | 1 | 2883.2 | 1473.2 | 147.3 | 21.0  | 21.0 |  |       |       | 4545.8 | BGA VLNTR |
| City Bay                  | ww counted as net | 7/14/2008 | 1 | 1 |        |        | 96.5  | 245.5 |      |  |       |       | 342.0  | BGA VLNTR |
| Highgate Springs-Shipyard | ww counted as net | 7/13/2008 | 1 | 1 | 105.2  | 431.4  | 221.0 | 31.6  |      |  |       |       | 789.2  | BGA VLNTR |
| Donaldson Point           | ww counted as net | 7/13/2008 | 1 | 1 |        | 294.6  | 694.5 | 957.6 |      |  |       |       | 1946.7 | BGA VLNTR |
| St. Albans Bay Park       | ww counted as net | 7/14/2008 | 1 | 1 |        | 1517.0 | 35.1  |       |      |  |       |       | 1552.1 | BGA VLNTR |
| North Beach shoreline     | ww counted as net | 7/15/2008 | 1 | 1 |        |        | 10.5  | 336.7 |      |  | 105.2 | 105.2 | 452.5  | BGA VLNTR |
| North Hero State Park     | ww counted as net | 7/14/2008 | 1 | 1 | 87.7   |        | 78.9  | 306.9 |      |  | 166.6 | 87.7  | 640.1  | BGA VLNTR |
| VTDEC Sta02               | net               | 7/14/2008 | 1 | 1 | 13.4   | 0.3    | 4.8   | 0.0   | 0.2  |  | 0.4   | 0.4   | 19.0   | VT DEC    |
| VTDEC Sta04               | net               | 7/14/2008 | 1 | 1 | 40.4   | 32.4   | 0.8   |       | 0.1  |  |       |       | 73.7   | VT DEC    |
| VTDEC Sta51               | net               | 7/15/2008 | 1 | 1 | 326.9  | 37.5   | 0.2   | 0.0   | 0.1  |  | 12.7  | 12.7  | 377.4  | VT DEC    |
| VTDEC Sta50               | net               | 7/15/2008 | 1 | 1 | 3.1    | 9.7    | 0.0   |       |      |  | 7.2   | 7.2   | 20.0   | VT DEC    |
| Long Point                | ww counted as net | 7/20/2008 | 1 | 1 | 350.8  | 87.7   | 280.6 | 61.4  | 17.5 |  | 350.8 | 350.8 | 1148.7 | BGA VLNTR |

|                           |                   |           |   |   |       |          |       |       |  |     |         |         |          |           |
|---------------------------|-------------------|-----------|---|---|-------|----------|-------|-------|--|-----|---------|---------|----------|-----------|
| Littlefield Shore         | ww counted as net | 7/20/2008 | 1 | 1 |       |          |       | 26.3  |  |     | 78.9    | 78.9    | 105.2    | BGA VLNTR |
| Beggs Park                | ww counted as net | 7/20/2008 | 1 | 1 |       |          | 17.5  | 228.0 |  |     | 534.9   | 526.1   | 780.4    | BGA VLNTR |
| Willsboro Bay             | ww counted as net | 7/21/2008 | 1 | 1 |       |          | 65.8  |       |  |     | 85956.8 | 85956.8 | 86022.6  | BGA VLNTR |
| Point Au Roche State Park | ww counted as net | 7/21/2008 | 1 | 1 |       | 120400.0 | 400.0 |       |  |     |         |         | 120800.0 | BGA VLNTR |
| Rouses Point              | ww counted as net | 7/21/2008 | 1 | 1 |       | 8.8      | 377.1 | 228.0 |  |     |         |         | 613.8    | BGA VLNTR |
| High Rocks                | ww counted as net | 7/21/2008 | 1 | 1 | 17.5  | 1332.9   | 61.4  | 175.4 |  |     | 543.7   | 438.4   | 2130.8   | BGA VLNTR |
| Maquam Bay                | ww counted as net | 7/21/2008 | 1 | 1 |       |          | 61.4  | 201.7 |  |     | 1341.6  | 1227.6  | 1604.7   | BGA VLNTR |
| Carry Bay                 | ww counted as net | 7/21/2008 | 1 | 1 | 613.8 | 464.7    | 105.2 | 342.0 |  |     | 920.7   | 920.7   | 2446.5   | BGA VLNTR |
| Pelots Bay                | ww counted as net | 7/21/2008 | 1 | 1 | 412.1 | 1420.6   | 78.9  | 166.6 |  | 8.8 | 3244.5  | 87.7    | 5331.5   | BGA VLNTR |
| City Bay                  | ww counted as net | 7/21/2008 | 1 | 1 |       | 17.5     | 254.3 | 973.3 |  |     |         |         | 1245.2   | BGA VLNTR |
| North Beach shoreline     | ww counted as net | 7/21/2008 | 1 | 1 | 166.6 | 8.8      | 35.1  |       |  |     | 675.2   | 394.6   | 885.7    | BGA VLNTR |

|                           |                   |           |   |   |        |       |       |        |     |     |         |        |         |           |
|---------------------------|-------------------|-----------|---|---|--------|-------|-------|--------|-----|-----|---------|--------|---------|-----------|
| Red Rocks Beach shoreline | ww counted as net | 7/21/2008 | 1 | 1 |        | 631.4 | 149.1 | 87.7   |     |     | 87.7    | 87.7   | 955.8   | BGA VLNTR |
| Highgate Springs-Shipyard | ww counted as net | 7/20/2008 | 1 | 1 |        | 175.4 | 254.3 | 1017.2 |     |     | 508.6   | 508.6  | 1955.5  | BGA VLNTR |
| Donaldson Point           | ww counted as net | 7/22/2008 | 1 | 1 |        | 245.5 | 96.5  | 17.5   |     |     |         |        | 359.5   | BGA VLNTR |
| St. Albans Bay Park       | ww counted as net | 7/21/2008 | 1 | 1 | 350.8  | 903.2 | 26.3  |        | 8.8 |     | 2981.4  | 876.9  | 4270.4  | BGA VLNTR |
| Rte 78 Access             | net               | 7/29/2008 | 1 | 1 | 808.2  | 87.9  | 1.8   |        | 1.8 |     | 7467.5  | 7467.5 | 8367.1  | UVM       |
| Rte 78 Access             | net               | 7/29/2008 | 2 | 1 | 32.8   | 23.6  |       |        | 0.2 |     | 196.9   | 196.9  | 253.5   | UVM       |
| Alburgh                   | net               | 7/29/2008 | 1 | 1 | 92.7   | 30.6  |       |        |     |     | 125.3   | 125.3  | 248.5   | UVM       |
| Alburgh                   | net               | 7/29/2008 | 2 | 1 | 518.6  | 100.2 |       |        |     |     | 463.3   | 463.3  | 1082.1  | UVM       |
| Highgate Cliffs           | net               | 7/29/2008 | 1 | 1 | 81.4   | 67.9  |       |        | 1.4 |     | 5392.9  | 5392.9 | 5543.5  | UVM       |
| Highgate Cliffs           | net               | 7/29/2008 | 2 | 1 | 110.0  | 126.0 |       |        | 1.0 |     | 5933.6  | 5933.6 | 6170.6  | UVM       |
| Highgate Springs          | net               | 7/29/2008 | 1 | 1 | 95.0   | 79.0  | 0.1   | 0.2    | 0.2 |     | 256.1   | 256.1  | 430.6   | UVM       |
| Highgate Springs          | net               | 7/29/2008 | 2 | 1 | 201.9  | 87.3  |       |        | 0.8 |     | 236.9   | 236.9  | 526.9   | UVM       |
| Rock River Access         | ww counted as net | 7/30/2008 | 1 | 1 |        | 557.7 | 368.3 | 105.2  |     |     |         |        | 1031.2  | UVM       |
| Rock River Access         | ww counted as net | 7/30/2008 | 2 | 1 | 10.5   |       | 252.5 | 31.6   |     |     |         |        | 294.6   | UVM       |
| St. Albans Boat Launch    | net               | 7/30/2008 | 1 | 1 | 2232.9 | 37.0  | 9.4   |        | 1.1 |     | 12166.6 | 788.7  | 14447.1 | UVM       |
| St. Albans Boat Launch    | net               | 7/30/2008 | 2 | 1 | 2454.8 | 29.6  | 10.7  |        | 0.4 |     | 7992.2  | 796.4  | 10487.7 | UVM       |
| Long Point                | net               | 7/23/2008 | 1 | 1 | 6.7    | 1.7   | 0.2   |        | 0.0 | 0.0 | 7.4     | 7.4    | 16.0    | VT DEC    |
| North Beach shoreline     | ww counted as net | 7/28/2008 | 1 | 1 |        | 8.8   | 175.4 | 947.0  |     |     | 289.4   | 175.4  | 1420.6  | BGA VLNTR |

|                           |                   |           |   |   |       |       |        |        |  |  |       |       |        |           |
|---------------------------|-------------------|-----------|---|---|-------|-------|--------|--------|--|--|-------|-------|--------|-----------|
| Red Rocks Beach shoreline | ww counted as net | 7/28/2008 | 1 | 1 | 8.8   |       | 43.8   | 166.6  |  |  | 175.4 | 175.4 | 394.6  | BGA VLNTR |
| Beggs Park                | ww counted as net | 7/27/2008 | 1 | 1 | 52.6  |       |        | 21.0   |  |  |       |       | 73.7   | BGA VLNTR |
| Littlefield Shore         | ww counted as net | 7/27/2008 | 1 | 1 |       | 10.5  |        | 21.0   |  |  |       |       | 31.6   | BGA VLNTR |
| Willsboro Bay             | ww counted as net | 7/28/2008 | 1 | 1 | 115.7 | 10.5  |        |        |  |  |       |       | 126.3  | BGA VLNTR |
| Point Au Roche State Park | ww counted as net | 7/28/2008 | 1 | 1 |       |       | 52.6   | 105.2  |  |  |       |       | 157.8  | BGA VLNTR |
| Rouses Point              | ww counted as net | 7/28/2008 | 1 | 1 |       |       | 18.8   | 56.4   |  |  |       |       | 75.2   | BGA VLNTR |
| City Bay                  | ww counted as net | 7/28/2008 | 1 | 1 | 94.0  | 9.4   | 18.8   | 28.2   |  |  | 563.7 | 563.7 | 714.0  | BGA VLNTR |
| Carry Bay                 | ww counted as net | 7/28/2008 | 1 | 1 | 94.7  |       | 1231.1 | 4051.2 |  |  | 210.5 | 210.5 | 5587.5 | BGA VLNTR |
| Pelots Bay                | ww counted as net | 7/28/2008 | 1 | 1 | 21.0  | 10.5  | 305.2  | 999.7  |  |  |       |       | 1336.4 | BGA VLNTR |
| Chapman Bay               | ww counted as net | 7/27/2008 | 1 | 1 |       |       | 94.7   | 694.5  |  |  |       |       | 789.2  | BGA VLNTR |
| Donaldson Point           | ww counted as net | 7/27/2008 | 1 | 1 | 431.4 | 641.9 | 105.2  | 42.1   |  |  |       |       | 1220.6 | BGA VLNTR |

|                            |                   |           |   |   |        |       |        |       |      |      |           |           |           |           |
|----------------------------|-------------------|-----------|---|---|--------|-------|--------|-------|------|------|-----------|-----------|-----------|-----------|
| Highgate Springs-Shipyard  | ww counted as net | 7/27/2008 | 1 | 1 |        |       | 242.0  | 84.2  | 10.5 |      |           | 336.7     | BGA VLNTR |           |
| St. Albans Bay Park        | ww counted as net | 7/28/2008 | 1 | 1 | 1031.2 | 21.0  |        | 42.1  |      | 84.2 | 63.1      | 1178.5    | BGA VLNTR |           |
| Maquam Bay                 | ww counted as net | 7/28/2008 | 1 | 1 | 31.6   |       | 21.0   | 21.0  | 10.5 |      | 1052.3    | 1052.3    | 1136.4    | BGA VLNTR |
| High Rocks                 | ww counted as net | 7/27/2008 | 1 | 1 |        | 52.6  | 52.6   | 10.5  |      |      | 105.2     | 105.2     | 221.0     | BGA VLNTR |
| Long Point                 | ww counted as net | 7/27/2008 | 1 | 1 | 42.1   |       | 126.3  | 105.2 |      |      |           |           | 273.6     | BGA VLNTR |
| Southeast of Rte 78 Bridge | ww counted as net | 7/30/2008 | 1 | 1 |        |       | 1400.0 |       |      |      | 1415200.0 | 1415200.0 | 1416600.0 | UVM       |
| VTDEC Sta02                | net               | 7/28/2008 | 1 | 1 | 13.8   | 0.0   | 0.6    |       | 0.4  |      | 3.8       | 3.8       | 18.6      | VT DEC    |
| VTDEC Sta04                | net               | 7/28/2008 | 1 | 1 | 1293.2 | 14.8  | 20.4   |       | 0.9  |      |           |           | 1329.2    | VT DEC    |
| VTDEC Sta16                | net               | 7/30/2008 | 1 | 1 | 281.4  | 0.9   | 26.3   |       | 2.2  |      | 1091.9    | 1070.0    | 1402.6    | VT DEC    |
| VTDEC Sta19                | net               | 7/30/2008 | 1 | 1 | 126.8  | 0.9   | 11.6   |       | 1.4  |      | 289.7     | 266.0     | 430.6     | VT DEC    |
| VTDEC Sta21                | net               | 7/30/2008 | 1 | 1 | 39.7   | 0.5   | 2.4    |       | 0.4  |      | 50.1      | 44.9      | 93.2      | VT DEC    |
| Rte 78 Access              | net               | 8/5/2008  | 1 | 1 |        |       |        |       |      |      | 13340.5   | 13340.5   | 13340.5   | UVM       |
| Rte 78 Access              | net               | 8/5/2008  | 2 | 1 | 16.9   |       |        |       |      |      | 3429.6    | 3429.6    | 3446.6    | UVM       |
| Alburgh                    | net               | 8/5/2008  | 1 | 1 | 5.6    | 0.1   |        |       |      |      | 576.4     | 576.4     | 582.1     | UVM       |
| Alburgh                    | net               | 8/5/2008  | 2 | 1 | 4.7    |       |        |       |      |      | 319.6     | 319.6     | 324.3     | UVM       |
| Highgate Cliffs            | net               | 8/5/2008  | 1 | 1 |        | 122.9 |        |       | 2.5  |      | 34776.5   | 34776.5   | 34901.8   | UVM       |
| Highgate Cliffs            | net               | 8/5/2008  | 1 | 2 |        |       |        |       |      |      | 8970.6    | 8970.6    | 8970.6    | UVM       |
| Highgate Cliffs            | net               | 8/5/2008  | 2 | 1 |        |       |        |       | 2.5  |      | 5735.5    | 5735.5    | 5737.9    | UVM       |
| Highgate Springs           | net               | 8/5/2008  | 1 | 1 | 15.9   |       |        |       | 4.8  |      | 3193.1    | 3193.1    | 3213.8    | UVM       |
| Highgate Springs           | net               | 8/5/2008  | 2 | 1 | 44.6   |       |        |       | 8.0  |      | 4579.6    | 4579.6    | 4632.1    | UVM       |

|                           |                   |           |   |   |       |      |       |       |      |  |          |          |          |           |
|---------------------------|-------------------|-----------|---|---|-------|------|-------|-------|------|--|----------|----------|----------|-----------|
| Rock River Access         | ww counted as net | 8/5/2008  | 1 | 1 | 144.7 | 26.3 | 223.6 | 13.2  |      |  | 526.1    | 526.1    | 933.9    | UVM       |
| Rock River Access         | ww counted as net | 8/5/2008  | 2 | 1 |       |      | 136.8 |       |      |  | 1473.2   | 1473.2   | 1610.0   | UVM       |
| St. Albans Boat Launch    | net               | 8/5/2008  | 1 | 1 | 410.8 |      |       |       | 10.3 |  | 5545.6   | 5417.2   | 5966.6   | UVM       |
| St. Albans Boat Launch    | net               | 8/5/2008  | 2 | 1 | 500.6 | 96.3 |       |       |      |  | 3196.4   | 3196.4   | 3793.3   | UVM       |
| North Hero State Park     | ww counted as net | 7/25/2008 | 1 | 1 | 407.8 |      | 52.6  | 144.7 |      |  |          |          | 605.1    | BGA VLNTR |
| North Hero State Park     | ww counted as net | 8/8/2008  | 1 | 1 |       |      | 133.3 |       |      |  | 232533.3 | 232533.3 | 232666.7 | BGA VLNTR |
| North Beach shoreline     | ww counted as net | 8/5/2008  | 1 | 1 | 473.5 |      | 42.1  | 221.0 |      |  |          |          | 736.6    | BGA VLNTR |
| Red Rocks Beach shoreline | ww counted as net | 8/5/2008  | 1 | 1 |       | 39.0 | 107.2 | 419.0 |      |  |          |          | 565.1    | BGA VLNTR |
| Pelots Bay                | ww counted as net | 8/4/2008  | 1 | 1 |       |      | 452.5 | 199.9 |      |  |          |          | 652.4    | BGA VLNTR |
| Carry Bay                 | ww counted as net | 8/3/2008  | 1 | 1 |       |      | 429.7 | 149.1 |      |  | 438.4    | 438.4    | 1017.2   | BGA VLNTR |
| City Bay                  | ww counted as net | 8/3/2008  | 1 | 1 | 438.4 |      | 52.6  | 17.5  |      |  |          |          | 508.6    | BGA VLNTR |
| Rouses Point              | ww counted as net | 8/4/2008  | 1 | 1 | 17.5  | 26.3 | 26.3  | 149.1 |      |  |          |          | 219.2    | BGA VLNTR |

