



Coastal Rivers Invertebrate Analysis FINAL REPORT

Agreement No. 14MA0000004 TWA No. 15TW0000044



To: Southwest Florida Water Management District

Brooksville, Florida

Date June 2016

From: Amec Foster Wheeler Environment & Infrastructure, Inc.

Project #: 600308.7

COASTAL RIVERS INVERTEBRATE ANALYSIS FINAL REPORT

Prepared for

Southwest Florida Water Management District Brooksville, Florida



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TABLE OF CONTENTS

	UTIVE SUMMARY	
1.0	INTRODUCTION	4
	Benthic Macroinvertebrates and their Environment	
1.2	Study Area	5
2.0	METHODS	15
2.1	Field Monitoring Component – Sample Collection Methodology	15
	Physical and Chemical SamplingQuantitative Benthic Macroinvertebrate Sampling from Various Habitats	15 15
2.2	Laboratory Component – Sample Processing and Analysis Methodology	15
2.3	Data Analyses	16
3. 0	Biological Metrics Univariate Analysis Multivariate Analysis RESULTS	17 18
3.1	Comparisons among Rivers	20
	Abiotic Factors Invertebrate Community Structure Habitats Correlations between the Biological Community and Abiotic Factors Longitudinal Patterns Comparison to Previous Studies	28 36 40 41
3.2	Comparisons within Rivers	42
3.3	Chassahowitzka	42
	Abiotic Factors Habitats Waterbody Type Longitudinal Patterns Correlations between the Biological Community and Abiotic Factors Comparison to Previous Studies	42 47 49
3.4	Homosassa	59
	Abiotic Factors Habitats Waterbody Type Longitudinal Patterns Correlations between the Biological Community and Abiotic Factors Comparison to Previous Studies	59 63 66
3.5	Weeki Wachee	77
	Abiotic Factors	77
	Habitats	
	Waterbody TypeLongitudinal Patterns	

		Correlations between the Biological Community and Abiotic Factors92 Comparison to Previous Studies95
3.6	Compa	arisons among Springs95
		Correlations between the Biological Community and Abiotic Factors95 Correlations between the Invertebrate Grazer Community and Abiotic Factors among Spring Zones
4.0 5.0		SSION AND CONCLUSIONS106 RENCES112
		LIST OF TABLES
Table 1	l -	Number of Samples Collected in Available Habitats per Zone
Table 2	2 -	Descriptive Summary Statistic Results for Chassahowitzka River
Table 3	3 -	Descriptive Summary Statistic Results for Homosassa River
Table 4	1 -	Descriptive Summary Statistic Results for Weeki Wachee River
Table 5	5 -	Descriptive Summary Statistic Results for All Springs Zones
Table 6	3 -	Descriptive Summary Statistic Results for All River Zones
Table 7	7 -	Descriptive Summary Statistic Results for All Tributary Zones
Table 8	3 -	Comparison of Hydrologic Conditions across All Rivers
Table 9) -	Percent and Cumulative Percent of Variation Explained by Principal Coordinates
Table 1	10 -	Correlations of Water-Quality and Environmental Parameters for each Principal Coordinate
Table 1	l1 -	Dominant 15 Taxa in Each River System
Table 1	12 -	Descriptive Summary Statistic of Biological Metrics Results for Chassahowitzka River
Table 1	13 -	Descriptive Summary Statistic of Biological Metrics Results for Homosassa River
Table 1	14 -	Descriptive Summary Statistic of Biological Metrics Results for Weeki Wachee River
Table 1	15 -	Descriptive Summary Statistic of Biological Metrics Results for All Springs Zones
Table 1	16 -	Descriptive Summary Statistic of Biological Metrics Results for All River Zones
Table 1	17 -	Descriptive Summary Statistic of Biological Metrics Results for All Tributary Zones
Table 1	18 -	ANOSIM Results for all Samples with River System as the Factor
Table 1	19 -	Spearman's Rank Correlation Results for Biological Metrics and Abiotic Factors for All Systems
Table 2	20 -	ANOSIM Results for all Samples with Habitat Type as the Factor
Table 2	21 -	Dominant 15 Taxa in Each Habitat
Table 2	22 -	Significant Spearman's Rank Correlation Results for Percent of Major Taxonomic Groups per Zone and Water Quality for All Systems
Table 2	23 -	ANOSIM Results for all Samples with Waterbody Area as the Factor
Table 2	24 -	ANOSIM Results for the Chassahowitzka River Samples with Habitat Type as the Factor

Table 25 -	Chassahowitzka River SIMPER Results for Significant Pairwise Comparisons between Habitat Types
Table 26 -	ANOSIM Results for Chassahowitzka with Waterbody Type as the Factor
Table 27 -	Chassahowitzka River SIMPER Results for Significant Pairwise Comparisons between Waterbody Types
Table 28 -	ANOSIM Results for Chassahowitzka with Waterbody Area as the Factor
Table 29 -	Chassahowitzka River SIMPER Results for Significant Pairwise Comparisons between Waterbody Areas
Table 30 -	ANOSIM Results for Homosassa with Habitat Type as the Factor
Table 31 -	Homosassa River SIMPER Results for Significant Pairwise Comparisons between Habitat Types
Table 32 -	ANOSIM Results for Homosassa with Waterbody Type as the Factor
Table 33 -	Homosassa River SIMPER Results for Significant Pairwise Comparisons between Waterbody Types
Table 34 -	ANOSIM Results for Homosassa with Waterbody Area as the Factor
Table 35 -	Homosassa River SIMPER Results for Significant Pairwise Comparisons between Waterbody Areas
Table 36 -	ANOSIM Results for Weeki Wachee with Habitat Type as the Factor
Table 37 -	Weeki Wachee River SIMPER Results for Significant Pairwise Comparisons between Habitat Types
Table 38 -	ANOSIM Results for Weeki Wachee with Waterbody Type as the Factor
Table 39 -	Weeki Wachee River SIMPER Results for Significant Pairwise Comparisons between Waterbody Types
Table 40 -	ANOSIM Results for Weeki Wachee with Waterbody Area as the Factor
Table 41 -	Weeki Wachee River SIMPER Results for Significant Pairwise Comparisons between Waterbody Areas
Table 42 -	Percent and Cumulative Percent of Variation Explained by Principal Coordinates
Table 43 -	Correlations of Water Quality and Environmental Parameters for each Principal Coordinate for Springs Zones
Table 44 -	ANOSIM Results for Browser-Grazer Invertebrate Samples from Spring Zones in all Systems
Table 45 -	SIMPER Results for Significant Pairwise Comparisons between Systems for Browser-Grazer Samples from Spring Zones

	LIST OF FIGURES
Figure 1 -	Overall Project Location Map
Figure 2 -	Chassahowitzka River Sample Zones Map
Figure 3 -	Homosassa River Sample Zones Map
Figure 4 -	Weeki Wachee River Sample Zones Map
Figure 5a -	Example of Habitat Variability of Zone Areas Zone ID: CHA-R-1–Chassahowitzka River Upstream
Figure 5b -	Example of Habitat Variability of Zone Areas Zone ID: HOM-R-1 – Homosassa River Upstream

Figure 5c -	Example of Habitat Variability of Zone Areas Zone ID: WEE-R-1- Weeki Wachee
	Upstream

- Figure 6 30-Day Antecedent Stage and Discharge in Chassahowitzka River (USGS Station 2310663)
- Figure 7 30-Day Antecedent Stage and Discharge in Homosassa River (USGS Station 2310700)
- Figure 8 30-Day Antecedent Stage and Discharge in Weeki Wachee River (USGS Station 2310500 and 2310525)
- Figure 9 PCA results for Environmental and Water-Quality Parameters from all River Systems
- Figure 10 CLUSTER and SIMPROF results for samples averaged by River System
- Figure 11 nMDS for all Samples with River System as the Factor
- Figure 12 nMDS for all Samples with Habitat Type as the Factor
- Figure 13 nMDS for all Samples with Waterbody Area as the Factor
- Figure 14 Percent Composition of Organisms from Major Taxa Groups by Habitat Type within the Chassahowitzka River
- Figure 15 Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Chassahowitzka River
- Figure 16 nMDS for the Chassahowitzka River Samples with Habitat Type as the Factor
- Figure 17 nMDS for Chassahowitzka with Waterbody Type as the Factor
- Figure 18 Percent Composition of Organisms from each Functional Feeding Group by Waterbody Type within the Chassahowitzka River
- Figure 19 Average Abundance of Organisms by River Zone in the Chassahowitzka River
- Figure 20 Total Species Richness by River Zone in the Chassahowitzka River
- Figure 21 Average Shannon's Diversity Index by River Zone for the Chassahowitzka River
- Figure 22 Spatial Distribution of Selected Average Biological Metrics per Zone in the Chassahowitzka River
- Figure 23 Percent Composition of Organisms from Major Taxa Groups by River Zone in the Chassahowitzka River
- Figure 24 Percent Composition of Organisms from each Functional Feeding Group by River Zone within the Chassahowitzka River
- Figure 25 nMDS Plot for Chassahowitzka with Waterbody Area as the Factor
- Figure 26a Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of River Zones within the Chassahowitzka River
- Figure 26b Bubble Plot of Conductivity (μS/cm) Values Superimposed on the nMDS Plot of River Zones within the Chassahowitzka River
- Figure 26c Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS Plot of River Zones within the Chassahowitzka River
- Figure 27 Percent Composition of Organisms from Major Taxa Groups by Habitat Type within the Homosassa River
- Figure 28 Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Homosassa River
- Figure 29 Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Halls River

Figure 30 -	nMDS for Homosassa with Habitat Type as the Factor
Figure 31 -	nMDS for Homosassa with Waterbody Type as the Factor
Figure 32 -	Percent Composition of Organisms from each Functional Feeding Group by Waterbody Type within the Homosassa River
Figure 33 -	Average Abundance of Organisms by River Zone in the Homosassa River
Figure 34 -	Total Species Richness by River Zone in the Homosassa River
Figure 35 -	Average Shannon's Diversity Index by River Zone for the Homosassa River
Figure 36 -	Spatial Distribution of Selected Average Biological Metrics per Zone in the Homosassa River
Figure 37 -	Percent Composition of Organisms from Major Taxa Groups by River Zone in the Homosassa River
Figure 38 -	Percent Composition of Organisms from each Functional Feeding Group by River Zone within the Homosassa River
Figure 39 -	nMDS Plot for Homosassa with Waterbody Area as the Factor
Figure 40a -	Bubble Plot of Depth of Sample (m) Values Superimposed on the nMDS plot of River Zones within the Homosassa River
Figure 40b -	Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS plot of River Zones within the Homosassa River Zones within the Homosassa River
Figure 40c -	Bubble Plot of Canopy Cover (%) Values Superimposed on the nMDS plot of River Zones within the Homosassa River
Figure 40d -	Bubble Plot of Distance from Spring (km) Values Superimposed on the nMDS plot of River Zones within the Homosassa River
Figure 41 -	Percent Composition of Organisms from Major Taxa Groups by Habitat Type within the Weeki Wachee River
Figure 42 -	Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Weeki Wachee River
Figure 43 -	nMDS for Weeki Wachee with Habitat Type as the Factor
Figure 44 -	nMDS for Weeki Wachee with Waterbody Type as the Factor
Figure 45 -	Percent Compositions of Organisms from Major Taxa Groups by Waterbody Type in the Weeki Wachee River
Figure 46 -	Percent Composition of Organisms from each Functional Feeding Group by Waterbody Type within the Weeki Wachee River
Figure 47 -	Average Abundance of Organisms by River Zone in the Weeki Wachee River
Figure 48 -	Total Species Richness by River Zone in the Weeki Wachee River
Figure 49 -	Average Shannon's Diversity Index by River Zone in the Weeki Wachee River
Figure 50 -	Spatial Distribution of Selected Average Biological Metrics per Zone in the Weeki Wachee River
Figure 51 -	Percent Composition of Organisms from Major Taxa Groups by River Zone in the

Percent Composition of Organisms from each Functional Feeding Group by

nMDS Plot for Weeki Wachee with Waterbody Area as the Factor

Figure 52 -

Figure 53 -

Weeki Wachee River

River Zone within the Weeki Wachee River

- Figure 54a Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River
- Figure 54b Bubble Plot of pH Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River
- Figure 54c Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River
- Figure 54d Bubble Plot of Canopy Cover (%) Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River
- Figure 55 PCA Results for Environmental and Water Quality Parameters from all Springs Zones
- Figure 56a Bubble Plot of Depth of Sample (m) Values Superimposed on the nMDS Plot of Spring Zones for all Systems
- Figure 56b Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of Spring Zones for all Systems
- Figure 56c Bubble Plot of Conductivity (μS/cm) Values Superimposed on the nMDS Plot of Spring Zones for all Systems
- Figure 56d Bubble Plot of pH Values Superimposed on the nMDS Plot of Spring Zones for all Systems
- Figure 56e Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS Plot of Spring Zones for all Systems
- Figure 57 nMDS Plot of Browser-Grazer Invertebrate Samples from Spring Zones in all Systems
- Figure 58a Bubble Plot of Depth of Sample (m) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems
- Figure 58b Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems
- Figure 58c Bubble Plot of Salinity (ppt) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems
- Figure 58d Bubble Plot of pH Values Superimposed on the nMDS

 Plot of Browser-Grazer Samples from Spring Zones in all Systems
- Figure 58e Bubble Plot of Canopy Cover (%) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems

LIST OF APPENDICES

Appendix A - Physicochemical Data and Selected Analysis Results

- Table A-1 Physicochemical Data
- Figure A-1 Monthly Median Discharge Time Series Plot for Chassahowitzka River
- Figure A-2 Monthly Median Discharge Time Series Plot for Homosassa River
- Figure A-3 Monthly Median Discharge Time Series Plot for Weeki Wachee River
- Figure A-4 Monthly Median Specific Conductance (Maxima) Time Series Plot for Chassahowitzka River
- Figure A-5 Monthly Median Specific Conductance (Maxima) Time Series Plot for Homosassa River

- Figure A-6 Monthly Median Specific Conductance (Maxima) Time Series Plot for Weeki Wachee River
- Figure A-7 Correlations between Monthly Median Discharge and Monthly Median Specific Conductance (Maxima) for Chassahowitzka River
- Figure A-8 Correlations between Monthly Median Discharge and Monthly Median Specific Conductance (Maxima) for Homosassa River
- Figure A-9 Correlations between Monthly Median Discharge and Monthly Median Specific Conductance (Maxima) for Weeki Wachee River

Appendix B - Macroinvertebrate Data and Taxa Lists

- Table B-1 Chassahowitzka River Macroinvertebrate Data
- Table B-2 Homosassa River Macroinvertebrate Data
- Table B-3 Weeki Wachee River Macroinvertebrate Data
- Table B-4 Chassahowitzka River Macroinvertebrate Taxa List
- Table B-5 Homosassa River Macroinvertebrate Taxa List
- Table B-6 Weeki Wachee River Macroinvertebrate Taxa List
- Table B-7 All Systems Macroinvertebrate Diversity Data

Appendix C - Raw Statistical Output

- Table C-1 All Zones from all River Systems Pooled Raw Correlation Matrix Results
- Table C-2 Chassahowitzka River System Pooled Zones Raw Correlation Matrix Results
- Table C-3 Homosassa River System Pooled Zones Raw Correlation Matrix Results
- Table C-4 Weeki Wachee River System Pooled Zones Raw Correlation Matrix Results
- Table C-5 Springs Only Zones from all Systems Pooled Raw Correlation Matrix Results

Appendix D - Correlation Matrix Tables

- Table D-1 Chassahowitzka River System Pooled Zones Correlation Matrix Data
- Table D-2 Homosassa River System Pooled Zones Correlation Matrix Data
- Table D-3 Weeki Wachee River System Pooled Zones Correlation Matrix Data

EXECUTIVE SUMMARY

The Southwest Florida Water Management District (SWFWMD or District) contracted Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) to characterize the spatial variability of the benthic macroinvertebrate community abundance and distribution within three first magnitude coastal spring-fed rivers, the Homosassa, Chassahowitzka, and Weeki Wachee Rivers. The overall objective of this project was to characterize the spatial variability of the benthic macroinvertebrate community abundance and distribution within each coastal spring-fed river. The benthic communities were assessed and compared across physicochemical gradients and among habitat types in various areas within the mainstem of the rivers along with their associated head spring areas, spring runs, and tributaries. Macroinvertebrate community composition is a widely used tool to assess waterbody health and can aid in the determination of departures from biological integrity or changes in natural and unnatural stressors over time. Thus, the results from this study will 1) assist the District in understanding the complex and unique issues and drivers affecting the selected waterbodies, and 2) will be integrated into the upcoming Surface Water Improvement and Management (SWIM) Plans, which will provide a path forward for protection, restoration and management of these important ecosystems.

Based on site reconnaissance and the results of previous studies, Amec Foster Wheeler identified different kinds of sampling zones within each of the three spring-fed coastal river systems to assure that a full spectrum of system conditions were sampled. River systems, spring head areas, and associated tributaries from upstream to the salt marsh and/or tidal zone were evaluated. The existing habitats, salinity gradient, and any other obvious changes in the river (i.e. inflow from major tributary) were used to define the zones within each river section.

Amec Foster Wheeler collected samples during one physicochemical and biological event in each spring-fed system. The monitoring program established 32 sampling locations (zones) within the three river systems (13 in Chassahowitzka, 12 in Homosassa, and 7 in Weeki Wachee). Habitats that were observed in the three river systems included submerged aquatic vegetation (SAV), benthic macroalgal mats, snags/woody debris, rock/limestone outcropping and sediments. Equipment used during the field sampling effort including the petite ponar and D-frame dipnet, the choice of which depended on site conditions (depth, habitat type, etc.). A total of 105 macroinvertebrate samples were collected from the various habitats.

The collected physicochemical parameters included sample depth, canopy cover over the stream channel, water temperature, salinity, specific conductance, pH, dissolved oxygen, and turbidity. In addition, the last ten years of continuous specific conductance, discharge, and stage data were obtained from the USGS. Univariate and multivariate statistical analyses were conducted on the physicochemical and biological datasets to investigate associations between abiotic factors and the biological community between and among river systems, water body types, habitat, and longitudinal gradients.

The results of the study show that certain abiotic factors and invertebrate community structure within Weeki Wachee River were significantly different than the Chassahowitzka and Homosassa Rivers. However, richness and diversity indices were similar between the rivers. This result is comparable to previous studies within these systems. The tidal influences that occurred in Chassahowitzka and Homosassa River are likely driving factors controlling the distribution of the macroinvertebrate communities. In addition, the results show that there is a difference in the invertebrate community within different habitats. The diversity of habitat types was found to be an important component supporting species richness, and influencing the composition and abundance of invertebrate communities within these systems.

Longitudinal trends in the invertebrate community and in certain physicochemical factors were observed in the three river systems. Aside from the linear trends found along the longitudinal gradient, parabolic shaped distributions were also sometimes seen where, for example, lower species richness occurred in the headspring areas, followed by an increase in the upper-middle portion of the river, and then a sharp decrease further downstream in the lower river reaches. The sharp downstream decrease in species richness suggests a threshold shift in the macroinvertebrate community, likely driven by some combination of physicochemical and biological interactions. These kinds of distributions are indicative of coastal river systems in Florida, where biological communities have to adapt to dynamic shifts in environmental conditions. Longitudinal sampling of macroinvertebrate communities over time could be used to track the position and extent of each transitional zone to guide adaptive tactics for stream protection and restoration.

A comparison of the biological community within spring, river and tributary samples showed no significant differences when data from all three river systems were pooled. However, mean species richness indices were significantly lower in the tributaries than in the river. When the comparisons were made for the individual systems, differences between the spring, river, and tributary samples were apparent.

The various grazer invertebrate communities were evaluated in just the springs zones. The grazer invertebrate community, which was dominated by crustaceans, was found to be significantly different in Weeki Wachee spring as compared to the communities from Chassahowitzka and Homosassa springs. Chassahowitzka springs samples had the greatest number of different grazer taxa as compared to Homosassa springs and to Weeki Wachee spring. The decapod shrimp, *Palaemonetes* spp. genus, which was commonly found in Weeki Wachee spring can tolerate low dissolved oxygen levels (Li and Brouwer, 2007). Naturally low dissolved oxygen levels are common to many springs, thus further evaluation may be merited to determine if this grazer genus and other invertebrates have the ability to reduce macroalgal coverage in springs, an issue of some significant interest to restoration.

Positive correlations were found between canopy cover, dissolved oxygen, and species richness indices of the grazer community in the springs zones. Negative correlations between salinity and abundance of grazers in the springs zone were also found to be significant. Therefore, canopy cover, dissolved oxygen, and salinity are important abiotic factors that could be influencing the grazer invertebrate community in these springs. Future monitoring studies targeting the collection of invertebrate grazers in springs, and comparisons with algal biomass and abiotic factors, would help reinforce these complex interactions.

When examined individually, each river exhibited well-defined zones differing in physicochemical characteristics and benthic communities. The Weeki Wachee River has a freshwater upper riverine zone that was unique to the study. For example, pH, DO, and canopy cover were all greater in the river zones versus the spring zone. The Chassahowitzka and Homossassa River systems each have spring zones, upper river, lower river, and tributary zones. This does not mean these zone descriptions should be viewed as interchangeable between the rivers. However, some commonalities suggest an overall restoration strategy by which certain zones can be identified where the benthic communities could be sustained or restored by selective activities tailored to each zone.

Overall species richness and diversity indices found in the current study were comparable to those found in previous studies within these systems and other similar systems. Previous and current stressors that affect these systems include drought and ground water pumping, which can affect

freshwater flow from the springs. Canals and incompletely treated stormwater and wastewater can adversely affect macroinvertebrate communities with organic pollutants and sedimentation. All three rivers indicated that snags (large woody debris) and SAV provide beneficial habitat, supporting significant biodiversity of macroinvertebrates in the upper river zones. The value of these habitats decrease in the lower river zones, suggesting prioritization of maintaining and increasing snag densities and SAV cover in the upper river zones. Some tributaries also warrant prioritization of snag management. Sea level rise may further complicate the hydrology and ecology of these systems by changing the extent and magnitude of the tidal influence and subsequent salinity regimes. If these regimes shift the transition zones over time, priority restoration and protection areas can be adjusted accordingly.

Based on the results of the study, the following management, protection and restoration alternatives were provided as recommendations for the three river systems:

- Enhance the diversity of available habitats to increase the biodiversity of the macroinvertebrate community. Enhancement of habitat diversity can be accomplished with 1) removal of organic sediments, 2) planting native SAV, 3) add snag/woody debris to certain areas, 4) prevent or reduce de-snagging activities, 5) manage boat traffic and the types of recreation allowed in certain areas to reduce damage to sensitive habitats if warranted (especially SAV habitat).
- Address potentially adverse effects of canals on mainstem and tributary zone benthic communities, especially those related to turbidity, sedimentation, and nutrient enrichment. Reduce pollutant loads from canals as warranted.
- Sustain or increase spring flow and other clean freshwater discharge volumes to mitigate salt-water intrusion into the upper river and spring zones.
- Canopy cover routinely was associated with benthic diversity. Consider this association when assessing potential buffer restoration activities along denuded shorelines.
- Continue biological monitoring to evaluate seasonal and inter-annual variability, and to examine long-term trends and transitional zone changes in relation to species richness and biodiversity over time.

1.0 <u>INTRODUCTION</u>

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) was contracted by the District to conduct benthic monitoring of three first magnitude (greater than 100 cubic feet per second in discharge) coastal spring-fed rivers, the Homosassa, Chassahowitzka, and Weeki Wachee Rivers. Overall, benthic monitoring was performed to characterize the spatial variability of the benthic macroinvertebrate community abundance and distribution within each coastal spring-fed river, and to assess the benthic communities across physicochemical gradients and across habitat types in various areas within the mainstem of the rivers along with headspring areas, at the spring runs, and at the tributaries associated with the main rivers. In addition, characterization of the macroinvertebrate community composition (i.e. abundance) and distribution data can be used to assess current ecological conditions, and to compare historical and future conditions in these spring influenced coastal ecosystems.

In 2014, the District acknowledged the need to place additional emphasis on the restoration, protection, and management of these three spring-fed rivers. Thus the District designated these three spring-fed river systems as Surface Water Improvement and Management (SWIM) priority waterbodies. This effort will assist the District in understanding the complex and unique issues and drivers affecting the selected waterbodies. In addition, the knowledge gained throughout this study will be integrated into the upcoming SWIM Plans, which will provide both a baseline and path forward for protection, restoration and management of these important ecosystems.

1.1 Benthic Macroinvertebrates and their Environment

The aquatic biota (e.g. fish, insects, algae, and plants) are continuously exposed to their habitat stressors, and as such provide direct information about the ecosystem's health. Water chemistry measurements alone are like a "snapshot", because it can only provide information on the waterbody's health at the time of sampling and cannot assess the long-term effects of habitat degradation. Biological information, on the other hand, not only reflects current physical and chemical conditions, but also changes in conditions over time, and cumulative impacts (Barbour et al., 1999).

The most common group of organisms used for biological assessment is benthic macroinvertebrates. Benthic macroinvertebrates are small animals living among rocks, woody debris (snags), sediments, algal mats, aquatic plants, and other benthic (i.e. bottom-dwelling) habitats. They are large enough to see with the naked eye, have no backbone, and are typically sedentary. These ecologically important organisms include aquatic insects (e.g. mayflies, stoneflies, caddisflies, midges, and beetles), worms, clams, snails, crayfish, and shrimp, and are a crucial component of the food chain. Macroinvertebrates can feed on algae and bacteria and process organic matter, which are critical roles in the balance and natural flow of energy and nutrients in an aquatic ecosystem. The benthic macroinvertebrate community is used to evaluate the health of an aquatic system because the community responses are indicators of the state of the biotic and abiotic variables (Barbour *et al.*, 1999) that vary across spatial and temporal scales. The macroinvertebrate community reflects the stability and diversity of the overall food web and aquatic ecosystem.

River flow and tidal state are important abiotic factors affecting the benthic macroinvertebrate community. Changes in freshwater flow and/or sea level rise can affect the water chemistry, habitat composition, and benthic macroinvertebrate community structure of a system. Like all organisms, insects must maintain their internal solute and water balance within a relatively narrow range. Freshwater insects actively regulate their internal solute concentration through

osmoregulation and the removal of excess water (Chapman, 1998). In contrast, saltwater insects rely primarily on water conservation to maintain their solute balance. In general, estuarine species are more tolerant to changing conditions than freshwater species. Therefore, they are more abundant in tidally influenced rivers than are freshwater species.

The combination of flow velocity and substratum size are usually the factors defining habitat in flowing systems. Substratum size can range from large boulders to fine sediments. The heterogeneity of substratum and flow result in a large range of habitats, which generally correlate with higher species richness (Merritt *et al.*, 2008). Aquatic insects that are specialists at colonizing sand or silt habitat often have morphological adaptations allowing them to maintain position in shifting sands to keep respiratory surfaces from becoming clogged (Merritt *et al.*, 2008). Organic substrates, wood debris or snags (larger woody debris such as a log), are another important habitat for benthic macroinvertebrates. Some insects which reside in snag habitat are wood-feeding specialists. However, the majority of wood-dwelling insects use the snag as a stable substratum for filter feeding, especially in unstable, sand bottom streams. Submerged aquatic vegetation (SAV) provides both a food source and refuge for aquatic insects. A variety of benthic macroinvertebrates utilize SAV habitat during their lifecycle. Some insects attach themselves to the SAV, and use the stratum for filter feeding, while other species feed off the SAV by scraping epiphytic (attached) algae or directly feeding off of the plant material itself.

1.2 Study Area

The following section will provide a brief description of the three spring-fed coastal river systems (Chassahowitzka, Homosassa, and Weeki Wachee Rivers) and their associated springs and tributaries investigated as part of this study (**Figure 1**). Summary background information on each system was derived from the SWFWMD Recommended Minimum Flows reports (SWFWMD, 2012a; SWFWMD, 2012b; and SWFWMD, 2008). During the field reconnaissance, Amec Foster Wheeler staff identified sampling zones within each spring-fed coastal river systems based on physicochemical parameters, sediment type and vegetation patterns. River systems, spring head areas, and associated tributaries from upstream (springs) to the salt marsh and/or tidal zone were assessed to identify existing habitats, and analyzed for water chemistry gradients. This information along with any other data gathered during the recon (i.e. inflow from major tributary) was used to define the zones within each river.

The Chassahowitzka River is 5.6 miles (9 kilometers (km)) long, flowing from its headsprings to where it meets the Gulf of Mexico at Chassahowitzka Bay. This river system is primarily located in the southeast corner of Citrus County, Florida, with some southern extents of the system crossing into Hernando County. More than a dozen springs contribute to the Chassahowitzka River system. This river system occurs in an area with karst limestone topography. The groundwater recharge area or springshed for Chassahowitzka Springs, is approximately 190 square miles with various land uses such as upland forests, urban, agriculture, and wetlands (SWFWMD, 2012a).

The Chassahowitzka River study area included the mainstem of the river, the headspring area, Potter Creek Spring, Potter Creek spring-run, and Crab Creek Spring. The Chassahowitzka River zones were determined based on salinity gradients and hydrologic contributions to the mainstem of the river, and are as follows: upper spring, headspring and six mainstem zones. The six mainstem zones were delineated with three upstream of Salt and Potter Creek tributary inflows and three downstream of the aforementioned inflows (**Figure 2**). These tannic contributions cause the mainstem of the Chassahowitzka River to be considerably darker in water color downstream of the inflows.

Physicochemical measurements that were collected during the reconnaissance included:

- Salinity ranged from 0.26 to 4.40 parts per thousand (ppt)
- Conductivity ranged from 543 to 5210 microsiemens per centimeter (µS/cm)
- Dissolved oxygen ranged from 2.97 to 12.03 milligrams per liter (mg/L)
- Water temperature ranged from 23.23 to 27.90 degrees Celsius (°C)
- pH ranged from 7.43 to 8.15
- Turbidity ranged from 0.50 to 9.83 Nephelometric Turbidity Units (NTU)
- Canopy cover ranged from 0 to 89.25 percent (%)

Sediment types that were observed within the study area during the reconnaissance included organic material, silty sand, sand, and detritus, with the majority of sediments being composed of fine organic material. SAV observed in the study area included *Vallisneria americana*, *Najas guadalupensis*, *Myriophyllum spicatum*, *Hydrilla verticillata*, and a negligible amount of *Cabomba caroliniana*. SAV was observed primarily in the upper portion of the river, however sparse *M. spicatum* was also observed in the lower portion of the river.

The Homosassa River is approximately 8 miles (12.9 km) long, flowing from the Homosassa Main Springs complex to where it meets the Gulf of Mexico at Homosassa Bay near Shell Island. The Homosassa River is located within Citrus County, Florida. More than 20 springs are associated with the Homosassa River system. This river system occurs in an area with karst geology and limestone topography. The springshed for Homosassa Springs is approximately 270 square miles of urban, natural (uplands and wetlands), and agricultural land uses (SWFWMD, 2012b).

The Homosassa River system study area comprises the area beginning at the Homosassa headspring, the main stem of the Homosassa River, the Halls River headspring to its confluence with the Homosassa River, and the Southeast Fork of the Homosassa River. The following zones were determined for the Homosassa River based on salinity gradients and hydrologic contributions to the mainstem of the river: headspring and six mainstem zones that were separated by the Halls River, with three zones upstream of Halls River inflow and three downstream of Halls River inflow (**Figure 3**). In addition to the mainstem of the Homosassa River, the Southeast Fork and the Halls River were also included as sampling zones. The Southeast Fork includes a single zone at the confluence of several small springs. Halls River zones include the Halls River headspring and three zones along the spring run.

Physicochemical measurements that were collected during the reconnaissance included:

- Salinity ranged from 0.25 to 5.15 ppt
- Conductivity ranged from 512 to 9211 µS/cm
- Dissolved oxygen ranged from 3.43 to 9.32 mg/L
- Water temperature ranged from 23.32 to 28.26 °C
- pH ranged from 7.55 to 8.40
- Turbidity ranged from 0.27 to 3.89 NTU
- Canopy cover ranged from 0 to 94.50%

Sediment material appeared to be dominated by organic fines and silty sand. SAV observed in the study area included very sparse *N. guadalupensis*, *H. verticillata*, and benthic filamentous macroalgae. SAV was observed in the upper portion of the river, but not further downstream. Although SAV was observed in some areas, it was not sampled because it was too sparse to collect an appropriate sample.

The Weeki Wachee River is approximately 7.4 miles (11.9 km) long, flowing from its main spring in Hernando County to where it meets the Gulf of Mexico at Bayport. Six spring vents contribute to this river system, which reside on and were created by karst limestone geology and topography (SWFMWD, 2008). The Weeki Wachee River study area consists of the Weeki Wachee headspring area to just above the tidal portion of the Weeki Wachee River. Zones within Weeki Wachee included one zone in the headspring area, and six mainstem zones that were separated by three upstream zones within the State Park, and three downstream zones below the park (**Figure 4**).

Physicochemical measurements that were collected during the reconnaissance included:

- Salinity ranged from 0.16 to 0.17 ppt
- Conductivity ranged from 337 to 351 μS/cm
- Dissolved oxygen ranged from 1.86 to 5.73 mg/L
- Water temperature ranged from 23.76 to 24.38 °C
- pH ranged from 7.38 to 7.79
- Turbidity ranged from 0.15 to 0.73 NTU
- Canopy cover ranged from 0 to 76%

Sand dominated the majority of sediment in the study area, however, some of the areas within the middle reaches also included some silty sand. SAV that was observed in the study area included *Sagittaria kurziana*, *V. americana*, and *N. guadalupensis*. SAV was abundant in the upper and middle reaches of the river, and less so in lower reaches. Filamentous benthic algal mats were also abundant habitat features within the study area.

The naming convention used to create zone area names is as follows: 1) the first three letters of the system, 2) Codes 'R' for mainstem of the river, 'S' for headspring, and the first three letters of the tributary (if applicable), and 3) mainstem zones 1-6, began with 1 as the most upstream and 6 as the most downstream. Photos representing examples of variability between the three rivers in regards to stream morphometry and habitat availability are shown in **Figures 5a, 5b**, and **5c**. **Table 1** provides the number of samples per system and habitat types that were collected for the biological sampling, processing, and analysis components for this study.

Table 1 - Number of Samples Collected in Available Habitats per Zone

Habitats										
Zone ID (Water Body Type in Parentheses)	Submerged Aquatic Vegetation Macroalgae		Snags	Rocks	Sediment					
Chassahowitzka- 44 total samples										
CHA-S-1 (Spring)	1		1	1	1					
CHA-S-2 (Spring)	1	1	1	1	1					
CHA-R-1 (River)	1	1	1		1					
CHA-R-2 (River)	1	1	1	1	1					
CHA-R-3 (River)	1	1	1		1					
CHA-R-4 (River)		1	1		1					
CHA-R-5 (River)			1		1					
CHA-R-6 (River)			1		1					
CHA-CRA (Spring)	1		1	1	1					
CHA-POT-S (Spring)	1		1		1					
CHA-POT-1 (Tributary)	1		1		1					
CHA-POT-2 (Tributary)	1		1		1					
CHA-POT-3 (Tributary)			1		1					
Homosassa- 29 total samples										
HOM-S (Spring)		•	1	1	1					
HOM-SOU (Spring)		1	1	1	1					
HOM-R-1 (River)		1	1		1					
HOM-R-2 (River)			1		1					
HOM-R-3 (River)		1	1		1					
HOM-R-4 (River)			1		1					
HOM-R-5 (River)			1		1					
HOM-R-6 (River)			1		1					
HOM-HAL-S (Spring)		1	1	1	1					
HOM-HAL-1 (Tributary)		1			1					
HOM-HAL-2 (Tributary)					1					
HOM-HAL-3 (Tributary)					1					
Weeki Wachee- 32 total samples										
WEE-S (Spring)	1	1		1	2					
WEE-R-1 (River)	1	1	1		1					
WEE-R-2 (River)	1	1	1	1	1					
WEE-R-3 (River)	1	1	1	1	1					
WEE-R-4 (River)	1	1	1	1	1					
WEE-R-5 (River)	1	1	1		1					
WEE-R-6 (River)	1	1	1		1					
Total Samples – 105 total samples	16	16	28	11	33					

Citrus County Hernando County Weeki Wachee Ri 11,000

Figure 1 - Overall Project Location Map

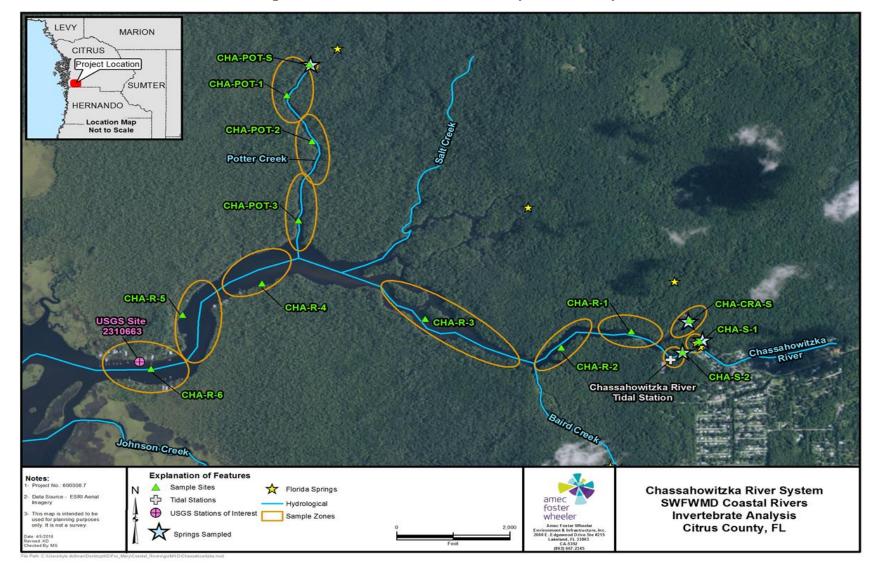


Figure 2 - Chassahowitzka River Sample Zones Map

HOM-HAL-1 HOM-HAL-2 HOM-HAL-3 Halls River Bridge Tidal Station HOM-S HOM-SOU-S MARION USGS Site 2310700 CITRUS SUMTER Project Location Homosassa River-HERNANDO Location Map Not to Scale **Explanation of Features** Notes: 1- Project No.: 600308.7 Sample Sites Florida Springs Homosassa River System - Data Source - ESRI Aerial Imagery amec foster Hydrological **SWFWMD Coastal Rivers** USGS Stations of Interest **Invertebrate Analysis** This map is intended to be Sample Zones wheeler used for planning purpose only. It is not a survey. Citrus County, FL

Figure 3 - Homosassa River Sample Zones Map

WEE-R-6 WEE-R-4 WEE-R-1 WEE-R-2 WEE-R-3 LEVY MARION USGS Site 2310525 CITRUS Project Location USGS Site 2310500 SUMTER HERNANDO Location Map Not to Scale **Explanation of Features** Notes: 1- Project No.: 600308.7 Sample Sites Florida Springs Weeki Wachee River System 2- Data Source - ESRI Aerial Imagery Tidal Stations **SWFWMD Coastal Rivers** Hydrological foster This map is intended to be used for planning purposes only. It is not a survey. USGS Stations of Interest Invertebrate Analysis Sample Zones wheeler Hernando County, FL Springs Sampled

Figure 4 - Weeki Wachee River Sample Zones Map

Figure 5a - Example of Habitat Variability of Zone Areas Zone ID: CHA-R-1 - Chassahowitzka River Upstream



Figure 5b - Example of Habitat Variability of Zone Areas Zone ID: HOM-R-1 - Homosassa River Upstream



Figure 5c - Example of Habitat Variability of Zone Areas Zone ID: WEE-R-1 – Weeki Wachee Upstream



2.0 METHODS

The following sections provide details on field sample collection, laboratory analytical methods, data management and statistical analysis methods that were employed during the project to achieve the stated objectives.

2.1 Field Monitoring Component – Sample Collection Methodology

Field monitoring activities included physiochemical and biological sampling. Amec Foster Wheeler conducted one sampling event in each spring-fed system, during which physicochemical and biological data was measured and collected respectively. For sites located within a state park, Amec Foster Wheeler coordinated access and permission to the site with the Florida Department of Environmental Protection (FDEP) prior to each sampling event. Habitats identified in the three river systems during initial recon and during sampling events included SAV, benthic macroalgal mats, snags/woody debris, rock/limestone outcropping and sediments. Sampling equipment used during the field sampling effort depended on site conditions (depth, habitat type, etc.), but was limited to the petite ponar and D-frame dipnet. Further details on sampling methods are provided below.

Physical and Chemical Sampling

FDEP 2012 Field SOPs for Surface Water Sampling were followed to collect *in-situ* water chemistry measurements at each of the sampling stations (zones). A total of 32 zones were monitored, and were split amongst the three river systems as follows 13 at Chassahowitzka, 12 at Homosassa, and 7 at Weeki Wachee. Parameters assessed include:

- Sample depth (m), with a levelling rod or a wading rod
- Canopy cover over the stream channel (%), with a spherical densiometer (Model–C)
- Water temperature (°C), Salinity (ppt), Specific conductance (µS/cm), pH (units), Dissolved oxygen (mg/L and % saturation), with a YSI- 5 series
- Turbidity (NTU), with a portable turbidimeter

Quantitative Benthic Macroinvertebrate Sampling from Various Habitats

At each of the sampling sites within the zones, and based on existing habitats, above-sediment SAV, rock, snag and macroalgae samples were collected with a D-Frame dipnet. Each macroinvertebrate sample was collected by sweeping the D-frame net a total of four times (0.125 m² each), for a total sample area of 0.5 m² for each habitat. Petite ponar (0.023 m²) was used to collect a quantitative sample of macroinvertebrates from bare sediment. D-frame net and petite ponar samples were carefully transferred into containers and preserved with formalin for later processing at the laboratory.

2.2 Laboratory Component – Sample Processing and Analysis Methodology

Amec Foster Wheeler conducted laboratory biological sample processing and analyses. Tasks included:

- Habitat sample processing, and removal of macroinvertebrates for taxonomic identification
- Macroinvertebrate processing, taxonomic identification from all habitats, and macroinvertebrate community measurements

Samples received at the Amec Foster Wheeler Taxonomy Lab were logged-in and processed in general accordance with FDEP SOP for Invertebrate Core/Grab/Dredge Sample Prepared (IZ-04). Invertebrate samples were emptied into a U.S. #30 mesh sieve over a discard bucket to catch waste formalin. The sieved samples were thoroughly rinsed with tap water. The remaining material was transferred to white trays for sorting under a dissecting microscope (approximately 10X magnification). Samples were subsampled to a target count of 200 organisms or all organisms were picked from the sample material and placed in a vial filled with 80% ethanol. QA/QC checks were completed on 10% of sorted aliquots.

