THIRD STATEWIDE ASSESSMENT OF MERCURY CONTAMINATION IN FISH TISSUE FROM CONNECTICUT LAKES (2019-2021)

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Submitted: September 2022

Please reference:

Sullivan, C. J., J. C. Vokoun, and C. R. Perkins. 2022. Third statewide assessment of mercury contamination in fish tissue from Connecticut lakes (2019-2021). Completion Report *submitted to* Connecticut Department of Energy and Environmental Protection. University of Connecticut, Storrs. 77pp.

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Executive Summary

Anthropogenically-derived mercury (Hg) is a ubiquitous contaminant in aquatic food webs that poses a human health risk via fish tissue consumption. The Connecticut Department of Energy and Environmental Protection has monitored largemouth bass (*Micropterus salmoides*) tissue mercury concentrations in lakes and ponds since the mid-1990s. Despite finding generally declining fish mercury concentrations as of the late 2000s, individuals with high mercury concentrations were still prevalent, indicating that consumption risks may still exist currently. Herein, we aimed to update existing knowledge of mercury concentrations in largemouth bass tissues from populations in Connecticut lakes and ponds and update consumption guidance by re-sampling historic sites. Further, we also examined trends in largemouth bass mercury concentrations from 1995 to present by leveraging past data sets, providing information relevant to long-term fishery management. Researchers from the University of Connecticut collected tissues from ≥10 largemouth bass tissues at 51 Connecticut lakes and ponds between June and November 2019-2021, totaling 701 bass. Mean largemouth bass concentrations were generally low (mean = 0.368 μg/g) and declined from 1995 to 2005-2006 and were static thereafter; individuals with mercury concentrations >1.0 μg/g are still prevalent (range = 0.021 to 1.892 μg/g). During 2019-2021, mean largemouth bass mercury concentrations still exceed 0.3 μg/g (EPA consumption criterion for low-risk groups) in some lakes, indicating that consumption risks still exist. The northeast and southeast regions of Connecticut remain mercury hotspots with higher largemouth bass mercury concentrations. Our results suggest that largemouth bass mercury concentrations have declined since the mid-1990s, but mercury consumption risks are still present. We recommend continued monitoring of largemouth bass mercury concentrations in Connecticut lakes and ponds and advocate for investigations into current angler harvest practices to determine at-risk groups.

Introduction

The bioaccumulation and biomagnification of anthropogenic mercury (Hg) in aquatic food webs is a substantial concern across the United States (US). Anthropogenic mercury primarily enters aquatic systems via atmospheric deposition, although mining activities, leachate from coal combustion waste, and industrial manufacturing also contribute (Butler et al. 2007; Driscoll et al. 2013). Mercury deposited into aquatic systems is converted to methylmercury, a more toxic form of mercury that bioaccumulates and biomagnifies throughout food webs (e.g., Neumann and Ward 1999; Tremain and Adams 2012), by sulfate- or iron-reducing bacteria or archaea (Benoit et al. 2003; Kerin et al. 2006). Human mercury exposure primarily occurs via the consumption of mercury-contaminated fish tissue, which can cause developmental and cognitive problems in fetuses (USEPA 2003) and damage cardiovascular and nervous systems in adults (NRC 2001). As such, the US Environmental Protection Agency (USEPA) and other state agencies regularly monitor fish tissue mercury concentrations and issue consumption advisories (USEPA 2001). Currently, nearly every US state administers at least one fish tissue consumption advisory (USEPA 2004).

The lake-rich northeastern US is sensitive to mercury deposition and contamination in predators in aquatic food webs. In general, regional mercury deposition is high (USEPA 1997; Evers et al. 2007), and prominent landcover characteristics (e.g., forested areas with shallow surficial materials and surface waters) facilitate the transformation of mercury to methylmercury and its delivery to aquatic ecosystems and food webs (Wiener et al. 2006; Driscoll et al. 2007; Mills et al. 2019). Elevated mercury concentrations in sportfish subsequently holds a prominent position in the public view and government sectors. In December 2007, the USEPA and northeastern states pledged to reduce mercury total maximum daily load (TMDL) by reducing the atmospheric emission of mercury, assuming that such an agreement would facilitate reductions in fish tissue mercury concentrations. Current evidence suggests that mercury deposition in the northeastern US has declined since more strict emission regulations were enacted (Evers et al. 2007; Yu et al. 2014; Weiss-Penzias et al. 2016), but also shows mixed temporal or conflicting trends in fish mercury concentrations. Mercury assessments conducted during the 2000s in both New York (Millard et al. 2020) and Massachusetts (Hutcheson et al. 2014) show a general decline in mean fish mercury concentrations but how much concentrations declined varied widely across lakes, some fish still had high mercury concentrations, and a minority of lakes had increasing fish mercury concentrations. Thus, regularly updated fish tissue mercury contamination data is necessary for understanding current human exposure risks.

With over 3,000 lakes, ponds, and reservoirs throughout Connecticut, monitoring and assessing fish mercury concentrations is critical to understanding associated human health hazards. During the mid-1990s, a statewide assessment found that mean largemouth bass (*Micropterus salmoides*) and smallmouth bass (*Micropterus dolomieu*), both of which are often the most prevalent predator in regional freshwater food webs, mercury concentrations in Connecticut lakes and ponds were high (mean = 0.511 µg/g; range = 0.032 to 2.645 µg/g; Neumann et al. 1996). As a result, the state developed a fish consumption advisory recommending limited, or no, consumption of fish with mercury concentrations ≥0.3 µg/g (Ginsburg and Rao 1996), following USEPA guidelines at the time. During the mid-2000s, mean largemouth bass mercury concentrations were found to be lower (mean = 0.433 µg/g) than mid-1990 concentrations, but individuals with mercury concentrations >1.0 µg/g were still prevalent

(range = 0.055 to 1.773 µg/g; Vokoun and Perkins 2008). Fish mercury concentrations can vary through space and time due to the cumulative effects of biotic (e.g., sex, age, and trophic level; Muir et al. 2005; Gandhi et al. 2014, Mills et al. 2019) and abiotic (e.g., water quality parameters and watershed area; Hanten et al. 1998; Mills et al. 2019; Millard et al. 2020) variables and natural attenuation of contamination through time (Wang et al. 2004). Thus, re-evaluating fish mercury concentrations throughout Connecticut, and identifying water bodies with fish mercury concentrations that remain elevated, will help the state issue fish consumption recommendations and update guidance.

This report contains the results of an assessment of largemouth bass mercury concentrations across Connecticut lakes and ponds. This project was conducted by the University of Connecticut under contract with the Connecticut Department of Energy and Environmental Protection (CT DEEP) and the New England Interstate Water Pollution Control Commission (NEIWPCC). The University of Connecticut's Center for Environmental Science and Engineering (CESE) maintains a facility to perform cold vapor atomic absorption (CVAA) and was the analytical laboratory used to determine mercury concentrations in fish. Personnel from J. Vokoun's lab in the Department of Natural Resources and the Environment at the University of Connecticut collected fish using boat electrofishing surveys and by attending angling tournaments and performed all fish necropsy. This report focuses on a statewide evaluation of largemouth bass mercury concentrations from lakes and ponds across Connecticut, repeating most sites sampled during the first two statewide assessments of fish mercury concentrations (Neumann et al. 1996; Vokoun and Perkins 2008). In lakes and ponds with low-density largemouth bass populations, researchers collected smallmouth bass to supplement low catches. In addition to providing a baseline summary of largemouth bass mercury concentrations, this report also evaluates trends in bass mercury concentrations across all three statewide assessments (1995, 2005-2006, and 2019-2021 [present assessment]).

Objectives

The specific objectives of this project were to:

1) sample and analyze mercury contamination in the axial tissue of largemouth bass in 51 Connecticut lakes and ponds to provide updated contamination information, repeating the sampling of most sites used in the previous two statewide assessments.
2) evaluate trends in largemouth bass mercury contamination in Connecticut lakes across all three statewide assessments, providing information relevant to long-term fishery management.

Methods

This assessment is intended to be an update of the previous sampling conducted in 1995 (Neumann et al. 1996) and 2005-2006 (Vokoun and Perkins 2008). Sampling was constrained to the 51 lakes sampled during the 2005-2006 statewide assessment (Figure 1); 45 of the 51 lakes were sampled during both 1995 and 2005-2006 while 6 lakes were added during 2005-2006 due to CT DEEP interest or changes in angler popularity and access (Vokoun and Perkins 2008). Lakes were initially selected in consultation with CT DEEP to represent each of the states' five ecoregions to ensure sufficient spatial coverage, as described by Dowhan and Craig (1976): northeast hills-uplands (8 lakes), southeast hills-coastal (16 lakes), northwest hills-uplands (9 lakes), southwest hills-uplands (10 lakes), and central lowlands (8 lakes). Further, selected lakes represent bass populations exhibiting high, moderate, and low levels of mercury contamination (Vokoun and Perkins 2008).

Across all three statewide assessments, largemouth bass were collected from June to November using two methods, collection at bass angling tournaments or by nighttime boat electrofishing (pulsed DC; 3-4 amps; 60 pulses per second with two netters). Unlike the 1995 assessment, sampling during 2005-2006 and 2019-2021 primarily targeted largemouth bass across lakes; smallmouth bass were occasionally collected to supplement low catches of largemouth bass. Both species are considered common predators throughout Connecticut lakes and are commonly used as sentinel species for programs monitoring mercury contamination in water bodies across North America (e.g., Monson et al. 2011; Millard et al. 2020). Thus, mercury contamination in largemouth and smallmouth bass serve as adequate indicators of overall mercury contamination across water bodies. During 1995 and 2005-2006, ≥10 bass were targeted from each lake with a minimum of three fish per length group (300.0-378.9 mm TL, 379.0-456.9 mm TL, and > 457.0 mm TL). During 2019-2021, 10-15 bass were targeted from each lake by 25.4 mm TL length groups (≤2 bass/25.4 mm TL; minimum length = 203 mm TL) to expand the sample across a greater size spectrum. Considerable effort was made to collect a minimum of 10-15 bass from each lake, but additional fish per length group were used if 10-15 fish could not be collected within a reasonable amount of sampling effort.

We adopted a set of standard operating procedures to guide fish collection, processing, and necropsy/sample preparation:

Field collection preparations

- Measuring boards and weighing totes were cleaned with detergent, rinsed 5 times with de-ionized (DI) water, and stored in a plastic bag until first use.
- The cooler was also cleaned with detergent, rinsed 5 times with DI water, and covered with a plastic sheet until first use.
- All utensils (e.g., tweezer) that may contact fish were cleaned with detergent, rinsed 5 times with DI water, and stored in a plastic bag until first use.
- The electroshocking boat and livewell were washed with soap and hot water rinsed for 10-min at a local car wash. The boat was then dried for 2 weeks before first use.

Fish collections-fishing tournaments

- Bass angling tournament organizers were contacted ≥2 days in advance of tournaments, informed of the project objectives, and were asked to voluntarily participate in fish collection. All bass angling tournaments are catch-and-release and weigh-ins were conducted at each lakes' public boat launch.

- During bass tournament weigh-ins, 10-12 bass were selected to collect ≤2 fish from 25.4mm length bins across the size spectrum. The official minimum total length (TL; mm) for bass allowed to be weighed-in is 304.8 mm.
- Bass were collected directly from anglers one at a time and placed into 62-L plastic totes with holes drilled into the sides to allow the inflow of fresh, oxygenated water. Personnel wore talc-free latex gloves or lineman's gloves; a designated 'fish handler' wore electric fish handling gloves to immobilize fish (Ward et al. 2017).
- Bass were weighed (g) and measured for total length (TL; mm).
- Scales were then removed from the left, anterior dorsal musculature using tweezers, and a 6-mm diameter non-lethal biopsy punch was used to collect axial tissue. VetBond Tissue Adhesive was used to cover the resulting wound and the bass was released back into the lake.
- Occasionally, 1 bass from each lake was kept to also remove whole axial tissue fillets. After measuring weight and total length and collecting a biopsy punch tissue sample, the single bass was placed into a labeled, plastic ziplocked bag and zipped shut.
- Both biopsy punch tissue samples and whole bass were then packed on ice in a pre-cleaned cooler and returned to the University of Connecticut campus and stored in a -10 °C chest freezer.

Fish collections-boat electrofishing

- Nighttime boat electrofishing sampling was conducted beginning at dusk. Sampling was conducted primarily in a direction that would move outboard motor exhaust away from the boat and personnel.
- Bass captured during nighttime boat electrofishing were not allowed to come in contact with the surface of the boat during netting and transfer to the livewell.
- When roughly 15 bass were collected in the livewell, the motor was stopped to allow for fish processing; the boat driver never handled the fish.
- Similar to before, fish were weighed (g), measured for TL (mm), a non-lethal 6-mm biopsy punch was used to collect axial tissue from de-scaled location on each fish, VetBond was used to cover the wound, and the fish was released alive. One bass from each lake was kept, bagged in a ziplocked bag, and packed on ice after processing to remove whole axial tissue fillets in the lab.

Necropsy/sample preparation

- Bass returned to the University of Connecticut campus and stored in a -10 °C chest freezer were allowed to thaw for ~30 minutes before necropsy.
- Before necropsy, all work surfaces (e.g., cutting board) were cleaned with detergent and rinsed 5 times with de-ionized (DI) water. All work surfaces were covered in saran plastic wrap for each necropsy.
- Two sets of stainless-steel dissections instruments (including scalpels and knives) were cleaned with detergent, rinsed with tap water, cleaned again with detergent, and rinsed 5 times with de-ionized (DI) water.
- New talc-free latex gloves were worn for each necropsy.
- Each bass was removed from their ziplocked bag, rinsed with DI water, and placed on the plastic-wrapped cutting board.
- Bass were placed facing left and the left, anterior dorsal musculature was removed with 2-3 cuts.

- The scalpel or knife was rinsed with DI water between cuts.
- The skin and scales were removed from each fillet by using the scalpel or knife to lift and cut away muscle from the edge of the skin which was held back using forceps.
- The skinless fillet was then placed in clean, labeled WhirlPak® bags and frozen until transferred to the University of Connecticut CESE.

Laboratory analytical procedures

- Laboratory analytical procedures were similar through time (see Neumann et al. 1996; Vokoun and Perkins 2008) and bass tissue mercury concentrations are reported as total wet-weight mercury concentration (μg/g). The mercury detection threshold was 0.05 μg/g.
- Within 90 days of processing, tissue samples were transferred to the University of Connecticut CESE for mercury analysis. Bass axial tissues (both biopsy punch and fillet tissue samples) were homogenized in an acid-cleaned food processor with a stainless-steel blade.
- Approximately 1 g of homogenate was removed from the processor and stored in a clean, acid-washed vial before analysis.
- Total mercury concentration was determined using Cold Vapor Atomic Absorption Spectrometry (CVAAS) using USEPA method 245.6.
- Homogenate tissue samples were digested with a 10 ml nitric: sulfuric acid mixture (4:1 ratio) at a temperature of 58 ºC for 60 minutes and allowed to cool.
- Once cooled, 10 ml of potassium permanganate was added incrementally, followed by the addition of 10 ml potassium persulfate, and stored overnight.
- After overnight storage, hydroxylamine hydrochloride was added to each sample vial and then analyzed using cold vapor atomic absorption (CVAA). The standard curve consisted of five standards for CVAA analysis, with a correlation coefficient $\geq$ 0.99 for all analytical runs.
- Standard quality assurance procedures were employed, including analysis of duplicate samples, method blanks, spiked samples, laboratory control samples, and standard reference materials (DOLT-3, DORM-2, and 966).
- Instrument response was evaluated initially, every 20 samples, and at the end of an analytical run using a calibration verification standard and blank.
- All quality control parameters, including all standard reference material data, were within method specifications for all bass analyzed: lab reports are included in Appendix 4 (separate document).
- Mercury concentrations are returned as μg/g of wet weight.

Data analysis

We performed all analyses in Program R Software Version 3.5.2 (R Core Team 2021) using an α of 0.05. Largemouth bass $\log_{10}$ mercury concentrations (μg/g) were back-transformed into standard units for interpretation in the Results and Discussion.

To address the first objective, we summarized the total count and proportion of largemouth bass with mercury concentrations greater than 0.1, 0.3, 0.5, and 1.0 μg/g (wet weight). Our approach mimics the data presentation from Neumann et al. (1996) and Vokoun and Perkins (2008) and expands to include mercury consumption criteria for high-risk groups

(Ginsberg and Rao 1996). Further, CT DEEP currently uses 0.1, 0.3, 0.5, and 1.0 µg/g (wet weight) as risk-based mercury concentration consumption criteria, indicating the direct applicability of these summaries to future consumption guidance alterations. We present information from largemouth bass tissue samples collected during 2019-2021 but also include summary statistics from both Neumann et al. (1996) and Vokoun and Perkins (2008) as an appendix to expedite across-assessment comparisons (Appendix 1 Table 1; Appendix 1 Figures 1 and 2).

Following Vokoun and Perkins (2008), we fit a linear regression model of largemouth bass mercury concentration (µg/g) as a function of total length (TL; mm) for each lake and ecoregion of Connecticut (see Appendix 3 for ecoregion assignment). We log-transformed (log_{10}) largemouth bass TL and mercury concentration values before the analysis and inspected residuals graphically using Q-Q plots to ensure that the data met model assumptions. When significant relationships occurred for a lake or ecoregion (P < 0.05), we adjusted individual largemouth bass mercury concentrations (µg/g) to a 'standard' 304.8 mm TL bass and present length-adjusted mean bass mercury concentrations. Such standardizations help facilitate comparisons of largemouth bass mercury concentrations without the confounding effect of fish length (similar to Neumann et al. 1996 and Vokoun and Perkins 2008). A 304.8 mm TL largemouth bass represents a commonly sampled fish length across all sites and is currently the statewide minimum length for consumption. Largemouth bass mercury concentrations from lakes where the linear regression model was not significant (P < 0.05) were excluded from the analysis.

Using length-adjusted mercury concentration data, we examined differences in largemouth bass mercury concentrations across the five ecoregions of Connecticut using a linear mixed effect model. The model was built using lake as a random effect and ecoregion as a fixed effect and fitted with restricted maximum likelihood (REML; 'lme4' tools package in Program R). To test for significant differences in mean length-adjusted largemouth bass mercury concentrations across ecoregions, we used a Type III analysis of variance (ANOVA) from the 'lme4' tools package. If significant differences were detected, we used Tukey's honest significant difference (HSD) test to determine specific among-region differences.

To address the second objective, we queried data to contain lakes sampled across all three assessment periods (1995, 2005-2006, and 2019-2021) and lakes with a significant relationship between largemouth bass TL and mercury concentrations. Our query resulted in 23 lakes, hereafter referred to as 'trend lakes', that met our inclusion criteria (see Table 2 and Appendix 1 Table 2). Using these data, we examined differences in largemouth bass mercury concentrations across all three assessments for a standard 304.8 mm TL bass (i.e., adjusted mercury concentrations). As described above, we expanded collections during 2019-2021 to include largemouth bass 203.0 to 254.0 mm TL, unlike the two previous statewide assessments. To facilitate cross-assessment comparisons, we omitted largemouth bass 203.0 to 254.0 mm TL captured during 2019-2021 from this analysis. We then re-regressed bass mercury concentration (µg/g) as a function of total length (TL; mm) for each lake and re-adjusted mercury concentrations for the 23 trend lakes. Using the updated dataset containing only largemouth bass $\geq$254.0 mm TL across all three statewide assessments, we used a repeated measure analysis of variance (ANOVA), blocked by lake to remove among-lake differences, to examine among-assessment differences in bass mercury concentrations. We used a post hoc

Tukey's HSD test ('cld' function within the 'multcomp' tools package; Hothorn et al. 2008) to distinguish significant differences among assessments.

Results

Across all sampling periods, researchers collected between 10 and 17 individual largemouth or smallmouth bass per lake (mean = 14 fish per lake). A total of 19 smallmouth bass were collected to supplement low catches of largemouth bass in 5 of the 51 lakes (9.8%): Rainbow Reservoir, Saugatuck Reservoir, Lake McDonough, Lake Zoar, and Candlewood Lake. We omitted smallmouth bass from the following descriptive statistics, analyses, and comparative results; however, we include raw, individual smallmouth bass mercury concentration data in Appendix 3. During 2019-2021, we collected a total of 701 largemouth bass across all 51 Connecticut lakes and ponds and analyzed their mercury concentration. Of the 701 largemouth bass, we sacrificed 53 bass for whole-fillet axial tissue mercury analysis; mercury concentrations were similar between whole-fillet and biopsy punches (Appendix 2), and we only present biopsy punch data as a result. All fish information is reported individually (by lake) in Appendix 3.

Individual largemouth bass ranged in total length (TL; mm) from 203 to 570 mm (mean ± SE = 347.7 ± 3.2 mm), and mercury concentrations ranged from 0.021 to 1.892 µg/g (0.368 ± 0.010 µg/g; Table 1). We present the proportion (*q*) of largemouth bass with mercury concentrations exceeding 0.1, 0.3, 0.5, and 1.0 µg/g (by lake) in Table 1. Twelve of the 51 (23.5%) lakes and ponds had individual largemouth bass with mercury concentrations that exceeded 1.0 µg/g. The eastern half of Connecticut generally contained lakes and ponds with higher largemouth bass mean mercury concentrations, particularly the southeast hills/coastal region (Figure 2a). In western Connecticut, higher largemouth bass mean mercury concentrations were present in four systems: Winchester Lake, Lake McDonough, Lake Zoar, and Saugatuck Reservoir (Figure 2a). The southeastern hills/coastal region of Connecticut also contained lakes and ponds with higher maximum largemouth bass mercury concentrations, but lakes with high maximum concentrations were present throughout the state (Figure 2b).

Of the 51 sampled lakes and ponds, linear regression models between largemouth bass $\log_{10}$TL and $\log_{10}$mercury concentrations were significant ($P < 0.05$) for 48 sites (Table 2). Lake Zoar, Moodus Reservoir, and Crystal Lake (M) were the only two lakes with non-significant regression models, precluding data from inclusion in further analyses. Across the 48 lakes with significant linear regression models, mean length-adjusted mercury concentrations ranged from 0.040 to 0.985 µg/g (0.260 ± 0.006 µg/g; Table 3). We present the proportion (*q*) of largemouth bass with length-adjusted mercury concentrations exceeding 0.1, 0.3, 0.5, and 1.0 µg/g (by lake) in Table 3. No lakes and ponds had individual largemouth bass with length-adjusted mercury concentrations that exceeded 1.0 µg/g. Similar spatial patterns of largemouth bass mercury concentrations were present after length-adjusting mercury concentrations to a 'standard' 304.8 mm total length (TL) bass (Figure 3).

Linear regression models between largemouth bass $\log_{10}$TL and $\log_{10}$mercury concentrations were significant ($P < 0.05$) for each of the five ecoregions of Connecticut (Table 4). A moderate amount of variance (R^2) was explained across models, ranging from 0.399 (northeast hills/uplands) to 0.619 (southeast hills/coastal). Additionally, we developed a statewide linear regression model (Table 4). Figure 4 displays individual log-transformed largemouth bass mercury concentration scatterplots and linear regressions for each of the five ecoregions and statewide. Significant differences in length-adjusted mean largemouth bass mercury concentrations were evident across the five ecoregions of Connecticut (*F* = 5.971, df = 4, *P* = <0.001). A posthoc Tukey HSD test (α = 0.05) indicated that length-adjusted mean largemouth bass mercury concentrations were highest in the southeast hills/coastal ecoregion and lowest in the central lowlands (Figure 5).

For objective two, we removed 47 largemouth bass <254.0 mm TL collected during 2019-2021 from the dataset of the 23 trend lakes to facilitate cross-assessment comparisons. In the 23 trend lakes identified, we found that adjusted largemouth bass mercury concentrations declined throughout the study period ($F_{2,711}$ = 43.657, *P* = <0.001), initially decreasing between 1995 and 2005-2006 but were similar between 2005-2006 and 2019-2021 (Figure 6). The mean adjusted largemouth bass mercury concentration during 1995 was 0.274 (± 0.008) µg/g, compared to lower concentrations present during both 2005-2006 (0.231 ± 0.010 µg/g) and 2019-2021 (0.220 ± 0.009 µg/g). Temporal trends in mean adjusted largemouth bass mercury concentrations varied across lakes (Appendix 1 Figure 3). Mean length-adjusted largemouth bass mercury concentrations consistently increased through time at Beach Pond and Bashan Lake; trends in other lakes were largely inconsistent (i.e., mercury concentrations increased during 2005-2006 then decreased during 2019-2021 or vice versa).

Discussion

Data collected throughout 51 Connecticut lakes and ponds provided an opportunity to understand the current risks associated with largemouth bass harvest and consumption and examine how these risks have changed since the mid-1990s. We found that contemporary largemouth bass mercury concentrations were highest in the eastern half of the state (similar to Vokoun and Perkins 2008), and high concentration individuals (mercury concentrations ≥1.0 µg/g) were present in lakes across the state. Of the 51 lakes and ponds sampled, 19 have mean, non-length-adjusted largemouth bass mercury concentrations deemed safe for unlimited consumption by low-risk groups (≤0.3 µg/g), but zero for high-risk groups (≤0.1 µg/g; Ginsberg and Rao 1996). Further, all lakes had at least one bass with a mercury concentration ≥0.3 µg/g except for North Farms Reservoir and Rainbow Reservoir. Leveraging data from all three statewide assessments, we found generally declining largemouth bass mercury concentrations across the state, but a minority of systems had increasing or recently unchanging mean bass mercury concentrations, similar to other assessments in the region (Hutcheson et al. 2014; Millard et al. 2020). As extensive mercury consumption can cause a suite of health issues in both children and adults (NRC 2001; USEPA 2003), our findings can help guide fisheries agencies and public health officials with developing and issuing safe fish harvest regulations in a state where mercury exposure is a concern.

Largemouth bass mercury concentrations were positively related to total length across majority of the sampled Connecticut lakes and ponds. Mercury concentration generally increases with fish length (e.g., Vokoun and Perkins 2008; Sackett et al. 2009; Mills et al. 2019), as larger and older fish tend to have a higher trophic position and a longer period to bioaccumulate additional mercury (Neumann and Ward 1999; Tremain and Adams 2012). Although the relationship between mercury concentration and largemouth bass total length was inconsistent across all lakes sampled, our results confirm a general relationship in Connecticut lakes and ponds. Fish length is easily and commonly measured by anglers and, thus, size-based consumption advisories are easily implemented and informative. In Connecticut lakes and ponds, mercury concentrations exceeded 0.30 µg/g in 66.0% (307 of 465 individual samples) of largemouth bass ≥304.8 mm TL (statewide minimum length for consumption), suggesting that legally harvestable bass commonly have mercury concentrations considered 'high' for specific risk groups (Ginsberg and Rao 1996). We are not aware of any published information documenting contemporary angler harvest practices of largemouth bass in Connecticut. Many questions thus remain to be answered about human exposure to mercury contamination via consuming largemouth bass in Connecticut lakes and ponds which warrant future investigation.

Largemouth bass mercury concentrations were higher in the eastern half of Connecticut, similar to the last two statewide assessments (Neumann et al. 1996; Vokoun and Perkins 2008). Various factors can contribute to regional differences in fish mercury concentrations. Differences in water quality parameters (Sackett et al. 2009; Mills et al. 2019; Millard et al. 2020), waterbody type/retention time (Hanten, Jr. et al. 1998; Simonin et al. 2008), and watershed land-use types, including wetland areas (Rypel et al. 2010; Wentz et al. 2014), agricultural fields (Benoit et al. 2003; Sackett et al. 2009), and forested areas (Mills et al. 2019), can influence mean fish mercury concentrations across aquatic systems. Further, mean fish mercury concentrations are higher farther away from coal-fired power plants (Anderson and Smith 1977; Sackett et al. 2010) and, thus, can influence regional patterns in fish mercury concentrations. In Connecticut,

predominant land use types are similar between the western and eastern portions of the state (forested, hay/pasture cover types), whereas the central lowland region landcover type is predominantly developed. However, sites in western Connecticut are closer and downwind to coal-fired power plants than other sites, suggesting that proximity to power plants may influence regional patterns in largemouth bass mercury concentrations. In addition to watershed-scale factors, biotic factors such as fish length, age, and trophic position can also influence mean fish mercury concentrations (Gandhi et al. 2014; Muir et al. 2005; Mills et al. 2019). Herein, we aimed to account for such biotic factors by standardizing largemouth bass mercury concentrations to a 'standard' 304.8 mm TL bass (12”); regional differences were still evident post-standardization. As such, largemouth bass mean mercury concentrations are spatially structured in Connecticut, but more work is needed to thoroughly investigate causal abiotic mechanisms.

The lack of consistent declines in mean largemouth bass mercury concentrations from 1995 to present do not coincide well with the overall decrease in mercury emissions into the northeastern US (Zhang and Jaeglé 2013; Weiss-Penzias et al. 2016). This pattern is consistent in lakes and ponds sampled in mid-to-high latitude North America over the same period (Monson 2009; Ghandi et al. 2014; Millard et al. 2020). Total mercury deposition records in Connecticut, or the northeastern US, generally show decreasing accumulation rates since the 1990s (Evers et al. 2007; Olson et al. 2020; Weiss-Penzias et al. 2016; Yu et al. 2014). Despite declining regional mercury deposition in the northeastern US, the recent lack of decline in largemouth bass mercury concentrations (2005-2006 to present) could be due to other external or internal mediators. Globally, atmospheric mercury emissions have increased over the last decade (Zhou et al. 2017; Streets et al. 2019), and some authors posture that global emissions and long-range transport are of local and regional concern (e.g., Weiss-Penzias et al. 2016). Further, other possible reasons for the lack of recent decline in largemouth bass mercury concentrations could be increases in more bioavailable forms of mercury via climate change (e.g., Schindler 2001; Eagles-Smith et al. 2018) or the slow response time of bass to changes in mercury inputs (e.g., Vijayaraghavan et al. 2014).