|                           |                   |           |   |   |        |      |        |       |      |         |         |         |           |
|---------------------------|-------------------|-----------|---|---|--------|------|--------|-------|------|---------|---------|---------|-----------|
| Point Au Roche State Park | ww counted as net | 8/4/2008  | 1 | 1 |        |      | 131.5  | 150.3 |      |         |         | 281.9   | BGA VLNTR |
| Beggs Park                | ww counted as net | 8/3/2008  | 1 | 1 | 78.9   | 8.8  | 271.8  | 61.4  |      | 526.1   | 526.1   | 947.0   | BGA VLNTR |
| Willsboro Bay             | ww counted as net | 8/4/2008  | 1 | 1 |        |      | 42.1   | 63.1  |      |         |         | 105.2   | BGA VLNTR |
| Littlefield Shore         | ww counted as net | 8/3/2008  | 1 | 1 |        |      |        | 43.8  |      |         |         | 43.8    | BGA VLNTR |
| Long Point                | ww counted as net | 8/3/2008  | 1 | 1 | 105.2  | 10.5 | 42.1   | 52.6  |      | 1052.3  | 1052.3  | 1262.7  | BGA VLNTR |
| Highgate Springs-Shipyard | ww counted as net | 8/3/2008  | 1 | 1 | 22.9   | 11.4 | 1212.4 | 22.9  |      |         |         | 1269.6  | BGA VLNTR |
| High Rocks                | ww counted as net | 8/4/2008  | 1 | 1 | 52.6   |      | 52.6   |       |      | 71527.7 | 70738.5 | 71632.9 | BGA VLNTR |
| Maquam Bay                | ww counted as net | 8/4/2008  | 1 | 1 |        |      | 8.8    | 52.6  |      |         |         | 61.4    | BGA VLNTR |
| Chapman Bay               | ww counted as net | 8/4/2008  | 1 | 1 |        |      | 52.6   | 96.5  |      |         |         | 149.1   | BGA VLNTR |
| St. Albans Bay Park       | ww counted as net | 8/4/2008  | 1 | 1 | 105.2  | 10.5 | 21.0   | 157.8 | 21.0 | 841.8   | 841.8   | 1157.5  | BGA VLNTR |
| VTDEC Sta34               | net               | 7/31/2008 | 1 | 1 | 371.8  | 4.9  | 16.2   |       | 3.5  | 129.6   | 129.6   | 526.1   | VT DEC    |
| VTDEC Sta40               | net               | 7/31/2008 | 1 | 1 | 2975.0 | 16.7 | 11.2   |       | 16.0 | 4570.0  | 1296.5  | 7588.9  | VT DEC    |
| VTDEC Sta25               | net               | 8/1/2008  | 1 | 1 | 0.4    |      | 1.7    |       | 0.1  | 67.3    | 67.3    | 69.5    | VT DEC    |
| VTDEC Sta07               | net               | 8/5/2008  | 1 | 1 | 2510.2 | 11.1 | 1.0    |       | 1.9  | 628.3   | 628.3   | 3152.5  | VT DEC    |
| VTDEC Sta09               | net               | 8/5/2008  | 1 | 1 | 238.0  | 2.1  |        |       | 1.1  | 678.6   | 652.1   | 919.8   | VT DEC    |

|                            |                   |           |   |   |       |        |        |       |      |     |         |         |         |           |
|----------------------------|-------------------|-----------|---|---|-------|--------|--------|-------|------|-----|---------|---------|---------|-----------|
| Donaldson Point            | ww counted as net | 8/5/2008  | 1 | 1 |       |        | 47.8   | 12.0  |      |     | 8119.2  | 8119.2  | 8179.0  | BGA VLNTR |
| Southeast of Rte 78 Bridge | ww counted as net | 8/5/2008  | 1 | 1 |       |        |        |       |      |     | 99800.7 | 99800.7 | 99800.7 | BGA VLNTR |
| VTDEC Sta50                | net               | 8/6/2008  | 1 | 1 | 73.8  |        |        | 0.3   | 1.0  | 0.3 | 1239.9  | 1239.9  | 1315.3  | VT DEC    |
| VTDEC Sta51                | net               | 8/6/2008  | 1 | 1 |       | 7.1    |        |       | 0.6  |     | 9016.9  | 9016.9  | 9024.6  | VT DEC    |
| Rte 78 Access- shore       | ww counted as net | 8/12/2008 | 1 | 1 | 146.1 | 1183.8 | 1213.0 |       |      |     | 39927.6 | 39927.6 | 42470.5 | UVM       |
| Rte 78 Access- shore       | ww counted as net | 8/12/2008 | 2 | 1 |       |        | 273.6  | 73.7  |      |     | 33304.2 | 33293.6 | 33651.4 | UVM       |
| Alburgh - Shore            | ww counted as net | 8/12/2008 | 1 | 1 |       | 8.8    | 596.3  | 157.8 |      |     | 438.4   | 438.4   | 1201.3  | UVM       |
| Alburgh - Shore            | ww counted as net | 8/12/2008 | 2 | 1 | 105.2 | 10.5   | 620.8  | 63.1  | 10.5 |     | 2735.9  | 2735.9  | 3546.1  | UVM       |
| Highgate Cliffs            | net               | 8/19/2008 | 1 | 1 |       |        |        |       |      |     | 18630.9 | 18630.9 | 18630.9 | UVM       |
| Highgate Cliffs            | net               | 8/19/2008 | 2 | 1 | 2.8   |        |        |       |      |     | 14173.6 | 14173.6 | 14176.4 | UVM       |
| Highgate Springs-Shipyard  | ww counted as net | 8/12/2008 | 1 | 1 | 131.5 |        | 236.8  | 302.5 |      |     | 74816.0 | 74816.0 | 75486.8 | UVM       |
| Highgate Springs-Shipyard  | ww counted as net | 8/12/2008 | 2 | 1 | 12.0  |        | 167.4  | 35.9  | 23.9 |     | 45689.8 | 45689.8 | 45928.9 | UVM       |
| Rock River Access          | ww counted as net | 8/12/2008 | 1 | 1 | 87.7  |        | 131.5  | 35.1  | 8.8  |     | 3753.1  | 3753.1  | 4016.1  | UVM       |
| Rock River Access          | ww counted as net | 8/12/2008 | 2 | 1 | 43.8  | 131.5  | 289.4  | 43.8  |      |     | 3954.8  | 3954.8  | 4463.4  | UVM       |

|                           |                   |           |   |   |       |       |       |       |      |  |         |         |         |           |
|---------------------------|-------------------|-----------|---|---|-------|-------|-------|-------|------|--|---------|---------|---------|-----------|
| St. Albans Boat Launch    | net               | 8/12/2008 | 1 | 1 | 88.8  | 4.4   |       |       | 4.4  |  | 9808.1  | 9808.1  | 9905.8  | UVM       |
| St. Albans Boat Launch    | net               | 8/12/2008 | 2 | 1 | 36.6  |       |       |       | 14.6 |  | 14539.0 | 14539.0 | 14590.2 | UVM       |
| North Beach shoreline     | ww counted as net | 8/11/2008 | 1 | 1 | 18.1  | 9.1   | 54.4  | 589.6 |      |  | 807.3   | 807.3   | 1478.6  | BGA VLNTR |
| Red Rocks Beach shoreline | ww counted as net | 8/11/2008 | 1 | 1 | 105.2 | 17.5  | 17.5  | 271.8 |      |  | 3718.0  | 3718.0  | 4130.1  | BGA VLNTR |
| Carry Bay                 | ww counted as net | 8/10/2008 | 1 | 1 | 221.0 | 63.1  | 52.6  |       |      |  | 841.8   | 841.8   | 1178.5  | BGA VLNTR |
| City Bay                  | ww counted as net | 8/11/2008 | 1 | 1 | 350.8 |       | 8.8   | 8.8   |      |  | 219.2   | 219.2   | 587.5   | BGA VLNTR |
| Long Point                | ww counted as net | 8/10/2008 | 1 | 1 | 429.7 | 657.7 | 192.9 | 368.3 |      |  | 1832.7  | 1832.7  | 3481.2  | BGA VLNTR |
| Beggs Park                | ww counted as net | 8/10/2008 | 1 | 1 |       | 21.0  | 168.4 | 242.0 |      |  | 315.7   | 315.7   | 747.1   | BGA VLNTR |
| Willsboro Bay             | ww counted as net | 8/11/2008 | 1 | 1 |       | 35.1  | 61.4  | 78.9  |      |  | 175.4   | 175.4   | 350.8   | BGA VLNTR |
| Rouses Point              | ww counted as net | 8/11/2008 | 1 | 1 |       | 17.5  | 140.3 | 52.6  |      |  |         |         | 210.5   | BGA VLNTR |
| Pelots Bay                | ww counted as net | 8/11/2008 | 1 | 1 | 175.4 |       | 87.7  | 8.8   |      |  | 789.2   | 789.2   | 1061.0  | BGA VLNTR |
| Westport boatlaunch       | ww counted as net | 8/11/2008 | 1 | 1 |       |       | 231.5 | 73.7  |      |  | 2441.3  | 2441.3  | 2746.4  | BGA VLNTR |

|                            |                   |           |   |   |        |        |       |       |      |  |          |          |          |           |
|----------------------------|-------------------|-----------|---|---|--------|--------|-------|-------|------|--|----------|----------|----------|-----------|
| Keeler Bay                 | ww counted as net | 8/11/2008 | 1 | 1 | 21.0   |        | 168.4 |       |      |  | 210.5    | 210.5    | 399.9    | BGA VLNTR |
| North Hero State Park      | ww counted as net | 8/10/2008 | 1 | 1 | 438.4  |        | 210.5 | 8.8   |      |  | 6839.7   | 6839.7   | 7497.4   | BGA VLNTR |
| Maquam Bay                 | ww counted as net | 8/11/2008 | 1 | 1 |        |        | 31.6  | 452.5 |      |  | 526.1    | 526.1    | 1010.2   | BGA VLNTR |
| High Rocks                 | ww counted as net | 8/11/2008 | 1 | 1 | 235.9  |        | 99.8  |       |      |  | 21916.1  | 21916.1  | 22251.8  | BGA VLNTR |
| Donaldson Point            | ww counted as net | 8/10/2008 | 1 | 1 | 105.2  |        | 715.5 | 147.3 |      |  | 20940.1  | 20940.1  | 21908.1  | BGA VLNTR |
| St. Albans Bay Park        | ww counted as net | 8/11/2008 | 1 | 1 | 2104.5 |        |       |       |      |  | 98228.9  | 98228.9  | 100333.4 | BGA VLNTR |
| Chapman Bay                | ww counted as net | 8/10/2008 | 1 | 1 |        |        | 21.0  |       |      |  | 6418.8   | 6418.8   | 6439.9   | BGA VLNTR |
| Highgate Springs-Shipyard  | ww counted as net | 8/10/2008 | 1 | 1 | 23.9   |        | 119.6 |       |      |  | 133446.2 | 133446.2 | 133589.7 | BGA VLNTR |
| Southeast of Rte 78 Bridge | ww counted as net | 8/10/2008 | 1 | 1 | 52.6   | 1315.3 | 184.1 |       |      |  | 233550.0 | 233550.0 | 235102.1 | BGA VLNTR |
| Rte 78 Access              | net               | 8/20/2008 | 1 | 1 |        |        |       |       | 29.5 |  | 101181.4 | 101181.4 | 101210.9 | UVM       |
| Rte 78 Access              | net               | 8/20/2008 | 2 | 1 |        |        |       |       |      |  | 62922.3  | 62922.3  | 62922.3  | UVM       |
| Alburgh                    | net               | 8/20/2008 | 1 | 1 | 17.1   |        |       |       |      |  | 4621.6   | 4621.6   | 4638.7   | UVM       |
| Alburgh                    | net               | 8/20/2008 | 2 | 1 | 0.3    | 17.0   |       |       | 0.3  |  | 4120.1   | 4120.1   | 4137.8   | UVM       |
| Highgate Springs           | net               | 8/20/2008 | 1 | 1 |        |        |       |       | 2.5  |  | 15545.3  | 15545.3  | 15547.8  | UVM       |
| Highgate Springs           | net               | 8/20/2008 | 2 | 1 | 22.1   | 55.3   |       |       |      |  | 9215.0   | 9215.0   | 9292.4   | UVM       |

|                           |                   |           |   |   |       |       |       |      |     |  |          |          |          |           |
|---------------------------|-------------------|-----------|---|---|-------|-------|-------|------|-----|--|----------|----------|----------|-----------|
| Rock River Access         | ww counted as net | 8/19/2008 | 1 | 1 | 175.4 |       | 241.1 |      |     |  | 123860.3 | 123860.3 | 124276.8 | UVM       |
| Rock River Access         | ww counted as net | 8/19/2008 | 2 | 1 |       |       | 55.4  |      |     |  | 61792.8  | 60408.3  | 61848.2  | UVM       |
| St. Albans Boat Launch    | net               | 8/19/2008 | 1 | 1 | 80.2  | 36.0  |       |      | 1.1 |  | 4073.0   | 3803.3   | 4190.2   | UVM       |
| St. Albans Boat Launch    | net               | 8/19/2008 | 2 | 1 | 34.3  | 35.7  | 0.7   |      | 0.4 |  | 3111.4   | 3111.4   | 3182.5   | UVM       |
| VTDEC Sta33               | net               | 8/12/2008 | 1 | 1 | 7.2   | 2.2   | 0.3   |      | 0.6 |  | 81.0     | 81.0     | 91.3     | VT DEC    |
| VTDEC Sta36               | net               | 8/12/2008 | 1 | 1 | 14.9  | 3.8   | 0.6   | 0.1  | 0.4 |  | 139.5    | 139.5    | 159.2    | VT DEC    |
| VTDEC Sta02               | net               | 8/13/2008 | 1 | 1 | 17.2  | 3.3   | 2.2   |      | 0.2 |  | 18.9     | 18.9     | 41.8     | VT DEC    |
| VTDEC Sta04               | net               | 8/13/2008 | 1 | 1 | 975.6 | 67.6  |       |      | 2.6 |  | 393.7    | 393.7    | 1439.4   | VT DEC    |
| VTDEC Sta34               | net               | 8/14/2008 | 1 | 1 | 126.1 |       |       |      | 0.2 |  | 377.6    | 377.6    | 503.9    | VT DEC    |
| VTDEC Sta40               | net               | 8/14/2008 | 1 | 1 | 47.7  | 12.8  | 0.4   |      | 0.7 |  | 3564.6   | 1730.8   | 3626.3   | VT DEC    |
| 1 mile north of Sta40     | ww counted as net | 8/14/2008 | 1 | 1 |       |       |       |      |     |  | 280165.3 | 280165.3 | 280165.3 | VT DEC    |
| VTDEC Sta16               | net               | 8/18/2008 | 1 | 1 | 186.0 | 4.9   | 0.6   |      | 0.4 |  | 128.0    | 128.0    | 320.0    | VT DEC    |
| VTDEC Sta21               | net               | 8/18/2008 | 1 | 1 | 127.3 | 0.3   | 4.2   |      | 0.6 |  | 217.6    | 217.6    | 350.0    | VT DEC    |
| Red Rocks Beach shoreline | ww counted as net | 8/18/2008 | 1 | 1 | 8.8   | 17.5  | 61.4  | 26.3 |     |  | 1052.3   | 1052.3   | 1166.3   | BGA VLNTR |
| North Beach shoreline     | ww counted as net | 8/18/2008 | 1 | 1 | 254.3 | 8.8   | 17.5  |      |     |  | 526.1    | 526.1    | 806.7    | BGA VLNTR |
| Long Point                | ww counted as net | 8/17/2008 | 1 | 1 | 447.2 | 245.5 | 26.3  | 8.8  |     |  | 2718.3   | 2718.3   | 3446.2   | BGA VLNTR |
| Littlefield Shore         | ww counted as net | 8/17/2008 | 1 | 1 |       |       |       | 8.8  |     |  | 87.7     | 87.7     | 96.5     | BGA VLNTR |