Amec Foster Wheeler's experienced taxonomists then identified the organisms in each sample according to FDEP SOP IZ-06. Organisms in each sample were identified to lowest practical taxonomic level (LPTL) and the identifications and enumeration were noted on benchsheets. Midges and worms were separated from the remainder of the sample for mounting and further identification under compound magnification. Midges and worms were mounted in general accordance with FDEP SOP IZ-08 and identified to LPTL. Identifications and enumeration were noted on benchsheets. Amec Foster Wheeler's extensive collection of taxonomic keys and reference specimens for invertebrates from Florida streams were used throughout the project to aid in identification. If an organism was found within the samples that was not already represented in the voucher reference collection, the individual was placed in a labeled vial in 95% ethanol and maintained for expert verification.

2.3 Data Analyses

Sample collection, sorting, and taxonomic data for all samples were entered into a relational database using SQL. The physicochemical and biological data were compiled into datasets and processed in various ways to prepare for statistical data analyses. All data were subjected to a QA/QC process prior to further analyses. The SQL database was queried to produce a taxa list for each river system which included functional feeding group and life habit information for each taxon. Final taxonomic data was exported from SQL to Excel and PRIMER v7 for further analyses. PRIMER v7 software was used for univariate and nonparametric, multivariate statistical analyses. This software application includes nonparametric, multivariate analyses often used in ecological studies, such as species assemblages, environmental/biological data interactions and modeling data (Clarke and Gorley, 2006). In addition, MINITAB v17 statistical software was used to conduct univariate techniques to investigate relationships between abiotic factors and biological metrics. Further detail on the various statistical techniques employed are provided below.

Biological Metrics

Biological metrics such as the abundance (normalized over an aerial basis), taxa richness, Margalef's species richness index (d), Shannon's diversity index (H'(\log_e)), Simpson's diversity (1- λ '), and Pielou's evenness index (J') were calculated for each sample by using the DIVERSE function in PRIMER, as defined below:

- Abundance # individuals/m² of sampled area by species and by sample (N);
- Taxa richness total number of taxa (S);
- Diversity Margalef's species richness index (d) = (S-1)/log_e(N)
- Diversity Shannon's Index (H'(log_e)) = $\sum P_i * log_e(P_i)$; where P_i = proportion of individuals found in the ith species
- Diversity Simpson's index $(1-\lambda') = 1 \{\sum_i N_i(N_i 1)\}/\{N(N-1)\}$; and
- Evenness Pielou's Evenness (J') = H'/log_eS.

Life history characteristics for each taxonomic group were defined using the following resources:

- Functional Feeding Group categorization for each invertebrate taxon, a functional feeding group (FFG) category was associated with it in the database developed. These were based on the FFG designations used by the FDEP (http://www.dep.state.fl.us/labs/cgi-bin/sbio/database.asp).
- Life Habit categorization for each invertebrate taxon, a Life Habit category as defined by Merritt and Cummins (1996) was associated with it in the database developed.
- Taxa identified by FDEP as "long-lived"
 (http://www.dep.state.fl.us/labs/cgibin/sbio/database.asp#lists) were identified in the database developed.
- Taxa identified by FDEP as "sensitive" and "very tolerant" were identified in the database developed (http://www.dep.state.fl.us/labs/cgi-bin/sbio/database.asp#lists).

The fifteen dominant macroinvertebrate taxa for each system were determined using a procedure developed by Janicki (2006) and Janicki (2008). The Dominance Index (DI) was calculated for all taxa as a geometric mean of the frequency of occurrence (P_o) and the relative abundance (P_a) where:

 $P_o = (\# \text{ of samples with taxon/Total } \# \text{ of samples collected}) \times 100$

 P_a = (Total # of taxon individuals in all samples/Total # of Individuals of all species in all samples) x 100

The geometric mean of these terms equals the square root of their product:

$$DI = (P_0 X P_a)^{-0.5}$$

Univariate Analysis

Statistical analyses were performed using MINITAB v17. Results were considered significant if the p-value was less than 0.05 (p<0.05). All analyses were performed on untransformed data unless specified. The means between river systems and waterbody types (i.e. spring, river, or tributary) for biological metrics were compared to test for significant differences using one-way ANOVA (analysis of variance) with the Tukey and/or Fisher Pairwise Comparison Method when assumptions of normality and homogeneity of variances were met. The nonparametric counterpart to the ANOVA, the Mann-Whitney test, could not be used to find significant differences for the medians because the number of records between sites were uneven.

Parametric and nonparametric correlation statistics such as Pearson's R, Spearman's Rho, and Kendall's Tau were used to investigate associations between each of the biological metrics and physicochemical parameters. Linear and non-parametric trend analyses were used to evaluate changes with time or to evaluate spatial changes along the longitudinal gradient for the abiotic factors and biological metrics. Abundance (normalized over an aerial basis), total number of taxa and Shannon's diversity index were examined in more detail using multivariate statistics by habitat type and zone in each river system and methods for those statistics are further discussed in the next section.

In addition to the physicochemical and biological data that were collected as part of this project, continuous daily minima and maxima specific conductance, daily discharge and daily minima and maxima stage data were acquired from four USGS stations. Two stations in the upper reach of the Weeki Wachee River provided stage and discharge data, USGS stations 2310500, and 2310525, respectively. The upper Weeki Wachee River stations did not have continuous specific conductance data available. The other two USGS stations provided specific conductance, tidally filtered discharge and stage data in Chassahowitzka (Station 2310663) and Homosassa (Station 2310700) Rivers. These four USGS station locations are shown in **Figures 2-4** in reference to the springs and sampling zones for each system. In addition, USGS daily minima and maxima continuous specific conductance and daily discharge data was obtained from a station approximately 8.4 river kilometers downstream of the headspring on Weeki Wachee River (Station 2310545; latitude 28.531106, longitude -82.623156). This station is not shown in the location figure due to it being out of the desired map frame.

Time series analyses of monthly median historical discharge data were conducted for the last ten years. Further analyses were conducted to evaluate the effects of tidal range and discharge on benthic communities that included calculations of the 30-day antecedent cumulative daily discharge, and the 30-day antecedent cumulative difference in daily stage. Moreover, the discrete discharge and stage data measured on the specific dates of sampling were assessed for comparison across systems.

Tidal stage data was obtained from http://tbone.biol.sc.edu/tide/index.html. Tide data was obtained for the "Halls River bridge, Homosassa River, Florida" station for all Homosassa system sampling sites, and from the "Chassahowitzka, Chassahowitzka River, Florida" station for all Chassahowitzka system sampling sites. Tidal stage locations are provided in **Figures 2** and **3**. Tide data was obtained for the sampling dates, then assigned tide stages based on the high and low tides given for those dates.

Multivariate Analysis

To examine for potential spatial differences in the water quality data, several tests were conducted in PRIMER. Draftsman plots were constructed for the environmental data prior to statistical analyses to check whether transformations of the environmental variables were necessary. These plots indicated that a mild square-root transformation was required due to right-skewness for water temperature, salinity, conductivity and turbidity. All environmental data were then normalized prior to analysis in order to reference these variables to a common measurement scale (Clarke and Gorley, 2006). Euclidean distance similarities were calculated between water quality samples to produce a resemblance matrix. Water quality samples were ordinated with non-metric multidimensional scaling (nMDS). The Analysis of Similarities (ANOSIM) procedure was then used to determine if water quality samples were significantly different across the various factors. Principal Component Analysis (PCA) was used to determine which environmental variables were driving the observed spatial trends.

Nonparametric, multivariate analyses were performed in PRIMER to evaluate benthic community structure and to make comparisons between the physicochemical and biological data. To determine the adequacy of the sampling effort for detecting variability in the benthic community structure, a species-accumulation plot in PRIMER was produced from the abundance data for each of the river systems (Chassahowitzka, CHA; Homosassa, HOM; Weeki Wachee, WEE). The plotted curves reached asymptotes prior to the number of samples actually collected in each river system, thereby indicating that the sampling effort was sufficient. Once the sampling effort

was determined to be sufficient, raw abundance data were pre-treated prior to further analyses. Because samples were collected using a dipnet and a Petite Ponar dredge with different sampling areas, the raw abundance data was standardized to number of individuals per square meter. Then a square-root transformation was applied to the data to minimize the effect of dominant taxa when calculating similarities between samples (Clarke *et al.*, 2006a). Further transformations of the raw abundance data were explored (fourth-root and log), and were ordinated by nMDS. These nMDS plots were compared to the nMDS plots from data that were square-root transformed. Similar patterns and stress values in the nMDS plots for the fourth-root and log transformations were observed. Consequently, the more conservative square-root transformation was utilized in all subsequent multivariate analyses.

To examine overall trends with the biological data among river systems, the standardized, square-root transformed abundance data were averaged by river system. Bray-Curtis similarities were calculated between samples to produce a resemblance matrix (Bray and Curtis, 1957; Clarke *et al.*, 2006b). The CLUSTER function in PRIMER, which uses hierarchical agglomerative clustering with group average sorting, was applied to the Bray-Curtis resemblance matrix. Similarity profile permutation tests (SIMPROF) used 1000 permutations to identify significant sample groups within the dendrogram produced by the CLUSTER analysis.

To examine trends in more detail among river systems, Bray-Curtis similarities were calculated between all samples using the standardized, square-root transformed data to produce a resemblance matrix. The Bray-Curtis similarities were ordinated with nMDS. River System (CHA, HOM, and WEE) was used as a factor in the nMDS to identify spatial trends in benthic community structure between systems. Waterbody Type (Spring, Tributary, River); Waterbody Area (Spring, Upper (R-1 through R-3), Lower (R-4 through R-6)); and Zone (Sample Site) were also used as factors in the nMDS to identify potential longitudinal trends in the benthic community. ANOSIM identified which factor levels were significantly different. The similarity percentages routine (SIMPER) determined which taxa contributed the most to the significant pairwise comparisons identified in the ANOSIM procedure (Clarke and Gorley, 2006).

To further evaluate trends associated with habitat requirements, Habitat Type was also used as a factor which included factor levels of macroalgae (MA), rock, SAV, sediment (sed), and snag. ANOSIM and SIMPER were again used to determine which factor levels were significantly different and which taxa contributed the most to the significant pairwise comparisons identified in the ANOSIM procedure (Clarke and Gorley, 2006).

Each river system was analyzed separately for trends in benthic community structure. Bray-Curtis resemblance matrices were calculated and were ordinated with nMDS. ANOSIM was used to determine where significant pairwise comparisons existed between the various factor levels. SIMPER listed the taxa which contributed the most to the significant differences between these factor levels. PRIMER's BEST procedure with the BIOENV option was utilized to identify which combination of physicochemical variables were best correlated with the observed benthic community structure in each river system. These significant physicochemical variables were then superimposed on the samples within the nMDS plots as bubbles. The size of the bubble was directly correlated with the value of the physicochemical variable. The bubble plots identified how each significant physicochemical variable from the BEST analysis was influencing the invertebrate community structure in each river system.

3. 0 RESULTS

Benthic macroinvertebrate communities of the three river systems, Chassahowitzka, Homosassa, and Weeki Wachee, are discussed below in relation to abiotic physicochemical parameters, habitat type, waterbody type, and longitudinal gradient. The results in the following sections provide comparisons and associations between abiotic factors and macroinvertebrate community structure, and biological metrics on two different analysis levels. The first hierarchical analysis level provides an overall comparison among the three (or four when Halls River is broken out separately) river systems. As will be explained in further detail in a later section, the biological community of the Halls River was found to be significantly different than Homosassa River, therefore some of the multivariate analyses treated Halls River as its own river system for comparison purposes. The second hierarchical analysis level includes comparisons within each river system. At both levels, evaluations across waterbody types (i.e. spring, river, tributary), and habitats are provided in relation to macroinvertebrate community distribution and abundance and abiotic factors.

3.1 Comparisons among Rivers

Abiotic Factors

The complete physicochemical dataset collected by Amec Foster Wheeler during biological sampling is provided in **Table A-1**, **Appendix A**. Physicochemical factors and hydrologic data are described in this section, along with some associations between physicochemical data and biological data. Data were pooled across the three waterbody types for analyses described in this section. Descriptive summary statistics for abiotic factors pooled by river system (all stations in each river system) are presented in **Tables 2-4** for comparison. Overall, mean water temperature ranged from a low of 24.07°C in Weeki Wachee to a high of 25.57°C in Chassahowitzka. Mean dissolved oxygen (DO) mg/L was lowest in Weeki Wachee at 4.23 mg/L and highest in Homosassa at 6.42 mg/L. Mean salinities were similar in Homosassa and Chassahowitzka at around 2 ppt and lowest in Weeki Wachee River at 0.16 ppt. Homosassa River had the highest conductivity and Weeki Wachee had the lowest, by an order of magnitude. Mean pH was similar across all three systems ranging from 7.59 to 7.78. Mean turbidity was an order of magnitude lower in Weeki Wachee at 0.38 NTU as compared to 2.31 in Chassahowitzka River. Mean canopy cover was about the same for all three systems around 30%.

Table 2 - Descriptive Summary Statistic Results for Chassahowitzka River

	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Salinity (ppt)	Conductivity (μS/cm)	pH (SU)	Turbidity (NTU)	Canopy Cover (%)
Minimum	23.23	2.97	35.70	0.26	543.00	7.43	0.50	0
Maximum	27.90	12.03	155.10	4.40	5210.00	8.15	9.83	89
Mean	25.57	5.60	69.32	2.06	3589.77	7.61	2.31	21
Median	25.09	5.05	60.20	2.28	4251.00	7.57	1.31	10
Standard Error	0.45	0.65	8.39	0.29	400.19	0.05	0.68	9
Std. Dev.	1.61	2.33	30.26	1.05	1442.92	0.18	2.47	32
N	13	13	13	13	13	13	13	13

Table 3 – Descriptive Summary Statistic Results for Homosassa River

	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Salinity (ppt)	Conductivity (μS/cm)	pH (SU)	Turbidity (NTU)	Canopy Cover (%)
Minimum	23.32	3.43	40.30	0.25	512.00	7.55	0.27	0
Maximum	28.26	9.32	115.80	5.15	9211.00	8.40	3.89	95
Mean	25.31	6.42	79.95	2.63	4820.83	7.78	1.41	31
Median	25.25	6.66	84.10	2.38	4334.50	7.70	1.13	30
Standard Error	0.45	0.65	8.60	0.50	885.47	0.07	0.30	8
Std. Dev.	1.55	2.27	29.77	1.74	3067.37	0.24	1.05	28
N	12	12	12	12	12	12	12	12

Table 4 – Descriptive Summary Statistic Results for Weeki Wachee River

	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Salinity (ppt)	Conductivity (µS/cm)	pH (SU)	Turbidity (NTU)	Canopy Cover (%)
Minimum	23.76	1.86	21.81	0.16	337.00	7.38	0.15	0
Maximum	24.38	5.73	68.70	0.17	351.00	7.79	0.73	76
Mean	24.07	4.23	50.26	0.16	341.86	7.59	0.38	36
Median	24.06	4.38	52.10	0.16	339.00	7.58	0.38	35
Standard Error	0.08	0.54	6.45	0.00	2.39	0.05	0.07	9
Std. Dev.	0.21	1.42	17.07	0.00	6.34	0.14	0.19	25
N	7	7	7	7	7	7	7	7

Similar summary tables are provided in **Tables 5-7** to show the summary statistics of abiotic variables and biological metrics when the data were pooled by waterbody type. When comparing pooled waterbody data and comparing across springs, rivers and tributaries, mean temperature was about 3°C lower in the springs than in the tributaries. Mean DO was also lowest in the springs and highest in the tributaries. Mean salinity and conductivity were lowest in the rivers and highest in tributaries. Mean pH was similar across waterbody types. Mean turbidity was similar in the rivers and tributaries and lowest in the springs. Mean canopy cover was lowest in the tributaries (1%) and highest in the springs (60%). One-way ANOVA was used to determine if significant differences existed across waterbody types for the mean abiotic factor data. Mean DO was significantly greater in the tributaries than the mean DO in the springs (p =0.030), but not different than the rivers. Mean salinity was significantly higher in the tributaries than the mean salinity in both of the springs and rivers (p =0.001), but the rivers and springs were not significantly different. Mean canopy cover in the springs was significantly higher than the mean canopy cover in both the rivers and the tributaries (p =0.000). Mean turbidity and pH were not found to be significantly different across the waterbody types.

Table 5 - Descriptive Summary Statistic Results for All Springs Zones

	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Salinity (ppt)	Conductivity (μS/cm)	pH (SU)	Turbidity (NTU)	Canopy Cover (%)
Minimum	23.23	2.97	35.70	0.25	512.00	7.43	0.27	13
Maximum	24.22	5.05	60.20	5.15	9211.00	7.65	1.76	95
Mean	23.66	4.01	47.79	1.81	3360.86	7.54	0.78	60
Median	23.47	3.95	46.90	1.64	3135.00	7.55	0.68	58
Standard Deviation	0.41	0.78	9.21	1.76	3123.85	0.08	0.51	30
Standard Error	0.15	0.30	3.48	0.66	1180.70	0.03	0.19	12
N	8	8	8	8	8	8	8	8

Table 6 - Descriptive Summary Statistic Results for All River Zones

	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Salinity (ppt)	Conductivity (µS/cm)	pH (SU)	Turbidity (NTU)	Canopy Cover (%)
Minimum	23.90	2.86	33.70	0.16	337.00	7.50	0.15	0
Maximum	27.82	12.03	155.10	2.54	4767.00	8.40	9.83	76
Mean	25.25	5.98	73.48	1.31	2483.17	7.72	1.87	25
Median	24.79	5.61	66.90	1.30	2525.50	7.67	1.16	23
Standard Deviation	1.24	2.22	28.86	0.98	1816.70	0.23	2.31	23
Standard Error	0.29	0.52	6.80	0.23	428.20	0.05	0.54	5
N	18	18	18	18	18	18	18	18

Table 7 - Descriptive Summary Statistic Results for All Tributary Zones

	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	Salinity (ppt)	Conductivity (µS/cm)	pH (SU)	Turbidity (NTU)	Canopy Cover (%)
Minimum	25.54	4.51	55.50	2.33	4212.00	7.51	0.92	0
Maximum	28.26	9.20	115.80	5.03	9005.00	8.01	2.77	12
Mean	26.81	6.97	88.90	3.85	6391.17	7.72	1.68	4
Median	26.76	6.88	89.50	4.37	6151.50	7.62	1.44	1
Standard Deviation	1.20	2.07	26.82	1.20	2271.38	0.20	0.76	6
Standard Error	0.49	0.84	10.95	0.49	927.29	0.08	0.31	2
N	6	6	6	6	6	6	6	6

Continuous daily specific conductance, discharge, and stage data were obtained from USGS stations for each of the river systems (stations are shown in **Figures 2-4**). The last ten years of monthly medians of available (period of record, POR 3/2005-9/2015) discharge data (tidally filtered) were calculated and are presented in time series plots for each system in **Figures A1-A3** in **Appendix A**.

The last ten years of monthly medians were calculated from available (period of record, POR 6/2006-9/2015) specific conductance data using individual daily minima (representative of low tide) and daily maxima (representative of high tide) values. Specific conductance was collected *in-situ* near the bottom of the water column. Time series plots for each river are shown in **Figures A4-A6** in **Appendix A**.

Monthly median tidally filtered discharge data were significantly inversely correlated to both the minima and maxima monthly median specific conductance data for all three rivers. Results from the specific conductance (maxima) versus discharge data correlations are shown in **Figures A7-A9** in **Appendix A.**

The discharge and stage datasets for each river system were queried to provide information regarding the hydrologic conditions encountered on each sampling date (ranging between 8/28/2015-9/15/2015 for all systems). In **Table 8**, the daily discharge values and daily minima and maxima stage values are provided along with the estimated tidal range for the dates sampled in each system. Discharge on the dates between the three systems ranged from 119 to 377 cfs, with Homosassa River having the greatest discharge (tidally filtered) and Chassahowitzka River (tidally filtered) having the lowest discharge on the days of sampling within September 2015.

The daily tidal range for the two tidally influenced systems was approximately 2 ft. and 0.7 ft. for Chassahowitzka and Homosassa Rivers, respectively. In addition, the table provides a summary of the 30-day antecedent cumulative daily discharge, and the 30-day antecedent cumulative difference in daily stage to give an understanding to the effects of tidal fluctuations and discharge on benthic communities during a colonization window. **Figures 6-8** provide visual representations of the 30-Day antecedent discharge and stage (minima and maxima) conditions prior to sampling in each system. It is evident from the minima and maxima data, that there is significant tidal influence on these two systems, with Chassahowitzka experiencing a greater effect from changes in tide than the other two rivers, as seen by the 30-day antecedent cumulative difference in daily stage data in **Table 8**. The sampling areas included in this study in Weeki Wachee were not tidally influenced and stage did not change to any noticeable extent. The relatively large fluctuations in tide (and salinity) as was seen in Chassahowitzka River may be influential in controlling the distribution of the macroinvertebrate communities.

Table 8 - Comparison of Hydrologic Conditions across All Rivers

System	USGS Station	Dates Sampled	*Discharge (cfs)	**Stage (ft, Max, NAVD88)	**Stage (ft, Min, NAVD88)	30-Day Antecedent Cumulative Difference in Daily Stage (ft)	30-Day Antecendent Cumulative Daily Discharge (cfs)	Tide During Sampling Event
Chassahowitzka	2310663	9/10/2015	126	1.56	-0.36	61.50	4195	Incoming and Outgoing
	River km ca. 3.63	9/11/2015	119	1.51	-0.52	61.33	4218	Incoming and Outgoing
Homosassa	2310700	9/14/2015	377	0.26	-0.47	26.04	7328	Incoming and Outgoing
	River km ca. 3.79	9/15/2015	295	-0.08	-0.78	25.96	7388	Outgoing
Weeki Wachee	2310525	8/28/2015	225	225 1.48***		1.15	6200	NA
	River km ca. 1.26	9/10/2015	228	1.46***		0.70	6660	NA

Note: *Discharge measured on day of sampling. ** Stage measured on day of sampling. ***Maximum and minimum NAVD88 stage data was unavailable, therefore gage height (ft) observations at noon from USGS station 2310500 (at Weeki Wachee headspring) were used instead.

Figure 6 - 30-Day Antecedent Stage and Discharge in Chassahowitzka River (USGS Station 2310663)

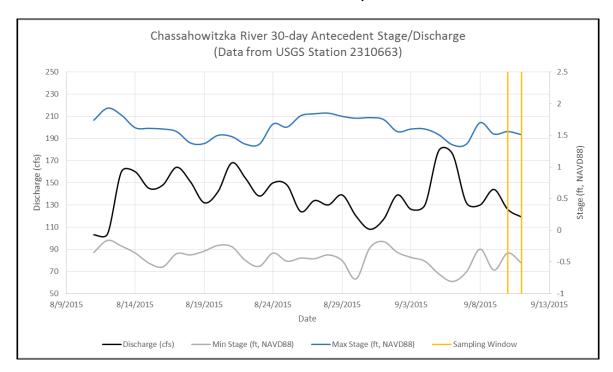


Figure 7 - 30-Day Antecedent Stage and Discharge in Homosassa River (USGS Station 2310700)

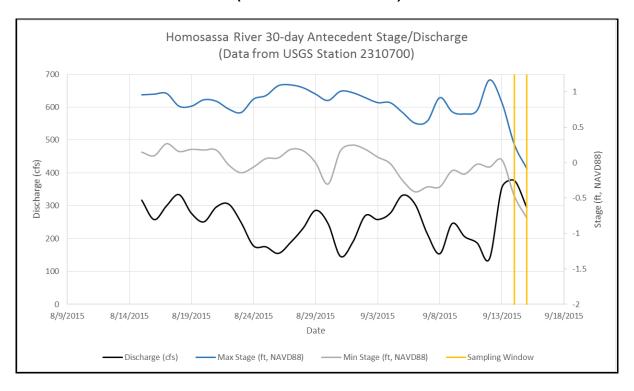
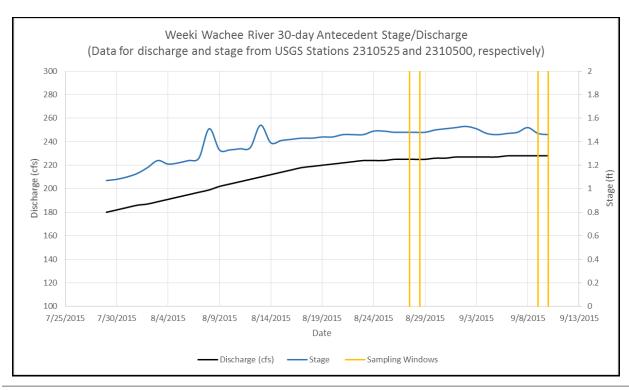


Figure 8 - 30-Day Antecedent Stage and Discharge in Weeki Wachee River (USGS Station 2310500 and 2310525)



Results of the PCA analysis illustrated that the water quality and environment at Weeki Wachee was distinctly different from the water quality and environment observed in the Chassahowitzka and Homosassa Rivers (Figure 9). The first principal coordinate (PC1) explained 46.4% of the total variation and was positively correlated with water temperature and conductivity, meaning that Weeki Wachee is characterized by lower temperatures and conductivity compared to Chassahowitzka and Homosassa. The second principal coordinate (PC2) explained 18.5% of the total variation and was positively correlated with pH and distance from the spring in kilometers. Lower turbidity, lower percent dissolved oxygen, lower salinity and deeper depths were also important parameters in distinguishing the water-quality at Weeki Wachee compared to Chassahowitzka and Homosassa (Tables 9 and 10). The values highlighted in yellow in Table 10 were the two environmental parameters that had the highest correlation with their respective principal component axes.

Figure 9 - PCA results for Environmental and Water-Quality Parameters from all River Systems

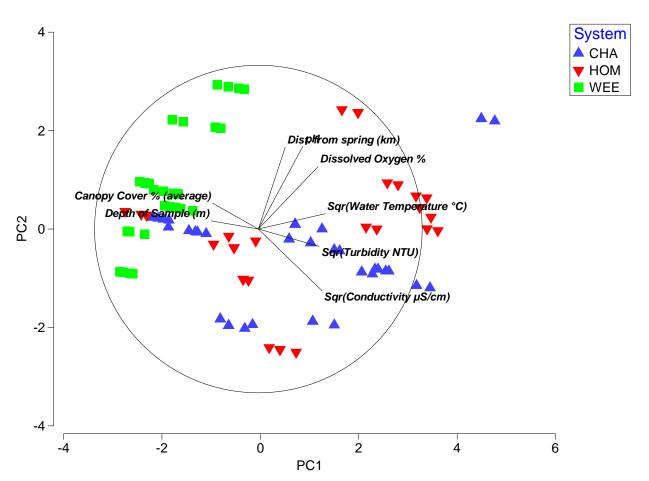


Table 9 - Percent and Cumulative Percent of Variation Explained by Principal Coordinates

PC	Eigenvalues	% Variation	Cumulative % Variation		
1	4.17	46.4	46.4		
2	1.66	18.5	64.9		
3	1.13	12.5	77.4		
4	0.81	9	86.4		
5	0.514	5.7	92.1		

Table 10 - Correlations of Water-Quality and Environmental Parameters for each Principal Coordinate

Parameter	PC1	PC2	PC3	PC4	PC5
Depth of Sample (m)	-0.289	0.05	-0.501	0.48	-0.176
Water Temperature (°C)	0.408	0.093	-0.33	-0.087	0.352
Dissolved Oxygen (%)	0.365	0.382	0.175	0.338	0.17
Salinity (ppt)	0.382	-0.397	0.155	0.135	-0.365
Conductivity (µS/cm)	0.39	-0.378	0.174	0.131	-0.36
рН	0.272	0.506	0.314	0.315	0.023
Turbidity (NTU)	0.373	-0.107	-0.21	-0.476	0.295
Canopy Cover % (average)	-0.28	0.158	0.564	-0.37	-0.066
Distance from spring (km)	0.164	0.5	-0.308	-0.387	-0.679

^{*}Note: The correlation coefficients with the highest values in PC1 and PC2 are highlighted.

Invertebrate Community Structure

Taxa lists for each river system were produced from the SQL database and included functional feeding group and life habit information for each taxon. The raw macroinvertebrate data, taxa lists, and diversity data are provided in **Tables B1 – B7** in **Appendix B**. Dominance scores were calculated for the taxa within each river system. The 15 macroinvertebrate taxa with the highest dominance scores for each system are listed in **Table 11** with their dominance scores as well as their percent contribution to the total number of organisms in all samples from each site.

The tanaid Leptocheliidae spp.; the amphipods *Gammarus* spp., *Grandidierella bonnieroides*, and *Apocorophium louisianum*; and the polychaete worm *Laeonereis culveri* were the most dominant taxa found in samples collected from the Chassahowitzka River system. These five taxa made up 56% of the organisms found in these samples.

The amphipods *G. bonnieroides* and *A. louisianum*; the tanaid Leptocheliidae spp.; the midge *Dicrotendipes* spp.; and the polychaete worm *L. culveri* were the most dominant taxa found in the samples collected from the Homosassa River system (excluding the Halls River). These five taxa made up 63% of the organisms found in the samples.

Hydrobiidae spp. snails; the tanaid Leptocheliidae spp.; the amphipods *Gammarus* spp. and *A. louisianum*; and the polychaete worm *L. culveri* were the most dominant taxa found in samples collected from the Halls River system. These five taxa made up 65% of the organisms found in the samples.

The amphipod *Hyalella azteca* sp. complex was the dominant taxon in the samples collected from Weeki Wachee making up 58% of the organisms found in the samples. Tubificinae spp. worms; Hydrobiidae spp. snails; the bivalve *Melanoides* spp.; and the caddisfly *Cheumatopsyche* spp. were the following dominant taxa from the samples collected from Weeki Wachee River system, and combined, made up 20% of the organisms found in the samples.

Table 11 - Dominant 15 Taxa in Each River System

0		Chassahov	vitzka	Homosas	ssa	Hall's		Weeki Wa	chee
Common Classification	Scientific Name	Dominance Index Score	% of Total						
	Boccardiella ligerica			8.92	3.34				
	Dero pectinata								
	Laeonereis culveri	21.23	7.35	22.10	9.32	3.72	13.85		
	Limnodriloidinae spp.					0.96	2.46		
Annelida	Limnodrilus hoffmeisteri			5.43	1.24			0.89	2.53
(worms)	Naididae spp.			4.63	1.50				
	Tubificinae spp.	16.08	5.99	18.38	5.91			2.40	10.24
	Pristina leidyi	5.77	0.86						
	Americorophium ellisi	6.24	1.90						
	Apocorophium louisianum	19.08	8.90	23.93	10.02	2.60	13.48		
	Apocorophium spp.								
	Cassidinidea ovalis								
	Cerapus spp.					1.44	8.33		
	Corophiidae spp.					0.85	1.45		
	Cyathura polita					0.94	2.38		
	Gammarus spp.	23.47	8.36	7.31	1.25	2.07	5.73		
Crustacea	Grandidierella bonnieroides	35.63	16.43	46.53	25.26	1.82	6.61		
Crustacea	Hargeria rapax					0.52	0.55		
	Hyalella azteca sp. complex							7.26	58.22
	Leptocheliidae spp.	32.66	15.14	25.64	9.20	2.86	13.10		
	Sinelobus stanfordi	10.55	2.88						
	Uromunna reynoldsi	12.80	2.77	8.84	1.64	0.49	0.48		
Insects									
	Ablabesmyia mallochi								

		Chassahov	vitzka	Homosa	ssa	Hall's	i	Weeki Wa	chee
Common Classification	Scientific Name	Dominance Index Score	% of Total						
	Apedilum spp.								
	Chironomidae spp.							0.62	0.73
	Cladotanytarsus spp.			5.51	1.60			0.74	1.10
	Cricotopus or Orthocladius	9.52	1.73					0.84	1.26
	Dicrotendipes spp.	15.59	3.34	25.44	9.06	1.57	3.28	0.69	1.18
Dinton (Mides)	Polypedilum illinoense group	6.70	1.10						
Diptera (Midge)	Polypedilum halterale group			4.54	0.72				
	Polypedilum scalaenum group							0.71	1.62
	Pseudochironom us spp.								
	Tanytarsus spp.	18.78	5.54	6.49	0.89			0.86	1.47
	Baetis intercalaris							0.63	1.28
Ephemeroptera	Caenis diminuta								
(Mayfly)	Callibaetis floridanus								
	Tricorythodes albilineatus								
Trichoptera	Cheumatopsych e spp.							0.93	1.86
(Caddisfly)	Hydropsyche rossi							0.56	0.84
	Melanoides spp.							1.06	2.25
Gastropoda	Hydrobiidae spp.	18.50	5.38	22.01	5.99	4.06	18.83	1.52	5.31
(Snail)	Pleurocera floridensis					0.56	0.63		
Mollusca	Bivalvia spp.					0.42	1.42		
Platyhelminthes (Flat worms)	Platyhelminthes spp.							0.44	0.56

Descriptive summary statistics for the biological metrics pooled by river system are presented in **Tables 12-14** for comparison. Interestingly, mean richness was exactly the same for all three rivers (17). Mean abundance did not range widely with a low of 4308 in Homosassa to a high of 5108 in Chassahowitzka. Margalef's richness index values for the three systems were all around 2. For mean Pielou's evenness index and the two diversity indices (Shannon's and Simpson's), Weeki Wachee had the lowest values and the other two systems had relatively similar but higher values. One-way ANOVA was used to determine if significant differences existed across systems for the mean biological metrics data. Only one metric, mean Pielou's evenness, was found to be slightly significantly lower in Weeki Wachee River than the mean Pielou's evenness in the other two systems (p = 0.05). None of the other metrics were found to be significantly different across the three systems.

Table 12 - Descriptive Summary Statistic of Biological Metrics Results for Chassahowitzka River

	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index	Pielou's Evenness Index	Shannon's Diversity Index	Simpson's Diversity Index
Minimum	1	43	0.00	0.00	0.00	0.00
Maximum	29	34304	3.88	1.00	2.52	0.90
Mean	17	5108	2.06	0.65	1.73	0.70
Median	18	2450	2.09	0.64	1.79	0.75
Standard Error	1	1042	0.15	0.03	0.08	0.03
Std. Dev.	7	6909	0.96	0.18	0.52	0.18
N	44	44	44	44	44	44

Table 13 - Descriptive Summary Statistic of Biological Metrics Results for Homosassa River

	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index	Pielou's Evenness Index	Shannon's Diversity Index	Simpson's Diversity Index
Minimum	2	130	0.18	0.29	0.45	0.28
Maximum	40	26130	4.57	0.94	2.37	0.87
Mean	17	4308	2.15	0.66	1.79	0.72
Median	15	2672	2.09	0.66	1.87	0.77
Standard Error	1	1084	0.19	0.02	0.09	0.03
Std. Dev.	8	5840	1.04	0.13	0.48	0.16
N	29	29	29	29	29	29

Table 14 - Descriptive Summary Statistic of Biological Metrics Results for Weeki Wachee River

	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index	Pielou's Evenness Index	Shannon's Diversity Index	Simpson's Diversity Index
Minimum	0	0	0.00	0.00	0.00	0.00
Maximum	39	26272	4.66	0.95	2.62	0.90
Mean	17	4777	2.10	0.54	1.47	0.59
Median	14	1704	1.78	0.58	1.37	0.62
Standard Error	2	1166	0.22	0.04	0.12	0.04
Std. Dev.	9	6599	1.23	0.22	0.69	0.24
N	32	32	32	32	32	32

Similar summary tables are provided in **Tables 15-17** to show the summary statistics of biological metrics when the data were pooled by waterbody type. When comparing pooled waterbody data and comparing across springs, rivers and tributaries, mean richness was lowest in the tributaries and greatest in the river zones with a range of 8 to 17. Mean abundance varied with a low of 1997 in the springs to a high of 5058 in the river zones. Margalef's richness index values for the three waterbody types ranged 1.39 to 2.13, with the tributaries having the lowest mean value. Mean Pielou's evenness index was similar for all three waterbody types, which was around 0.6. The tributaries had lower mean values than the other two waterbody types for the two diversity indices (Shannon's and Simpson's). One-way ANOVA was used to determine if significant differences existed across waterbody types for the mean biological metrics data. Mean richness and Margalef's richness index were both significantly lower in the tributaries than in the river (p = 0.010 and 0.075, respectively), however the springs and the river means were not different. No other significant differences were found for the other biological metrics across waterbody type.

Table 15 - Descriptive Summary Statistic of Biological Metrics Results for All Springs Zones

	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index	Pielou's Evenness Index	Shannon's Diversity Index	Simpson's Diversity Index
Minimum	1	2	0.86	0.51	1.21	0.55
Maximum	21	3723	3.19	0.81	2.26	0.85
Mean	12	1997	1.97	0.67	1.76	0.72
Median	12	2954	2.03	0.66	1.81	0.71
Standard Deviation	7	1597	0.75	0.10	0.41	0.12
Standard Error	3	604	0.28	0.04	0.15	0.04
N	7	7	7	7	7	7

Table 16 - Descriptive Summary Statistic of Biological Metrics Results for All River Zones

	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index	Pielou's Evenness Index	Shannon's Diversity Index	Simpson's Diversity Index
Minimum	11	543	1.14	0.31	0.90	0.34
Maximum	29	15601	3.31	0.89	2.13	0.86
Mean	17	5058	2.13	0.62	1.70	0.68
Median	17	3355	2.03	0.66	1.73	0.73
Standard Deviation	5	4037	0.56	0.13	0.35	0.14
Standard Error	1	952	0.13	0.03	0.08	0.03
N	18	18	18	18	18	18

Table 17 - Descriptive Summary Statistic of Biological Metrics Results for All Tributary Zones

	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index	Pielou's Evenness Index	Shannon's Diversity Index	Simpson's Diversity Index
Minimum	1	2	0.18	0.61	0.45	0.28
Maximum	21	22161	2.20	0.70	2.14	0.83
Mean	8	4763	1.39	0.65	1.42	0.62
Median	4	1315	1.66	0.64	1.56	0.66
Standard Deviation	9	8660	0.82	0.04	0.58	0.18
Standard Error	4	3536	0.34	0.02	0.24	0.07
N	6	6	6	6	6	6

To examine overall trends in invertebrate community structure between river systems, organism abundances were averaged for all samples (pooled) within each river system, and then analyzed with the CLUSTER and SIMPROF analyses in PRIMER. The invertebrate community structure at Weeki Wachee was significantly different than that within the Chassahowitzka and Homosassa Rivers with only a 25.74% similarity (p = 0.001). Whereas invertebrate communities at Chassahowitzka and Homosassa were not significantly different than each other and were 67.83% similar (**Figure 10**).

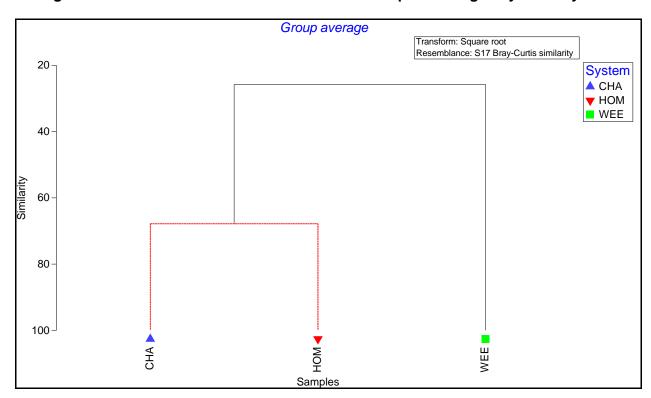


Figure 10 - CLUSTER and SIMPROF results for samples averaged by River System

When samples from all river systems were not averaged by system and then ordinated with nMDS, a similar trend was observed, with the Weeki Wachee samples isolated from the Chassahowitzka and Homosassa samples (Figure 11). Furthermore, ANOSIM detected a statistically significant difference between the invertebrate community structure at Weeki Wachee compared to the other two river systems (Table 18). Weeki Wachee was characterized by lower temperatures and conductivity when compared to Chassahowitzka and Homosassa. Chassahowitzka and Homosassa Rivers are also more tidally influenced and could experience higher salinities throughout a tidal cycle. The fluctuations in salinity may limit the occurrence of certain species in a river system and may also account for some of the differences observed in invertebrate communities between these river systems.

Figure 11 - nMDS for all Samples with River System as the Factor



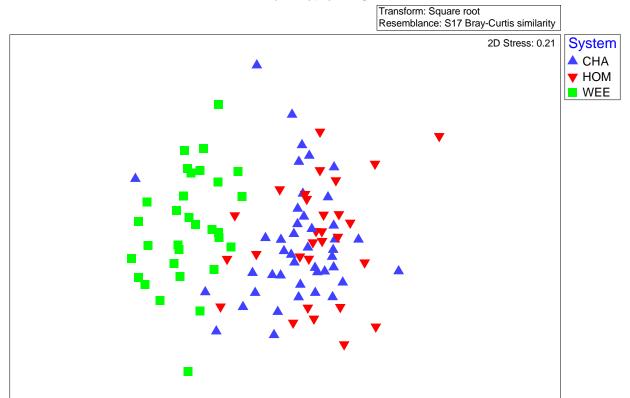


Table 18 - ANOSIM Results for all Samples with River System as the Factor

	СНА	НОМ	WEE
СНА			
НОМ	0.054674		
WEE	0.584281	0.636003	
Global R = 0	0.402, p = 0.00	1	

<u>Habitats</u>

Habitat diversity (number of habitats sampled) was evaluated to determine if the number of habitats that were available to sample within each zone was correlated to other abiotic factors or biological metrics. It must be noted that there was a limited amount of data to conduct these analyses. In addition, significant correlations do not necessarily indicate causation of one parameter onto another. Given these two caveats, for all sites combined, habitat diversity was negatively correlated with water temperature (Rho = -0.694, p = 0.000), DO (Rho = -0.353, p = 0.048), salinity (Rho = -0.691, p = 0.000), conductivity (Rho = -0.699, p = 0.000), turbidity (Rho = -0.656, p = 0.000), and sediment type (i.e. higher organic material supported a fewer number habitats; Rho = -0.492, p = 0.004). Habitat diversity was also positively correlated with canopy cover (Rho = 0.451, p = 0.010), richness, and Margalef's richness (**Table 19**). The full correlation matrix results output from MINITAB is provided in **Table C-1** in **Appendix C**.

Habitat Type was used as a factor to evaluate trends in invertebrate community structure among macroalgae, rock, sediment, SAV and snag habitats. Samples collected from sediment habitats clustered at the top of the nMDS plot (**Figure 12**). ANOSIM indicated that the invertebrate communities from sediment samples were significantly different, albeit slightly, than those within SAV or Snag habitats when samples from all three river systems were accounted for. Additionally, invertebrate communities collected from macroalgal habitats were significantly different from those collected from snag habitats (**Table 20**).