Consuming wild-caught fish provides numerous health benefits. Fish tissue is an excellent source of omega-3 fatty acids and lean protein, both of which help reduce the risk of heart disease and improve brain development and function (Kris-Etherton et al. 2002; Ruxton et al. 2004). However, consuming mercury-laden fish could lead to neurodevelopmental problems, decreased cognitive abilities in children, and increased risks of heart disease in adults (NRC 2001; USEPA 2003). Fish consumption advisories are aimed to protect consumers from such adverse effects but could also result in a substantial reduction in the intake of healthful fatty acids and proteins (Shimshack and Ward 2010). Further, some fishery harvest regulations legally limit harvest to sizes of fish under advisory (i.e., only harvest larger fish). Such a dilemma is commonplace, and agencies often adopt an integrated approach to managing risks to mercury exposure. For example, Petre et al. (2012) suggested implementing fishery harvest regulations that integrate fish mercury concentrations and public health goals as a means of increasing awareness of the risks of consuming larger, mercury-laden fish while reducing the risk of mercury exposure to fish harvesters. In Connecticut, most lakes and ponds have a 304.8 mm TL minimum length limit for largemouth bass (although higher minimum length limit and slot limit regulations are in place in various lakes across the state), indicating that only larger bass can be legally kept and consumed. Given the nutritional benefits of consuming fish, it is critical for public health agencies and fishery managers to cooperatively work towards improving

largemouth bass consumption advisories and public awareness strategies to maximize the benefits of eating bass while minimizing risks for harvesters.

Implications for continued monitoring

Given that human mercury exposure largely occurs by consuming contaminated fish (Driscoll et a. 2013) and the instances of elevated largemouth bass mercury concentrations in Connecticut lakes and ponds, monitoring of bass mercury concentrations is necessary. While this time-series covers a nearly 30-year span, it is our recommendation to continue monitoring largemouth bass mercury concentrations. Vokoun and Perkins (2008) recommended assessing mercury concentrations every 10-years with an option for more frequent assessments if mercury concentrations continue to decline. We concur with this recommendation but would suggest that future monitoring efforts focus on (1) lakes with a longer length of existing data records; (2) lakes with recent largemouth bass mercury concentrations that exceed consumption guidelines; (3) lakes located on the eastern half of Connecticut; and (4) in lakes with a popular largemouth bass fishery. Managers and decision-makers could also assess largemouth bass mercury concentrations from this sub-sample of lakes at more frequent intervals (e.g., every 5-years) to monitor risk at a more fine temporal resolution while also monitoring the rest of the 51 lakes every 10-years. As atmospheric mercury emission standards continue to change, long-term and standardized monitoring programs are an essential component to understanding current and future risks associated with fish consumption in Connecticut.

Although we primarily used non-lethal biopsy punches to sample largemouth bass tissues, we also sacrificed a subset of bass to examine agreement between lethal whole-fillet samples and punch samples. We found that largemouth bass mercury concentrations were similar between biopsy punches and whole fillets (Appendix 3), similar to other studies (Vokoun and Perkins 2008; Knight et al. 2019). While anglers harvest whole fillets of largemouth bass for consumption, non-lethal sampling methods (biopsy punches) are favorable as they mimic whole-fillet sample mercury concentrations and fish sacrifice is not necessary. Using biopsy punches to non-lethally sample fish tissues has been described since the early 1970s, but widespread adoption is slow. Using biopsy punches has multiple benefits, including low collection and processing times (<20 seconds to collect sample and no processing), less equipment needed to store tissue samples (both in transit and long term), and no fish sacrifice. In Connecticut, minimizing fish mortality is a particularly important benefit as it reduces conflict with the general public. For example, size-selective mortality from catch-and-release angling tournaments for largemouth bass suppresses size structure (Hessenauer et al. 2018), causing negative public perception of angling tournaments. Thus, we recommend the full adoption of biopsy punches to sample tissue and monitor mercury concentrations in largemouth bass in Connecticut lakes and ponds for future assessments.

Conclusion

The information provided herein will aid fishery managers in assessing human exposure risks to mercury contamination via largemouth bass consumption and re-assessing current bass consumption guidelines. Leveraging data collected since the mid-1990s, we found that mercury concentrations in largemouth bass are declining through time (less so recently), but individuals (and some lakes) with high mercury concentrations still exist, particularly in the eastern half of Connecticut. Generally, harvest of largemouth bass across the United States is low (Allen et al. 2008; Myers et al. 2008; Sullivan et al. 2020) but can be high in specific lakes or years (e.g., Edwards et al. 2004; Hessenauer et al. 2018). Further, fish harvest tends to be higher closer to

more developed city centers (Post et al. 2008; Post and Parkinson 2012). During 2019-2021, 12 lakes had individual largemouth bass with mercury concentrations $\geq$1.0 µg/g (i.e., a 'high' concentration fish; Ginsberg and Rao 1996) and these lakes generally had higher mean mercury concentrations (Table 1); interestingly, several of these lakes are designated 'bass management' lakes and are popular fisheries. As such, human exposure risks to mercury contamination could be high in Connecticut at present and for the foreseeable future.

Acknowledgements

The Connecticut Department of Energy and Environmental Protection (CT DEEP) funded this project. We thank the numerous technicians and biologists who were involved with data collection. Specifically, Raul Flamenco, Peter Grundy, Sarah Manstan, and Megan Upp netted fish during electrofishing surveys and assisted with data collection, and Chris McDowell and Ed Machowski were kind enough to let Christopher Sullivan join them on their standardized electrofishing surveys to sample bass tissues. This work was performed under the auspices of University of Connecticut Institutional Animal Care and Use Committee (IACUC) protocol permit A19-029, and animals were collected under state permit SC-19016.

Figures

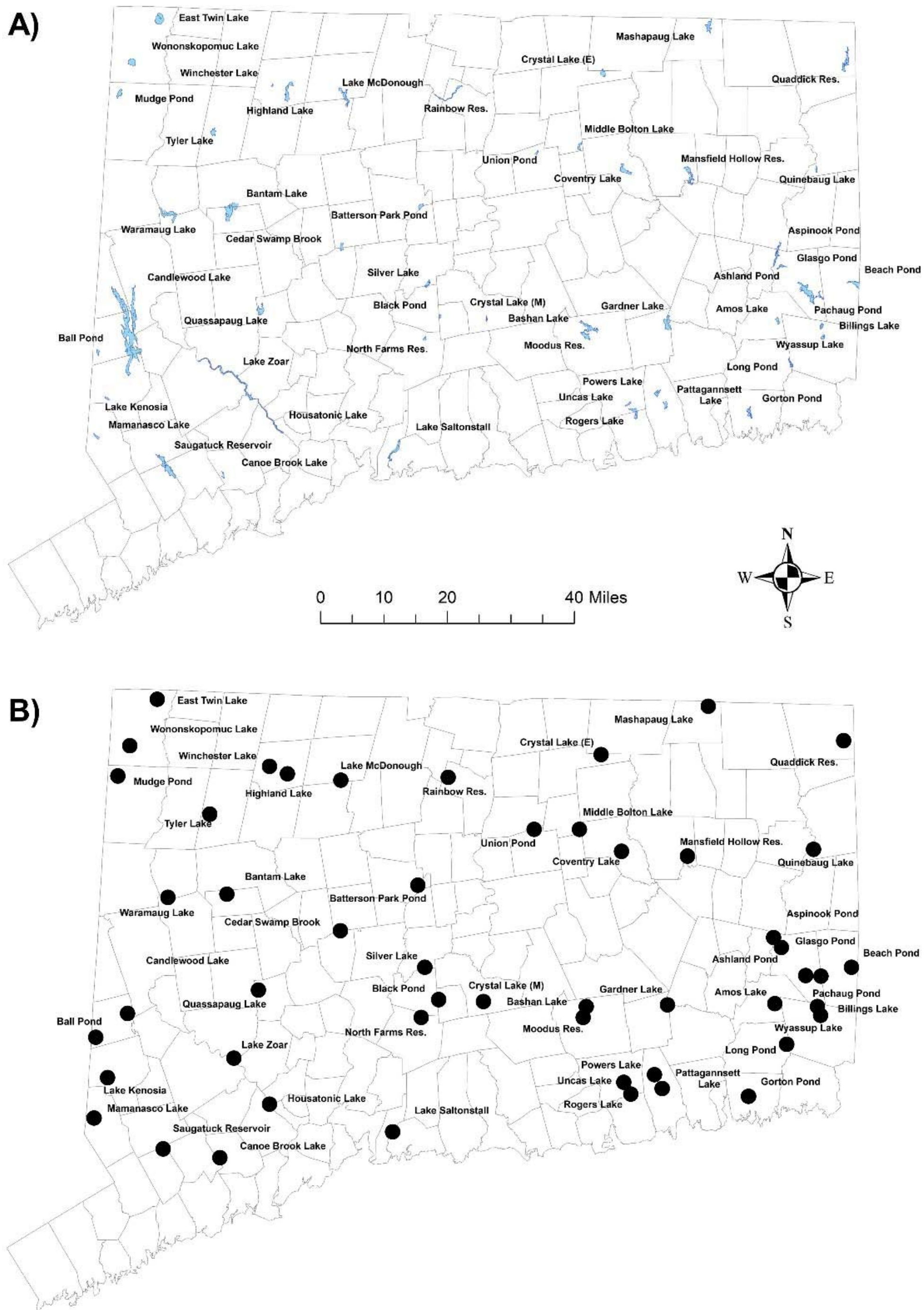


Figure 1. A) Map of Connecticut depicting location and relative size of the 51 lakes and ponds sampled during 2019-2021 to evaluate mercury concentration in largemouth bass. B) Black and white (dot) version of the 51 sampled lakes in panel A.

2019-2021

Figure 2. Mean and maximum mercury concentrations in largemouth tissues from 51 Connecticut lakes and ponds sampled between 2019 and 2021. Mercury concentration data represent raw, not adjusted, values.

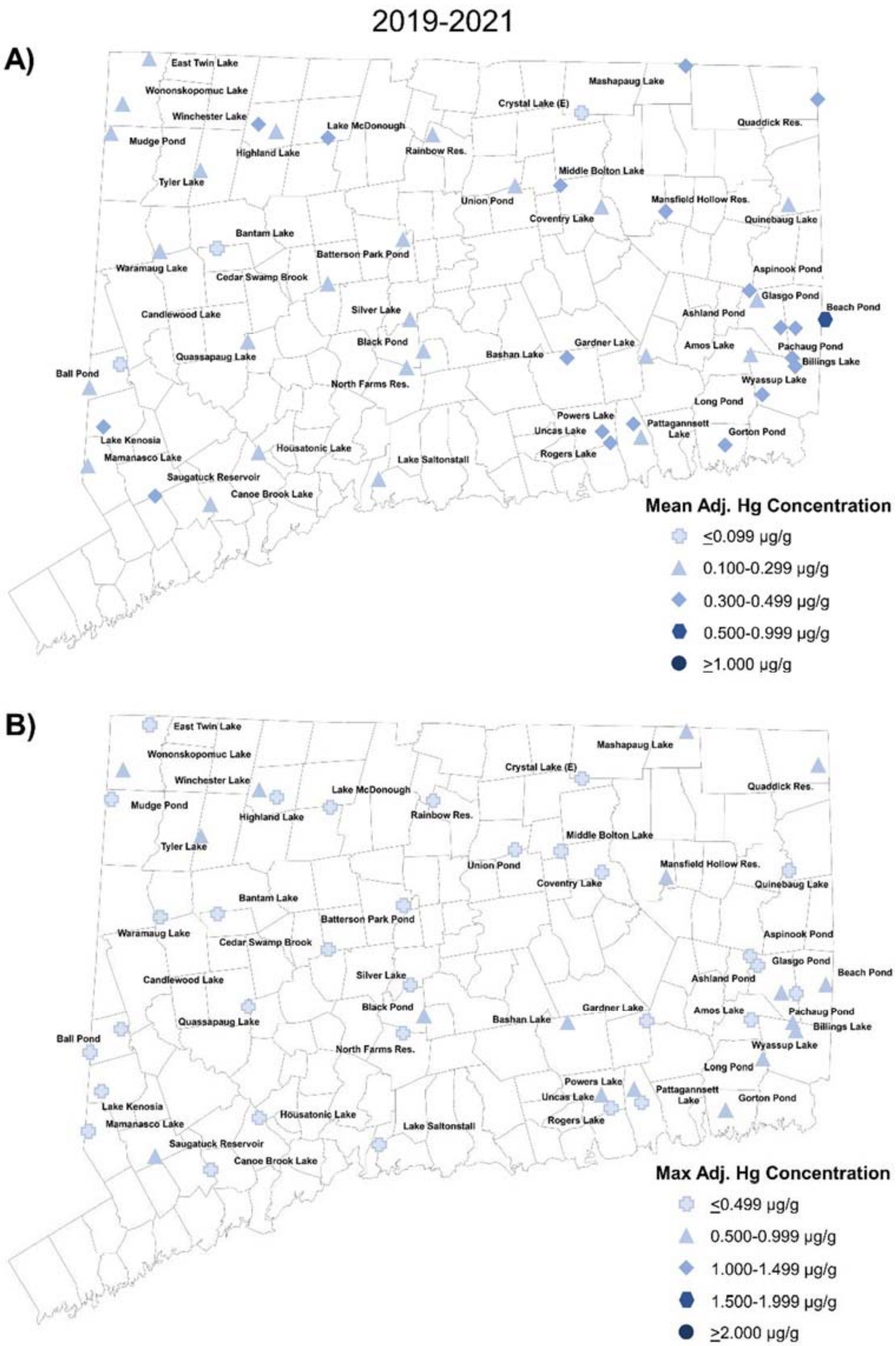


Figure 3. Mean and maximum mercury concentrations for standardized 304.8 mm TL largemouth bass collected from 48 Connecticut lakes and ponds sampled between 2019 and 2021. Length-adjusted mercury concentrations are not reported for Crystal Lake (M), Lake Zoar, and Moodus Reservoir as linear regression analyses between log_{10}total length (TL; mm) and log_{10}mercury concentration (Hg; µg/g) were not significant.

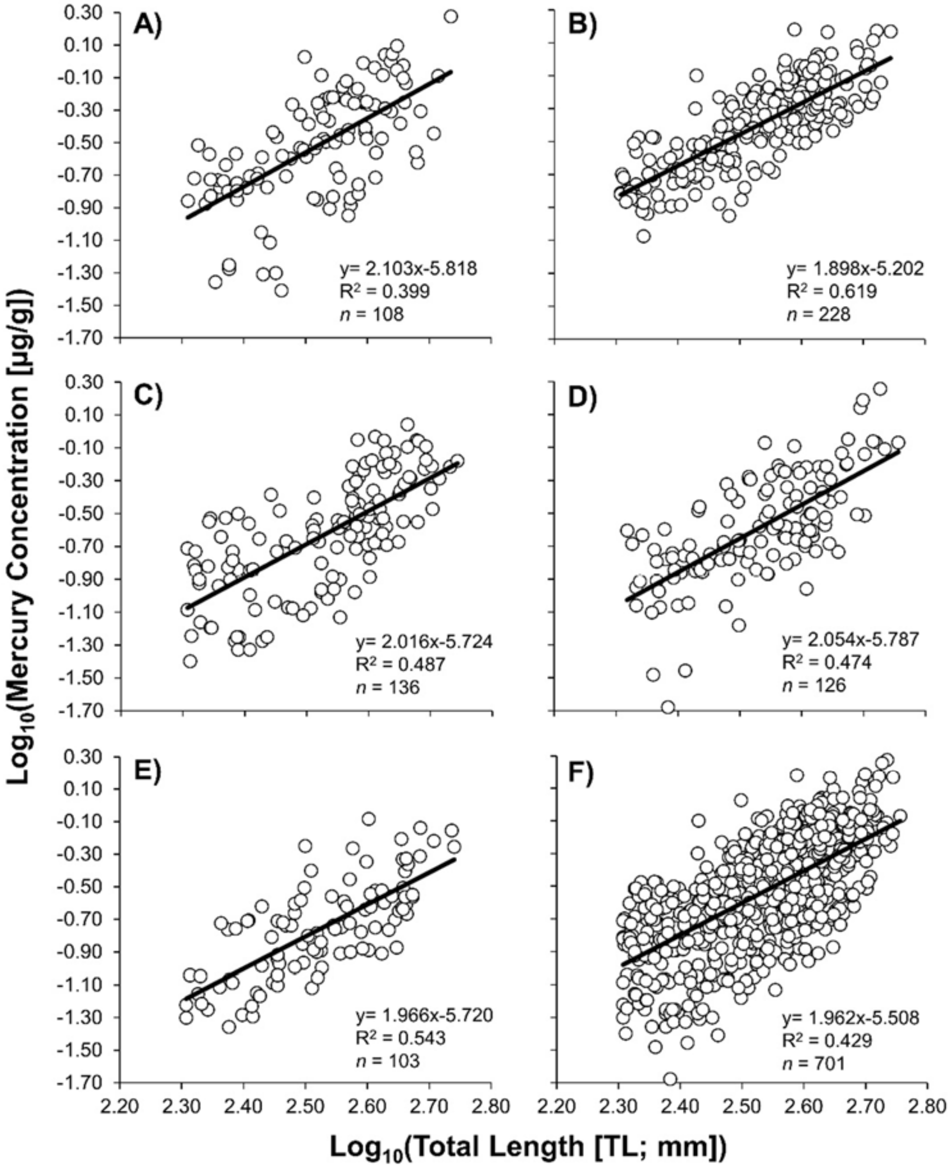


Figure 4. Scatterplots depicting the relationship between log-transformed ($\log_{10}$) largemouth bass mercury concentration (µg/g wet weight) and total length (TL; mm) captured from lakes sampled during 2019-2021 within each of the five ecoregions of Connecticut: A) northeast hills/uplands, B) southeast hills/coastal, C) southwest hills/costal, D) northwest hills/uplands, and E) central lowlands. We also include a scatterplot depicting the relationship for all sample largemouth bass across the state (panel F). Mercury concentration data represent raw, not adjusted, values.

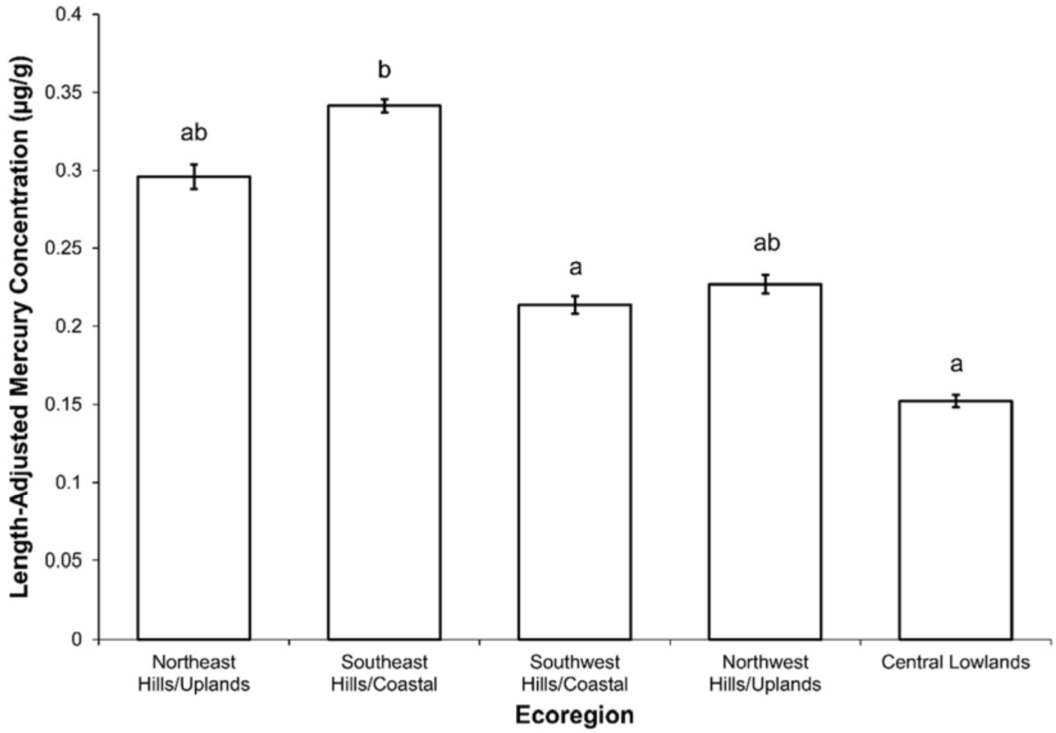


Figure 5. Mean length-adjusted largemouth bass mercury concentration by ecoregion from fish collected from 48 Connecticut lakes and ponds sampled between 2019 and 2021. Error bars represent 1 standard error, and statistical significance is indicated by differences in letters above bars (Tukey's HSD; α = 0.05). Mercury concentration data represent length-adjusted values; 3 lakes were not included. Error bars represent one standard error.

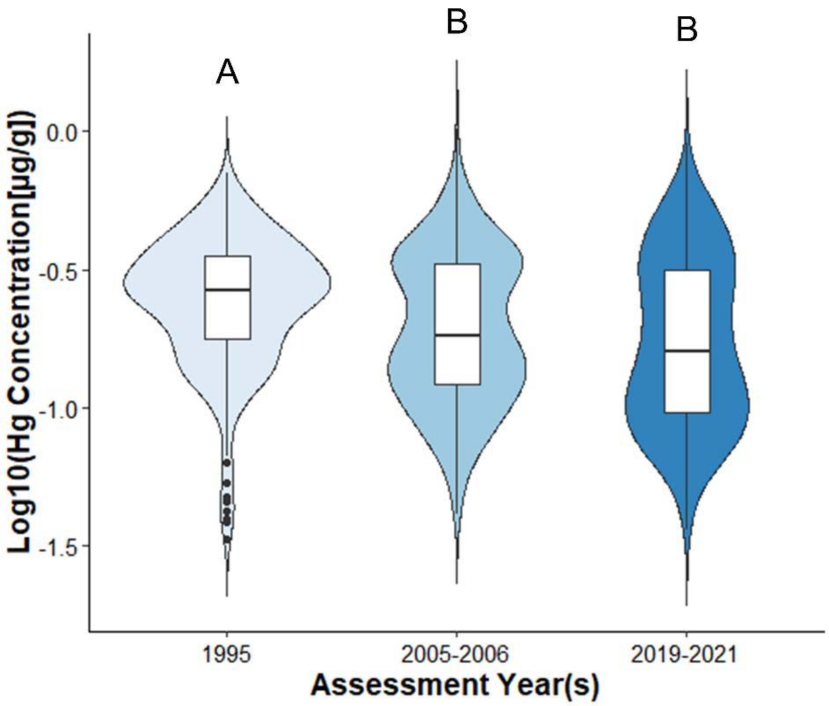


Figure 6. Violin plots showing the temporal trend in length-adjusted largemouth bass mercury concentrations (µg/g; log-transformed) across the three statewide assessments from the 23 trend lakes. Overlaid boxplots represent the quantile range while the horizontal black line represents the median. Statistical significance is indicated by differences in letters above violin plots.

Tables

Table 1. Summary statistics describing the total number (N), total length (TL; mm) range, mercury (Hg) concentration range, and proportion (*q*) of largemouth bass with mercury concentrations equal to or exceeding 0.1, 0.3, 0.5, and 1.0 µg/g wet weight from bass captured from the 51 Connecticut water bodies during 2019-2021. Mercury concentration data represent raw, not adjusted, values.

Site	N	TL Range	Mean Hg	Hg Range	$q \geq 0.1$	$q \geq 0.3$	$q \geq 0.5$	$q \geq 1.0$
Amos Lake	17	216-516	0.301	0.084-0.846	0.94	0.41	0.18	0.00
Ashland Pond	14	226-435	0.314	0.132-0.626	1.00	0.57	0.07	0.00
Aspinook Pond	11	209-457	0.311	0.133-0.560	1.00	0.45	0.09	0.00
Ball Pond	15	206-505	0.221	0.056-0.449	0.80	0.20	0.00	0.00
Bantam Lake	15	229-524	0.191	0.021-0.852	0.73	0.13	0.07	0.00
Bashan Lake	14	215-434	0.615	0.216-1.513	1.00	0.71	0.57	0.14
Batterson Park Pond	14	220-550	0.183	0.044-0.604	0.64	0.14	0.14	0.00
Beach Pond	11	293-439	0.735	0.379-1.460	1.00	1.00	0.91	0.09
Billings Lake	14	217-510	0.590	0.240-1.202	1.00	0.93	0.57	0.14
Black Pond	14	203-377	0.222	0.060-0.563	0.79	0.21	0.14	0.00
Candlewood Lake	16	242-518	0.297	0.053-0.615	0.81	0.50	0.25	0.00
Canoe Brook Lake	14	221-455	0.185	0.047-0.481	0.50	0.21	0.00	0.00
Cedar Swamp Pond	15	205-407	0.162	0.040-0.437	0.53	0.13	0.00	0.00
Coventry Lake	11	226-485	0.214	0.044-0.493	0.91	0.18	0.00	0.00
Crystal Lake (E)	16	238-510	0.149	0.039-0.415	0.56	0.13	0.00	0.00
Crystal Lake (M)	12	231-330	0.190	0.082-0.398	0.92	0.08	0.00	0.00
East Twin Lake	10	358-519	0.446	0.176-0.865	1.00	0.70	0.30	0.00
Gardner Lake	15	224-445	0.418	0.115-1.080	1.00	0.67	0.20	0.13
Glasgo Pond	15	282-506	0.551	0.26-0.987	1.00	0.93	0.53	0.00
Gorton Pond	15	206-535	0.394	0.13-0.796	1.00	0.67	0.33	0.00
Highland Lake	15	232-570	0.265	0.123-0.850	1.00	0.13	0.13	0.00
Housatonic Lake	14	203-423	0.327	0.145-0.614	1.00	0.50	0.21	0.00
Lake Kenosia	16	208-476	0.415	0.153-0.885	1.00	0.56	0.31	0.00
Lake McDonough	9	230-436	0.537	0.190-0.615	1.00	0.89	0.89	0.00
Lake Saltonstall	17	230-484	0.173	0.068-0.487	0.65	0.18	0.00	0.00
Lake Zoar	8	219-460	0.529	0.151-1.102	0.93	0.63	0.38	0.13
Long Pond	16	203-515	0.404	0.154-0.918	1.00	0.63	0.38	0.00
Mamanasco Lake	12	209-554	0.272	0.115-0.663	1.00	0.17	0.17	0.00
Mansfield Hollow	16	221-543	0.671	0.197-1.892	1.00	0.69	0.69	0.19
Mashapaug Lake	13	212-518	0.487	0.141-1.002	1.00	0.77	0.54	0.08
Middle Bolton Lake	15	204-459	0.351	0.139-0.884	1.00	0.47	0.20	0.00
Moodus Reservoir	14	203-352	0.262	0.151-0.479	1.00	0.29	0.00	0.00
Mudge Pond	15	235-430	0.227	0.085-0.556	0.80	0.27	0.07	0.00
North Farms Reservoir	13	215-458	0.208	0.059-0.299	0.85	0.00	0.00	0.00
Pachaug Pond	15	220-555	0.667	0.119-1.486	1.00	0.87	0.73	0.13
Pattagannsett Lake	10	301-416	0.507	0.197-0.885	1.00	0.80	0.50	0.00

Powers Lake	14	204-393	0.330	0.166-0.533	1.00	0.57	0.14	0.00
Quaddick Reservoir	11	310-455	0.761	0.411-1.245	1.00	1.00	0.73	0.18
Quassapaug Lake	15	203-493	0.325	0.082-0.873	0.93	0.40	0.20	0.00
Quinebaug Lake	15	222-425	0.345	0.160-0.678	1.00	0.60	0.27	0.00
Rainbow Reservoir	6	203-403	0.170	0.050-0.257	0.83	0.00	0.00	0.00
Rogers Lake	16	205-520	0.469	0.142-1.299	1.00	0.56	0.31	0.13
Saugatuck Reservoir	11	212-493	0.549	0.126-0.928	1.00	0.64	0.64	0.00
Silver Lake	12	331-471	0.289	0.088-0.825	0.92	0.25	0.08	0.00
Tyler Lake	16	215-495	0.332	0.087-1.385	0.94	0.38	0.13	0.06
Uncas Lake	15	213-521	0.463	0.227-0.782	1.00	0.93	0.40	0.00
Union Pond	15	214-545	0.329	0.090-0.727	0.87	0.47	0.20	0.00
Waramaug Lake	15	228-542	0.246	0.079-0.775	0.87	0.20	0.07	0.00
Winchester Lake	15	208-533	0.629	0.206-1.807	1.00	0.80	0.47	0.13
Wononskopomuc Lake	16	215-462	0.317	0.112-0.810	1.00	0.44	0.19	0.00
Wyassup Lake	13	207-377	0.447	0.134-0.982	1.00	0.62	0.46	0.00

Table 2. Regression statistics (*N* = number of fish collected; *a* = intercept; *b* = slope) describing the relationship between $\log_{10}$total length (TL; mm) and $\log_{10}$mercury concentration (Hg; µg/g) for largemouth bass captured from the 51 Connecticut water bodies during 2019-2021. Linear regression equations were used to 'adjust' individual largemouth bass mercury concentrations a standard 304.8 mm TL. Mercury concentrations at sites with no significant relationship (P > 0.05) were not adjusted (bold).