|                            |                   |           |   |   |        |      |        |       |  |      |          |          |          |           |
|----------------------------|-------------------|-----------|---|---|--------|------|--------|-------|--|------|----------|----------|----------|-----------|
| Beggs Park                 | ww counted as net | 8/17/2008 | 1 | 1 | 1315.3 | 63.1 | 73.7   | 294.6 |  |      | 1515.3   | 1515.3   | 3262.0   | BGA VLNTR |
| Willsboro Bay              | ww counted as net | 8/18/2008 | 1 | 1 |        | 52.6 | 10.5   | 420.9 |  |      | 210.5    | 210.5    | 694.5    | BGA VLNTR |
| Point Au Roche State Park  | ww counted as net | 8/18/2008 | 1 | 1 | 42.1   | 10.5 | 84.2   | 368.3 |  |      |          |          | 505.1    | BGA VLNTR |
| Rouses Point               | ww counted as net | 8/18/2008 | 1 | 1 | 31.6   |      | 42.1   | 157.8 |  |      | 1157.5   | 1157.5   | 1389.0   | BGA VLNTR |
| City Bay                   | ww counted as net | 8/18/2008 | 1 | 1 |        |      | 43.8   | 61.4  |  |      |          |          | 105.2    | BGA VLNTR |
| Pelots Bay                 | ww counted as net | 8/18/2008 | 1 | 1 |        | 21.0 | 10.5   | 52.6  |  |      | 1746.8   | 1746.8   | 1830.9   | BGA VLNTR |
| Carry Bay                  | ww counted as net | 8/18/2008 | 1 | 1 | 10.5   | 84.2 | 21.0   | 21.0  |  |      | 2504.4   | 2504.4   | 2641.2   | BGA VLNTR |
| Dunham Bay                 | ww counted as net | 8/18/2008 | 1 | 1 |        |      |        |       |  |      | 134130.8 | 134130.8 | 134130.8 | BGA VLNTR |
| Highgate Springs-Shipyard  | ww counted as net | 8/17/2008 | 1 | 1 | 103.3  | 9.4  | 1343.5 | 291.3 |  |      | 7835.6   | 7835.6   | 9583.1   | BGA VLNTR |
| High Rocks                 | ww counted as net | 8/18/2008 | 1 | 1 |        |      |        | 169.1 |  |      | 83175.8  | 83175.8  | 83345.0  | BGA VLNTR |
| Southeast of Rte 78 Bridge | ww counted as net | 8/18/2008 | 1 | 1 |        |      |        | 136.8 |  | 10.5 | 25706.8  | 25180.7  | 25854.1  | BGA VLNTR |

|                             |                   |           |   |   |       |       |       |     |  |  |           |           |           |           |
|-----------------------------|-------------------|-----------|---|---|-------|-------|-------|-----|--|--|-----------|-----------|-----------|-----------|
| St. Albans Bay Park         | ww counted as net | 8/18/2008 | 1 | 1 |       |       | 215.2 |     |  |  | 31328.8   | 30730.9   | 31544.0   | BGA VLNTR |
| Donaldson Point             | ww counted as net | 8/18/2008 | 1 | 1 |       |       | 91.1  |     |  |  | 21753.5   | 21753.5   | 21844.6   | BGA VLNTR |
| Maquam Bay                  | ww counted as net | 8/18/2008 | 1 | 1 | 876.9 |       |       |     |  |  | 48283.6   | 47735.5   | 49160.5   | BGA VLNTR |
| Chapman Bay                 | ww counted as net | 8/18/2008 | 1 | 1 |       |       | 52.6  |     |  |  | 350.8     | 350.8     | 403.4     | BGA VLNTR |
| Rte 78 - surface grab       | ww counted as net | 8/20/2008 | 1 | 1 | 37.6  |       | 112.7 |     |  |  | 105696.2  | 105696.2  | 105846.5  | UVM       |
| Vicinity of Highgate Cliffs | ww counted as net | 8/20/2008 | 1 | 1 |       |       |       |     |  |  | 1983333.3 | 1983333.3 | 1983333.3 | UVM       |
| Rte 78 Access               | net               | 8/26/2008 | 1 | 1 |       |       |       |     |  |  | 35260.7   | 35260.7   | 35260.7   | UVM       |
| Rte 78 Access               | net               | 8/26/2008 | 2 | 1 | 16.1  |       | 0.5   | 0.2 |  |  | 3644.1    | 3644.1    | 3660.9    | UVM       |
| Alburgh                     | net               | 8/26/2008 | 1 | 1 | 29.6  |       |       |     |  |  | 2906.4    | 2906.4    | 2936.0    | UVM       |
| Alburgh                     | net               | 8/26/2008 | 2 | 1 |       |       |       |     |  |  | 5476.5    | 5476.5    | 5476.5    | UVM       |
| Highgate Cliffs             | net               | 8/26/2008 | 1 | 1 | 2.0   |       | 2.0   |     |  |  | 8338.4    | 8338.4    | 8342.3    | UVM       |
| Highgate Cliffs             | net               | 8/26/2008 | 2 | 1 |       |       | 1.8   |     |  |  | 10594.1   | 10594.1   | 10595.9   | UVM       |
| Highgate Springs            | net               | 8/26/2008 | 1 | 1 | 41.7  | 43.1  |       |     |  |  | 4382.0    | 4382.0    | 4466.8    | UVM       |
| Highgate Springs            | net               | 8/26/2008 | 2 | 1 | 147.9 |       |       |     |  |  | 4418.7    | 4418.7    | 4566.6    | UVM       |
| Rock River Access           | ww counted as net | 8/26/2008 | 1 | 1 | 175.4 | 730.7 | 43.8  |     |  |  | 16997.0   | 16997.0   | 17946.9   | UVM       |
| Rock River Access           | ww counted as net | 8/26/2008 | 2 | 1 |       | 548.1 |       |     |  |  | 18480.4   | 18480.4   | 19028.4   | UVM       |
| St. Albans Boat Launch      | net               | 8/26/2008 | 1 | 1 | 65.7  | 5.9   | 0.3   |     |  |  | 337.8     | 337.8     | 409.7     | UVM       |

|                        |                   |           |   |   |        |       |       |      |     |  |         |         |         |           |
|------------------------|-------------------|-----------|---|---|--------|-------|-------|------|-----|--|---------|---------|---------|-----------|
| St. Albans Boat Launch | net               | 8/26/2008 | 2 | 1 | 145.9  | 16.3  |       |      |     |  | 454.6   | 446.4   | 616.8   | UVM       |
| VTDEC Sta25            | net               | 8/19/2008 | 1 | 1 | 3.0    | 0.0   | 3.7   | 0.0  | 0.3 |  | 33.9    | 33.9    | 40.8    | VT DEC    |
| VTDEC Sta50            | net               | 8/20/2008 | 1 | 1 |        |       |       |      |     |  | 3620.0  | 3620.0  | 3620.0  | VT DEC    |
| VTDEC Sta51            | net               | 8/20/2008 | 1 | 1 | 13.9   | 3.3   | 0.3   |      |     |  | 765.1   | 765.1   | 782.7   | VT DEC    |
| VTDEC Sta07            | net               | 8/21/2008 | 1 | 1 | 345.2  | 27.3  |       |      | 2.3 |  | 1399.5  | 1376.8  | 1774.2  | VT DEC    |
| VTDEC Sta09            | net               | 8/21/2008 | 1 | 1 | 320.6  |       |       |      | 2.2 |  | 957.3   | 957.3   | 1280.0  | VT DEC    |
| Rte 78 Access          | net               | 9/2/2008  | 1 | 1 | 52.8   | 79.1  |       |      |     |  | 23457.0 | 23457.0 | 23588.9 | UVM       |
| Rte 78 Access          | net               | 9/2/2008  | 2 | 1 | 87.9   | 211.0 |       |      | 4.4 |  | 13664.8 | 13664.8 | 13968.2 | UVM       |
| Alburgh                | net               | 9/2/2008  | 1 | 1 | 222.1  |       |       |      | 5.6 |  | 23508.7 | 23508.7 | 23736.4 | UVM       |
| Alburgh                | net               | 9/2/2008  | 2 | 1 |        |       | 1.5   |      |     |  | 3499.1  | 3499.1  | 3500.6  | UVM       |
| Highgate Cliffs        | net               | 9/2/2008  | 1 | 1 | 3.1    |       | 1.0   |      |     |  | 6001.1  | 6001.1  | 6005.2  | UVM       |
| Highgate Cliffs        | net               | 9/2/2008  | 2 | 1 |        | 51.1  |       |      | 2.0 |  | 3648.9  | 3648.9  | 3702.1  | UVM       |
| Highgate Springs       | net               | 9/2/2008  | 1 | 1 | 13.7   | 1.2   |       |      | 2.5 |  | 5570.9  | 5570.9  | 5588.4  | UVM       |
| Highgate Springs       | net               | 9/2/2008  | 2 | 1 | 40.8   |       |       |      |     |  | 5333.8  | 5333.8  | 5374.5  | UVM       |
| Rock River Access      | ww counted as net | 9/2/2008  | 1 | 1 | 25.1   |       | 100.2 |      |     |  | 44708.7 | 44708.7 | 44834.0 | UVM       |
| Rock River Access      | ww counted as net | 9/2/2008  | 2 | 1 | 16.4   |       | 65.8  |      |     |  | 97235.8 | 97235.8 | 97318.0 | UVM       |
| St. Albans Boat Launch | net               | 9/2/2008  | 1 | 1 | 3114.3 |       | 6.5   |      |     |  | 17513.9 | 14924.0 | 20634.6 | UVM       |
| St. Albans Boat Launch | net               | 9/2/2008  | 2 | 1 | 987.0  |       |       |      |     |  | 6909.3  | 5610.5  | 7896.3  | UVM       |
| Littlefield Shore      | ww counted as net | 8/24/2008 | 1 | 1 |        |       | 10.5  | 52.6 |     |  | 2893.7  | 2893.7  | 2956.9  | BGA VLNTR |
| Beggs Park             | ww counted as net | 8/24/2008 | 1 | 1 | 210.5  | 438.4 | 8.8   | 26.3 |     |  | 710.3   | 710.3   | 1394.2  | BGA VLNTR |
| Willsboro Bay          | ww counted as net | 8/25/2008 | 1 | 1 | 241.1  |       | 32.9  |      |     |  | 339.8   | 339.8   | 613.8   | BGA VLNTR |

|                           |                   |           |   |   |       |      |       |       |  |  |         |         |         |           |
|---------------------------|-------------------|-----------|---|---|-------|------|-------|-------|--|--|---------|---------|---------|-----------|
| Rouses Point              | ww counted as net | 8/25/2008 | 1 | 1 | 8.8   | 8.8  | 131.5 | 315.7 |  |  | 333.2   | 333.2   | 798.0   | BGA VLNTR |
| Carry Bay                 | ww counted as net | 8/24/2008 | 1 | 1 | 87.7  |      | 87.7  |       |  |  | 771.7   | 771.7   | 947.0   | BGA VLNTR |
| Pelots Bay                | ww counted as net | 8/25/2008 | 1 | 1 |       |      |       | 61.4  |  |  |         |         | 61.4    | BGA VLNTR |
| City Bay                  | ww counted as net | 8/25/2008 | 1 | 1 |       |      | 52.6  | 210.5 |  |  | 140.3   | 140.3   | 403.4   | BGA VLNTR |
| North Hero State Park     | ww counted as net | 8/18/2008 | 1 | 1 |       |      | 35.1  | 438.4 |  |  |         |         | 473.5   | BGA VLNTR |
| North Hero State Park     | ww counted as net | 8/25/2008 | 1 | 1 |       |      | 96.5  | 508.6 |  |  | 3946.0  | 3946.0  | 4551.0  | BGA VLNTR |
| Red Rocks Beach shoreline | ww counted as net | 8/26/2008 | 1 | 1 | 315.7 | 10.5 | 52.6  | 452.5 |  |  |         |         | 831.3   | BGA VLNTR |
| North Beach shoreline     | ww counted as net | 8/26/2008 | 1 | 1 | 21.0  |      | 10.5  | 31.6  |  |  | 2083.5  | 2083.5  | 2146.6  | BGA VLNTR |
| Highgate Springs-Shipyard | ww counted as net | 8/24/2008 | 1 | 1 |       |      | 253.7 | 47.0  |  |  | 3232.0  | 3232.0  | 3532.6  | BGA VLNTR |
| High Rocks                | ww counted as net | 8/25/2008 | 1 | 1 |       |      |       |       |  |  | 24278.8 | 24278.8 | 24278.8 | BGA VLNTR |
| Chapman Bay               | ww counted as net | 8/25/2008 | 1 | 1 | 701.5 |      | 26.3  |       |  |  | 3682.9  | 3682.9  | 4410.7  | BGA VLNTR |

|                            |                   |           |   |   |        |      |      |       |     |  |           |           |           |           |
|----------------------------|-------------------|-----------|---|---|--------|------|------|-------|-----|--|-----------|-----------|-----------|-----------|
| Donaldson Point            | ww counted as net | 8/24/2008 | 1 | 1 |        |      | 78.9 | 26.3  | 8.8 |  | 9496.7    | 9496.7    | 9610.7    | BGA VLNTR |
| Southeast of Rte 78 Bridge | ww counted as net | 8/24/2008 | 1 | 1 |        |      | 11.0 |       |     |  | 14687.9   | 14687.9   | 14698.8   | BGA VLNTR |
| Maquam Bay                 | ww counted as net | 8/25/2008 | 1 | 1 |        |      |      |       |     |  | 859.3     | 859.3     | 859.3     | BGA VLNTR |
| St. Albans Bay Park        | ww counted as net | 8/26/2008 | 1 | 1 | 997.5  |      | 32.9 |       |     |  | 20387.6   | 19291.5   | 21418.0   | UVM       |
| VTDEC Sta02                | net               | 8/25/2008 | 1 | 1 | 5.6    | 28.2 | 22.6 | 0.6   | 0.6 |  | 1045.8    | 1045.8    | 1103.4    | VT DEC    |
| VTDEC Sta04                | net               | 8/25/2008 | 1 | 1 | 1319.1 | 18.0 |      |       | 0.7 |  | 920.2     | 902.2     | 2258.0    | VT DEC    |
| VTDEC Sta34                | net               | 8/26/2008 | 1 | 1 | 41.8   |      | 3.1  |       | 0.3 |  | 1116.9    | 947.5     | 1162.1    | VT DEC    |
| VTDEC Sta40                | net               | 8/26/2008 | 1 | 1 | 921.7  | 42.8 |      |       | 0.9 |  | 2473.3    | 2323.5    | 3438.6    | VT DEC    |
| VTDEC Sta46                | net               | 8/12/2008 | 1 | 1 | 60.8   | 4.0  | 0.2  |       |     |  | 80.9      | 80.9      | 145.9     | VT DEC    |
| VTDEC Sta16                | net               | 8/28/2008 | 1 | 1 | 14.8   | 0.7  | 0.8  |       | 0.3 |  | 280.2     | 280.2     | 296.7     | VT DEC    |
| VTDEC Sta16                | net               | 8/28/2008 | 1 | 2 | 113.4  |      |      | 1.9   | 0.5 |  | 754.8     | 754.8     | 870.6     | VT DEC    |
| VTDEC Sta19                | net               | 8/28/2008 | 1 | 1 | 88.1   |      | 0.5  |       | 0.8 |  | 906.3     | 905.0     | 995.6     | VT DEC    |
| VTDEC Sta21                | net               | 8/28/2008 | 1 | 1 | 89.8   | 0.8  | 0.8  |       | 1.1 |  | 948.4     | 948.4     | 1041.0    | VT DEC    |
| Red Rocks Beach shoreline  | ww counted as net | 9/2/2008  | 1 | 1 |        |      | 16.4 | 32.9  |     |  | 35990.7   | 23659.5   | 36040.0   | BGA VLNTR |
| North Beach shoreline      | ww counted as net | 9/2/2008  | 1 | 1 | 8.8    |      | 17.5 | 105.2 |     |  | 1999.3    | 1999.3    | 2130.8    | BGA VLNTR |
| Knight Point               | ww counted as net | 9/2/2008  | 1 | 1 |        |      | 15.5 |       |     |  | 35390.1   | 2893.7    | 35405.6   | BGA VLNTR |
| Dunham Bay                 | ww counted as net | 9/2/2008  | 1 | 1 |        |      |      |       |     |  | 1903000.0 | 1869666.7 | 1903000.0 | BGA VLNTR |