Dominance scores were calculated for the taxa within each habitat for all samples. The 15 macroinvertebrate taxa with the highest dominance scores for each habitat are listed in Table 21 with their dominance scores as well as their percent contribution to the total number of organisms in all samples from each site. Snag habitat displayed the highest total species richness of 142 taxa, followed by SAV and macroalgae (which had the same species richness of 118 taxa). Sediment and rock habitat had similar taxa richness with 86 and 84 taxa, respectively. The dominant taxon found in the macroalgae samples was the amphipod Hyalella azteca sp. complex making up 49% of the organisms found in macroalgae samples. Hydrobiidae snails are the second most dominant taxon in the macroalgae samples. Dominant taxa found in the rock samples were the tanaid Leptocheliidae spp., followed by the amphipod G. bonnieroides. Dominant taxa found in the SAV samples were the midges Tanytarsus spp. and Cricotopus/Orthocladius spp. making up 22% and 12% of the organisms found in all of the SAV samples, respectively. Dominant taxa found in the sediment samples were the amphipod G. bonnieroides and Tubificinae worms making up 20% and 15% of the total organisms found in all of the sediment samples, respectively. Dominant taxa found in snag samples were the tanaid Leptochellidae spp., followed by the amphipod A. louisianum, making up 30% and 22% of the total organisms found in all snag samples, respectively.

Table 19 - Spearman's Rank Correlation Results for Biological Metrics and Abiotic Factors for All Systems

Physical- Chemical Parameters	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index (d)	Pielou's Evenness Index (J')	Shannon's Diversity Index (H'(loge))	Simpson's Diversity Index (1-Lambda')
Water Temperature (°C)	Rho = -0.287 p = 0.112	Rho = -0.071 p = 0.688	Rho = -0.404 p = 0.022	Rho = 0.0148 p = 0.418	Rho = -0.125 p = 0.495	Rho = -0.029 p = 0.877
Dissolved Oxygen (mg/L)	Rho = 0.056 p = 0.763	Rho = 0.008 p = 0.967	Rho = -0.073 p = 0.691	Rho = -0.054 p = 0.767	Rho = 0.052 p = 0.779	Rho = 0.012 p = 0.949
Dissolved	Rho = 0.024	Rho = -0.001	Rho = -0.109	Rho = -0.038	Rho = 0.034	Rho = -0.002 p
Oxygen (%)	p = 0.896	p = 0.995	p = 0.554	p = 0.834	p = 0.854	= 0.991
Salinity (ppt)	Rho = -0.354	Rho = -0.071	Rho = -0.410,	Rho = 0.299	Rho = -0.036	Rho = 0.155 p
	p = 0.047	p = 0.700	p = 0.020	p = 0.097	p = 0.846	= 0.398
Conductivity (µS/cm)	Rho = -0.421	Rho = -0.020	Rho = -0.494	Rho = 0.303	Rho = -0.064	Rho = 0.155 p
	p = 0.016	p = 0.914	p = 0.004	p = 0.092	p = 0.726	= 0.397
pH (SU)	Rho = 0.035	Rho = 0.002	Rho = -0.061	Rho = -0.112	Rho = 0.001	Rho = -0.042
	p = 0.851	p = 0.991	p = 0.741	p = 0.540	p = 0.995	p = 0.818
Turbidity	Rho = -0.351	Rho = -0.133	Rho = -0.422	Rho = 0.157	Rho = -0.099	Rho = -0.005
(NTU)	p = 0.049	p = 0.467	p = 0.016	p = 0.392	p = 0.590	p = 0.978
Canopy	Rho = 0.383	Rho = -0.228	Rho = 0.625	Rho = 0.031	Rho = 0.307	Rho = 0.187
Cover (%)	p = 0.031	p = 0.209	p = 0.000	p = 0.865	p = 0.088	p = 0.306
Habitat	Rho = 0.420	Rho = 0.207	Rho = 0.501	Rho = -0.316	Rho = 0.151	Rho = -0.030
Diversity	p = 0.017	p = 0.255	p = 0.004	p = 0.078	p = 0.409	p = 0.869

Note: Rho is the correlation coefficient, bolded cells are considered to be statistically significant at p<0.05.

Figure 12 - nMDS for all Samples with Habitat Type as the Factor



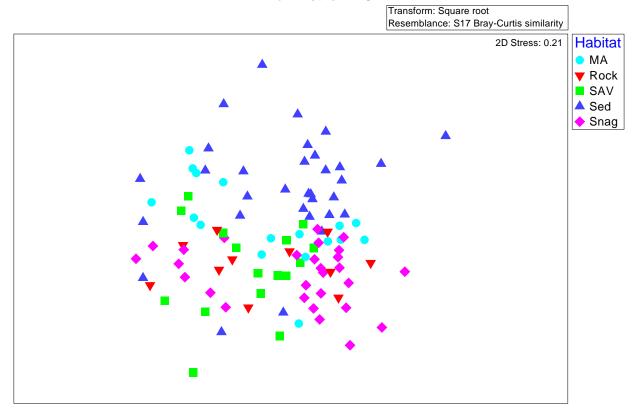


Table 20 - ANOSIM Results for all Samples with Habitat Type as the Factor

	MA	Rock	SAV	Sed	Snag
MA					
Rock	0.172019				
SAV	0.131463	0.095455			
Sed	0.179481	0.189026	0.265882		
Snag	0.199277	0.04349	0.123929	0.313547	
Global R = 0.195, p = 0.001					

Table 21 - Dominant 15 Taxa in Each Habitat

		Macroalgae		Rock		SAV		Sediment		Snag	Snag	
Common Classification	Scientific Name	Dominance Index Score	% of Total	Dominance Index Score	% of Total							
	Laeonereis culveri	5.00	0.67%	7.20	1.42%			28.37	13.28%			
Annelida (worms)	Limnodrilus hoffmeisteri							10.93	2.47%			
rumonaa (mormo)	Pristina leidyi			5.58	3.43%	6.63	1.01%			9.75	1.90%	
	Tubificinae spp.	6.88	1.08%			7.61	1.32%	31.04	14.45%			
	Americorophium ellisi							6.25	1.84%			
	Americorophium sp. A									7.93	3.52%	
	Apocorophium Iouisianum	10.70	3.05%					11.88	5.82%	34.17	20.44%	
	Cassidinidea ovalis					8.01	1.28%					
	Cyathura polita							6.60	1.60%			
	Gammarus spp.	20.89	6.98%	12.73	4.46%	18.82	7.08%	9.52	2.99%	7.73	1.40%	
Crustaceans	Grandidierella bonnieroides	16.16	4.64%	34.78	19.01%	8.77	2.05%	31.81	18.56%	17.29	5.23%	
	Hyalella azteca sp. complex	52.44	48.90%	18.44	4.68%	21.83	8.48%	6.55	1.41%	10.04	2.57%	
	Leptocheliidae spp.	18.19	5.29%	41.07	37.11%	11.15	2.84%	9.82	3.54%	44.52	27.75%	
	Melita nitida complex			6.21	0.85%							
	Sinelobus stanfordi									19.12	7.88%	
	Uromunna reynoldsi	11.16	2.49%	11.99	2.64%	11.77	3.17%			7.05	1.16%	
Insects	•											
	Chironomidae spp.			5.69	0.59%	10.05	1.62%					
	Cladotanytarsus spp.			6.74	0.83%			5.24	1.13%			
	Cricotopus or Orthocladius			6.75	0.72%	31.75	11.52%			5.72	0.61%	
	Dicrotendipes spp.	15.31	3.41%	19.00	4.97%	21.82	6.92%	11.90	3.11%	14.20	2.69%	
	Nanocladius spp.					7.88	1.99%					
Diptera	Polypedilum halterale group							5.16	1.25%			
	Polypedilum scalaenum group							7.75	1.98%			
	Polypedilum illinoense group					12.73	3.71%			6.04	1.02%	
	Tanytarsus spp.	9.02	1.18%	12.75	2.98%	41.11	20.80%			14.54	3.48%	
Ephemeroptera (mayfly)	Caenis diminuta	3.71	0.44%									
Tichoptera (caddisfly)	Cheumatopsyche spp.	4.02	0.86%							5.75	1.32%	
	Hydrobiidae spp.	29.92	10.23%	16.58	5.04%	20.74	5.74%	24.21	12.09%	17.27	4.64%	
,	Melanoides spp.	6.84	1.50%	5.16	0.73%							
Platyhelminthes(flatworms)	Platyhelminthes spp.	5.01	0.50%									
Total Species	Richness	118		84		118		86		142		
Chassahowitzka Sp		50		40		72		46		80		
Homosassa Spec		68		41				57		74		
Weeki Wachee Spo		58		40		76		29		61		

Correlations between the Biological Community and Abiotic Factors

Associations were made between physicochemical parameters and biological metrics for all systems combined using the nonparametric correlation statistic Spearman's Rank, which is shown in the correlation matrix **Table 19**. Water temperature, salinity, conductivity, and turbidity were all significantly inversely correlated with Margalef's richness index. Conversely, Margalef's richness index was positively correlated with habitat diversity (number of habitats sampled) and canopy cover, as was richness. Richness was inversely correlated with salinity, conductivity (a covariate of salinity), and turbidity. None of the diversity indices nor abundance metrics were correlated to any of the abiotic factors.

Spearman's Rank correlation analysis was used to look at percent composition of major taxonomic groups within each zone and the water quality parameter measurements. **Table 22** presents the significant correlations. Percent composition of several insect groups were negatively correlated with salinity, conductivity, water temperature, and turbidity. The caddisflies (Trichoptera) and mayflies (Ephemeroptera) are known to be sensitive to pollution and salinity, which in this case was evident by the stronger negative correlations to salinity and turbidity as compared to the other taxa groups. Annelid worms, however, were positively correlated with salinity and turbidity. The insect taxa tend to be associated more with freshwater, while worms are more common in estuarine and marine waters.

Table 22 - Significant Spearman's Rank Correlation Results for Percent of Major Taxonomic Groups per Zone and Water Quality for All Systems

Percentage of Major Taxonomic Group by Zone	Salinity ppt	Conductivity µS/cm	Water Temperature °C	Turbidity NTU	Dissolved Oxygen %
Acari	-0.530	-0.505	-	-	-
	0.002	0.003	NS	NS	NS
Annelida	0.421	0.368	-	0.354	-
	0.017	0.038	NS	0.047	NS
Coleoptera	-0.609	-0.612	-0.480	-0.575	-
	0.000	0.000	0.005	0.001	NS
Diptera	-	-0.349	-0.384	-0.509	-
	NS	0.050	0.030	0.003	NS
Ephemeroptera	-0.613	-0.659	-0.491	-0.688	-
	0.000	0.000	0.004	0.000	NS
Heteroptera	-0.377	-0.376	-	-	-
	0.033	0.034	NS	NS	NS
Lepidoptera	-0.519	-0.531	-0.453	-0.560	
	0.002	0.002	0.009	0.001	NS
Trichoptera	-0.701	-0.732	-0.637	-0.740	-0.362
	0.000	0.000	0.000	0.000	0.042
Odonata	-0.546	-0.542	-	-0.473	-
	0.001	0.001	NS	0.006	NS

Note: The top bolded value in each cell is Rho, the correlation coefficient. The bottom value in italics is the p-value. All results reported in this table are considered to be statistically significant at p<0.05

Longitudinal Patterns

Waterbody Area and Waterbody Type were used as factors to investigate longitudinal trends in invertebrate communities for samples from all three river systems. No distinctive pattern was observed in the nMDS plot when Waterbody Area was used as a factor (**Figure 13**). However, ANOSIM indicated a slightly significant difference between invertebrate communities within the Lower river samples when compared with those from the Upper and Spring samples (**Table 23**). As discussed previously, lower portions of each river system are more influenced by tides, therefore, the fluctuations in salinity may limit the occurrence of certain species in lower reaches of each river system. No significant differences existed between the invertebrate communities from Spring, Tributary and River samples when samples from all three river systems were examined with nMDS and ANOSIM (Global R = 0.03, p = 0.206).

Non-metric MDS

Transform: Square root
Resemblance: S17 Bray-Curtis similarity

2D Stress: 0.21

Waterbody Area
Spring
Upper
Lower

Figure 13 - nMDS for all Samples with Waterbody Area as the Factor

Table 23 - ANOSIM Results for all Samples with Waterbody Area as the Factor

	Spring	Upper	Lower		
Spring					
Upper	0.082782				
Lower	0.275369	0.228566			
Global R = 0.174, p = 0.001					

Comparison to Previous Studies

Janicki Environmental, Inc. (2006) defined four salinity classes for Southwest Florida tidal rivers based on benthic macroinvertebrate community structures: 0-7 ppt = oligohaline; 8-18 ppt = mesohaline; 19-29 ppt = polyhaline; and >29 ppt = eurohaline. During the Amec Foster Wheeler sampling events, all measured salinities were less than 7 ppt; therefore, they are classified as oligohaline based on Janicki's classification system.

3.2 Comparisons within Rivers

Benthic macroinvertebrate communities of the three river systems, Chassahowitzka, Homosassa, and Weeki Wachee, will be discussed below on an individual river basis. Results will be summarized in relation to abiotic physicochemical parameters, habitat type, waterbody type, and longitudinal gradient. To examine trends in more detail for each river system, the same factors were used in similar analyses as above, with the addition of the BEST analysis to investigate correlations with environmental parameters. Percent composition of major taxonomic groups and functional feeding groups within each system were examined by habitat and by zone. Percent composition of functional feeding groups by waterbody type were also examined. Furthermore, average abundance, total species richness and average diversity by each river zone were examined for trends in invertebrate community structure along a longitudinal gradient within each river system.

3.3 Chassahowitzka

Invertebrate communities of the Chassahowitzka and its associated springs and tributaries will be discussed below in relation to abiotic factors, habitat type, waterbody type, and longitudinal gradient.

Abiotic Factors

Table D-1 in **Appendix D** provides a comprehensive correlation matrix for the Chassahowitzka River zones that includes parametric (Pearson's R) and nonparametric (Spearman's Rho and Kendall's Tau) correlation results between physicochemical parameters and biological metrics. Distance from the headspring in river kilometer was included as a factor to determine whether a longitudinal gradient existed, therefore results from those analyses will be provided in the appropriate section below. Additionally, the biological metrics and abiotic factors will also be provided in a subsequent section.

Habitats

Habitat diversity (number of habitats sampled) was evaluated to determine if the number of habitats that were available to sample within each zone in Chassahowitzka River was correlated to other abiotic factors or biological metrics. It must be noted that there was a limited amount of data to conduct these analyses. In addition, significant correlations do not necessarily indicate causation of one parameter onto another. This nuance can be applied to the other two river systems as well. Given these two caveats, for all sites combined, habitat diversity was negatively correlated with water temperature (Rho = -0.732, p = 0.004), salinity (Rho = -0.629, p = 0.021), conductivity (Rho = -0.643, p = 0.018), and turbidity (Rho = -0.720, p = 0.005). Habitat diversity was also positively correlated with Shannon's diversity (Rho = 0.649, p = 0.016), richness (Rho =

0.586, p = 0.035), and Margalef's richness (Rho = 0.794, p = 0.001). The full correlation matrix results output from MINITAB is provided in **Table C-2** in **Appendix C**.

For Chassahowitzka, crustaceans were the dominant major taxonomic group in the macroalgae, rock, sediment and snag habitats, while midges were the most abundant and dominant taxa in the SAV habitats. Ephemeroptera were rare across all habitats; however they were most common in macroalgae samples. Trichoptera were also rare across all habitats; however they were most common in SAV samples (**Figure 14**). When percent composition of organisms within each functional feeding group was examined by habitat, collector-gatherer/deposit feeders were found to be the dominant group, followed by browser-grazers, in all habitats. Filter-feeders were most common in snag habitats (**Figure 15**).

Figure 14 - Percent Composition of Organisms from Major Taxa Groups by Habitat Type within the Chassahowitzka River

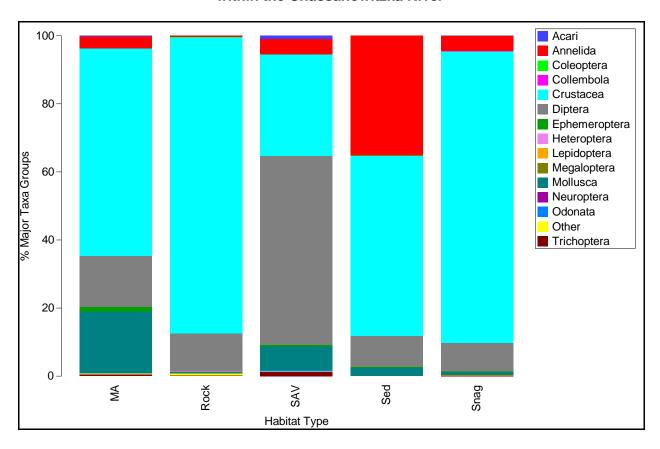
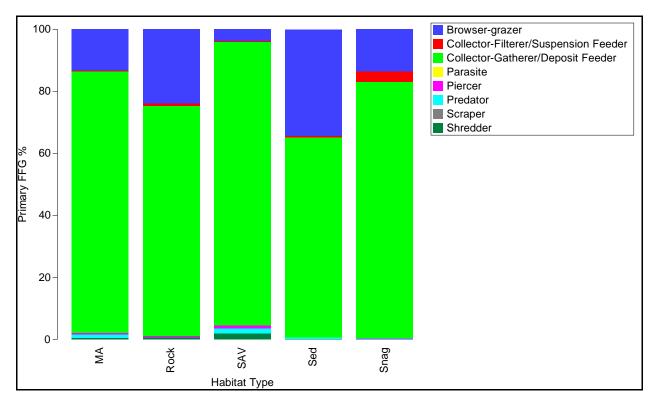


Figure 15 - Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Chassahowitzka River



When samples from Chassahowitzka were ordinated with nMDS, a separation between the samples collected in sediment habitats versus some of the other habitats was evident (Figure 16). The ANOSIM results revealed additional significant differences for invertebrate communities between macroalgae and rock habitats, and between macroalgae and snag habitats (Table 24). SIMPER results listed the taxa that contributed up to 50% cumulatively to the dissimilarity between the significant pairwise comparisons observed in the ANOSIM for Habitat Type (Table 25). More motile speices including the snail, Hydrobiidae spp.; the amphipod, Gammarus spp.; the isopod, Uromunna reynoldsi; and the midge, Dicrotendipes spp. all had higher average abundances in the macroalgae habitats and contributed to the significant differences observed between the invertebrate communities in this habitat and those in the rock and snag habitats. This could be due to their mobility and/or dietary requirements as these organisms may feed directly on the macroalgae. The annelid worms, L. culveri and Tubificinae spp., and the amphipod, G. bonnieroides, had higher average abundances in the sediment habitats versus the SAV and snag. These organisms contributed to the significant differences observed between these invertebrate communities. Organisms such as the tanaid Leptocheliidae spp. and the amphipod A. louisianum are tube-dwelling organisms that can occur in high densities and typically attach to debris or submerged vegetation (Heard et al., 2003; LeCroy, 2004). These two taxa had higher average abundances within the snag habitat as would be expected (**Table 25**). Additionally, organisms that are confined to the sediment, such as annelid worms, had higher average abundances as expected in this habitat.

Figure 16 - nMDS for the Chassahowitzka River Samples with Habitat Type as the Factor

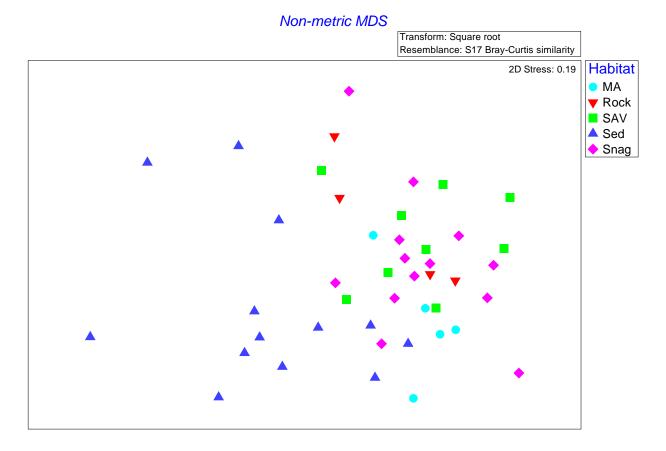


Table 24 - ANOSIM Results for the Chassahowitzka River Samples with Habitat Type as the Factor

	MA	Rock	SAV	Sed	Snag
MA					
Rock	0.38125				
SAV	0.16715	0.261905			
Sed	0.248252	0.26511	0.391963		
Snag	0.344056	0.157967	0.230469	0.495524	
Global R = 0.315, p = 0.001					

Table 25 - Chassahowitzka River SIMPER Results for Significant Pairwise Comparisons between Habitat Types

Таха	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity					
MA vs. Rock, Average Dissimilarity = 74.74									
	Rock	MA							
Hydrobiidae spp.	2.5	36.68	13.82	13.82					
Gammarus spp.	10.61	38.72	10.64	24.46					
Leptocheliidae spp.	28.41	23.08	9.03	33.49					
Grandidierella bonnieroides	21.67	22.26	6.37	39.86					
Dicrotendipes spp.	9.66	17.68	5.64	45.5					
Uromunna reynoldsi	9.07	18.98	4.95	50.45					
	MA vs. Snag, Av	erage Dissimilari	ity = 75.25						
	Snag	MA							
Hydrobiidae spp.	4.16	36.68	10.88	10.88					
Gammarus spp.	5.36	38.72	9.79	20.67					
Leptocheliidae spp.	30.81	23.08	7.42	28.08					
Apocorophium Iouisianum	20.21	11.49	6.48	34.56					
Dicrotendipes spp.	6.62	17.68	4.85	39.41					
Grandidierella bonnieroides	7.07	22.26	4.78	44.19					
Uromunna reynoldsi	5.16	18.98	4.53	48.72					
Tanytarsus spp.	8.11	12.66	3.71	52.44					
	Sed vs. Snag, Av	erage Dissimilar	ity = 86.98						
	Sed	Snag							
Leptocheliidae spp.	7.77	30.81	10.71	10.71					
Laeonereis culveri	24.29	3.13	7.46	18.18					
Apocorophium louisianum	5.99	20.21	7.23	25.41					
Tubificinae spp.	23.99	0.96	7.08	32.49					
Grandidierella bonnieroides	27.75	7.07	6.36	38.85					
Sinelobus stanfordi	1.96	12.78	4.09	42.94					
Americorophium ellisi	9.85	1.8	3.59	46.53					
Tanytarsus spp.	3.51	8.11	3.32	49.85					
Gammarus spp.	10.12	5.36	3.31	53.16					
	Sed vs. SAV, Ave	erage Dissimilari	ty = 85.40						
	Sed	SAV							
Laeonereis culveri	24.29	4.74	7.53	7.53					
Tubificinae spp.	23.99	1.64	7.15	14.68					
Grandidierella bonnieroides	27.75	7.31	6.47	21.15					
Tanytarsus spp.	3.51	18.09	5.87	27.02					
Cricotopus or Orthocladius	1.6	14.4	5.32	32.34					
Gammarus spp.	10.12	14.21	5.21	37.55					
Hydrobiidae spp.	7.17	12.19	5.05	42.6					
Polypedilum illinoense group	0	9.52	4.17	46.77					
Leptocheliidae spp.	7.77	8.97	3.81	50.58					

Waterbody Type

Comparison of invertebrate communities by waterbody type at Chassahowitzka revealed that the spring invertebrate community was different than those in the tributaries and the river (Figure 17). ANOSIM results revealed these significant differences were slight with a low Global R and higher p-value (Table 26). SIMPER results listed the taxa that contributed up to 50% cumulatively to the dissimilarity between the significant pairwise comparisons observed in the ANOSIM for Waterbody Type (Table 27). Multiple taxa had higher average abundances in the spring invertebrate communities versus those in the river, and contributed to the significant difference observed between these two waterbody types. The amphipod, A. louisianum and the tanaid Leptocheliidae spp. are both found in low salinity waters which were characteristic of the river and tributaries in the Chassahowitzka (Heard et al., 2003; LeCroy, 2004). These two taxa had higher average abundances in the river and tributaries than the spring, and contributed to the observed significant differences between these invertebrate communities (Table 27). The other taxa did not exhibit much differences in average abundances between the two waterbody types. When percent composition of organisms within each functional feeding group was examined by waterbody type, collector-gatherer/deposit feeders, followed by browser-grazers, were found to be the dominant group in spring, tributary and river samples (Figure 18).

Non-metric MDS

Transform: Square root
Resemblance: S17 Bray-Curtis similarity

2D Stress: 0.19

✓ Spring
✓ Tributary
■ River

Figure 17 - nMDS for Chassahowitzka with Waterbody Type as the Factor

Table 26 - ANOSIM Results for Chassahowitzka with Waterbody Type as the Factor

	Spring	Tributary	River		
Spring					
Tributary	0.170239				
River	0.195484	0.023681			
Global R = 0.146, p = 0.008					

Table 27 - Chassahowitzka River SIMPER Results for Significant Pairwise Comparisons between Waterbody Types

Таха	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity				
Spring vs. River, Average Dissimilarity = 80.70								
Spring River								
Leptocheliidae spp.	11.49	26.09	8.64	8.64				
Grandidierella bonnieroides	13.02	19.97	6.12	14.76				
Gammarus spp.	8.76	18.82	5.74	20.5				
Laeonereis culveri	7.66	13.41	5.69	26.19				
Hydrobiidae spp.	6.29	13.99	5.14	31.33				
Tubificinae spp.	7.13	10.35	4.93	36.27				
Apocorophium louisianum	1.51	15.83	4.9	41.16				
Tanytarsus spp.	5.65	13	4.69	45.85				
Dicrotendipes spp.	5.53	11.41	3.6	49.45				
Sinelobus stanfordi	0.44	10.14	3.3	52.75				
Spring vs	. Tributary, Ave	erage Dissimila	rity = 75.41					
	Spring	Tributary						
Apocorophium Iouisianum	1.51	21.38	10.42	10.42				
Leptocheliidae spp.	11.49	14.27	8.07	18.5				
Grandidierella bonnieroides	13.02	13.93	6.06	24.56				
Laeonereis culveri	7.66	7.71	5.54	30.1				
Hydrobiidae spp.	6.29	10.19	5.36	35.46				
Polypedilum illinoense group	4.1	7.99	4.07	39.52				
Gammarus spp.	8.76	4.48	4.03	43.55				
Tubificinae spp.	7.13	1.43	3.28	46.83				
Cricotopus or Orthocladius	3.82	5.37	3.22	50.06				

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Figure 18 - Percent Composition of Organisms from each Functional Feeding Group by Waterbody Type within the Chassahowitzka River

Longitudinal Patterns

As mentioned above, longitudinal gradients were examined using parametric (Pearson's R) and non-parametric (Spearman's Rho and Kendall's Tau) correlation analyses in the Chassahowitzka River. For the abiotic factors, habitat diversity, water temperature, salinity, conductivity and turbidity all had significantly strong and positive correlations with distance from the headspring, which indicates a strong longitudinal gradient that increases with distance. However, canopy cover decreased significantly along the longitudinal gradient (**Table D-1 in Appendix D**). In addition, biological metrics were evaluated, which resulted in two significant and strong longitudinal gradients where richness and Margalef's richness index both decrease with distance downstream. This is a similar pattern that was found in the overall correlations mentioned above. Additionally, Shannon's diversity index appeared to also decrease longitudinally downstream.

Waterbody Type

The total abundance of organisms in each sample was averaged by river zone to conduct analyses. Higher average abundances occurred in the upper zones of the mainstem of Chassahowitzka River (Figure 19). Total species richness peaked in the second spring zone (S-2) and declined downstream. Similarly, species richness peaked in the first river zone (R-1) and declined further downstream in the Potter Creek spring run (Figure 20). Average Shannon's diversity indices did not vary much longitudinally in the Chassahowitzka River (Figure 21). Average species richness on the mainstem river downstream of the junctions of Salt and Potter Creek is about half of that collected in the upper river. These results are also shown spatially in Figure 22.

The mainstem river channel included a lower river zone downstream of the Potter Creek junction, an upper river zone upstream of the Salt Creek junction, an intermediate area between those two stream junctions, and three separate spring zones. The data also suggests Potter Creek included a headspring zone, a short upper creek zone, and a longer lower creek zone.

Figure 19 - Average Abundance of Organisms by River Zone in the Chassahowitzka River

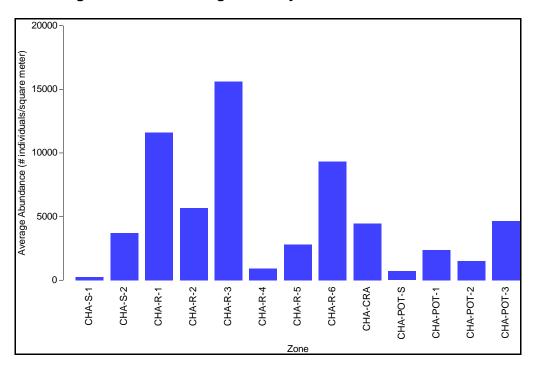


Figure 20 - Total Species Richness by River Zone in the Chassahowitzka River

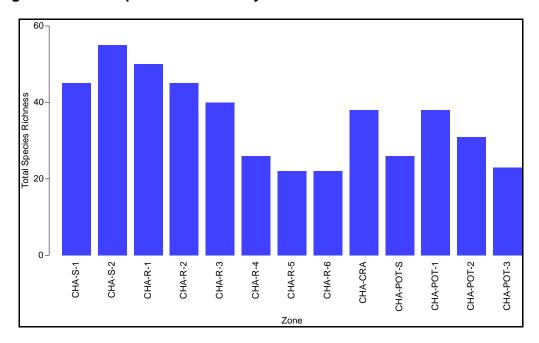
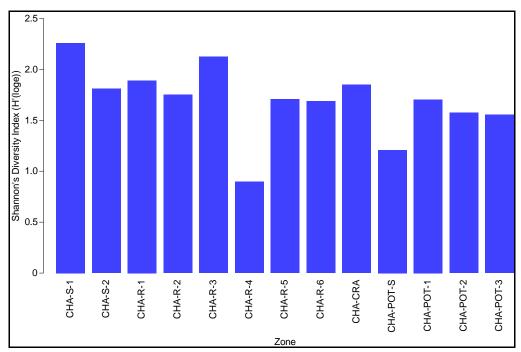


Figure 21 - Average Shannon's Diversity Index by River Zone for the Chassahowitzka River



Crustaceans were the dominant taxa in all zones except CHA-R-4 where molluscs were the dominant major taxon (**Figure 23**). Ephemeroptera, Odonata, and Trichoptera species were absent from lower river Chassahowtizka River samples (R-4, R-5, R-6); lower Potter Creek Samples (POT-R-2 and POT-R-3); and Crab Creek Spring (CRA). Collector-gatherer/deposit feeders were the dominant functional feeding group present in all zones within the Chassahowitzka River (**Figure 24**).

LEVY MARION CHA-POT-S Abundance: 707 CITRUS Richness: 12 Project Location Shannon's: 1.2 SUMTER CHA-POT-1 bundance: 2370 **HERNANDO** Richness: 18 Location Map Shannon's: 1.7 Not to Scale CHA-POT-2 Abundance: 1529 Richness: 15 Shannon's: 1.6 CHA-POT-3 Abundance: 4640 Richness: 13 Shannon's: 1.6 CHA-CRA-S CHA-S-1 CHA-R-2 CHA-R-1 Abundance: 260 Abundance: 5669 Abundance: 11607 Abundance: 4443 Richness: 18 Richness: 22 Richness: 17 Richness: 18 CHA-R-5 Shannon's: 1.8 Shannon's: 1.9 Shannon's: 2.3 Shannon's: 1.8 Abundance: 2794 Richness: 13 Shannon's: 1.7 CHA-R-3 CHA-R-6 CHA-R-4 CHA-S-2 Abundance: 9319 Abundance: 938 Abundance: 15601 Abundance: 372: Richness: 11 Richness: 11 Richness: 20 Richness: 21 Shannon's: 1.7 Shannon's: 0.9 Shannon's: 2.1 Shannon's: 1. Johnson Creek **Explanation of Features** Notes: Sample Sites Chassahowitzka River System Data Source - ESRI Aerial amec **SWFWMD Coastal Rivers** foster This map is intended to be used for planning purposes only. It is not a survey. Abundance: Total Number of Individuals/m2 Invertebrate Analysis wheeler Richness: Number of Taxa Citrus County, FL Shannon's (Diversity Index): H'(loge)

Figure 22 - Spatial Distribution of Selected Average Biological Metrics per Zone in the Chassahowitzka River

Figure 23 - Percent Composition of Organisms from Major Taxa Groups by River Zone in the Chassahowitzka River

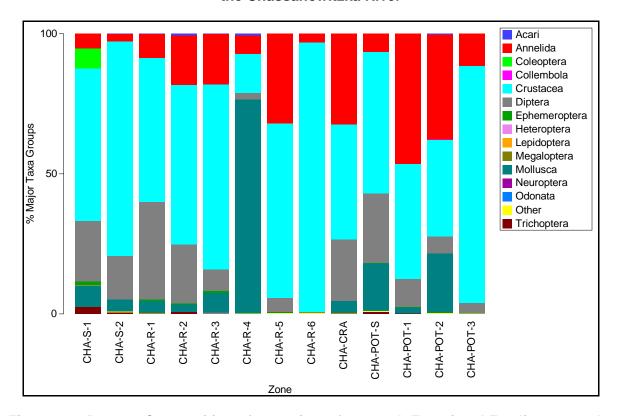
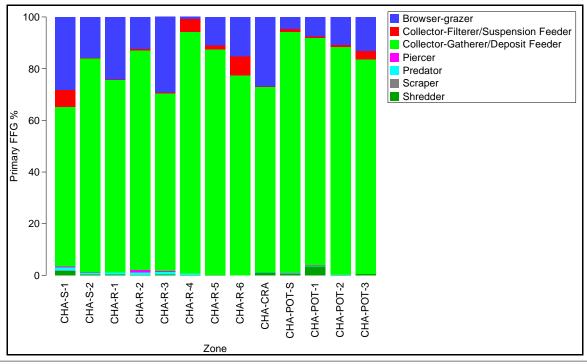


Figure 24 - Percent Composition of Organisms from each Functional Feeding Group by River Zone within the Chassahowitzka River



Longitudinal patterns within the Chassahowitzka were also examined by using Waterbody Area as a factor. The nMDS plot showed some separation between the different Waterbody Areas (Figure 25). ANOSIM indicated a significant difference between samples collected in the lower reaches of the Chassahowitzka when compared with those from the upper and spring areas of the river (Table 28). The amphipods, G. bonnieroides, Gammarus spp., and H. azteca sp. complex, all had higher average abundances in the spring versus the lower area of Chassahowitzka and contributed to the significant differences observed between these invertebrate communities. The Hyalella genus of amphipod has been noted to reside primarily in freshwaters, but can be swept downstream by rain events. It is currently unknown whether this species can survive long-term in higher salinities (LeCroy, 2007). The tanaid, Leptocheliidae spp.; the amphipods, Gammarus spp. and G. bonnieroides; and the midge, Tanytarsus spp., all had substantially higher average abundances in the upper versus the lower areas of the river. Tanytarsus spp. and G. bonnieroides have been known to occur in brackish waters (Epler, 1995; LeCroy, 2002). These taxa, along with several others, contributed to the dissimilarity observed between the invertebrate communities located in these two areas of the Chassahowitzka River (Table 29).

Figure 25 - nMDS Plot for Chassahowitzka with Waterbody Area as the Factor

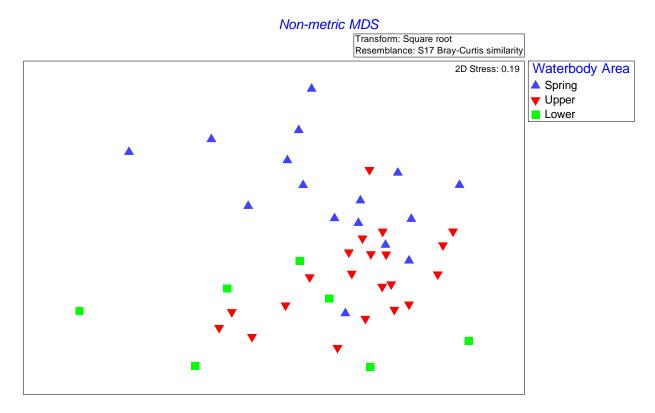


Table 28 - ANOSIM Results for Chassahowitzka with Waterbody Area as the Factor

	Spring	Upper	Lower		
Spring					
Upper	0.22307				
Lower	0.443769	0.379922			
Global R = 0.300, p = 0.001					

Table 29 - Chassahowitzka River SIMPER Results for Significant Pairwise Comparisons between Waterbody Areas

Taxa	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity				
Spring vs. Lower, Average Dissimilarity = 88.48								
	Spring	Lower						
Leptocheliidae spp.	13.64	14.92	7.54	7.54				
Hydrobiidae spp.	6.89	9.08	6.71	14.25				
Tubificinae spp.	4.15	7.64	5.85	20.1				
Apocorophium louisianum	0.71	17.69	5.55	25.65				
Grandidierella bonnieroides	12.63	2.38	4.9	30.55				
Laeonereis culveri	3.13	7.32	4.62	35.18				
Gammarus spp.	10.4	1.88	4.25	39.42				
Americorophium ellisi	0	7.55	4.02	43.44				
Sinelobus stanfordi	0.53	11.25	3.43	46.87				
Hyalella azteca sp. complex	4.95	0.7	3.15	50.02				
Upper v	s. Lower, Avera	age Dissimilari	ty = 80.50					
	Upper	Lower						
Leptocheliidae spp.	23.27	14.92	8.42	8.42				
Apocorophium louisianum	15.1	17.69	7.27	15.7				
Grandidierella bonnieroides	23.71	2.38	6.6	22.3				
Laeonereis culveri	16.71	7.32	5.8	28.1				
Hydrobiidae spp.	13.17	9.08	5.69	33.79				
Gammarus spp.	18.36	1.88	5.12	38.92				
Tubificinae spp.	10.94	7.64	4.99	43.91				
Tanytarsus spp.	13.53	0.35	4.45	48.36				
Sinelobus stanfordi	6.35	11.25	3.99	52.35				

Correlations between the Biological Community and Abiotic Factors

Table D-1 in **Appendix D** provides a comprehensive correlation matrix that presents additional associations between biological metrics and abiotic factors found in Chassahowitzka River. Richness, Margalef's richness index and Shannon's diversity index all had strong significant inverse relationships with water temperature. DO was only negatively correlated with Pielou's evenness index and Simpson's diversity index (only with Pearson's R). Salinity and conductivity, which are covariates, were both strongly and negatively correlated with Margalef's richness index. pH was negatively correlated with Pielou's Evenness index and both diversity indices (only for Pearson's R). Situations where parameters are correlated by only the parametric test should be used with caution. Turbidity was correlated negatively with Margalef's richness index and Shannon's diversity index. Finally, Margalef's index was positively correlated with canopy cover. It appears that temperature, salinity, canopy cover, and turbidity may be good predictors for species richness (Margalef's index) in Chassahowitzka River. It should be noted that since several of the abiotic variables vary predictably with distance downstream, they may not actually influence the biological metrics despite significant correlations. For example, slight changes in temperature and pH with distance downstream are probably irrelevant related to the biology. It should be taken into consideration that regardless of the significant correlations with other parameters that 'Distance downstream' may be the most relevant variable. This distinction applies to the other two rivers as well.

The BEST analysis with the BIOENV option was utilized in PRIMER to identify significant correlations between the biological community structure and various environmental parameters. The combination of dissolved oxygen (%), conductivity (μ S/cm) and turbidity (NTU) was best correlated with the invertebrate community structure in the Chassahowitzka River (rho = 0.421). Values for each of these significant environmental variables were overlaid as bubbles on the nMDS plot for each sample. The size of the bubble corresponded directly to the value of the environmental variable and the color of the bubble represented each Zone. Dissolved oxygen (%), conductivity (μ S/cm) and turbidity (NTU) values were all lower in the spring zones and represented by the smaller bubbles, except for conductivity values in Potter Spring (**Figures 26a-c**). These results corroborated the longitudinal trends observed in the biological community. The invertebrate communities in the spring and upper zones are significantly different than the ones in the lower reaches of the river and some species such as beetles and the amphipod, *H. azteca* sp. complex prefer the physicochemical environmental in these areas of the Chassahowitzka River.

Figure 26a - Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of River Zones within the Chassahowitzka River

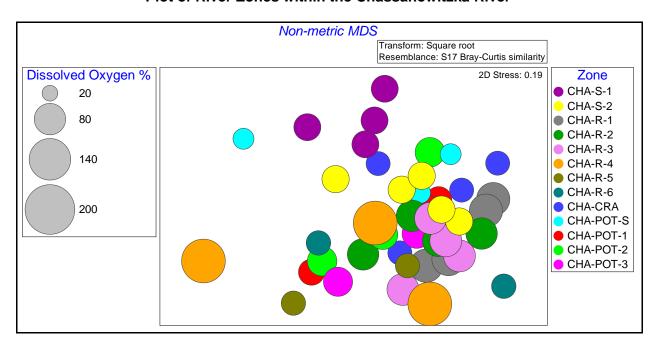


Figure 26b - BubblePplot of Conductivity (µS/cm) Values Superimposed on the nMDS Plot of River Zones within the Chassahowitzka River

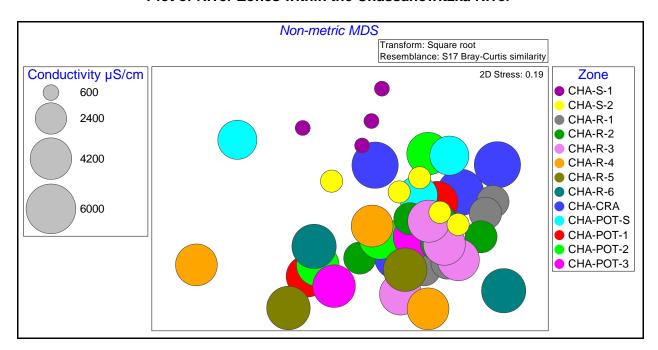
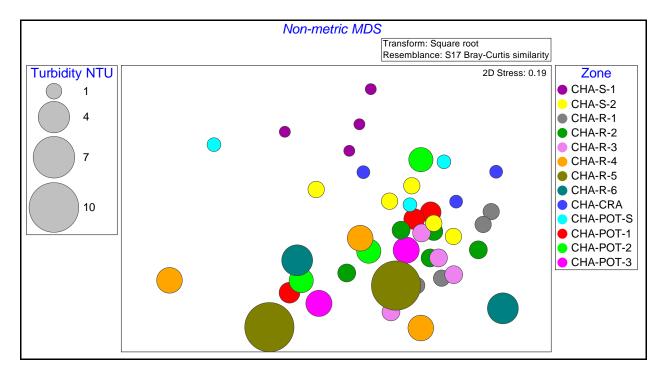


Figure 26c – Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS Plot of River Zones within the Chassahowitzka River



Comparison to Previous Studies

Janicki Environmental, Inc.'s (2006) analysis of the benthic community structure in the Chassahowitzka River revealed the dominant taxa to be the amphipod *Gammarus mucronatus*, and the polychaete worm *L. culveri*. *Laeonereis culveri* and *Gammarus* spp. were among the top fifteen dominant taxa in Chassahowitzka during the current study; however, the tanaid Leptocheliidae spp. was the most dominant taxa found during this study.