Site	*N*	*a*	*b*	R^2	*P*
Amos Lake	17	-6.020	2.137	0.796	<0.001
Ashland Pond	14	-4.485	1.566	0.709	<0.001
Aspinook Pond	11	-4.817	1.729	0.869	<0.001
Ball Pond	15	-6.245	2.146	0.819	<0.001
Bantam Lake	15	-9.805	3.484	0.862	<0.001
Bashan Lake	14	-5.780	2.182	0.730	<0.001
Batterson Park Pond	14	-6.759	2.310	0.807	<0.001
Beach Pond	11	-5.095	1.936	0.570	0.007
Billings Lake	14	-4.621	1.712	0.686	<0.001
Black Pond	14	-7.037	2.581	0.603	0.001
Candlewood Lake	16	-10.593	3.823	0.818	<0.001
Canoe Brook Lake	14	-8.742	3.155	0.867	<0.001
Cedar Swamp Pond	15	-9.759	3.533	0.805	<0.001
Coventry Lake	11	-7.802	2.741	0.815	<0.001
Crystal Lake (E)	16	-8.073	2.829	0.831	<0.001
Crystal Lake (M)	12	-5.750	2.036	0.294	**0.0685**
East Twin Lake	10	-10.659	3.896	0.907	<0.001
Gardner Lake	15	-7.567	2.817	0.870	<0.001
Glasgo Pond	15	-3.174	1.122	0.277	0.0441
Gorton Pond	15	-3.853	1.337	0.501	0.003
Highland Lake	15	-5.164	1.797	0.798	<0.001
Housatonic Lake	14	-3.280	1.095	0.516	0.004
Lake Kenosia	16	-4.410	1.588	0.705	<0.001
Lake McDonough	9	-4.969	1.824	0.855	<0.001
Lake Saltonstall	17	-7.024	2.419	0.832	<0.001
Lake Zoar	8	-4.416	1.598	0.431	**0.077**
Long Pond	16	-4.921	1.792	0.877	<0.001
Mamanasco Lake	12	-4.733	1.632	0.916	<0.001
Mansfield Hollow	16	-6.237	2.367	0.764	<0.001
Mashapaug Lake	13	-4.931	1.797	0.666	<0.001
Middle Bolton Lake	15	-5.763	2.107	0.860	<0.001
Moodus Reservoir	14	-2.199	0.653	0.137	**0.193**
Mudge Pond	15	-7.620	2.741	0.721	<0.001
North Farms Reservoir	13	-6.396	2.201	0.861	<0.001
Pachaug Pond	15	-6.490	2.392	0.782	<0.001
Pattagannsett Lake	10	-10.274	3.894	0.825	<0.001
Powers Lake	14	-4.915	1.793	0.681	<0.001

Quaddick Reservoir	11	-5.707	2.157	0.670	0.002
Quassapaug Lake	15	-6.343	2.274	0.784	<0.001
Quinebaug Lake	15	-5.497	1.991	0.718	<0.001
Rainbow Reservoir	6	-6.758	2.366	0.954	<0.001
Rogers Lake	16	-5.430	1.976	0.832	<0.001
Saugatuck Reservoir	11	-6.210	2.305	0.872	<0.001
Silver Lake	12	-8.982	3.222	0.405	0.026
Tyler Lake	16	-6.800	2.511	0.754	<0.001
Uncas Lake	15	-3.569	1.263	0.752	<0.001
Union Pond	15	-7.578	2.735	0.816	<0.001
Waramaug Lake	15	-5.330	1.826	0.770	<0.001
Winchester Lake	15	-5.266	1.977	0.867	<0.001
Wononskopomuc Lake	16	-5.665	2.014	0.700	<0.001
Wyassup Lake	13	-7.689	2.925	0.908	<0.001

Table 3. Summary statistics describing the total number (N), mean length-adjusted mercury (Adj. Hg) concentration and range, and proportion (*q*) of largemouth bass with mercury concentrations equal to or exceeding 0.1, 0.3, 0.5, and 1.0 µg/g wet weight from bass captured from the 51 Connecticut water bodies during 2019-2021. Length-adjusted mercury concentrations are not reported for Crystal Lake (M) , Lake Zoar, and Moodus Reservoir as linear regression analyses between $\log_{10}$total length (TL; mm) and $\log_{10}$mercury concentration (Hg; µg/g) were not significant. Mercury concentration data represent mean standardized values; e.g., an adj. mean mercury concentration of 0.3 µg/g represents the average of all individual largemouth bass mercury concentrations adjusted to a length of 304.8 mm TL.

Site	N	Adj. Hg (µg/g)	Adj. Hg Range	$q \geq 0.1$	$q \geq 0.3$	$q \geq 0.5$	$q \geq 1.0$
Amos Lake	17	0.203	0.113-0.381	1.00	0.06	0.00	0.00
Ashland Pond	14	0.260	0.140-0.374	1.00	0.21	0.00	0.00
Aspinook Pond	11	0.305	0.237-0.423	1.00	0.36	0.00	0.00
Ball Pond	15	0.127	0.066-0.220	0.73	0.00	0.00	0.00
Bantam Lake	15	0.075	0.041-0.129	0.20	0.00	0.00	0.00
Bashan Lake	14	0.459	0.295-0.894	1.00	0.86	0.36	0.00
Batterson Park Pond	14	0.102	0.056-0.184	0.36	0.00	0.00	0.00
Beach Pond	11	0.530	0.319-0.720	1.00	1.00	0.64	0.00
Billings Lake	14	0.443	0.254-0.626	1.00	0.93	0.36	0.00
Black Pond	14	0.257	0.100-0.513	1.00	0.43	0.07	0.00
Candlewood Lake	16	0.085	0.040-0.132	0.31	0.00	0.00	0.00
Canoe Brook Lake	14	0.130	0.071-0.178	0.71	0.00	0.00	0.00
Cedar Swamp Pond	15	0.110	0.070-0.189	0.40	0.00	0.00	0.00
Coventry Lake	11	0.105	0.069-0.146	0.45	0.00	0.00	0.00
Crystal Lake (E)	16	0.094	0.045-0.138	0.44	0.00	0.00	0.00
Crystal Lake (M)							
East Twin Lake	10	0.105	0.086-0.141	0.50	0.00	0.00	0.00
Gardner Lake	15	0.276	0.178-0.402	1.00	0.33	0.00	0.00
Glasgo Pond	15	0.430	0.238-0.693	1.00	0.80	0.33	0.00
Gorton Pond	15	0.323	0.166-0.941	1.00	0.53	0.07	0.00
Highland Lake	15	0.206	0.145-0.334	1.00	0.07	0.00	0.00
Housatonic Lake	14	0.288	0.169-0.489	1.00	0.43	0.00	0.00
Lake Kenosia	16	0.354	0.185-0.493	1.00	0.69	0.00	0.00
Lake McDonough	9	0.367	0.289-0.442	1.00	0.89	0.00	0.00
Lake Saltonstall	17	0.100	0.066-0.159	0.41	0.00	0.00	0.00
Lake Zoar							
Long Pond	16	0.345	0.257-0.553	1.00	0.81	0.06	0.00
Mamanasco Lake	12	0.212	0.148-0.265	1.00	0.00	0.00	0.00
Mansfield Hollow	16	0.461	0.265-0.985	1.00	0.88	0.31	0.00
Mashapaug Lake	13	0.359	0.209-0.586	1.00	0.69	0.23	0.00
Middle Bolton Lake	15	0.303	0.226-0.466	1.00	0.40	0.00	0.00
Moodus Reservoir							
Mudge Pond	15	0.162	0.090-0.273	0.80	0.00	0.00	0.00
North Farms Reservoir	13	0.120	0.084-0.168	0.69	0.00	0.00	0.00

Pachaug Pond	15	0.294	0.159-0.419	1.00	0.40	0.00	0.00
Pattagannsett Lake	10	0.255	0.201-0.370	1.00	0.20	0.00	0.00
Powers Lake	14	0.354	0.257-0.507	1.00	0.64	0.07	0.00
Quaddick Reservoir	11	0.457	0.333-0.669	1.00	1.00	0.36	0.00
Quassapaug Lake	15	0.212	0.092-0.343	0.93	0.13	0.00	0.00
Quinebaug Lake	15	0.289	0.198-0.435	1.00	0.33	0.00	0.00
Rainbow Reservoir	6	0.132	0.119-0.168	1.00	0.00	0.00	0.00
Rogers Lake	16	0.312	0.194-0.482	1.00	0.44	0.00	0.00
Saugatuck Reservoir	11	0.341	0.221-0.548	1.00	0.55	0.09	0.00
Silver Lake	12	0.118	0.065-0.344	0.58	0.08	0.00	0.00
Tyler Lake	16	0.288	0.190-0.528	1.00	0.31	0.06	0.00
Uncas Lake	15	0.374	0.275-0.518	1.00	0.93	0.07	0.00
Union Pond	15	0.173	0.103-0.285	1.00	0.00	0.00	0.00
Waramaug Lake	15	0.166	0.105-0.271	1.00	0.00	0.00	0.00
Winchester Lake	15	0.453	0.269-0.656	1.00	0.93	0.27	0.00
Wononskopomuc Lake	16	0.232	0.102-0.501	1.00	0.19	0.06	0.00
Wyassup Lake	13	0.384	0.246-0.536	1.00	0.92	0.08	0.00

Table 4. Regression statistics (*N* = number of fish collected; *a* = intercept; *b* = slope) for region-specific and statewide relationships between $\log_{10}$total length (TL; mm) and $\log_{10}$mercury concentration (Hg; µg/g) for largemouth bass captured from Connecticut water bodies during 2019-2021.

Region	***N***	***a***	***b***	**R^2**	***P***
Northeast Hills/Uplands	108	-5.818	2.103	0.399	<0.001
Southeast Hills/Coastal	228	-5.202	1.898	0.623	<0.001
Southwest Hills/Coastal	136	-5.724	2.016	0.487	<0.001
Northwest Hills/Uplands	126	-5.787	2.054	0.474	<0.001
Central Lowlands	103	-5.720	1.966	0.543	<0.001
Statewide	701	-5.508	1.962	0.429	<0.001

References

Allen, M. S., C. J. Walters, and R. Myers. 2008. Temporal trends in largemouth bass mortality, with fishery implications. North American Journal of Fisheries Management 28: 418-427.

Anderson, W. L., and K. E. Smith. 1977. Dynamics of mercury at coal-fired power plants and adjacent cooling lakes. Environmental Science and Technology 11: 75-80.

Benoit, J. M. M., C. C. C. Gilmour, A. Heyes, R. P. Mason, and C. L. Miller. 2003. Geochemical and biological controls over methylmercury production and degradation in aquatic ecosystems. Pp. 262–297, *In* Y. Chai and O. C. Braids (Eds.). Biogeochemistry of Environmentally Important Trace Elements. ACS Symposium Series # 835. American Chemical Society, Washington, D.C.

Butler, T., G. Likens, M. Cohen, and F. Vermeylen. 2007. Mercury in the environmental and patterns of mercury deposition from the NADP/MDN mercury deposition network. Final Report. Institute of Ecosystem Studies, NOAA. New York, NY. 87pp.

Dowan, J.J., and R. J. Craig. 1976. Rare and endangered species of Connecticut and their habitats. Connecticut State Geological and Natural History Survey *submitted to* Connecticut Department of Environmental Protection, Hartford, CT. 137pp.

Driscoll, C. T., R. P. Mason, H. M. Chan, D. J. Jacob, and N. Pirrone. 2013. Mercury as a global pollutant: sources, pathways, and effects. Environmental Science and Technology 47:4967–4983.

Eagles-Smith, C. A., E. K. Silbergeld, N. Basu, P. Bustamante, F. Diaz-Barriga, W. A. Hopkins, K. A. Kidd, and J. F. Nyland. 2018. Modulators of mercury risk to wildlife and humans in the context of rapid global change. Ambio 47:170-197.

Edwards, G. P., R. M. Neumann, R. P. Jacobs, and E. B. O'Donnell. 2004. Impacts of small club tournaments on black bass populations in Connecticut and the effects of regulation exemptions. North American Journal of Fisheries Management 24: 811-821.

Evers, D. C., Y. J. Han, C. T. Driscoll, N. C. Kamman, M. W. Goodale, K. F. Lambert, T. M. Holsen, C. Y. Chen, T. A. Clair, and T. Butler. 2007. Biological mercury hotspots in the northeastern United States and southeastern Canada. BioScience 57(1): 29–43.

Gandhi, N., R. W. K. Tang, S. P. Bhavsar, and G. B. Arhonditsis. 2014. Fish mercury levels appear to be increasing lately: a report from 40 years of monitoring in the Province of Ontario, Canada. Environmental Science & Technology 48: 5404-5414.

Ginsberg, G. L., and K. Rao. 1996. Memorandum regarding mercury in fish consumption limits. Connecticut Department of Public Health.

Hanten, R. P., R. M. Neumann, S. M. Ward, R. J. Carley, C. R. Perkins, and R. Pirrie. 1998. Relationships between concentrations of mercury in Largemouth Bass and physical and chemical characteristics of Connecticut lakes. Transactions of the American Fisheries Society 127: 807–818.

Hessenauer, J-M., J. Vokoun, J. Davis, R. Jacobs, and E. O'Donnell. 2018. Size structure suppression and obsolete length regulations in recreational fisheries dominated by catch-and-release. Fisheries Research 200: 33-42.

Hothorn, T., F. Bretz, and P. Westfall. 2008. Simultaneous inference in general parametric models. Biometrical Journal 50(3): 346–363.

Hutcheson, M. S., C. M. Smith, J. Rose, C. Batdorf, O. Pancorbo, C. R. West, J. Strube, and C. Francis. 2014. Temporal and spatial trends in freshwater fish tissue mercury concentrations associated with mercury emission reductions. Environmental Science & Technology 48: 2193–2202.

Kerin, E. J., C. C. Gilmour, E. Roden, M. T. Suzuki, J. D. Coates, and R. P. Mason. 2006. Mercury methylation by dissimilatory iron-reducing bacteria. Applied and Environmental Microbiology 72(12): 7919–7921.

Knight, A., S. P. Bhavsar, B. A. Branfireun, P. Drouin, R. Prashad, S. Petro, and M. Oke. 2019. A comparison of fish tissue mercury concentrations from homogenized fillet and nonlethal biopsy plugs. Journal of Environmental Sciences 80: 137-145.

Kris-Etherton, P. M., W. S. Harris, and L. J. Appel. 2002. Fish consumption, fish oil, omega-3 fatty acids, and cardiovascular disease. Circulation 106(21): 2747-2757.

Millard, G., C. Driscoll, M. Montesdeoca, Y. Yang, M. Taylor, S. Boucher, A. Shaw, W. Richter, E. Paul, C. Parker, and K. Yokota. 2020. Patterns and trends of fish mercury in New York state. Ecotoxicology 29: 1709–1720.

Mills, N., M. J. Weber, C. L. Pierce, and D. Cashatt. 2019. Factors influencing fish mercury concentrations in Iowa rivers. Ecotoxicology 28: 229–241.

Monson, B. A. 2009. Trend reversal of mercury concentrations in piscivorous fish from Minnesota lakes: 1982-2006. Environmental Science and Technology 43(6): 1750-1755.

Monson, B. A., D. F. Staples, S. P. Bhavsar, T. M. Holsen, C. S. Schrank, S. K. Moses, D. J. McGoldrick, S. M. Backus, and K. A. Williams. 2011. Spatiotemporal trends of mercury in walleye and largemouth bass from the Laurentian Great Lakes Region. Ecotoxicology 20: 1555-1567.

Muir, D., X. Wang, D. Bright, L Lockhart, and G. Köck. 2005. Spatial and temporal trends of mercury and other metals in landlocked char from lakes in the Canadian Artic archipelago. Science of The Total Environment 351-352: 464-478.

Myers, R., J. Taylor, M. Allen, and T. F. Bonvechio. 2008. Temporal trends in voluntary release of largemouth bass. North American Journal of Fisheries Management 28: 428-433.

NRC (National Research Council). 2001. Toxicological effects of methylmercury. National Academy Press, Washington D. C.

Neumann, R. M., and S. M. Ward. 1999. Bioaccumulation and biomagnification of mercury in two warmwater fish communities. Journal of Freshwater Ecology 14(4): 487-497.

Neumann, R. M., R. J. Carley, C. R. Perkins, and R. Pirrie. 1998. Preliminary assessment of total mercury concentrations in fishes from Connecticut water bodies. Completion Report

submitted to Connecticut Department of Environmental Protection. University of Connecticut, Storrs. 117pp.

Olson, C. I., H. Fakhraei, and C. T. Discoll. 2020. Mercury emissions, atmospheric concentrations, and wet deposition across the conterminous United States: changes over 20 years of monitoring. Environmental Science and Technology 7(6): 376-381.

Petre, S. J., D. K. Sackett, and D. D. Aday. 2012. Do national advisories serve local consumers: An assessment of mercury in economically important North Carolina fish. Journal of Environmental Monitoring 14: 1410-1416.

Post, J. R., L. Persson, E. A. Parkinson, and R. Van Kooten. 2008. Angler numerical response across landscapes and the collapse of freshwater fisheries. Ecological Applications 18(4): 1038-1049.

Post, J. R., and E. A. Parkinson. 2012. Temporal and spatial patterns of angler effort across lake districts and policy options to sustain recreational fisheries. Canadian Journal of Fisheries and Aquatic Sciences 69: 321-329.

R Core Team. 2021. R: A language and environment for statistical computing. Version 3.5.2. R Foundation for Statistical Computing, Vienna, Austria. Available online at http://www.R-project.org. Accessed August 2021.

Ruxton, C. H. S., S. C. Reed, M. J. A. Simpson, and K. J. Millington. 2004. The health benefits of omega-3 polyunsaturated fatty acids: a review of the evidence. Journal of Human Nutrition and Dietetics 17(5): 449-459.

Rypel, A. L. 2010. Mercury concentrations in lentic fish populations related to ecosystem and watershed characteristics. Ambio 39: 14-19.

Sackett, D. K., D. D. Aday, J. A. Rice, and W. G. Cope. 2009. A statewide assessment of mercury dynamics in North Carolina water bodies and fish. Transactions of the American Fisheries Society 138: 1328-1341.

Sackett, D. K., D. D. Aday, J. A. Rice, W. G. Cope, and D. Buchwalter. 2010. Does proximity to coal-fired power plants influence fish tissue mercury? Ecotoxicology 19: 1601-1611.

Schindler, D. W. 2001. The cumulative effects of climate warming and other human stresses on Canadian freshwaters in the new millennium. Canadian Journal of Fisheries and Aquatic Sciences 58: 18-29.

Shimshack, J. P., and M. B. Ward. 2010. Mercury advisories and household health trade-offs. Journal of Health Economics 29(5): 674-685.

Simonin, H. A., J. J. Loukmas, L. C. Skinner, and K. M. Roy. 2008. Lake variability: key factors controlling mercury concentrations in New York fish. Environmental Pollution 154(1): 107-115.

Streets, D. G., H. M. Horowitz, Z. Lu, L. Levin, C. P. Thackray, and E. M. Sunderland. 2019. Global and regional trends in mercury emissions and concentrations, 2010-2015. Atmospheric Environment 201: 417-427.

Sullivan, C. J., D. A. Isermann, K. E. Whitlock, and J. F. Hansen. 2020. Assessing the potential to mitigate climate-related expansion of largemouth bass populations using angler harvest. Canadian Journal of Fisheries and Aquatic Sciences 77(3): 520-533.

Tremain, D. M., and D. H. Adams. 2012. Mercury in groupers and sea basses from the Gulf of Mexico: relationships with size, age, and feeding ecology. Transactions of the American Fisheries Society 141: 1274–1286.

[USEPA] United States Environmental Protection Agency. 1997. Mercury study report to Congress. Report no. EPA-452/R-97-005, Office of Air Quality Planning and Standards and Office of Research and Development, Washington, D. C.

[USEPA] United States Environmental Protection Agency. 2001. Water Quality Criterion for the Protection of Human Health: Methylmercury. Report no. EPA-823-R-01-001, Office of Water, Washington D. C.

[USEPA] United States Environmental Protection Agency. 2003. America's children and the environment: measures of contaminants, body burdens, and illnesses. Report no. EPA-240R03001, Washington D. C.

[USEPA] United States Environmental Protection Agency. 2004. National listing of fish and wildlife consumption advisories. Available: http://www.epa.gov/ebtpages/humaadvisofishandwildlifeconsumption.html (accessed: June 2021).

Vijayaraghavan, K., L. Levin, L. Parker, G. Yarwood, and D. Streets. 2014. Response of fish tissue mercury in a freshwater lake to local, regional, and global changes in mercury emissions. Environmental Toxicology and Chemistry 33(6): 1238-1247.

Vokoun, J. C., and C. R. Perkins. 2008. Second statewide assessment of mercury contamination in fish tissue from Connecticut lakes (2005-2006). Completion Report *submitted to* Connecticut Department of Environmental Protection. University of Connecticut, Storrs. 49pp.

Wang, Q., D. Kim, D. D. Dionysiou, G. A. Sorial, and D. Timberlake. 2004. Sources and remediation for mercury contamination in aquatic systems – a literature review. Environmental Pollution 131: 323-336.

Ward, T.D., J. W. Brownscombe, L. F. G. Gutowsky, R. Ballagh, N. Sakich, D. McLean, G. Quesnel, S. Gambhir, C. M. O'Connor, and S. J. Cooke. 2017. Electric fish handling gloves provide effective immobilization and do not impede reflex recovery of adult largemouth bass. North American Journal of Fisheries Management 37:652-659.

Weiss-Penzias, P. S., D. A. Gay, M. E. Brigham, M. T. Parsons, M. S. Gustin, and A. Schure. 2016. Trends in mercury wet deposition and mercury air concentrations across the U.S. and Canada. Science of the Total Environment 568: 546-556.

Wentz, D. A., M. E. Brigham, L. C. Chasar, M. A. Lutz, and D. P. Krabbenhoft. 2014. Mercury in the Nation's streams- levels, trends, and implications. U.S. Geological Survey Circular 1395, 90pp.

Wiener, J. G., B. C. Knights, M. B. Sandheinrich, J. D. Jeremiason, M. E. Brigham, D. R. Engstrom, L. G. Woodruff, W. F. Cannon, and S. J. Balogh. 2006. Mercury in soils, lakes, and fish in Voyageurs National Park (Minnesota): importance of atmospheric deposition and ecosystem factors. Environmental Science & Technology 40: 6261–6268.

Yu, X., C. T. Driscoll, R. A. F. Warby, M. Montesdeoca, and C. E. Johnson. 2014. Soil mercury and its response to atmospheric mercury deposition across the northeastern United States. Ecological Applications 24(4): 812-822.

Zhang, Y., and L. Jauglé. 2013. Decreases in mercury wet deposition over the United States during 2004-2010: roles of domestic and global background emission reductions. Atmosphere 4(2): 113-131.

Zhou, H., C. Zhou, M. M. Lynam, J. T. Dvonch, J. A. Barres, P. K. Hopke, M. Cohen, and T. M. Holsen. 2017. Atmospheric mercury temporal trends in the Northeastern United States from 1992-2014: are measured concentrations responding to decreasing regional emissions? Environmental Science and Technology 4: 91-97.

Appendix 1

Appendix 1 Table 1. Summary statistics describing the total number (N), total length (TL; mm) range, mercury (Hg) concentration range, and proportion (*q*) of largemouth bass with mercury concentrations equal to or exceeding 0.1, 0.3, 0.5, and 1.0 µg/g wet weight from bass captured from Connecticut water bodies during 1995 (Neumann et al. 1996) and 2005-2006 (Vokoun and Perkins 2008). Mercury concentration data represent raw, not standardized, values.

			1995					
Site	**N**	**TL Range**	**Mean Hg**	**Hg Range**	$q \geq 0.1$	$q \geq 0.3$	$q \geq 0.5$	$q \geq 1.0$
Amos Lake	10	333-472	0.688	0.421-1.069	1.00	1.00	0.70	0.20
Aspinook Pond	10	323-438	0.553	0.293-1.005	1.00	0.90	0.50	0.10
Ball Pond	10	325-490	0.388	0.232-0.676	1.00	0.80	0.20	0.00
Bantam Lake	10	321-510	0.367	0.140-0.889	1.00	0.50	0.20	0.00
Bashan Lake	10	312-436	0.655	0.335-1.252	1.00	1.00	0.60	0.10
Batterson Park Pond	8	302-462	0.401	0.170-0.736	1.00	0.75	0.13	0.00
Beach Pond	10	318-456	0.573	0.348-1.314	1.00	1.00	0.30	0.10
Billings Lake	10	311-429	0.750	0.616-0.945	0.90	0.90	0.90	0.00
Black Pond	10	279-430	0.542	0.294-0.868	1.00	0.90	0.50	0.00
Candlewood Lake	10	323-476	0.496	0.250-0.904	1.00	0.70	0.40	0.00
Canoe Brook Lake	10	292-426	0.205	0.096-0.325	0.90	0.10	0.00	0.00
Cedar Swamp Pond	10	290-458	0.355	0.079-0.797	0.90	0.60	0.10	0.00
Coventry Lake	10	306-385	0.250	0.154-0.411	1.00	0.30	0.00	0.00
Crystal Lake (E)	20	267-475	0.307	0.152-0.593	1.00	0.40	0.05	0.00
Crystal Lake (M)	10	285-500	0.471	0.245-1.072	1.00	0.90	0.30	0.10
Dodge Pond	20	247-479	1.169	0.719-2.645	1.00	1.00	1.00	0.65
East Twin Lake	10	312-440	0.480	0.214-0.828	1.00	0.80	0.50	0.00
Gardner Lake	5	355-421	0.377	0.281-0.497	1.00	0.80	0.00	0.00
Glasgo Pond	7	345-389	0.729	0.531-1.235	1.00	1.00	1.00	0.14
Hanover Pond	8	294-380	0.189	0.138-0.291	1.00	0.00	0.00	0.00
Highland Lake	10	301-450	0.287	0.119-0.659	1.00	0.30	0.30	0.00
Housatonic Lake	10	307-390	0.385	0.279-0.578	0.90	0.80	0.10	0.00
Lake Kenosia	10	291-498	0.520	0.238-1.143	1.00	0.80	0.40	0.10
Lake McDonough	13	259-492	1.005	0.292-2.462	1.00	0.92	0.85	0.46
Lake of the Isles	10	315-504	0.476	0.296-1.018	1.00	0.90	0.40	0.10
Lake Saltonstall	10	297-490	0.227	0.032-0.459	0.80	0.30	0.00	0.00
Lake Zoar	10	310-423	0.671	0.331-0.995	1.00	1.00	0.80	0.00
Mamanasco Lake	3	278-319	0.189	0.176-0.201	0.67	0.00	0.00	0.00
Mansfield Hollow Reservoir	10	305-417	0.601	0.440-0.675	1.00	1.00	0.90	0.00
Mashapaug Lake	10	303-422	0.551	0.271-1.115	1.00	0.80	0.30	0.10
Middle Bolton Lake	10	310-361	0.345	0.249-0.536	1.00	0.80	0.10	0.00
Moodus Reservoir	10	372-479	0.675	0.527-1.042	1.00	1.00	1.00	0.10
Mudge Pond	10	282-358	0.244	0.165-0.388	1.00	0.10	0.00	0.00
North Farms Reservoir	10	253-451	0.272	0.075-0.542	0.90	0.40	0.10	0.00
Pachaug Pond	7	317-373	0.427	0.368-0.481	1.00	1.00	0.00	0.00
Pattagannsett Lake	10	306-443	0.635	0.426-1.036	1.00	1.00	0.70	0.10
Powers Lake	10	305-425	0.533	0.425-0.767	1.00	1.00	0.40	0.00
Quaddick Reservoir	10	304-433	0.750	0.342-1.255	1.00	1.00	0.80	0.20
Quassapaug Lake	10	303-440	0.514	0.280-0.737	1.00	0.90	0.40	0.00
Rainbow Reservoir	6	277-402	0.263	0.158-0.403	1.00	0.17	0.00	0.00
Rogers Lake	10	309-450	0.509	0.198-0.657	1.00	0.90	0.60	0.00

Saugatuck Reservoir	10	340-439	0.748	0.542-1.043	0.90	0.90	0.90	0.10
Silver Lake	9	269-512	1.084	0.162-1.488	1.00	0.89	0.78	0.78
Taunton Lake	10	304-455	0.356	0.144-0.670	1.00	0.50	0.20	0.00
Tyler Lake	10	301-512	0.569	0.282-1.114	1.00	0.80	0.50	0.10
Union Pond	9	276-387	0.333	0.233-0.443	1.00	0.56	0.00	0.00
Waramaug Lake	10	314-405	0.240	0.158-0.362	1.00	0.10	0.00	0.00
Wauregan Reservoir	10	261-390	0.437	0.266-0.661	1.00	0.90	0.30	0.00
Winchester Lake	10	311-388	0.593	0.347-1.026	1.00	1.00	0.60	0.10
Wononskopomuc Lake	10	277-331	0.478	0.318-0.661	1.00	1.00	0.40	0.00
Wyassup Lake	10	313-505	0.881	0.449-1.418	1.00	1.00	0.90	0.30

2005-2006

Site	N	TL Range	Mean Hg	Hg Range	*q* > 0.1	*q* > 0.3	*q* > 0.5	*q* > 1.0
Amos Lake	10	352-463	0.621	0.231-1.092	1.00	0.80	0.60	0.10
Ashland Pond	15	274-501	0.621	0.198-1.296	1.00	0.87	0.47	0.20
Aspinook Pond	10	319-463	0.478	0.237-0.866	1.00	0.50	0.40	0.00
Ball Pond	5	341-457	0.381	0.236-0.531	1.00	0.60	0.20	0.00
Bantam Lake	10	304-498	0.235	0.082-0.581	0.70	0.30	0.10	0.00
Bashan Lake	10	290-471	0.882	0.364-1.742	1.00	1.00	0.80	0.30
Batterson Park Pond	10	295-475	0.397	0.109-1.306	1.00	0.20	0.20	0.20
Beach Pond	10	312-564	0.803	0.360-1.773	1.00	1.00	0.80	0.30
Billings Lake	10	300-379	0.533	0.283-0.774	1.00	0.90	0.50	0.00
Black Pond	10	291-387	0.291	0.178-0.584	1.00	0.30	0.10	0.00
Candlewood Lake	10	322-486	0.336	0.098-0.644	0.90	0.60	0.20	0.00
Canoe Brook Lake	10	289-411	0.221	0.121-0.370	1.00	0.20	0.00	0.00
Cedar Swamp Pond	10	294-374	0.113	0.086-0.149	0.80	0.00	0.00	0.00
Coventry Lake	10	286-480	0.223	0.089-0.503	0.80	0.30	0.10	0.00
Crystal Lake (E)	10	307-550	0.499	0.244-0.864	1.00	0.70	0.40	0.00
Crystal Lake (M)	10	306-337	0.284	0.234-0.354	1.00	0.20	0.00	0.00
East Twin Lake	10	350-440	0.405	0.212-0.649	1.00	0.70	0.20	0.00
Gardner Lake	10	316-413	0.389	0.182-0.521	1.00	0.80	0.30	0.00
Glasgo Pond	10	284-516	0.606	0.428-1.091	1.00	1.00	0.60	0.10
Gorton Pond	10	320-378	0.349	0.273-0.521	1.00	0.50	0.10	0.00
Highland Lake	10	325-410	0.318	0.164-0.470	1.00	0.50	0.00	0.00
Housatonic Lake	7	310-433	0.641	0.243-1.364	1.00	0.86	0.43	0.29
Lake Kenosia	10	282-376	0.472	0.290-0.681	1.00	0.90	0.50	0.00
Lake McDonough	10	304-485	0.605	0.211-1.514	1.00	0.70	0.50	0.20
Lake Saltonstall	10	280-500	0.277	0.120-0.666	1.00	0.30	0.20	0.00
Lake Zoar	10	305-448	0.495	0.226-1.020	1.00	0.60	0.30	0.10
Long Pond	10	313-405	0.512	0.291-0.872	1.00	0.90	0.50	0.00
Mamanasco Lake	10	307-348	0.145	0.079-0.226	0.80	0.00	0.00	0.00
Mansfield Hollow Reservoir	10	348-455	0.647	0.432-0.800	1.00	1.00	0.90	0.00
Mashapaug Lake	10	320-407	0.704	0.359-1.136	1.00	1.00	0.90	0.10
Middle Bolton Lake	10	276-320	0.358	0.254-0.512	1.00	0.90	0.10	0.00
Moodus Reservoir	10	334-452	0.535	0.341-0.649	1.00	1.00	0.70	0.00
Mudge Pond	10	294-451	0.190	0.094-0.468	0.80	0.10	0.00	0.00
North Farms Reservoir	9	292-490	0.135	0.055-0.381	0.44	0.11	0.00	0.00
Pachaug Pond	10	315-405	0.394	0.267-0.613	1.00	0.90	0.20	0.00
Pattagannsett Lake	10	283-397	0.371	0.276-0.498	1.00	0.70	0.00	0.00
Powers Lake	7	320-440	0.348	0.177-0.635	1.00	0.43	0.14	0.00
Quaddick Reservoir	9	282-367	0.382	0.246-0.718	1.00	0.78	0.11	0.00
Quassapaug Lake	9	318-473	0.458	0.146-0.701	1.00	0.78	0.44	0.00
Quinebaug Lake	12	310-420	0.668	0.342-0.969	1.00	1.00	0.83	0.00