|                            |                   |           |   |   |       |  |        |       |  |  |           |           |           |           |
|----------------------------|-------------------|-----------|---|---|-------|--|--------|-------|--|--|-----------|-----------|-----------|-----------|
| Van Tines                  | ww counted as net | 9/2/2008  | 1 | 1 |       |  | 20.2   |       |  |  | 69409.0   | 69409.0   | 69429.2   | BGA VLNTR |
| Maquam Bay                 | ww counted as net | 9/2/2008  | 1 | 1 |       |  | 306.9  | 35.1  |  |  | 438.4     | 438.4     | 780.4     | BGA VLNTR |
| Donaldson Point            | ww counted as net | 9/1/2008  | 1 | 1 |       |  | 1400.0 |       |  |  | 2354000.0 | 2354000.0 | 2355400.0 | BGA VLNTR |
| Southeast of Rte 78 Bridge | ww counted as net | 9/1/2008  | 1 | 1 | 23.9  |  | 47.8   |       |  |  | 26462.1   | 26462.1   | 26533.8   | BGA VLNTR |
| Chapman Bay                | ww counted as net | 8/31/2008 | 1 | 1 |       |  | 447.2  | 342.0 |  |  | 6182.1    | 6182.1    | 6971.2    | BGA VLNTR |
| Highgate Springs-Shipyard  | ww counted as net | 8/31/2008 | 1 | 1 |       |  | 668.6  | 328.8 |  |  | 4932.5    | 4932.5    | 5929.9    | BGA VLNTR |
| Highgate Springs-Shipyard  | ww counted as net | 9/1/2008  | 1 | 1 | 13.8  |  |        |       |  |  | 147940.0  | 147940.0  | 147953.9  | BGA VLNTR |
| St. Albans Bay Park        | ww counted as net | 9/1/2008  | 1 | 1 | 767.3 |  | 11.0   | 11.0  |  |  | 2959.5    | 2959.5    | 3748.7    | BGA VLNTR |
| High Rocks                 | ww counted as net | 9/1/2008  | 1 | 1 |       |  | 21.9   |       |  |  | 111342.7  | 111342.7  | 111364.6  | BGA VLNTR |
| Long Point                 | ww counted as net | 8/24/2008 | 1 | 1 | 438.4 |  | 61.4   | 61.4  |  |  | 289.4     | 289.4     | 850.6     | BGA VLNTR |
| Littlefield Shore          | ww counted as net | 8/31/2008 | 1 | 1 | 20.2  |  |        |       |  |  |           |           | 20.2      | BGA VLNTR |

|                   |                   |           |   |   |       |      |       |       |     |  |         |        |         |           |
|-------------------|-------------------|-----------|---|---|-------|------|-------|-------|-----|--|---------|--------|---------|-----------|
| Pelots Bay        | ww counted as net | 8/31/2008 | 1 | 1 |       |      | 52.6  |       |     |  | 199.9   | 199.9  | 252.5   | BGA VLNTR |
| Long Point        | ww counted as net | 9/1/2008  | 1 | 1 | 87.7  |      | 105.2 | 78.9  |     |  | 552.4   | 552.4  | 824.3   | BGA VLNTR |
| Beggs Park        | ww counted as net | 9/1/2008  | 1 | 1 | 105.2 |      | 21.0  | 115.7 |     |  | 1262.7  | 1262.7 | 1504.7  | BGA VLNTR |
| Willsboro Bay     | ww counted as net | 9/2/2008  | 1 | 1 |       | 10.5 | 21.0  | 21.0  |     |  |         |        | 52.6    | BGA VLNTR |
| Rouses Point      | ww counted as net | 9/2/2008  | 1 | 1 |       |      | 284.1 | 42.1  |     |  | 399.9   | 399.9  | 726.1   | BGA VLNTR |
| City Bay          | ww counted as net | 9/2/2008  | 1 | 1 |       |      |       |       |     |  | 35623.5 | 3836.4 | 35623.5 | BGA VLNTR |
| Carry Bay         | ww counted as net | 9/1/2008  | 1 | 1 | 11.0  | 11.0 | 32.9  | 11.0  |     |  | 350.8   | 350.8  | 416.5   | BGA VLNTR |
| VTDEC Sta25       | net               | 9/3/2008  | 1 | 1 | 795.6 | 1.8  | 52.6  | 11.4  | 2.0 |  | 28.4    | 17.1   | 891.8   | VT DEC    |
| VTDEC Sta33       | net               | 8/29/2008 | 1 | 1 | 49.0  | 11.2 |       |       | 0.2 |  | 452.9   | 430.4  | 513.3   | VT DEC    |
| VTDEC Sta36       | net               | 8/29/2008 | 1 | 1 | 84.2  | 9.9  | 0.6   |       | 0.2 |  | 132.9   | 132.9  | 227.8   | VT DEC    |
| Rte 78 Access     | net               | 9/8/2008  | 1 | 1 | 32.2  | 13.3 | 0.2   |       | 1.3 |  | 3668.6  | 3668.6 | 3715.6  | UVM       |
| Rte 78 Access     | net               | 9/8/2008  | 2 | 1 | 135.4 |      |       |       |     |  | 9283.5  | 9283.5 | 9418.9  | UVM       |
| Alburgh           | net               | 9/8/2008  | 1 | 1 | 21.0  | 19.1 |       |       |     |  | 2928.5  | 2928.5 | 2968.7  | UVM       |
| Alburgh           | net               | 9/8/2008  | 2 | 1 | 7.2   | 7.5  |       |       | 0.3 |  | 4352.8  | 4352.8 | 4367.9  | UVM       |
| Highgate Cliffs   | net               | 9/8/2008  | 1 | 1 | 11.4  | 57.2 | 4.6   |       | 1.1 |  | 4074.9  | 4074.9 | 4149.3  | UVM       |
| Highgate Cliffs   | net               | 9/8/2008  | 2 | 1 | 27.5  |      |       |       | 0.9 |  | 7986.7  | 7986.7 | 8015.1  | UVM       |
| Highgate Springs  | net               | 9/8/2008  | 1 | 1 | 1.8   | 6.6  |       |       | 0.4 |  | 1279.2  | 1279.2 | 1287.9  | UVM       |
| Highgate Springs  | net               | 9/8/2008  | 2 | 1 | 0.9   | 22.1 |       |       |     |  | 3354.0  | 3354.0 | 3377.1  | UVM       |
| Rock River Access | ww counted as net | 9/8/2008  | 1 | 1 |       |      | 87.7  | 32.9  |     |  | 2740.3  | 2740.3 | 2860.8  | UVM       |

|                           |                   |           |   |   |       |       |        |       |     |         |         |         |           |
|---------------------------|-------------------|-----------|---|---|-------|-------|--------|-------|-----|---------|---------|---------|-----------|
| Rock River Access         | ww counted as net | 9/8/2008  | 2 | 1 |       | 548.1 | 197.3  |       |     | 548.1   | 548.1   | 1293.4  | UVM       |
| St. Albans Boat Launch    | net               | 9/8/2008  | 1 | 1 | 258.6 | 7.9   |        |       | 1.1 | 2296.5  | 2296.5  | 2564.1  | UVM       |
| St. Albans Boat Launch    | net               | 9/8/2008  | 2 | 1 | 216.9 |       |        |       | 2.2 | 4011.3  | 3794.4  | 4230.4  | UVM       |
| Highgate Springs-Shipyard | ww counted as net | 9/7/2008  | 1 | 1 |       |       |        |       |     | 4055.6  | 4055.6  | 4373.5  | BGA VLNTR |
| Maquam Bay                | ww counted as net | 9/8/2008  | 1 | 1 | 8.8   |       | 8.8    |       |     | 876.9   | 876.9   | 894.4   | BGA VLNTR |
| VTDEC Sta46               | net               | 9/4/2008  | 1 | 1 | 1.2   | 1.5   | 3.4    |       | 0.0 | 425.2   | 184.9   | 431.3   | VT DEC    |
| VTDEC Sta50               | net               | 9/4/2008  | 1 | 1 |       | 0.6   | 1.6    |       | 1.9 | 4772.1  | 4772.1  | 4776.3  | VT DEC    |
| VTDEC Sta51               | net               | 9/4/2008  | 1 | 1 | 19.4  |       | 1.3    |       | 0.8 | 1114.7  | 1114.7  | 1136.3  | VT DEC    |
| VTDEC Sta02               | net               | 9/5/2008  | 1 | 1 | 5.9   | 6.2   | 20.3   |       | 1.0 | 856.2   | 856.2   | 889.6   | VT DEC    |
| VTDEC Sta04               | net               | 9/5/2008  | 1 | 1 | 193.5 | 64.7  |        |       | 5.2 | 4087.0  | 4087.0  | 4350.4  | VT DEC    |
| VTDEC Sta07               | net               | 9/8/2008  | 1 | 1 | 46.4  | 3.4   | 0.2    |       | 0.5 | 223.5   | 223.5   | 274.0   | VT DEC    |
| VTDEC Sta09               | net               | 9/8/2008  | 1 | 1 | 20.2  | 2.9   | 0.2    |       | 0.4 | 367.1   | 367.1   | 390.8   | VT DEC    |
| Rte 78 Access             | net               | 9/16/2008 | 1 | 1 | 40.9  | 37.6  | 0.5    |       |     | 1998.5  | 1998.5  | 2077.5  | UVM       |
| Rte 78 Access             | net               | 9/16/2008 | 2 | 1 | 59.6  | 15.0  | 0.3    | 0.3   |     | 2300.9  | 2300.9  | 2376.0  | UVM       |
| Alburgh                   | net               | 9/16/2008 | 1 | 1 | 15.4  | 15.2  | 2.3    |       |     | 787.9   | 787.9   | 820.9   | UVM       |
| Alburgh                   | net               | 9/16/2008 | 2 | 1 | 65.2  | 16.6  |        |       | 0.1 | 936.4   | 936.4   | 1018.2  | UVM       |
| Highgate Cliffs           | net               | 9/16/2008 | 1 | 1 | 134.7 | 0.6   |        |       |     | 1598.0  | 1598.0  | 1733.2  | UVM       |
| Highgate Cliffs           | net               | 9/16/2008 | 2 | 1 | 732.0 |       |        |       |     | 2205.7  | 2205.7  | 2937.7  | UVM       |
| Highgate Springs          | net               | 9/16/2008 | 1 | 1 | 124.8 |       | 1.0    |       |     | 1170.1  | 1170.1  | 1295.9  | UVM       |
| Highgate Springs          | net               | 9/16/2008 | 2 | 1 | 668.5 | 35.9  | 2.2    |       | 1.4 | 1833.1  | 1833.1  | 2541.2  | UVM       |
| Rock River Access         | ww counted as net | 9/16/2008 | 1 | 1 | 991.6 | 505.9 | 1102.9 |       |     | 5109.6  | 5109.6  | 7709.9  | UVM       |
| Rock River Access         | ww counted as net | 9/16/2008 | 2 | 1 | 263.1 | 438.4 | 640.1  | 131.5 |     | 12714.9 | 12714.9 | 14188.0 | UVM       |

|                            |                   |           |   |   |        |       |       |       |     |  |         |         |         |           |
|----------------------------|-------------------|-----------|---|---|--------|-------|-------|-------|-----|--|---------|---------|---------|-----------|
| St. Albans Boat Launch     | net               | 9/16/2008 | 1 | 1 | 1917.5 |       |       |       |     |  | 4234.3  | 3618.2  | 6151.9  | UVM       |
| St. Albans Boat Launch     | net               | 9/16/2008 | 2 | 1 | 6020.5 | 143.3 |       |       |     |  | 3242.5  | 3242.5  | 9406.4  | UVM       |
| Southeast of Rte 78 Bridge | ww counted as net | 9/7/2008  | 1 | 1 | 25.1   |       | 37.6  |       |     |  | 35238.3 | 35238.3 | 35301.0 | BGA VLNTR |
| Donaldson Point            | ww counted as net | 9/7/2008  | 1 | 1 | 87.7   | 105.2 | 140.3 |       |     |  | 1841.5  | 1841.5  | 2174.7  | BGA VLNTR |
| High Rocks                 | ww counted as net | 9/14/2008 | 1 | 1 | 175.4  | 438.4 | 70.2  |       |     |  | 8576.0  | 8576.0  | 9259.9  | BGA VLNTR |
| Highgate Springs-Shipyard  | ww counted as net | 9/14/2008 | 1 | 1 | 613.8  | 438.4 | 754.1 | 105.2 |     |  | 6401.3  | 6401.3  | 8312.9  | BGA VLNTR |
| Maquam Bay                 | ww counted as net | 9/15/2008 | 1 | 1 | 289.4  | 438.4 | 17.5  | 26.3  |     |  | 438.4   |         | 1210.1  | BGA VLNTR |
| VTDEC Sta34                | net               | 9/11/2008 | 1 | 1 | 75.1   |       | 12.1  |       | 0.9 |  | 629.9   | 572.2   | 718.0   | VT DEC    |
| VTDEC Sta40                | net               | 9/11/2008 | 1 | 1 | 1936.2 | 31.9  | 1.6   |       | 0.3 |  | 3161.2  | 1409.0  | 5131.3  | VT DEC    |
| VTDEC Sta16                | net               | 9/16/2008 | 1 | 1 | 11.8   | 0.9   | 0.5   |       | 0.1 |  | 40.0    | 40.0    | 53.3    | VT DEC    |
| VTDEC Sta19                | net               | 9/16/2008 | 1 | 1 | 145.7  | 3.1   | 0.7   | 0.2   | 0.3 |  | 283.3   | 144.8   | 433.2   | VT DEC    |
| VTDEC Sta21                | net               | 9/16/2008 | 1 | 1 | 26.1   | 1.0   | 0.0   |       | 0.2 |  | 115.2   | 81.0    | 142.5   | VT DEC    |
| Rte 78 Access              | net               | 9/22/2008 | 1 | 1 | 261.4  | 4.1   | 0.7   |       | 0.3 |  | 2353.1  | 2353.1  | 2619.7  | UVM       |
| Rte 78 Access              | net               | 9/22/2008 | 2 | 1 | 640.4  | 27.3  |       |       |     |  | 2241.8  | 2241.8  | 2909.6  | UVM       |
| Alburgh                    | net               | 9/22/2008 | 1 | 1 | 64.5   | 9.8   | 0.2   |       |     |  | 711.6   | 711.6   | 786.1   | UVM       |
| Alburgh                    | net               | 9/22/2008 | 2 | 1 | 76.5   | 7.2   |       |       |     |  | 344.3   | 344.3   | 428.0   | UVM       |
| Highgate Cliffs            | net               | 9/22/2008 | 1 | 1 | 920.3  | 26.0  | 1.4   |       |     |  | 2215.5  | 2215.5  | 3163.3  | UVM       |
| Highgate Cliffs            | net               | 9/22/2008 | 2 | 1 | 1842.4 |       | 0.9   |       |     |  | 3436.7  | 3436.7  | 5279.9  | UVM       |
| Highgate Springs           | net               | 9/22/2008 | 1 | 1 | 486.9  | 7.5   |       |       |     |  | 1846.8  | 1846.8  | 2341.2  | UVM       |
| Highgate Springs           | net               | 9/22/2008 | 2 | 1 | 1786.9 | 77.8  |       | 1.5   |     |  | 1888.6  | 1888.6  | 3754.8  | UVM       |

|                            |                   |           |   |   |        |       |        |       |     |  |         |         |         |           |
|----------------------------|-------------------|-----------|---|---|--------|-------|--------|-------|-----|--|---------|---------|---------|-----------|
| Rock River Access          | ww counted as net | 9/22/2008 | 1 | 1 | 131.5  | 23.9  | 1853.4 |       |     |  | 1195.8  | 1195.8  | 3204.6  | UVM       |
| Rock River Access          | ww counted as net | 9/22/2008 | 2 | 1 |        | 570.0 | 1556.5 |       |     |  | 3288.3  | 3288.3  | 5414.8  | UVM       |
| St. Albans Boat Launch     | net               | 9/22/2008 | 1 | 1 | 557.4  | 11.0  | 0.3    |       | 0.6 |  | 859.5   | 844.7   | 1428.7  | UVM       |
| St. Albans Boat Launch     | net               | 9/22/2008 | 2 | 1 | 1486.6 | 39.0  | 1.0    | 1.8   | 0.3 |  | 893.4   | 854.3   | 2422.2  | UVM       |
| Highgate Springs-Shipyard  | ww counted as net | 9/21/2008 | 1 | 1 | 1236.4 |       | 52.6   |       |     |  | 1753.8  | 1753.8  | 3042.8  | BGA VLNTR |
| Donaldson Point            | ww counted as net | 9/21/2008 | 1 | 1 | 944.6  |       | 95.7   |       |     |  | 4185.1  | 4185.1  | 5225.4  | BGA VLNTR |
| Southeast of Rte 78 Bridge | ww counted as net | 9/21/2008 | 1 | 1 |        |       | 80.9   | 141.7 |     |  | 2934.2  | 2934.2  | 3156.8  | BGA VLNTR |
| VTDEC Sta50                | net               | 9/17/2008 | 1 | 1 | 59.8   | 6.3   | 0.7    |       |     |  | 482.3   | 482.3   | 549.1   | VT DEC    |
| VTDEC Sta51                | net               | 9/17/2008 | 1 | 1 | 13.5   | 0.5   | 0.0    |       |     |  | 72.2    | 72.2    | 86.2    | VT DEC    |
| VTDEC Sta25                | net               | 9/18/2008 | 1 | 1 | 82.0   | 0.0   | 0.5    | 0.0   |     |  | 4.1     | 4.1     | 86.7    | VT DEC    |
| VTDEC Sta46                | net               | 9/19/2008 | 1 | 1 | 8.6    |       | 0.0    |       |     |  | 31.3    | 31.3    | 39.9    | VT DEC    |
| VTDEC Sta33                | net               | 9/22/2008 | 1 | 1 | 33.8   | 0.7   | 0.2    | 0.0   | 0.0 |  | 71.0    | 71.0    | 105.8   | VT DEC    |
| VTDEC Sta36                | net               | 9/22/2008 | 1 | 1 | 19.1   |       | 0.9    |       |     |  | 100.9   | 100.9   | 120.8   | VT DEC    |
| Rte 78 Access              | net               | 9/29/2008 | 1 | 1 | 300.7  |       | 1.6    |       |     |  | 7613.9  | 7613.9  | 7916.1  | UVM       |
| Rte 78 Access              | net               | 9/29/2008 | 2 | 1 | 1253.1 | 60.8  |        |       |     |  | 6402.9  | 6402.9  | 7716.8  | UVM       |
| Alburgh                    | net               | 9/29/2008 | 1 | 1 | 441.8  |       |        |       |     |  | 762.2   | 762.2   | 1204.0  | UVM       |
| Alburgh                    | net               | 9/29/2008 | 2 | 1 | 784.6  | 41.9  | 2.7    |       |     |  | 984.9   | 984.9   | 1814.1  | UVM       |
| Highgate Cliffs            | net               | 9/29/2008 | 1 | 1 | 1124.1 | 76.7  |        |       |     |  | 1787.9  | 1787.9  | 2988.8  | UVM       |
| Highgate Cliffs            | net               | 9/29/2008 | 2 | 1 | 1635.4 | 47.8  |        |       |     |  | 3374.0  | 3374.0  | 5057.2  | UVM       |
| Highgate Springs           | net               | 9/29/2008 | 1 | 1 | 1291.2 | 173.3 |        |       |     |  | 8087.3  | 8087.3  | 9551.8  | UVM       |
| Highgate Springs           | net               | 9/29/2008 | 2 | 1 | 4554.9 |       |        |       |     |  | 16292.0 | 16292.0 | 20846.9 | UVM       |