Mote Marine Laboratory (2006) collected and processed invertebrate samples from Chassahowitzka River over a gradient from the head spring to the mouth using a coring device and dipnet sweeps. Results illustrated a general trend in increased species diversity with distance downstream. The current study found a similar trend with a positive correlation between species richness and distance from headspring; however, there was not a longitudinal trend in Shannon's diversity index.

Janicki Environmental, Inc. (2008) performed a study of the macroinvertebrate community within Chassahowitzka River and its tributaries. Samples were collected with a Van Veen modified sampler within the mainstem of the river, Crab Spring Run, Lettuce Spring, Salt Creek, Potter Creek, Crawford Creek and Ryle Creek. Janicki Environmental, Inc. (2008) reported a mean number of species per samples as < 15 taxa, similar to the current study of approximately 16 taxa per sample. They also observed that the invertebrate community of the downstream estuarine creeks (Crawford and Ryles Creeks) differed from the other creek systems and the river. General trends differentiating the creeks included higher abundances of oligochaetes and the amphipod *G. mucronatus* in the Potter-Salt Creek systems and in the upper river. *Gammarus* spp. was the

second dominant taxa found in the current study behind the tanaid Leptocheliidae spp., however, oligocheate worms were not common in the current study. Janicki Environmental, Inc. (2008) also found the highest abundance of *Ampelisca* in the two most downstream creeks (Ryles and Crawford). *Ampelisca* spp. was not found in the current study; however the current study was limited to the upper portion of the river, and did not extend to the mouth.

3.4 Homosassa

Invertebrate communities of the Homosassa River and its associated springs and tributaries will be discussed below in relation to abiotic factors, habitat type, waterbody type, and longitudinal gradient.

Abiotic Factors

Table D-2 in **Appendix D** provides a comprehensive correlation matrix for the Homosassa River zones that includes parametric (Pearson's R) and nonparametric (Spearman's Rho and Kendall's Tau) correlation results between physicochemical parameters and biological metrics. Distance from the headspring in river kilometer was included as a factor to determine whether a longitudinal gradient existed. Therefore results from those analyses will be provided in the appropriate section below. Additionally, the biological metrics and abiotic factors will also be provided in a subsequent section.

Habitats

Habitat diversity (number of habitats sampled) was evaluated to determine if the number of habitats that were available to sample within each zone in Homosassa River was correlated to other abiotic factors or biological metrics. For all sites combined, habitat diversity was negatively correlated with water temperature (Rho = -0.829, p = 0.001) and DO (Rho = -0.730, p = 0.007). Habitat diversity was also positively correlated with canopy cover (Rho = 0.772, p = 0.003). The full correlation matrix results output from MINITAB is provided in **Appendix C in Table C-3**.

For Homosassa, crustaceans were the dominant taxonomic group within all habitats. Rock, macroalgae, and snag habitats displayed similar major taxonomic group distribution, with the second and third dominant groups being molluscs and Diptera (midges). Annelida worms were the second dominant taxa in sediment (**Figure 27**). Although Ephemeroptera were rare across all habitats, they were most common in macroalgae samples. Collector-gatherer/deposit feeders were the most dominant functional feeding group in all habitats within the Homosassa River (**Figure 28**) and the Halls River. Browser-grazers contributed substantially to the overall composition of the invertebrate communities from rock habitats within the Halls River (**Figure 29**).

Figure 27 - Percent Composition of Organisms from Major Taxa Groups by Habitat Type within the Homosassa River

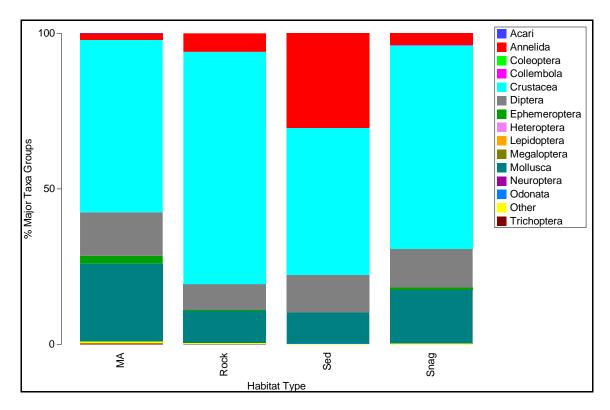


Figure 28 - Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Homosassa River

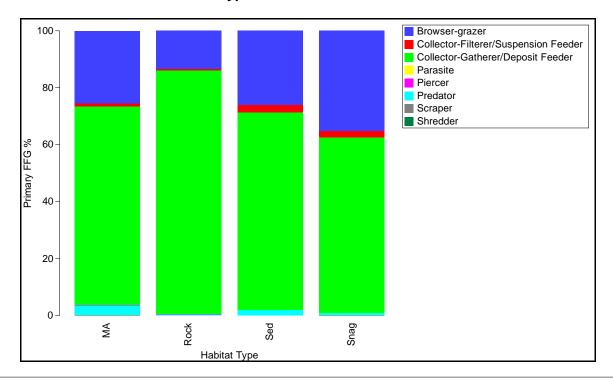
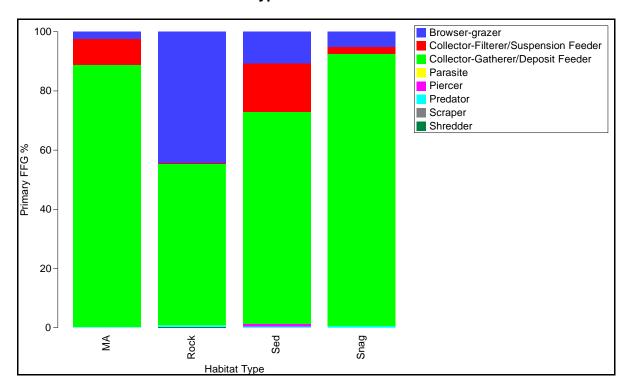


Figure 29 - Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Halls River



Samples from Homosassa were ordinated with nMDS and indicated that sediment and snag samples grouped with themselves (**Figure 30**). ANOSIM results depicted a significant difference between samples collected from these two habitats (**Table 30**). Several annelid worms, crustaceans and bivalves had higher average abundances in the sediment habitats than the snag habitats, as this is expected given their sedentary lifestyle, and contributed to the significant difference observed between these two invertebrate communities (**Table 31**).

Figure 30 - nMDS for Homosassa with Habitat Type as the Factor



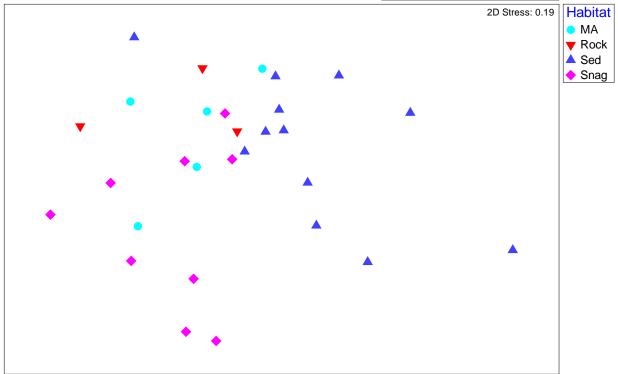


Table 30 - ANOSIM Results for Homosassa with Habitat Type as the Factor

	MA	Rock	Sed	Snag	
MA					
Rock	0.107692				
Sed	0.114035	0.031401			
Snag	0.113043	0.109212	0.39833		
Global R = 0.197, p = 0.013					

Table 31 - Homosassa River SIMPER Results for Significant Pairwise Comparisons between Habitat Types

Таха	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity
Sed vs.	Snag, Averag	je Dissimilarity	y = 85.67	
	Sed	Snag		
Laeonereis culveri	25.26	1.39	8.46	8.46
Grandidierella bonnieroides	24.34	10.97	8.37	16.83
Apocorophium louisianum	15.07	11.9	6.78	23.61
Hydrobiidae spp.	15.72	8.18	6.63	30.24
Leptocheliidae spp.	11.14	11.36	5.47	35.71
Dicrotendipes spp.	12.21	7.59	4.51	40.23
Tubificinae spp.	10.96	1.19	4.31	44.53
Boccardiella ligerica	5.24	0.31	2.38	46.91
Bivalvia spp.	4.83	0.16	2.2	49.12
Cyathura polita	6.26	0.16	1.98	51.1

Waterbody Type

The nMDS plot for Homosassa samples with Waterbody Type as the factor revealed distinct separation of samples from each other (**Figure 31**). However, ANOSIM indicated that only the invertebrate communities in the tributary (Halls River) were significantly different than the invertebrate community structure in the spring and river samples (**Table 32**). The snail, Hydrobiidae spp.; the amphipods, *A. louisianum*, *Cerapus* spp., and *Gammarus* spp.; the tanaid, Leptocheliidae spp.; and the annelid, *L. culveri* all had substantially higher average abundances in the Halls River samples when compared to the spring and river samples. These differences contributed to the significant pairwise comparison between the invertebrate community in Halls River with those in the spring and river samples (**Table 33**). Collector-gatherer/deposit feeders were the most dominant functional feeding group across all Waterbody Types in the Homosassa River. Browser-grazers comprised a considerable portion of the total in the river samples, but were not the majority; and filter feeders comprised a considerable portion of the total in the Halls River (Tributary), but again were not the majority (**Figure 32**).

Figure 31 - nMDS for Homosassa with Waterbody Type as the Factor

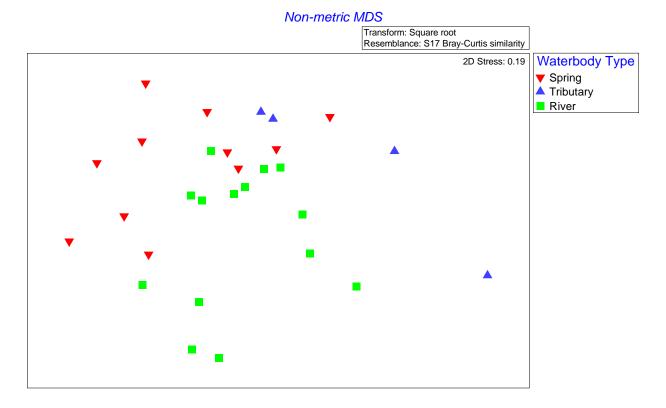


Table 32 - ANOSIM Results for Homosassa with Waterbody Type as the Factor

	Spring	Tributary	River	
Spring				
Tributary	0.376304			
River	0.186533	0.391016		
Global R = 0.259, p = 0.001				

Table 33 - Homosassa River SIMPER Results for Significant Pairwise Comparisons between Waterbody Types

Таха	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity			
Tributary vs. Spring, Average Dissimilarity = 86.10							
Tributary Spring							
Hydrobiidae spp.	35.05	11.41	10.22	10.22			
Leptocheliidae spp.	26.59	14.11	8.06	18.28			
Laeonereis culveri	28.59	8.57	7.05	25.32			
Grandidierella bonnieroides	16.35	14.66	6.02	31.35			
Apocorophium louisianum	31.11	1.16	5.74	37.09			
Gammarus spp.	19.49	6.76	4.83	41.92			
Dicrotendipes spp.	10.83	10.33	4.48	46.39			
Cerapus spp.	23.7	0	4.18	50.57			
Tributary v	vs. River, Aver	age Dissimilar	ity = 84.67				
	Tributary	River					
Hydrobiidae spp.	35.05	11.19	9.56	9.56			
Apocorophium louisianum	31.11	16.19	8.5	18.07			
Grandidierella bonnieroides	16.35	22.12	6.61	24.68			
Laeonereis culveri	28.59	10.61	6.45	31.12			
Leptocheliidae spp.	26.59	9.72	6.29	37.42			
Cerapus spp.	23.7	0.57	4.2	41.62			
Dicrotendipes spp.	10.83	12.96	4.18	45.8			
Gammarus spp.	19.49	1.95	3.77	49.57			
Bivalvia spp.	7.37	2.26	3.67	53.24			

Figure 32 - Percent Composition of Organisms from each Functional Feeding Group by Waterbody Type within the Homosassa River

Longitudinal Patterns

As mentioned above, longitudinal gradients were examined using parametric (Pearson's R) and nonparametric (Spearman's Rho and Kendall's Tau) correlation analyses in the Homosassa River. A similar pattern was found for the Homosassa River as was found in the Chassahowitzka River where water temperature, salinity, and conductivity significantly increased and canopy cover decreased along the downstream longitudinal gradient. Converse to Chassahowitzka, habitat diversity significantly decreased with distance from the headspring. None of the biological metrics were found to significantly vary with distance downstream (**Table D-2 in Appendix D**).

The total abundance of organisms in each sample was averaged by zone. The highest average abundance occurred in one of the zones within the Halls River. The remaining abundances varied slightly across the longitudinal gradient (**Figure 33**). Total species richness was highest in the first river zone and declined downstream. Similarly, richness peaked in the first river zone in the Halls River and declined downstream, but was particularly low in the HOM-HAL-2 zone (**Figure 34**). Average Shannon's diversity varied slightly along the gradient and was particularly low in the HOM-HAL-2 zone (**Figure 35**). These results are also shown spatially in **Figure 36**.

The mainstem river channel included an upper and lower river division occurring somewhere between zones HOM-R-5 and HOM-R-6, and two separate spring zones. Much like the Potter Creek tributary of the Chassahowitzka River, the Halls River tributary to the Homosassa River appears to have sub-zones including a headspring zone, a short upper channel zone, and a longer lower channel zone, where the lower channel zone has much lower species richness than the other zones.

Figure 33 - Average Abundance of Organisms by River Zone in the Homosassa River

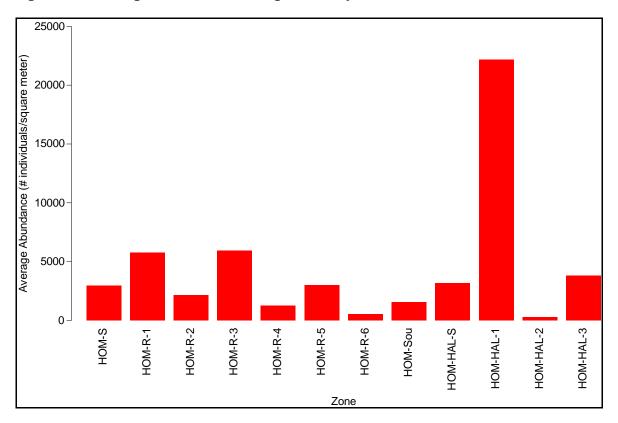
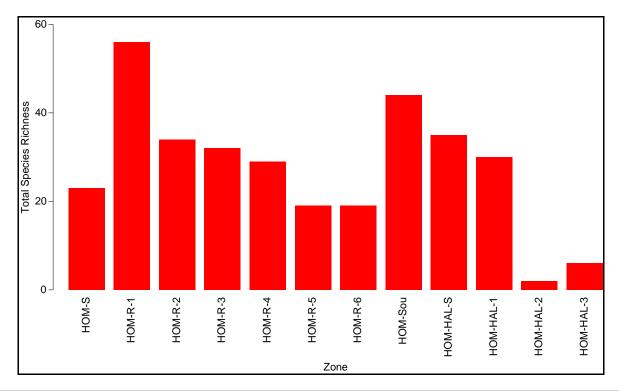


Figure 34 - Total Species Richness by River Zone in the Homosassa River



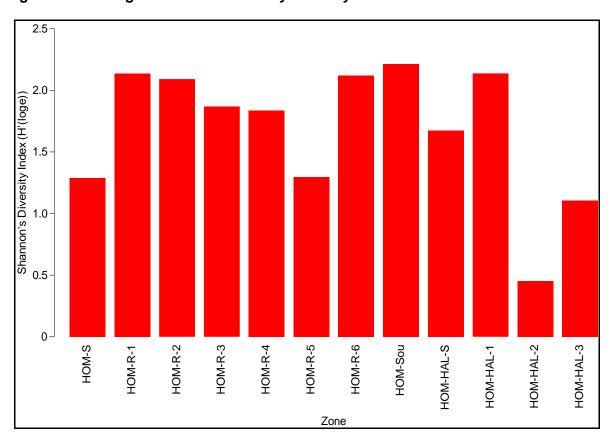


Figure 35 - Average Shannon's Diversity Index by River Zone for the Homosassa River

Crustaceans dominated all zones except HOM-R-4 where annelid worms were the most dominant, and HOM-HAL-3 where molluscs were the most dominant (**Figure 37**). Ephemeroptera, Trichoptera, and Odonata were absent from the Homosassa headspring samples (HOM-S), and Ephemeroptera were absent from the lower Homosassa (HOM-R-4, HOM-R-5, HOM-R-6) and Halls (HOM-HAL-2 and HOM-HAL-3) River samples. Collector-gatherer/deposit feeders were the dominant functional feeding group for all river zones except HOM-R-2. Browser-grazers were the dominant functional feeding group in this zone and comprised a large portion of the HOM-S and HOM-R-1 zones. The zone furthest downstream, HOM-R-6, and half of the Halls River zones had suspension feeders comprising an ample portion of the total (**Figure 38**).

HOM-HAL-S HOM-HAL-1 HOM-HAL-2 HOM-HAL-1 HOM-HAL-S Abundance: 261 Abundance: 3166 HOM-HAL-2 Abundance: 22161 Richness: 2 Richness: 21 Richness: 16 Shannon's: 0.5 Shannon's: 1.7 Shannon's: 2.1 HOM-R-2 Abundance: 2135 Abundance: 2954 HOM-HAL-3 HOM-HAL-3 Richness: 21 Richness: 12 Abundance: 3783 Shannon's: 2.1 Shannon's: 1.3 Richness: 6 Shannon's: 1.1 HOM-R-3 HOM-S HOM-R-4 HOM-SOU-S Abundance: 1243 Richness: 18 HOM-R-4 Shannon's: 1.8 HOM-R-3 HOM-R-1 HOM-SOU-S HOM-R-6 MARION Abundance: 5935 Abundance: 5742 Abundance: 1550 Abundance: 543 Richness: 17 Richness: 29 Richness: 19 Richness: 11 Shannon's: 1.9 Shannon's: 2.2 Shannon's: 2.1 Shannon's: 2.1 HOM-R-5 CITRUS SUMTER HOM-R-5 Project Location Homosassa River. Abundance: 2976 **HERNANDO** Richness: 13 Location Map Shannon's: 1.3 Not to Scale **Explanation of Features** Notes: Homosassa River System Sample Sites Data Source - ESRI Aerial amec **SWFWMD Coastal Rivers** Hydrological foster Abundance: Total Number of Individuals/m2 Invertebrate Analysis wheeler used for planning purpo only. It is not a survey. Richness: Number of Taxa Citrus County, FL Shannon's (Diversity Index): H'(loge)

Figure 36 – Spatial Distribution of Selected Average Biological Metrics per Zone in the Homosassa River

Figure 37 - Percent Composition of Organisms from Major Taxa Groups by River Zone in the Homosassa River

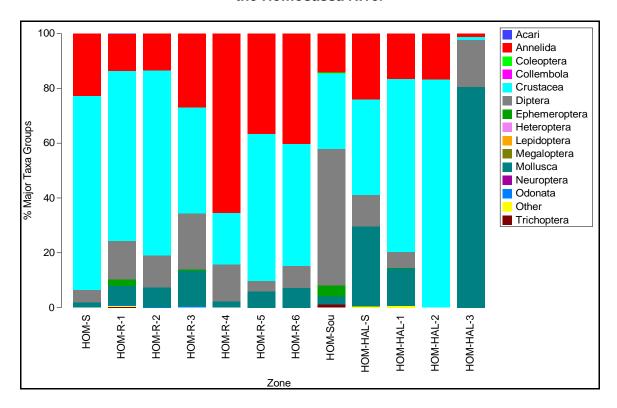
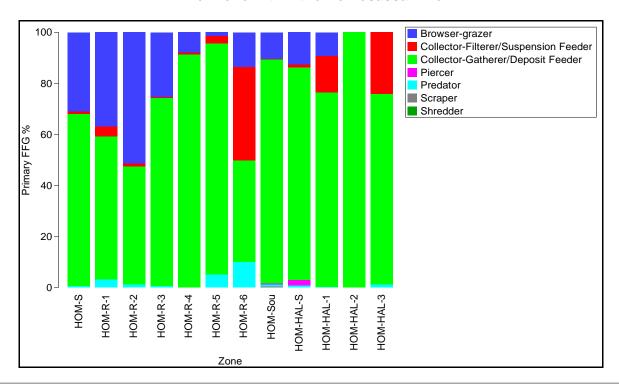


Figure 38 - Percent Composition of Organisms from each Functional Feeding Group by River Zone within the Homosassa River



Longitudinal patterns within the Homosassa were also examined by using Waterbody Area as a factor. The nMDS plot revealed distinct separation between samples collected in the lower reaches of the Homosassa River (**Figure 39**). ANOSIM results further corroborated this observation by depicting a significant difference between samples collected in the lower reaches of the river versus those collected from the upper and spring areas of the river (**Table 34**). The tanaid, Leptocheliidae spp.; the amphipod, *G. bonnieroides*; the polychaete worm, *L. culveri*; the snail, Hydrobiidae spp.; and the midge, *Dicrotendipes* spp. had higher average abundances in the spring and upper reaches of the Homosassa River compared with the lower area. Additionally, more estuarine species, such as the crab, *Rhithropanopeus harrisii*, and the polychaete worm, *Boccardiella ligerica*, were more abundant in the lower areas (**Table 35**). These taxa, along with the others listed in the table, contributed the most to the dissimilarity observed between the invertebrate communities in the lower area versus those in the spring and upper reaches of Homosassa River.

Figure 39 - nMDS Plot for Homosassa with Waterbody Area as the Factor

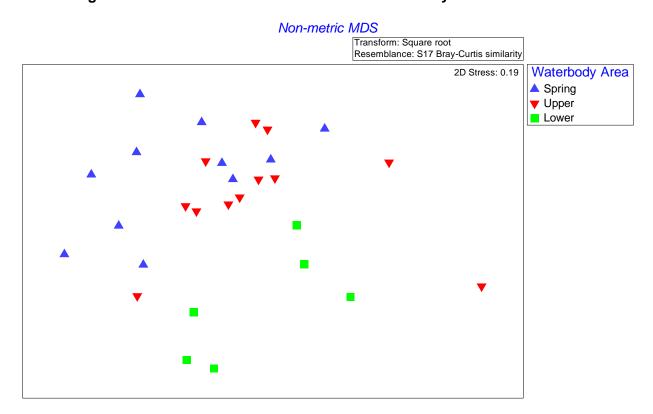


Table 34 - ANOSIM Results for Homosassa with Waterbody Area as the Factor

	Spring	Upper	Lower	
Spring				
Upper	0.118332			
Lower	0.478355	0.337106		
Global R = 0.253, p = 0.001				

Table 35 - Homosassa River SIMPER Results for Significant Pairwise Comparisons between Waterbody Areas

Taxa Spring vs.	Group 1 Average Abundance Lower, Averag	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity
	Spring	Lower	,	
Leptocheliidae spp.	14.11	1.48	7.25	7.25
Apocorophium louisianum	1.16	13.76	6.95	14.2
Grandidierella bonnieroides	14.66	3.69	6.55	20.75
Laeonereis culveri	8.57	7.87	5.36	26.11
Hydrobiidae spp.	11.41	4.54	5.06	31.17
Dicrotendipes spp.	10.33	4.35	4.71	35.88
Tubificinae spp.	2.02	7.88	4.12	40
Boccardiella ligerica	0	9.4	3.9	43.9
Gammarus spp.	6.76	0	3.24	47.14
Rhithropanopeus harrisii	0	5.13	2.48	49.62
Polypedilum scalaenum group	0.35	5.01	2.39	52.02
Upper vs.	Lower, Averag	e Dissimilarity	y = 83.93	
	Upper	Lower		
Grandidierella bonnieroides	29.41	3.69	9.25	9.25
Apocorophium louisianum	22.38	13.76	7.43	16.68
Hydrobiidae spp.	22.47	4.54	7.31	23.98
Laeonereis culveri	17.98	7.87	5.69	29.68
Leptocheliidae spp.	19.46	1.48	5.66	35.34
Dicrotendipes spp.	16.55	4.35	5.27	40.6
Tubificinae spp.	6.27	7.88	3.94	44.54
Boccardiella ligerica	0.78	9.4	3.3	47.84
Gammarus spp.	8.77	0	2.34	50.18

Correlations between the Biological Community and Abiotic Factors

Correlation results found in **Table D-2** in **Appendix D** show that the only significant correlations between abiotic factors and biological metrics while conducting univariate analyses was the inverse relationships found between richness and salinity (and conductivity, which is a covariate of salinity). Thus it may be possible to predict richness values from one of these abiotic factors.

The BEST analysis with the BIOENV option was conducted in PRIMER to identify the combination of environmental variables that are best correlated with the invertebrate community structure. Depth (m), turbidity (NTU), canopy cover (%) and distance from the spring (km) comprised the combination of environmental variables that were best correlated with the invertebrate community structure in the Homosassa River system (rho = 0.545). Values for each of these significant environmental variables were overlaid as bubbles on the nMDS plot for each sample. The size of the bubble corresponded directly to the value of the environmental variable and the color of the bubble represented each Zone. Depth of sample appeared to vary within and across zones (**Figure 40a**). Samples located within the upper left quadrant of the nMDS plots were collected from the spring and upper areas of the Homosassa and were characterized by lower turbidity, higher percentage of canopy cover and closer distances to the spring (**Figures 40b-d**). The longitudinal patterns above in the invertebrate community structure can be attributed to correlations with these environmental variables.

Figure 40a - Bubble Plot of Depth of Sample (m) Values Superimposed on the nMDS plot of River Zones within the Homosassa River.

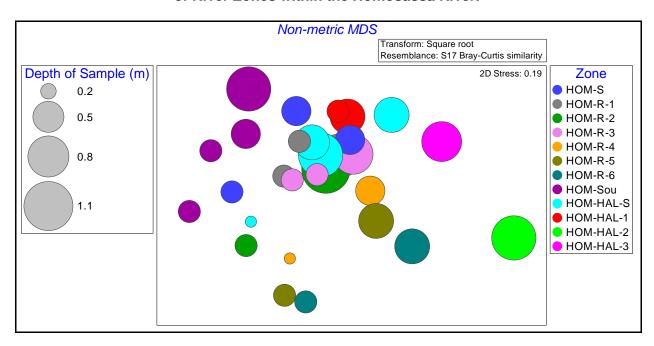


Figure 40b - Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS plot of River Zones within the Homosassa River

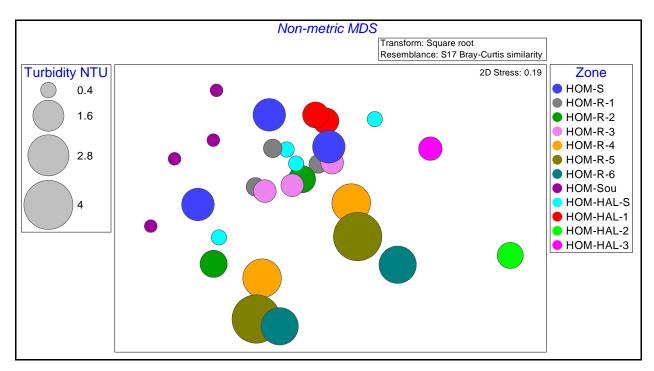


Figure 40c - Bubble Plot of Canopy Cover (%) Values Superimposed on the nMDS plot of River Zones within the Homosassa River

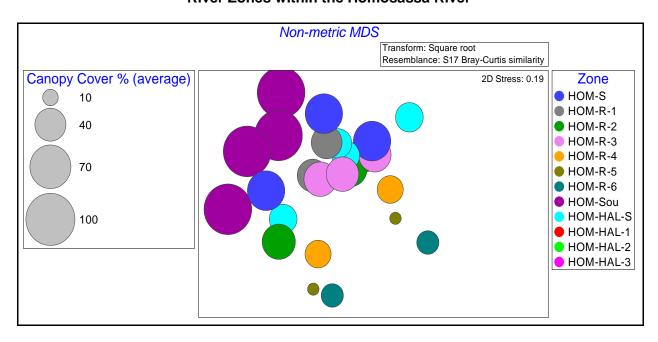
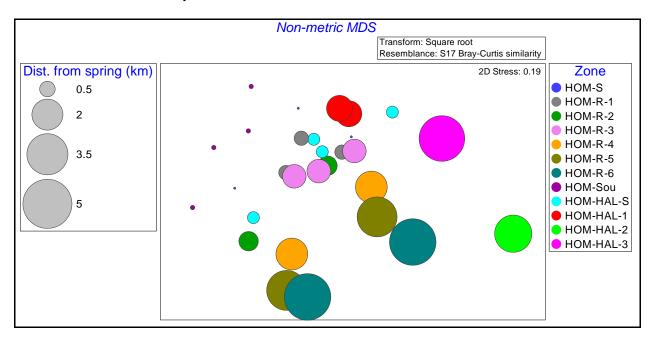


Figure 40d - Bubble Plot of Distance from Spring (km) Values Superimposed on the nMDS plot of River Zones within the Homosassa River



Comparison to Previous Studies

Sloan (1956) evaluated the distribution of aquatic insects in Homosassa River. Sloan collected invertebrate samples using dipnet sweeps at transects located between the headspring and the mouth of the river. Sloan found that the diversity at the headspring was low, and sharply increased in the upper river and declined moving downstream toward the estuaries. The results of this study show a similar trend, with slightly lower species richness within the headspring, and an increase in the upper river, with a decline as one moved downstream. Shannon's diversity index showed a similar trend; however, diversity increased in the furthest downstream samples. When diversity was evaluated based on taxonomic group, Sloan found that Ephemeroptera, Odonata, Hemiptera (recently renamed as Heteroptera), Trichoptera, and Diptera showed similar trends in species diversity, where species diversity within each order was lower in the headspring, increased in the upper river, and decreased downstream. The current study found no Ephemeroptera, Odonata, Hemiptera, or Trichoptera in the headspring; however, Ephemeroptera, Odonata, and Trichoptera were present in the upper river, but absent from the lower river, and Diptera species richness showed a similar trend to overall species richness with a lower species richness in the headspring and an increase in the upper river, and a decline moving downstream. Sloan (1956) noted the presence of rooted vegetation throughout the portion of the Homosassa River which was sampled for the current study. Vegetation included Vallisneria neotropicalis, Potamogeton pectinatus and N. guadelupensis; however, during the current study sampling, very minimal vegetation was observed within the Homosassa Spring and River.

Janicki (2010) performed a characterization of the benthic macroinvertebrate community of Homosassa and Halls Rivers, which included samples from the spring run, Southeast Fork, Halls River, and through the mouth of the river. Within the Homosassa River the dominant taxa included the amphipods *G. bonnieroides* and *Ampelisca* spp., along with the polychaete worm *Mediomastus* spp. Only *G. bonnieroides* was found in the current study and was the most dominant taxa within the Homosassa River and the spring. The other two taxa were absent in all samples. This may be due to the fact that the current study did not extend into the estuary to the mouth of the river and that the current study used a petite ponar and dipnet; while the 2010 study implemented a coring device.

Janicki (2010) also found that diversity decreased upstream from the mouth of the river to River km 10-11; then increased in the Halls River and near the headspring and the Southeast Fork. In comparison, the current study only extended downstream to approximately River km 8. Lower diversity was observed in the headspring, it increased in the upper river, then decreased moving downstream, and ended with a peak at station R-6 (approximately River km 8). Furthermore, average diversity was higher in the Southeast Fork Spring and Halls River Spring samples than the main headspring samples.

Janicki (2010) found that the Halls River samples were dominated by the amphipod species *G. mucronatus, Cerapus benthophilus, and G. bonnieroides.* These three species were amongst the top ten dominant species in the current study; however, the gastropod Hydrobiidae spp. and the tanaid Leptocheliidae spp. were the dominant taxa.

3.5 Weeki Wachee

Abiotic Factors

Table D-3 in **Appendix D** provides a comprehensive correlation matrix for the Weeki Wachee River zones that includes parametric (Pearson's R) and nonparametric (Spearman's Rho and Kendall's Tau) correlation results between physicochemical parameters and biological metrics. Distance from the headspring in river kilometer was included as a factor to determine whether a longitudinal gradient existed, therefore results from those analyses will be provided in the appropriate section below. Additionally, the biological metrics and abiotic factors will also be provided in a subsequent section.

Habitats

Habitat diversity (number of habitats sampled) was evaluated to determine if the number of habitats that were available to sample within each zone in Weeki Wachee River was correlated to other abiotic factors or biological metrics. For all sites combined, habitat diversity was only negatively correlated with conductivity (Rho = -0.882, p = 0.009). The full correlation matrix results output from MINITAB is provided in **Appendix C, Table C-4**.

Annelida worms were the dominant taxonomic group in the rock and sediment habitats within the Weeki Wachee River. Crustaceans were the dominant taxonomic group in the macroalgae habitats, Diptera were dominant in SAV, and caddisflies (Trichoptera) were dominant in the snags (**Figure 41**). Ephemeroptera and Odonata were absent from sediment samples. Collectorgatherer/deposit feeders dominated the functional feeding group composition regardless of habitat in the Weeki Wachee River. Filter feeders were most common in snag samples compared to other habitats (**Figure 42**).

Figure 41 - Percent Composition of Organisms from Major Taxa Groups by Habitat Type within the Weeki Wachee River

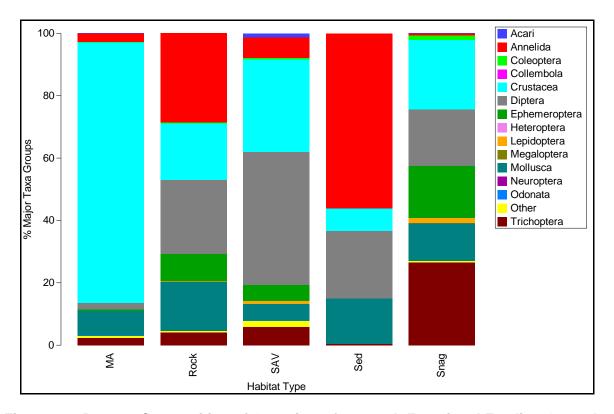
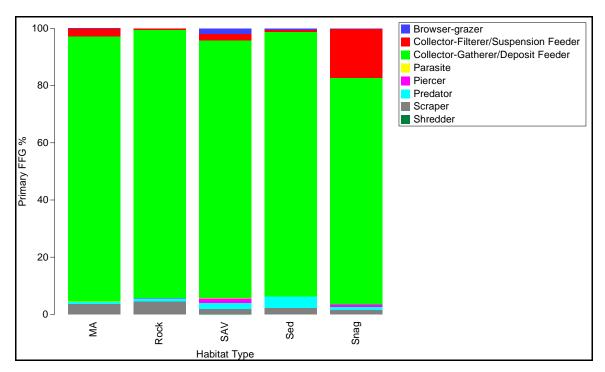


Figure 42 - Percent Composition of Organisms from each Functional Feeding Group by Habitat Type within the Weeki Wachee River



Some slight trends were observed in the nMDS plot with habitat as the factor for the Weeki Wachee samples. Samples collected from the macroalgae and snag habitats clustered with themselves (Figure 43). ANOSIM depicted significant differences between macroalgae and all other habitat types. Additionally, samples collected from snag habitats were significantly different than those collected from sediment habitats (Table 36). These significant differences were all due mostly to the higher average abundances of *H. azteca* sp. complex in the macroalgae samples compared to samples collected from other habitats (Table 37). The preference for a macroalgae habitat by this species cannot be compared to the literature, because this organism is part of a species complex and may be an undescribed species. Some morphological and molecular work has been conducted on this species complex to describe some of the species, but more work needs to be done before information about habitat preferences are available for all the different species that comprise this species complex (Gonzalez and Watling, 2002). The oligochaete worms, Tubificinae spp. and Limnodrilus hoffmeisteri had higher average abundances in the sediment samples versus those collected from snag habitats, which is to be expected considering their sedentary lifestyle. Furthermore, the caddisflies, Cheumatopsyche spp. and Hvdropsyche rossi, and the mayfly, Baetis intercalaris, had higher average abundances in the snag habitats versus the sediment. These taxa, along with the others listed in the table, contributed to the dissimilarity observed between the invertebrate communities in sediment versus snag habitats (Table 37).

Figure 43 - nMDS for Weeki Wachee with Habitat Type as the Factor

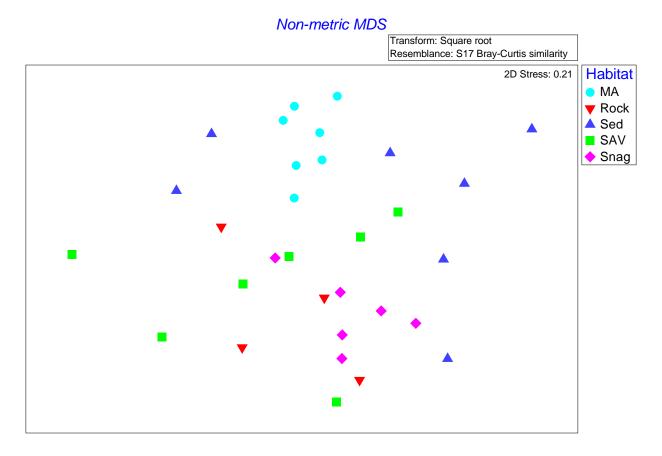


Table 36 - ANOSIM Results for Weeki Wachee with Habitat Type as the Factor

	MA	Rock	SAV	Sed	Snag
MA					
Rock	0.857143				
SAV	0.49757	-0.11905			
Sed	0.599611	0.206349	0.248785		
Snag	0.910053	0.059524	0.070767	0.513228	
Global R = 0.403, p = 0.001					

Table 37 - Weeki Wachee River SIMPER Results for Significant Pairwise Comparisons between Habitat Types

Таха	Group 1 Average	Group 2 Average	% Contribution to	% Cumulative Contribution to
	Abundance	Abundance	Dissimilarity	Dissimilarity
MA vs.	Rock, Average	Dissimilarity =	82.12	
	MA	Rock		
Hyalella azteca sp. complex	103.71	12.03	32.8	32.8
Hydrobiidae spp.	10.6	6.11	4.6	37.39
Melanoides spp.	14.19	5.64	4.35	41.74
Tubificinae spp.	10.33	1.48	3.17	44.91
Tanytarsus spp.	4.55	6.83	2.9	47.81
Cheumatopsyche spp.	7.43	1.57	2.78	50.59
MA vs.	SAV, Average	Dissimilarity =	81.02	
	MA	SAV		
Hyalella azteca sp. complex	103.71	16.65	30.53	30.53
Melanoides spp.	14.19	1.7	4.53	35.06
Hydrobiidae spp.	10.6	4.95	3.66	38.72
Cricotopus or Orthocladius	2.54	10.4	3.09	41.81
Tubificinae spp.	10.33	5.55	3.07	44.88
Cheumatopsyche spp.	7.43	3.42	2.82	47.7
Tanytarsus spp.	4.55	7.24	2.5	50.21
MA vs. Sed, Average Dissimilarity = 83.55				
	Sed	MA		
Hyalella azteca sp. complex	11.59	103.71	31.61	31.61
Tubificinae spp.	23.83	10.33	6.15	37.75
Hydrobiidae spp.	11.5	10.6	5.15	42.9
Melanoides spp.	6.25	14.19	4.33	47.23
Limnodrilus hoffmeisteri	13.53	5.52	3.85	51.08
MA vs.	Snag, Average	Dissimilarity =	80.82	
	MA	Snag		
Hyalella azteca sp. complex	103.71	15.7	29.74	29.74
Melanoides spp.	14.19	1.05	4.58	34.32
Hydrobiidae spp.	10.6	5.2	4.24	38.56
Cheumatopsyche spp.	7.43	11.06	3.8	42.37
Tubificinae spp.	10.33	1.08	3.04	45.41
Baetis intercalaris	1.4	10.04	3.03	48.44
Hydropsyche rossi	2.29	9.36	2.96	51.41
Sed vs.	Snag, Average	Dissimilarity =	83.59	
	Sed	Snag		
Tubificinae spp.	23.83	1.08	7.78	7.78
Hyalella azteca sp. complex	11.59	15.7	6.55	14.33
Hydrobiidae spp.	11.5	5.2	5.83	20.15
Cheumatopsyche spp.	1.63	11.06	5.12	25.27
Polypedilum scalaenum group	9.57	0.67	4.87	30.15
Limnodrilus hoffmeisteri	13.53	0	4.75	34.89
Hydropsyche rossi	0	9.36	4.48	39.38
Baetis intercalaris	0	10.04	4.43	43.8
Cladotanytarsus spp.	10.5	4.9	4.32	48.12
Corynoneura spp.	5.81	0.33	3.21	51.33

Waterbody Type

Comparison of invertebrate communities by waterbody type in Weeki Wachee depicted a slightly significant difference between communities in the spring versus the river. No samples were collected from tributaries (Figure 44). ANOSIM results confirmed the significant difference between the invertebrate communities in the spring versus the river (Table 38). The amphipod, H. azteca sp. complex, had slightly higher average abundances in the river versus the spring and was responsible for contributing the most to the observed dissimilarity between the invertebrate communities in the river versus the spring. The snail, Hydrobiidae spp., and the annelid worm, Tubificinae spp., had distinctly higher average abundances in the spring compared to the river samples and helped contribute to the dissimilarity observed between invertebrate communities in these two types of waterbodies (Table 39). In fact, annelid worms, crustaceans, midges, molluscs, a few organisms from miscellaneous phyla and trichopterans were the only major taxa groups present in the spring samples. All other insect groups such as mayflies (Ephemeroptera), beetles (Coleoptera) and damselflies and dragonflies (Odonata) were absent from the spring samples (Figure 45). Collector-gatherer/deposit feeders were the dominant functional feeding group for both waterbody types in the Weeki Wachee River. Scrapers were more abundant in the spring versus the river samples, while filter feeders were more common in the river than in the spring samples (Figure 46).