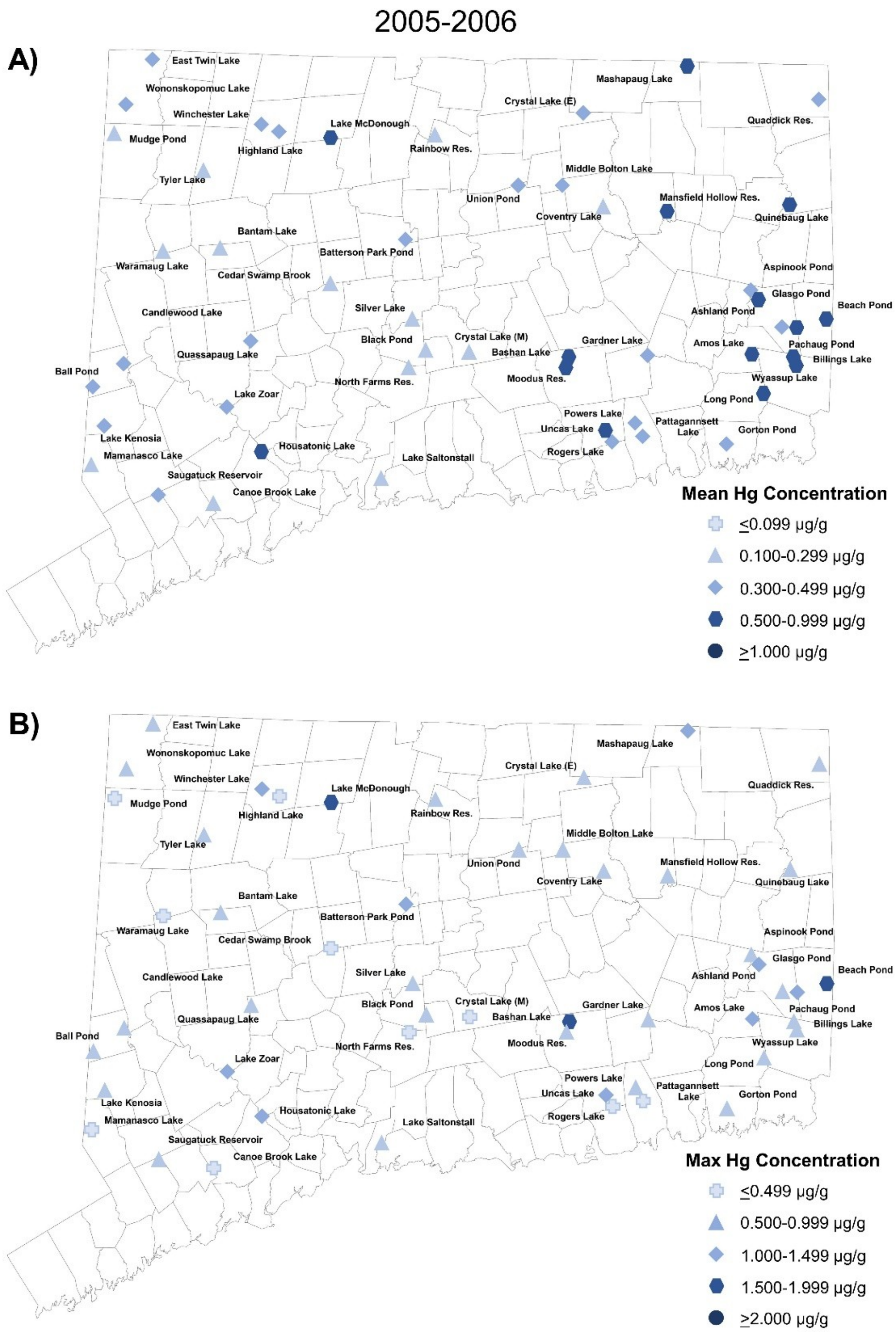
Rainbow Reservoir	11	245-403	0.202	0.098-0.538	0.91	0.09	0.09	0.00
Rogers Lake	6	340-415	0.341	0.198-0.491	1.00	0.67	0.00	0.00
Saugatuck Reservoir	8	275-516	0.473	0.288-0.935	1.00	0.88	0.25	0.00
Silver Lake	10	290-443	0.299	0.157-0.564	1.00	0.40	0.10	0.00
Tyler Lake	10	292-428	0.240	0.133-0.639	1.00	0.20	0.10	0.00
Uncas Lake	15	288-497	0.668	0.264-1.172	1.00	0.93	0.73	0.07
Union Pond	10	290-440	0.496	0.253-0.787	1.00	0.80	0.40	0.00
Waramaug Lake	10	334-440	0.242	0.162-0.416	1.00	0.20	0.00	0.00
Winchester Lake	10	293-421	0.484	0.268-1.097	1.00	0.90	0.30	0.10
Wononskopomuc Lake	10	297-413	0.330	0.134-0.537	1.00	0.50	0.10	0.00
Wyassup Lake	10	280-332	0.602	0.408-0.772	1.00	1.00	0.80	0.00

Appendix 1 Table 2. Regression statistics (*N* = number of fish collected; *a* = intercept; *b* = slope) describing the relationship between log_{10}total length (TL; mm) and log_{10}mercury concentration (Hg; μg/g) for largemouth bass captured from from Connecticut water bodies during 1995 (Neumann et al. 1996) and 2005-2006 (Vokoun and Perkins 2008).

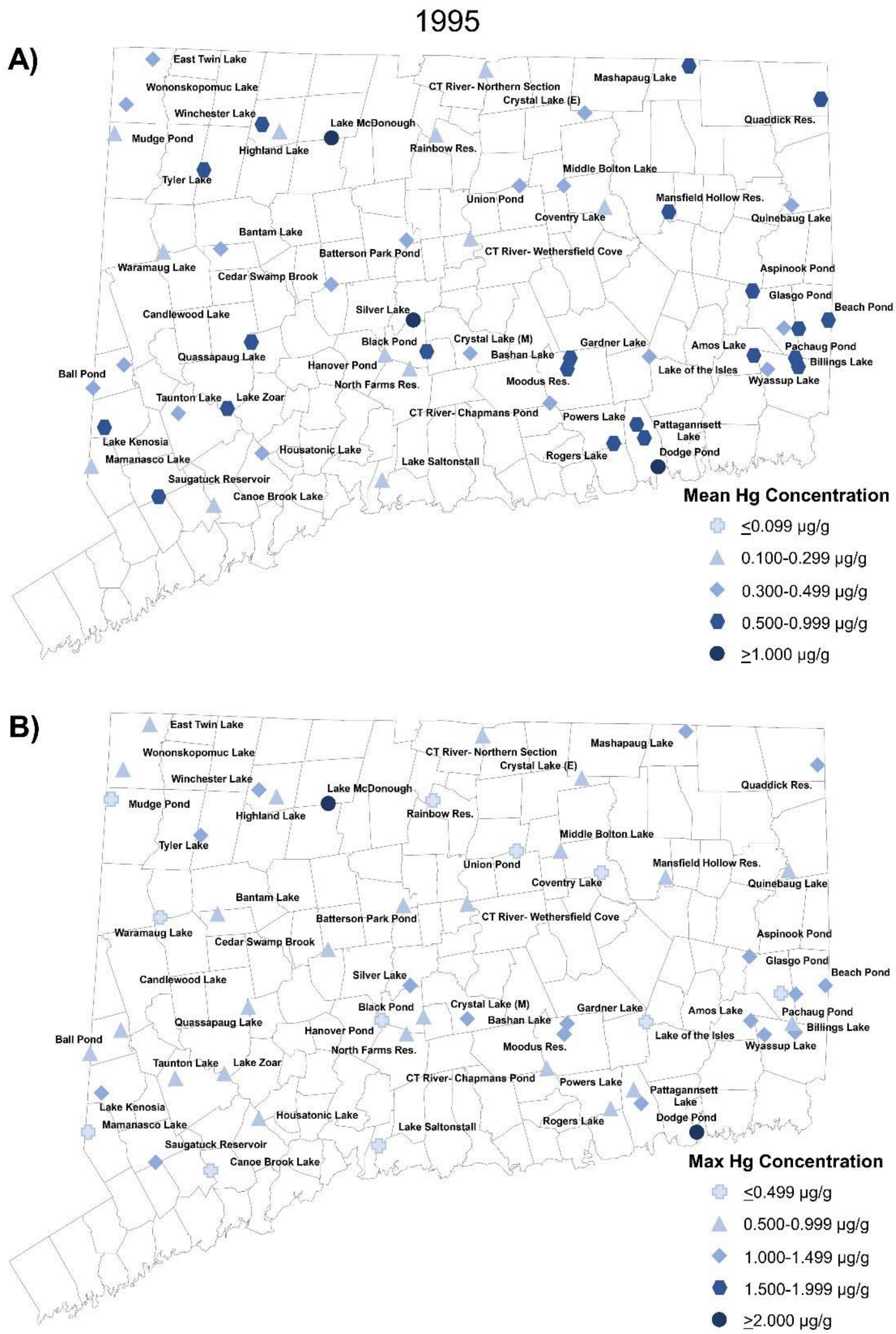
1995					
Site	***N***	***a***	***b***	**R^2**	***P***
Amos Lake	10	-6.558	2.459	0.700	0.003
Aspinook Pond	10	-7.664	2.859	0.410	0.046
Ball Pond	10	-7.008	2.550	0.900	<0.001
Bantam Lake	10	-10.124	3.712	0.930	<0.001
Bashan Lake	10	-8.957	3.388	0.980	<0.001
Batterson Park Pond	8	-5.730	2.047	0.490	0.054
Beach Pond	10	-8.267	3.108	0.660	0.004
Billings Lake	10	-1.801	0.646	0.311	0.119
Black Pond	10	-5.463	2.045	0.880	<0.001
Candlewood Lake	10	-6.837	2.506	0.620	0.035
Canoe Brook Lake	10	-6.517	2.287	0.650	0.009
Cedar Swamp Pond	10	-11.995	4.479	0.860	<0.001
Coventry Lake	10	-9.256	3.405	0.470	0.043
Crystal Lake (E)	20	-6.032	2.176	0.610	<0.001
Crystal Lake (M)	10	-6.858	2.531	0.850	<0.001
Dodge Pond	20	-3.543	1.407	0.580	<0.001
East Twin Lake	10	-7.981	2.960	0.470	0.029
Gardner Lake	5	-4.717	1.661	0.239	0.404
Glasgo Pond	7	-7.101	2.706	0.213	0.298
Hanover Pond	8	-5.864	2.038	0.404	0.090
Highland Lake	10	-12.075	4.486	0.890	<0.001
Housatonic Lake	10	-4.587	1.638	0.384	0.075
Lake Kenosia	10	-5.876	2.158	0.680	0.003
Lake McDonough	13	-8.249	3.167	0.830	<0.001
Lake of the Isles	10	-6.847	2.517	0.910	<0.001
Lake Saltonstall	10	-13.353	4.846	0.820	<0.001
Lake Zoar	10	-1.880	0.648	0.015	0.818
Mamanasco Lake	3				
Mansfield Hollow Reservoir	10	-1.005	0.308	0.055	0.516
Mashapaug Lake	10	-9.835	3.737	0.880	<0.001
Middle Bolton Lake	10	-6.277	2.305	0.305	0.098
Moodus Reservoir	10	-4.896	1.791	0.429	0.040
Mudge Pond	10	-5.549	1.959	0.438	0.037
North Farms Reservoir	10	-8.069	2.924	0.890	<0.001
Pachaug Pond	7	-2.258	0.740	0.214	0.296
Pattagannsett Lake	10	-4.325	1.600	0.582	0.010
Powers Lake	10	-3.930	1.442	0.468	0.029
Quaddick Reservoir	10	-6.836	2.621	0.660	0.004
Quassapaug Lake	10	-5.951	2.178	0.620	0.007
Rainbow Reservoir	6	-5.247	1.855	0.601	0.124
Rogers Lake	10	-4.673	1.696	0.362	0.066
Saugatuck Reservoir	10	-2.500	0.910	0.186	0.246
Silver Lake	9	-9.463	3.567	0.930	<0.001
Taunton Lake	10	-10.264	3.801	0.840	<0.001
Tyler Lake	10	-6.416	2.383	0.810	<0.001
Union Pond	9	-4.285	1.515	0.600	0.025

Waramaug Lake	10	-3.406	1.088	0.086	0.410
Wauregan Reservoir	10	-3.768	1.363	0.364	0.065
Winchester Lake	10	-8.321	3.193	0.620	0.007
Wononskopomuc Lake	10	-2.622	0.925	0.036	0.600
Wyassup Lake	10	-5.195	1.997	0.720	0.004
		2005-2006			
Site	**N**	***a***	***b***	**R^2**	***P***
Amos Lake	10	-11.136	4.157	0.618	0.007
Ashland Pond	15	-7.662	2.868	0.912	<0.001
Aspinook Pond	10	-10.480	3.921	0.692	0.003
Ball Pond	5	-6.170	2.170	0.619	0.114
Bantam Lake	10	-11.587	4.260	0.809	<0.001
Bashan Lake	10	-7.127	2.728	0.827	<0.001
Batterson Park Pond	10	-14.567	5.439	0.835	<0.001
Beach Pond	10	-5.477	2.064	0.446	0.035
Billings Lake	10	-7.404	2.801	0.550	0.014
Black Pond	10	1.586	-0.859	0.038	0.592
Candlewood Lake	10	-11.038	4.037	0.604	0.040
Canoe Brook Lake	10	-6.701	2.366	0.578	0.011
Cedar Swamp Pond	10	-4.986	1.596	0.537	0.016
Coventry Lake	10	-7.540	2.678	0.636	0.006
Crystal Lake (E)	10	-3.804	1.315	0.307	0.096
Crystal Lake (M)	10	-0.891	0.136	0.001	0.930
East Twin Lake	10	-9.922	3.680	0.628	0.006
Gardner Lake	10	-8.087	2.966	0.584	0.010
Glasgo Pond	10	-4.389	1.625	0.758	0.001
Gorton Pond	10	-1.265	0.313	0.008	0.811
Highland Lake	10	-4.901	1.704	0.168	0.239
Housatonic Lake	7	-13.078	4.977	0.945	<0.001
Lake Kenosia	10	-5.277	1.971	0.444	0.036
Lake McDonough	10	-8.378	3.078	0.754	0.132
Lake Saltonstall	10	-6.846	2.402	0.561	0.013
Lake Zoar	10	-11.232	4.267	0.803	<0.001
Long Pond	10	-5.339	1.982	0.199	0.197
Mamanasco Lake	10	-12.735	4.725	0.302	0.010
Mansfield Hollow Reservoir	10	-1.381	0.460	0.049	0.537
Mashapaug Lake	10	-8.264	3.152	0.723	0.002
Middle Bolton Lake	10	-1.095	0.261	0.004	0.860
Moodus Reservoir	10	-2.702	0.942	0.141	0.284
Mudge Pond	10	-9.324	3.385	0.851	<0.001
North Farms Reservoir	9	-8.652	2.990	0.708	0.005
Pachaug Pond	10	-5.102	1.843	0.256	0.136
Pattagannsett Lake	10	-4.128	1.463	0.639	0.006
Powers Lake	7	-8.813	3.249	0.741	0.013
Quaddick Reservoir	9	-8.176	3.096	0.699	0.005
Quassapaug Lake	9	-10.430	3.842	0.820	<0.001
Quinebaug Lake	12	-3.792	1.417	0.288	0.072
Rainbow Reservoir	11	-7.050	2.537	0.482	0.026
Rogers Lake	6	-8.809	3.227	0.435	0.154
Saugatuck Reservoir	8	-5.244	1.914	0.924	<0.001
Silver Lake	10	-4.079	1.391	0.201	0.194
Tyler Lake	10	-10.686	3.992	0.946	<0.001
Uncas Lake	15	-5.300	1.963	0.650	<0.001

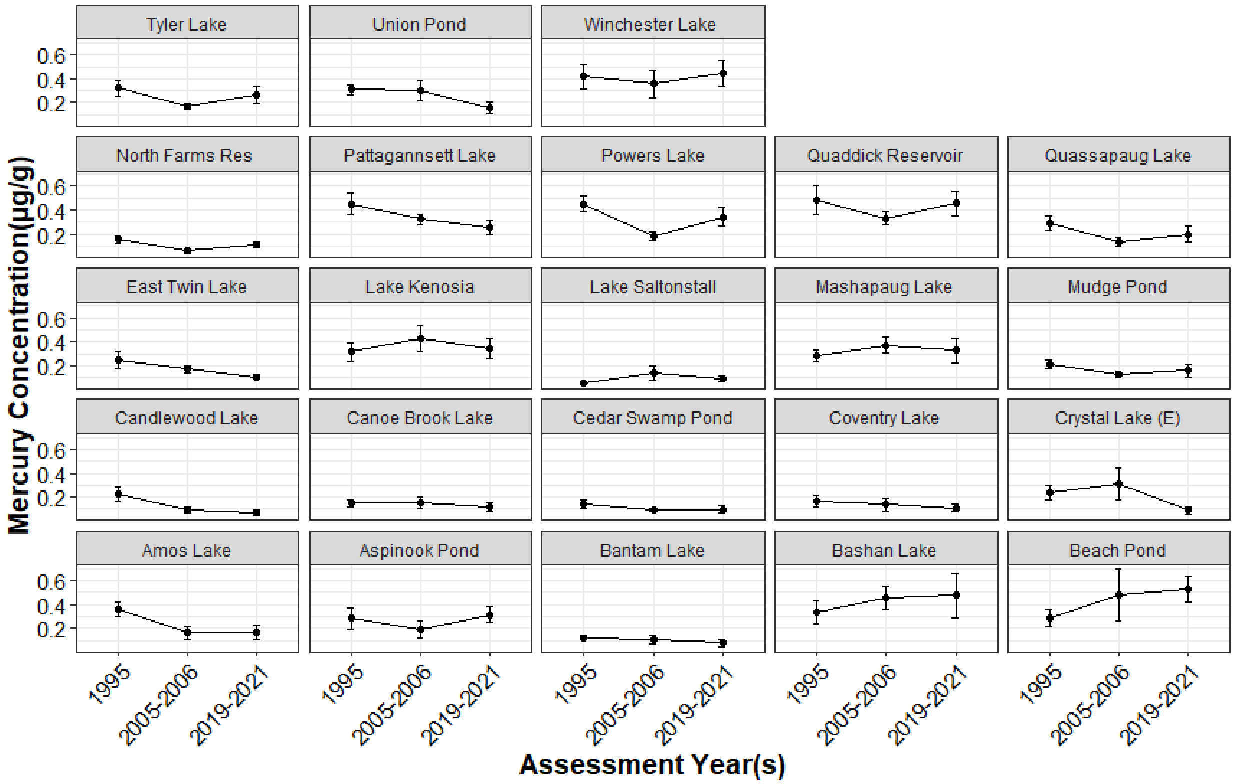
Union Pond	10	-6.427	2.369	0.530	0.017
Waramaug Lake	10	-8.608	3.102	0.824	<0.001
Winchester Lake	10	-5.673	2.098	0.400	0.050
Wononskopomuc Lake	10	-9.323	3.455	0.777	<0.001
Wyassup Lake	10	-3.467	1.306	0.164	0.245



Appendix 1 Figure 1. Mean and maximum mercury concentrations in largemouth and smallmouth bass tissues from 51 Connecticut lakes and ponds sampled between 2005 and 2006. Mercury concentration data represent raw, not standardized, values.



Appendix 1 Figure 2. Mean and maximum mercury concentrations in largemouth and smallmouth bass tissues from 51 Connecticut lakes and ponds sampled during 1995. Mercury concentration data represent raw, not standardized, values.



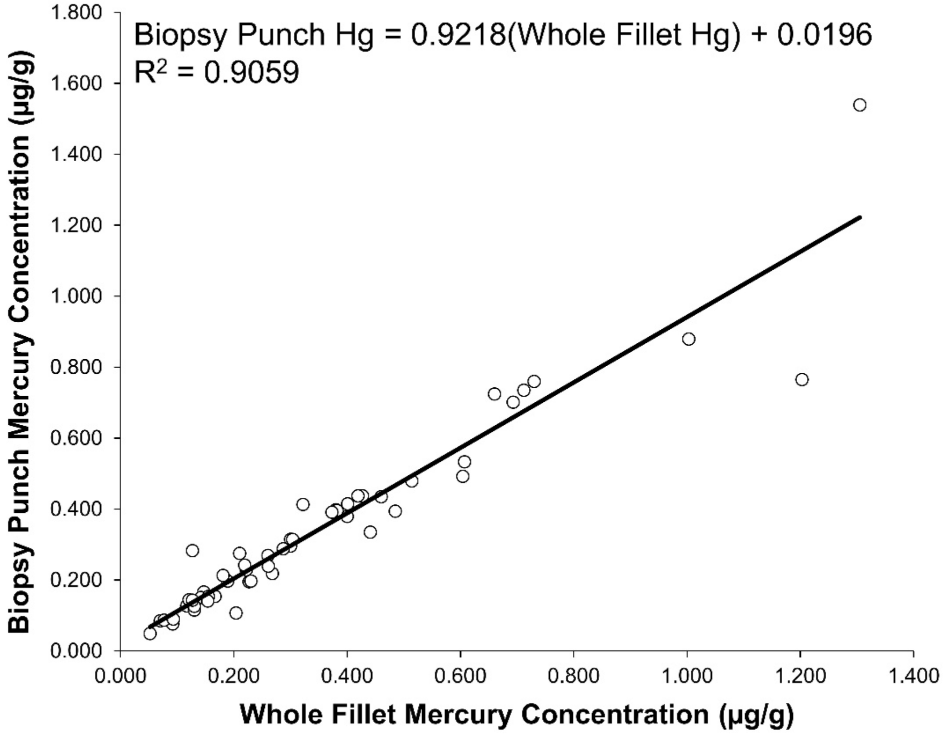
Appendix 1 Figure 3. Scatterplots depicting mean largemouth bass length-adjusted mercury concentrations across the three statewide assessments (1995, 2005-2006, and 2019-2021). Error bars represent ±1 standard error.

Appendix 2

The use of non-lethal biopsy punches (also referred to as biopsy “plugs”) instead of homogenized lethal whole fillets to sample fish muscle tissue for mercury analysis is widespread. Using biopsy punches to collect fish tissue is beneficial since it eliminates the need to sacrifice the fish, reduces processing time, and allows for the sampling of fish that would otherwise be prohibited or undesirable (e.g., large females). Mercury concentrations in biopsy punch samples are statistically equivalent to concentrations in homogenized fillets in smallmouth bass (Knight et al. 2019), suggesting that biopsy plugs are a suitable alternative tissue sampling method for largemouth bass in Connecticut. During the second statewide assessment of fish mercury concentrations, Vokoun and Perkins (2008) found similar results from samples collected from largemouth bass, promoting the adoption of biopsy punches for the non-lethal sampling of fish tissues in Connecticut lakes and ponds.

During this assessment, we further examined whether mercury concentrations were different between biopsy punch and whole fillet samples in largemouth bass. We sampled whole fillet and biopsy punch samples from 53 largemouth bass across 51 lakes and ponds, collecting fish from a variety of size classes. After collection, we collected axial tissue from each largemouth bass using a 7mm x 6mm (diameter) biopsy punch from the left anterior dorsal musculature. We used biopsy punches to sample a single largemouth bass and then discarded each biopsy punch. We then euthanized each largemouth bass for whole-fillet axial tissue collection (see Methods section for further processing details). We used a paired t-test to determine whether mercury concentrations were similar between biopsy punch and whole fillet tissue samples from largemouth bass. Our null hypothesis was that there would be no difference in mercury concentrations between biopsy punch and whole-fillet tissue samples.

We present mercury concentration data for paired biopsy punch and whole-fillet samples from the 53 largemouth bass in Appendix 2 Table 1. Mean mercury concentrations were not statistically different between biopsy punch and whole-fillet samples ($t = -0.649$, $df = 52$, $P = 0.519$; Appendix 2 Figure 1), further confirming that mercury concentrations from tissue samples collected using non-lethal biopsy punches are similar to those collected from lethal whole-fillets. The mean absolute difference in mercury concentrations between paired biopsy punch and whole-fillet tissues was 0.044 µg/g, but such perceived difference is negligible.



Appendix 2 Figure 1. Relationship between paired biopsy punch and homogenized whole fillet tissue mercury concentrations (µg/g) from 53 largemouth bass across Connecticut lakes and ponds. The linear regression equation and associated R^2 values in the plot was statistically significant (α = 0.05). Mercury concentration data represent raw, not standardized, values.

Appendix 2 Table 1. Mercury concentrations (µg/g) from paired biopsy punch and homogenized whole fillet samples from 53 largemouth bass across Connecticut lakes and ponds. Sample IDs can be indexed in Appendix 2 to retrieve fish length and weight information. Mercury concentration data represent raw, not standardized, values.

Sample ID	Species	Mercury Concentration (µg/g)		Absolute Difference
		Biopsy Punch	Whole Fillet	
AMOS011	LMB	0.127	0.117	0.01
AMOS014	LMB	0.166	0.147	0.019
ASH007	LMB	0.195	0.227	0.032
ASP003	LMB	0.492	0.604	0.112
BALL006	LMB	0.296	0.300	0.004
BASH002	LMB	0.269	0.260	0.009
BAT014	LMB	0.085	0.070	0.015
BEACH011	LMB	0.379	0.400	0.021
BILL005	LMB	0.315	0.300	0.015
BLACK005	LMB	0.107	0.204	0.097
CAND005	LMB	0.415	0.401	0.014
CAN009	LMB	0.288	0.287	0.001
CEDAR001	LMB	0.197	0.189	0.008
COV004	LMB	0.275	0.210	0.065
CRYS009	LMB	0.144	0.121	0.023
CRYS002	LMB	0.049	0.052	0.003
CRYST001	LMB	0.398	0.38	0.018
EAST003	LMB	0.724	0.660	0.064
GARD001	LMB	0.437	0.427	0.01
GLAS007	LMB	0.765	1.203	0.438
GORT003	LMB	0.396	0.382	0.014
GORT008	LMB	0.533	0.607	0.074
HIGH003	LMB	0.218	0.268	0.05
HOUS008	LMB	0.239	0.261	0.022
KEN006	LMB	0.413	0.322	0.091
SALT001	LMB	0.076	0.092	0.016
SALT006	LMB	0.394	0.485	0.091
ZOAR008	LMB	0.283	0.127	0.156
LONG_002	LMB	0.154	0.167	0.013
MAM008	LMB	0.115	0.130	0.015
MANS003	LMB	0.197	0.230	0.033
MBOLT006	LMB	0.735	0.712	0.023
MOOD001	LMB	0.151	0.142	0.009
MUDGE003	LMB	0.154	0.155	0.001
NFARM003	LMB	0.229	0.222	0.007
PACH002	LMB	0.701	0.693	0.008
PATTA003	LMB	0.197	0.230	0.033

POWERS002	LMB	0.437	0.419	0.018
QUADD001	LMB	0.76	0.73	0.027
QUAS001	LMB	0.314	0.304	0.01
QUIN006	LMB	0.335	0.441	0.106
RAIN001	LMB	0.141	0.154	0.013
ROG004	LMB	0.479	0.514	0.035
SAUG001	LMB	0.879	1.003	0.124
SILVER001	LMB	0.126	0.130	0.004
SILVER004	LMB	0.435	0.460	0.025
TYLER003	LMB	0.087	0.077	0.01
UNC001	LMB	0.391	0.373	0.018
UNION001	LMB	0.090	0.093	0.003
WARA001	LMB	0.213	0.181	0.032
WIN004	LMB	1.539	1.305	0.234
WONO006	LMB	0.143	0.127	0.016
WYAS001	LMB	0.242	0.219	0.023
			mean	0.044

Appendix 3

Appendix 3 Table 1. Length (TL; mm), wet weight (g), and mercury concentration (µg/g) for individual largemouth bass and smallmouth bass captured during 2019-2021 from 51 Connecticut lakes and ponds. LMB = largemouth bass, and SMB = smallmouth bass. Mercury concentration data represent raw, not standardized, values.