|                            |                   |           |   |   |        |      |       |       |     |         |         |         |           |
|----------------------------|-------------------|-----------|---|---|--------|------|-------|-------|-----|---------|---------|---------|-----------|
| Southeast of Rte 78 Bridge | ww counted as net | 9/28/2008 | 1 | 1 | 1262.7 |      | 42.1  |       |     |         |         | 1304.8  | BGA VLNTR |
| Donaldson Point            | ww counted as net | 9/28/2008 | 1 | 1 | 420.9  |      | 21.0  |       |     | 21097.9 | 21097.9 | 21539.8 | BGA VLNTR |
| Highgate Springs-Shipyard  | ww counted as net | 9/28/2008 | 1 | 1 | 315.7  |      | 21.0  | 31.6  |     | 5398.1  | 5398.1  | 5766.4  | BGA VLNTR |
| High Rocks                 | ww counted as net | 9/22/2008 | 1 | 1 | 2315.0 |      | 189.4 | 168.4 |     | 4893.0  | 4893.0  | 7565.8  | BGA VLNTR |
| VTDEC Sta02                | net               | 9/23/2008 | 1 | 1 | 145.3  | 51.1 | 116.4 |       | 0.6 | 158.9   | 158.9   | 472.2   | VT DEC    |
| VTDEC Sta04                | net               | 9/23/2008 | 1 | 1 | 925.2  |      |       |       |     | 176.2   | 176.2   | 1101.4  | VT DEC    |
| VTDEC Sta07                | net               | 9/25/2008 | 1 | 1 | 269.6  | 3.9  | 0.5   |       | 0.2 | 89.5    | 89.5    | 363.7   | VT DEC    |
| VTDEC Sta09                | net               | 9/25/2008 | 1 | 1 | 101.8  |      | 0.4   |       | 0.6 | 233.5   | 233.5   | 336.3   | VT DEC    |
| VTDEC Sta34                | net               | 9/26/2008 | 1 | 1 | 372.9  | 11.7 | 10.1  |       | 0.4 | 586.8   | 586.8   | 981.9   | VT DEC    |
| VTDEC Sta40                | net               | 9/26/2008 | 1 | 1 | 602.0  | 15.9 | 1.6   |       | 0.8 | 654.1   | 654.1   | 1274.4  | VT DEC    |
| VTDEC Sta16                | net               | 9/29/2008 | 1 | 1 | 148.2  | 12.6 | 2.2   |       |     | 157.5   | 70.6    | 320.4   | VT DEC    |
| VTDEC Sta19                | net               | 9/29/2008 | 1 | 1 | 50.1   | 1.9  | 1.5   |       | 0.0 | 70.8    | 43.5    | 124.2   | VT DEC    |
| VTDEC Sta21                | net               | 9/29/2008 | 1 | 1 | 52.6   | 1.9  | 0.0   |       | 0.0 | 8.2     | 8.2     | 62.7    | VT DEC    |
| Rte 78 Access              | net               | 10/7/2008 | 1 | 1 | 582.1  |      |       |       |     | 9806.5  | 9806.5  | 10388.6 | UVM       |
| Rte 78 Access              | net               | 10/7/2008 | 2 | 1 | 429.0  |      |       |       |     | 11837.6 | 11837.6 | 12266.6 | UVM       |
| Alburgh                    | net               | 10/7/2008 | 1 | 1 | 404.9  | 6.0  | 1.3   |       |     | 107.8   | 107.8   | 520.0   | UVM       |
| Alburgh                    | net               | 10/7/2008 | 2 | 1 | 229.1  | 2.6  | 1.6   |       |     | 538.7   | 538.7   | 772.0   | UVM       |
| Highgate Cliffs            | net               | 10/7/2008 | 1 | 1 | 459.2  | 14.7 | 0.6   |       |     | 2280.5  | 2280.5  | 2755.0  | UVM       |
| Highgate Cliffs            | net               | 10/7/2008 | 2 | 1 | 475.2  |      |       |       |     | 2748.9  | 2748.9  | 3224.1  | UVM       |
| Highgate Springs           | net               | 10/7/2008 | 1 | 1 | 192.6  |      |       |       |     | 2491.6  | 2491.6  | 2684.2  | UVM       |
| Highgate Springs           | net               | 10/7/2008 | 2 | 1 | 191.0  | 31.4 |       |       |     | 1793.7  | 1793.7  | 2016.1  | UVM       |
| Rock River Access          | ww counted as net | 10/7/2008 | 1 | 1 | 10.5   |      | 115.7 | 73.7  |     | 526.1   | 526.1   | 726.1   | UVM       |

|                        |                   |            |   |   |        |      |        |     |     |  |         |         |         |        |
|------------------------|-------------------|------------|---|---|--------|------|--------|-----|-----|--|---------|---------|---------|--------|
| Rock River Access      | ww counted as net | 10/7/2008  | 2 | 1 | 17.5   | 8.8  | 1210.1 |     |     |  | 1210.1  | 1210.1  | 2446.5  | UVM    |
| St. Albans Boat Launch | net               | 10/7/2008  | 1 | 1 | 624.3  | 9.1  | 0.3    | 1.2 |     |  | 267.3   | 267.3   | 902.2   | UVM    |
| St. Albans Boat Launch | net               | 10/7/2008  | 2 | 1 | 134.6  | 0.3  | 9.1    | 0.1 |     |  | 278.0   | 129.4   | 422.1   | UVM    |
| VTDEC Sta50            | net               | 10/7/2008  | 1 | 1 | 394.5  |      |        |     |     |  | 802.4   | 802.4   | 1196.9  | VT DEC |
| VTDEC Sta25            | net               | 10/7/2008  | 1 | 1 | 74.5   | 0.4  | 0.6    | 3.6 |     |  | 61.8    | 61.8    | 141.0   | VT DEC |
| VTDEC Sta51            | net               | 10/7/2008  | 1 | 1 | 1160.9 |      |        |     |     |  | 1730.7  | 1730.7  | 2891.5  | VT DEC |
| Rte 78 Access          | net               | 10/13/2008 | 1 | 1 | 60.8   |      | 0.8    | 0.4 |     |  | 42.0    | 42.0    | 104.0   | UVM    |
| Rte 78 Access          | net               | 10/13/2008 | 2 | 1 | 57.5   |      | 2.6    |     |     |  | 78.2    | 78.2    | 138.3   | UVM    |
| Alburgh                | net               | 10/13/2008 | 1 | 1 | 39.0   | 1.6  |        |     |     |  | 156.3   | 156.3   | 196.9   | UVM    |
| Alburgh                | net               | 10/13/2008 | 2 | 1 |        |      | 1.9    |     |     |  | 14.2    | 14.2    | 16.1    | UVM    |
| Highgate Cliffs        | net               | 10/13/2008 | 1 | 1 | 20.1   | 5.2  | 0.3    |     |     |  | 105.5   | 105.5   | 131.1   | UVM    |
| Highgate Cliffs        | net               | 10/13/2008 | 2 | 1 | 144.1  | 13.4 | 0.1    | 0.1 |     |  | 166.5   | 166.5   | 324.2   | UVM    |
| Highgate Springs       | net               | 10/13/2008 | 1 | 1 | 30.3   | 6.1  | 2.6    |     |     |  | 247.4   | 247.4   | 286.5   | UVM    |
| Highgate Springs       | net               | 10/13/2008 | 2 | 1 | 14.7   | 0.1  | 0.7    |     | 0.1 |  | 154.1   | 154.1   | 169.6   | UVM    |
| Melo Boat Slip         | net               | 10/10/2008 | 1 | 1 | 28.5   | 23.7 |        |     |     |  | 19262.8 | 19262.8 | 19315.0 | UVM    |
| Rte 78 Access          | net               | 10/27/2008 | 1 | 1 | 15.9   | 0.1  | 2.8    | 0.5 |     |  | 39.7    | 39.7    | 58.9    | UVM    |
| Rte 78 Access          | net               | 10/27/2008 | 2 | 1 | 14.8   | 2.9  | 3.6    | 2.2 |     |  | 60.2    | 60.2    | 83.6    | UVM    |
| Alburgh                | net               | 10/27/2008 | 1 | 1 | 8.6    | 1.6  | 1.1    | 1.9 |     |  | 30.4    | 30.4    | 43.6    | UVM    |
| Alburgh                | net               | 10/27/2008 | 2 | 1 | 15.0   |      | 6.6    | 3.6 |     |  | 12.2    | 12.2    | 37.3    | UVM    |
| Highgate Cliffs        | net               | 10/27/2008 | 1 | 1 | 7.4    | 0.5  | 3.3    | 0.2 |     |  | 38.5    | 38.5    | 49.9    | UVM    |
| Highgate Cliffs        | net               | 10/27/2008 | 2 | 1 | 10.6   | 0.4  | 3.3    | 0.2 |     |  | 59.3    | 59.3    | 73.8    | UVM    |
| Highgate Springs       | net               | 10/27/2008 | 1 | 1 | 0.9    |      | 6.0    | 0.0 |     |  | 7.0     | 7.0     | 13.9    | UVM    |
| Highgate Springs       | net               | 10/27/2008 | 2 | 1 | 100.8  |      | 11.1   |     |     |  | 1.6     | 1.6     | 113.5   | UVM    |
| Rock River Access      | ww counted as net | 10/27/2008 | 1 | 1 | 8.8    |      |        |     |     |  |         |         | 8.8     | UVM    |
| Rock River Access      | ww counted as net | 10/27/2008 | 2 | 1 | 8.8    |      | 534.9  |     |     |  |         |         | 543.7   | UVM    |

|                        |     |            |   |   |     |     |     |  |  |  |  |  |     |     |
|------------------------|-----|------------|---|---|-----|-----|-----|--|--|--|--|--|-----|-----|
| St. Albans Boat Launch | net | 10/27/2008 | 1 | 1 | 6.2 | 0.2 | 0.2 |  |  |  |  |  | 6.7 | UVM |
| St. Albans Boat Launch | net | 10/27/2008 | 2 | 1 | 6.0 | 1.1 | 0.3 |  |  |  |  |  | 7.4 | UVM |

### Appendix C. Results of Toxin Analyses – Data Summary 2008

| Collection Date | Sample Location            | Rep | Microcystin by ELISA<br>(analyzed by UVM) |                  | Anatoxin-a by HPLC<br>(analyzed by VDH) |                                |                  |
|-----------------|----------------------------|-----|---|------------------|---|--------------------------------|------------------|
|                 |                            |     | Conc. In<br>Lakewater<br>(µg/L)           | Analysis<br>Date | Less than<br>Reportable<br>Limit        | Reportable<br>Limit<br>(ng/mL) | Date<br>Reported |
| 07/21/08        | Willsboro Bay              | 1   | 0.025                                     | 07/24/08         | X                                       | 0.0025                         | 07/28/08         |
| 07/21/08        | St. Albans Bay Park        | 1   | 0.031                                     | 07/24/08         |   |                                |                  |
| 07/29/08        | Rte 78 Access              | 1   | 0.249                                     | 07/31/08         |   |                                |                  |
| 07/29/08        | Rte 78 Access              | 2   | 0.276                                     | 07/31/08         |   |                                |                  |
| 07/29/08        | Highgate Cliffs            | 1   | 0.487                                     | 07/31/08         |   |                                |                  |
| 07/30/08        | Southeast of Rte 78 Bridge | 1   | 3.623                                     | 07/31/08         |   |                                |                  |
| 08/04/08        | High Rocks                 | 1   | 1.068                                     | 08/07/08         | X                                       | 0.025                          | 08/08/08         |
| 08/05/08        | Highgate Cliffs            | 1   | 4.243                                     | 08/07/08         | X                                       | 0.05                           | 08/08/08         |
| 08/05/08        | Highgate Cliffs            | 2   | 2.216                                     | 08/07/08         |   |                                |                  |
| 08/05/08        | Highgate Springs           | 1   | 0.167                                     | 08/07/08         | X                                       | 0.01                           | 08/08/08         |
| 08/05/08        | Highgate Springs           | 2   | 0.149                                     | 08/07/08         |   |                                |                  |
| 08/05/08        | St. Albans Boat Launch     | 1   | 0.018                                     | 08/07/08         |   |                                |                  |
| 08/05/08        | St. Albans Boat Launch     | 2   | 0.026                                     | 08/07/08         |   |                                |                  |
| 08/05/08        | Donaldson Point            | 1   | 0.145                                     | 08/07/08         |   |                                |                  |
| 08/05/08        | Southeast of Rte 78 Bridge | 1   | 5.816                                     | 08/07/08         | X                                       | 0.025                          | 08/08/08         |
| 08/08/08        | North Hero State Park      | 1   | 0.511                                     | 08/07/08         | X                                       | 0.025                          | 08/08/08         |
| 08/10/08        | North Hero State Park      | 1   | 0.032                                     | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/10/08        | Donaldson Point            | 1   | 0.166                                     | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/10/08        | Chapman Bay                | 1   | 0.164                                     | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/10/08        | Highgate Springs- Shipyard | 1   | 0.722                                     | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/10/08        | Southeast of Rte 78 Bridge | 1   | 2.255                                     | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/11/08        | High Rocks                 | 1   | 0.663                                     | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/11/08        | St. Albans Bay Park        | 1   | 0.04                                      | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/12/08        | Rte 78 Access- shore       | 1   | 7.678                                     | 08/14/08         | X                                       | 0.00125                        | 08/18/08         |
| 08/12/08        | Rte 78 Access- shore       | 2   | 12.62                                     | 08/14/08         |   |                                |                  |
| 08/12/08        | Highgate Springs- Shipyard | 1   | 7.818                                     | 08/14/08         | X                                       | 0.0025                         | 08/18/08         |
| 08/12/08        | Highgate Springs- Shipyard | 2   | 3.143                                     | 08/14/08         |   |                                |                  |