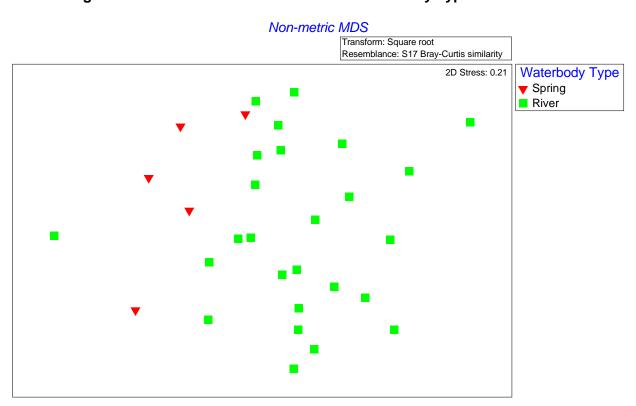


Figure 44 - nMDS for Weeki Wachee with Waterbody Type as the Factor

Table 38 - ANOSIM Results for Weeki Wachee with Waterbody Type as the Factor

	Spring	River		
Spring				
River	0.244			
Global R = 0.244, p = 0.045				

Table 39 - Weeki Wachee River SIMPER Results for Significant Pairwise Comparisons between Waterbody Types

Taxa	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity
River v	s. Spring, Aver	age Dissimilar	ity = 82.17	
	River	Spring		
Hyalella azteca sp. complex	34.89	31.79	15.18	15.18
Hydrobiidae spp.	3.26	32.02	11.85	27.03
Tubificinae spp.	6.35	25.03	7.83	34.86
Melanoides spp.	5.63	7.47	3.74	38.6
Limnodrilus hoffmeisteri	3.54	9.31	3.46	42.06
Dicrotendipes spp.	3.14	8.81	3.39	45.44
Cheumatopsyche spp.	6.15	0	2.62	48.06
Cricotopus or Orthocladius	5.25	2	2.57	50.63

Figure 45 - Percent Compositions of Organisms from Major Taxa Groups by Waterbody
Type in the Weeki Wachee River

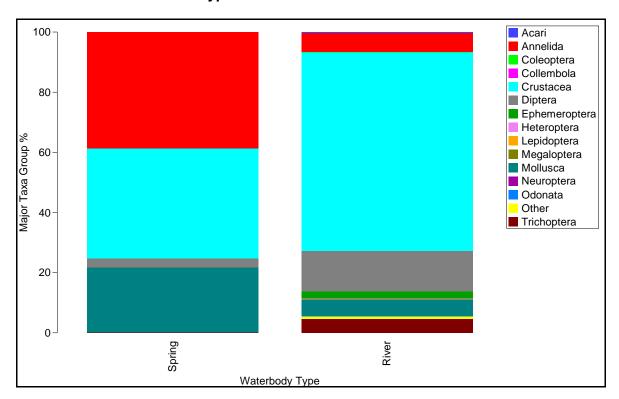
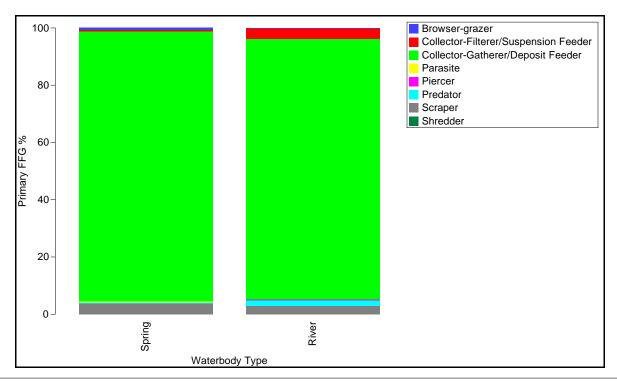


Figure 46 - Percent Composition of Organisms from each Functional Feeding Group by Waterbody Type within the Weeki Wachee River



Longitudinal Patterns

As mentioned above, longitudinal gradients were examined using parametric (Pearson's R) and nonparametric (Spearman's Rho and Kendall's Tau) correlation analyses in the Weeki Wachee River. **Table D-3** in **Appendix D** provides a comprehensive correlation matrix with results from the correlation analysis. Canopy cover, salinity and pH all significantly increased along the longitudinal gradient, with strong correlation relationships (Rho = 0.821, 0.791 and 0.929, respectively). None of the biological metrics had a discernable longitudinal pattern.

The total abundance of organisms in each sample was averaged by zone and were higher in the spring zone and the first river zone (**Figure 47**). Total species richness peaked in WEE-R-2, declined downstream, but increased again in the last zone, WEE-R-6 (**Figure 48**). Average Shannon's diversity index peaked at WEE-R-2 and fluctuated slightly thereafter further downstream (**Figure 49**). These results are also shown spatially in **Figure 50**.

The mainstem river channel included an upper river zone downstream of the spring zone. Because the upper river zone was indicated for the entire non-spring area sampled within the study area, the lower limits of this zone cannot be described based on these samples. More zones almost definitely occur downstream based on previous studies. Future sampling should be extended downstream to identify and track the position between the upper and lower mainstem zones.

Figure 47 - Average Abundance of Organisms by River Zone in the Weeki Wachee River

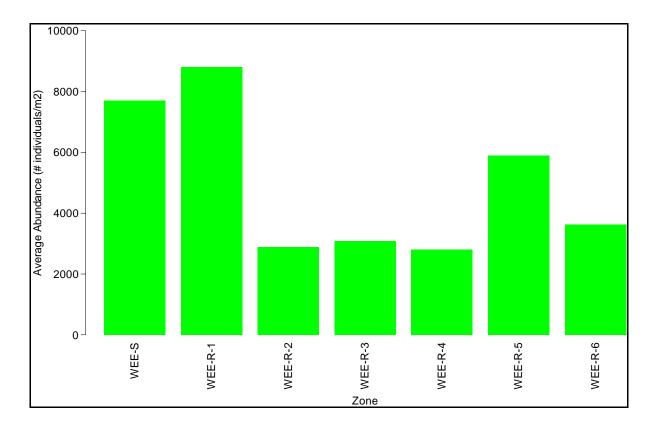


Figure 48 - Total Species Richness by River Zone in the Weeki Wachee River

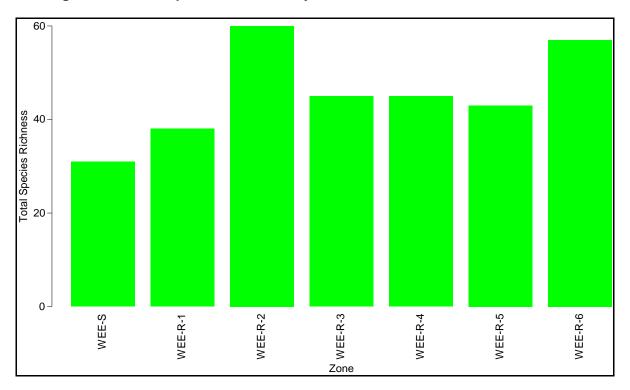
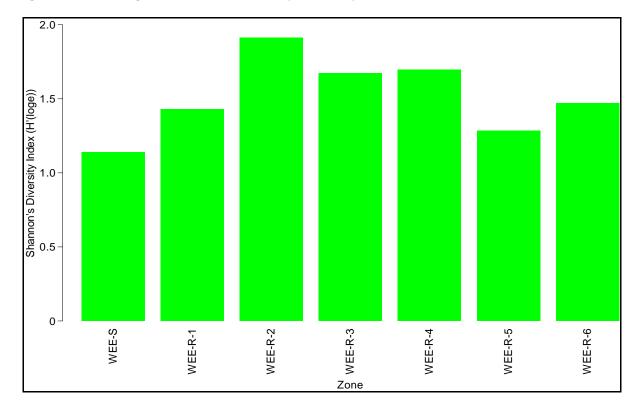


Figure 49 - Average Shannon's Diversity Index by River Zone in the Weeki Wachee River



WEE-R-6 Abundance: 3620 Richness: 21 Shannon's: 1.5 WEE-R-5 Abundance: 5891 Richness: 17 Shannon's: 1.3 Abundance: 2241 Richness: 14 WEE-R-1 Shannon's: 1.4 Abundance: 8812 Richness: 16 Shannon's: 1.4 LEVY MARION CITRUS WEE-R-3 Project Location Abundance: 3090 SUMTER WEE-R-2 Richness: 18 WEE-S Abundance: 2886 Shannon's: 1.7 Abundance: 7698 HERNANDO Richness: 21 Richness: 11 Shannon's: 1.9 **Location Map** Shannon's: 1.1 **Explanation of Features** Notes: Project No.: 600308.7 Sample Sites Weeki Wachee River System Data Source - ESRI Aerial **SWFWMD Coastal Rivers** Hydrological foster Abundance: Total Number of Individuals/m2 Invertebrate Analysis wheeler used for planning purpose only. It is not a survey. Richness: Number of Taxa Hernando County, FL Shannon's (Diversity Index): H'(loge)

Figure 50 - Spatial Distribution of Selected Average Biological Metrics per Zone in the Weeki Wachee River

Crustaceans were the dominant taxonomic group for all river samples within the Weeki Wachee River. Annelid worms were the dominant taxonomic group for the spring samples (**Figure 51**). Ephemeroptera, Odonata, and Coleoptera were absent from the spring samples; however, they were present in the river samples. Collector gatherer/deposit feeders were the dominant functional feeding group for all river zones. Suspension feeders and scrapers exhibited a slightly higher composition in the middle portions of the Weeki Wachee River when compared with other river zones (**Figure 52**).

Figure 51 - Percent Composition of Organisms from Major Taxa Groups by River Zone in the Weeki Wachee River

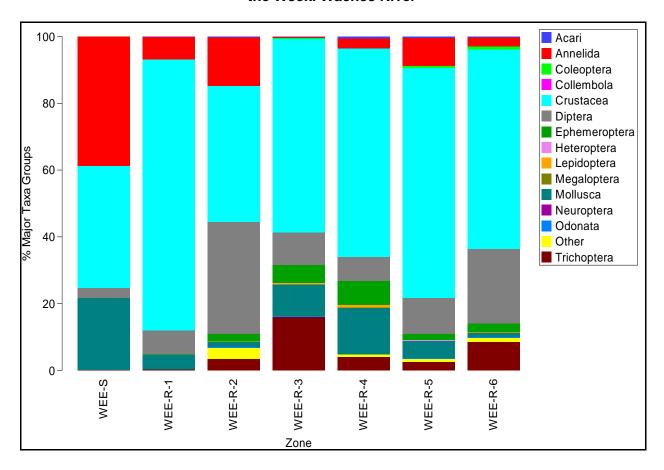
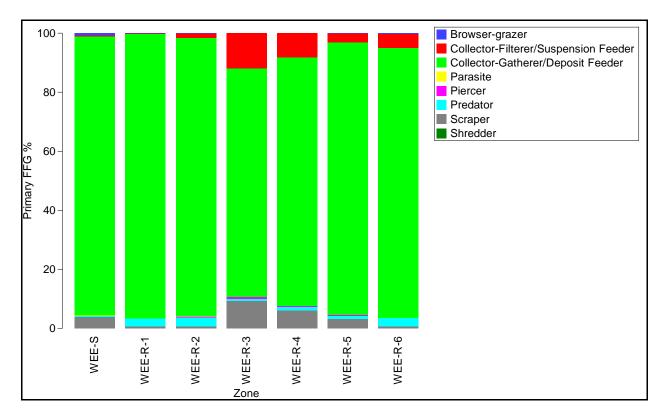


Figure 52 - Percent Composition of Organisms from each Functional Feeding Group by River Zone within the Weeki Wachee River



Samples collected from the spring area were slightly separated in the nMDS plot from samples collected in the upper and lower reaches of Weeki Wachee River (**Figure 53**). ANOSIM confirmed a slight significant difference between the invertebrate community structure in the spring samples and those within the upper and lower reaches of the river (**Table 40**). The amphipod, *H. azteca* sp. complex, had slightly higher average abundances in the upper and lower portions of the river when compared with the spring area. This species contributed the most to the observed dissimilarity between the invertebrate communities in the spring area versus the upper and lower areas of the Weeki Wachee River (**Table 41**).

Figure 53 - nMDS Plot for Weeki Wachee with Waterbody Area as the Factor

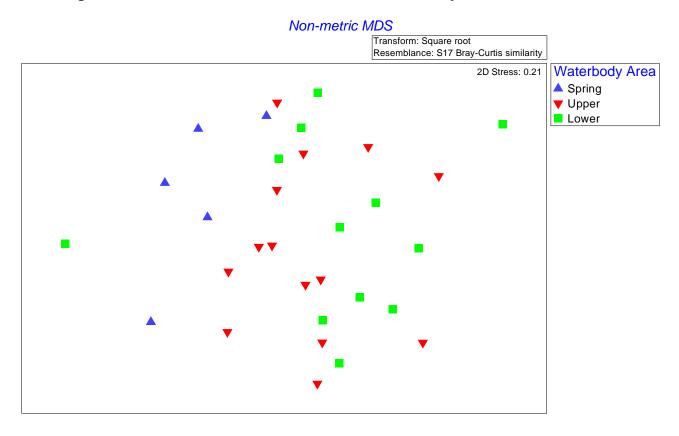


Table 40 - ANOSIM Results for Weeki Wachee with Waterbody Area as the Factor

	Spring	Upper	Lower
Spring			
Upper	0.327298		
Lower	0.269956	0.073476	
Global R = 0.1	77, p = 0.006		

Table 41 - Weeki Wachee River SIMPER Results for Significant Pairwise Comparisons between Waterbody Areas

Таха	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity		
Spring vs. Upper, Average Dissimilarity = 80.15						
	Spring	Upper				
Hyalella azteca sp. complex	31.79	35.36	15.58	15.58		
Hydrobiidae spp.	32.02	5	11.48	27.06		
Tubificinae spp.	25.03	5.63	7.8	34.86		
Limnodrilus hoffmeisteri	9.31	4.45	3.87	38.74		
Melanoides spp.	7.47	4.95	3.76	42.5		
Cricotopus or Orthocladius	2	7.45	3.64	46.14		
Tanytarsus spp.	0	8.64	3.59	49.72		
Dicrotendipes spp.	8.81	5.34	3.43	53.16		
Spring vs.	Lower, Avera	ge Dissimilarit	y = 84.52			
	Spring	Lower				
Hyalella azteca sp. complex	31.79	34.34	14.73	14.73		
Hydrobiidae spp.	32.02	1.24	12.26	27		
Tubificinae spp.	25.03	7.19	7.86	34.85		
Melanoides spp.	7.47	6.44	3.71	38.57		
Dicrotendipes spp.	8.81	0.58	3.34	41.9		
Limnodrilus hoffmeisteri	9.31	2.48	3	44.9		
Cladotanytarsus spp.	2.27	5.3	2.98	47.89		
Polypedilum scalaenum group	2.26	6.7	2.93	50.82		

Correlations between the Biological Community and Abiotic Factors

Table D-3 in **Appendix D** provides results for correlations conducted between biological metrics and abiotic factors. Significant and strong positive associations were found between richness and water temperature, and DO. The same pattern was found for Margalef's richness and the aforementioned abiotic factors. Shannon's diversity index was also positively correlated to water temperature.

The BEST analysis with the BIOENV option in PRIMER was used to determine the combination of environmental variables that were best correlated with the invertebrate community structure within Weeki Wachee. Dissolved oxygen (%), pH, turbidity (NTU) and canopy cover (%) were best correlated with the invertebrate community structure within the Weeki Wachee River (rho = 0.255). Values for each of these significant environmental variables were superimposed as bubbles on the nMDS plot for each sample. The size of the bubble corresponded directly to the value of the environmental variable and the color of the bubble represented each Zone. Dissolved oxygen (%), pH and canopy cover (%) were all lower in the spring zone, represented by the smaller bubbles, while turbidity (NTU) was slightly higher in the spring, R-4 and R-6 zones represented by larger bubbles (**Figures 54a-d**).

Figure 54a - Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River

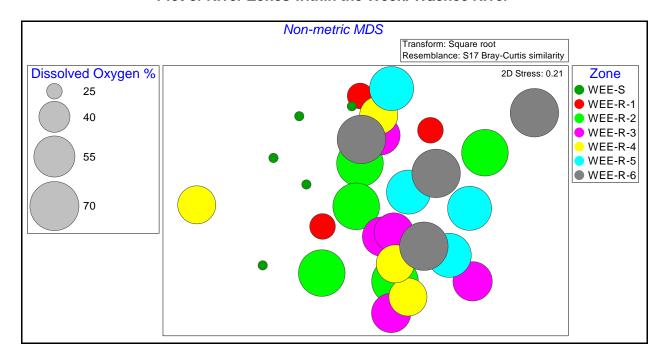


Figure 54b - Bubble Plot of pH Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River

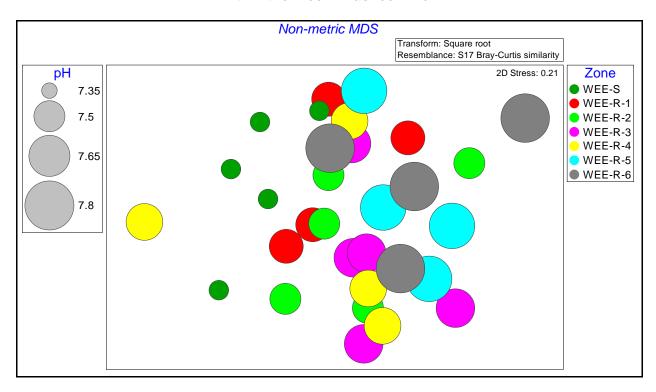


Figure 54c - Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River

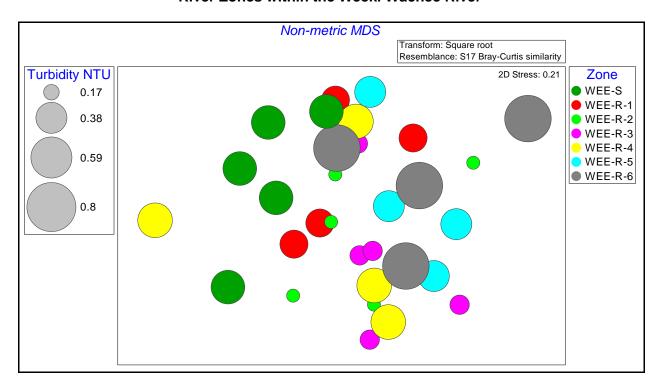
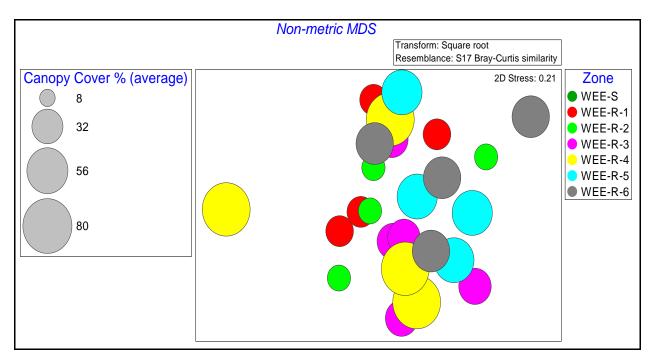


Figure 54d - Bubble Plot of Canopy Cover (%) Values Superimposed on the nMDS Plot of River Zones within the Weeki Wachee River



Comparison to Previous Studies

Sloan (1956) evaluated the distribution of aquatic insects in Weeki Wachee River. Invertebrate samples were collected using dipnet sweeps at transects located between the headspring and the mouth of the river. Sloan (1956) found that the diversity at the headspring was low in both Weeki Wachee and Homosassa Rivers, and sharply increased in the upper river and declined moving downstream toward the estuary. The results of this study showed a similar trend, with slightly lower species richness within the headspring, an increase in the upper river, and a decline as one moved downstream. Species richness between sample transects were very similar between the two studies.

Sloan (1956) looked at the macroinvertebrate groups by order and their species richness along a longitudinal gradient from the headspring to mouth of the river. He found that in Weeki Wachee River, Ephemeropertera, Hemiptera, and Trichoptera had low diversity in the headspring, were more diverse in the upper reaches of the river and decreased moving downstream. He also found no Coleoptera species in the headspring. In the current study, Ephemeroptera, Coleoptera, and Odonata taxa were absent from the headspring; however, they were common in the river samples.

As part of the benthic portion of a comprehensive study, Mote Marine Laboratory (1986) characterized the benthic infaunal communities in the Weeki Wachee River. The study's main goal was to evaluate the composition of the macroinvertebrate communities in relation to salinity regimes. Faunal samples were collected with stainless steel box cores. However, all four of their sampling locations were downstream of Roger's Park/Shoal Line Road, which is downstream of the furthest downstream sampling location for this study.

Janicki Environmental, Inc. (2006) also performed an analysis of the benthic community structure in the Weeki Wachee River. However, samples were also limited to downstream of Roger's Park/Shoal Line Road, which is downstream of the furthest downstream sampling location for this study.

3.6 Comparisons among Springs

Physicochemical factors are important macroinvertebrate structuring forces in aquatic systems, and especially within spring systems. The benthic macroinvertebrate community structure and associated biological metrics and abiotic factors data from the limited springs zones dataset were further evaluated to determine if the variability seen in **Table 5** (Section 3.1) could be influencing the macroinvertebrate community. The aim of the analyses was to determine which physicochemical parameters best explain the variability in community structure due to species-specific tolerances to spring discharge and instream water chemistry and physical factors. Results from the statistical analyses of the limited springs zones dataset are provided below.

<u>Correlations between the Biological Community and Abiotic Factors</u>

Springs zones from Chassahowitzka, Homosassa, and Weeki Wachee were pooled together and correlations were conducted between abiotic factors and biological metrics. Results from the springs zones only correlation matrix are provided in **Table C-5** in **Appendix C**. Only pH and canopy coverage were significantly correlated with the taxa richness metric (rho = 0.76, p = 0.02; rho = 0.79, p = 0.02, respectively). Canopy cover was significantly correlated with Margalef's richness and both Shannon's and Simpson's diversity indices (rho = 0.76, p = 0.02; rho = 0.79, p = 0.02; rho = 0.78, p = 0.03 respectively). Log₁₀ transformed Margalef's richness was significantly

correlated with DO concentrations (R= 0.76, p = 0.03). Abundance and taxa richness values were not correlated with any of the indices. However, Margalef's richness, Pielou's evenness and the two diversity indices were highly correlated to each other (rho ranging from 0.76 to 0.90, p<0.05; **Table C-5, Appendix C**).

Results of the PCA analysis illustrated that the water quality and environmental parameters were different between samples collected from the various spring systems (Figure 55, Tables 42 and 43). The first principal component (PC1) axis explained 49.9% of the total variation and was positively correlated with canopy cover and negatively correlated with depth of sample. The samples collected from Chassahowitzka springs (CHA-S-1, and CHA-S-2) and the Homosassa South Fork spring (HOM-Sou) generally had more canopy cover and were collected from shallower depths than those from the other spring vents. Additionally, the samples from Weeki Wachee spring were characterized by deeper depths and less canopy cover. The second principal component (PC2) axis explained 33.5% of the total variation and was largely negatively correlated with salinity. The samples collected from the Hall's River spring were characterized by higher salinities compared to samples from other spring vents. The values highlighted in yellow in Table 43 were the three environmental parameters that had the highest correlation with their respective principal component axes.

Figure 55 - PCA Results for Environmental and Water Quality Parameters from all Springs Zones

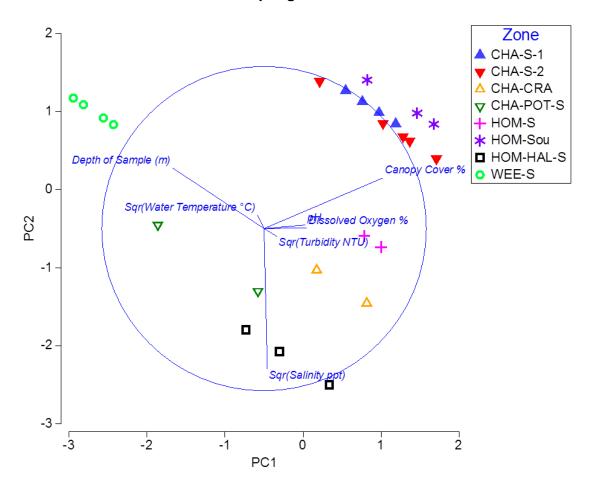


Table 42 - Percent and Cumulative Percent of Variation Explained by Principal Coordinates

PC	Eigenvalues	% Variation	Cumulative % Variation
1	2.13	49.9	49.9
2	1.43	33.5	83.4

Table 43 - Correlations of Water Quality and Environmental Parameters for each Principal Coordinate for Springs Zones

Parameter	PC1	PC2	PC3	PC4	PC5
Depth of Sample (m)	-0.565	0.374	-0.676	0.252	-0.128
Water Temperature (°C)	-0.042	0.086	-0.145	-0.222	0.373
Dissolved Oxygen (%)	0.264	0.005	-0.368	-0.161	0.427
Salinity (ppt)	0.020	-0.867	-0.409	0.240	0.003
рН	0.255	0.022	-0.071	0.094	-0.761
Turbidity (NTU)	0.080	-0.049	-0.330	-0.843	-0.280
Canopy Cover % (average)	0.733	0.313	0.325	0.291	0.064

*Note: The correlation coefficients with the highest values in PC1 and PC2 are highlighted.

The BEST analysis with the BIOENV option in PRIMER depicted the combination of environmental variables that were best correlated with the invertebrate community structure across all of the springs zones. The combination of five physicochemical variables provided the greatest combined correlation coefficient (rho = 0.339) and explained the greatest variability in invertebrate community structure, which included 1) depth of sample, 2) dissolved oxygen, 3) conductivity, 4) pH, and 5) turbidity. These five variables were cumulatively best correlated and were the best explanatory variables of invertebrate community structure from all of the spring samples. When the BEST analysis was forced to provide the best result for only two variables, then depth of sample and conductivity were found to provide a correlation coefficient of rho = 0.304. For up to three variables, depth of sample, dissolved oxygen and conductivity increased the coefficient to rho = 0.320. With the addition of the other two variables, pH and turbidity, the correlation coefficient only increased slightly.

Values for each of the five environmental variables identified in the BEST analysis were overlaid as bubbles on the nMDS plot for each spring sample (**Figures 56a-e**). The size of the bubble directly corresponds to the value of the environmental variable and the color of the bubble represents the spring zone from which the sample was collected from. Weeki Wachee spring was characterized by deeper depths, much lower dissolved oxygen, conductivity and salinity when compared with the other spring samples. This contributed to the difference in the invertebrate community structure observed in this spring system compared to the others. Chassahowitzka springs samples were highest in dissolved oxygen. Homosassa spring had the highest turbidity, and Hall's River spring had the highest conductivity values. Homosassa South Fork spring samples had the highest pH and lowest turbidity values.

Figure 56a - Bubble Plot of Depth of Sample (m) Values Superimposed on the nMDS Plot of Spring Zones for all Systems

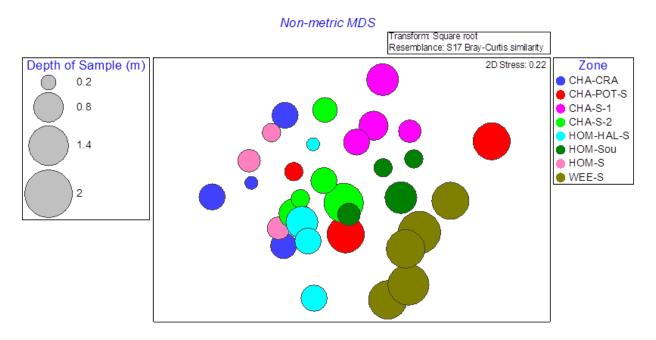


Figure 56b - Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of Spring Zones for all Systems

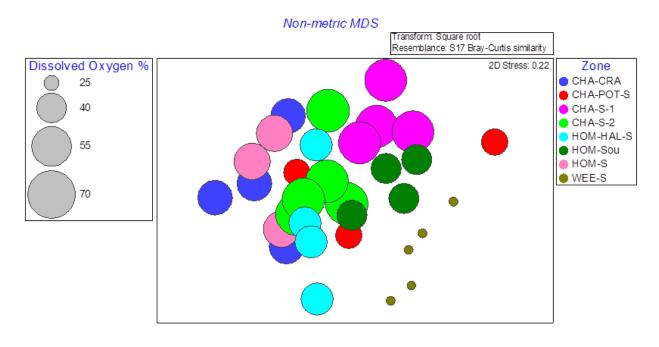


Figure 56c - Bubble Plot of Conductivity (µS/cm) Values Superimposed on the nMDS Plot of Spring Zones for all Systems

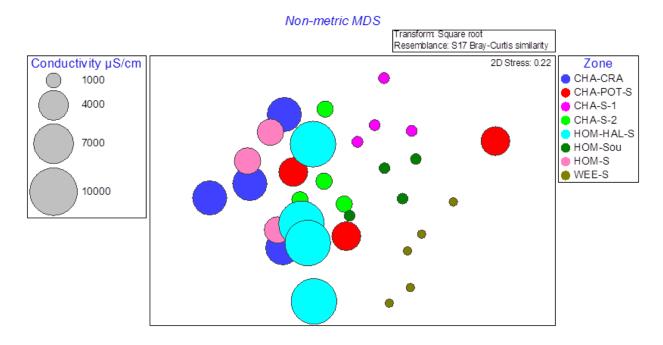


Figure 56d - Bubble Plot of pH Values Superimposed on the nMDS Plot of Spring Zones for all Systems

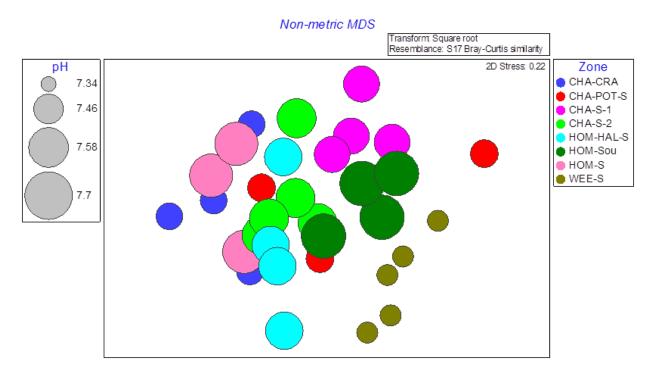
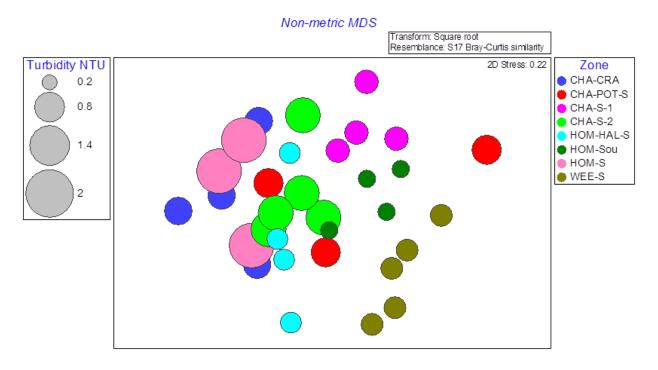


Figure 56e - Bubble Plot of Turbidity (NTU) Values Superimposed on the nMDS Plot of Spring Zones for all Systems



<u>Correlations between the Invertebrate Grazer Community and Abiotic Factors among Spring Zones</u>

Potential relationships between the grazer invertebrate community and the various abiotic factors were investigated because previous studies have shown that densities and biomass of certain gastropods, and their inherent grazing, can largely influence algal biomass. Due to differences in defining specific taxa as grazers between previous studies in the literature and the functional feeding group classification scheme according to the FDEP, three datasets comprised of different taxa were subjected to the same multivariate analyses and results were compared. The three datasets were 1) taxa with the primary functional feeding group listed as browsers-grazers according to FDEP, 2) taxa identified as gastropods because these are considered grazers by several studies in the literature (e.g. Liebowitz *et al.*, 2014), and 3) the taxa classified as browser-grazers by FDEP plus the taxa belonging to the Class Gastropoda.

For the spring zone samples, only some of the brackish and estuarine crustaceans from the entire taxa list from this study were classified as browser-grazers according to FDEP's classification scheme. These few crustaceans comprised the first dataset that was subjected to multivariate analyses examining potential interactions between the grazer community structure and the abiotic factors. The browser-grazer community from the Weeki Wachee spring zone was significantly different than that observed in Homosassa and Chassahowitzka spring zones (**Figure 57 and Table 44**). The BEST analysis with the BIOENV option in PRIMER revealed that a combination of five abiotic variables were best correlated with the browser-grazer invertebrate community structure across all spring zones. These variables were 1) depth of sample, 2) dissolved oxygen, 3) salinity, 4) pH and 5) canopy cover (rho = 0.333, p = 0.007).

Bubble plots illustrated how each of these abiotic variables related to the grazer invertebrate community structure (**Figures 58a-e**). Weeki Wachee samples were characterized by deeper depths, no canopy cover, and lower pH, salinity and dissolved oxygen. The HOM-Sou and CHA-S-1 spring zones had similar low salinity levels when compared to Weeki Wachee, but were shallower sites, with little to no canopy cover and had lower dissolved oxygen than Weeki Wachee spring samples.

Chassahowitzka springs samples had seven different browser-grazers and Homosassa springs had only five, as classified by the FDEP. Weeki Wachee spring only had one species of FDEP classified browser-grazer, which was found in SAV habitat in that spring. All FDEP classified grazers were from phylum arthropoda (subphylum crustacea). Results of the SIMPER analysis revealed that the decapod shrimp, *Palaemonetes* spp., had five times higher average abundances in the Weeki Wachee spring samples than the spring samples from Chassahowitzka and Homosassa (**Table 45**). It was the only invertebrate, classified as a browser-grazer according to the FDEP scheme that was found in the Weeki Wachee spring samples. The larvae of this genus of shrimp has been shown to prefer brackish and marine conditions, but as an adult can tolerate a wider range of salinities such as the lower salinities observed in Weeki Wachee spring (Knowlton and Kirby, 1984). Furthermore, *Palaemonetes pugio* possesses a transcription factor that helps regulate cellular and homeostatic responses to hypoxic conditions (Li and Brouwer, 2007). It is possible that the species present in the Weeki Wachee spring samples is *P. pugio*, or that the species present in these samples also possesses this transcription factor, and can tolerate the lower dissolved oxygen levels present in Weeki Wachee Spring.

Figure 57 - nMDS Plot of Browser-Grazer Invertebrate Samples from Spring Zones in all Systems

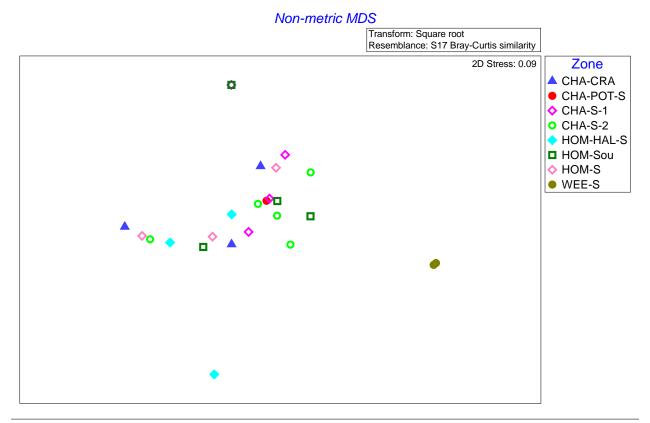


Table 44 - ANOSIM Results for Browser-Grazer Invertebrate Samples from Spring Zones in all Systems

	СНА	НОМ	WEE
СНА			
НОМ	0.025391		
WEE	0.9591	0.76739	
Global R = 0.2	256, p = 0.007		_

Figure 58a - Bubble Plot of Depth of Sample (m) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems

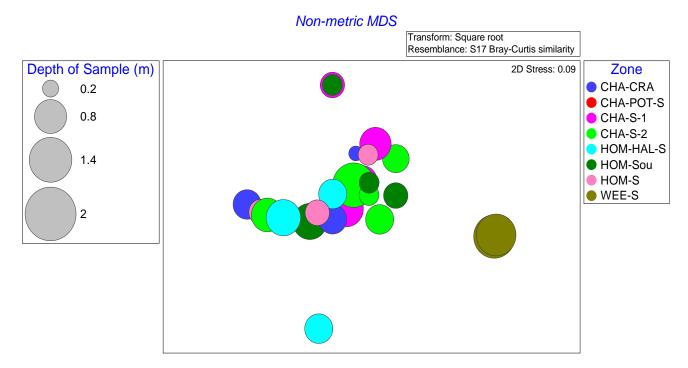


Figure 58b - Bubble Plot of Dissolved Oxygen (%) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems

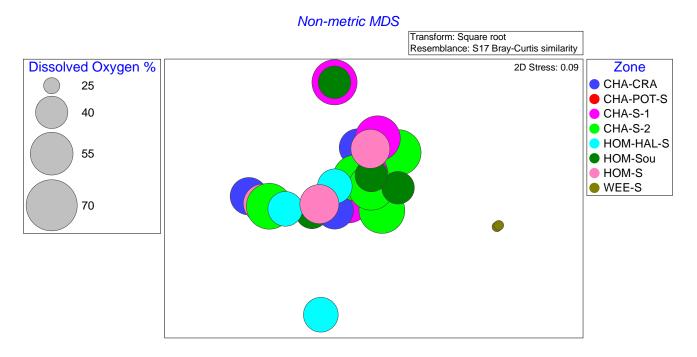


Figure 58c - Bubble Plot of Salinity (ppt) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems

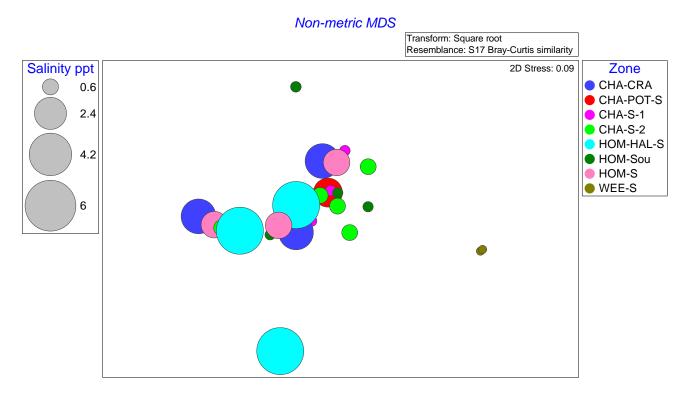


Figure 58d - Bubble Plot of pH Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems

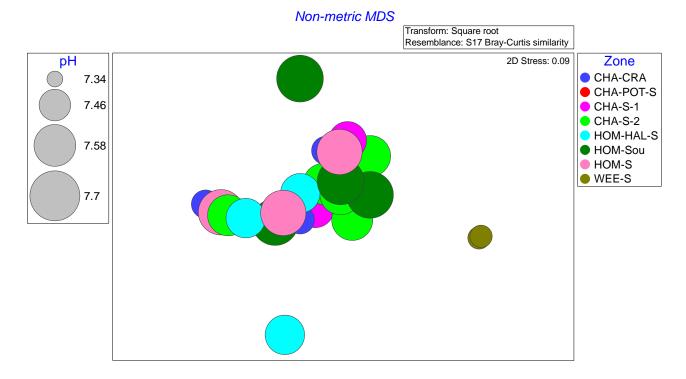


Figure 58e - Bubble Plot of Canopy Cover (%) Values Superimposed on the nMDS Plot of Browser-Grazer Samples from Spring Zones in all Systems

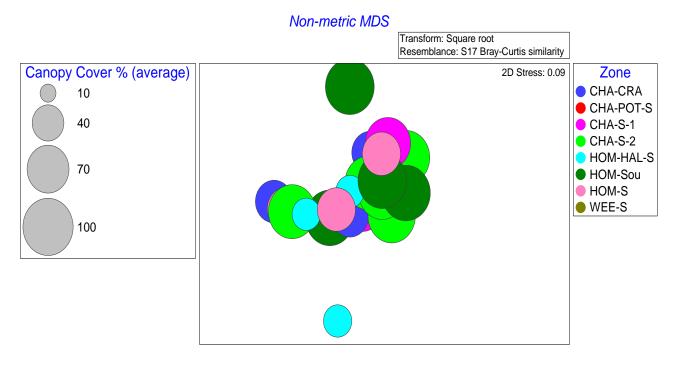


Table 45 - SIMPER Results for Significant Pairwise Comparisons between Systems for Browser-Grazer Samples from Spring Zones

Таха	Group 1 Average Abundance	Group 2 Average Abundance	% Contribution to Dissimilarity	% Cumulative Contribution to Dissimilarity
CHA vs	. WEE, Average	Dissimilarity =	97.71	
	CHA	WEE		
Palaemonetes spp.	0.36	11.71	45.54	45.54
Grandidierella bonnieroides	15.54	0.00	38.87	84.40
Melita nitida complex	2.54	0.00	6.51	90.91
Cyathura polita	2.64	0.00	3.93	94.85
Sinelobus stanfordi	0.65	0.00	2.64	97.49
Sphaeroma spp.	0.51	0.00	2.09	99.57
Gammaridea spp.	0.15	0.00	0.43	100.00
HOM vs	s. WEE, Average	Dissimilarity :	= 94.36	
	HOM	WEE		
Palaemonetes spp.	0.67	11.71	45.30	45.30
Grandidierella bonnieroides	16.13	0.00	42.84	88.14
Cyathura polita	3.35	0.00	9.43	97.57
Melita nitida complex	0.92	0.00	1.93	99.50
Gammaridea spp.	0.28	0.00	0.50	100.00
Sinelobus stanfordi	0.00	0.00	0.00	100.00
Sphaeroma spp.	0.00	0.00	0.00	100.00

The second dataset that was analyzed for potential trends between the grazer invertebrate community and the abiotic factors in the spring zones included taxa identified as gastropods only because these were considered "grazers" by several studies in the literature (e.g. Liebowitz 2013, Liebowitz et al., 2014). The ANOSIM results indicated that no significant differences existed in the gastropod communities between systems. Previous studies have indicated that *Pleurocera* species (as *Elimia*, see Dillon 2011 for discussion of taxonomy) can occur in very high densities in the southeastern United States (Brown et al. 2008). *Pleurocera* species were classified as collector-gatherer/deposit feeders as their primary functional feeder group and scraper as their secondary functional feeding group by the FDEP. However, *Pleurocera* species were rarely found in this study and instead, hydrobiid snails were the dominant gastropod found in all springs samples in this study. This could be due to differences in the sampling techniques employed, such as the smaller mesh size that was used to capture invertebrates in this study compared to Liebowitz et al. (2014).

Chassahowitzka and Homosassa springs samples had only three to four gastropod taxa, with the total gastropod abundance being made up of 98% hydrobiid snails for both systems. Weeki Wachee spring had nearly the same number of gastropod individuals (N=2522) as the cumulative number of gastropod individuals from all of the other springs combined (N=2587). Hydrobiids made up 77% of the total gastropod abundance in Weeki Wachee spring. The remaining gastropods were the exotic snail species *Melanoides spp.* and *Physella cubensis*. Gastropods were found in sediment, rock, SAV and macroalgae habitat types in Weeki Wachee spring.