Site	Location	Date Collected	Sample ID	Species	Length (TL; mm)	Weight (g)	Hg (µg/g)
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS001	LMB	221	110.5	0.084
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS002	LMB	405	919.5	0.367
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS003	LMB	305	385.4	0.216
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS004	LMB	216	144	0.139
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS005	LMB	516	2342.5	0.541
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS006	LMB	460	1261.2	0.542
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS007	LMB	418	982.5	0.364
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS008	LMB	437	1110.5	0.443
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS009	LMB	470	1687.5	0.423
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS010	LMB	359	715.5	0.206
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS011	LMB	235	205.3	0.127
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS012	LMB	245	194.7	0.128
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS013	LMB	443	1106.7	0.846
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS014	LMB	322	506.3	0.166
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS015	LMB	305	365.7	0.274
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS016	LMB	318	421	0.140
Amos Lake	Southeast Hills/Coastal	7/13/2020	AMOS017	LMB	304	360.1	0.112
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH001	LMB	305	362.1	0.201
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH002	LMB	435	1078.1	0.626
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH003	LMB	230	147.3	0.182
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH004	LMB	249	205.1	0.194
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH005	LMB	280	313.2	0.177
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH006	LMB	425	1141.7	0.448
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH007	LMB	226	139.9	0.195

Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH008	LMB	403	1024.4	0.365
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH009	LMB	293	358.2	0.132
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH010	LMB	393	905.8	0.367
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH011	LMB	420	1040.4	0.409
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH012	LMB	383	770.4	0.405
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH013	LMB	417	1073.5	0.396
Ashland Pond	Southeast Hills/Coastal	9/15/2020	ASH014	LMB	266	194.5	0.302
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP001	LMB	230	149.8	0.168
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP002	LMB	235	174.9	0.231
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP003	LMB	435	1252.5	0.492
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP004	LMB	338	447.9	0.334
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP005	LMB	345	587.3	0.431
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP006	LMB	218	148.5	0.133
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP007	LMB	209	122.6	0.191
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP008	LMB	265	252.9	0.205
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP009	LMB	245	198.1	0.178
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP010	LMB	334	556.3	0.496
Aspinook Pond	Northeast Hills/Uplands	7/23/2020	ASP011	LMB	457	1291.2	0.560
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL001	LMB	393	946.6	0.262
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL002	LMB	453	1638.4	0.283
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL003	LMB	358	687	0.126
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL004	LMB	445	1641.3	0.213
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL005	LMB	505	2365.1	0.337
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL006	LMB	413	1041.5	0.296
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL007	LMB	334	537.5	0.158
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL008	LMB	378	818.7	0.105
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL009	LMB	425	1195.6	0.260
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL010	LMB	478	1811.3	0.280

Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL011	LMB	502	1798.1	0.450
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL012	LMB	213	130.5	0.070
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL013	LMB	384	793.4	0.360
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL014	LMB	246	208.2	0.060
Ball Pond	Southwest Hills/Coastal	10/21/2019	BALL015	LMB	206	117.9	0.060
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT001	LMB	325	465.8	0.160
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT002	LMB	387	739.8	0.166
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT003	LMB	456	1602.1	0.184
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT004	LMB	351	535.8	0.135
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT005	LMB	315	406.3	0.066
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT006	LMB	336	640.4	0.144
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT007	LMB	403	1196.9	0.200
Bantam Lake	Northwest Hills/Upland	7/6/2020	BANT008	LMB	524	2265	0.852
Bantam Lake	Northwest Hills/Upland	11/7/2020	BANT009	LMB	434	1326.8	0.268
Bantam Lake	Northwest Hills/Upland	11/7/2020	BANT010	LMB	258	231.7	0.035
Bantam Lake	Northwest Hills/Upland	11/7/2020	BANT011	LMB	229	169.4	0.033
Bantam Lake	Northwest Hills/Upland	11/7/2020	BANT012	LMB	405	1063.4	0.110
Bantam Lake	Northwest Hills/Upland	11/7/2020	BANT013	LMB	503	2395.5	0.306
Bantam Lake	Northwest Hills/Upland	11/7/2020	BANT014	LMB	242	226.2	0.021
Bantam Lake	Northwest Hills/Upland	11/7/2020	BANT015	LMB	419	1083.5	0.186
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH001	LMB	340	486	0.800
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH002	LMB	250	227	0.269
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH003	LMB	402	886.9	0.685
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH004	LMB	423	1024.3	0.890
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH005	LMB	308	383.4	0.532
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH006	LMB	434	1163.4	0.723
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH007	LMB	337	512.5	0.370
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH008	LMB	349	604.4	0.397

Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH009	LMB	422	788.2	1.069
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH010	LMB	388	829.6	1.513
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH011	LMB	381	737.2	0.633
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH012	LMB	238	230.6	0.235
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH013	LMB	215	125.6	0.274
Bashan Lake	Southeast Hills/Coastal	10/22/2019	BASH014	LMB	251	205.8	0.216
Batterson Park Pond	Central Lowlands	10/8/2019	BAT001	LMB	441	1571.6	0.198
Batterson Park Pond	Central Lowlands	10/8/2019	BAT002	LMB	444	1405.3	0.134
Batterson Park Pond	Central Lowlands	10/8/2019	BAT003	LMB	260	204.6	0.051
Batterson Park Pond	Central Lowlands	10/8/2019	BAT004	LMB	285	350.6	0.114
Batterson Park Pond	Central Lowlands	10/8/2019	BAT005	LMB	510	1953.4	0.604
Batterson Park Pond	Central Lowlands	10/8/2019	BAT006	LMB	250	226.2	0.052
Batterson Park Pond	Central Lowlands	10/8/2019	BAT007	LMB	400	1205.3	0.129
Batterson Park Pond	Central Lowlands	10/8/2019	BAT008	LMB	420	1164.7	0.123
Batterson Park Pond	Central Lowlands	10/8/2019	BAT009	LMB	550	3243	0.557
Batterson Park Pond	Central Lowlands	10/8/2019	BAT010	LMB	460	1322	0.247
Batterson Park Pond	Central Lowlands	10/8/2019	BAT011	LMB	389	935	0.167
Batterson Park Pond	Central Lowlands	10/8/2019	BAT012	LMB	220	136.4	0.056
Batterson Park Pond	Central Lowlands	10/8/2019	BAT013	LMB	238	166.4	0.044
Batterson Park Pond	Central Lowlands	10/8/2019	BAT014	LMB	238	171	0.085
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH001	LMB	306	330.3	0.552
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH002	LMB	331	407.1	0.583
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH003	LMB	373	492.2	0.878
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH004	LMB	320	435.5	0.660
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH005	LMB	364	564.1	0.608
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH006	LMB	437	1150	0.821
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH007	LMB	337	461.2	0.640
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH008	LMB	439	1113.3	1.460

Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH009	LMB	293	312.6	0.587
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH010	LMB	396	647.7	0.912
Beach Pond	Southeast Hills/Coastal	9/15/2019	BEACH011	LMB	333	490.1	0.379
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL001	LMB	363	696.2	0.520
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL002	LMB	349	656.5	0.410
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL003	LMB	404	900	0.904
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL004	LMB	401	1027.5	0.857
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL005	LMB	278	276.3	0.315
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL006	LMB	489	1801	1.202
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL007	LMB	510	2063	1.067
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL008	LMB	379	893.2	0.468
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL009	LMB	268	249.5	0.502
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL010	LMB	350	630.6	0.509
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL011	LMB	328	510.4	0.547
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL012	LMB	295	393.7	0.240
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL013	LMB	315	501	0.388
Billings Lake	Southeast Hills/Coastal	10/15/2019	BILL014	LMB	217	111.6	0.335
Black Pond	Central Lowlands	7/28/2020	BLACK001	LMB	203	115	0.060
Black Pond	Central Lowlands	7/28/2020	BLACK002	LMB	206	101.9	0.091
Black Pond	Central Lowlands	7/28/2020	BLACK003	LMB	212	131.6	0.070
Black Pond	Central Lowlands	7/28/2020	BLACK004	LMB	335	509.7	0.128
Black Pond	Central Lowlands	7/28/2020	BLACK005	LMB	287	343.7	0.107
Black Pond	Central Lowlands	7/28/2020	BLACK006	LMB	244	167.1	0.175
Black Pond	Central Lowlands	7/28/2020	BLACK007	LMB	256	118.8	0.197
Black Pond	Central Lowlands	7/28/2020	BLACK008	LMB	237	217.4	0.173
Black Pond	Central Lowlands	7/28/2020	BLACK009	LMB	316	489.4	0.563
Black Pond	Central Lowlands	7/28/2020	BLACK010	LMB	269	238.5	0.240
Black Pond	Central Lowlands	7/28/2020	BLACK011	LMB	285	299.7	0.195

Black Pond	Central Lowlands	7/28/2020	BLACK012	LMB	304	422.3	0.218
Black Pond	Central Lowlands	7/28/2020	BLACK013	LMB	373	788.8	0.351
Black Pond	Central Lowlands	7/28/2020	BLACK014	LMB	377	728.4	0.545
Candlewood Lake	Southwest Hills/Coastal	10/7/2020	CAND001	LMB	358	713.3	0.074
Candlewood Lake	Southwest Hills/Coastal	10/7/2020	CAND002	LMB	414	1278.5	0.223
Candlewood Lake	Southwest Hills/Coastal	10/7/2020	CAND003	LMB	400	1005.8	0.130
Candlewood Lake	Southwest Hills/Coastal	10/7/2020	CAND004	LMB	350	561	0.110
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND005	LMB	446	1364.5	0.415
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND006	LMB	448	1433.5	0.436
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND007	LMB	342	561.5	0.096
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND008	LMB	504	2276.2	0.615
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND009	LMB	380	764.7	0.306
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND010	LMB	465	1490.7	0.518
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND011	LMB	414	1088.2	0.210
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND012	LMB	408	1179.3	0.357
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND013	LMB	334	574.1	0.105
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND014	SMB	306	389.3	0.084
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND015	LMB	518	2498.5	0.517
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND016	LMB	490	1652.2	0.591
Candlewood Lake	Southwest Hills/Coastal	10/24/2020	CAND017	LMB	242	190.7	0.053
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN001	LMB	397	918.3	0.204
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN002	LMB	406	934	0.322
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN003	LMB	261	239.4	0.082
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN004	LMB	245	187.4	0.047
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN005	LMB	321	502.1	0.084
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN006	LMB	256	233.5	0.047
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN007	LMB	244	206.4	0.056
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN008	LMB	370	620.6	0.274

Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN009	LMB	355	529.1	0.288
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN010	LMB	377	745.9	0.349
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN011	LMB	455	1527.3	0.481
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN012	LMB	221	173.9	0.064
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN013	LMB	222	145.2	0.064
Canoe Brook Lake	Southwest Hills/Coastal	10/20/2020	CAN014	LMB	383	752.3	0.230
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR001	LMB	354	572.9	0.197
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR002	LMB	205	122.1	0.040
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR003	LMB	334	457.3	0.109
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR004	LMB	362	626.5	0.277
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR005	LMB	268	289.5	0.053
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR006	LMB	273	271.3	0.056
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR007	LMB	348	572.1	0.131
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR008	LMB	375	473.9	0.394
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR009	LMB	407	897.5	0.210
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR010	LMB	380	598.4	0.193
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR011	LMB	405	756.5	0.437
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR012	LMB	312	425.2	0.076
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR013	LMB	281	277.5	0.092
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR014	LMB	300	369.3	0.084
Cedar Swamp Pond	Southwest Hills/Coastal	7/21/2020	CEDAR015	LMB	295	413.4	0.085
Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV001	LMB	385	785.1	0.175
Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV002	LMB	385	760	0.153
Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV003	LMB	374	644.1	0.144
Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV004	LMB	411	905.4	0.275
Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV005	LMB	330	476.1	0.141
Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV006	LMB	480	1681.5	0.238
Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV007	LMB	354	590.6	0.220

Coventry Lake	Northeast Hills/Uplands	9/14/2019	COV008	LMB	420	697.2	0.336
Coventry Lake	Northeast Hills/Uplands	9/18/2019	COV009	LMB	374	720.5	0.130
Coventry Lake	Northeast Hills/Uplands	9/18/2019	COV010	LMB	226	166.8	0.040
Coventry Lake	Northeast Hills/Uplands	9/18/2019	COV011	LMB	485	2032.4	0.490
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS001	LMB	477	1657.9	0.277
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS002	LMB	270	246.8	0.049
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS003	LMB	238	261.2	0.053
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS004	LMB	268	240.1	0.089
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS005	LMB	277	343.5	0.077
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS006	LMB	283	273.3	0.050
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS007	LMB	289	350.9	0.039
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS008	LMB	238	156.5	0.056
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS009	LMB	326	451.6	0.144
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS010	LMB	359	689.2	0.194
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS011	LMB	350	599.6	0.147
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS012	LMB	346	549.6	0.124
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS013	LMB	371	716.9	0.113
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS014	LMB	410	1183.1	0.193
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS015	LMB	450	1701.1	0.415
Crystal Lake (E)	Northeast Hills/Uplands	10/15/2020	CRYS016	LMB	510	2324.3	0.360
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST001	LMB	323	425.7	0.398
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST002	LMB	304	339.3	0.249
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST003	LMB	255	206.6	0.195
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST004	LMB	279	311.7	0.155
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST005	LMB	300	344.2	0.183
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST006	LMB	311	344.2	0.261
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST007	LMB	330	460.5	0.164
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST008	LMB	269	241.4	0.104

Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST009	LMB	294	345.8	0.183
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST010	LMB	241	185.6	0.082
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST011	LMB	231	184.8	0.189
Crystal Lake (M)	Central Lowlands	10/19/2020	CRYST012	LMB	285	283.5	0.121
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST001	LMB	470	1977.1	0.626
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST002	LMB	374	819.6	0.264
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST003	LMB	503	2315	0.724
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST004	LMB	405	967.5	0.292
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST005	LMB	411	980.8	0.316
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST006	LMB	358	642.2	0.176
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST007	LMB	411	859.4	0.453
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST008	LMB	519	2655.8	0.865
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST009	LMB	443	1185.2	0.370
East Twin Lake	Northwest Hills/Upland	11/6/2019	EAST010	LMB	440	1272.4	0.375
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD001	LMB	390	911.1	0.437
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD002	LMB	268	256.3	0.150
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD003	LMB	305	393.9	0.331
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD004	LMB	233	189.4	0.149
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD005	LMB	282	330.1	0.228
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD006	LMB	347	534.8	0.360
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD007	LMB	224	146.5	0.115
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD008	LMB	295	310.3	0.254
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD009	LMB	335	468.3	0.424
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD010	LMB	362	602.7	0.317
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD011	LMB	382	801.5	0.469
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD012	LMB	379	780.3	0.329
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD013	LMB	445	1149.8	1.080
Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD014	LMB	426	1187.3	1.032

Gardner Lake	Southeast Hills/Coastal	7/29/2020	GARD015	LMB	414	962.5	0.588
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS001	LMB	282	301.4	0.260
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS002	LMB	350	478.6	0.652
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS003	LMB	333	463	0.585
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS004	LMB	293	357	0.381
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS005	LMB	418	765.9	0.987
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS006	LMB	360	585.6	0.606
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS007	LMB	387	727.5	0.765
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS008	LMB	372	712.5	0.423
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS009	LMB	397	860.4	0.572
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS010	LMB	471	1539.2	0.447
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS011	LMB	506	2195.5	0.881
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS012	LMB	442	1215.5	0.478
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS013	LMB	345	470.6	0.564
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS014	LMB	448	1627.2	0.367
Glasgo Pond	Southeast Hills/Coastal	7/27/2020	GLAS015	LMB	297	392.4	0.303
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT001	LMB	206	116.5	0.157
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT002	LMB	212	128.9	0.166
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT003	LMB	302	367.5	0.396
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT004	LMB	254	234.2	0.130
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT005	LMB	268	271.7	0.192
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT006	LMB	326	486.8	0.383
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT007	LMB	367	712.8	0.260
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT008	LMB	439	1245.4	0.533
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT009	LMB	404	815.9	0.309
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT010	LMB	486	1738.2	0.560
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT011	LMB	269	240	0.796
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT012	LMB	394	987.5	0.311
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT013	LMB	412	832.2	0.458

Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT014	LMB	456	1613.1	0.531
Gorton Pond	Southeast Hills/Coastal	9/22/2020	GORT015	LMB	535	2576.2	0.722
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH001	LMB	295	354.4	0.164
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH002	LMB	232	168.7	0.123
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH003	LMB	316	343.9	0.218
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH004	LMB	246	208.3	0.181
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH005	LMB	283	299.7	0.178
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH006	LMB	268	229.6	0.141
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH007	LMB	409	1070.6	0.246
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH008	LMB	240	185.8	0.166
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH009	LMB	254	228.5	0.138
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH010	LMB	316	416	0.189
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH011	LMB	389	791.9	0.257
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH012	LMB	373	700.2	0.228
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH013	LMB	435	1128.2	0.298
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH014	LMB	424	1024.3	0.604
Highland Lake	Northwest Hills/Upland	7/20/2020	HIGH015	LMB	570	2577.5	0.850
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS001	LMB	230	158.4	0.228
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS002	LMB	203	113.7	0.194
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS003	LMB	209	111.2	0.186
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS004	LMB	265	290	0.222
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS005	LMB	384	923.2	0.529
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS006	LMB	375	772.6	0.614
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS007	LMB	423	1419.8	0.565
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS008	LMB	419	1201.1	0.239
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS009	LMB	420	1154.8	0.296
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS010	LMB	415	1239.1	0.337
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS011	LMB	374	862.6	0.379

Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS012	LMB	245	217.1	0.145
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS013	LMB	398	1012.6	0.304
Housatonic Lake	Southwest Hills/Coastal	9/8/2020	HOUS014	LMB	400	1061.6	0.337
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN001	LMB	208	118.1	0.153
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN002	LMB	221	140.1	0.296
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN003	LMB	240	156.7	0.186
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN004	LMB	245	164.1	0.315
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN005	LMB	286	295.8	0.329
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN006	LMB	277	266.3	0.413
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN007	LMB	255	192.5	0.275
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN008	LMB	293	304.5	0.215
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN009	LMB	328	477.9	0.291
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN010	LMB	476	1592.6	0.885
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN011	LMB	438	1272.6	0.743
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN012	LMB	419	1056.2	0.612
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN013	LMB	439	1165.3	0.606
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN014	LMB	391	836.3	0.581
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN015	LMB	381	778.6	0.264
Lake Kenosia	Southwest Hills/Coastal	5/18/2021	KEN016	LMB	376	728.4	0.477
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD001	LMB	436	1128.1	0.608
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD002	LMB	405	940.2	0.603
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD003	LMB	365	629.7	0.615
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD004	LMB	367	696.7	0.579
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD005	LMB	355	669	0.536
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD006	LMB	430	1104	0.541
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD007	LMB	230	171.4	0.190
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD008	SMB	400	782.2	1.172
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD009	SMB	390	674.7	0.858

Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD010	SMB	288	345.7	0.452
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD011	LMB	393	916.3	0.593
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD012	SMB	308	422	0.226
Lake McDonough	Northwest Hills/Upland	9/17/2020	MCD013	LMB	374	697.5	0.566
Lake Saltonstall	Central Lowlands	10/17/2020	SALT001	LMB	324	416.2	0.076
Lake Saltonstall	Central Lowlands	10/17/2020	SALT002	LMB	230	150.5	0.077
Lake Saltonstall	Central Lowlands	10/17/2020	SALT003	LMB	264	200.8	0.071
Lake Saltonstall	Central Lowlands	10/17/2020	SALT004	LMB	314	375	0.108
Lake Saltonstall	Central Lowlands	10/17/2020	SALT005	LMB	267	227.1	0.068
Lake Saltonstall	Central Lowlands	10/17/2020	SALT006	LMB	458	1218.3	0.394
Lake Saltonstall	Central Lowlands	10/17/2020	SALT007	LMB	280	231.7	0.082
Lake Saltonstall	Central Lowlands	10/17/2020	SALT008	LMB	285	265.3	0.079
Lake Saltonstall	Central Lowlands	10/17/2020	SALT009	LMB	336	478.5	0.101
Lake Saltonstall	Central Lowlands	10/17/2020	SALT010	LMB	471	1586.2	0.274
Lake Saltonstall	Central Lowlands	10/17/2020	SALT011	LMB	461	1385.2	0.215
Lake Saltonstall	Central Lowlands	10/17/2020	SALT012	LMB	455	1247.5	0.312
Lake Saltonstall	Central Lowlands	10/17/2020	SALT013	LMB	484	1608.6	0.487
Lake Saltonstall	Central Lowlands	10/17/2020	SALT014	LMB	431	1256.5	0.172
Lake Saltonstall	Central Lowlands	10/17/2020	SALT015	LMB	360	593.6	0.123
Lake Saltonstall	Central Lowlands	10/17/2020	SALT016	LMB	410	927.3	0.178
Lake Saltonstall	Central Lowlands	10/17/2020	SALT017	LMB	391	926.4	0.132
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR001	LMB	460	1549.2	1.102
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR002	LMB	370	742.5	0.465
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR003	LMB	394	816.1	0.642
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR004	LMB	380	717.5	0.496
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR005	LMB	382	793.9	0.891
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR006	LMB	426	1153	0.204
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR007	LMB	219	147.6	0.151

Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR008	LMB	220	159.2	0.283
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR009	SMB	237	132.2	0.215
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR010	SMB	245	162.2	0.288
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR011	SMB	257	178.2	0.623
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR012	SMB	291	275.7	0.293
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR013	SMB	271	266.1	0.427
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR014	SMB	366	573.1	0.480
Lake Zoar	Southwest Hills/Coastal	9/9/2020	ZOAR015	SMB	320	409.7	
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_001	LMB	399	873.1	0.586
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_002	LMB	203	106.5	0.154
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_003	LMB	230	128.8	0.334
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_004	LMB	244	176.3	0.251
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_005	LMB	272	245.1	0.265
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_006	LMB	247	215.7	0.176
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_007	LMB	228	171.8	0.197
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_008	LMB	255	204.1	0.209
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_009	LMB	351	546.8	0.501
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_010	LMB	355	678.2	0.422
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_011	LMB	331	473.8	0.381
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_012	LMB	368	723.7	0.362
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_013	LMB	377	841.7	0.507
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_014	LMB	401	939.4	0.511
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_015	LMB	414	946.4	0.691
Long Pond	Southeast Hills/Coastal	9/21/2020	LONG_016	LMB	515	2250.1	0.918
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM001	LMB	256	193	0.142
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM002	LMB	453	1232.1	0.283
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM003	LMB	323	485.7	0.268
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM004	LMB	554	3032	0.663

Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM005	LMB	356	527.7	0.258
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM006	LMB	325	427.4	0.251
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM007	LMB	539	2715.6	0.609
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM008	LMB	228	137.1	0.115
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM009	LMB	331	468.2	0.214
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM010	LMB	303	318.6	0.196
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM011	LMB	209	113.6	0.143
Mamanasco Lake	Southwest Hills/Coastal	10/24/2019	MAM012	LMB	212	110.6	0.119
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS001	LMB	392	929.6	0.977
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS002	LMB	365	663.6	0.606
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS003	LMB	257	224.8	0.197
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS004	LMB	221	140.2	0.269
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS005	LMB	425	1004.2	1.100
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS006	LMB	361	641.7	0.611
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS007	LMB	244	198.3	0.270
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS008	LMB	301	421.8	0.544
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS009	LMB	340	545.8	0.585
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS010	LMB	315	501.5	1.065
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS011	LMB	391	867.7	0.560
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS012	LMB	346	580.3	0.601
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS013	LMB	299	348	0.253
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS014	LMB	269	251.3	0.257
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS015	LMB	455	1260.1	0.943
Mansfield Hollow	Northeast Hills/Uplands	6/29/2020	MANS016	LMB	543	2399	1.892
Mashapaug Lake	Northeast Hills/Uplands	8/30/2019	MASH001	LMB	212	138.1	0.305
Mashapaug Lake	Northeast Hills/Uplands	8/30/2019	MASH002	LMB	341	510.6	0.320
Mashapaug Lake	Northeast Hills/Uplands	8/30/2019	MASH003	LMB	409	948.6	0.540
Mashapaug Lake	Northeast Hills/Uplands	8/30/2019	MASH004	LMB	396	929.1	0.556

Mashapaug Lake	Northeast Hills/Uplands	8/30/2019	MASH005	LMB	434	1370.8	1.002
Mashapaug Lake	Northeast Hills/Uplands	8/30/2019	MASH006	LMB	363	690.1	0.699
Mashapaug Lake	Northeast Hills/Uplands	8/30/2019	MASH007	LMB	518	2066.2	0.815
Mashapaug Lake	Northeast Hills/Uplands	9/26/2019	MASH008	LMB	395	1090	0.37
Mashapaug Lake	Northeast Hills/Uplands	9/26/2019	MASH009	LMB	350	720.8	0.60
Mashapaug Lake	Northeast Hills/Uplands	9/26/2019	MASH010	LMB	317	582.8	0.26
Mashapaug Lake	Northeast Hills/Uplands	9/26/2019	MASH011	LMB	400	940	0.54
Mashapaug Lake	Northeast Hills/Uplands	9/26/2019	MASH012	LMB	245	213.8	0.14
Mashapaug Lake	Northeast Hills/Uplands	9/26/2019	MASH013	LMB	228	162.8	0.19
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT001	LMB	353	553.4	0.317
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT002	LMB	371	641.5	0.378
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT003	LMB	327	406.1	0.292
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT004	LMB	444	1195.1	0.884
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT005	LMB	395	892.5	0.391
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT006	LMB	459	1075	0.735
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT007	LMB	237	176.6	0.159
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT008	LMB	331	469.5	0.554
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT009	LMB	222	133.2	0.149
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT010	LMB	314	374.5	0.286
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT011	LMB	310	358.3	0.294
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT012	LMB	284	269.5	0.343
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT013	LMB	204	131.3	0.139
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT014	LMB	233	173.5	0.183
Middle Bolton Lake	Northeast Hills/Uplands	7/2/2020	MBOLT015	LMB	254	270.6	0.167
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD001	LMB	203	100.8	0.151
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD002	LMB	226	136.9	0.244
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD003	LMB	257	226.4	0.180
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD004	LMB	332	430.3	0.220

Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD005	LMB	295	305.3	0.348
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD006	LMB	307	479.7	0.288
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD007	LMB	228	139.3	0.337
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD008	LMB	270	256.4	0.198
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD009	LMB	215	123.1	0.174
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD010	LMB	286	312.8	0.296
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD011	LMB	343	606.9	0.329
Moodus Reservoir	Southeast Hills/Coastal	7/15/2020	MOOD012	LMB	304	353.8	0.479
Moodus Reservoir	Southeast Hills/Coastal	9/16/2020	MOOD013	LMB	335	429.4	0.201
Moodus Reservoir	Southeast Hills/Coastal	9/16/2020	MOOD014	LMB	352	540.4	0.218
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE001	LMB	395	797.7	0.556
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE002	LMB	251	217.7	0.087
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE003	LMB	270	218.4	0.154
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE004	LMB	275	232.4	0.139
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE005	LMB	314	466	0.125
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE006	LMB	415	981.2	0.230
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE007	LMB	328	435.5	0.183
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE008	LMB	375	710	0.263
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE009	LMB	235	192.6	0.085
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE010	LMB	381	794.2	0.363
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE011	LMB	300	310.5	0.086
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE012	LMB	304	372.2	0.167
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE013	LMB	350	349.5	0.136
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE014	LMB	430	1162.1	0.426
Mudge Pond	Northwest Hills/Upland	9/14/2020	MUDGE015	LMB	390	808.7	0.403
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM001	LMB	215	149.7	0.061
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM002	LMB	259	286.4	0.059
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM003	LMB	395	764.8	0.229

North Farms Reservoir	Central Lowlands	5/6/2021	NFARM004	LMB	330	541.6	0.126
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM005	LMB	362	641.1	0.179
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM006	LMB	413	954.3	0.271
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM007	LMB	410	964.8	0.299
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM008	LMB	366	767.1	0.251
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM009	LMB	455	1576.4	0.230
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM010	LMB	424	974.6	0.265
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM011	LMB	448	1672.1	0.225
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM012	LMB	453	1378.3	0.235
North Farms Reservoir	Central Lowlands	5/6/2021	NFARM013	LMB	458	1379.5	0.274
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH001	LMB	310	409.1	0.250
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH002	LMB	378	672.1	0.701
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH003	LMB	462	1460	0.754
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH004	LMB	555	1968.7	1.473
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH005	LMB	509	2053	0.931
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH006	LMB	471	1841.2	0.704
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH007	LMB	419	1164.8	0.341
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH008	LMB	397	976	0.632
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH009	LMB	410	1066.8	0.550
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH010	LMB	527	2682.7	1.486
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH011	LMB	365	617.9	0.593
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH012	LMB	350	586.9	0.536
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH013	LMB	492	1796.1	0.514
Pachaug Pond	Southeast Hills/Coastal	7/18/2020	PACH014	LMB	387	820.2	0.428
Pachaug Pond	Southeast Hills/Coastal	9/16/2020	PACH015	LMB	220	135.7	0.119
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA001	LMB	402	866.3	0.591
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA002	LMB	310	390.5	0.238
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA003	LMB	301	357.7	0.197

Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA004	LMB	361	671.3	0.413
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA005	LMB	370	636.4	0.528
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA006	LMB	409	819	0.828
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA007	LMB	353	583.8	0.597
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA008	LMB	323	426.2	0.464
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA009	LMB	338	484.9	0.331
Pattagannsett Lake	Southeast Hills/Coastal	9/22/2019	PATTA010	LMB	416	819.2	0.885
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS001	LMB	308	299.4	0.517
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS002	LMB	322	415.3	0.437
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS003	LMB	260	203.3	0.222
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS004	LMB	285	278.8	0.248
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS005	LMB	204	103.2	0.200
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS006	LMB	295	307.5	0.391
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS007	LMB	222	144.1	0.166
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS008	LMB	342	519.7	0.316
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS009	LMB	315	382.5	0.455
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS010	LMB	262	225.7	0.199
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS011	LMB	333	436.7	0.382
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS012	LMB	250	200.1	0.306
Powers Lake	Southeast Hills/Coastal	9/3/2020	POWERS013	LMB	270	244	0.252
Powers Lake	Southeast Hills/Coastal	11/3/2020	POWERS014	LMB	393	729.8	0.533
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD001	LMB	14773	581.6	0.760
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD002	LMB	12228	481.4	0.450
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD003	LMB	8219	323.6	0.820
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD004	LMB	8329	327.9	0.410
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD005	LMB	28346	1116	1.110
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD006	LMB	8905	350.6	0.470
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD007	LMB	24625	969.5	1.250

Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD008	LMB	34153	1344.6	0.790
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD009	LMB	22009	866.5	0.920
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD010	LMB	23604	929.3	0.820
Quaddick Reservoir	Northeast Hills/Uplands	9/21/2019	QUADD011	LMB	16355	643.9	0.580
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS001	LMB	385	862.4	0.314
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS002	LMB	363	651.4	0.282
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS003	LMB	325	421.6	0.397
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS004	LMB	493	1453.5	0.809
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS005	LMB	372	745.8	0.232
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS006	LMB	414	1025.2	0.381
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS007	LMB	400	925.4	0.170
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS008	LMB	256	223.1	0.101
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS009	LMB	236	147.9	0.149
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS010	LMB	283	276.9	0.186
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS011	LMB	324	451.2	0.224
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS012	LMB	259	221.5	0.145
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS013	LMB	203	90.6	0.082
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS014	LMB	479	1421.7	0.873
Quassapaug Lake	Southwest Hills/Coastal	10/28/2020	QUAS015	LMB	463	1452.9	0.528
Quinebaug Lake	Northeast Hills/Uplands	8/31/2020	QUIN001	LMB	379	781.9	0.551
Quinebaug Lake	Northeast Hills/Uplands	8/31/2020	QUIN002	LMB	384	717.3	0.678
Quinebaug Lake	Northeast Hills/Uplands	8/31/2020	QUIN003	LMB	360	696.8	0.351
Quinebaug Lake	Northeast Hills/Uplands	8/31/2020	QUIN004	LMB	370	799.8	0.338
Quinebaug Lake	Northeast Hills/Uplands	8/31/2020	QUIN005	LMB	245	242.1	0.160
Quinebaug Lake	Northeast Hills/Uplands	8/31/2020	QUIN006	LMB	397	1029.3	0.335
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN007	LMB	222	149.9	0.188
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN008	LMB	264	274.3	0.190
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN009	LMB	290	375.7	0.263

Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN010	LMB	274	338.9	0.168
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN011	LMB	425	1206.1	0.514
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN012	LMB	294	402.1	0.197
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN013	LMB	330	606.3	0.314
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN014	LMB	280	345.1	0.367
Quinebaug Lake	Northeast Hills/Uplands	11/8/2020	QUIN015	LMB	397	846.7	0.566
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN001	LMB	313	447	0.141
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN002	LMB	373	830.7	0.189
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN003	LMB	326	502.9	0.145
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN004	LMB	403	1061.4	0.238
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN005	LMB	203	129.9	0.050
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN006	SMB	249	217.2	0.108
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN007	SMB	247	195.8	0.117
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN008	SMB	229	156.5	0.112
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN009	SMB	210	100.9	0.119
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN010	LMB	365	631.6	0.257
Rainbow Reservoir	Central Lowlands	7/30/2020	RAIN011	SMB	219	132.9	0.156
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG001	LMB	491	1941.8	1.101
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG002	LMB	420	1043.2	0.506
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG003	LMB	274	287.4	0.270
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG004	LMB	372	735	0.479
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG005	LMB	302	480.6	0.226
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG006	LMB	520	1972.1	1.299
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG007	LMB	385	845.6	0.764
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG008	LMB	310	480	0.201
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG009	LMB	453	1420.3	0.488
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG010	LMB	461	1370.1	0.466
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG011	LMB	415	1138.2	0.495

Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG012	LMB	255	242.4	0.183
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG013	LMB	423	1177.2	0.534
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG014	LMB	210	114.3	0.157
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG015	LMB	211	126.2	0.142
Rogers Lake	Southeast Hills/Coastal	10/14/2020	ROG016	LMB	205	101.2	0.191
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG001	LMB	422	1116.2	0.879
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG002	LMB	212	131.4	0.126
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG003	LMB	238	182.8	0.126
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG004	LMB	240	176.2	0.164
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG005	LMB	234	198.8	0.298
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG006	SMB	208	102.5	0.383
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG007	SMB	281	196.3	0.905
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG008	LMB	408	1126.3	0.928
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG009	LMB	425	1031.6	0.742
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG010	LMB	430	1260.2	0.636
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG011	LMB	403	1003.5	0.667
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG012	LMB	493	1953.4	0.671
Saugatuck Reservoir	Southwest Hills/Coastal	9/23/2020	SAUG013	LMB	460	1501.2	0.804
Silver Lake	Central Lowlands	9/8/2019	SILVER001	LMB	374	807.8	0.126
Silver Lake	Central Lowlands	9/8/2019	SILVER002	LMB	353	644.1	0.174
Silver Lake	Central Lowlands	9/8/2019	SILVER003	LMB	351	512.5	0.183
Silver Lake	Central Lowlands	9/8/2019	SILVER004	LMB	463	1465.9	0.435
Silver Lake	Central Lowlands	9/8/2019	SILVER005	LMB	403	976.9	0.286
Silver Lake	Central Lowlands	9/8/2019	SILVER006	LMB	420	1086.7	0.300
Silver Lake	Central Lowlands	9/8/2019	SILVER007	LMB	400	703.7	0.825
Silver Lake	Central Lowlands	9/8/2019	SILVER008	LMB	424	1149.6	0.253
Silver Lake	Central Lowlands	9/8/2019	SILVER009	LMB	369	676.7	0.240
Silver Lake	Central Lowlands	9/8/2019	SILVER010	LMB	471	1606.6	0.282

Silver Lake	Central Lowlands	9/8/2019	SILVER011	LMB	331	492.2	0.088
Silver Lake	Central Lowlands	9/8/2019	SILVER012	LMB	436	1079	0.277
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER001	LMB	314	374.5	0.372
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER002	LMB	352	625.3	0.324
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER003	LMB	215	139.5	0.087
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER004	LMB	273	287.3	0.144
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER005	LMB	314	438.3	0.215
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER006	LMB	348	536.1	0.300
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER007	LMB	495	1584.6	1.385
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER008	LMB	232	157	0.161
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER009	LMB	377	736.9	0.455
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER010	LMB	327	501.3	0.510
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER011	LMB	220	159.2	0.233
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER012	LMB	262	245.8	0.202
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER013	LMB	340	579.5	0.263
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER014	LMB	298	405.4	0.200
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER015	LMB	302	360.7	0.282
Tyler Lake	Northwest Hills/Upland	7/14/2020	TYLER016	LMB	257	201.5	0.175
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC001	LMB	353	554.5	0.391
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC002	LMB	505	2099.5	0.683
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC003	LMB	521	2699.5	0.592
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC004	LMB	470	1284.5	0.782
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC005	LMB	394	932.4	0.584
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC006	LMB	425	1259.7	0.578
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC007	LMB	325	455.3	0.358
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC008	LMB	350	549.8	0.617
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC009	LMB	324	444.7	0.335
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC010	LMB	356	629.7	0.485

Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC011	LMB	213	126.3	0.307
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC012	LMB	262	227.3	0.227
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC013	LMB	273	261.9	0.302
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC014	LMB	315	378.9	0.404
Uncas Lake	Southeast Hills/Coastal	5/4/2021	UNC015	LMB	290	291.1	0.306
Union Pond	Central Lowlands	5/19/2021	UNION001	LMB	214	123.7	0.090
Union Pond	Central Lowlands	5/19/2021	UNION002	LMB	291	304.5	0.191
Union Pond	Central Lowlands	5/19/2021	UNION003	LMB	285	396.2	0.091
Union Pond	Central Lowlands	5/19/2021	UNION004	LMB	349	590.2	0.276
Union Pond	Central Lowlands	5/19/2021	UNION005	LMB	454	1287.6	0.466
Union Pond	Central Lowlands	5/19/2021	UNION006	LMB	326	537.3	0.130
Union Pond	Central Lowlands	5/19/2021	UNION007	LMB	452	1318.6	0.621
Union Pond	Central Lowlands	5/19/2021	UNION008	LMB	319	436	0.158
Union Pond	Central Lowlands	5/19/2021	UNION009	LMB	460	1481.1	0.471
Union Pond	Central Lowlands	5/19/2021	UNION010	LMB	545	2859.2	0.701
Union Pond	Central Lowlands	5/19/2021	UNION011	LMB	397	1023.3	0.451
Union Pond	Central Lowlands	5/19/2021	UNION012	LMB	485	1765.9	0.727
Union Pond	Central Lowlands	5/19/2021	UNION013	LMB	304	469.4	0.102
Union Pond	Central Lowlands	5/19/2021	UNION014	LMB	335	564.1	0.145
Union Pond	Central Lowlands	5/19/2021	UNION015	LMB	315	473.5	0.312
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA001	LMB	342	583.6	0.213
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA002	LMB	261	245.6	0.090
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA003	LMB	375	813.7	0.224
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA004	LMB	391	888.1	0.220
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA005	LMB	403	968.1	0.212
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA006	LMB	413	963.1	0.313
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA007	LMB	234	168.5	0.106
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA008	LMB	358	685.1	0.255

Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA009	LMB	364	713.3	0.274
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA010	LMB	414	1087.7	0.248
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA011	LMB	489	1654.2	0.311
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA012	LMB	542	2669.9	0.775
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA013	LMB	228	159.6	0.079
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA014	LMB	246	176.4	0.170
Waramaug Lake	Northwest Hills/Upland	10/27/2020	WARA015	LMB	441	1343.5	0.207
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN001	LMB	471		0.637
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN002	LMB	533		1.807
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN003	LMB	473		0.890
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN004	LMB	500		1.539
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN005	LMB	347		0.414
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN006	LMB	347		0.848
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN007	LMB	327		0.527
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN008	LMB	329		0.508
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN009	LMB	306		0.412
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN010	LMB	208		0.248
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN011	LMB	212		0.206
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN012	LMB	271		0.329
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN013	LMB	301		0.475
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN014	LMB	272		0.346
Winchester Lake	Northwest Hills/Upland	7/16/2020	WIN015	LMB	239		0.253
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO001	LMB	387	666.7	0.810
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO002	LMB	429	1071.5	0.393
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO003	LMB	215	121.9	0.112
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO004	LMB	410	969.8	0.248
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO005	LMB	376	837.5	0.156
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO006	LMB	248	212.5	0.143

Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO007	LMB	247	179.4	0.128
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO008	LMB	298	323.9	0.211
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO009	LMB	391	1023.9	0.346
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO010	LMB	350	612	0.437
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO011	LMB	218	140.3	0.122
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO012	LMB	265	238.3	0.168
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO013	LMB	462	1721.4	0.733
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO014	LMB	443	1341.7	0.507
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO015	LMB	460	1353.7	0.397
Wononskopomuc Lake	Northwest Hills/Upland	10/26/2020	WONO016	LMB	281	330.7	0.156
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS001	LMB	303	426.8	0.242
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS002	LMB	225	151.8	0.202
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS003	LMB	353	575.7	0.673
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS004	LMB	375	593.9	0.982
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS005	LMB	221	145.2	0.134
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS006	LMB	207	123.1	0.136
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS007	LMB	304	366.5	0.334
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS008	LMB	377	610.3	0.779
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS009	LMB	350	552.4	0.578
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS010	LMB	360	607.9	0.550
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS011	LMB	347	592.3	0.461
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS012	LMB	345	580.7	0.532
Wyassup Lake	Southeast Hills/Coastal	9/1/2020	WYAS013	LMB	255	224.9	0.207

Appendix 4

Appendix 4. Raw data sheets as returned by the analytical laboratory, the University of Connecticut Center for Environmental Sciences and Engineering.

Center for Environmental Sciences and Engineering **Fax # (860) 486-5488** **UCONN - NRE**
University of Connecticut **Telephone # (860) 486-4015** **Order # 210148 Email: cesecustserv@uconn.edu** **Matrix: Tissue**
The Longley Building, U-5210 **Analysts: Sniega Stapcinskaite** **Contact:C. Sullivan/J. Report Date: 7/30/21**
270 Middle Turnpike, Rte. 44 **Reported by: C. Perki**
Storrs, CT 06269-5210

EPA Digestion Method #				**245.6**
EPA Analysis Method #				**245.6**
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g**
Prep date				6/14/21
Analysis date				6/14/21
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
210148-001	**UNC001**	**5/4/2021**	**5/24/2021**	**0.391**
210148-002	**UNC002**	**5/4/2021**	**5/24/2021**	**0.683**
210148-003	**UNC003**	**5/4/2021**	**5/24/2021**	**0.592**
210148-004	**UNC004**	**5/4/2021**	**5/24/2021**	**0.782**
210148-005	**UNC005**	**5/4/2021**	**5/24/2021**	**0.584**
210148-006	**UNC006**	**5/4/2021**	**5/24/2021**	**0.578**
210148-007	**UNC007**	**5/4/2021**	**5/24/2021**	**0.358**
210148-008	**UNC008**	**5/4/2021**	**5/24/2021**	**0.617**
210148-009	**UNC009**	**5/4/2021**	**5/24/2021**	**0.335**
210148-010	**UNC010**	**5/4/2021**	**5/24/2021**	**0.485**
210148-011	**UNC011**	**5/4/2021**	**5/24/2021**	**0.307**
210148-012	**UNC012**	**5/4/2021**	**5/24/2021**	**0.227**
210148-013	**UNC013**	**5/4/2021**	**5/24/2021**	**0.302**
210148-014	**UNC014**	**5/4/2021**	**5/24/2021**	**0.404**
210148-015	**UNC015**	**5/4/2021**	**5/24/2021**	**0.306**

210148-016	UNC_001_Fillet	5/4/2021	5/24/2021	0.373
210148-017	NFARM001	5/6/2021	5/24/2021	0.061
210148-018	NFARM002	5/6/2021	5/24/2021	0.059
210148-019	NFARM003	5/6/2021	5/24/2021	0.229
210148-020	NFARM004	5/6/2021	5/24/2021	0.126
Average Practical Quantitation Limit (PQL) ug/g				0.031
Limit of Detection (LOD) ug/g				0.008
NSS = No Sample Sent	ND = Not Detected			

Center for Environmental Sc iences and Engineering Fax # (860) 486-5488 UCONN - NRE
University of Connecticut Telephone # (860) 486-4015 Order # 210148 Email: cesecustserv@uconn.edu Matrix: Tissue
The Longley Building , U-5210 Analysts: Sniega Stapcinskaite Contact:C. Sullivan/J. Brandt Report Date: 7/30/21
270 Middle Turnpike, Rte. 44 Reported by: C. Perkins
Storrs, CT 06269-5210

EPA Digestion Method # EPA Analysis Method #				245.6 245.6	
Metals Units Prep date Analysis date	WET WEIGHT			CVAA µg/g 6/15/21 6/15/21	
LIM #	FIELD #	Collected	Received	Hg	% Solid
210148-021	NFARM005	5/6/2021	5/24/2021	0.179	NA
210148-022	NFARM006	5/6/2021	5/24/2021	0.271	NA
210148-023	NFARM007	5/6/2021	5/24/2021	0.299	NA
210148-024	NFARM008	5/6/2021	5/24/2021	0.251	NA
210148-025	NFARM009	5/6/2021	5/24/2021	0.230	NA
210148-026	NFARM010	5/6/2021	5/24/2021	0.265	NA
210148-027	NFARM011	5/6/2021	5/24/2021	0.225	NA
210148-028	NFARM012	5/6/2021	5/24/2021	0.235	NA
210148-029	NFARM013	5/6/2021	5/24/2021	0.274	NA
210148-030	NFARM_003_Fillet	5/6/2021	5/24/2021	0.222	20.92
210148-031	KEN001	5/18/2021	5/24/2021	0.153	NA
210148-032	KEN002	5/18/2021	5/24/2021	0.296	NA
210148-033	KEN003	5/18/2021	5/24/2021	0.186	NA
210148-034	KEN004	5/18/2021	5/24/2021	0.315	NA
210148-035	KEN005	5/18/2021	5/24/2021	0.329	NA
210148-036	KEN006	5/18/2021	5/24/2021	0.413	NA
210148-037	KEN007	5/18/2021	5/24/2021	0.275	NA
210148-038	KEN008	5/18/2021	5/24/2021	0.215	NA
210148-039	KEN009	5/18/2021	5/24/2021	0.291	NA
210148-040	KEN010	5/18/2021	5/24/2021	0.885	NA

Average Practical Quantitation Limit (PQL) ug/g	**0.029**	
Limit of Detection (LOD) ug/g	**0.002**	
NSS = No Sample Sent ND = Not Detected		

Note:

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN - NRE
University of Connecticut Telephone # (860) 486-4015 Order # 210148 Email: cesecustserv@uconn.edu Matrix: Tissue
The Longley Building 4, U-5210 Analysts: Sniega Stapcinskaite Contact:C. Sullivan/J. Brandt Report Date: 7/30/21
270 Middle Turnpike, Rte. 4 Reported by: C. Perkins
Storrs, CT 06269-5210

EPA Digestion Method # EPA Analysis Method #				245.6 245.6	
Metals Units Prep date Analysis date	WET WEIGHT			CVAA µg/g 6/17/21 6/17/21	
LIM #	FIELD #	Collected	Received	Hg	% Solid
210148-041	KEN011	5/18/2021	5/24/2021	0.743	NA
210148-042	KEN012	5/18/2021	5/24/2021	0.612	NA
210148-043	KEN013	5/18/2021	5/24/2021	0.606	NA
210148-044	KEN014	5/18/2021	5/24/2021	0.581	NA
210148-045	KEN015	5/18/2021	5/24/2021	0.264	NA
210148-046	KEN016	5/18/2021	5/24/2021	0.477	NA
210148-047	KEN_016_Fillet	5/18/2021	5/24/2021	0.322	20.53
210148-048	UNION001	5/19/2021	5/24/2021	0.090	NA
210148-049	UNION002	5/19/2021	5/24/2021	0.191	NA
210148-050	UNION003	5/19/2021	5/24/2021	0.091	NA
210148-051	UNION004	5/19/2021	5/24/2021	0.276	NA
210148-052	UNION005	5/19/2021	5/24/2021	0.466	NA
210148-053	UNION006	5/19/2021	5/24/2021	0.130	NA
210148-054	UNION007	5/19/2021	5/24/2021	0.621	NA
210148-055	UNION008	5/19/2021	5/24/2021	0.158	NA
210148-056	UNION009	5/19/2021	5/24/2021	0.471	NA
210148-057	UNION010	5/19/2021	5/24/2021	0.701	NA
210148-058	UNION011	5/19/2021	5/24/2021	0.451	NA
210148-059	UNION012	5/19/2021	5/24/2021	0.727	NA
210148-060	UNION013	5/19/2021	5/24/2021	0.102	NA

210148-061	**UNION014**	**5/19/2021**	**5/24/2021**	**0.145**	**NA**
210148-062	**UNION015**	**5/19/2021**	**5/24/2021**	**0.312**	**NA**
210148-063	**UNION_001_Fillet**	**5/19/2021**	**5/24/2021**	**0.093**	**21.14**
Average Practical Quantitation Limit (PQL) ug/g				**0.093**	
Limit of Detection (LOD) ug/g				**0.027**	
NSS = No Sample Sent	**ND = Not Detected**				

Note:

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN - NRE Telephone # (860) 486-4015 Order # 200156 Email: cesecustserv@uconn.edu
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210

Matrix: Tissue Analysts: Sniega Stapcinskaite Contact: J. Vokoun
Report Date: 9/1/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				8/4/20
Analysis date				8/4/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
200156-001	MANS001	6/29/2020	7/27/2020	0.977
200156-002	MANS002	6/29/2020	7/27/2020	0.606
200156-003	MANS003	6/29/2020	7/27/2020	0.197
200156-004	MANS004	6/29/2020	7/27/2020	0.269
200156-005	MANS005	6/29/2020	7/27/2020	1.100
200156-006	MANS006	6/29/2020	7/27/2020	0.611
200156-007	MANS007	6/29/2020	7/27/2020	0.270
200156-008	MANS008	6/29/2020	7/27/2020	0.544
200156-009	MANS009	6/29/2020	7/27/2020	0.585
200156-010	MANS010	6/29/2020	7/27/2020	1.065
200156-011	MANS011	6/29/2020	7/27/2020	0.560
200156-012	MANS012	6/29/2020	7/27/2020	0.601
200156-013	MANS013	6/29/2020	7/27/2020	0.253
200156-014	MANS014	6/29/2020	7/27/2020	0.257
200156-015	MANS015	6/29/2020	7/27/2020	0.943
200156-016	MANS016	6/29/2020	7/27/2020	1.892
200156-017	MBOLT001	7/2/2020	7/27/2020	0.317
200156-018	MBOLT002	7/2/2020	7/27/2020	0.378
200156-019	MBOLT003	7/2/2020	7/27/2020	0.292
200156-020	MBOLT004	7/2/2020	7/27/2020	0.884

Average Practical Quantitation Limit (PQL) ug/g	**0.026**
Limit of Detection (LOD) ug/g	**0.007**
NSS = No Sample Sent **ND = Not Detected**	

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN - NRE
University of Connecticut Telephone # (860) 486-4015 Order # 200156 Email: cesecustserv@uconn.edu Matrix: Tissue
The Longley Building, U-5210 Analysts: Sniega Stapcinskaite Contact: J. Vokoun
270 Middle Turnpike, Rte. 44 Report Date: 9/1/2020 Reported by: C. Perkins
Storrs, CT 06269-5210

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				8/5/20
Analysis date				8/5/20
LIM #	FIELD #	Collected	Received	Hg
200156-021	MBOLT005	7/2/2020	7/27/2020	0.391
200156-022	MBOLT006	7/2/2020	7/27/2020	0.735
200156-023	MBOLT007	7/2/2020	7/27/2020	0.159
200156-024	MBOLT008	7/2/2020	7/27/2020	0.554
200156-025	MBOLT009	7/2/2020	7/27/2020	0.149
200156-026	MBOLT010	7/2/2020	7/27/2020	0.286
200156-027	MBOLT011	7/2/2020	7/27/2020	0.294
200156-028	MBOLT012	7/2/2020	7/27/2020	0.343
200156-029	MBOLT013	7/2/2020	7/27/2020	0.139
200156-030	MBOLT014	7/2/2020	7/27/2020	0.183
200156-031	MBOLT015	7/2/2020	7/27/2020	0.167
200156-032	BANT001	7/6/2020	7/27/2020	0.160
200156-033	BANT002	7/6/2020	7/27/2020	0.166
200156-034	BANT003	7/6/2020	7/27/2020	0.184
200156-035	BANT004	7/6/2020	7/27/2020	0.135
200156-036	BANT005	7/6/2020	7/27/2020	0.066
200156-037	BANT006	7/6/2020	7/27/2020	0.144
200156-038	BANT007	7/6/2020	7/27/2020	0.200
200156-039	BANT008	7/6/2020	7/27/2020	0.852
200156-040	MOOD001	7/15/2020	7/27/2020	0.151

Average Practical Quantitation Limit (PQL) ug/g	**0.038**
Limit of Detection (LOD) ug/g	**0.009**
NSS = No Sample Sent **ND = Not Detected**	

Center for Environmental Scie University of Connecticut The Longley Building 270 Middle Turnpike, Rte. 44, Storrs, CT 06269-5210	nces and Engineering Fax # (860) 486-5488 UCONN - NRE Telephone # (860) 486-4015 Order # 200156 Email: cesecustserv@uconn.edu Matrix: Tissue U-5210 Analysts: Sniega Stapcinskaite Contact: J. Vokoun Report Date: 9/1/2020 Reported by: C. Perkins			
EPA Digestion Method # EPA Analysis Method #				245.6 245.6
Metals Units Prep date Analysis date	WET WEIGHT			CVAA µg/g 8/7/20 8/7/20
LIM #	FIELD #	Collected	Received	Hg
200156-041	MOOD002	7/15/2020	7/27/2020	0.244
200156-042	MOOD003	7/15/2020	7/27/2020	0.180
200156-043	MOOD004	7/15/2020	7/27/2020	0.220
200156-044	MOOD005	7/15/2020	7/27/2020	0.348
200156-045	MOOD006	7/15/2020	7/27/2020	0.288
200156-046	MOOD007	7/15/2020	7/27/2020	0.337
200156-047	MOOD008	7/15/2020	7/27/2020	0.198
200156-048	MOOD009	7/15/2020	7/27/2020	0.174
200156-049	MOOD010	7/15/2020	7/27/2020	0.296
200156-050	MOOD011	7/15/2020	7/27/2020	0.329
200156-051	MOOD012	7/15/2020	7/27/2020	0.479
200156-052	AMOS001	7/13/2020	7/27/2020	0.084
200156-053	AMOS002	7/13/2020	7/27/2020	0.367
200156-054	AMOS003	7/13/2020	7/27/2020	0.216
200156-055	AMOS004	7/13/2020	7/27/2020	0.139
200156-056	AMOS005	7/13/2020	7/27/2020	0.541
200156-057	AMOS006	7/13/2020	7/27/2020	0.542
200156-058	AMOS007	7/13/2020	7/27/2020	0.364
200156-059	AMOS008	7/13/2020	7/27/2020	0.443
200156-060	AMOS009	7/13/2020	7/27/2020	0.423

Average Practical Quantitation Limit (PQL) ug/g	**0.038**
Limit of Detection (LOD) ug/g	**0.009**
NSS = No Sample Sent **ND = Not Detected**	

Center for Environmental Sciences and Engineering
University of Connecticut
The Longley Building U-5210
270 Middle Turnpike, Rte. 44,
Storrs, CT 06269-5210

Fax # (860) 486-5488
Telephone # (860) 486-4015 Email: cesecustserv@uconn.edu
Analysts: Sniega Stapcinskaite

UCONN - NRE
Order # 200156 Matrix: Tissue Contact: J. Vokoun Report Date: 9/1/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				8/10/20
Analysis date				8/10/20
LIM #	FIELD #	Collected	Received	Hg
200156-061	AMOS010	7/13/2020	7/27/2020	0.206
200156-062	AMOS011	7/13/2020	7/27/2020	0.127
200156-063	AMOS012	7/13/2020	7/27/2020	0.128
200156-064	AMOS013	7/13/2020	7/27/2020	0.846
200156-065	AMOS014	7/13/2020	7/27/2020	0.166
200156-066	AMOS015	7/13/2020	7/27/2020	0.274
200156-067	AMOS016	7/13/2020	7/27/2020	0.140
200156-068	AMOS017	7/13/2020	7/27/2020	0.112
200156-069	TYLER001	7/14/2020	7/27/2020	0.372
200156-070	TYLER002	7/14/2020	7/27/2020	0.324
200156-071	TYLER003	7/14/2020	7/27/2020	NSS
200156-072	TYLER004	7/14/2020	7/27/2020	0.144
200156-073	TYLER005	7/14/2020	7/27/2020	0.215
200156-074	TYLER006	7/14/2020	7/27/2020	0.300
200156-075	TYLER007	7/14/2020	7/27/2020	1.385
200156-076	TYLER008	7/14/2020	7/27/2020	0.161
200156-077	TYLER009	7/14/2020	7/27/2020	0.455
200156-078	TYLER010	7/14/2020	7/27/2020	0.510
200156-079	TYLER011	7/14/2020	7/27/2020	0.233

200156-080	**TYLER012**	**7/14/2020**	**7/27/2020**	**0.202**
Average Practical Quantitation Limit (PQL) ug/g				**0.042**
Limit of Detection (LOD) ug/g				**0.010**
NSS = No Sample Sent	**ND = Not Detected**			

Note: Lab did not receive sample #200156-071 (Field# TYLER003)

Center for Environmental Sciences and Engineering
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210
Fax # (860) 486-5488
Telephone # (860) 486-4015
Email: cesecustserv@uconn.edu

UCONN - NRE
Order # 200156 Matrix: Tissue
Analysts: Sniega Stapcinskaite Contact: J. Vokoun Report Date: 9/1/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				8/12/20
Analysis date				8/12/20
LIM #	FIELD #	Collected	Received	Hg
200156-081	TYLER013	7/14/2020	7/27/2020	0.263
200156-082	TYLER014	7/14/2020	7/27/2020	0.200
200156-083	TYLER015	7/16/2020	7/27/2020	0.282
200156-084	TYLER016	7/16/2020	7/27/2020	0.175
200156-085	WIN001	7/16/2020	7/27/2020	0.637
200156-086	WIN002	7/16/2020	7/27/2020	1.807
200156-087	WIN003	7/16/2020	7/27/2020	0.890
200156-088	WIN004	7/16/2020	7/27/2020	1.539
200156-089	WIN005	7/16/2020	7/27/2020	0.414
200156-090	WIN006	7/16/2020	7/27/2020	0.848
200156-091	WIN007	7/16/2020	7/27/2020	0.527
200156-092	WIN008	7/16/2020	7/27/2020	0.508
200156-093	WIN009	7/16/2020	7/27/2020	0.412
200156-094	WIN010	7/16/2020	7/27/2020	0.248
200156-095	WIN011	7/16/2020	7/27/2020	0.206
200156-096	WIN012	7/16/2020	7/27/2020	0.329
200156-097	WIN013	7/16/2020	7/27/2020	0.475
200156-098	WIN014	7/16/2020	7/27/2020	0.346
200156-099	WIN015	7/16/2020	7/27/2020	0.253
200156-100	PACH001	7/18/2020	7/27/2020	0.250

Average Practical Quantitation Limit (PQL) ug/g	**0.041**
Limit of Detection (LOD) ug/g	**0.010**
NSS = No Sample Sent **ND = Not Detected**	

Center for Environmental Sciences and Engineering
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210

Fax # (860) 486-5488
Telephone # (860) 486-4015
Sniega Stapcinskaite
Report Date: 9/1/2020
Reported by: C. Perkins

UCONN - NRE
Order # 200156 Email: cesecustserv@uconn.edu Matrix: Tissue Analysts:
Contact: J. Vokoun

EPA Digestion Method #	245.6
EPA Analysis Method #	245.6
Metals WET WEIGHT	CVAA
Units	µg/g
Prep date	8/17/20
Analysis date	8/17/20

LIM #	FIELD #	Collected	Received	Hg
200156-101	PACH002	7/18/2020	7/27/2020	0.701
200156-102	PACH003	7/18/2020	7/27/2020	0.754
200156-103	PACH004	7/18/2020	7/27/2020	1.473
200156-104	PACH005	7/18/2020	7/27/2020	0.931
200156-105	PACH006	7/18/2020	7/27/2020	0.704
200156-106	PACH007	7/18/2020	7/27/2020	0.341
200156-107	PACH008	7/18/2020	7/27/2020	0.632
200156-108	PACH009	7/18/2020	7/27/2020	0.550
200156-109	PACH010	7/18/2020	7/27/2020	1.486
200156-110	PACH011	7/18/2020	7/27/2020	0.593
200156-111	PACH012	7/18/2020	7/27/2020	0.536
200156-112	PACH013	7/18/2020	7/27/2020	0.514
200156-113	PACH014	7/18/2020	7/27/2020	0.428
200156-114	HIGH001	7/20/2020	7/27/2020	0.164
200156-115	HIGH002	7/20/2020	7/27/2020	0.123
200156-116	HIGH003	7/20/2020	7/27/2020	0.218
200156-117	HIGH004	7/20/2020	7/27/2020	0.181
200156-118	HIGH005	7/20/2020	7/27/2020	0.178
200156-119	HIGH006	7/20/2020	7/27/2020	0.141
200156-120	HIGH007	7/20/2020	7/27/2020	0.246

Average Practical Quantitation Limit (PQL) ug/g		**0.043**
Limit of Detection (LOD) ug/g		**0.011**
NSS = No Sample Sent	**ND = Not Detected**	

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN - NRE
University of Connecticut Telephone # (860) 486-4015 Order # 200156 Email: cesecustserv@uconn.edu Matrix: Tissue
The Longley Building, U-5210 Analysts: Sniega Stapcinskaite Contact: J. Vokoun Report Date: 9/1/2020
270 Middle Turnpike, Rte. 44 Reported by: C. Perkins
Storrs, CT 06269-5210