|          |                             |   |        |          |   |         |          |
|----------|-----------------------------|---|--------|----------|---|---------|----------|
| 08/12/08 | St. Albans Boat Launch      | 1 | 0.025  | 08/14/08 | X | 0.00125 | 08/18/08 |
| 08/12/08 | St. Albans Boat Launch      | 2 | 0.019  | 08/14/08 |   |         |          |
| 08/14/08 | 1 mile north of Sta 40      | 1 |        |          | X | 0.01    | 08/26/08 |
| 08/17/08 | Highgate Springs- Shipyard  | 1 | 0.801  | 08/21/08 | X | 0.01    | 08/26/08 |
| 08/18/08 | High Rocks                  | 1 | 2.903  | 08/21/08 | X | 0.01    | 08/26/08 |
| 08/18/08 | Southeast of Rte 78 Bridge  | 1 | 0.717  | 08/21/08 | X | 0.01    | 08/26/08 |
| 08/18/08 | St. Albans Bay Park         | 1 | 0.081  | 08/21/08 | X | 0.01    | 08/26/08 |
| 08/18/08 | Donaldson Point             | 1 | 0.785  | 08/21/08 | X | 0.01    | 08/26/08 |
| 08/18/08 | Maquam Bay                  | 1 | 0.079  | 08/21/08 | X | 0.01    | 08/26/08 |
| 08/19/08 | Highgate Cliffs             | 1 | 8.417  | 08/21/08 |   |         |          |
| 08/19/08 | Highgate Cliffs             | 2 | 6.805  | 08/21/08 |   |         |          |
| 08/19/08 | Rock River Access           | 1 | 66.078 | 08/21/08 | X | 0.022   | 08/26/08 |
| 08/19/08 | Rock River Access           | 2 | 59.573 | 10/23/08 |   |         |          |
| 08/20/08 | Rte 78 Access               | 1 | 2.346  | 08/21/08 | X | 0.0077  | 08/26/08 |
| 08/20/08 | Rte 78 Access               | 2 | 3.794  | 08/21/08 |   |         |          |
| 08/20/08 | Alburgh                     | 1 | 0.342  | 10/23/08 | X | 0.0028  | 08/26/08 |
| 08/20/08 | Alburgh                     | 2 | 0.262  | 08/21/08 |   |         |          |
| 08/20/08 | Highgate Springs            | 1 | 6.048  | 08/21/08 | X | 0.0067  | 08/26/08 |
| 08/20/08 | Highgate Springs            | 2 | 5.651  | 08/21/08 |   |         |          |
| 08/20/08 | Rte 78 - surface grab       | 1 | 2.979  | 08/21/08 | X | 0.013   | 08/26/08 |
| 08/20/08 | Vicinity of Highgate Cliffs | 1 | 51.99  | 08/21/08 | X | 0.015   | 08/26/08 |
| 08/24/08 | Donaldson Point             | 1 | 0.842  | 08/28/08 | X | 0.0025  | 09/15/08 |
| 08/24/08 | Southeast of Rte 78 Bridge  | 1 | 1.692  | 08/28/08 | X | 0.0025  | 09/15/08 |
| 08/25/08 | High Rocks                  | 1 | 9.351  | 08/28/08 | X | 0.0025  | 09/15/08 |
| 08/26/08 | Rte 78 Access               | 1 | 4.758  | 08/28/08 |   |         |          |
| 08/26/08 | Rte 78 Access               | 2 | 4.462  | 08/28/08 |   |         |          |
| 08/26/08 | Alburgh                     | 1 | 0.592  | 08/28/08 |   |         |          |
| 08/26/08 | Alburgh                     | 2 | 0.898  | 08/28/08 |   |         |          |
| 08/26/08 | Highgate Cliffs             | 1 | 13.365 | 08/28/08 |   |         |          |
| 08/26/08 | Highgate Cliffs             | 2 | 13.487 | 08/28/08 |   |         |          |
| 08/26/08 | Highgate Springs            | 1 | 9.842  | 08/28/08 |   |         |          |
| 08/26/08 | Highgate Springs            | 2 | 11.365 | 08/28/08 |   |         |          |
| 08/26/08 | Rock River Access           | 1 | 56.544 | 08/28/08 |   |         |          |
| 08/26/08 | Rock River Access           | 2 | 42.321 | 08/28/08 |   |         |          |
| 08/26/08 | St. Albans Bay Park         | 1 | 0.123  | 08/28/08 | X | 0.0025  | 09/15/08 |

|          |                            |   |        |          |   |        |          |
|----------|----------------------------|---|--------|----------|---|--------|----------|
| 08/31/08 | Chapman Bay                | 1 | 0.259  | 09/04/08 | X | 0.0025 | 09/15/08 |
| 08/31/08 | Highgate Springs- Shipyard | 1 | 2.762  | 09/04/08 |   |        |          |
| 09/01/08 | Donaldson Point            | 1 | 4.603  | 10/23/08 | X | 0.0025 | 09/15/08 |
| 09/01/08 | Southeast of Rte 78 Bridge | 1 | 1.098  | 10/23/08 | X | 0.0025 | 09/15/08 |
| 09/01/08 | Highgate Springs- Shipyard | 1 | 94.575 | 09/04/08 | X | 0.0025 | 09/15/08 |
| 09/01/08 | High Rocks                 | 1 | 71.981 | 10/23/08 | X | 0.0025 | 09/15/08 |
| 09/02/08 | Rte 78 Access              | 1 | 1.238  | 09/04/08 | X | 0.0016 | 09/15/08 |
| 09/02/08 | Rte 78 Access              | 2 | 1.51   | 09/04/08 |   |        |          |
| 09/02/08 | Alburgh                    | 1 | 4.189  | 09/04/08 | X | 0.0016 | 09/15/08 |
| 09/02/08 | Alburgh                    | 2 | 2.561  | 09/04/08 |   |        |          |
| 09/02/08 | Highgate Cliffs            | 1 | 5.763  | 09/04/08 | X | 0.0019 | 09/15/08 |
| 09/02/08 | Highgate Cliffs            | 2 | 5.605  | 09/04/08 |   |        |          |
| 09/02/08 | Highgate Springs           | 1 | 4.285  | 09/04/08 | X | 0.0015 | 09/15/08 |
| 09/02/08 | Highgate Springs           | 2 | 4.32   | 09/04/08 |   |        |          |
| 09/02/08 | Rock River Access          | 1 | 5.699  | 09/04/08 | X | 0.0019 | 09/15/08 |
| 09/02/08 | Rock River Access          | 2 | 6.324  | 09/04/08 |   |        |          |
| 09/02/08 | St. Albans Boat Launch     | 1 | 0.054  | 11/05/08 | X | 0.0018 | 09/15/08 |
| 09/02/08 | St. Albans Boat Launch     | 2 | 0.041  | 11/05/08 |   |        |          |
| 09/02/08 | Red Rocks Beach shoreline  | 1 | 1.488  | 10/23/08 | X | 0.0025 | 09/15/08 |
| 09/02/08 | Dunham Bay                 | 1 | 22.497 | 09/04/08 |   |        |          |
| 09/07/08 | Southeast of Rte 78 Bridge | 1 | 1.084  | 09/18/08 |   |        |          |
| 09/08/08 | Rte 78 Access              | 1 | 1.304  | 09/11/08 |   |        |          |
| 09/08/08 | Rte 78 Access              | 2 | 1.118  | 09/11/08 |   |        |          |
| 09/08/08 | Alburgh                    | 1 | 1.457  | 09/11/08 |   |        |          |
| 09/08/08 | Alburgh                    | 2 | 1.324  | 09/11/08 |   |        |          |
| 09/08/08 | Highgate Cliffs            | 1 | 3.07   | 09/11/08 |   |        |          |
| 09/08/08 | Highgate Cliffs            | 2 | 2.477  | 09/11/08 |   |        |          |
| 09/14/08 | High Rocks                 | 1 | 2.059  | 10/23/08 |   |        |          |
| 09/14/08 | Highgate Springs- Shipyard | 1 | 0.685  | 09/18/08 |   |        |          |
| 09/16/08 | Rock River Access          | 1 | 4.365  | 09/18/08 |   |        |          |
| 09/16/08 | Rock River Access          | 2 | 6.106  | 09/18/08 |   |        |          |
| 09/21/08 | Donaldson Point            | 1 | 0.904  | 10/23/08 |   |        |          |
| 09/22/08 | High Rocks                 | 1 | 1.543  | 11/05/08 |   |        |          |
| 09/28/08 | Donaldson Point            | 1 | 0.834  | 10/02/08 |   |        |          |
| 09/28/08 | Highgate Springs- Shipyard | 1 | 0.894  | 10/02/08 |   |        |          |

|          |                  |   |       |          |  |  |  |
|----------|------------------|---|-------|----------|--|--|--|
| 09/29/08 | Rte 78 Access    | 1 | 0.263 | 10/02/08 |  |  |  |
| 09/29/08 | Rte 78 Access    | 2 | 0.296 | 10/02/08 |  |  |  |
| 09/29/08 | Highgate Springs | 1 | 0.419 | 10/02/08 |  |  |  |
| 09/29/08 | Highgate Springs | 2 | 0.361 | 10/02/08 |  |  |  |
| 10/07/08 | Rte 78 Access    | 1 | 0.063 | 10/09/08 |  |  |  |
| 10/07/08 | Rte 78 Access    | 2 | 0.055 | 10/09/08 |  |  |  |
| 10/10/08 | Melo Boat Slip   | 1 | 0.474 | 10/23/08 |  |  |  |

## Appendix D. Chlorophyll, Total Phosphorus and Total Nitrogen Data Summary, 2008

| Date      | Location                  | Time     | Rep | Chlorophyll $\alpha$<br>( $\mu\text{g/L}$ ) | TN<br>( $\text{mg/L}$ ) | TP<br>( $\mu\text{g/L}$ ) |
|-----------|---------------------------|----------|-----|---|-------------------------|---------------------------|
| 6/1/2008  | Rte 78 Access             | 10:44 AM | 1   | 9.166                                       | 0.58                    | 25.6                      |
| 6/3/2008  | Rte 78 Access             | 10:45 AM | 1   | 2.292                                       | 0.47                    | 26.39                     |
| 6/3/2008  | Rte 78 Access             | 10:45 AM | 2   | 2.578                                       | 0.3                     | 25.27                     |
| 6/3/2008  | Alburgh                   | 10:30 AM | 1   | 4.583                                       | 0.36                    | 34.29                     |
| 6/3/2008  | Alburgh                   | 10:30 AM | 2   | 4.297                                       | 0.27                    | 33.88                     |
| 6/3/2008  | Highgate Cliffs           | 10:10 AM | 1   | 12.603                                      | 0.38                    | 30.3                      |
| 6/3/2008  | Highgate Cliffs           | 10:10 AM | 2   | 13.176                                      | 0.3                     | 31.05                     |
| 6/3/2008  | Highgate Springs          | 10:00 AM | 1   | 12.317                                      | 0.55                    | 32.61                     |
| 6/3/2008  | Highgate Springs          | 10:00 AM | 2   | 13.176                                      | 0.37                    | 29.66                     |
| 6/3/2008  | Rock River Access         | 11:20 AM | 1   | 10.694                                      | 3.42                    | 97.18                     |
| 6/3/2008  | Rock River Access         | 11:20 AM | 2   | 10.694                                      | 3.28                    | 99.28                     |
| 6/3/2008  | St. Albans Boat Launch    | 11:55 AM | 1   | 5.156                                       | 0.39                    | 20.08                     |
| 6/3/2008  | St. Albans Boat Launch    | 11:55 AM | 2   | 4.869                                       | 0.36                    | 17.6                      |
| 6/9/2008  | North Beach shoreline     | 10:00 AM | 1   | 1.844                                       | 0.76                    | 11.14                     |
| 6/9/2008  | North Beach shoreline     | 10:00 AM | 2   | 1.782                                       | 0.66                    | 10.94                     |
| 6/9/2008  | Red Rocks Beach shoreline | 10:30 AM | 1   | 1.782                                       | 0.48                    | 9.53                      |
| 6/9/2008  | Red Rocks Beach shoreline | 10:30 AM | 2   | 0.764                                       | 0.58                    | 937.85                    |
| 6/17/2008 | Rte 78 Access             | 10:50 AM | 1   | 3.055                                       | 0.74                    | 29.09                     |
| 6/17/2008 | Rte 78 Access             | 10:50 AM | 2   | 4.074                                       | 0.69                    | 28.42                     |
| 6/17/2008 | Alburgh                   | 10:34 AM | 1   | 3.055                                       | 0.73                    | 23.04                     |
| 6/17/2008 | Alburgh                   | 10:34 AM | 2   | 3.31  | 0.79                    | 25.6                      |
| 6/17/2008 | Highgate Cliffs           | 10:09 AM | 1   | 23.297                                      | 1.04                    | 42.29                     |
| 6/17/2008 | Highgate Cliffs           | 10:09 AM | 2   | 21.769                                      | 0.98                    | 36.51                     |
| 6/17/2008 | Highgate Springs          | 10:00 AM | 1   | 35.518                                      | 1.35                    | 46.51                     |
| 6/17/2008 | Highgate Springs          | 10:00 AM | 2   | 37.046                                      | 1.09                    | 50.59                     |
| 6/17/2008 | Rock River Access         | 11:50 AM | 1   | 4.583                                       | 2.08                    | 56.48                     |
| 6/17/2008 | Rock River Access         | 11:50 AM | 2   | 3.666                                       | 2.01                    | 58.66                     |
| 6/17/2008 | St. Albans Boat Launch    | 12:18 PM | 1   | 7.256                                       | 0.46                    | 24.06                     |
| 6/17/2008 | St. Albans Boat Launch    | 12:18 PM | 2   | 11.076                                      | 0.36                    | 24.5                      |
| 6/23/2008 | North Beach shoreline     | 10:50 AM | 1   | 5.442                                       | 0.83                    | 30.24                     |
| 6/23/2008 | North Beach shoreline     | 10:50 AM | 2   | 4.297                                       | 0.56                    | 21.74                     |

|           |                            |          |   |        |      |       |
|-----------|----------------------------|----------|---|--------|------|-------|
| 6/23/2008 | Red Rocks Beach shoreline  | 10:15 AM | 1 | 57.044 | 0.81 | 23.67 |
| 6/23/2008 | Red Rocks Beach shoreline  | 10:15 AM | 2 | 16.957 | 0.58 | 17.62 |
| 6/29/2008 | North Hero State Park      | 2:00 AM  | 1 | 3.437  |      |       |
| 6/29/2008 | Long Point                 | 1:50 AM  | 1 | 1.146  |      |       |
| 6/29/2008 | Campbell Bay               | 12:30 PM | 1 | 21.769 |      |       |
| 6/29/2008 | Chapman Bay                | 11:00 AM | 1 | 6.875  |      |       |
| 6/29/2008 | Highgate Springs- Shipyard | 2:00 PM  | 1 | 12.603 |      |       |
| 6/30/2008 | Beggs Park                 | 11:30 AM | 1 | 2.292  |      |       |
| 6/30/2008 | Rouses Point               | 10:45 AM | 1 | 5.729  |      |       |
| 6/30/2008 | Pelots Bay                 | 10:00 AM | 1 | 1.146  |      |       |
| 6/30/2008 | City Bay                   | 11:30 AM | 1 | 3.437  |      |       |
| 6/30/2008 | Carry Bay                  | 10:00 AM | 1 | 13.749 |      |       |
| 6/30/2008 | North Beach shoreline      | 1:00 PM  | 1 | 4.583  |      |       |
| 6/30/2008 | Red Rocks Beach shoreline  | 1:50 PM  | 1 | 2.292  |      |       |
| 6/30/2008 | Maquam Bay                 | 2:10 PM  | 1 | 1.146  |      |       |
| 6/30/2008 | High Rocks                 | 10:15 AM | 1 | 17.186 |      |       |
| 7/1/2008  | Rte 78 Access              | 10:44 AM | 2 | 8.784  | 0.63 | 26.95 |
| 7/1/2008  | Alburgh                    | 10:35 AM | 1 | 11.458 | 0.84 | 36.19 |
| 7/1/2008  | Alburgh                    | 10:35 AM | 2 | 12.221 | 0.7  | 36.56 |
| 7/1/2008  | Highgate Cliffs            | 10:15 AM | 1 | 19.86  | 0.91 | 43.71 |
| 7/1/2008  | Highgate Cliffs            | 10:15 AM | 2 | 19.478 | 0.85 | 48.91 |
| 7/1/2008  | Highgate Springs           | 10:00 AM | 1 | 14.131 | 0.76 | 30.22 |
| 7/1/2008  | Highgate Springs           | 10:00 AM | 2 | 14.895 | 0.9  | 31.3  |
| 7/1/2008  | Rock River Access          | 11:30 AM | 1 | 8.784  | 1.14 | 45.21 |
| 7/1/2008  | Rock River Access          | 11:30 AM | 2 | 7.638  | 1.09 | 37.38 |
| 7/1/2008  | St. Albans Boat Launch     | 12:15 PM | 1 | 5.729  | 0.58 | 29.09 |
| 7/1/2008  | St. Albans Boat Launch     | 12:15 PM | 2 | 9.548  | 0.44 | 26.73 |
| 7/1/2008  | North Beach shoreline      | 11:00 AM | 1 | 4.583  | 0.37 | 23.48 |
| 7/6/2008  | Highgate Springs- Shipyard | 11:30 AM | 1 | 11.458 |      |       |
| 7/6/2008  | Long Point                 | 10:10 AM | 1 | 4.583  |      |       |
| 7/6/2008  | Cumberland Bay State Park  | 12:30 PM | 1 | 4.583  |      |       |
| 7/6/2008  | Chapman Bay                | 1:58 AM  | 1 | 2.292  |      |       |
| 7/6/2008  | Littlefield Shore          | 1:00 AM  | 1 | 4.583  |      |       |
| 7/7/2008  | Red Rocks Beach shoreline  | 11:40 AM | 1 | 9.166  | 0.37 | 44.31 |
| 7/7/2008  | High Rocks                 | 9:30 AM  | 1 | 10.312 |      |       |