Hydrobiid snails are classified as deposit feeders by the FDEP and their relative abundances have been shown to be positively correlated with algal biomass, unlike *Pleurocera*, whose biomass was found to be inversely correlated with algal biomass (Liebowitz *et al.*, 2014). Additionally, species belonging to the genus *Pleurocera* have been the focus of historical studies investigating effects of grazing pressure on algal biomass and how their abundances and biomass are influenced by abiotic factors, such as dissolved oxygen (Liebowitz *et al.*, 2014). *Pleurocera floridensis* was present in only three springs samples from the Halls River spring in snag, sediment and macroalgae habitat. *Pleurocera floridensis* made up only 2% of the total gastropod abundance in the Hall's River spring/Homosassa system. Hall's River spring had an intermediate DO concentration (3.56 mg/L) and the highest salinity values (5.15 ppt) compared to all of the other springs, suggesting that *Pleurocera floridensis* can tolerate a higher salinity regime. Due to low abundance of *Pleurocera* species, it is unlikely that gastropods exert much control on algal biomass in these systems.

The third combined dataset included gastropods plus taxa classified as browser-grazers by FDEP. Results similar to the first dataset were observed, where the combined browser-grazer plus gastropod community of Weeki Wachee spring was significantly different from those communities found in the Chassahowitzka and Homosassa springs (ANOSIM R = 0.238, p = 0.003). The multivariate BEST with the BIOENV results revealed that the browser-grazer plus gastropod invertebrate community was best correlated with only two abiotic variables, depth and canopy cover (rho = 0.425, p = 0.01). Bubble plots for the third dataset, which included organisms classified as browser-grazers according to FDEP plus gastropods were similar to the bubble plots shown in **Figure 58** from the first dataset (only browser-grazers), and therefore were not displayed. In addition, univariate statistical results showed that the combined dataset of % gastropods plus % browser-grazers (i.e. % of total abundance) was not correlated to any of the abiotic variables, including DO. However, abundance (i.e. number of individuals normalized for area) data for gastropods plus browser-grazers were significantly inversely correlated with salinity and specific conductance, which are covariates (**Appendix C, Table C-5**). Therefore, salinity may be the strongest predictor of gastropods plus browser-grazers abundance.

4.0 <u>DISCUSSION AND CONCLUSIONS</u>

The information from this study will increase the District's understanding of the complex and unique issues and drivers affecting these spring-fed rivers. The results provide both a baseline and path forward for protection, restoration and management of these iconic ecosystems. The results also provide a basis to describe the stability of the biological communities that will be incorporated into the upcoming SWIM plans for these three water bodies.

Although all three systems are first magnitude springs and are tidally influenced, the portion of Weeki Wachee River that was sampled was freshwater throughout. On the contrary, Chassahowitzka and Homosassa displayed tidal influences all the way up to the headsprings.

However, the maximum salinity recorded during the study was less than 5.5 ppt, which places these areas under study in the oligohaline zone of the salinity gradient, although the sites with the higher salinities were approaching salinities in the mesohaline zone. The abiotic environment and invertebrate community structure within the Weeki Wachee River was significantly different than the Chassahowitzka and Homosassa Rivers. Organisms found within the Weeki Wachee samples were primarily freshwater species, while those found in Homosassa and Chassahowitzka were more indicative of brackish waters.

Mean species richness, abundance, diversity and evenness indices were very similar between the three river systems and were similar to those reported in previous studies within these systems and other similar systems (Sloan 1956, Mote Marine Laboratory 2006, Janicki Environmental, Inc. 2008, Janicki Environmental, Inc. 2010). Previous studies (Janicki Environmental, Inc. 2006) were highly focused on salinity and evaluated larger extents of the river that extended beyond the scope of this study's reach, which included higher ranges of salinities. In this study, salinity was inversely correlated to species richness and to the percent composition of several taxonomic groups of invertebrates, but not to diversity and abundance when evaluating the systems overall. For the Weeki Wachee River, salinity was not a factor because the portion of the river sampled in this study was entirely fresh. However, in the Chassahowitzka and Homosassa Rivers, salinity was strongly inversely correlated to richness indices, indicating that salinity is an important driver of the invertebrate community in these systems.

There was a significant difference in the invertebrate communities from the Lower river samples compared to those in the Upper and Spring samples when looking at samples from all three river systems. Trends showing parabolic shaped distributions were similar to previous studies where low overall species richness was seen in the headspring, an increase was seen in the upper river and then a sharp decrease in the lower downstream region. The sharp downstream decrease in species richness suggests a threshold shift in the macroinvertebrate community, likely driven by some combination of physicochemical and biological interactions. Such abrupt longitudinal changes in riverine ecology are common, thus enabling scientists to identify and inventory distinctly different functional process zones along a river valley separated by comparatively short transition zones (Thorp et al., 2008). These trends were only seen for total species richness (not diversity indices), and were apparent in all three river systems. In addition, previous studies (Sloan 1956, Janicki 2010) found an increase in species richness moving towards the estuary, with a slight increase in species richness at the furthest downstream sampling location in Homosassa, which may be related to an increase in estuarine taxa. The middle portion of the rivers that constituted the transition zones between fresh and estuarine reaches may experience the greatest variability in salinity, making it difficult for many species to adapt to the ever changing conditions, resulting in lower species richness.

The dominant taxa found in the Homosassa and Chassahowitzka river systems overall, and when separating out springs zones alone, were similar to each other and consisted primarily of brackish water crustacean amphipods and Polychaeta worms. The dominant taxa found in Weeki Wachee river and spring zones were different from Homosassa and Chassahowitzka and consisted of freshwater amphipods, gastropods (i.e. snails) and a variety of insects. Collector-gatherer/deposit feeders were the dominant functional feeding group for all habitats, across all rivers, and zones, with the exception of HOM-R-2. Collector-gatherer/deposit feeders were still present in high concentrations within HOM-R-2; however, browser-grazers were the dominant functional feeding group in this zone (according to the FDEP classification system). Collector-gatherers that feed on small particles have previously been identified as the most abundant functional feeding group in

stream macroinvertebrate communities. However, their functional role has received little attention in the literature (Wallace and Webster, 1996).

Potential relationships between the grazer invertebrate community and the various abiotic factors were investigated for the springs only zones because previous studies have shown that densities and biomass of certain gastropods, and their inherent grazing, can largely influence algal biomass. In turn, low dissolved oxygen levels can be detrimental to gastropods affecting fecundity, growth and survival, thereby reducing the grazing pressure on macroalgae (Liebowitz *et al.*, 2014). When the browser-grazer invertebrate community, as classified by the FDEP, was employed in the multivariate analyses, the grazer community from Weeki Wachee spring was significantly different than the communities from Chassahowitzka and Homosassa springs. Notably, none of the gastropod taxa found in this study were classified as browser-grazers by the FDEP. The dominant browser-grazers found in this study were from phylum arthropoda (subphylum crustacea), with Chassahowitzka springs samples having the greatest number of different browser-grazer taxa (N=7) when compared to Homosassa (N=5) and Weeki Wachee spring (N=1).

The difference between Weeki Wachee and the browser-grazer communities in Chassahowitzka and Homosassa springs was largely due to the presence of the decapod shrimp, *Palaemonetes* spp. *Palaemonetes* spp. had five times higher average abundances in Weeki Wachee spring than in Chassahowitzka and Homosassa springs. Species belonging to this genus have been shown to possess a transcription factor that allows the organism to tolerate low dissolved oxygen levels, such as those observed at Weeki Wachee spring (Li and Brouwer, 2007). Because *Palaemonetes* spp. can tolerate lower dissolved oxygen levels that are common to many springs, further evaluation may be merited to determine if this species and other crustaceans have the ability to reduce macroalgal coverage in springs.

The naturally low oxygen conditions observed in the Weeki Wachee spring zone may be limiting the occurrence of other important grazers, such as *Pleurocera* snail (gastropod) species. Because *P. floridensis* was collected only from three spring samples (from the Hall's River spring) and that previous studies have focused primarily on *Pleurocera* species densities and biomass in relation to grazing pressure and algal biomass, it is difficult to make comparisons about grazing pressures on algal biomass between this study and others (such as Liebowitz *et al.*, 2014). The dominant gastropod observed in this study was Hydrobiidae spp. which is classified as a deposit feeder by FDEP. Additionally, the relative abundance of species within this family have been shown to be positively correlated with algal biomass and may not exhibit the same grazing pressures on macroalgae as those species belonging to the Family Pleuroceridae (Liebowitz *et al.*, 2014). This suggests that naturally low dissolved oxygen levels may preclude the establishment of Pleuroceridae as an agent of macroalgal control in Weeki Wachee spring.

Positive correlations were found between canopy cover, dissolved oxygen, and species richness indices of the grazer community in the springs zones. Negative correlations between salinity and abundance of grazers (i.e combined browser-grazers plus gastropod community) in the springs zone were also found to be significant. Therefore, canopy cover, DO, and salinity are important abiotic factors that could be influencing the invertebrate community in these springs. Future monitoring studies targeting the collection of various invertebrate grazers in springs, and comparisons with algal biomass and abiotic factors, would help reinforce these complex interactions.

In addition to the head springs zones, other sub-zone categories include upper and lower riverine zones and tributary zones. As mentioned, even when data were pooled among the three rivers, tributary communities differed from the mainstem river zones and springs. This strongly suggests different restoration and protection strategies are likely to be needed for tributaries versus other zones.

When examined individually, each river exhibited well-defined zones differing in physicochemical characteristics and benthic communities. The Weeki Wachee River has a freshwater upper riverine zone that was unique to the study. The springs and mainstem of this river represent separate zones. For example, pH, DO, and canopy cover were all greater in the river zones versus the spring zone.

The Chassahowitzka and Homosassa River systems each have spring zones, upper river, lower river, and tributary zones. This does not mean these zone descriptions should be viewed as interchangeable between the rivers. However, some commonalities suggest an overall restoration strategy by which certain zones can be identified where the benthic communities could be sustained or restored by selective activities tailored to each zone. Both natural and altered areas across zones can be identified, and the specific departures from nature can be placed in context and addressed in a restoration plan for the altered zones. Many human alterations tend to simplify and homogenize habitat complexity, thus reducing biodiversity.

The habitats investigated within the three river systems were macroalgae, SAV, rock, snag, and sediment. In most zones, one or more of the habitat types were absent. Habitat diversity (i.e. number of habitats available) may be a controlling factor in species richness. Therefore, the physicochemical factors that are driving habitat diversity should be further evaluated and restoration alternatives should be pursued to establish more beneficial habitat availability to enhance community stability.

The various invertebrates have different functional roles within the food chain, as well as in nutrient cycles. The results of this study show that there is a difference in the invertebrate community within different habitats. The differences in the invertebrate community between habitats is more pronounced in the freshwater Weeki Wachee system. This may be due to higher variability in salinity and turbidity concentrations across the sampling zones in Homosassa and Chassahowitzka when compared to Weeki Wachee. Therefore, habitat type was a stronger driver influencing the invertebrate community in Weeki Wachee River. Samples from snag habitats produced the largest number of unique taxa compared to the other habitats in Chassahowitzka and Homosassa Rivers. SAV samples, followed by snag, produced the largest number of unique taxa in Weeki Wachee. Macroalgae does provide habitat for a large number of taxa, however, to a lesser extent than snag and SAV habitats. The District has already initiated habitat restoration in several coastal spring systems through revegetation of SAV. In addition to this effort, direct enhancement of snag/woody debris habitat within these systems, reestablishment of a woody riparian zone, and precluding removal of these habitats would benefit the macroinvertebrate community.

Habitat diversity was correlated with several water quality (temperature, salinity, conductivity, turbidity) and physical factors (sediment type and canopy cover). Furthermore, species richness and Margalef's richness were positively correlated with habitat diversity. The expectations for the invertebrate (and other biotic) communities for the individual systems should take the physicochemical environment into consideration including tidal influence and habitat availability. For example, the lower portion of each of these river systems had limited, if any, SAV. The

Homosassa River system had limited SAV throughout the study area. Therefore, it is expected that these portions of the river with fewer habitats would have lower species richness and diversity.

In the Homosassa River system, the invertebrate community in the Halls River was different than those in the springs or river samples. For Chassahowitzka and Weeki Wachee, the spring invertebrate community was different than those in the river and tributary samples. In Weeki Wachee, annelid worms, crustaceans, midges, molluscs, a few organisms from miscellaneous phyla and trichopterans were the only major taxa groups present in the spring samples. All other insect groups such as mayflies (Ephemeroptera), beetles (Coleoptera), and damselflies and dragonflies (Odonata) were absent from the spring samples, while they were present in the river samples.

During the current study, Amec Foster Wheeler scientists observed substantial changes in the SAV and macroalgae community between the site reconnaissance (July 2015) and the sampling event (August/September 2015). Specifically, during the sampling event, the epiphytic algae on the SAV was much more abundant in Chassahowitzka than was observed during the site reconnaissance site visit. In addition, certain organisms emerge at certain times of the year and are more prevalent prior to emergence. Previous and current drivers that affect these systems include drought and ground water pumping, which can affect freshwater flow from the springs. Sea level rise may further complicate the hydrology and ecology of these systems by changing the extent and magnitude of the tidal influence and subsequent salinity regimes.

Due to short and long-term factors affecting variability, seasonally spaced sampling events for macroinvertebrates may provide a more comprehensive evaluation of the factors affecting the macroinvertebrate communities in these systems. Furthermore, a single sampling event and single sample from each zone/habitat provides only a snap shot of the current condition. Additional sampling events and replication can provide increased assurance that all taxa in the systems are being captured. Finally, synoptic monitoring of SAV and macroalgal biomass coupled with macroinvertebrate biomass, specifically grazers, would provide the ability to assess more direct causal relationships regarding feeding habits that reduce algal communities, which is an important issue for springs restoration.

Based on the results of the study, the following management, protection and restoration alternatives are provided as recommendations for the three river systems:

- Enhance the diversity of available habitats to increase the biodiversity of the macroinvertebrate community. Enhancement of habitat diversity can be accomplished with 1) removal of organic sediments, 2) planting native SAV, 3) add snag/woody debris to certain areas, 4) prevent or reduce de-snagging activities, 5) manage boat traffic and the types of recreation allowed in certain areas to reduce damage to sensitive habitats if warranted (especially SAV habitat).
- Address potentially adverse effects of canals on mainstem and tributary zone benthic communities, especially those related to turbidity, sedimentation, and nutrient enrichment.
 Reduce pollutant loads from canals as warranted.
- Sustain or increase spring flow and other clean freshwater discharge volumes to mitigate salt-water intrusion into the upper river and spring zones.

- Canopy cover routinely was associated with benthic diversity. Consider this association when assessing potential buffer restoration activities along denuded shorelines.
- Continue biological monitoring to evaluate seasonal and inter-annual variability, and to examine long-term trends and transitional zone changes in relation to species richness and biodiversity over time.

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Appendices

Appendix A Physicochemical Data & Selected Analysis Results

Table A-1. Physicochemical Data Page 1 of 4

Zone ID	Habitat	Photolog #	Latitude	Longitude	Distance from Headspring (km)	Distance from Headspring (mi)	Distance from Headspring (m)	Notes	Sample Date	Sample Time	Tidal Stage	Depth of Sample (ft)	Water Depth at Point of WQ Measureme nt (ft)	Water Temperatur e °C	Dissolved Oxygen mg/L	Dissolved Oxygen %	Salinity ppt	Conductivity μS/cm	pН	Turbidity NTU	Sediment type	Canopy Cover % (average)	Sample Equipment	Comments
WEE-S	MA	90-94	-82.573470	28.517140	0.025	0.016	25.05		8/28/15	8:52	NA	4.90	1.00	23.76	1.86	21.81	0.16	340.00	7.38	0.43	Sand	0.00	Dipnet	Vaucheria & Lyngbya
WEE-3	IVIA						25.05			0.32	INA	4.90	1.00	23.70	1.00	21.61	0.10	340.00		0.43	Sanu	0.00	Dipriet	Vallisneria
WEE-S	SAV	90-94	-82.573470	28.517140	0.025	0.016	25.05		8/28/15	8:55	NA	4.00	1.00	23.76	1.86	21.81	0.16	340.00	7.38	0.43	Sand	0.00	Dipnet	americana Duplicate
WEE-S	SED	90-94	-82.573470	28.517140	0.025	0.016	25.05		8/28/15	9:05		4.30	1.00	23.76	1.86	21.81	0.16	340.00			Sand		Dipnet	Sample
WEE-S	SED-2	90-94	-82.573470	28.517140	0.025	0.016	25.05	Measured from "WEEKI	8/28/15	9:05	NA	4.30	1.00	23.76	1.86	21.81	0.16	340.00	7.38	0.43	Sand	0.00	Petite Ponar	Sand and
								WACHEE SPRING" aerial boil																algae on
WEE-S	ROCK	90-94	-82.573470	28.517140	0.025	0.016	25.05	location.	8/28/15	9:30	NA	5.20	1.00	23.76	1.86	21.81	0.16	340.00	7.38	0.43	Sand	0.00	Dipnet	rock Vallisneria
WEE-R-1	SAV	95-99	-82.57475	28.519470	0.312	0.194	311.93		8/28/15	12:25		3.60	1.00	23.90	2.86	33.70	0.16	339.00	7.54	0.33			Dipnet	americana
WEE-R-1 WEE-R-1	SNAG MA	95-99 95-99	-82.57475 -82.57475	28.519470 28.519470	0.312 0.312	0.194 0.194	311.93 311.93	Measured from "WEEKI WACHEE SPRING" aerial boil	8/28/15 8/28/15	12:30 12:35		5.00 5.20	1.00 1.00	23.90 23.90	2.86 2.86	33.70 33.70	0.16	339.00 339.00	7.54 7.54	0.33	Sand Sand		Dipnet Dipnet	
WEE-R-1	SED	95-99	-82.57475	28.519470	0.312	0.194	311.93	location.	8/28/15	12:40		5.20	1.00	23.90	2.86	33.70	0.16	339.00	7.54	0.33			Petite Ponar	
WEE-R-2	MA	100-103	-82.579310	28.518640	0.893	0.555	893.03		8/28/15	13:00		2.60	1.00	24.38	5.49	65.10	0.16	337.00	7.50	0.15	Sand		Dipnet	
WEE-R-2 WEE-R-2	SNAG SAV	100-103 100-103	-82.579310 -82.579310	28.518640 28.518640	0.893	0.555 0.555	893.03 893.03	Measured from "WEEKI	8/28/15 8/28/15	13:05 13:10		4.10 3.00	1.00 1.00	24.38 24.38	5.49 5.49	65.10 65.10	0.16	337.00 337.00	7.50 7.50	0.15 0.15			Dipnet Dipnet	Vaucheria
WEE-R-2	SED	100-103	-82.579310	28.518640	0.893	0.555	893.03	WACHEE SPRING" aerial boil	8/28/15	13:15	NA	3.60	1.00	24.38	5.49	65.10	0.16	337.00	7.50	0.15	Sand	18.00	Ponar	
WEE-R-2 WEE-R-3	ROCK MA	100-103 104-106	-82.579310 -82.583234	28.518640 28.519443	0.893 1.457	0.555 0.905	893.03 1456.64	location.	8/28/15 8/28/15	13:15 14:00		1.50 2.10	1.00 1.00	24.38 24.06	5.49 4.38	65.10 52.10	0.16 0.16	337.00 338.00	7.50 7.61	0.15 0.21	Sand Silt/Sand		Dipnet Dipnet	
WEE-R-3	SNAG	104-106	-82.583234	28.519443	1.457	0.905	1456.64		8/28/15	14:20		2.50	1.00	24.06	4.38	52.10	0.16	338.00	7.61	0.21			Dipnet	
WEE-R-3	ROCK	104-106	-82.583234	28.519443	1.457	0.905	1456.64	Measured from "WEEKI	8/28/15	14:30		2.00	1.00	24.06	4.38	52.10	0.16	338.00	7.61	0.21			Dipnet	
WEE-R-3 WEE-R-3	SED SAV	104-106 104-106	-82.583234 -82.583234	28.519443 28.519443	1.457 1.457	0.905 0.905	1456.64 1456.64	WACHEE SPRING" aerial boil location.	8/28/15 8/28/15	14:50 14:50		4.30 3.40	1.00 1.00	24.06 24.06	4.38 4.38	52.10 52.10	0.16	338.00 338.00	7.61 7.61	0.21	Silt/Sand Silt/Sand		Petite Ponar Dipnet	
WEE-R-4	SNAG	107-110	-82.583920	28.521430	1.740	1.081	1739.82		8/28/15	15:40		3.50	1.00	24.05	4.22	50.10	0.16	337.00	7.58		Sand, Light sil		Dipnet	
WEE-R-4	SAV ROCK	107-110	-82.583920	28.521430	1.740	1.081	1739.82		8/28/15	15:40		3.90	1.00	24.05	4.22	50.10	0.16	337.00	7.58	0.45			Dipnet	
WEE-R-4 WEE-R-4	SED	107-110 107-110	-82.583920 -82.583920	28.521430 28.521430	1.740 1.740	1.081	1739.82 1739.82	Measured from "WEEKI WACHEE SPRING" aerial boil	8/28/15 8/28/15	15:40 15:40		3.80 3.60	1.00	24.05 24.05	4.22 4.22	50.10 50.10	0.16	337.00 337.00	7.58 7.58	0.45 0.45	Sand, Light sil		Dipnet Petite Ponar	
WEE-R-4	MA	107-110	-82.583920	28.521430	1.740	1.081	1739.82	location.	8/28/15	15:45	NA	4.40	1.00	24.05	4.22	50.10	0.16	337.00	7.58	0.45	Sand, Light sil		Dipnet	
WEE-R-5 WEE-R-5	SNAG SAV	No photos No photos	-82.595523 -82.595523	28.525779 28.525779	4.445 4.445	2.762	4444.72 4444.72		9/10/15 9/10/15	11:30 11:30		0.50 1.00	1.00	24.06 24.06	5.06 5.06	60.30 60.30	0.17	351.00 351.00	7.73	0.38	Sand Sand		Dipnet Dipnet	
WEE-R-5	MA	No photos	-82.595523	28.525779	4.445	2.762	4444.72	Measured from "WEEKI WACHEE SPRING" aerial boil	9/10/15	11:30		4.00	1.00	24.06	5.06	60.30	0.17	351.00	7.73	0.38			Dipnet	
WEE-R-5	SED	No photos	-82.595523	28.525779	4.445	2.762	4444.72	location.	9/10/15	11:30		5.00	1.00	24.06	5.06	60.30	0.17	351.00	7.73	0.38			Petite Ponar	
WEE-R-6	SNAG SAV	No Photos No photos	-82.606223 -82.606223	28.531440	6.245	3.881	6245.12		9/10/15 9/10/15	12:42		2.00	1.00	24.30	5.73	68.70	0.17	351.00 351.00	7.79		Sand		Dipnet Dipnet	Vallisneria americana, Najas guadalupen sis
WEE-R-6	MA	No photos	-82.606223	28.531440	6.245	3.881	6245.12	Measured from "WEEKI WACHEE SPRING" aerial boil	9/10/15	12:42		3.00	1.00	24.30	5.73	68.70	0.17	351.00	7.79				Dipnet	313
WEE-R-6	SED	No photos	-82.606223	28.531440	6.245	3.881	6245.12	location.	9/10/15	12:49	NA	4.00	1.00	24.30	5.73	68.70	0.17	351.00	7.79	0.73	Sand	46.50	Petite Ponar	
CHA-POT-S	SAV	1-6	-82.596647	28.731613	0.010	0.006	10.28		9/10/15	15:13	Incoming	4.00	1.00	24.22	2.97	35.70	1.96	3716.00	7.44	0.77	Organic	12.50	Dipnet	Myriophyllu m spicatum
CHA-POT-S	SNAG	1-6	-82.596647	28.731613	0.010	0.006	10.28	Measured from "POTTER	9/10/15	15:15	Incoming	1.00	1.00	24.22	2.97	35.70	1.96	3716.00	7.44	0.77	Organic	12.50	Dipnet	
CHA-POT-S	SED	1-6	-82.596647	28.731613	0.010	0.006	10.28	CREEK SPRING"	9/10/15	15:17	Incoming	4.00	1.00	24.22	2.97	35.70	1.96	3716.00	7.44	0.77	Organic	12.50	Petite Ponar	Vallisneria americana and Najas guadalupen sis - cover w/ epiphytic
CHA-POT-1	-	7-10	-82.597887	28.729908	0.234	0.145	234.03		9/10/15		Incoming	3.00	1.00	25.54	4.51	55.50	4.40				Organic		Dipnet	algae
CHA-POT-1 CHA-POT-1		7-10 7-10	-82.597887 -82.597887	28.729908	0.234 0.234	0.145 0.145	234.03 234.03	Measured from "POTTER CREEK SPRING"	9/10/15		Incoming Incoming	1.00 3.00		25.54 25.54	4.51 4.51	55.50 55.50	4.40 4.40				Organic Organic		Dipnet Petite Ponar	
				28.729908				CREEK SPRING"	9/10/15		<u> </u>				4.51									Vallisneria americana and Najas guadalupen sis - cover w/ epiphytic
CHA-POT-2 CHA-POT-2		11-13 11-13	-82.596538 -82.596538	28.727344 28.727344	0.549 0.549	0.341 0.341	548.58 548.58	Managered from IDOTTES	9/10/15 9/10/15		Incoming Incoming	2.00 1.00	1.00 1.00	27.44 27.44	5.52 5.52	70.80 70.80	2.33		7.62 7.62		Organic & Sar Organic & Sar		Dipnet Dipnet	algae
CHA-POT-2		11-13	-82.596538 -82.596538	28.727344	0.549	0.341	548.58	Measured from "POTTER CREEK SPRING"	9/10/15		Incoming	2.00	1.00	27.44	5.52	70.80	2.33				Organic & Sar Organic & Sar		Petite Ponar	
CHA-POT-3		14-16	-82.597341	28.722999	1.075	0.668	1075.24	Measured from "POTTER	9/10/15		Incoming	1.00	1.00	27.90	5.37	68.70	2.34				Sand		Dipnet	No SAV observed

Table A-1. Physicochemical Data Page 2 of 4

Zone ID	Habitat	Photolog #	Latitude	Longitude	Distance from Headspring (km)	Distance from Headspring (mi)	Distance from Headspring (m)	Notes	Sample Date	Sample Time	Tidal Stage	Depth of Sample (ft)	Water Depth at Point of WQ Measureme nt (ft)	Water Temperatur e °C	Dissolved Oxygen mg/L	Dissolved Oxygen %	Salinity ppt	Conductivity μS/cm	рН	Turbidity NTU	Sediment type	Canopy Cover % (average)	Sample Equipment	Comments
CHA-POT-3	SED	14-16	-82.597341	28.722999	1.075	0.668	1075.24	CREEK SPRING"	9/10/15	16:50	Incoming	2.00	1.00	27.90	5.37	68.70	2.34	4415.00	7.61	2.77	Sand	2.00	Petite Ponar	
CHA-CRA-S	ROCK	17-27	-82.575789	28.717272	0.010	0.006	10.19		9/10/15	17:23	Outgoing	2.00	1.00	23.23	3.95	46.90	2.81	5210.00	7.43	0.68	Sand/Detritus	55.50	Dipnet	Orange iron bacteria observed
		17-27							- 11-11-															Vallisneria americana and Myriophyllu
CHA-CRA-S CHA-CRA-S		17-27	-82.575789 -82.575789	28.717272 28.717272	0.010	0.006 0.006	10.19 10.19		9/10/15 9/10/15		Outgoing Outgoing	2.00 0.50	1.00	23.23	3.95 3.95		2.81	5210.00 5210.00	7.43		Sand/Detritus Sand/Detritus		Dipnet Dipnet	m spicatum
CHA-CRA-S		17-27	-82.575789	28.717272	0.010	0.006	10.19	Measured from "CRAB SPRING"	9/10/15		Outgoing	2.00	1.00	23.23	3.95		2.81				Sand/Detritus		Petite Ponar	During Recon spring run completely covered with orange bacteria; during sampling much clearer
CHA-R-6	SNAG	28-30	-82.605600	28.714888	3.571	2.219	3571.02	Measured from *CHASSAHOWITZKA	9/11/15	9:56	Outgoing	0.50	1.00	26.70	3.81	48.50	2.54	4767.00	7.52	3.88	Silty, organic	0.00	Dipnet	Cabbage palm only snags, sparse Myriophyllu m spicatum observed (not sufficient to sample)
CHA-R-6	SED	28-30	-82.605600	28.714888	3.571	2.219	3571.02	SPRING MAIN"	9/11/15		Outgoing	1.50	1.00	26.70	3.81	48.50	2.54		7.52		Silty, organic		Petite Ponar	
CHA-R-5	SNAG	31-33	-82.603803	28.717841	3.126	1.943	3126.42	Moved sampling site point. Updated Lat/Long. Measured from "CHASSAHOWITZKA	9/11/15		Outgoing	0.25	1.00	26.96	3.81	47.90	2.45	4600.00	7.52		Silty, organic		Dipnet	Sparse Myriophyllu m spicatum observed (not sufficient to sample)
CHA-R-5	SED	31-33	-82.603803	28.717841	3.126	1.943	3126.42	SPRING MAIN"	9/11/15	10:17	Outgoing	1.50	1.00	26.96	3.81	47.90	2.45	4600.00	7.52	9.83	Silty, organic	1.00	Petite Pona	
CHA-R-4	SNAG	34	-82.599410	28.719528	2.619	1.627	2619.09		9/11/15	10:49	Outgoing	0.25	1.00	27.82	12.03	155.10	2.25	4251.00	8.15	2.69	Silty, organic	0.00	Dipnet	Sparse Myriophyllu m spicatum observed, WQ above algae bed (high DO)
CHA-R-4	MA	34	-82.599410	28.719528	2.619	1.627	2619.09	Measured from "CHASSAHOWITZKA	9/11/15		Outgoing	1.50	1.00	27.82	12.03	155.10	2.25	4251.00	8.15		Silty, organic		Dipnet	(···g·· = +)
CHA-R-4	SED	34	-82.599410	28.719528	2.619	1.627	2619.09	SPRING MAIN"	9/11/15	10:50	Outgoing	1.50	1.00	27.82	12.03	155.10	2.25	4251.00	8.15	2.68	Silty, organic	0.00	Petite Pona	
CHA-R-3	SAV	35-37	-82.590397	28.717492	1.613	1.002	1612.87		9/11/15	11-12	Outgoing	1,50	1.00	24.93	6.77	82.70	2.28	4298.00	7.66	1 20	Soft sand w/ o	0.50	Dipnet	Vallisneria americana and Najas guadalupen sis w/ epiphytic algae
CHA-R-3	MA	35-37	-82.590397	28.717492	1.613	1.002	1612.87	Measured from	9/11/15		Outgoing	1.50	1.00	24.93	6.77	82.70	2.28		7.66		Soft sand w/ o		Dipnet	
CHA-R-3	SNAG	35-37	-82.590397	28.717492	1.613	1.002	1612.87	"CHASSAHOWITZKA	9/11/15		Outgoing	1.00	1.00	24.93	6.77	82.70	2.28		7.66		Soft sand w/ o		Dipnet	
CHA-R-3 CHA-R-2	SED ROCK	35-37 38-43	-82.590397 -82.582896	28.717492 28.715829	1.613 0.755	1.002 0.469	1612.87 755.01	SPRING MAIN"	9/11/15 9/11/15		Outgoing Outgoing	1.50 0.50	1.00	24.93 24.57	6.77 6.65	82.70 80.20	2.28 1.29	4298.00 2501.00	7.66	1.30 1.31	Soft sand w/ organ		Petite Pona Dipnet	
CHA-R-2	SED	38-43	-82.582896	28.715829	0.755	0.469	755.01		9/11/15		Outgoing	2.50	1.00	24.57	6.65	80.20	1.29	2501.00	7.67	1.31	Sand w/ organ		Petite Pona	r
CHA-R-2	MA	38-43 38-43	-82.582896	28.715829	0.755	0.469	755.01	Measured from	9/11/15		Outgoing	2.50	1.00	24.57	6.65	80.20	1.29	2501.00	7.67		Sand w/ organ		Dipnet	
CHA-R-2 CHA-R-2	SNAG SAV	38-43	-82.582896 -82.582896	28.715829 28.715829	0.755 0.755	0.469 0.469	755.01 755.01	"CHASSAHOWITZKA SPRING MAIN"	9/11/15 9/11/15		Outgoing Outgoing	0.50 2.50	1.00	24.57 24.57	6.65 6.65	80.20 80.20	1.29	2501.00 2501.00	7.67	1.31 1.31	Sand w/ organ Sand w/ organ		Dipnet Dipnet	1

Table A-1. Physicochemical Data Page 3 of 4

Zone ID	Habitat	Photolog #	Latitude	Longitude	Distance from Headspring (km)	Distance from Headspring (mi)	Distance from Headspring (m)	Notes	Sample Date	Sample Time	Tidal Stage	Depth of Sample (ft)	Water Depth at Point of WQ Measureme nt (ft)	Water Temperatur e °C	Dissolved Oxygen mg/L	Dissolved Oxygen %	Salinity ppt	Conductivity μS/cm	рН	Turbidity NTU	Sediment type	Canopy Cover % (average)	Sample Equipment	Comments
																								Vallisneria americana, Myriophyllu m spicatum, Najas guadalupen
CHA-R-1	SAV	44-48	-82.579012	28.716685	0.340	0.212	340.47		9/11/15	12:56	Incoming	2.75	1.00	25.09	7.37	89.90	1.31	2550.00	7.74	1.09	Organic & det	11.75	Dipnet	sis
CHA-R-1	SNAG	44-48	-82.579012	28.716685	0.340	0.212	340.47		9/11/15	12:54	Incoming	0.25	1.00	25.09	7.37	89.90	1.31	2550.00	7.74	1.09	Organic & det	11.75	Dipnet	
CHA-R-1	MA	44-48	-82.579012	28.716685	0.340	0.212	340.47	Measured from "CHASSAHOWITZKA	9/11/15	12:56	Incoming	2.75	1.00	25.09	7.37	89.90	1.31	2550.00	7.74	1.09	Organic & det	11.75	Dipnet	Hard to separate from Najas guadalupen sis
	SED	44-48	-82.579012	28.716685	0.340	0.212	340.47	SPRING MAIN"	9/11/15	13:00	Incoming	2.75	1.00	25.09	7.37		1.31	2550.00	7.74	1.09	Organic & det	11.75	Petite Pona	r
	SED	49-51	-82.576203	28.715518	0.000	0.000	0.17		9/11/15	13:59	Incoming	1.80		24.09	5.05		0.59	1199.00			Organic, detrit		Petite Pona	r
	SNAG MA	49-51 49-51	-82.576203 -82.576203	28.715518 28.715518	0.000	0.000	0.17		9/11/15 9/11/15		Incoming Incoming	1.00 4.50		24.09 24.09	5.05 5.05		0.59 0.59	1199.00 1199.00			Organic, detrit Organic, detrit		Dipnet Dipnet	
																					,			Sampled Vallisneria americana and Hydrilla verticillata, small amount of Cabomba and Myriophylllu m spicatum
CHA-S-2	SAV	49-51	-82.576203	28.715518	0.000	0.000	0.17	Measured from "CHASSAHOWITZKA	9/11/15	13.55	Incoming	2.00	1.00	24.09	5.05	60.20	0.59	1199.00	7 57	1 10	Organic, detrit	89.25	Dipnet	also observed
	ROCK	49-51	-82.576203	28.715518	0.000		0.17	SPRING MAIN"	9/11/15		Incoming	2.60		24.09	5.05		0.59	1199.00			Organic, detrit		Dipnet	
	SED	52-57	-82.575285	28.716108	0.021	0.013	20.99		9/11/15	14:37	Incoming	3.00	1.00	23.92	4.98	59.10	0.26	543.00	7.53	0.50	Detritus, sand		Petite Pona	r
	SNAG	52-57	-82.575285	28.716108	0.021	0.013	20.99	Moved sampling site point.	9/11/15		Incoming	1.50		23.92	4.98	59.10	0.26	543.00	7.53		Detritus, sand		Dipnet	
CHA-S-1	ROCK	52-57	-82.575285	28.716108	0.021	0.013	20.99	Updated Lat/Long. Measured from "CHASSAHOWITZKA #1;	9/11/15	14:38	Incoming	2.50	1.00	23.92	4.98	59.10	0.26	543.00	7.53	0.50	Detritus, sand	81.50	Dipnet	Hydrilla
CHA-S-1	SAV	52-57	-82.575285	28.716108	0.021	0.013	20.99	BUBBA SPRING"	9/11/15	14:50	Incoming	2.00	1.00	23.92	4.98	59.10	0.26	543.00	7.53	0.50	Detritus, sand	81.50	Dipnet	verticillata
	ROCK	58-60	-82.583215	28.826548	0.299	0.186	299.14		9/14/15	13:49	Outgoing	3.00		23.47	3.56	43.10	5.15	9211.00	7.55	0.39	Soft sand	32.00	Dipnet	
	MA	58-60	-82.583215	28.826548	0.299	0.186	299.14		9/14/15		Outgoing	0.50		23.47	3.56	43.10	5.15	9211.00	7.55		Soft sand		Dipnet	
	SNAG SED	58-60 58-60	-82.583215 -82.583215	28.826548 28.826548	0.299	0.186 0.186	299.14 299.14	Measured from "HALLS RIVER HEAD SPRING"	9/14/15 9/14/15		Outgoing Outgoing	2.00		23.47 23.47	3.56 3.56		5.15 5.15	9211.00 9211.00	_		Soft sand Soft sand		Dipnet Petite Pona	,
	MA	61-63	-82.591326	28.823372	0.233	0.100	233.14	Measured from "HALLS	9/14/15		Outgoing	1.00		25.64	9.20	115.80	5.03	9005.00	8.01		Soft sand		Dipnet	1
HOM-HAL-1	SED	61-63	-82.591326	28.823372	1.408	0.875	1407.52	RIVER HEAD SPRING"	9/14/15		Outgoing	2.00		25.64	9.20		5.03	9005.00	8.01		Soft sand		Petite Pona	r
HOM-HAL-2	SED	64-66	-82.603008	28.817142	2.882	1.791	2882.35	Measured from "HALLS RIVER HEAD SPRING"	9/14/15	15:03	Incoming	3.00	1.00	26.07	9.00	114.40	4.66	8422.00	7.94	1.13	Organic, soft s	0.00	Petite Pona	Macroalgae present in small amounts but r not sampled
HOM-HAL-3		67-68 69-71	-82.607644 -82.588200	28.807200 28.799251	4.318 0.010		4318.09 10.01	Measured from "HALLS RIVER HEAD SPRING"	9/14/15 9/14/15		Incoming Incoming	2.50 1.50		28.26 23.36	8.24 4.16		4.34 1.64	7888.00 3135.00			Organic, soft s		Petite Pona	present in small amounts but r not sampled
				28.799251	0.010		10.01	Measured from "HOMOSASSA SPRING			Incoming	1.50		23.36	4.16	49.20	1.64				Organic, sand		Petite Pona	r
		69-71	-82.588200	28.799251	0.010		10.01	#1"	9/14/15		Incoming	1.00			4.16		1.64				Organic, sand		Dipnet	
	ROCK	72-74	-82.586703	28.796659	0.040		40.36	_	9/15/15		Outgoing	1.00		23.32	3.43		0.25	512.00			Soft sand		Dipnet	
	MA	72-74	-82.586703	28.796659	0.040		40.36		9/15/15		Outgoing	1.50		23.32	3.43		0.25	512.00			Soft sand		Dipnet	
HOM-SOU-S	SNAG SED	72-74 72-74	-82.586703 -82.586703	28.796659 28.796659	0.040		40.36 40.36	Measured from "TROTTER MAIN SPRING"	9/15/15 9/15/15		Outgoing Outgoing	1.00 3.00		23.32 23.32	3.43 3.43		0.25 0.25	512.00 512.00			Soft sand Soft sand		Dipnet Petite Pona	r
HOM-R-1		75-77		28.799416	0.428		427.98	Measured from	9/15/15		Outgoing	1.00					0.88				Organic		Dipnet	Sparse Najas guadalupen sis observed (too sparse to sample)

Table A-1. Physicochemical Data

Zone ID	Habitat	Photolog #	Latitude	Longitude	Distance from Headspring (km)	Distance from Headspring (mi)	Distance from Headspring (m)	Notes	Sample Date	Sample Time	Tidal Stage	Depth of Sample (ft)	Water Depth at Point of WQ Measureme nt (ft)	Water Temperatur e °C	Dissolved Oxygen mg/L	Dissolved Oxygen %	Salinity ppt	Conductivity μS/cm	рН	Turbidity NTU	Sediment type	Canopy Cover % (average)	Sample Equipment	Comments
HOM-R-1	SNAG	75-77	-82.591477	28.799416	0.428	0.266	427.98	"HOMOSASSA SPRING	9/15/15	11:25	Outgoing	1.00	1.00	24.40	4.61	55.20	0.88	1739.00	7.59	0.57	Organic	39.50	Dipnet	
HOM-R-1	SED	75-77	-82.591477	28.799416	0.428	0.266	427.98	#1"	9/15/15	11:25	Outgoing	2.90	1.00	24.40	4.61	55.20	0.88	1739.00	7.59	0.57	Organic	39.50	Petite Ponar	
								Measured from																Sparse Hydrilla verticillata and Najas guadalupe sis observed (too sparse to sample) No Macroalga
HOM-R-2	SNAG	78-79	-82.594208	28.801282	0.784	0.487	784.43	"HOMOSASSA SPRING	9/15/15	11:59	Outgoing	1.00	1.00	24.72	4.65	56.30	0.94	1870.00	7.62	1.23	Organic	46.00	Dipnet	observed
HOM-R-2	SED	78-79	-82.594208	28.801282	0.784	0.487	784.43	#1"	9/15/15	11:59	Outgoing	3.50	1.00	24.72	4.65		0.94	1870.00		1.23	Organic	46.00	Petite Ponar	
HOM-R-3		80-82	-82.597621	28.799383	1.158	0.719	1157.88	Measured from	9/15/15	12:29	Outgoing	1.00	1.00	24.85	9.32	113.10	1.44	2788.00	8.40		Organic		Dipnet	
HOM-R-3	SNAG	80-82	-82.597621	28.799383	1.158	0.719	1157.88	"HOMOSASSA SPRING	9/15/15	12:29	Outgoing	1.00	1.00	24.85	9.32	113.10	1.44	2788.00	8.40	0.86	Organic	44.00	Dipnet	
HOM-R-3		80-82	-82.597621	28.799383	1.158	0.719	1157.88	#1"	9/15/15	12:29	Outgoing	2.50	1.00	24.85	9.32	113.10	1.44	2788.00	8.40	0.86	Organic		Petite Ponar	
HOM-R-4		83-84	-82.604647	28.794252	2.102	1.306	2101.94	"HOMOSASSA SPRING	9/15/15		Outgoing	1.50		26.48	6.23		2.35	4138.00			Organic		Petite Ponar	
HOM-R-4		83-84	-82.604647	28.794252	2.102	1.306	2101.94	#1"	9/15/15	12:54	Outgoing	0.50		26.48	6.23		2.35	4138.00		-	Organic		Dipnet	
HOM-R-5	-	85-86	-82.612886	28.787252	3.308	2.055	3307.73	"HOMOSASSA SPRING	9/15/15	13:22	Outgoing	2.00	1.00	26.72	7.55	95.60	2.41	4531.00	7.84	3.89	Organic	5.50	Petite Ponar	
HOM-R-5	SNAG	85-86	-82.612886	28.787252	3.308	2.055	3307.73	#1"	9/15/15	13:22	Outgoing	1.00	1.00	26.72	7.55	95.60	2.41	4531.00	_	3.89	Organic		Dipnet	
HOM-R-6		87-89	-82.623929	28.782679	4.494	2.793	4494.34	"HOMOSASSA SPRING	9/15/15	13:49	Outgoing	2.00	1.00	26.45	7.09		2.45	4611.00	_	2.32	Organic		Petite Ponar	
HOM-R-6	SNAG	87-89	-82.623929	28.782679	4.494	2.793	4494.34	#1"	9/15/15	13:49	Outgoing	1.00	1.00	26.45	7.09	89.40	2.45	4611.00	7.78	2.32	Organic	20.50	Dipnet	