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				8/20/20
Analysis date				8/20/20
LIM #	FIELD #	Collected	Received	Hg
200156-121	HIGH008	7/20/2020	7/27/2020	0.166
200156-122	HIGH009	7/20/2020	7/27/2020	0.138
200156-123	HIGH010	7/20/2020	7/27/2020	0.189
200156-124	HIGH011	7/20/2020	7/27/2020	0.257
200156-125	HIGH012	7/20/2020	7/27/2020	0.228
200156-126	HIGH013	7/20/2020	7/27/2020	0.298
200156-127	HIGH014	7/20/2020	7/27/2020	0.604
200156-128	HIGH015	7/20/2020	7/27/2020	0.850
200156-129	CEDAR001	7/21/2020	7/27/2020	0.197
200156-130	CEDAR002	7/21/2020	7/27/2020	0.040
200156-131	CEDAR003	7/21/2020	7/27/2020	0.109
200156-132	CEDAR004	7/21/2020	7/27/2020	0.277
200156-133	CEDAR005	7/21/2020	7/27/2020	0.053
200156-134	CEDAR006	7/21/2020	7/27/2020	0.056
200156-135	CEDAR007	7/21/2020	7/27/2020	0.131
200156-136	CEDAR008	7/21/2020	7/27/2020	0.394
200156-137	CEDAR009	7/21/2020	7/27/2020	0.210
200156-138	CEDAR010	7/21/2020	7/27/2020	0.193
200156-139	CEDAR011	7/21/2020	7/27/2020	0.437
200156-140	CEDAR012	7/21/2020	7/27/2020	0.076

Average Practical Quantitation Limit (PQL) ug/g	**0.041**
Limit of Detection (LOD) ug/g	**0.011**
NSS = No Sample Sent **ND = Not Detected**	

Center for Environmental Sciences and Engineering
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44,
Storrs, CT 06269-5210
Fax # (860) 486-5488
Telephone # (860) 486-4015
U-5210
Email: cesecustserv@uconn.edu

UCONN - NRE
Order # 200156 Matrix: Tissue
Analysts: Sniega Stapcinskaite Contact: J. Vokoun Report Date: 9/1/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				8/26/20
Analysis date				8/26/20
LIM #	FIELD #	Collected	Received	Hg
200156-141	CEDAR013	7/21/2020	7/27/2020	0.092
200156-142	CEDAR014	7/21/2020	7/27/2020	0.084
200156-143	CEDAR015	7/21/2020	7/27/2020	0.085
200156-144	ASP001	7/23/2020	7/27/2020	0.168
200156-145	ASP002	7/23/2020	7/27/2020	0.231
200156-146	ASP003	7/23/2020	7/27/2020	0.492
200156-147	ASP004	7/23/2020	7/27/2020	0.334
200156-148	ASP005	7/23/2020	7/27/2020	0.431
200156-149	ASP006	7/23/2020	7/27/2020	0.133
200156-150	ASP007	7/23/2020	7/27/2020	0.191
200156-151	ASP008	7/23/2020	7/27/2020	0.205
200156-152	ASP009	7/23/2020	7/27/2020	0.178
200156-153	ASP010	7/23/2020	7/27/2020	0.496
200156-154	ASP011	7/23/2020	7/27/2020	0.560
Average Practical Quantitation Limit (PQL) ug/g				0.039
Limit of Detection (LOD) ug/g				0.010
NSS = No Sample Sent		ND = Not Detected		

Center for Environmental Sciences and Engineering Fax # (860) 486- 5488
University of Connecticut Telephone # (860) 486-4015
The Longley Building Email: cesecustse rv@uconn.edu a Stapcinskaite
270 Middle Turnpike, Rte. 44, U-5210 Analysts: Snieg Storrs, CT 06269-5210

UCONN - NRE
Order # 200210 Matrix: Tissue Contact: J. Vokoun Report Date: 10/22/20
Reported by: C. Perkins

EPA Digestion Method #	245.6
EPA Analysis Method #	245.6
Metals WET WEIGHT	CVAA
Units	µg/g
Prep date	9/11/20
Analysis date	9/11/20

LIM #	FIELD #	Collected	Received	Hg
200210-001	GLAS001	7/27/2020	9/1/2020	0.260
200210-002	GLAS002	7/27/2020	9/1/2020	0.652
200210-003	GLAS003	7/27/2020	9/1/2020	0.585
200210-004	GLAS004	7/27/2020	9/1/2020	0.381
200210-005	GLAS005	7/27/2020	9/1/2020	0.987
200210-006	GLAS006	7/27/2020	9/1/2020	0.606
200210-007	GLAS007	7/27/2020	9/1/2020	0.765
200210-008	GLAS008	7/27/2020	9/1/2020	0.423
200210-009	GLAS009	7/27/2020	9/1/2020	0.572
200210-010	GLAS010	7/27/2020	9/1/2020	0.447
200210-011	GLAS011	7/27/2020	9/1/2020	0.881
200210-012	GLAS012	7/27/2020	9/1/2020	0.478
200210-013	GLAS013	7/27/2020	9/1/2020	0.564
200210-014	GLAS014	7/27/2020	9/1/2020	0.367
200210-015	GLAS015	7/27/2020	9/1/2020	0.303
200210-016	BLACK001	7/27/2020	9/1/2020	0.060
200210-017	BLACK002	7/27/2020	9/1/2020	0.091
200210-018	BLACK003	7/27/2020	9/1/2020	0.070
200210-019	BLACK004	7/27/2020	9/1/2020	0.128
200210-020	BLACK005	7/27/2020	9/1/2020	0.107

Average Practical Quantitation Limit (PQL) ug/g	0.027
Limit of Detection (LOD) ug/g	0.007
NSS = No Sample Sent **ND = Not Detected**	

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University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210
Telephone # (860) 486-4015
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Email: cesecustserv@uconn.edu

UCONN - NRE
Order # 200210
Matrix: Tissue
Analysts: Sniega Stapcinskaite
Contact: J. Vokoun
Report Date: 10/22/20
Reported by: C. Perkins

EPA Digestion Method #				**245.6**
EPA Analysis Method #				**245.6**
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g**
Prep date				9/14/20
Analysis date				9/14/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
200210-021	**BLACK006**	**7/28/2020**	**9/1/2020**	0.175
200210-022	**BLACK007**	**7/28/2020**	**9/1/2020**	0.197
200210-023	**BLACK008**	**7/28/2020**	**9/1/2020**	0.173
200210-024	**BLACK009**	**7/28/2020**	**9/1/2020**	0.563
200210-025	**BLACK010**	**7/28/2020**	**9/1/2020**	0.240
200210-026	**BLACK011**	**7/28/2020**	**9/1/2020**	0.195
200210-027	**BLACK012**	**7/28/2020**	**9/1/2020**	0.218
200210-028	**BLACK013**	**7/28/2020**	**9/1/2020**	0.351
200210-029	**BLACK014**	**7/28/2020**	**9/1/2020**	0.545
200210-030	**GARD001**	**7/29/2020**	**9/1/2020**	0.437
200210-031	**GARD002**	**7/29/2020**	**9/1/2020**	0.150
200210-032	**GARD003**	**7/29/2020**	**9/1/2020**	0.331
200210-033	**GARD004**	**7/29/2020**	**9/1/2020**	0.149
200210-034	**GARD005**	**7/29/2020**	**9/1/2020**	0.228
200210-035	**GARD006**	**7/29/2020**	**9/1/2020**	0.360
200210-036	**GARD007**	**7/29/2020**	**9/1/2020**	0.115
200210-037	**GARD008**	**7/29/2020**	**9/1/2020**	0.254
200210-038	**GARD009**	**7/29/2020**	**9/1/2020**	0.424
200210-039	**GARD010**	**7/29/2020**	**9/1/2020**	0.317
200210-040	**GARD011**	**7/29/2020**	**9/1/2020**	0.469

Average Practical Quantitation Limit (PQL) ug/g	0.044
Limit of Detection (LOD) ug/g	0.011
NSS = No Sample Sent **ND = Not Detected**	

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN - NRE
University of Connecticut Telephone # (860) 486-4015 Order # 200210 Email: cesecustserv@uconn.edu Matrix: Tissue
The Longley Building 44, U-5210 Analysts: Sniega Stapcinskaite Contact: J. Vokoun Report Date: 10/22/20
270 Middle Turnpike, Rte. Storrs, CT 06269-5210 Reported by: C. Perkins

EPA Digestion Method #				**245.6**
EPA Analysis Method #				**245.6**
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g**
Prep date				9/14/20
Analysis date				9/14/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
200156-041	**GARD012**	**7/29/2020**	**9/1/2020**	0.329
200156-042	**GARD013**	**7/29/2020**	**9/1/2020**	1.080
200156-043	**GARD014**	**7/29/2020**	**9/1/2020**	1.032
200156-044	**GARD015**	**7/29/2020**	**9/1/2020**	0.588
200156-045	**RAIN001**	**7/29/2020**	**9/1/2020**	0.141
200156-046	**RAIN002**	**7/29/2020**	**9/1/2020**	0.189
200156-047	**RAIN003**	**7/29/2020**	**9/1/2020**	0.145
200156-048	**RAIN004**	**7/29/2020**	**9/1/2020**	0.238
200156-049	**RAIN005**	**7/29/2020**	**9/1/2020**	0.050
200156-050	**RAIN006**	**7/29/2020**	**9/1/2020**	0.108
200156-051	**RAIN007**	**7/29/2020**	**9/1/2020**	0.117
200156-052	**RAIN008**	**7/29/2020**	**9/1/2020**	0.112
200156-053	**RAIN009**	**7/29/2020**	**9/1/2020**	0.119
200156-054	**RAIN010**	**7/29/2020**	**9/1/2020**	0.257
200156-055	**RAIN011**	**7/29/2020**	**9/1/2020**	0.156
200156-056	**Quin001**	**8/31/2020**	**9/1/2020**	0.551
200156-057	**Quin002**	**8/31/2020**	**9/1/2020**	0.678
200156-058	**Quin003**	**8/31/2020**	**9/1/2020**	0.351
200156-059	**Quin004**	**8/31/2020**	**9/1/2020**	0.338
200156-060	**Quin005**	**8/31/2020**	**9/1/2020**	0.160

200156-061	**Quin006**	**8/31/2020**	**9/1/2020**	0.335
Average Practical Quantitation Limit (PQL) ug/g				0.037
Limit of Detection (LOD) ug/g				0.009
NSS = No Sample Sent	**ND = Not Detected**			

Center for Environmental Sciences and Engineering
University of Connecticut
The Longley Building, U-5210
270 Middle Turnpike, Rte. 44
Storrs, CT 06269-5210
Fax # (860) 486-5488
Telephone # (860) 486-4015 Email: cesecustserv@uconn.edu Analysts: Sniega Stapcinskaite

UCONN-NRE
Order # 200236 Matrix: Tissue Contact: J. Vokoun
Report Date: 10/28/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				9/29/20
Analysis date				9/29/20
LIM #	FIELD #	Collected	Received	Hg
200236-001	POWERS001	9/3/2020	9/14/2020	0.517
200236-002	POWERS002	9/3/2020	9/14/2020	0.437
200236-003	POWERS003	9/3/2020	9/14/2020	0.222
200236-004	POWERS004	9/3/2020	9/14/2020	0.248
200236-005	POWERS005	9/3/2020	9/14/2020	0.200
200236-006	POWERS006	9/3/2020	9/14/2020	0.391
200236-007	POWERS007	9/3/2020	9/14/2020	0.166
200236-008	POWERS008	9/3/2020	9/14/2020	0.316
200236-009	POWERS009	9/3/2020	9/14/2020	0.455
200236-010	POWERS010	9/3/2020	9/14/2020	0.199
200236-011	POWERS011	9/3/2020	9/14/2020	0.382
200236-012	POWERS012	9/3/2020	9/14/2020	0.306
200236-013	POWERS013	9/3/2020	9/14/2020	0.252
200236-014	WYAS001	9/1/2020	9/14/2020	0.242
200236-015	WYAS002	9/1/2020	9/14/2020	0.202
200236-016	WYAS003	9/1/2020	9/14/2020	0.673
200236-017	WYAS004	9/1/2020	9/14/2020	0.982
200236-018	WYAS005	9/1/2020	9/14/2020	0.134
200236-019	WYAS006	9/1/2020	9/14/2020	0.136
200236-020	WYAS007	9/1/2020	9/14/2020	0.334

200236-021	**WYAS008**	**9/1/2020**	**9/14/2020**	0.779
200236-022	**WYAS009**	**9/1/2020**	**9/14/2020**	0.578
200236-023	**WYAS010**	**9/1/2020**	**9/14/2020**	0.550
200236-024	**WYAS011**	**9/1/2020**	**9/14/2020**	0.461
200236-025	**WYAS012**	**9/1/2020**	**9/14/2020**	0.532
200236-026	**WYAS013**	**9/1/2020**	**9/14/2020**	0.207
200236-027	**HOUS001**	**9/8/2020**	**9/14/2020**	0.228
200236-028	**HOUS002**	**9/8/2020**	**9/14/2020**	0.194
200236-029	**HOUS003**	**9/8/2020**	**9/14/2020**	0.186
200236-030	**HOUS004**	**9/8/2020**	**9/14/2020**	0.222
200236-031	**HOUS005**	**9/8/2020**	**9/14/2020**	0.529
200236-032	**HOUS006**	**9/8/2020**	**9/14/2020**	0.614
200236-033	**HOUS007**	**9/8/2020**	**9/14/2020**	0.565
200236-034	**HOUS008**	**9/8/2020**	**9/14/2020**	0.239
200236-035	**HOUS009**	**9/8/2020**	**9/14/2020**	0.296
200236-036	**HOUS010**	**9/8/2020**	**9/14/2020**	0.337
200236-037	**HOUS011**	**9/8/2020**	**9/14/2020**	0.379
200236-038	**HOUS012**	**9/8/2020**	**9/14/2020**	0.145
200236-039	**HOUS013**	**9/8/2020**	**9/14/2020**	0.304
200236-040	**HOUS014**	**9/8/2020**	**9/14/2020**	0.337
Average Practical Quantitation Limit (PQL) ug/g				0.026
Limit of Detection (LOD) ug/g				0.006
NSS = No Sample Sent		**ND = Not Detected**		

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University of Connecticut
The Longley Building
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Storrs, CT 06269-5210
Telephone # (860) 486-4015
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Email: cesecustserv@uconn.edu

UCONN-NRE
Order # 200236 Matrix: Tissue
Analysts: Sniega Stapcinskaite
Contact: J. Vokoun Report Date: 10/28/2020
Reported by: C. Perkins

EPA Digestion Method #	**245.6**
EPA Analysis Method #	**245.6**
Metals Units Prep date Analysis date — **WET WEIGHT**	**CVAA** **µg/g** 9/30/20 9/30/20

LIM #	FIELD #	Collected	Received	Hg
200236-041	ZOAR001	9/9/2020	9/14/2020	1.102
200236-042	ZOAR002	9/9/2020	9/14/2020	0.465
200236-043	ZOAR003	9/9/2020	9/14/2020	0.642
200236-044	ZOAR004	9/9/2020	9/14/2020	0.496
200236-045	ZOAR005	9/9/2020	9/14/2020	0.891
200236-046	ZOAR006	9/9/2020	9/14/2020	0.204
200236-047	ZOAR007	9/9/2020	9/14/2020	0.151
200236-048	ZOAR008	9/9/2020	9/14/2020	0.283
200236-049	ZOAR009	9/9/2020	9/14/2020	0.215
200236-050	ZOAR010	9/9/2020	9/14/2020	0.288
200236-051	ZOAR011	9/9/2020	9/14/2020	0.623
200236-052	ZOAR012	9/9/2020	9/14/2020	0.293
200236-053	ZOAR013	9/9/2020	9/14/2020	0.427
200236-054	ZOAR014	9/9/2020	9/14/2020	0.480
Average Practical Quantitation Limit (PQL) ug/g				0.047
Limit of Detection (LOD) ug/g				0.012
NSS = No Sample Sent		**ND = Not Detected**		

Note: lab didn't receive sample 200236-055

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN-NRE
University of Connecticut Telephone # (860) 486-4015 Order # 200236 Email: cesecustserv@uconn.edu Matrix: Tissue
The Longley Building , U-5210 Analysts: Sniega Stapcinskaite Contact: J. Vokoun
270 Middle Turnpike, Rte. 44 Report Date: 10/28/2020 Reported by: C. Perkins
Storrs, CT 06269-5210

EPA Digestion Method #				**245.6**	
EPA Analysis Method #				**245.6**	
Metals	**WET WEIGHT**			**CVAA**	
Units				**µg/g**	
Prep date				10/8/20	
Analysis date				10/8/20	
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**	**% Solid**
200236-056	**ZOAR008_Fillet**	**9/9/2020**	**9/14/2020**	0.127	20.02
200236-057	**MBOLT006_Fillet**	**7/2/2020**	**9/14/2020**	0.712	19.67
200236-058	**POWERS002_Fillet**	**9/3/2020**	**9/14/2020**	0.419	20.08
200236-059	**WYAS001_Fillet**	**9/1/2020**	**9/14/2020**	0.219	20.41
200236-060	**TYLER003_Fillet**	**7/14/2020**	**9/14/2020**	0.077	20.93
200236-061	**PACH002_Fillet**	**7/18/2020**	**9/14/2020**	0.693	20.76
200236-062	**MOOD001_Fillet**	**7/15/2020**	**9/14/2020**	0.142	19.62
200236-063	**BLACK005_Fillet**	**7/28/2020**	**9/14/2020**	0.204	20.70
200236-064	**MANS003_Fillet**	**6/29/2020**	**9/14/2020**	0.230	19.95
200236-065	**QUIN006_Fillet**	**8/31/2020**	**9/14/2020**	0.441	21.58
200236-066	**GLAS007_Fillet**	**7/27/2020**	**9/14/2020**	1.203	20.29
200236-067	**AMOS014_Fillet**	**7/13/2020**	**9/14/2020**	0.147	20.65
200236-068	**CEDAR001_Fillet**	**7/21/2020**	**9/14/2020**	0.189	20.98
200236-069	**RAIN001_Fillet**	**7/30/2020**	**9/14/2020**	0.154	20.54
200236-070	**HIGH003_Fillet**	**7/20/2020**	**9/14/2020**	0.268	19.90
200236-071	**ASP003_Fillet**	**7/23/2020**	**9/14/2020**	0.604	21.43
200236-072	**HOUS008_Fillet**	**9/8/2020**	**9/14/2020**	0.261	21.34
200236-073	**WIN004_Fillet**	**7/16/2020**	**9/14/2020**	1.305	21.28
200236-074	**GARD001_Fillet**	**7/29/2020**	**9/14/2020**	0.427	20.69
Average Practical Quantitation Limit (PQL) ug/g				0.017	
Limit of Detection (LOD) ug/g				0.004	

NSS = No Sample Sent **ND = Not Detected**	

Note: lab didn’t receive sample 200236-055

University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210

Fax # (860) 486-5488
Telephone # (860) 486-4015 Email: cesecustserv@uconn.edu
Analysts: Sniega Stapcinskaite

UCONN - NRE
Order # 200258 Matrix: Tissue Contact:C. Sullivan Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #	245.6
EPA Analysis Method #	245.6
Metals WET WEIGHT	CVAA
Units	µg/g
Prep date	10/8/20
Analysis date	10/8/20

LIM #	FIELD #	Collected	Received	Hg
200280-001	MUDGE001	9/14/2020	9/21/2020	0.556
200280-002	MUDGE002	9/14/2020	9/21/2020	0.087
200280-003	MUDGE003	9/14/2020	9/21/2020	0.154
200280-004	MUDGE004	9/14/2020	9/21/2020	0.139
200280-005	MUDGE005	9/14/2020	9/21/2020	0.125
200280-006	MUDGE006	9/14/2020	9/21/2020	0.230
200280-007	MUDGE007	9/14/2020	9/21/2020	0.183
200280-008	MUDGE008	9/14/2020	9/21/2020	0.263
200280-009	MUDGE009	9/14/2020	9/21/2020	0.085
200280-010	MUDGE010	9/14/2020	9/21/2020	0.363
200280-011	MUDGE011	9/14/2020	9/21/2020	0.086
200280-012	MUDGE012	9/14/2020	9/21/2020	0.167
200280-013	MUDGE013	9/14/2020	9/21/2020	0.136
200280-014	MUDGE014	9/14/2020	9/21/2020	0.426
200280-015	MUDGE015	9/14/2020	9/21/2020	0.403
200280-016	MOOD013	9/16/2020	9/21/2020	0.201
200280-017	MOOD014	9/16/2020	9/21/2020	0.218
200280-018	PACH015	9/16/2020	9/21/2020	0.119
200280-019	ASH001	9/15/2020	9/21/2020	0.201
200280-020	ASH002	9/15/2020	9/21/2020	0.626
Average Practical Quantitation Limit (PQL) ug/g				0.047

Limit of Detection (LOD) ug/g	0.004
NSS = No Sample Sent **ND = Not Detected**	

Note:

Center for Environmental Sciences and Engine Fax # (860) 486-5488 UCONN - NRE University of Connecticut Telephone # (860) 486-4015 Order # 200258
The Longley Building Email: cesecustserv@uconn.edu Matrix: Tissue
270 Middle Turnpike, Rte. 44, U-5210 Analysts: Sniega Stapcinskaite Contact:C. Sullivan Storrs, CT 06269-5210 Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #	245.6
EPA Analysis Method #	245.6
Metals WET WEIGHT	CVAA
Units	µg/g
Prep date	10/15/20
Analysis date	10/15/20

LIM #	FIELD #	Collected	Received	Hg
200258-021	ASH003	9/15/2020	9/21/2020	0.182
200258-022	ASH004	9/15/2020	9/21/2020	0.194
200258-023	ASH005	9/15/2020	9/21/2020	0.177
200258-024	ASH006	9/15/2020	9/21/2020	0.448
200258-025	ASH007	9/15/2020	9/21/2020	0.195
200258-026	ASH008	9/15/2020	9/21/2020	0.365
200258-027	ASH009	9/15/2020	9/21/2020	0.132
200258-028	ASH010	9/15/2020	9/21/2020	0.367
200258-029	ASH011	9/15/2020	9/21/2020	0.409
200258-030	ASH012	9/15/2020	9/21/2020	0.405
200258-031	ASH013	9/15/2020	9/21/2020	0.396
200258-032	ASH014	9/15/2020	9/21/2020	0.302
200258-033	MCD001	9/17/2020	9/21/2020	0.608
200258-034	MCD002	9/17/2020	9/21/2020	0.603
200258-035	MCD003	9/17/2020	9/21/2020	0.615
200258-036	MCD004	9/17/2020	9/21/2020	0.579
200258-037	MCD005	9/17/2020	9/21/2020	0.536
200258-038	MCD006	9/17/2020	9/21/2020	0.541
200258-039	MCD007	9/17/2020	9/21/2020	0.190
200258-040	MCD008	9/17/2020	9/21/2020	1.172

200258-041	**MCD009**	**9/17/2020**	**9/21/2020**	0.858
200258-042	**MCD010**	**9/17/2020**	**9/21/2020**	0.452
200258-043	**MCD011**	**9/17/2020**	**9/21/2020**	0.593
200258-044	**MCD012**	**9/17/2020**	**9/21/2020**	0.226
200258-045	**MCD013**	**9/17/2020**	**9/21/2020**	0.566
Average Practical Quantitation Limit (PQL) ug/g				0.042
Limit of Detection (LOD) ug/g				0.010
NSS = No Sample Sent	**ND = Not Detected**			

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Fax # (860) 486-5488
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Analysts: Sniega Stapcinskaite

UCONN - NRE
Order # 200280 Matrix: Tissue Contact: C. Sullivan Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #				**245.6**
EPA Analysis Method #				**245.6**
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g**
Prep date				10/20/20
Analysis date				10/20/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
200280-001	**LONG001**	**9/21/2020**	**9/29/2020**	0.586
200280-002	**LONG002**	**9/21/2020**	**9/29/2020**	0.154
200280-003	**LONG003**	**9/21/2020**	**9/29/2020**	0.334
200280-004	**LONG004**	**9/21/2020**	**9/29/2020**	0.251
200280-005	**LONG005**	**9/21/2020**	**9/29/2020**	0.265
200280-006	**LONG006**	**9/21/2020**	**9/29/2020**	0.176
200280-007	**LONG007**	**9/21/2020**	**9/29/2020**	0.197
200280-008	**LONG008**	**9/21/2020**	**9/29/2020**	0.209
200280-009	**LONG009**	**9/21/2020**	**9/29/2020**	0.501
200280-010	**LONG010**	**9/21/2020**	**9/29/2020**	0.422
200280-011	**LONG011**	**9/21/2020**	**9/29/2020**	0.381
200280-012	**LONG012**	**9/21/2020**	**9/29/2020**	0.362
200280-013	**LONG013**	**9/21/2020**	**9/29/2020**	0.507
200280-014	**LONG014**	**9/21/2020**	**9/29/2020**	0.511
200280-015	**LONG015**	**9/21/2020**	**9/29/2020**	0.691
200280-016	**LONG016**	**9/21/2020**	**9/29/2020**	0.918
200280-017	**GORT001**	**9/22/2020**	**9/29/2020**	0.157
200280-018	**GORT002**	**9/22/2020**	**9/29/2020**	0.166
200280-019	**GORT003**	**9/22/2020**	**9/29/2020**	0.396
200280-020	**GORT004**	**9/22/2020**	**9/29/2020**	0.130
200280-021	**GORT005**	**9/22/2020**	**9/29/2020**	0.192

200280-022	**GORT006**	**9/22/2020**	**9/29/2020**	0.383
200280-023	**GORT007**	**9/22/2020**	**9/29/2020**	0.260
200280-024	**GORT008**	**9/22/2020**	**9/29/2020**	0.533
200280-025	**GORT009**	**9/22/2020**	**9/29/2020**	0.309
200280-026	**GORT010**	**9/22/2020**	**9/29/2020**	0.560
200280-027	**GORT011**	**9/22/2020**	**9/29/2020**	0.796
200280-028	**GORT012**	**9/22/2020**	**9/29/2020**	0.311
200280-029	**GORT013**	**9/22/2020**	**9/29/2020**	0.458
200280-030	**GORT014**	**9/22/2020**	**9/29/2020**	0.531
200280-031	**GORT015**	**9/22/2020**	**9/29/2020**	0.722
200280-032	**SAUG001**	**9/23/2020**	**9/29/2020**	0.879
200280-033	**SAUG002**	**9/23/2020**	**9/29/2020**	0.126
200280-034	**SAUG003**	**9/23/2020**	**9/29/2020**	0.126
200280-035	**SAUG004**	**9/23/2020**	**9/29/2020**	0.164
200280-036	**SAUG005**	**9/23/2020**	**9/29/2020**	0.298
200280-037	**SAUG006**	**9/23/2020**	**9/29/2020**	0.383
200280-038	**SAUG007**	**9/23/2020**	**9/29/2020**	0.905
200280-039	**SAUG008**	**9/23/2020**	**9/29/2020**	0.928
200280-040	**SAUG009**	**9/23/2020**	**9/29/2020**	0.742
200280-041	**SAUG010**	**9/23/2020**	**9/29/2020**	0.636
200280-042	**SAUG011**	**9/23/2020**	**9/29/2020**	0.667
200280-043	**SAUG012**	**9/23/2020**	**9/29/2020**	0.671
200280-044	**SAUG013**	**9/23/2020**	**9/29/2020**	0.804
Average Practical Quantitation Limit (PQL) ug/g				0.044
Limit of Detection (LOD) ug/g				0.011
NSS = No Sample Sent		**ND = Not Detected**		

Center for Environmental Sciences and Engineering   Fax # (860) 486-5488   UCONN - NRE Telephone # (860) 486-4015   Order # 200340 Email: cesecustserv@uconn.edu Matrix:
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210

Tissue Analysts: Sniega Stapcinskaite   Contact:C. Sullivan
Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #	245.6
EPA Analysis Method #	245.6
Metals WET WEIGHT	CVAA
Units	µg/g
Prep date	11/4/20
Analysis date	11/4/20

LIM #	FIELD #	Collected	Received	Hg
200340-001	CAND001	10/7/2020	10/28/2020	0.074
200340-002	CAND002	10/7/2020	10/28/2020	0.223
200340-003	CAND003	10/7/2020	10/28/2020	0.130
200340-004	CAND004	10/7/2020	10/28/2020	0.110
200340-005	CAND005	10/24/2020	10/28/2020	0.415
200340-006	CAND006	10/24/2020	10/28/2020	0.436
200340-007	CAND007	10/24/2020	10/28/2020	0.096
200340-008	CAND008	10/24/2020	10/28/2020	0.615
200340-009	CAND009	10/24/2020	10/28/2020	0.306
200340-010	CAND010	10/24/2020	10/28/2020	0.518
200340-011	CAND011	10/24/2020	10/28/2020	0.210
200340-012	CAND012	10/24/2020	10/28/2020	0.357
200340-013	CAND013	10/24/2020	10/28/2020	0.105
200340-014	CAND014	10/24/2020	10/28/2020	0.084
200340-015	CAND015	10/24/2020	10/28/2020	0.517
200340-016	CAND016	10/24/2020	10/28/2020	0.591
200340-017	CAND017	10/24/2020	10/28/2020	0.053
200340-018	ROG001	10/14/2020	10/28/2020	1.101

200340-019	**ROG002**	**10/14/2020**	**10/28/2020**	0.506
200340-020	**ROG003**	**10/14/2020**	**10/28/2020**	0.270
200340-021	**ROG004**	**10/14/2020**	**10/28/2020**	0.479
200340-022	**ROG005**	**10/14/2020**	**10/28/2020**	0.226
200340-023	**ROG006**	**10/14/2020**	**10/28/2020**	1.299
200340-024	**ROG007**	**10/14/2020**	**10/28/2020**	0.764
200340-025	**ROG008**	**10/14/2020**	**10/28/2020**	0.201
200340-026	**ROG009**	**10/14/2020**	**10/28/2020**	0.488
200340-027	**ROG010**	**10/14/2020**	**10/28/2020**	0.466
200340-028	**ROG011**	**10/14/2020**	**10/28/2020**	0.495
200340-029	**ROG012**	**10/14/2020**	**10/28/2020**	0.183
200340-030	**ROG013**	**10/14/2020**	**10/28/2020**	0.534
200340-031	**ROG014**	**10/14/2020**	**10/28/2020**	0.157
200340-032	**ROG015**	**10/14/2020**	**10/28/2020**	0.142
200340-033	**ROG016**	**10/14/2020**	**10/28/2020**	0.191
200340-034	**CRYS001**	**10/14/2020**	**10/28/2020**	0.277
200340-035	**CRYS002**	**10/15/2020**	**10/28/2020**	0.049
200340-036	**CRYS003**	**10/15/2020**	**10/28/2020**	0.053
200340-037	**CRYS004**	**10/15/2020**	**10/28/2020**	0.089
200340-038	**CRYS005**	**10/15/2020**	**10/28/2020**	0.077
200340-039	**CRYS006**	**10/15/2020**	**10/28/2020**	0.050
200340-040	**CRYS007**	**10/15/2020**	**10/28/2020**	0.039
Average Practical Quantitation Limit (PQL) ug/g				0.046
Limit of Detection (LOD) ug/g				0.012
NSS = No Sample Sent		**ND = Not Detected**		