|           |                            |          |   |        |      |       |
|-----------|----------------------------|----------|---|--------|------|-------|
| 7/7/2008  | City Bay                   | 11:10 AM | 1 | 3.437  |      |       |
| 7/7/2008  | Pelots Bay                 | 12:30 PM | 1 | 2.292  |      |       |
| 7/7/2008  | Carry Bay                  | 10:30 AM | 1 | 6.875  |      |       |
| 7/7/2008  | Beggs Park                 | 11:00 AM | 1 | 2.292  |      |       |
| 7/7/2008  | Willsboro Bay              | 10:00 AM | 1 | 65.308 |      |       |
| 7/7/2008  | Point Au Roche State Park  | 11:49 AM | 1 | 5.729  |      |       |
| 7/7/2008  | Rouses Point               | 12:40 PM | 1 | 3.437  |      |       |
| 7/7/2008  | Maquam Bay                 | 10:15 AM | 1 | 8.02   |      |       |
| 7/7/2008  | St. Albans Bay Park        | 11:30 AM | 1 | 18.332 |      |       |
| 7/13/2008 | Chapman Bay                | 10:02 AM | 1 | 36.664 |      |       |
| 7/13/2008 | Long Point                 | 1:10 PM  | 1 | 2.292  |      |       |
| 7/13/2008 | Littlefield Shore          | 10:45 AM | 1 | 9.166  |      |       |
| 7/13/2008 | Beggs Park                 | 11:30 AM | 1 | 4.583  |      |       |
| 7/13/2008 | Highgate Springs- Shipyard | 11:15 AM | 1 | 12.603 |      |       |
| 7/13/2008 | Donaldson Point            | 12:30 PM | 1 | 8.02   |      |       |
| 7/14/2008 | Rte 78 Access              | 10:45 AM | 1 | 3.437  | 0.58 | 38.26 |
| 7/14/2008 | Rte 78 Access              | 10:45 AM | 2 | 3.437  | 0.62 | 38.32 |
| 7/14/2008 | Alburgh                    | 10:31 AM | 1 | 1.91   | 0.67 | 35.07 |
| 7/14/2008 | Alburgh                    | 10:31 AM | 2 | 1.894  | 0.67 | 31.37 |
| 7/14/2008 | Highgate Cliffs            | 10:14 AM | 1 | 0.382  | 0.88 | 56.27 |
| 7/14/2008 | Highgate Cliffs            | 10:14 AM | 2 | 2.673  | 0.81 | 55.88 |
| 7/14/2008 | Highgate Springs           | 10:00 AM | 1 | 3.437  | 0.9  | 53.54 |
| 7/14/2008 | Highgate Springs           | 10:00 AM | 2 | 3.437  | 1    | 55.88 |
| 7/14/2008 | Rock River Access          | 11:10 AM | 1 | 8.784  | 0.91 | 70.37 |
| 7/14/2008 | Rock River Access          | 11:10 AM | 2 | 10.694 | 0.93 | 73.89 |
| 7/14/2008 | St. Albans Boat Launch     | 12:15 PM | 1 | 4.583  | 0.43 | 22.31 |
| 7/14/2008 | St. Albans Boat Launch     | 12:15 PM | 2 | 4.201  | 1.27 | 22.21 |
| 7/14/2008 | Maquam Bay                 | 10:05 AM | 1 | 2.292  |      |       |
| 7/14/2008 | Willsboro Bay              | 10:00 AM | 1 | 1.146  |      |       |
| 7/14/2008 | Point Au Roche State Park  | 10:10 AM | 1 | 19.478 |      |       |
| 7/14/2008 | Rouses Point               | 11:10 AM | 1 | 2.292  |      |       |
| 7/14/2008 | Carry Bay                  | 11:00 AM | 1 | 4.583  |      |       |
| 7/14/2008 | Pelots Bay                 |          | 1 | 20.624 |      |       |
| 7/14/2008 | City Bay                   | 11:30 AM | 1 | 4.583  |      |       |
| 7/14/2008 | St. Albans Bay Park        | 11:15 AM | 1 | 9.166  |      |       |

|           |                            |          |   |         |      |       |
|-----------|----------------------------|----------|---|---------|------|-------|
| 7/15/2008 | North Beach shoreline      | 10:40 AM | 1 | 9.166   | 0.34 | 18.55 |
| 7/15/2008 | Red Rocks Beach shoreline  | 11:15 AM | 1 | 5.729   | 0.43 | 17.72 |
| 7/20/2008 | Long Point                 | 1:00 PM  | 1 | 3.437   |      |       |
| 7/20/2008 | Littlefield Shore          | 1:30 PM  | 1 | 2.292   |      |       |
| 7/20/2008 | Beggs Park                 | 1:00 PM  | 1 | 3.055   |      |       |
| 7/20/2008 | Highgate Springs- Shipyard | 1:45 AM  | 1 | 6.875   |      |       |
| 7/21/2008 | Point Au Roche State Park  | 10:25 AM | 1 | 387.264 |      |       |
| 7/21/2008 | Rouses Point               | 11:20 AM | 1 | 5.729   |      |       |
| 7/21/2008 | High Rocks                 | 10:30 AM | 1 | 12.603  |      |       |
| 7/21/2008 | Maquam Bay                 | 11:45 AM | 1 | 10.312  |      |       |
| 7/21/2008 | Carry Bay                  | 10:00 AM | 1 | 6.875   |      |       |
| 7/21/2008 | Pelots Bay                 | 10:05 AM | 1 | 4.583   |      |       |
| 7/21/2008 | City Bay                   | 10:50 AM | 1 | 3.437   |      |       |
| 7/21/2008 | North Beach shoreline      | 11:00 AM | 1 | 2.292   | 0.35 |       |
| 7/21/2008 | Red Rocks Beach shoreline  | 10:30 AM | 1 | 0       | 0.43 |       |
| 7/21/2008 | St. Albans Bay Park        | 1:55 AM  | 1 | 16.041  |      |       |
| 7/22/2008 | Donaldson Point            | 11:30 AM | 1 | 3.437   |      |       |
| 7/25/2008 | North Hero State Park      | 2:00 PM  | 1 | 1.146   |      |       |
| 7/27/2008 | Beggs Park                 | 11:00 AM | 1 | 0       |      |       |
| 7/27/2008 | Littlefield Shore          | 1:00 PM  | 1 | 2.292   |      |       |
| 7/27/2008 | Chapman Bay                | 11:40 AM | 1 | 3.437   |      |       |
| 7/27/2008 | Donaldson Point            | 11:30 AM | 1 | 54.996  |      |       |
| 7/27/2008 | Highgate Springs- Shipyard | 1:15 PM  | 1 | 4.583   |      |       |
| 7/27/2008 | High Rocks                 | 1:30 PM  | 1 | 19.478  |      |       |
| 7/27/2008 | Long Point                 | 10:30 AM | 1 | 4.583   |      |       |
| 7/28/2008 | North Beach shoreline      | 12:30 PM | 1 | 8.02    | 0.37 | 30.76 |
| 7/28/2008 | Red Rocks Beach shoreline  | 12:00 PM | 1 | 4.583   | 0.39 | 18.61 |
| 7/28/2008 | Willsboro Bay              | 10:00 AM | 1 | 1.146   |      |       |
| 7/28/2008 | Rouses Point               | 10:50 AM | 1 | 1.146   |      |       |
| 7/28/2008 | City Bay                   | 10:10 AM | 1 | 2.292   |      |       |
| 7/28/2008 | Carry Bay                  | 10:00 AM | 1 | 24.061  |      |       |
| 7/28/2008 | Pelots Bay                 | 10:05 AM | 1 | 4.583   |      |       |
| 7/28/2008 | St. Albans Bay Park        | 11:35 AM | 1 | 14.895  |      |       |
| 7/28/2008 | Maquam Bay                 | 11:20 AM | 1 | 3.437   |      |       |
| 7/29/2008 | Rte 78 Access              | 11:30 AM | 1 | 23.488  | 0.53 | 47.1  |

|           |                            |          |   |         |      |        |
|-----------|----------------------------|----------|---|---------|------|--------|
| 7/29/2008 | Rte 78 Access              | 11:30 AM | 2 | 23.488  | 0.63 | 46.76  |
| 7/29/2008 | Alburgh                    | 11:53 AM | 1 | 5.729   | 0.56 | 30.29  |
| 7/29/2008 | Alburgh                    | 11:53 AM | 2 | 6.302   | 0.61 | 32.46  |
| 7/29/2008 | Highgate Cliffs            | 11:30 AM | 1 | 34.945  | 0.71 | 57.81  |
| 7/29/2008 | Highgate Cliffs            | 11:30 AM | 2 | 30.935  | 0.58 | 73.86  |
| 7/29/2008 | Highgate Springs           | 11:30 AM | 1 | 19.707  | 0.57 | 40.31  |
| 7/29/2008 | Highgate Springs           | 10:00 AM | 2 | 12.374  | 0.57 | 38.38  |
| 7/30/2008 | Rock River Access          | 10:00 AM | 1 | 13.291  | 1.08 | 62.17  |
| 7/30/2008 | Rock River Access          | 10:00 AM | 2 | 11.233  | 1.12 | 56.93  |
| 7/30/2008 | St. Albans Boat Launch     | 10:45 AM | 1 | 10.541  | 0.47 | 19.18  |
| 7/30/2008 | St. Albans Boat Launch     | 10:45 AM | 2 | 6.29    | 0.41 | 21.39  |
| 8/3/2008  | Carry Bay                  | 10:20 AM | 1 | 4.583   |      |        |
| 8/3/2008  | City Bay                   | 10:15 AM | 1 | 2.292   |      |        |
| 8/3/2008  | Beggs Park                 |          | 1 | 6.111   |      |        |
| 8/3/2008  | Littlefield Shore          | 2:00 PM  | 1 | 2.292   |      |        |
| 8/3/2008  | Long Point                 | 1:45 PM  | 1 | 6.875   |      |        |
| 8/3/2008  | Highgate Springs- Shipyard | 1:30 PM  | 1 | 17.186  |      |        |
| 8/4/2008  | Pelots Bay                 |          | 1 | 6.875   |      |        |
| 8/4/2008  | Rouses Point               | 10:30 AM | 1 | 2.292   |      |        |
| 8/4/2008  | Point Au Roche State Park  | 10:12 AM | 1 | 3.437   |      |        |
| 8/4/2008  | Willsboro Bay              | 10:00 AM | 1 | 4.583   |      |        |
| 8/4/2008  | Maquam Bay                 | 12:10 PM | 1 | 1.146   |      |        |
| 8/4/2008  | Chapman Bay                | 10:40 AM | 1 | 2.292   |      |        |
| 8/4/2008  | St. Albans Bay Park        | 10:45 AM | 1 | 16.041  |      |        |
| 8/5/2008  | Rte 78 Access              | 10:50 AM | 1 | 24.634  | 3.38 | 54.27  |
| 8/5/2008  | Rte 78 Access              | 10:50 AM | 2 | 22.915  | 3.28 | 58.79  |
| 8/5/2008  | Alburgh                    | 10:30 AM | 1 | 4.583   | 3.12 | 34.53  |
| 8/5/2008  | Alburgh                    | 10:30 AM | 2 | 4.201   | 3.24 | 34.12  |
| 8/5/2008  | Highgate Cliffs            | 10:15 AM | 1 | 219.984 | 0.97 | 177.53 |
| 8/5/2008  | Highgate Cliffs            | 10:15 AM | 2 | 195.105 | 4.19 | 158.5  |
| 8/5/2008  | Highgate Springs           | 10:00 AM | 1 | 17.759  | 4.64 | 45.18  |
| 8/5/2008  | Highgate Springs           | 10:00 AM | 2 | 16.613  | 3.24 | 41.7   |
| 8/5/2008  | Rock River Access          | 11:30 AM | 1 | 24.634  | 4.73 | 143.92 |
| 8/5/2008  | Rock River Access          | 11:30 AM | 2 | 160.978 | 4.76 | 156.21 |
| 8/5/2008  | St. Albans Boat Launch     | 12:00 PM | 1 | 18.332  | 2.96 | 30.73  |

|           |                            |          |   |        |      |        |
|-----------|----------------------------|----------|---|--------|------|--------|
| 8/5/2008  | St. Albans Boat Launch     | 12:00 PM | 2 | 17.186 | 3.27 | 31.93  |
| 8/5/2008  | North Beach shoreline      | 10:45 AM | 1 | 2.292  | 0.39 | 9.62   |
| 8/5/2008  | Red Rocks Beach shoreline  | 11:12 AM | 1 | 1.146  | 0.36 | 14.33  |
| 8/5/2008  | Donaldson Point            | 11:30 AM | 1 | 8.02   |      |        |
| 8/10/2008 | Carry Bay                  | 2:00 PM  | 1 | 9.395  |      |        |
| 8/10/2008 | Long Point                 | 2:00 PM  | 1 | 9.166  |      |        |
| 8/10/2008 | Littlefield Shore          | 12:00 PM | 1 | 20.624 |      |        |
| 8/10/2008 | Beggs Park                 | 11:00 AM | 1 | 6.111  |      |        |
| 8/11/2008 | North Beach shoreline      | 11:42 AM | 1 | 1.146  | 0.33 | 13.76  |
| 8/11/2008 | Red Rocks Beach shoreline  | 12:27 PM | 1 | 3.437  | 0.31 | 13.31  |
| 8/11/2008 | City Bay                   | 11:20 AM | 1 | 2.292  |      |        |
| 8/11/2008 | Willsboro Bay              | 10:00 AM | 1 | 0      |      |        |
| 8/11/2008 | Point Au Roche State Park  | 10:20 AM | 1 | 2.292  |      |        |
| 8/11/2008 | Rouses Point               | 10:55 AM | 1 | 2.292  |      |        |
| 8/11/2008 | Pelots Bay                 | 10:15 AM | 1 | 5.729  |      |        |
| 8/11/2008 | Maquam Bay                 | 12:16 PM | 1 | 2.292  |      |        |
| 8/12/2008 | Rte 78 Access- shore       | 9:55 AM  | 1 |        | 3.53 | 82.53  |
| 8/12/2008 | Rte 78 Access- shore       | 9:55 AM  | 2 | 62.443 | 3.48 | 86.93  |
| 8/12/2008 | Alburgh - Shore            | 9:45 AM  | 1 | 17.186 | 3.47 | 59.24  |
| 8/12/2008 | Alburgh - Shore            | 9:45 AM  | 2 | 20.051 | 3.1  | 46.3   |
| 8/12/2008 | Highgate Springs- Shipyard | 10:20 AM | 1 | 121.45 | 3.55 | 112.14 |
| 8/12/2008 | Highgate Springs- Shipyard | 10:20 AM | 2 | 47.358 | 3.48 | 106.93 |
| 8/12/2008 | Rock River Access          | 10:40 AM | 1 | 26.734 | 4.66 | 145.59 |
| 8/12/2008 | Rock River Access          | 10:40 AM | 2 | 30.935 | 4.79 | 145.96 |
| 8/12/2008 | St. Albans Boat Launch     | 11:30 AM | 1 |        | 3.19 | 39.51  |
| 8/12/2008 | St. Albans Boat Launch     | 11:30 AM | 2 | 72.182 | 3.09 | 35.7   |
| 8/17/2008 | Long Point                 | 10:00 AM | 1 | 4.583  |      |        |
| 8/17/2008 | Littlefield Shore          | 1:15 PM  | 1 | 2.292  |      |        |
| 8/17/2008 | Beggs Park                 | 11:07 AM | 1 | 1.528  |      |        |
| 8/18/2008 | Red Rocks Beach shoreline  | 11:23 AM | 1 | 3.437  | 0.29 | 932.01 |
| 8/18/2008 | North Beach shoreline      | 12:19 PM | 1 | 82.494 | 0.44 | 45.86  |
| 8/18/2008 | Willsboro Bay              | 10:15 AM | 1 | 1.146  |      |        |
| 8/18/2008 | Point Au Roche State Park  | 8:40 AM  | 1 | 4.583  |      |        |
| 8/18/2008 | Rouses Point               | 11:10 AM | 1 | 2.292  |      |        |
| 8/18/2008 | City Bay                   | 12:45 PM | 1 | 3.437  |      |        |