APPENDIX A Physicochemical Data

Figure A-1 - Monthly Median Discharge Time Series Plot for Chassahowitzka River (USGS Station 2310663)

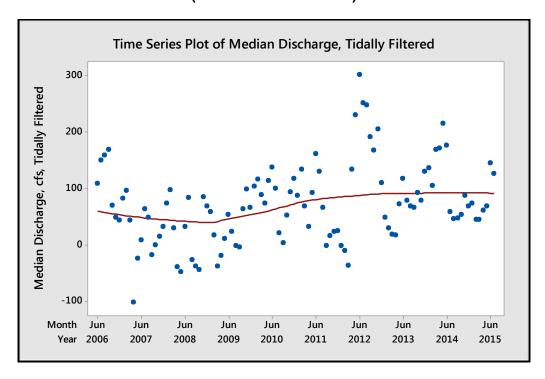


Figure A-2 - Monthly Median Discharge Time Series Plot for Homosassa River (USGS Station 2310700)

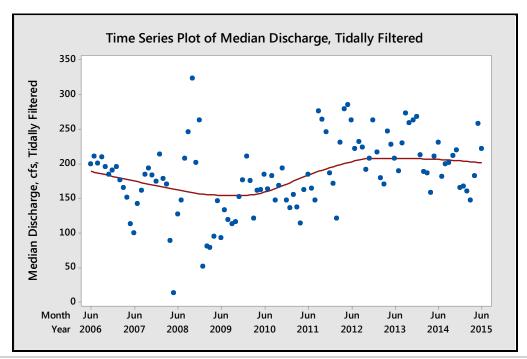


Figure A-3 - Monthly Median Discharge Time Series Plot for Weeki Wachee River (USGS Station 2310525)

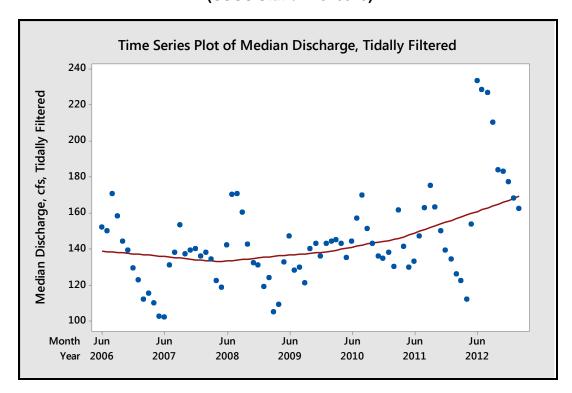


Figure A-4 - Monthly Median Specific Conductance (Maxima) Time Series Plot for Chassahowitzka River (USGS Station 2310663)

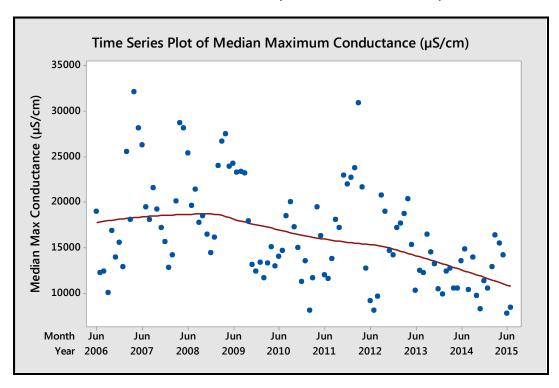


Figure A-5 - Monthly Median Specific Conductance (Maxima) Time Series Plot for Homosassa River (USGS Station 2310700)

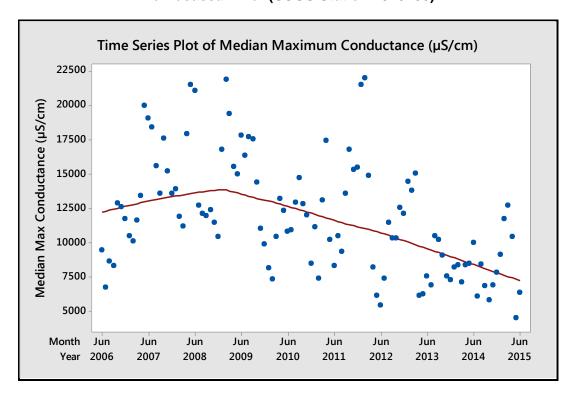


Figure A-6 - Monthly Median Specific Conductance (Maxima) Time Series Plot for Weeki Wachee River (USGS Station 2310545)

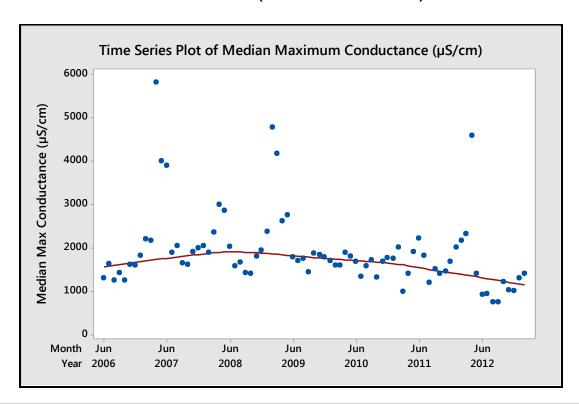


Figure A-7 - Correlations between Monthly Median Discharge and Monthly Median Specific Conductance (Maxima) for Chassahowitzka River (USGS Station 2310663)

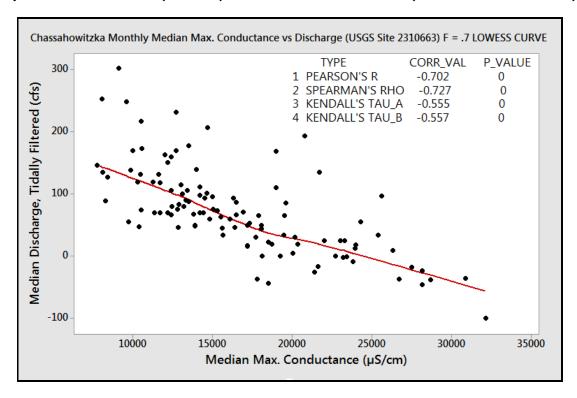


Figure A-8 - Correlations between Monthly Median Discharge and Monthly Median Specific Conductance (Maxima) for Homosassa River (USGS Station 2310700)

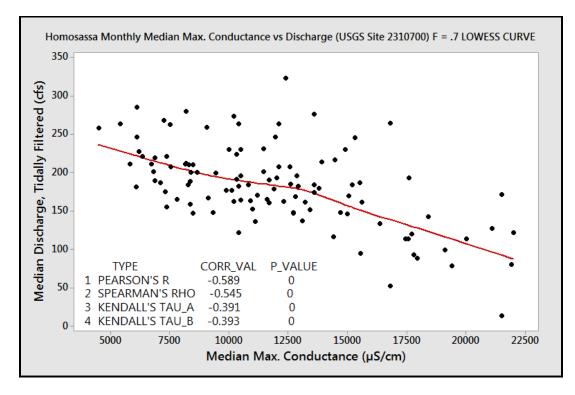
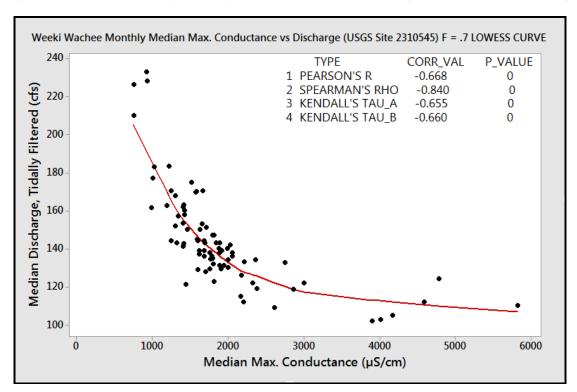


Figure A-9 - Correlations between Monthly Median Discharge and Monthly Median Specific Conductance (Maxima) for Weeki Wachee River (USGS Station 2310545)



Appendix B Macroinvertebrate Data & Taxa Lists

		1	1	1		ı	ı	T			
		Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count	Abundance (Count/m²)	Notes
CHA-CRA-SAV	9/10/2015	Nemertea		Enopla		Hoplonemertea	Emplectonematidae	Kirsteueriella biocellata	4	8	
CHA-CRA-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	16	32	female
CHA-CRA-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	56	112	
CHA-CRA-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	24	48	
CHA-CRA-SAV CHA-CRA-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	40	80	
		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Unidea and Unidea	Trichoptera spp.	16		juvenile
CHA-CRA-SAV CHA-CRA-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	8	16	
CHA-CRA-SAV	9/10/2015 9/10/2015	Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Diptera Diptera	Chironomidae Chironomidae	Tanytarsus spp. Polypedilum illinoense group	211 403	422 806	
CHA-CRA-SAV		Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Diptera	Chironomidae	Thienemanniella spp.	10	20	
CHA-CRA-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	422	844	
CHA-CRA-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae	Empididae spp.	4	8	
CHA-CRA-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Parapoynx spp.	4	8	
CHA-CRA-Rock	9/10/2015		пехароца	Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	9	18	
CHA-CRA-Rock	-, -, -	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	2		female
CHA-CRA-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	3	6	Voucher
CHA-CRA-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	26	52	Voucher
CHA-CRA-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	23		Voucher
CHA-CRA-Rock	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Gammaridea spp.	2	4	damaged
CHA-CRA-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Gammarida spp.	1	2	damaged, maybe Gammarus sp.
CHA-CRA-Rock	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	31	62	Voucher
CHA-CRA-Rock	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	83	166	
CHA-CRA-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium spp.	4	8	juvenile
CHA-CRA-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	1	2	
CHA-CRA-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2		pupa
CHA-CRA-Rock	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	7	14	
CHA-CRA-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	1	2	
CHA-CRA-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Parapoynx spp.	1	2	
CHA-CRA-Sed		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	36	1565	
CHA-CRA-Sed	9/10/2015	Annelida		Polychaeta	Palpata	Canalipalpata	Ampharetidae	Hobsonia florida	6	261	
CHA-CRA-Sed	9/10/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	71		Immature and/or damaged
CHA-CRA-Sed	9/10/2015		C	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	18		famala.
CHA-CRA-Sed CHA-CRA-Sed	9/10/2015 9/10/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Tanaidacea Isopoda	Leptocheliidae Anthuridae	Leptocheliidae spp. Cyathura polita	12	217 522	female
CHA-CRA-Sed								Cassidinidea ovalis	12	43	
CHA-CRA-Sed		Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Isopoda Isopoda	Sphaeromatidae Munnidae	Uromunna reynoldsi	1	43	
CHA-CRA-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	21	913	
CHA-CRA-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	1	43	
CHA-CRA-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	90	3913	
CHA-CRA-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	12	522	
CHA-CRA-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	6	261	
CHA-CRA-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	2	87	
CHA-CRA-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	2	87	
CHA-CRA-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	3	130	
CHA-CRA-Snag	9/10/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	4	8	
CHA-CRA-Snag	9/10/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	384	768	
CHA-CRA-Snag	9/10/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais communis	4	8	
CHA-CRA-Snag		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais pardalis	4	8	
CHA-CRA-Snag		Annelida		Clitellata	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae spp.	20	40	
CHA-CRA-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	348	696	female
CHA-CRA-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	4	8	male
CHA-CRA-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	4	8	
CHA-CRA-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	8	16	
CHA-CRA-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	68	136	
CHA-CRA-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	16	8	
CHA-CRA-Snag		Arthropoda Arthropoda	Crustacea	Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Aoridae	Grandidierella bonnieroides		32	Voucher - maybe Uhlorchestia spartinophila
CHA-CRA-Snag CHA-CRA-Snag			Crustacea	Malacostraca		Amphipoda Diptera	Talitridae Chironomidae	Talitridae spp. Chironomidae spp.	32 12		4 pupa, 8 larvae
CHA-CRA-Snag	9/10/2015	Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera	Chironomidae	Tanytarsus spp.	164	328	- papa, o idi vac
CHA-CRA-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	116	232	
CHA-CRA-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Rheotanytarsus spp.	110	232	
CHA-CRA-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	4	δ Ω	
CHA-CRA-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	4	8	
CHA-CRA-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Stenochironomus spp.	4	8	
CHA-CRA-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	12	24	
CHA-CRA-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	4	8	
CHA-CRA-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Psychodidae	Psychodidae spp.	8	16	pupae
CHA-POT-1-SAV		Platyhelminthes						Platyhelminthes spp.	4		
21011012301		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	8	16	
CHA-POT-1-SAV	9/10/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	36	72	
	9/10/2015 9/10/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Dero spp.	4		no posterior end, missing most needles & hairs
CHA-POT-1-SAV			<u> </u>	Ciiteliata	Oligochiacta			1		128	
CHA-POT-1-SAV CHA-POT-1-SAV	9/10/2015	Annelida		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	64	128	
CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Mollusca Arthropoda	Crustacea	Gastropoda Malacostraca		Littorinimorpha Tanaidacea	Leptocheliidae	Hydrobiidae spp. Leptocheliidae spp.	64 212	424	female
CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Mollusca	Crustacea Crustacea	Gastropoda	Caenogastropoda		,	Leptocheliidae spp. Hargeria rapax	212 4	424 8	female male
CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Mollusca Arthropoda Arthropoda Arthropoda	Crustacea Crustacea	Gastropoda Malacostraca Malacostraca Malacostraca	Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca	Tanaidacea Tanaidacea Isopoda	Leptocheliidae Leptocheliidae Sphaeromatidae	Leptocheliidae spp. Hargeria rapax Cassidinidea ovalis	212 4 112	424 8 224	
CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Mollusca Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea	Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca	Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Tanaidacea Tanaidacea Isopoda Isopoda	Leptocheliidae Leptocheliidae	Leptocheliidae spp. Hargeria rapax Cassidinidea ovalis Uromunna reynoldsi	212 4	424 8 224 248	male
CHA-POT-1-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea Crustacea	Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Tanaidacea Tanaidacea Isopoda Isopoda Amphipoda	Leptocheliidae Leptocheliidae Sphaeromatidae Munnidae	Leptochellidae spp. Hargeria rapax Cassidinidea ovalis Uromunna reynoldsi Gammaridea spp.	212 4 112 124 8	424 8 224 248 16	
CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV CHA-POT-1-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Mollusca Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea	Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca	Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Tanaidacea Tanaidacea Isopoda Isopoda	Leptocheliidae Leptocheliidae Sphaeromatidae	Leptocheliidae spp. Hargeria rapax Cassidinidea ovalis Uromunna reynoldsi	212 4 112	424 8 224 248 166	male

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April 20,0000 20,000	CHA-POT-1-Snag	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca		Amphilochidae	Hourstonius laguna	3	6 Voucher
March 1992 Marc									·	16	
Mathematics	CHA-POT-1-Snag	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca		Corophiidae	Apocorophium Iouisianum	45	90
Authority 1.50										6	
CAPTT-15-09	CHA-POT-1-Snag	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca		Palaemonidae	Palaemonetes spp.	3	6
Content										6	12
Content Cont										10	
CALPT-15-Deg	CHA-POT-1-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta		Diptera	Chironomidae	Dicrotendipes spp.	13	26
CAR PT 2-5 Sept 91/90015 Arthropods respect Pergetal Option O	CHA-POT-1-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta		Diptera	Chironomidae	Pseudochironomus spp.	6	12
CAA-072-5-06V	CHA-POT-1-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	3	6
Execution Polyments Programs Polyments Programs Accounts Recentable Lacourers culent 145 338 150	CHA-POT-1-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	6	12
ChaPoT2-SAW	CHA-POT-2-SAV										
CAA-POT-2-SAW		9/10/2015	Platyhelminthes						Platyhelminthes spp.	8	16
CAM-POT-2-SW					Polychaeta	Palpata	Aciculata	Nereididae	'''	8 164	
CRA-POT-3-SAV	CHA-POT-2-SAV	9/10/2015	Annelida						Laeonereis culveri	8 164 8	328
CHA-PDT-25AW	CHA-POT-2-SAV CHA-POT-2-SAV	9/10/2015 9/10/2015	Annelida Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Laeonereis culveri Tubificinae spp.	8 164 8 4	328
CHA-POT2-SAM \$1/0,0015 Antrhopoda Crustacea Malaccotraca Crustacea Malaccotraca Maphipoda Condidered International Control Crustacea Malaccotraca M	CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca		Clitellata Clitellata	Oligochaeta Oligochaeta	Tubificida Tubificida	Naididae Naididae	Laeonereis culveri Tubificinae spp. Pristina leidyi	8 4	328 16 immature and/or damaged 8
CHA-PDT-2-SAV \$1/10/2015 Anthropoda Crustaces Malicostraca Cumalacostraca Amphipoda Coroplitude Caradificerila Sconnieroides 196 322 Junelles and/or damaged	CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca	Crustacea	Clitellata Clitellata Gastropoda	Oligochaeta Oligochaeta Caenogastropoda	Tubificida Tubificida Littorinimorpha	Naididae Naididae Hydrobiidae	Laeonereis culveri Tubificinae spp. Pristina leidyi Hydrobiidae spp.	8 4	328 16 immature and/or damaged 8
CAR-POT-2-SAV	CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda		Clitellata Clitellata Gastropoda Malacostraca	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca	Tubificida Tubificida Littorinimorpha Tanaidacea	Naididae Naididae Hydrobiidae Tanaidae	Laeonereis culveri Tubificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi	8 4	328 16 immature and/or damaged 8
CHA-PDT2-SAV 9/10/2015 Arthropods Coustace Malacostraca Amphipoda Corophilide Apocrophim Industrianum 24 48	CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda Arthropoda	Crustacea	Clitellata Clitellata Gastropoda Malacostraca Malacostraca	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda	Naididae Naididae Hydrobiidae Tanaidae Idoteidae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobildae spp. Sinelobus stanfordi Edotia triloba	4 428 4 4 16	328 16 Immature and/or damaged 8 856 8 8
CHA-PDT-2-SAV 9/10/2015 Arthropoda Hesapoda Insecta Persyota Diptera Chinomidale Tanyasus sp. 8 16 Persyota Persyota Diptera Chinomidale Tanyasus sp. 8 16 Persyota Persyota Diptera Chinomidale Directalipes spp. 12 24 Persyota Persyota Persyota Diptera Chinomidale Directalipes spp. 28 56 Persyota Persyot	CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda Arthropoda Arthropoda	Crustacea Crustacea	Clitellata Clitellata Gastropoda Malacostraca Malacostraca Malacostraca	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda Amphipoda	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae	Laeonereis culveri Tublficinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp.	4 428 4 4 16	328 16 Immature and/or damaged 8 856 8 8 8 8 32
CHA-POT2-SAV 9/10/2015 Arthropoda Hesapoda Insecta Pterygota Optera Chinonmidare Tanytarsus spp. 8 16	CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea	Clitellata Clitellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda	Naididae Naididae Hydrobilidae Tanaidae Idoteidae Gammaridae Aoridae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides	8 4 428 4 4 16 196	328 16 Immature and/or damaged 8 856 8 8 8 8 32 392
CHA-POT2-SAV \$1/07.015 Arthropoda Hesapoda Insecta Petrygota Optera Chironomidae Polypedilum Illineense group 12 24	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea	Clitellata Clitellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae	Laeonereis culveri Tublficinae spp. Pristina leidyi Hydrobildae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophildae spp. Apocorophium louisianum	8 4 428 4 4 16 196 16 24	328 16 Immature and/or damaged 8 8 856 8 8 8 8 32 322 392 322 juveniles and/or damaged
CHA-PDT-2-SAV 91/0/2015 Anthropoda Hesapoda Insecta Plerygota Diptera Chienomidae Dictorendipes spp. 28 56 CHA-PDT-2-SAV 91/0/2015 Anthropoda Hesapoda Insecta Plerygota Diptera Chienomidae Criotopus or Crithocladius 16 32 CHA-PDT-2-SAV 91/0/2015 Anthropoda Hesapoda Insecta Plerygota Diptera Chienomidae Criotopus or Crithocladius 16 32 CHA-PDT-2-SAV 91/0/2015 Annelida Pleybataria Pleybata	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea	Ciitellata Ciitellata Gastropoda Malacostraca	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda Amphipoda	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobildae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophildae spp. Apoccorphium louislanum Americorophium ellisi	8 4 428 4 4 16 196 16 24	328 16 Immature and/or damaged 8 856 8 8 8 8 8 9 9 9 9 9
CHA-POT-2-SW	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Annelida Mollusca Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda	Ciitellata Ciitellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca insecta	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Pterygota	Tubificida Tubificida Utttorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Chronomidae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidlerella bonnieroides Corophiidae spp. Apocorophium louislanum Americorophium ellisi Tanytarsus spp.	8 44 428 4 4 16 196 16 24 52	328 16 Immature and/or damaged 8 8 856 8 8 8 8 32 392 392 42 juveniles and/or damaged 48 104 2 vials
CHA-POT-2-Sed 9/10/2015 Annelida Hexapoda Insecta Pterrygota Diptera Chiconomidae Cricotopus or Orthocladius 16 32	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda	Citellata Citellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Insecta Insecta	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Pungunalacostraca Eumalacostraca Prerygota	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Diptera	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobildae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophildae spp. Apocorophium louisianum Americorophium ellisi Tanytarsus spp. Polypedilum illinoense group	8 4 428 4 4 16 196 16 24 52 8	328 16 Immature and/or damaged 8 8 856 8 8 8 8 932 332 392 322 322 juveniles and/or damaged 48 104 2 vials 16 24
CHA-POT-2-Sed 9/10/2015 Annelida Polychesta Palata Acculata Neredidae Leenereis culverl 22 957	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda Hexapoda	Ciitellata Ciitellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca insecta Insecta Insecta Insecta Insecta	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Fuenygota Pterygota Pterygota Pterygota	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Diptera Diptera	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Chironomidae Chironomidae Chironomidae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophilidae spp. Apocorophilim louislanum Americorophium lellisi Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp.	8 4 428 4 4 16 196 16 24 52 8	328 16 Immature and/or damaged 8 8 856 8 8 8 8 932 332 392 322 322 juveniles and/or damaged 48 104 2 vials 16 24
CHA-POT-2-Sed 9/10/2015 Annelida Citellata Oligochaeta Tubificida Naididae Limodriloidinae spp. 1 43 CHA-POT-2-Sed 9/10/2015 Annelida Citellata Oligochaeta Tubificida Naididae Tubificinae spp. 7 3304 Immature and/or damaged CHA-POT-2-Sed 9/10/2015 Annelida Citellata Oligochaeta Tubificida Naididae Limodrilois hoffmeisteri 1 43 CHA-POT-2-Sed 9/10/2015 Mollusca Gastropoda Caenogastropoda Littorinimorpha Hydrobiidae spp. 2 2 87 CHA-POT-2-Sed 9/10/2015 Arthropoda Crustaeea Malacostraca Amphipoda Aoridae Grandidirefiela bonnieroides 2 2 87 CHA-POT-2-Sed 9/10/2015 Arthropoda Crustaeea Malacostraca Eumalacostraca Amphipoda Corophilidae Mareirorophium ellis 7 304 Voucher Marei	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Annelida Mollusca Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Ciitellata Ciitellata Ciitellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca insecta Insecta Insecta Insecta Insecta Insecta	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Puerygota Pterygota Pterygota Pterygota	Tubificida Tubificida Utttorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Diptera Diptera Diptera	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Chironomidae Chironomidae Chironomidae Chironomidae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierelia bonnieroides Corophiidae spp. Apocorophium louislanum Americorophium ellisi Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Thienemanniella spp.	8 4 428 4 16 196 16 24 52 8 12 28 4	328 16 Immature and/or damaged 8 8 856 8 8 8 8 32 392 392 42 juveniles and/or damaged 48 104 2 vials 16 24 56
CHA-POT-2-Sed 9/10/2015 Annelida Citellata Oligochaeta Tubificida Naldidae Tubificinae spp. 7 304 Immature and/or damaged	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Cittellata Cittellata Cittellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Perrygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Tubificida Tubificida Utttorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Diptera Diptera Diptera Diptera	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Corophiidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Americorophium ellisi Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Thienemanniella spp. Cricotopus or Orthocladius	8 4288 44 166 196 16 24 52 8 12 28 4 16	328 16 Immature and/or damaged 8 8 856 8 8 8 8 9 32 322 392 322 juveniles and/or damaged 48 104 2 vials 16 24 56 8 8
CHA-POT-2-Sed 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Limnodrilus hoffmeisteri 1 43 CHA-POT-2-Sed 9/10/2015 Anthropoda Crustacea Malacostraca Amphipoda Aoridae Grandidierella bonnieroides 2 87 CHA-POT-2-Sed 9/10/2015 Arthropoda Crustacea Malacostraca Amphipoda Corophilidae Andridae Grandidierella bonnieroides 2 87 CHA-POT-2-Sed 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophilidae Americorophium ellisi 7 304 Voucher CHA-POT-2-Sed 9/10/2015 Arthropoda Nexapoda Insecta Pterygota Oliptera Ceratopogonidae Ceratopogonidae Spp. 1 4 43 CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Tubificida Pristina leidyi 2 4 4 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Pristina leidyi 2 4 4 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Pristina leidyi 2 4 4 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Dero spp. 2 1 4 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Dero spp. 2 2 4 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Enchytraeidae Enchytraeidae Enchytraeidae Enchytraeidae Spp. 2 4 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Enchytraeida Enchytraeidae Enchytraeidae Spp. 2 4 Immature and/or damaged ChA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Enchytraeidae Enchytraeidae Enchytraeidae Spp. 1 4 28 Immature and/or damaged ChA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromatidae Cassidinidea voalis 5 1 10 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Andero Corophilidae Apocrophium Indisianum 247 4 49 Encha-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Collembola Corophilidae Apocrophium Indisianum 247 4 8 1 8 maybe Podura aquatica	CHA-POT-2-SAV	9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda Annelida	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Ciitellata Ciitellata Ciitellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Polychaeta	Oligochaeta Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Puenygota Pterygota Pterygota Pterygota Pterygota Pterygota Palpata	Tubificida Tubificida Littorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Nereididae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophilidae spp. Apocorophilum louisianum Americorophium lellisi Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Thienemanniella spp. Cricotopus or Orthocladius Laeonereis culveri	8 4288 44 166 196 16 24 52 8 12 28 4 16	328 16 Immature and/or damaged 8 8 8 8 8 8 8 8 8 8
CHA-POT-2-Sed 9/10/2015 Mollusca Gastropoda Cenegastropoda Littorinimorpha Hydrobiidae Hydrobiidae Hydrobiidae Sp. 2 87	CHA-POT-2-SAV	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Annelida Annelida Annelida Annelida Mollusca Arthropoda Annelida Annelida	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Ciitellata Ciitellata Ciitellata Gastropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Ciitellata	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Puenygota Pterygota Pterygota Pterygota Pterygota Pterygota Oligochaeta	Tubificida Tubificida Uttorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Tubificida	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophiidae spp. Apocorophium louislanum Americorophium ellisi Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Thienemanniella spp. Cricotopus or Orthocladius Laeonereis culveri Limnodriloidinae spp.	8 4288 44 166 196 16 24 52 8 12 28 4 16	328 16 Immature and/or damaged 8 8 8 856 8 8 8 8 8 8 32 32 392 322 juveniles and/or damaged 48 104 2 vials 16 24 56 8 8 32 957
CHA-POT-2-Sed 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Aoridae Grandidirerlla bonnieroides 2 87 CHA-POT-2-Sed 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophilidae Americorrophium ellisi 7 304 Voucher CHA-POT-2-Sed 9/10/2015 Arthropoda Hexapoda Insecta Petrygota Diptera Ceratopogonidae Ceratopogonidae Spp. 1 43 CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Tubificida Spp. 5 10 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Pristina leidyi 2 4 Missing most needles & hairs CHA-POT-2-Snag 9/10/2015 Annelida Clitellata Oligochaeta Tubificida Naididae Dero spp. 2 4 Missing most needles & hairs CHA-POT-2-Snag 9/10/2015 Missing Mollusca Clitellata Oligochaeta Enchytraeidae Enchytraeidae Enchytraeidae Enchytraeidae Spp. 1 4 28 CHA-POT-2-Snag 9/10/2015 Mollusca Gastropoda Caenogastropoda Littorinimorpha Hydrobiidae spp. 1 4 28 CHA-POT-2-Snag 9/10/2015 Mollusca Bivalia Heterodonta Veneroida Spasaeridae Musculium spp. 2 4 4 CHA-POT-2-Snag 9/10/2015 Mollusca Bivalia Heterodonta Veneroida Spasaeridae Ueptocheliidae Leptocheliidae Leptocheliidae Spp. 1 4 28 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromatidae Cassidnidea ovalis 5 10 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromatidae Sphaeromatidae Cassidnidea ovalis 5 10 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophiidae Apocorophium louisianum 247 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophiidae Apocorophium louisianum 247 CHA-POT-2-Snag 9/10/2015 Arthropoda Hexapoda Insecta Collembola Spp. 4 8 maybe Podura aquatica	CHA-POT-2-SAV	9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda Annelida Annelida	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Citellata Citellata Citellata Castropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Insecta Insecta Insecta Insecta Insecta Citellata Citellata	Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Oligochaeta Oligochaeta	Tubificida Tubificida Utttorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Tubificida Tubificida	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae Naididae Naididae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobiidae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Americorophium ellisi Tanytarus spp. Polypedilum illinoense group Dicrotendipes spp. Theiemanniella spp. Cricotopus or Orthocladius Laeonereis culveri Lumodriloidinae spp. Tublificinae spp.	8 4288 44 166 196 16 24 52 8 12 28 4 16	328 16 Immature and/or damaged 8 8 856 8 8 8 8 8 8 9 32 32 392 32 juveniles and/or damaged 48 104 2 vials 16 24 56 8 8 8 9 32 44 56 8 8 32 957 43 304 Immature and/or damaged
CHA-POT-2-Sed 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophilidae Americorophium ellisi 7 304 Voucher CHA-POT-2-Sed 9/10/2015 Arthropoda Hexapoda Insecta Pterygota Diptera Ceratopogonidae Ceratopogonidae Spp. 1 43 CHA-POT-2-Snag 9/10/2015 Annelida Clitelata Oligochaeta Tubificida Naididae Tubificinae spp. 5 10 Immature and/or damaged CHA-POT-2-Snag 9/10/2015 Annelida Clitelata Oligochaeta Tubificida Naididae Pristina leidyi 2 4 CHA-POT-2-Snag 9/10/2015 Annelida Clitelata Oligochaeta Tubificida Naididae Dero spp. 2 4 missing most needles & hairs CHA-POT-2-Snag 9/10/2015 Annelida Clitelata Oligochaeta Tubificida Naididae Dero spp. 2 4 missing most needles & hairs CHA-POT-2-Snag 9/10/2015 Mollusca Clitelata Oligochaeta Enchytraeidae Enchytraeidae Enchytraeidae spp. 2 4 CHA-POT-2-Snag 9/10/2015 Mollusca Gastropoda Caenogastropoda Littorinimorpha Hydrobiidae Pydrobiidae spp. 14 28 CHA-POT-2-Snag 9/10/2015 Mollusca Bivalvia Heterodonta Veneroida Sphaeriidae Musculium spp. 2 4 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromatidae Cassidinidae ovalis 5 5 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromatidae Sphaeromaspp. 2 4 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromatidae Sphaeromaspp. 2 4 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophium Spp. 13 26 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophium Psp. 13 26 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophium Psp. 14 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophium Spp. 15 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophium Psp. 15 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Corophium Spp. 14 CHA-POT-2-Snag 9/10/2015 Arthropoda Crustace	CHA-POT-2-SAV CHA-POT-2-SED CHA-POT-2-SED CHA-POT-2-SED CHA-POT-2-SED CHA-POT-2-SED CHA-POT-2-SED CHA-POT-2-SED	9/10/2015 9/10/2015	Annelida Annelida Annelida Mollusca Arthropoda Annelida Annelida Annelida	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Cittellata Cittellata Cittellata Castropoda Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca insecta Insecta Insecta Insecta Insecta Insecta Insecta Cittellata Cittellata Cittellata Cittellata	Oligochaeta Oligochaeta Oligochaeta Caenogastropoda Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Petumalacostraca Oligochaeta Oligochaeta Oligochaeta	Tubificida Tubificida Utttorinimorpha Tanaidacea Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Diptera Diptericida Tubificida Tubificida	Naididae Naididae Hydrobiidae Tanaidae Idoteidae Gammaridae Aoridae Corophiidae Corophiidae Corophiidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae Naididae Naididae Naididae	Laeonereis culveri Tublificinae spp. Pristina leidyi Hydrobildae spp. Sinelobus stanfordi Edotia triloba Gammarus spp. Grandidierella bonnieroides Corophildae spp. Apocorophilum louisianum Americorophium lellisi Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Thienemanniella spp. Cricotopus or Orthocladius Laeonereis culveri Limnodriloidinae spp. Tublificinae spp. Limnodrilus hoffmeisteri	8 4288 44 166 196 16 24 52 8 12 28 4 16	328 16 Immature and/or damaged 8 8 8 56 8 8 8 8 32 32 392 322 322 104 104 2 vials 16 24 56 8 8 32 957 43 304 Immature and/or damaged 43 104 2 vials
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Campaign	CHA-POT-2-Snag						Chironomidae			2	4
Section Column	CHA-POT-2-Snag	9/10/2015 Arthropoda	Chelicerata	Arachnida				Acariformes spp.		5 1	0 terrestrial?
Control Cont	CHA-POT-3-Sed	9/10/2015 Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri		9 39	1
Content Cont											
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March 1 Marc	CHA-POT-3-Snag	9/10/2015 Annelida		Clitellata		Tubificida	Naididae	Dero furcata		8 1	6
2007-15-188	CHA-POT-3-Snag	9/10/2015 Mollusca		Bivalvia				Bivalvia spp.		8 1	6 small, damaged
2007-15-100 2007-200 Contact Milestrock State Stat	CHA-POT-3-Snag	9/10/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	8	8 17	6 female
Control Cont			Crustacea			Tanaidacea		Sinelobus stanfordi		8 1	6
Section 19											
Company Comp											8
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CAPCT-56mg									1	6 3	2
Commonstrate				Insecta		Diptera	Chironomidae			0 16	0
Content Cont	CHA-POT-3-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tribelos jucundum			6
Charlot September Charlot September Charlot September Charlot September			Hexapoda	Insecta	Pterygota	Diptera	Chironomidae		5	6 11	2
CAR PT 5-SAM								Nematoda spp.		8 1	6
Content Cont										1	2
CRA-PTD-SAM 91/9025 Affrogode Crustees Malecotrea Constitutions Crus Cr										-	0
CRA-PTOS-SAM 97(90215) Anthropode Crustace Miscortera Complications Complication Com			Countries				•		15	1 30	2
CRA-PTS-SAW 97(2015) Arthropoda Crustece Malicontraca Commiscorana Sp. 17 38 6 6							•			1	2
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CAR-PT-5-SAV 91/20015 Partroposal Insequent Paragona Ephemeropera Canodada Camor dimensal 1 2										3	6
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CAA-071-5-SAV	CHA-POT-S-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta		Ephemeroptera	Baetidae	Callibaetis floridanus		1	2
CRA-DT-S-SAW	CHA-POT-S-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta		Trichoptera	Hydropsychidae	Cheumatopsyche spp.		1	2
CAA-DTS-SAV 97,002015 Anthropoda Necapoda Insecta Pervigota Trichoptera Psychoptilisa pp. 1 2		9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi		5 1	0
CAA-POTS-SAW 91/0/2015 Arthropoda thesapoda			Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.		1	2
CAR-POTS-SAVI 9/10/2015 Antropoda Neseta Pergyta Diptera Ohronomate Tanytarras spp. 15 30										1	2
GAA-DTS-SAW 91/0/2015 Arthropoda Ineapda Ineacta Petrygota Diptera Olironomidae Polypedium Inalinemes group 126 252										1	2
CHA-POTS-SAV 9/10/2015 Arthropoda Hespada Insecta Preygota Diptera Chinonomidae Polypedium Illinoense group 126 252]	5 3	0
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CHA-PDT-S-Snag 9/10/2015 Amenida Polychaeta Pajpata Accudata Neredidae Lacenceris Culveri 2 4			Crustacea							2 8	7
CHA-PDT-S-Snag				Enopla			Tetrastemmatidae	Prostoma spp.		2	4
CHA-POT-S-Snag										2	4
Chaport-Sang 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Eumalacostraca Euptochellidae Euptoch											8
PAP-DT-S-Snag			Construction				•				
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CHA-POT-S-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Gammaridae Gammarus spp. 16 32 CHA-POT-S-Snag 9/10/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Aoridae Grandidicrella bonnieroides 48 96 CHA-POT-S-Snag 9/10/2015 Arthropoda Hexapoda Insecta Pterygota Odonata Zygoptera spp. 2 4 missing prementum CHA-POT-S-Snag 9/10/2015 Arthropoda Hexapoda Insecta Pterygota Diptera Chironomidae Tanytarsus spp. 6 12 CHA-POT-S-Snag 9/10/2015 Arthropoda Hexapoda Insecta Pterygota Diptera Chironomidae Dicrotendipes spp. 12 24 CHA-POT-S-Snag 9/10/2015 Arthropoda Hexapoda Insecta Pterygota Diptera Chironomidae Dicrotendipes spp. 12 24 CHA-POT-S-Snag 9/10/2015 Arthropoda Hexapoda Insecta Pterygota Diptera Psychodidae spp. 2 2 4 pupa CHA-R-I-MA 9/11/2015 Platyhelminthes Polychaeta Playta Acculata Nereididae Psychodidae spp. 16 32 CHA-R-I-MA 9/11/2015 Annelida Polychaeta Playta Acculata Nereididae Laeonereis culveri 224 448 CHA-R-I-MA 9/11/2015 Annelida Cittellata Hirudinida Arhynchobdellida Erpobdellidae Erpobdella punctata 16 32 CHA-R-I-MA 9/11/2015 Mollusca Gastropoda Caenogastropoda Littorinimorpha Hydrobiidae spp. 720 1440 CHA-R-I-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromidae Cassidinidea sopp. 640 CHA-R-I-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Munnidae Uromunna reynoldsi 64 CHA-R-I-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Spoda Sphaeromatidae Cassidinidea sopp. 16 CHA-R-I-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Gammaridea Gammaridea Spp. 16 CHA-R-I-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Gammaridea Gammaridea Spp. 16 CHA-R-I-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Gammaridea Gammaridea Spp. 16 CHA-R-I-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Gammaridea Gammarius Spp. 1968									-	2 2	4
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CHA-R-1-MA 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Aoridae Grandidierella bonnieroides 208 416	CHA-R-1-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	20	8 41	6