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN - NRE Telephone # (860) 486-4015 Order # 200340 Email: cesecustserv@uconn.edu Matrix:
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210

Tissue Analysts: Sniega Stapcinskaite Contact:C. Sullivan
Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				11/12/20
Analysis date				11/12/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
200340-041	CRYS008	10/15/2020	10/28/2020	0.056
200340-042	CRYS009	10/15/2020	10/28/2020	0.144
200340-043	CRYS010	10/15/2020	10/28/2020	0.194
200340-044	CRYS011	10/15/2020	10/28/2020	0.147
200340-045	CRYS012	10/15/2020	10/28/2020	0.124
200340-046	CRYS013	10/15/2020	10/28/2020	0.113
200340-047	CRYS014	10/15/2020	10/28/2020	0.193
200340-048	CRYS015	10/15/2020	10/28/2020	0.415
200340-049	CRYS016	10/15/2020	10/28/2020	0.360
200340-050	SALT001	10/15/2020	10/28/2020	0.076
200340-051	SALT002	10/17/2020	10/28/2020	0.077
200340-052	SALT003	10/17/2020	10/28/2020	0.071
200340-053	SALT004	10/17/2020	10/28/2020	0.108
200340-054	SALT005	10/17/2020	10/28/2020	0.068
200340-055	SALT006	10/17/2020	10/28/2020	0.394
200340-056	SALT007	10/17/2020	10/28/2020	0.082
200340-057	SALT008	10/17/2020	10/28/2020	0.079
200340-058	SALT009	10/17/2020	10/28/2020	0.101

200340-059	**SALT010**	**10/17/2020**	**10/28/2020**	0.274
200340-060	**SALT011**	**10/17/2020**	**10/28/2020**	0.215
200340-061	**SALT012**	**10/17/2020**	**10/28/2020**	0.312
200340-062	**SALT013**	**10/17/2020**	**10/28/2020**	0.487
200340-063	**SALT014**	**10/17/2020**	**10/28/2020**	0.172
200340-064	**SALT015**	**10/17/2020**	**10/28/2020**	0.123
200340-065	**SALT016**	**10/17/2020**	**10/28/2020**	0.178
200340-066	**SALT017**	**10/17/2020**	**10/28/2020**	0.132
200340-067	**CRYST001**	**10/19/2020**	**10/28/2020**	0.398
200340-068	**CRYST002**	**10/19/2020**	**10/28/2020**	0.249
200340-069	**CRYST003**	**10/19/2020**	**10/28/2020**	0.195
200340-070	**CRYST004**	**10/19/2020**	**10/28/2020**	0.155
200340-071	**CRYST005**	**10/19/2020**	**10/28/2020**	0.183
200340-072	**CRYST006**	**10/19/2020**	**10/28/2020**	0.261
200340-073	**CRYST007**	**10/19/2020**	**10/28/2020**	0.164
200340-074	**CRYST008**	**10/19/2020**	**10/28/2020**	0.104
200340-075	**CRYST009**	**10/19/2020**	**10/28/2020**	0.183
200340-076	**CRYST010**	**10/19/2020**	**10/28/2020**	0.082
200340-077	**CRYST011**	**10/19/2020**	**10/28/2020**	0.189
200340-078	**CRYST012**	**10/19/2020**	**10/28/2020**	0.121
200340-079	**CAN001**	**10/19/2020**	**10/28/2020**	0.204
200340-080	**CAN002**	**10/19/2020**	**10/28/2020**	0.322
Average Practical Quantitation Limit (PQL) ug/g				0.043
Limit of Detection (LOD) ug/g				0.011
NSS = No Sample Sent	**ND = Not Detected**			

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UCONN - NRE Telephone # (860) 486-4015 Order # 200340 Email: cesecustserv@uconn.edu Matrix:
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210
Tissue Analysts: Sniega Stapcinskaite Contact:C. Sullivan
Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #	245.6
EPA Analysis Method #	245.6
Metals WET WEIGHT	CVAA
Units	µg/g
Prep date	11/13/20
Analysis date	11/13/20

LIM #	FIELD #	Collected	Received	Hg
200340-081	CAN003	10/20/2020	10/28/2020	0.082
200340-082	CAN004	10/20/2020	10/28/2020	0.047
200340-083	CAN005	10/20/2020	10/28/2020	0.084
200340-084	CAN006	10/20/2020	10/28/2020	0.047
200340-085	CAN007	10/20/2020	10/28/2020	0.056
200340-086	CAN008	10/20/2020	10/28/2020	0.274
200340-087	CAN009	10/20/2020	10/28/2020	0.288
200340-088	CAN010	10/20/2020	10/28/2020	0.349
200340-089	CAN011	10/20/2020	10/28/2020	0.481
200340-090	CAN012	10/20/2020	10/28/2020	0.064
200340-091	CAN013	10/20/2020	10/28/2020	0.064
200340-092	CAN014	10/20/2020	10/28/2020	0.230
200340-093	WONO001	10/26/2020	10/28/2020	0.810
200340-094	WONO002	10/26/2020	10/28/2020	0.393
200340-095	WONO003	10/26/2020	10/28/2020	0.112
200340-096	WONO004	10/26/2020	10/28/2020	0.248
200340-097	WONO005	10/26/2020	10/28/2020	0.156
200340-098	WONO006	10/26/2020	10/28/2020	0.143

200340-099	**WONO007**	**10/26/2020**	**10/28/2020**	0.128
200340-100	**WONO008**	**10/26/2020**	**10/28/2020**	0.211
200340-101	**WONO009**	**10/26/2020**	**10/28/2020**	0.346
200340-102	**WONO010**	**10/26/2020**	**10/28/2020**	0.437
200340-103	**WONO011**	**10/26/2020**	**10/28/2020**	0.122
200340-104	**WONO012**	**10/26/2020**	**10/28/2020**	0.168
200340-105	**WONO013**	**10/26/2020**	**10/28/2020**	0.733
200340-106	**WONO014**	**10/26/2020**	**10/28/2020**	0.507
200340-107	**WONO015**	**10/26/2020**	**10/28/2020**	0.397
200340-108	**WONO016**	**10/26/2020**	**10/28/2020**	0.156
200340-109	**WARA001**	**10/27/2020**	**10/28/2020**	0.213
200340-110	**WARA002**	**10/27/2020**	**10/28/2020**	0.090
200340-111	**WARA003**	**10/27/2020**	**10/28/2020**	0.224
200340-112	**WARA004**	**10/27/2020**	**10/28/2020**	0.220
200340-113	**WARA005**	**10/27/2020**	**10/28/2020**	0.212
200340-114	**WARA006**	**10/27/2020**	**10/28/2020**	0.313
200340-115	**WARA007**	**10/27/2020**	**10/28/2020**	0.106
200340-116	**WARA008**	**10/27/2020**	**10/28/2020**	0.255
200340-117	**WARA009**	**10/27/2020**	**10/28/2020**	0.274
200340-118	**WARA010**	**10/27/2020**	**10/28/2020**	0.248
200340-119	**WARA011**	**10/27/2020**	**10/28/2020**	0.311
200340-120	**WARA012**	**10/27/2020**	**10/28/2020**	0.775
200340-121	**WARA013**	**10/27/2020**	**10/28/2020**	0.079
200340-122	**WARA014**	**10/27/2020**	**10/28/2020**	0.170
200340-123	**WARA015**	**10/27/2020**	**10/28/2020**	0.207
Average Practical Quantitation Limit (PQL) ug/g				0.053
Limit of Detection (LOD) ug/g				0.013
NSS = No Sample Sent		**ND = Not Detected**		

Center for Environmental Sciences and Engineering
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Telephone # (860) 486-4015
Email: cesecustserv@uconn.edu

UCONN - NRE
Order # 200379 Matrix: Tissue
Analysts: Sniega Stapcinskaite Contact:C. Sullivan Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6
EPA Analysis Method #				245.6
Metals	WET WEIGHT			CVAA
Units				µg/g
Prep date				11/24/20
Analysis date				11/24/20
LIM #	FIELD #	Collected	Received	Hg
200379-001	QUAS001	10/28/2020	11/20/2020	0.314
200379-002	QUAS002	10/28/2020	11/20/2020	0.282
200379-003	QUAS003	10/28/2020	11/20/2020	0.397
200379-004	QUAS004	10/28/2020	11/20/2020	0.809
200379-005	QUAS005	10/28/2020	11/20/2020	0.232
200379-006	QUAS006	10/28/2020	11/20/2020	0.381
200379-007	QUAS007	10/28/2020	11/20/2020	0.170
200379-008	QUAS008	10/28/2020	11/20/2020	0.101
200379-009	QUAS009	10/28/2020	11/20/2020	0.149
200379-010	QUAS010	10/28/2020	11/20/2020	0.186
200379-011	QUAS011	10/28/2020	11/20/2020	0.224
200379-012	QUAS012	10/28/2020	11/20/2020	0.145
200379-013	QUAS013	10/28/2020	11/20/2020	0.082
200379-014	QUAS014	10/28/2020	11/20/2020	0.873
200379-015	QUAS015	10/28/2020	11/20/2020	0.528
200379-016	POWERS014	11/3/2020	11/20/2020	0.533
200379-017	BANT009	11/7/2020	11/20/2020	0.268
200379-018	BANT010	11/7/2020	11/20/2020	0.035
200379-019	BANT011	11/7/2020	11/20/2020	0.033
200379-020	BANT012	11/7/2020	11/20/2020	0.110

200379-021	**BANT013**	**11/7/2020**	**11/20/2020**	0.306
200379-022	**BANT014**	**11/7/2020**	**11/20/2020**	0.021
200379-023	**BANT015**	**11/7/2020**	**11/20/2020**	0.186
200379-024	**QUIN007**	**11/8/2020**	**11/20/2020**	0.188
200379-025	**QUIN008**	**11/8/2020**	**11/20/2020**	0.190
200379-026	**QUIN009**	**11/8/2020**	**11/20/2020**	0.263
200379-027	**QUIN010**	**11/8/2020**	**11/20/2020**	0.168
200379-028	**QUIN011**	**11/8/2020**	**11/20/2020**	0.514
200379-029	**QUIN012**	**11/8/2020**	**11/20/2020**	0.197
200379-030	**QUIN013**	**11/8/2020**	**11/20/2020**	0.314
200379-031	**QUIN014**	**11/8/2020**	**11/20/2020**	0.367
200379-032	**QUIN015**	**11/8/2020**	**11/20/2020**	0.566
200379-033	**TYLER003**	**7/14/2020**	**11/20/2020**	0.087
Average Practical Quantitation Limit (PQL) ug/g				0.049
Limit of Detection (LOD) ug/g				0.012
NSS = No Sample Sent		**ND = Not Detected**		

Center for Environmental Sciences and Engineering
University of Connecticut
The Longley Building U-5210
270 Middle Turnpike, Rte. 44,
Storrs, CT 06269-5210

Fax # (860) 486-5488
Telephone # (860) 486-4015 Email: cesecustserv@uconn.edu Analysts: Sniega Stapcinskaite

UCONN - NRE
Order # 200379 Matrix: Tissue Contact:C. Sullivan Report Date: 12/8/2020
Reported by: C. Perkins

EPA Digestion Method #				245.6	
EPA Analysis Method #				245.6	
Metals	WET WEIGHT			CVAA	
Units				µg/g	
Prep date				11/30/20	
Analysis date				11/30/20	
LIM #	FIELD #	Collected	Received	Hg	% Solid
200379-034	AMOS011_Fillet	0914/20	11/20/2020	0.117	20.48
200379-035	MUDGE003_Fillet	9/15/2020	11/20/2020	0.155	20.17
200379-036	ASH007_Fillet	9/14/2020	11/20/2020	0.227	19.78
200379-037	LONG002_Fillet	9/15/2020	11/20/2020	0.167	20.35
200379-038	GORT003_Fillet	9/22/2020	11/20/2020	0.382	19.76
200379-039	GORT008_Fillet	9/22/2020	11/20/2020	0.607	20.50
200379-040	SAUG001_Fillet	9/23/2020	11/20/2020	1.033	20.46
200379-041	ROG004_Fillet	10/14/2020	11/20/2020	0.514	20.09
200379-042	CRYS002_Fillet	10/15/2020	11/20/2020	0.052	20.69
200379-043	CRYS009_Fillet	10/15/2020	11/20/2020	0.121	20.43
200379-044	SALT001_Fillet	10/17/2020	11/20/2020	0.092	20.44
200379-045	SALT006_Fillet	10/17/2020	11/20/2020	0.485	19.65
200379-046	CRYST001_Fillet	10/19/2020	11/20/2020	0.380	19.15
200379-047	CAN009_Fillet	10/19/2020	11/20/2020	0.287	19.10
200379-048	CAND005_Fillet	10/20/2020	11/20/2020	0.401	21.44
200379-049	WONO006_Fillet	10/26/2020	11/20/2020	0.127	20.52
200379-050	WARA001_Fillet	10/27/2020	11/20/2020	0.181	21.33
200379-051	QUAS001_Fillet	10/27/2020	11/20/2020	0.304	21.04
Average Practical Quantitation Limit (PQL) ug/g				0.015	
Limit of Detection (LOD) ug/g				0.004	

NSS = No Sample Sent	**ND = Not Detected**	

Note:

Center for Environmental Sciences and Engineering **Fax # (860) 486-5488** **UConn-NRE University of Connecticut Telephone # (860) 486-4015** **Order # 190511**
The Longley Building **Email: cesecustserv@uconn.edu** **Matrix: Tissue**
270 Middle Turnpike, Rte. 44, U-5210 **Analyst: Snieguole Stapanskaite** **Contact: Jason Vokoun Storrs, CT 06269-5210** **Report Date: 1/23/2020**
Reported by: C. Perkins

EPA Digestion Method # **245.6**
EPA Analysis Method # **245.6**

Metals				**CVAA**
Units				**µg/g (wet wt.)**
Prep date				12/29/19
Analysis date				12/29/19
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
190511-001	PATTA001	9/22/19	12/2/19	0.591
190511-002	PATTA002	9/22/19	12/2/19	0.238
190511-003	PATTA003	9/22/19	12/2/19	0.197
190511-004	PATTA004	9/22/19	12/2/19	0.413
190511-005	PATTA005	9/22/19	12/2/19	0.528
190511-006	PATTA006	9/22/19	12/2/19	0.828
190511-007	PATTA007	9/22/19	12/2/19	0.597
190511-008	PATTA008	9/22/19	12/2/19	0.464
190511-009	PATTA009	9/22/19	12/2/19	0.331
190511-010	PATTA010	9/22/19	12/2/19	0.885
190511-011	EAST001	11/16/19	12/2/19	0.626
190511-012	EAST002	11/16/19	12/2/19	0.264
190511-013	EAST003	11/16/19	12/2/19	0.724
190511-014	EAST004	11/16/19	12/2/19	0.292
190511-015	EAST005	11/16/19	12/2/19	0.316
190511-016	EAST006	11/16/19	12/2/19	0.176
190511-017	EAST007	11/16/19	12/2/19	0.453
190511-018	EAST008	11/16/19	12/2/19	0.865
190511-019	EAST009	11/16/19	12/2/19	0.370

190511-020	EAST010	11/16/19	12/2/19	0.375
Average Practical Quantitation Limit (PQL)				0.019
Limit of Detection (LOD)				0.005
NSS = No Sample Sent		**ND = Not Detected**		**NA = Not Applicable**

Note:

Center for Environmental Scienc es and Engineering Fax # (860) 486-5488 UConn-NRE Telephone # (860) 486-4015 Order # 190511 Email: cesecustserv@uconn.edu Matrix: Tissue
University of Connecticut -5210 Analyst: Snieguole Stapanskaite Contact: Jason Vokoun
The Longley Building Report Date: 1/23/2020 Reported by: C. Perkins
270 Middle Turnpike, Rte. 44, U
Storrs, CT 06269-5210

EPA Digestion Method #	**245.6**			
EPA Analysis Method #	**245.6**			
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g (wet wt.)**
Prep date				12/30/19
Analysis date				12/30/19
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
190511-021	MASH001	8/30/19	12/2/19	0.305
190511-022	MASH002	8/30/19	12/2/19	0.320
190511-023	MASH003	8/30/19	12/2/19	0.540
190511-024	MASH004	8/30/19	12/2/19	0.556
190511-025	MASH005	8/30/19	12/2/19	1.002
190511-026	MASH006	8/30/19	12/2/19	0.699
190511-027	MASH007	8/30/19	12/2/19	0.815
190511-028	SILVER001	9/8/19	12/2/19	0.126
190511-029	SILVER002	9/8/19	12/2/19	0.174
190511-030	SILVER003	9/8/19	12/2/19	0.183
190511-031	SILVER004	9/8/19	12/2/19	0.435
190511-032	SILVER005	9/8/19	12/2/19	0.286
190511-033	SILVER006	9/8/19	12/2/19	0.300
190511-034	SILVER007	9/8/19	12/2/19	0.825
190511-035	SILVER008	9/8/19	12/2/19	0.253
190511-036	SILVER009	9/8/19	12/2/19	0.240
190511-037	SILVER010	9/8/19	12/2/19	0.282
190511-038	SILVER011	9/8/19	12/2/19	0.088
190511-039	SILVER012	9/8/19	12/2/19	0.277
190511-040	MAM001	10/24/19	12/2/19	0.142

Average Practical Quantitation Limit (PQL)		0.028
Limit of Detection (LOD)		0.007
NSS = No Sample Sent	**ND = Not Detected**	**NA = Not Applicable**

Note:

Center for Environmental Scienc es and Engineering Fax # (860) 486-5488 UConn-NRE Telephone # (860) 486-4015 Order # 190511 Email: cesecustserv@uconn.edu Matrix: Tissue
University of Connecticut -5210 Analyst: Snieguole Stapanskaite Contact: Jason Vokoun
The Longley Building Report Date: 1/23/2020 Reported by: C. Perkins
270 Middle Turnpike, Rte. 44, U
Storrs, CT 06269-5210

EPA Digestion Method #	**245.6**			
EPA Analysis Method #	**245.6**			
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g (wet wt.)**
Prep date				12/31/19
Analysis date				12/31/19
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
190511-041	MAM002	10/24/19	12/2/19	0.283
190511-042	MAM003	10/24/19	12/2/19	0.268
190511-043	MAM004	10/24/19	12/2/19	0.663
190511-044	MAM005	10/24/19	12/2/19	0.258
190511-045	MAM006	10/24/19	12/2/19	0.251
190511-046	MAM007	10/24/19	12/2/19	0.609
190511-047	MAM008	10/24/19	12/2/19	0.115
190511-048	MAM009	10/24/19	12/2/19	0.214
190511-049	MAM010	10/24/19	12/2/19	0.196
190511-050	MAM011	10/24/19	12/2/19	0.143
190511-051	MAM012	10/24/19	12/2/19	0.119
190511-052	BAT001	10/8/19	12/2/19	0.198
190511-053	BAT002	10/8/19	12/2/19	0.134
190511-054	BAT003	10/8/19	12/2/19	0.051
190511-055	BAT004	10/8/19	12/2/19	0.114
190511-056	BAT005	10/8/19	12/2/19	0.604
190511-057	BAT006	10/8/19	12/2/19	0.052
190511-058	BAT007	10/8/19	12/2/19	0.129
190511-059	BAT008	10/8/19	12/2/19	0.123
190511-060	BAT009	10/8/19	12/2/19	0.557

Average Practical Quantitation Limit (PQL)	0.019
Limit of Detection (LOD)	0.005
NSS = No Sample Sent **ND = Not Detected**	**NA = Not Applicable**

Note:

Center for Environmental Science University of Connecticut The Longley Building 270 Middle Turnpike, Rte. 44, U Storrs, CT 06269-5210	es and Engineering Fax # (860) 486-5488 -5210 Analyst: Snieguole Stapanskaite Report Date: 1/23/2020 Reported by: C. Perkins	UConn-NRE Telephone # (860) 486-4015 Contact: Jason Vokoun	Order # 190511 Email: cesecustserv@uconn.edu	Matrix: Tissue
EPA Digestion Method # EPA Analysis Method #	245.6 245.6			
Metals Units Prep date Analysis date	WET WEIGHT			CVAA µg/g (wet wt.) 1/2/20 1/2/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
190511-061	BAT010	10/8/19	12/2/19	0.247
190511-062	BAT011	10/8/19	12/2/19	0.167
190511-063	BAT012	10/8/19	12/2/19	0.056
190511-064	BAT013	10/8/19	12/2/19	0.044
190511-065	BAT014	10/8/19	12/2/19	0.085
190511-066	BILL001	10/15/19	12/2/19	0.520
190511-067	BILL002	10/15/19	12/2/19	0.410
190511-068	BILL003	10/15/19	12/2/19	0.904
190511-069	BILL004	10/15/19	12/2/19	0.857
190511-070	BILL005	10/15/19	12/2/19	0.315
190511-071	BILL006	10/15/19	12/2/19	1.202
190511-072	BILL007	10/15/19	12/2/19	1.067
190511-073	BILL008	10/15/19	12/2/19	0.468
190511-074	BILL009	10/15/19	12/2/19	0.502
190511-075	BILL010	10/15/19	12/2/19	0.509
190511-076	BILL011	10/15/19	12/2/19	0.547
190511-077	BILL012	10/15/19	12/2/19	0.240
190511-078	BILL013	10/15/19	12/2/19	0.388
190511-079	BILL014	10/15/19	12/2/19	0.335

190511-080	COV001	9/14/19	12/2/19	0.175
Average Practical Quantitation Limit (PQL)				0.022
Limit of Detection (LOD)				0.005
NSS = No Sample Sent		**ND = Not Detected**		**NA = Not Applicable**

Note:

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UConn-NRE Telephone # (860) 486-4015 Order # 190511 Email: cesecustserv@uconn.edu Matrix: Tissue
University of Connecticut -5210 Analyst: Snieguole Stapanskaite Contact: Jason Vokoun
The Longley Building Report Date: 1/23/2020 Reported by: C. Perkins
270 Middle Turnpike, Rte. 44, U
Storrs, CT 06269-5210

EPA Digestion Method #	**245.6**			
EPA Analysis Method #	**245.6**			
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g (wet wt.)**
Prep date				1/6/20
Analysis date				1/6/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
190511-081	COV002	9/14/19	12/2/19	0.153
190511-082	COV003	9/14/19	12/2/19	0.144
190511-083	COV004	9/14/19	12/2/19	0.275
190511-084	COV005	9/14/19	12/2/19	0.141
190511-085	COV006	9/14/19	12/2/19	0.238
190511-086	COV007	9/14/19	12/2/19	0.220
190511-087	COV008	9/14/19	12/2/19	0.336
190511-088	BEACH001	9/15/19	12/2/19	0.552
190511-089	BEACH002	9/15/19	12/2/19	0.583
190511-090	BEACH003	9/15/19	12/2/19	0.878
190511-091	BEACH004	9/15/19	12/2/19	0.660
190511-092	BEACH005	9/15/19	12/2/19	0.608
190511-093	BEACH006	9/15/19	12/2/19	0.821
190511-094	BEACH007	9/15/19	12/2/19	0.640
190511-095	BEACH008	9/15/19	12/2/19	1.460
190511-096	BEACH009	9/15/19	12/2/19	0.587
190511-097	BEACH010	9/15/19	12/2/19	0.912
190511-098	BEACH011	9/15/19	12/2/19	0.379
190511-099	BASH001	10/22/19	12/2/19	0.800
190511-100	BASH002	10/22/19	12/2/19	0.269

Average Practical Quantitation Limit (PQL)		0.022
Limit of Detection (LOD)		0.006
NSS = No Sample Sent	**ND = Not Detected**	**NA = Not Applicable**

Note:

Center for Environmental Scienc es and Engineering Fax # (860) 486-5488 UConn-NRE Telephone # (860) 486-4015 Order # 190511 Email: cesecustserv@uconn.edu Matrix: Tissue
University of Connecticut -5210 Analyst: Snieguole Stapanskaite Contact: Jason Vokoun
The Longley Building Report Date: 1/23/2020 Reported by: C. Perkins
270 Middle Turnpike, Rte. 44, U
Storrs, CT 06269-5210

EPA Digestion Method # **245.6**
EPA Analysis Method # **245.6**

Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g (wet wt.)**
Prep date				1/7/20
Analysis date				1/7/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
190511-101	BASH003	10/22/19	12/2/19	0.685
190511-102	BASH004	10/22/19	12/2/19	0.890
190511-103	BASH005	10/22/19	12/2/19	0.532
190511-104	BASH006	10/22/19	12/2/19	0.723
190511-105	BASH007	10/22/19	12/2/19	0.370
190511-106	BASH008	10/22/19	12/2/19	0.397
190511-107	BASH009	10/22/19	12/2/19	1.069
190511-108	BASH010	10/22/19	12/2/19	1.513
190511-109	BASH011	10/22/19	12/2/19	0.633
190511-110	BASH012	10/22/19	12/2/19	0.235
190511-111	BASH013	10/22/19	12/2/19	0.274
190511-112	BASH014	10/22/19	12/2/19	0.216
190511-113	BALL001	10/21/19	12/2/19	0.262
190511-114	BALL002	10/21/19	12/2/19	0.283
190511-115	BALL003	10/21/19	12/2/19	0.126
190511-116	BALL004	10/21/19	12/2/19	0.213
190511-117	BALL005	10/21/19	12/2/19	0.337
190511-118	BALL006	10/21/19	12/2/19	0.296
190511-119	BALL007	10/21/19	12/2/19	0.158
190511-120	BALL008	10/21/19	12/2/19	0.105

Average Practical Quantitation Limit (PQL)		0.020
Limit of Detection (LOD)		0.005
NSS = No Sample Sent	**ND = Not Detected**	**NA = Not Applicable**

Note:

Center for Environmental Sciences and Engineering Fax # (860) 486-5488 UConn-NRE Telephone # (860) 486-4015 Order # 190511 Email: cesecustserv@uconn.edu Matrix: Tissue
University of Connecticut -5210 Analyst: Snieguole Stapanskaite Contact: Jason Vokoun
The Longley Building Report Date: 1/23/2020 Reported by: C. Perkins
270 Middle Turnpike, Rte. 44, U
Storrs, CT 06269-5210

EPA Digestion Method #	**245.6**			
EPA Analysis Method #	**245.6**			
Metals	**WET WEIGHT**			**CVAA**
Units				**µg/g (wet wt.)**
Prep date				1/10/20
Analysis date				1/10/20
LIM #	**FIELD #**	**Collected**	**Received**	**Hg**
190511-121	BALL009	10/21/19	12/2/19	0.26
190511-122	BALL010	10/21/19	12/2/19	0.28
190511-123	BALL011	10/21/19	12/2/19	0.45
190511-124	BALL012	10/21/19	12/2/19	0.07
190511-125	BALL013	10/21/19	12/2/19	0.36
190511-126	BALL014	10/21/19	12/2/19	0.06
190511-127	BALL015	10/21/19	12/2/19	0.06
190511-128	QUADD001	9/21/19	12/2/19	0.76
190511-129	QUADD002	9/21/19	12/2/19	0.45
190511-130	QUADD003	9/21/19	12/2/19	0.82
190511-131	QUADD004	9/21/19	12/2/19	0.41
190511-132	QUADD005	9/21/19	12/2/19	1.11
190511-133	QUADD006	9/21/19	12/2/19	0.47
190511-134	QUADD007	9/21/19	12/2/19	1.25
190511-135	QUADD008	9/21/19	12/2/19	0.79
190511-136	QUADD009	9/21/19	12/2/19	0.92
190511-137	QUADD010	9/21/19	12/2/19	0.82
190511-138	QUADD011	9/21/19	12/2/19	0.58
190511-139	COV009	9/18/19	12/2/19	0.13
190511-140	COV010	9/18/19	12/2/19	0.04

190511-141	COV011	9/18/19	12/2/19	0.49
190511-142	MASH008	9/26/19	12/2/19	0.37
190511-143	MASH009	9/26/19	12/2/19	0.60
190511-144	MASH010	9/26/19	12/2/19	0.26
190511-145	MASH011	9/26/19	12/2/19	0.54
190511-146	MASH012	9/26/19	12/2/19	0.14
190511-147	MASH013	9/26/19	12/2/19	0.19
Average Practical Quantitation Limit (PQL)				0.023
Limit of Detection (LOD)				0.006
NSS = No Sample Sent		**ND = Not Detected**		**NA = Not Applicable**

Note:

Center for Environmental Sciences and Engineering
University of Connecticut
The Longley Building
270 Middle Turnpike, Rte. 44, U-5210
Storrs, CT 06269-5210

Fax # (860) 486-5488
Telephone # (860) 486-4015 Email: cesecustserv@uconn.edu Analyst: Snieguole Stapanskaite

UConn-NRE Order # 190523 Matrix: Tissue
Contact: Jason Vokoun
Report Date: 1/23/2020
Reported by: C. Perkins

EPA Digestion Method #					**245.6**
EPA Analysis Method #				**ILM3.0**	**245.6**
Metals					**CVAA**
Units				**%**	**µg/g (wet wt.)**
Prep date				1/16/2020	1/13/20
Analysis date				1/17/2020	1/13/20
LIM #	**FIELD #**	**Collected**	**Received**	**% Solids**	**Hg**
190523-001	SILVER 001_Fillet	9/8/19	12/17/19	21.04	0.13
190523-002	SILVER 004_Fillet	9/8/19	12/17/19	19.22	0.46
190523-003	COV004_Fillet	9/14/19	12/17/19	20.18	0.21
190523-004	BEACH011_Fillet	9/15/19	12/17/19	20.95	0.40
190523-005	QUADD001_Fillet	9/21/19	12/17/19	20.60	0.73
190523-006	PATTA003_Fillet	9/22/19	12/17/19	20.40	0.23
190523-007	BAT014_Fillet	10/8/19	12/17/19	20.36	0.07
190523-008	BILL005_Fillet	10/15/19	12/17/19	20.39	0.30
190523-009	BALL006_Fillet	10/21/19	12/17/19	20.40	0.30
190523-010	BASH002_Fillet	10/22/19	12/17/19	20.44	0.26
190523-011	MAM008_Fillet	10/24/19	12/17/19	20.07	0.13
190523-012	EAST003_Fillet	11/6/19	12/17/19	22.37	0.66
Average Practical Quantitation Limit (PQL)					0.016
Limit of Detection (LOD)					0.004
NSS = No Sample Sent		**ND = Not Detected**			**NA = Not Applicable**