|           |                            |          |   |         |      |        |
|-----------|----------------------------|----------|---|---------|------|--------|
| 8/18/2008 | Pelots Bay                 |          | 1 | 3.437   |      |        |
| 8/18/2008 | Carry Bay                  | 10:55 AM | 1 | 5.729   |      |        |
| 8/18/2008 | Chapman Bay                | 10:20 AM | 1 | 3.437   |      |        |
| 8/18/2008 | North Hero State Park      | 2:00 PM  | 1 | 10.312  |      |        |
| 8/19/2008 | Highgate Cliffs            | 10:21 AM | 1 | 67.828  |      | 82.22  |
| 8/19/2008 | Highgate Cliffs            | 10:21 AM | 2 | 70.442  | 0.55 | 77.76  |
| 8/19/2008 | Rock River Access          | 10:15 AM | 1 | 245.191 | 3.75 | 415.97 |
| 8/19/2008 | Rock River Access          | 10:15 AM | 2 | 137.49  | 2    | 355.3  |
| 8/19/2008 | St. Albans Boat Launch     | 11:00 AM | 1 | 11.458  | 0.52 | 28.59  |
| 8/19/2008 | St. Albans Boat Launch     | 11:00 AM | 2 | 13.749  | 0.55 | 29.42  |
| 8/20/2008 | Rte 78 Access              | 11:00 AM | 1 |         | 0.64 | 86.52  |
| 8/20/2008 | Rte 78 Access              | 11:00 AM | 2 | 97.95   |      | 87.37  |
| 8/20/2008 | Alburgh                    | 10:40 AM | 1 |         | 0.47 | 36.27  |
| 8/20/2008 | Alburgh                    | 10:40 AM | 2 | 6.455   | 0.54 | 37.2   |
| 8/20/2008 | Highgate Springs           | 10:00 AM | 1 |         | 0.74 | 83.67  |
| 8/20/2008 | Highgate Springs           | 10:00 AM | 2 | 80.203  | 0.62 | 86.68  |
| 8/24/2008 | Littlefield Shore          | 11:00 AM | 1 | 2.292   |      |        |
| 8/24/2008 | Beggs Park                 | 10:00 AM | 1 | 1.528   |      |        |
| 8/24/2008 | Carry Bay                  | 11:00 AM | 1 | 5.729   |      |        |
| 8/24/2008 | Highgate Springs- Shipyard | 2:00 PM  | 1 | 25.207  |      |        |
| 8/25/2008 | Willsboro Bay              | 10:00 AM | 1 | 5.729   |      |        |
| 8/25/2008 | Rouses Point               | 11:10 AM | 1 | 3.437   |      |        |
| 8/25/2008 | Pelots Bay                 | 10:45 AM | 1 | 5.729   |      |        |
| 8/25/2008 | City Bay                   | 11:15 AM | 1 | 2.292   |      |        |
| 8/25/2008 | North Hero State Park      | 10:00 AM | 1 | 2.292   |      |        |
| 8/25/2008 | Chapman Bay                | 10:30 AM | 1 | 11.458  |      |        |
| 8/25/2008 | Maquam Bay                 | 11:13 AM | 1 | 36.664  |      |        |
| 8/26/2008 | Rte 78 Access              | 10:45 AM | 1 | 52.705  | 3.33 | 74.99  |
| 8/26/2008 | Rte 78 Access              | 10:45 AM | 2 | 77.147  | 3.4  | 79.92  |
| 8/26/2008 | Alburgh                    | 10:30 AM | 1 | 11.458  | 3.11 | 35.74  |
| 8/26/2008 | Alburgh                    | 10:30 AM | 2 | 10.694  | 3.11 | 33.21  |
| 8/26/2008 | Highgate Cliffs            | 10:09 AM | 1 | 66.454  | 3.62 | 86.7   |
| 8/26/2008 | Highgate Cliffs            | 10:09 AM | 2 | 70.273  | 3.66 | 90.93  |
| 8/26/2008 | Highgate Springs           | 10:00 AM | 1 | 35.136  | 3.29 | 57.95  |
| 8/26/2008 | Highgate Springs           | 10:00 AM | 2 |         | 3.29 | 61.55  |

|           |                            |          |   |        |      |        |
|-----------|----------------------------|----------|---|--------|------|--------|
| 8/26/2008 | Rock River Access          | 11:07 AM | 1 |        | 5.2  | 227.27 |
| 8/26/2008 | Rock River Access          | 11:07 AM | 2 |        | 4.59 | 232.65 |
| 8/26/2008 | St. Albans Boat Launch     | 11:55 AM | 1 |        | 3.03 | 23.51  |
| 8/26/2008 | St. Albans Boat Launch     | 11:55 AM | 2 |        | 2.93 | 23.23  |
| 8/26/2008 | Red Rocks Beach shoreline  | 10:56 AM | 1 | 2.292  | 0.35 | 12.62  |
| 8/26/2008 | North Beach shoreline      | 10:25 AM | 1 | 1.146  | 0.32 | 11.99  |
| 8/26/2008 | St. Albans Bay Park        |          | 1 | 14.666 |      |        |
| 8/31/2008 | Highgate Springs- Shipyard | 2:00 PM  | 1 | 16.041 |      |        |
| 8/31/2008 | Littlefield Shore          | 1:50 PM  | 1 | 4.583  |      |        |
| 8/31/2008 | Pelots Bay                 | 11:15 AM | 1 | 2.292  |      |        |
| 9/1/2008  | St. Albans Bay Park        | 2:00 PM  | 1 | 9.166  |      |        |
| 9/1/2008  | Long Point                 | 2:00 PM  | 1 | 5.729  |      |        |
| 9/1/2008  | Beggs Park                 |          | 1 | 6.111  |      |        |
| 9/1/2008  | Carry Bay                  | 10:00 AM | 1 | 3.437  |      |        |
| 9/2/2008  | Rte 78 Access              | 11:10 AM | 1 |        | 0.59 | 88.73  |
| 9/2/2008  | Rte 78 Access              | 11:10 AM | 2 | 57.469 | 0.56 | 88.82  |
| 9/2/2008  | Alburgh                    | 10:55 AM | 1 |        | 0.53 | 120.18 |
| 9/2/2008  | Alburgh                    | 10:55 AM | 2 | 91.66  | 0.42 | 93.36  |
| 9/2/2008  | Highgate Cliffs            | 10:40 AM | 1 |        | 0.98 | 86.84  |
| 9/2/2008  | Highgate Cliffs            | 10:40 AM | 2 | 57.288 | 0.47 | 92.25  |
| 9/2/2008  | Highgate Springs           | 10:29 AM | 1 |        | 0.66 | 88.27  |
| 9/2/2008  | Highgate Springs           | 10:29 AM | 2 | 0      | 0.56 | 92.81  |
| 9/2/2008  | Rock River Access          | 12:10 PM | 1 |        | 0.66 | 182.39 |
| 9/2/2008  | Rock River Access          | 12:10 PM | 2 | 1.833  | 0.6  | 182.02 |
| 9/2/2008  | St. Albans Boat Launch     | 12:45 PM | 1 |        | 0.4  | 48.62  |
| 9/2/2008  | St. Albans Boat Launch     | 12:45 PM | 2 | 23.87  | 0.54 | 43.44  |
| 9/2/2008  | Red Rocks Beach shoreline  | 10:58 AM | 1 |        | 0.36 | 43.13  |
| 9/2/2008  | North Beach shoreline      | 10:22 AM | 1 | 3.437  | 0.27 | 13     |
| 9/2/2008  | Maquam Bay                 | 10:03 AM | 1 | 2.292  |      |        |
| 9/2/2008  | Willsboro Bay              | 10:00 AM | 1 | 1.146  |      |        |
| 9/2/2008  | Rouses Point               | 11:00 AM | 1 | 4.583  |      |        |
| 9/2/2008  | City Bay                   | 12:00 PM | 1 | 61.871 |      |        |
| 9/7/2008  | Highgate Springs- Shipyard | 1:15 PM  | 1 | 28.644 |      |        |
| 9/7/2008  | Southeast of Rte 78 Bridge | 2:00 PM  | 1 | 27.498 |      |        |
| 9/8/2008  | Rte 78 Access              | 10:55 AM | 1 | 15.124 | 0.44 | 50.68  |

|           |                            |          |   |        |      |        |
|-----------|----------------------------|----------|---|--------|------|--------|
| 9/8/2008  | Rte 78 Access              | 10:55 AM | 2 | 14.207 | 0.45 | 40.91  |
| 9/8/2008  | Alburgh                    | 10:45 AM | 1 | 0.458  | 0.42 | 40.79  |
| 9/8/2008  | Alburgh                    | 10:45 AM | 2 | 11.916 | 0.37 | 44.66  |
| 9/8/2008  | Highgate Cliffs            | 10:20 AM | 1 | 20.624 | 0.42 | 67.27  |
| 9/8/2008  | Highgate Cliffs            | 10:20 AM | 2 | 19.707 | 0.53 | 64.38  |
| 9/8/2008  | Highgate Springs           | 10:05 AM | 1 | 14.207 | 0.85 | 55.23  |
| 9/8/2008  | Highgate Springs           | 10:05 AM | 2 | 16.041 | 0.5  | 61.59  |
| 9/8/2008  | Rock River Access          | 11:45 AM | 1 | 0      | 0.61 | 141.25 |
| 9/8/2008  | Rock River Access          | 11:45 AM | 2 | 20.624 | 0.55 | 236.03 |
| 9/8/2008  | St. Albans Boat Launch     | 12:20 PM | 1 | 6.875  | 0.41 | 36.98  |
| 9/8/2008  | St. Albans Boat Launch     | 12:20 PM | 2 | 8.249  | 0.81 | 41.36  |
| 9/8/2008  | Maquam Bay                 | 10:05 AM | 1 | 4.583  |      |        |
| 9/14/2008 | High Rocks                 | 10:15 AM | 1 | 28.644 |      |        |
| 9/14/2008 | Highgate Springs- Shipyard | 12:45 PM | 1 | 17.186 |      |        |
| 9/14/2008 | Southeast of Rte 78 Bridge | 12:30 PM | 1 | 13.749 |      |        |
| 9/14/2008 | Donaldson Point            | 11:30 AM | 1 | 11.458 |      |        |
| 9/15/2008 | Maquam Bay                 | 11:09 AM | 1 | 1.146  |      |        |
| 9/16/2008 | Rte 78 Access              | 11:00 AM | 1 | 9.166  | 0.49 | 44.85  |
| 9/16/2008 | Rte 78 Access              | 11:00 AM | 2 | 10.312 | 0.46 | 50.62  |
| 9/16/2008 | Alburgh                    | 10:50 AM | 1 | 6.875  | 0.48 | 36.46  |
| 9/16/2008 | Alburgh                    | 10:50 AM | 2 | 7.932  | 0.45 | 36.48  |
| 9/16/2008 | Highgate Cliffs            | 10:30 AM | 1 | 66.912 | 0.57 | 103.62 |
| 9/16/2008 | Highgate Cliffs            | 10:30 AM | 2 | 34.831 | 0.53 | 91.3   |
| 9/16/2008 | Highgate Springs           | 10:05 AM | 1 | 22.632 | 0.45 | 49.83  |
| 9/16/2008 | Highgate Springs           | 10:05 AM | 2 | 22.915 | 0.76 | 47.01  |
| 9/16/2008 | Rock River Access          | 11:55 AM | 1 | 69.509 | 0.74 | 146.56 |
| 9/16/2008 | Rock River Access          | 11:55 AM | 2 | 69.509 | 0.72 | 166.59 |
| 9/16/2008 | St. Albans Boat Launch     | 12:30 PM | 1 | 22.915 | 0.45 | 31.58  |
| 9/16/2008 | St. Albans Boat Launch     | 12:30 PM | 2 | 20.12  | 0.36 | 30.09  |
| 9/21/2008 | Highgate Springs- Shipyard | 11:00 AM | 1 | 21.769 |      |        |
| 9/21/2008 | Donaldson Point            | 1:00 PM  | 1 | 13.749 |      |        |
| 9/21/2008 | Southeast of Rte 78 Bridge | 1:45 PM  | 1 | 5.729  |      |        |
| 9/22/2008 | Rte 78 Access              | 10:50 AM | 1 | 10.083 | 0.32 | 48.5   |
| 9/22/2008 | Rte 78 Access              | 10:50 AM | 2 | 12.832 |      | 46.4   |
| 9/22/2008 | Alburgh                    | 10:40 AM | 1 | 6.875  | 0.36 | 39.1   |

|            |                            |          |   |        |      |       |
|------------|----------------------------|----------|---|--------|------|-------|
| 9/22/2008  | Alburgh                    | 10:40 AM | 2 | 1.375  | 0.32 | 36.11 |
| 9/22/2008  | Highgate Cliffs            | 10:19 AM | 1 | 20.165 | 0.36 | 44.91 |
| 9/22/2008  | Highgate Cliffs            | 10:19 AM | 2 | 16.041 | 0.41 | 41.79 |
| 9/22/2008  | Highgate Springs           | 10:10 AM | 1 | 10.999 | 0.64 | 38.56 |
| 9/22/2008  | Highgate Springs           | 10:10 AM | 2 | 6.416  | 0.37 | 38.66 |
| 9/22/2008  | Rock River Access          | 11:40 AM | 1 |        | 0.65 | 83.22 |
| 9/22/2008  | Rock River Access          | 11:40 AM | 2 | 28.873 | 0.81 | 89.36 |
| 9/22/2008  | St. Albans Boat Launch     | 12:11 PM | 1 | 3.666  | 0.34 | 18.84 |
| 9/22/2008  | St. Albans Boat Launch     | 12:11 PM | 2 | 1.375  | 0.33 | 20.24 |
| 9/22/2008  | High Rocks                 | 12:45 PM | 1 | 20.624 |      |       |
| 9/28/2008  | Southeast of Rte 78 Bridge | 1:00 PM  | 1 | 5.729  |      |       |
| 9/28/2008  | Donaldson Point            | 12:30 PM | 1 | 24.061 |      |       |
| 9/28/2008  | Highgate Springs- Shipyard | 1:30 PM  | 1 | 13.749 |      |       |
| 9/29/2008  | Rte 78 Access              | 10:47 AM | 1 |        | 0.51 | 45.8  |
| 9/29/2008  | Rte 78 Access              | 10:47 AM | 2 |        | 0.57 | 48.9  |
| 9/29/2008  | Alburgh                    | 10:36 AM | 1 |        | 0.45 | 31.39 |
| 9/29/2008  | Alburgh                    | 10:36 AM | 2 |        | 0.41 | 33.47 |
| 9/29/2008  | Highgate Cliffs            | 10:15 AM | 1 |        | 0.51 | 35.91 |
| 9/29/2008  | Highgate Cliffs            | 10:15 AM | 2 |        | 0.44 | 34.28 |
| 9/29/2008  | Highgate Springs           | 10:05 AM | 1 |        | 0.5  | 36.01 |
| 9/29/2008  | Highgate Springs           | 10:05 AM | 2 |        | 0.51 | 28.49 |
| 10/7/2008  | Rte 78 Access              | 10:40 AM | 1 |        | 0.48 | 28.36 |
| 10/7/2008  | Rte 78 Access              | 10:40 AM | 2 | 5.445  | 0.45 | 28.84 |
| 10/7/2008  | Alburgh                    | 10:28 AM | 1 |        | 0.44 | 26.86 |
| 10/7/2008  | Alburgh                    | 10:28 AM | 2 | 3.208  | 0.39 | 22.24 |
| 10/7/2008  | Highgate Cliffs            | 10:06 AM | 1 | 20.165 | 0.5  | 23.94 |
| 10/7/2008  | Highgate Cliffs            | 10:06 AM | 2 | 4.583  | 0.49 | 23.2  |
| 10/7/2008  | Highgate Springs           | 9:55 AM  | 1 |        | 0.62 | 24.7  |
| 10/7/2008  | Highgate Springs           | 9:55 AM  | 2 | 2.723  | 0.46 | 21.44 |
| 10/7/2008  | Rock River Access          | 11:40 AM | 1 | 9.166  | 0.75 | 59.41 |
| 10/7/2008  | Rock River Access          | 11:40 AM | 2 | 10.999 | 0.69 | 68.83 |
| 10/7/2008  | St. Albans Boat Launch     | 12:22 PM | 1 | 0.458  | 0.36 | 14.57 |
| 10/7/2008  | St. Albans Boat Launch     | 12:22 PM | 2 | 2.75   | 0.39 | 18.64 |
| 10/13/2008 | Rte 78 Access              | 10:30 AM | 1 |        | 0.35 | 27.51 |
| 10/13/2008 | Rte 78 Access              | 10:30 AM | 2 |        | 0.35 | 28.09 |

|            |                        |          |   |  |      |        |
|------------|------------------------|----------|---|--|------|--------|
| 10/13/2008 | Alburgh                | 10:20 AM | 1 |  | 0.36 | 24.89  |
| 10/13/2008 | Alburgh                | 10:20 AM | 2 |  | 0.32 | 28.77  |
| 10/13/2008 | Highgate Cliffs        | 10:10 AM | 1 |  | 0.35 | 23.73  |
| 10/13/2008 | Highgate Cliffs        | 10:10 AM | 2 |  | 0.33 | 26.11  |
| 10/13/2008 | Highgate Springs       | 10:00 AM | 1 |  | 0.35 | 20.66  |
| 10/13/2008 | Highgate Springs       | 10:00 AM | 2 |  | 0.43 | 18.94  |
| 10/27/2008 | Rte 78 Access          | 11:05 AM | 1 |  | 0.33 | 38.05  |
| 10/27/2008 | Rte 78 Access          | 11:05 AM | 2 |  | 0.33 | 37.89  |
| 10/27/2008 | Alburgh                | 10:55 AM | 1 |  | 0.3  | 34.04  |
| 10/27/2008 | Alburgh                | 10:55 AM | 2 |  | 0.32 | 34.24  |
| 10/27/2008 | Highgate Cliffs        | 10:35 AM | 1 |  | 0.32 | 35.69  |
| 10/27/2008 | Highgate Cliffs        | 10:35 AM | 2 |  | 0.31 | 32.59  |
| 10/27/2008 | Highgate Springs       | 10:22 AM | 1 |  | 0.59 | 42.6   |
| 10/27/2008 | Highgate Springs       | 10:22 AM | 2 |  | 0.45 | 39.33  |
| 10/27/2008 | Rock River Access      | 11:45 AM | 1 |  | 3.15 | 448.28 |
| 10/27/2008 | Rock River Access      | 11:45 AM | 2 |  | 3.3  | 352.77 |
| 10/27/2008 | St. Albans Boat Launch | 12:15 PM | 1 |  | 3.56 | 17.22  |
| 10/27/2008 | St. Albans Boat Launch | 12:15 PM | 2 |  |      | 17.34  |