Carrada ID	Data Calledon	Di i	C. b. b. b. d	Cl	Colodor	01	e			About 400 - 400 - 400 - 20
Sample ID CHA-R-1-MA	Date Collected 9/11/2015	Phylum Arthropoda	Subphylum Crustacea	Class Malacostraca	Subclass Eumalacostraca	Order Mysida	Family Mysidae	Taxa Taphromysis bowmani	Count 48	Abundance (Count/m²) Notes 8 96
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	Caenis diminuta	16	6 32
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	16	
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	Nehalennia minuta	16	
CHA-R-1-MA	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Oecetis avara	16	6 32
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Nectopsyche spp.	16	-)
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	16	
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	16	
CHA-R-1-MA CHA-R-1-MA		Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Tanytarsus spp. Polypedilum illinoense group	128 64	
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Procladius spp.	48	
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	48	**
CHA-R-1-MA	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes lobus	240	
CHA-R-1-MA	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	112	2 224
CHA-R-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Labrundinia spp.	64	
CHA-R-1-MA		Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Limnesiidae	Limnesia spp.	16	
CHA-R-1-SAV	9/11/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	80	
CHA-R-1-SAV CHA-R-1-SAV		Mollusca Arthropoda	Crustacea	Gastropoda Malacostraca	Caenogastropoda Eumalacostraca	Littorinimorpha Tanaidacea	Hydrobiidae Leptocheliidae	Hydrobiidae spp. Leptocheliidae spp.	128 128	
CHA-R-1-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	16	
CHA-R-1-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	16	
CHA-R-1-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	448	
CHA-R-1-SAV		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	16	
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Callibaetis floridanus	16	
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	16	
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	16	
CHA-R-1-SAV CHA-R-1-SAV		Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Diptera Diptera	Chironomidae Chironomidae	Chironomidae spp.	32 2959	r pripar
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp. Polypedilum illinoense group	125	
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	42	
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	291	
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	42	
CHA-R-1-SAV	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Nanocladius spp.	374	4 748
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	874	
CHA-R-1-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Beardius spp.	42	
CHA-R-1-Sed	9/11/2015			Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	5	5 217 2 87
CHA-R-1-Sed CHA-R-1-Sed	9/11/2015 9/11/2015	Annelida		Polychaeta Clitellata	Palpata Oligochaeta	Canalipalpata Tubificida	Ampharetidae Naididae	Hobsonia florida Tubificinae spp.	64	-
CHA-R-1-Sed		Mollusca	+	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	5	5 217
CHA-R-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	16	
CHA-R-1-Sed	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	2	2 87
CHA-R-1-Sed	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	16	6 696
CHA-R-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	2	2 87
CHA-R-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	2	2 87
CHA-R-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	70	5015
CHA-R-1-Sed CHA-R-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae Aoridae	Melita nitida complex Grandidierella bonnieroides	213	5 217 3 9261
CHA-R-1-Sed		Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Corophiidae	Apocorophium Iouisianum	213	2 87
CHA-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	Caenis diminuta	5	5 217
CHA-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2	2 87 pupa
CHA-R-1-Sed	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	6	6 261
CHA-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	43	
CHA-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	3	3 130
CHA-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	8	8 348
CHA-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	2	2 87 2 87
CHA-R-1-Sed CHA-R-1-Sed		Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Paratanytarsus spp. Cricotopus or Orthocladius	2	2 87 2
CHA-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	2	2 87
CHA-R-1-Snag	9/11/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	72	
CHA-R-1-Snag		Annelida		Clitellata	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae spp.	32	2 64
CHA-R-1-Snag	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	800	0 1600 female
CHA-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	80	
CHA-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	8	8 16
CHA-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Comments	Gammaridea spp.	8	8 16 damaged
CHA-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda	Gammaridae Molitidae	Gammarus spp.	160 16	*
CHA-R-1-Snag CHA-R-1-Snag		Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca	Amphipoda Amphipoda	Melitidae Amphilochidae	Melita nitida complex Hourstonius laguna	16	6 32 8 16
CHA-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Cerapus spp.	16	
CHA-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Talitridae	Talitridae spp.	8	8 16 no posterior end
CHA-R-1-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	Caenis diminuta	8	8 16
CHA-R-1-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	797	7 1594
CHA-R-1-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	125	
CHA-R-1-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	38	
CHA-R-1-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Nanocladius spp.	10	
CHA-R-1-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	58	
CHA-R-1-Snag CHA-R-1-Snag		Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Diptera Diptera	Ceratopogonidae Ptychopteridae	Ceratopogonidae spp. Ptychopteridae spp.	8	8 16 8 16 pupa
CHA-R-1-Snag CHA-R-2-MA	9/11/2015		пелароца	Polychaeta	Pterygota Palpata	Aciculata	Nereididae	Laeonereis culveri	102	
CHA-R-2-MA	9/11/2015		+	Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	102	
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Col. 1.00.	CHA-R-2-MA									13	26
Teacher 1977 Teac	CHA-R-2-Rock	9/11/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae		4	8
The State The Content of State The Cont	CHA-R-2-Rock	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	988	1976 females
Trigonome Communication	CHA-R-2-Rock	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	16	32 males
TABLE \$1.7707 charges Coules Manual state of polygons Coules Manual state of polygons Table	CHA-R-2-Rock	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	24	
The Author Vi (1977) Intergrant Contrary Macromore Contrary Macromore Macrom	CHA-R-2-Rock			Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	100	200
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CARA 2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-	CHA-R-2-SAV	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	4	8
CABA 2-2-SAV 9/11/2015 Arthropoda Coustacea Mallacostraca Emalacostraca Amplipoda Communidae	CHA-R-2-SAV	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	4	8
CARA 2-2-W	CHA-R-2-SAV	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	60	120
CARA 2-SAV	CHA-R-2-SAV	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	40	80
CARA 2-SAV 9/11/2015 Arthropoda Heapoda Insecta Pereydra Trichoptera Chronomidae C	CHA-R-2-SAV	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	20	40
CHA-R-2-SMV 911/2015 Anthropoda Insecta Pergota Diptera Chironomides Chironomides Pergota Option Chironomides Option	CHA-R-2-SAV	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Polycentropodidae	Polycentropodidae spp.	4	8 Damaged
CHAR-2-SAV 9/11/2015 Arthropods Hesapods Insecta Pergota Diptera Chironomidae Tanyfarans spp. 476 992				Hexapoda	Insecta	Pterygota			Hydroptila spp.	4	8
CHA-R-2-SAV 911/2015 Arthropoda Ineapoda Ineacta Per-yapta Diptera Chinocomidae Nalysequillam Illinocruse group 7 54			_							50	
CHA-R-2-SAV 9/11/2015 Arthropoda Hespada Insecta Pergota Diptera Chironomidae Alabemya fhample group 7 14											
CHAR-2-SAV 9/11/2015 Arthropods Heappoda Insecta Pterygota Diptera Chironomidae Discretation Pterygota Diptera Chironomidae Pseudorincomus spp. 7 14 14 14 15 15 15 15 15									,, ,	27	
CHAR-2-SAV 9/11/2015 Althropoda Hesapoda Insecta Perryptia Optera Ohironomidae Personalidae P										7	
CHAR-2-SAV 9/11/2015 Arthropoda Hesapoda Insecta Persyota Diptera Chironomidae Thienemaniella spp. 14 28				· ·						163	
CHAR.2-SAW 9/11/2015 Arthropoda Hexpoda Insecta Perrygota Diptera Chriconomidae Nanciadius spp. 7										7	
CHAR.2-SAW 9/11/2015 Arthropoda Hexapoda Insecta Ptervgota Diptera Chronomidae Circotopus or Orthocadius 6:1 122			_	· ·					· ·	14	
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CHAR-2-SAW 9/11/2015 Arthropoda Hexapoda Insecta Pervgota Diptera Ceratopogonidae Ceratopogonidae Sp. 4 8				· ·					•	51	
CHAR-2-SAW 9/11/2015 Arthropoda Chelicerata Arachida Acari Trombidiformes Unionicolidae Keenikea spp. 32 64										/	24
PAR-2-SAV 9/11/2015 Anthropoda Chelicerata Arachnida Papata Acciulata Nerelididae Lueonereis culveri 69 3000										22	64
CHA.R-2-Sed 9/11/2015 Annelida Polychaeta Palpata Aciculata Nereididae Laeonereis culveri 69 3000 CHA.R-2-Sed 9/11/2015 Annelida Ciltellata Oligochaeta Tubificida Naididae Tubificidae Sp. 13 565 Immature and/or damaged CHA.R-2-Sed 9/11/2015 Annelida Ciltellata Oligochaeta Tubificida Naididae Immodrilus hoffmeisteri 7 3 304 CHA.R-2-Sed 9/11/2015 Mollusca Gastropoda Caenogastropoda Littorimorpha Hydrobidae Bydrobideae Sp. 4 174 CHA.R-2-Sed 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Gammaridae Gammarius Sp. 3 130 females CHA.R-2-Sed 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Gammaridae Gammarius Sp. 4 174 CHA.R-2-Sed 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Amphipoda Aoridae Grandidirerella bonnieroides 9 391 CHA.R-2-Sed 9/11/2015 Arthropoda Crustacea Malacostraca Perrygota Diptera Chironomidae Chironomus Sp. 2 87 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Cryptochironomus Sp. 1 43 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Polypedilum halterale group 8 348 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Polypedilum halterale group 8 348 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Polypedilum halterale group 8 348 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Polypedilum halterale group 8 348 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Dicrotendipes Sp. 1 1 43 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Dicrotendipes Sp. 1 1 43 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Dicrotendipes Sp. 1 1 43 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Dicrotendipes Sp. 1 1 43 CHA.R-2-Sed 9/11/2015 Arthropoda Hexapoda Insecta Perrygota Diptera Chironomidae Dicrotendipes Sp. 1 1 43 CHA.R-2-Sed 9/11/2015 Arthropoda Crustacea Malacostraca											
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CHA-R-2-Snag 9/11/2015 Annelida Citellata Oligochaeta Tubificida Naididae Pristina leidyi 16 32 CHA-R-2-Snag 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Tanaidacea Leptocheliidae Leptocheliidae pp. 3120 CHA-R-2-Snag 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Tanaidacea Leptocheliidae Hargeria rapax 48 96 CHA-R-2-Snag 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Tanaidacea Tanaidaee Sinelobus stanfordi 1152 CHA-R-2-Snag 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Tanaidacea Tanaidaee Tanaidaee Sinelobus stanfordi 1152		9/11/2015	Arthropoda					Chironomidae		2	87
CHA-R-2-Snag 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Tanaidacea Leptochellidae Hargeria rapax 48 96 males CHA-R-2-Snag 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Tanaidacea Tanaidacea Sinelobus stanfordi 1152 2304								Naididae			
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CHA-R-2-Snag 9/11/2015 Arthropoda Crustacea Malacostraca Eumalacostraca Isopoda Sphaeromatidae Sphaeroma spp. 16 32											
	CHA-R-2-Snag	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	16	32

	Date Collected Phylum	Subphylum	Class	Subclass	Order	Family	Таха		undance (Count/m²)	Notes
CHA-R-2-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	160	320	
CHA-R-2-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	16	32	
CHA-R-2-Snag CHA-R-2-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca	Amphipoda Amphipoda	Aoridae Corophiidae	Grandidierella bonnieroides	64 112	128 224	
CHA-R-2-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Eumalacostraca Pterygota	Trichoptera	Hydroptilidae	Apocorophium louisianum Hydroptila spp.	32	64	
CHA-R-2-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Пуагоринаас	Diptera spp.	16		no posterior end (pupa)
CHA-R-2-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	144	288	
CHA-R-2-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	16	32	
CHA-R-2-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	16	32	
CHA-R-3-MA	9/11/2015 Platyhelminthes						Platyhelminthes spp.	32	64	
CHA-R-3-MA	9/11/2015 Annelida		Polychaeta Clitellata	Palpata	Aciculata Tubificida	Nereididae	Laeonereis culveri	32	64	
CHA-R-3-MA CHA-R-3-MA	9/11/2015 Annelida 9/11/2015 Annelida		Clitellata	Oligochaeta Oligochaeta	Tubificida	Naididae Naididae	Pristina leidyi	64 64	128 128	
CHA-R-3-MA	9/11/2015 Affileida 9/11/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Dero nivea Hydrobiidae spp.	1568	3136	
CHA-R-3-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	1216	2432	females
CHA-R-3-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	64	128	
CHA-R-3-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	32	64	
CHA-R-3-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	1152	2304	
CHA-R-3-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	1344	2688	
CHA-R-3-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	2272	4544	
CHA-R-3-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	1120	2240	
CHA-R-3-MA CHA-R-3-MA	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Ephemeroptera Odonata	Caenidae Coenagrionidae	Caenis diminuta Coenagrionidae spp.	192 32	384	juvenile
CHA-R-3-MA	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Diptera	Chironomidae	Tanytarsus spp.	32	64	Javenine
CHA-R-3-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	64	128	
CHA-R-3-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	544	1088	
CHA-R-3-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	32	64	
CHA-R-3-SAV	9/11/2015 Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	21	42	
CHA-R-3-SAV	9/11/2015 Annelida	ļ	Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	11	22	
CHA-R-3-SAV	9/11/2015 Annelida	ļ	Clitellata	Oligochaeta	Tubificida	Naididae	Dero nivea	53	106	
CHA-R-3-SAV	9/11/2015 Annelida		Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata	11	22	
CHA-R-3-SAV CHA-R-3-SAV	9/11/2015 Mollusca 9/11/2015 Arthropoda	Crustacea	Gastropoda Malacostraca	Caenogastropoda Eumalacostraca	Littorinimorpha Tanaidacea	Hydrobiidae Leptocheliidae	Hydrobiidae spp. Leptocheliidae spp.	138 85	276	females
CHA-R-3-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	11	22	Terriales
CHA-R-3-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	64	128	
CHA-R-3-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	435	870	
CHA-R-3-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	572	1144	
CHA-R-3-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	64	128	
CHA-R-3-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium spp.	53		damaged and/or juveniles
CHA-R-3-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae Palaemonidae	Apocorophium louisianum	604	1208	
CHA-R-3-SAV CHA-R-3-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Decapoda Ephemeroptera	Caenidae	Palaemonetes spp. Caenis spp.	42 11	0-1	missing legs
CHA-R-3-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	Caenis spp.	21	42	
CHA-R-3-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	Coenagrionidae spp.	74		juveniles
CHA-R-3-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Orthotrichia spp.	85	170	
CHA-R-3-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	32	64	pupae
CHA-R-3-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	64	128	
CHA-R-3-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	449	898	
CHA-R-3-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Nanocladius spp.	21	42	
CHA-R-3-SAV CHA-R-3-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Paratanytarsus spp. Cricotopus or Orthocladius	32 54	108	
CHA-R-3-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	Koenikea spp.	21	42	
CHA-R-3-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	Unionicola spp.	11	22	
CHA-R-3-SAV	9/11/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Limnesiidae	Limnesia spp.	11	22	
CHA-R-3-Sed	9/11/2015 Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	144	6261	
CHA-R-3-Sed	9/11/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	90		Immature and/or damaged
CHA-R-3-Sed	9/11/2015 Annelida	ļ	Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	3	130	
CHA-R-3-Sed	9/11/2015 Annelida	ļ	Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata	9	391	
CHA-R-3-Sed	9/11/2015 Mollusca	Caustone	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	18	783	famalas
CHA-R-3-Sed CHA-R-3-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Tanaidacea Tanaidacea	Leptocheliidae Leptocheliidae	Leptocheliidae spp. Hargeria rapax	54		females male
CHA-R-3-Sed CHA-R-3-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	5	261	maic
CHA-R-3-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	12	522	
CHA-R-3-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	3	130	
CHA-R-3-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	9	391	
CHA-R-3-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	3	130	
CHA-R-3-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	276	12000	
CHA-R-3-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	60	2609	
CHA-R-3-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium ellisi	51	2217	
CHA-R-3-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae Chironomidae	Cladotanytarsus spp.	39	130 1696	
CHA-R-3-Sed CHA-R-3-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae	Polypedilum scalaenum group Dicrotendipes spp.	39	1696	
CHA-R-3-Sed CHA-R-3-Snag	9/11/2015 Arthropoda 9/11/2015 Annelida	пелароца	Polychaeta	Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	δ Δ	261	
CHA-R-3-Snag	9/11/2015 Annelida	İ	Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	4	8	
CHA-R-3-Snag	9/11/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	4	8	
CHA-R-3-Snag	9/11/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	12	24	
CHA-R-3-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	340		females
CHA-R-3-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	16		males
CHA-R-3-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	132	264	

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		Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Count	Abundance (Count/m²)	Notes
CHA-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	4	8	
CHA-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	76	152	
CHA-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	56	112	
CHA-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	56	112	
CHA-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Amphilochidae	Hourstonius laguna	8	16	
CHA-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	404	808	
CHA-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda	Corophiidae	Americaraphium ellisi	4	8	
CHA-R-3-Snag CHA-R-3-Snag		Arthropoda Arthropoda	Crustacea Hexapoda	Malacostraca Insecta		Amphipoda Diptera	Corophiidae Chironomidae	Americorophium sp. A Dicrotendipes spp.	12	24	
CHA-R-3-Snag		Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	12	16	
CHA-R-4-MA	9/11/2015		Пехароца	Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	3	6	
CHA-R-4-MA		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero nivea	14	28	
CHA-R-4-MA	9/11/2015			Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	942	1884	
CHA-R-4-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	7		females
CHA-R-4-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	7	14	
CHA-R-4-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	3	6	
CHA-R-4-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiidae spp.	20	40	damaged and/or juveniles
CHA-R-4-MA	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	51	102	
CHA-R-4-MA	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	3	6	
CHA-R-4-MA	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	3	6	
CHA-R-4-MA	9/11/2015	Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Limnesiidae	Limnesia spp.	7	14	
CHA-R-4-Sed	9/11/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	1	43	Immature and/or damaged
CHA-R-4-Snag	9/11/2015			Polychaeta	Palpata	Canalipalpata	Spionidae	Dipolydora socialis	2	4	
CHA-R-4-Snag		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	26	52	
CHA-R-4-Snag	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Annelida	_	Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	14	28	Immature and/or damaged
CHA-R-4-Snag	9/11/2015	Annelida	+	Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	2	4	
CHA-R-4-Snag	9/11/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Bratislavia unidentata	4	8	
CHA-R-4-Snag		Annelida		Clitellata	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae spp.	6	12	
CHA-R-4-Snag		Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	130	260	
CHA-R-4-Snag		Mollusca	Countries	Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaeriidae spp.	30	4	famala.
CHA-R-4-Snag CHA-R-4-Snag		Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Tanaidacea Tanaidacea	Leptocheliidae Tanaidae	Leptocheliidae spp. Sinelobus stanfordi	30	16	females
CHA-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	2	10	
CHA-R-4-Shag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	4	9	
CHA-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophildae spp.	48	96	Damaged and/or juveniles
CHA-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	10	20	Daniageu ana/or juvernies
CHA-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium sp. A	2		Voucher
CHA-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Americamysis spp.	2		Voucher
CHA-R-4-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2		рира
CHA-R-4-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	16	32	
CHA-R-4-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	10	20	
CHA-R-4-Snag	9/11/2015	Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	Unionicola spp.	2	4	
CHA-R-4-Snag	9/11/2015	Nematoda						Nematoda spp.	4	8	
CHA-R-5-Sed	9/11/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	5	217	
CHA-R-5-Sed	9/11/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	24	1043	Immature and/or damaged
CHA-R-5-Sed	9/11/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	1	43	
CHA-R-5-Sed	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Idoteidae	Edotia triloba	2	87	
CHA-R-5-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium ellisi	10	435	
CHA-R-5-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	5	217	
CHA-R-5-Snag		Platyhelminthes						Platyhelminthes spp.	4	8	
CHA-R-5-Snag	9/11/2015			Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	44	88	
CHA-R-5-Snag	9/11/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	112	224	
CHA-R-5-Snag	9/11/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Dero nivea	88	176	
CHA-R-5-Snag		Mollusca	Crustones	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	8	16	famalas
CHA-R-5-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp. Sinelobus stanfordi	364 292	728 584	females
CHA-R-5-Snag CHA-R-5-Snag		Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Tanaidacea Isopoda	Tanaidae Sphaeromatidae	Cassidinidea ovalis	292	584	
CHA-R-5-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	12	24	
CHA-R-5-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Amphilochidae	Hourstonius laguna	12	24	
CHA-R-5-Shag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophildae spp.	48		damaged and/or juveniles
CHA-R-5-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	508	1016	annuages and or jurcinics
CHA-R-5-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium ellisi	212	424	
CHA-R-5-Snag	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium sp. A	12	24	
CHA-R-5-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	12	24	
CHA-R-5-Snag	9/11/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	4	8	
CHA-R-5-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	24	48	
CHA-R-5-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	4		
CHA-R-5-Snag	9/11/2015							Nematoda spp.	8	16	
CHA-R-6-Sed	9/11/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	7	304	
CHA-R-6-Sed	9/11/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	2	87	Immature and/or damaged
CHA-R-6-Sed	9/11/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	3	130	
CHA-R-6-Sed	9/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	1	43	
CHA-R-6-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	2	87	
CHA-R-6-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium ellisi	3	130	
CHA-R-6-Snag	9/11/2015			Polychaeta	Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	16	32	
CHA-R-6-Snag	9/11/2015		ļ	Polychaeta	Palpata	Canalipalpata	Ampharetidae	Hobsonia florida	16	32	
CHA-R-6-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	2176	4352	females
	0/11/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	1280	2560	
CHA-R-6-Snag CHA-R-6-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda		Asellota spp.	16		Voucher

	,				1		1		_	
	Date Collected Phylum	Subphylum	Class	Subclass	Order	Family			Abundance (Count/m²)	Notes
CHA-R-6-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	16	32	2
CHA-R-6-Snag CHA-R-6-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Isopoda	Munnidae Melitidae	Uromunna reynoldsi Melita nitida complex	96 48	192	
CHA-R-6-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda Amphipoda	Amphilochidae	Hourstonius laguna	144	288	1
CHA-R-6-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiidae spp.	592		Damaged and/or juveniles
CHA-R-6-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	2992	5984	
CHA-R-6-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Cerapus spp.	96	192	Voucher - juveniles
CHA-R-6-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium sp. A	1328	2656	5
CHA-R-6-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda		Decapoda spp.	48	96	crab megalops
CHA-R-6-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	32	64	
CHA-R-6-Snag CHA-S-1-Rock	9/11/2015 Nematoda 9/11/2015 Annelida		Clitellata	Oligachaeta	Tubificida	Naididae	Nematoda spp. Tubificinae spp.	32	64	
CHA-S-1-Rock	9/11/2015 Annelida 9/11/2015 Mollusca		Gastropoda	Oligochaeta Heterobranchia	Hygrophila	Planorbidae	Planorbella scalaris	1	-	Immature and/or damaged
CHA-S-1-Rock	9/11/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	2	-	
CHA-S-1-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	2	4	1
CHA-S-1-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	1		2
CHA-S-1-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	6	12	2
CHA-S-1-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	1		2
CHA-S-1-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	11	22	
CHA-S-1-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	6	12	2
CHA-S-1-Rock CHA-S-1-Rock	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Ephemeroptera Trichoptera	Baetidae Polycentropodidae	Acerpenna pygmaea Cernotina spp.	2		1
CHA-S-1-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Nectopsyche pavida	1		2
CHA-S-1-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Stenelmis spp.	5	10	
CHA-S-1-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	1		
CHA-S-1-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	1		2
CHA-S-1-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	2	4	1
CHA-S-1-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	6	12	2
CHA-S-1-Rock CHA-S-1-SAV	9/11/2015 Arthropoda 9/11/2015 Annelida	Hexapoda	Insecta Clitellata	Pterygota	Diptera Tubificida	Chironomidae	Cricotopus or Orthocladius Tubificinae spp.	1		2
CHA-S-1-SAV	9/11/2015 Annelida 9/11/2015 Annelida		Clitellata	Oligochaeta Hirudinida	Rhynchobdellida	Naididae Glossiphoniidae	Helobdella elongata	1	-	Immature and/or damaged
CHA-S-1-SAV	9/11/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	14	28	3
CHA-S-1-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	2		females
CHA-S-1-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	1		2
CHA-S-1-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	2	4	1
CHA-S-1-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	42	84	
CHA-S-1-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	5	10	
CHA-S-1-SAV CHA-S-1-SAV	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Taphromysis bowmani	11	22	2
CHA-S-1-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Trichoptera Trichoptera	Polycentropodidae Leptoceridae	Polycentropodidae spp. Triaenodes spp.	1	-	no posterior end
CHA-S-1-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	3		
CHA-S-1-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	1		2
CHA-S-1-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2	4	1 pupa, 1 larvae
CHA-S-1-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanypodinae spp.	2	4	1
CHA-S-1-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi	2	4	1
CHA-S-1-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	1		2
CHA-S-1-SAV	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	4	8	3
CHA-S-1-SAV CHA-S-1-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Diptera Diptera	Chironomidae Chironomidae	Nanocladius spp. Labrundinia spp.	1		2
CHA-S-1-SAV	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Lepidoptera	Crambidae	Parapoynx spp.	1		
CHA-S-1-Sed	9/11/2015 Annelida	Пехарова	Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Eclipidrilus palustris	1	4	3
CHA-S-1-Sed	9/11/2015 Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Musculium spp.	1	43	3
CHA-S-1-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Asellidae	Caecidotea spp.	1	43	3 Voucher
CHA-S-1-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	1	43	,
CHA-S-1-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	3	130	
CHA-S-1-Sed	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	2	87	
CHA-S-1-Sed CHA-S-1-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae Chironomidae	Microcylloepus spp.	1	43	
CHA-S-1-Sed CHA-S-1-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae	Ablabesmyia mallochi Pentaneura inconspicua	1	4:	
CHA-S-1-Sed	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Xestochironomus spp.	1	43	
CHA-S-1-Snag	9/11/2015 Annelida		Polychaeta	Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	1	7	2
CHA-S-1-Snag	9/11/2015 Annelida	<u> </u>	Clitellata	Oligochaeta	Tubificida	Naididae	Nais communis	1		
CHA-S-1-Snag	9/11/2015 Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Glossiphoniidae spp.	1		juvenile
CHA-S-1-Snag	9/11/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1		2
CHA-S-1-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	. 2	4	1
CHA-S-1-Snag	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	38	76	
CHA-S-1-Snag CHA-S-1-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Ephemeroptera Trichoptera	Baetidae Leptoceridae	Acerpenna pygmaea Nectopsyche pavida	6	12	<u> </u>
CHA-S-1-Snag CHA-S-1-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	2	,	1
CHA-S-1-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	1		2
CHA-S-1-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Stenelmis spp.	10	20	
CHA-S-1-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	1		pupa
CHA-S-1-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	1		2
CHA-S-1-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	2		1
CHA-S-1-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	4	8	3
CHA-S-1-Snag	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	1		2
CHA-S-1-Snag CHA-S-1-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Ablabesmyia rhamphe group Dicrotendipes spp.	4	10	
CHA-S-1-Snag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Nanocladius spp.	3	10	
J 1 51105	3/11/2013 / II (III opodd	poud			1			,	· · · · · · · · · · · · · · · · · · ·	· L

	I I	Table 1	1	1	T		_	-		I
Sample ID CHA-S-1-Snag	Date Collected Phylum 9/11/2015 Arthropoda	Subphylum	Class Insecta	Subclass	Order	Family Chironomidae	Taxa Paratanytarsus spp.	Count	Abundance (Count/m²)	Notes
CHA-S-1-Shag CHA-S-1-Shag	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae	Cricotopus or Orthocladius		1	2
CHA-S-2-MA	9/11/2015 Annelida	пскароца	Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.		8 1	6 Immature and/or damaged
CHA-S-2-MA	9/11/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Aulodrilus pigueti		8 1	
CHA-S-2-MA	9/11/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero spp.		4	8 no posterior end, dorsal needles & hairs broken
CHA-S-2-MA	9/11/2015 Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis		4	8
CHA-S-2-MA	9/11/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	28		
CHA-S-2-MA CHA-S-2-MA	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	4	8 9	6 females
CHA-S-2-MA	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Isopoda Isopoda	Sphaeromatidae Asellidae	Cassidinidea ovalis Caecidotea spp.		4	8
CHA-S-2-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna revnoldsi	1	6 3	2
CHA-S-2-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	64		0
CHA-S-2-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	6		0
CHA-S-2-MA	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	20		
CHA-S-2-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Leptoceridae spp.			8 damaged, no posterior end
CHA-S-2-MA CHA-S-2-MA	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Trichoptera	Hydroptilidae Chironomidae	Oxyethira spp. Chironomidae spp.	-	8 1	6 pupa
CHA-S-2-MA	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae	Chironomus spp.	1		
CHA-S-2-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	-	4	8
CHA-S-2-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group		8 1	6
CHA-S-2-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi		4	8
CHA-S-2-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	8-		8
CHA-S-2-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Labrundinia spp.	3	2 6	4
CHA-S-2-MA	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius		4	8
CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Annelida 9/11/2015 Mollusca	1	Polychaeta Gastropoda	Palpata Caenogastropoda	Canalipalpata Littorinimorpha	Spionidae Hydrobiidae	Spionidae spp. Hydrobiidae spp.	3		2 juvenile, either Boccardiella ligerica or Dipolydora socialis
CHA-S-2-ROCK CHA-S-2-Rock	9/11/2015 Moliusca 9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	225		4 2 females
CHA-S-2-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	3		4 males
CHA-S-2-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	1		
CHA-S-2-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	1		2
CHA-S-2-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	22		
CHA-S-2-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	40		
CHA-S-2-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae Aoridae	Melita nitida complex Grandidierella bonnieroides	1		
CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Corophiidae	Apocorophium louisianum	121		
CHA-S-2-Rock	9/11/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	9		
CHA-S-2-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	1		
CHA-S-2-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	1	6 3	2 pupa
CHA-S-2-Rock	0/44/2045 Authorized	To a second	la contra	Dtorugoto	Dintoro	Chironomidae	at the state of		6 3	
	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Cladotanytarsus spp.	1		2
CHA-S-2-Rock	9/11/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	3	2 6	4
CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Tanytarsus spp. Polypedilum illinoense group	3.	2 6 6 3	4 2
CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta	Pterygota Pterygota Pterygota	Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group	3 1 9	2 6 6 3 6 19	2
CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae Chironomidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp.	3 1 9 41	2 6 6 3 6 19 6 83	2
CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group	3 1 9	2 6 6 3 6 19 6 83 6 3 6 3	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp.	3 1 9 41	2 6 6 3 6 19 6 83 6 3 6 3 2 6 6 6 6 7 9 6 7 6 7 6 7 6 7 6 7 6 7 7 6 7 7 7 7	2 2 2 2 4
CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock CHA-S-2-Rock	9/11/2015 Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius	3 1 9 41 1 3 1	2 6 6 3 6 119 6 83 6 83 6 8 3 6 8 3 6 8 3 6 8 3 6 8 3 6 8 3 6 8 3 6 8 8 8 8	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock	9/11/2015 Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Tamtarsus spp. Polypedilum illinoense group Albiabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp.	3 1 9 41 1 3 3 1	2 6 3 6 3 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Nematoda	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp. Polypedilum illinoense group Albabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp.	3 1 9 41 1 3 1	2 6 3 6 3 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Marthropoda 9/11/2015 Marthropoda 9/11/2015 Mollusca	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota Heterobranchia	Diptera	Chironomidae Physidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis	3 1 9 41 1 3 1 1 1 1 3	2 6 6 3 6 119 6 83 6 3 2 6 6 3 6 3 6 3 6 3 7	5 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock CHA-S-2-SAV CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta Gastropoda Gastropoda	Pterygota Heterobranchia Caenogastropoda	Diptera Hyptophila Uttorinimorpha	Chironomidae Physidae Hydrobiidae	Tamtarsus spp. Polypedillum illinoense group Albiabesmyia rhamphe group Dicrotendijes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp.	3 1 9 41 1 3 1 1 1 1 3 3	2 6 3 6 3 6 83 6 3 3 6 3 3 6 3 3 6 3 3 8 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	2
CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Marthropoda 9/11/2015 Marthropoda 9/11/2015 Mollusca	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota Heterobranchia	Diptera	Chironomidae Physidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis	3 1 9 41 1 3 1 1 1 1 3	2 6 3 6 3 6 83 6 3 3 6 3 3 6 3 3 6 3 3 8 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	5 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock CHA-S-2-SAV CHA-S-2-SAV CHA-S-2-SAV CHA-S-2-SAV CHA-S-2-SAV CHA-S-2-SAV CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mrhopoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda	Нехарода	Insecta Malacostraca Malacostraca Malacostraca	Pterygota Heterobranchia Caenogastropoda Eumalacostraca	Diptera Tanaidacea	Chironomidae Liptocheliidae Liptocheliidae Tanaidae Anthuridae	Tamtarsus spp. Polypedilum illinoense group Albiabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita	3 1 9 41 1 3 1 1 1 1 3 3	2 6 6 3 6 19 6 83 6 3 3 2 6 3 3 16 3 3 3 2 2 6 6 3 3 3 6 5 7 7 8 8 8 7 8 8 7 8 8 7 8 8 8 7 8 8 8 7 8 8 8 7 8 8 8 7 8 8 8 7 8 8 8 7 8 8 8 7 8 8 8 8 7 8 8 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 9 8 8 9 8 9 8 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 9 8 9 9 8 9	4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda 9/11/2015 Arthropoda	Hexapoda Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Pterygota Euralacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Diptera Tanaidacea Tanaidacea Tanaidacea Isopoda	Chironomidae Lhironomidae Leptochelidae Leptochelidae Tanaidae Anthuridae Sphaeromatidae	Tanytarsus spp. Polypedilum illinoense group Albabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis	3 1 9 41 1 3 1 1 1 1 3 3	2 6 3 6 3 6 83 6 3 3 6 3 3 6 3 3 6 3 3 8 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Pterygota Europota Pterygota Pterygota Pterygota Pterygota Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Diptera Littorinimorpha Tanaidacea Tanaidacea Isopoda Isopoda	Chironomidae Hydrobildae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae	Tanytarsus spp. Polypedilum illinoense group Alblabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobildae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 2 2 2 8 8	2 6 6 3 6 19 6 6 83 6 6 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 7 6 7	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea	Insecta Insect	Pterygota Europata Europata Europata Europata Europata Europata Europata Europata	Diptera Littorinimorpha Tanaidacea Tanaidacea Isopoda Isopoda Amphipoda	Chironomidae Aliromidae Chironomidae Chirono	Tamtarsus spp. Polypedilum illinoense group Albiabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp.	3 1 9 41 1 3 1 1 1 1 3 3	2 6 3 6 3 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea	Insecta Malacostraca	Pterygota Eumalacostraca	Diptera Tanaidacea	Chironomidae Leptocheliidae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae	Tanutarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemannielia spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobildae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex	3 3 1 1 1 1 1 1 1 1 1 1 1 2 2 8 8 8 2 23	2 6 6 3 3 6 6 9 9 9 1 1 3 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 1 5 6 6 1 1 1 9 9 9 1 1 1 1 1 1 1 1 1 1 1 1	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea	Insecta Malacostraca	Pterygota Heterobranchia Caenogastropoda Eumalacostraca	Diptera Tapiadacea Uttorinimorpha Tanaidacea Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda	Chironomidae Leptocheliidae Leptocheliidae Laptocheliidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Aoridae	Tanytarsus spp. Polypedilum illinoense group Albiabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reymoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 2 2 2 8 8	2 6 6 3 3 6 6 9 9 9 1 1 3 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 5 6 6 1 1 9 9 9 1 1 1 5 6 6 1 1 1 9 9 9 1 1 1 1 1 1 1 1 1 1 1 1	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea	Insecta Malacostraca	Pterygota Eumalacostraca	Diptera Tanaidacea	Chironomidae Leptocheliidae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae	Tanutarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemannielia spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobildae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex	3 3 1 1 1 1 1 1 1 1 1 1 1 2 2 8 8 8 2 23	2 6 6 3 6 19 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 6 3 3 6 6 6 5 5 6 6 5 5 6 6 5 5 6 6 5 5 6 6 5 5 6 6 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 5 6 6 6 5 5 5 5 6 6 6 5 5 5 5 5 6 6 6 5	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea	Insecta Insect	Pterygota Eumalacostraca	Diptera Littorinimorpha Tanaidacea Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda	Chironomidae Mydromidae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Dogielinotidae	Tamtarsus spp. Polypedilum illinoense group Alblabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroldes Hyalella azteca sp. complex	3 3 1 1 9 9 411 11 11 11 11 11 11 11 11 11 11 11 11	2 6 6 3 6 19 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 6 3 3 6 6 6 5 5 6 6 5 5 6 6 5 5 6 6 5 5 6 6 5 5 6 6 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 6 6 6 5 5 5 5 6 6 6 5 5 5 5 6 6 6 5 5 5 5 5 6 6 6 5	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mrthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea	Insecta Malacostraca Insecta	Pterygota Eumalacostraca	Diptera Dipter	Chironomidae Munnidae Munnidae Munnidae Gammaridae Melitidae Aoridae Dogielinotidae Palaemonidae Mysidae Baetidae	Tamtarsus spp. Polypedilum illinoense group Alblabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus	3 3 1 1 9 9 411 11 11 11 11 11 11 11 11 11 11 11 11	2 6 6 3 6 19 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 5 6 5	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea Hexapoda Hexapoda	Insecta Malacostraca Insecta Insecta	Pterygota Eumalacostraca Pterygota	Diptera Dipter	Chironomidae Leptocheliidae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Melitidae Aoridae Dogielinotidae Palaemonidae Mysidae Baetidae Hydroptilidae	Tanytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemannielia spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobildae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp.	3 3 1 1 9 9 411 11 11 11 11 11 11 11 11 11 11 11 11	2 6 6 3 6 19 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 5 6 5	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Insecta Insecta Insecta Insecta	Pterygota Heterobranchia Caenogastropoda Eumalacostraca Puerygota Pterygota	Diptera	Chironomidae Anthuridae Ieptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Doglelinotidae Palaemonidae Mysidae Baetidae Baetidae Hydroptilidae Chironomidae Chironomidae	Tamytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydroblidae spp. Leptocheliidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Ooyethira spp. Tanytarsus spp.	3 3 1 1 9 9 411 11 11 11 11 11 11 11 11 11 11 11 11	2 6 6 3 6 19 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 5 6 5	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Malacostraca Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Eumalacostraca Pterygota Pterygota Pterygota Pterygota	Diptera	Chironomidae Deptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Mellitidae Aoridae Dogielinotidae Dogielinotidae Palaemonidae Mysidae Baetidae Hydroptilidae Chironomidae Chironomidae	Tamtarsus spp. Polypedilum illinoense group Alblabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Mellta nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedilum illinoense group	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 83 6 83 6 8 3 8 8 8 1 8 8 1 16 8 1 16 8 1 16	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta I	Pterygota Eumalacostraca Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera	Chironomidae Leptochellidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Dogielinotidae Palaemonidae Mysidae Baetidae Bydroptilidae Chironomidae Chironomidae Chironomidae	Tantarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemannielia spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobildae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Mellta nitida complex Grandidierella bonnieroides Hydalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Okyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp.	3 3 1 1 9 9 411 11 11 11 11 11 11 11 11 11 11 11 11	2 6 6 3 6 83 6 83 6 8 3 8 8 8 1 8 8 1 16 8 1 16 8 1 16	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Malacostraca Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Heterobranchia Caenogastropoda Eumalacostraca Puenygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera	Chironomidae Deptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Mellitidae Aoridae Dogielinotidae Dogielinotidae Palaemonidae Mysidae Baetidae Hydroptilidae Chironomidae Chironomidae	Tamtarsus spp. Polypedillum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Leptochellidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedillim illinoense group Dicrotendipes spp. Paralauterborniella spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 83 6 83 6 8 3 8 8 8 1 8 8 1 16 8 1 16 8 1 16	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta	Pterygota Eumalacostraca Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera Littorinimorpha Tanaidacea Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Ephemeroptera Trichoptera Diptera	Chironomidae Physidae Hydrobildae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Dogielinotidae Palaemonidae Hydroptilidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Tantarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemannielia spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobildae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Mellta nitida complex Grandidierella bonnieroides Hydalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Okyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 83 6 6 3 6 3 6 6 3 7 6 6 3 7 6 7 6 7 6 7	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Crustacea Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta	Pterygota	Diptera	Chironomidae Leptochellidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Mellitidae Aoridae Dogielinotidae Palaemonidae Mysidae Baetidae Hydroptilidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Tamtarsus spp. Polypedilum illinoense group Alblabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Polypedilum illinoense group Dicrotendipes spp. Paralauterborniella spp. Pertaneura spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 8 8 8 8 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta	Pterygota Heterobranchia Caenogastropoda Eumalacostraca Puerygota Pterygota	Diptera Tanaidacea Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Decapoda Mysida Ephemeroptera Trichoptera Diptera	Chironomidae Leptochellidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Dogielinotidae Palaemonidae Hydroptilidae Retironomidae Chironomidae	Tamtarsus spp. Polypedilum illinoense group Alblabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Tanhromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Paralauterborniella spp. Pertaneura spp. Larsia spp. Tanienemanniella spp. Cricotopus or Orthocladius Cricotopus or Orthocladius	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 8 8 8 8 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9	4
CHA-S-2-Rock	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda	Insecta	Pterygota Heterobranchia Caenogastropoda Eumalacostraca Pterygota	Diptera	Chironomidae Ieptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Doglelinotidae Palaemonidae Mysidae Baetidae Hydroptilidae Chironomidae	Tamytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Pysella cubensis Hydrobiidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Paralauterborniella spp. Pentaneura spp. Larisa spp. Paralauterborniella spp. Pentaneura spp. Larias spp. Thienemanniella spp. Trictotopus or Orthocladius Nematoda spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 7 6 7	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Molliusca 9/11/2015 Molliusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta	Pterygota Heterobranchia Caenogastropoda Eumalacostraca Pternacostraca Eumalacostraca Eumalacostraca Eumalacostraca Pterygota	Diptera Littorinimorpha Tanaidacea Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Ephemeroptera Trichoptera Diptera	Chironomidae Physidae Hydrobiidae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Dogielinotidae Palaemonidae Hydroptilidae Chironomidae	Tamtarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. Sinelobus stanfordi Oyathura spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. Daphomysis bowmani Callibaetis floridanus Oxyethira spp. Tamytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Paralauterborniella spp. Pentaneura spp. Larsia spp. Thienemanniella spp. Cricotopus or Orthocladius Nematoda spp. Limnodrilus hoffmelsteri	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 19 6 6 3 3 6 3 3 6 5 3 3 9 16 5 5 6 11 1 2 2 2 2 2 2 2 5 5 3 3 2 2 5 5 1 1 8 8 1 1 1 3 2 2 1 1 5 5 1 1 3 3 2 2 1 1 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Molliusca 9/11/2015 Molliusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Ins	Pterygota	Diptera	Chironomidae Leptochellidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Mellitidae Aoridae Dogielinotidae Palaemonidae Mysidae Baetidae Hydroptilidae Chironomidae Sphaeromatidae	Tamtarsus spp. Polypedilum illinoense group Alblabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Physella cubensis Hydrobiidae spp. Leptochellidae spp. Leptochellidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Paralauterborniella spp. Pertaneura spp. Larsia spp. Trienemanniella spp. Cricotopus or Orthocladius Nematoda spp. Limnodrilus hoffmeisteri Sphaeroma spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 83 6 6 3 6 3 6 6 3 7 6 6 3 7 6 7 6 7 6 7	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Hexapoda	Insecta Insect	Petrygota Pterygota Heterobranchia Caenogastropoda Eumalacostraca Pterygota	Diptera	Chironomidae Hydrobiidae Leptocheliidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Doglelinotidae Palaemonidae Mysidae Baetidae Hydroptilidae Chironomidae	Tamytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Nematoda spp. Physella cubensis Hydroblidae spp. Leptocheliidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Paralauterborniella spp. Pentaneura spp. Larsia spp. Tarisa spp. Trienemanniella spp. Cricotopus or Orthocladius Nematoda spp. Limnodrius hoffmeisteri Sphaeroma spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 19 6 6 3 3 6 3 3 6 5 3 3 9 16 5 5 6 11 1 2 2 2 2 2 2 2 5 5 3 3 2 2 5 5 1 1 8 8 1 1 1 3 2 2 1 1 5 5 1 1 3 3 2 2 1 1 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Hexapoda	Insecta Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Insecta Insec	Pterygota Heterobranchia Caenogastropoda Eumalacostraca Pterygota	Diptera Littorinimorpha Tanaidacea Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Ephemeroptera Trichoptera Diptera Amphipoda Amphipoda Amphipoda Amphipoda	Chironomidae Leptochellidae Tanaidae Anthuridae Sphaeromatidae Munnidae Gammaridae Mellitidae Aoridae Dogielinotidae Palaemonidae Mysidae Baetidae Hydroptilidae Chironomidae Sphaeromatidae	Tamtarsus spp. Polypedillum illinoense group Ablabesmyia rhamphe group Dicrotendijees spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Nematoda spp. Nematoda spp. Leptocheliidae spp. Leptocheliidae spp. Lieptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Peralauterborniella spp. Pertaneura spp. Larsia spp. Thienemanniella spp. Cricotopus or Orthocladius Nematoda spp. Limnodrilus hoffmeisteri Sphaeroma spp. Gammarus spp. Gammarus spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 6 3 6 6 3 6 6 3 6 6 3 6 6 3 6 6 3 6 6 6 7 6 7	4
CHA-S-2-Rock CHA-S-2-SAV	9/11/2015 Arthropoda 9/11/2015 Mematoda 9/11/2015 Mematoda 9/11/2015 Mollusca 9/11/2015 Arthropoda	Hexapoda Grustacea Crustacea Hexapoda	Insecta Insect	Petrygota Pterygota Heterobranchia Caenogastropoda Eumalacostraca Pterygota	Diptera	Chironomidae	Tamytarsus spp. Polypedilum illinoense group Ablabesmyia rhamphe group Dicrotendipes spp. Thienemanniella spp. Nanocladius spp. Paratanytarsus spp. Cricotopus or Orthocladius Beardius spp. Nematoda spp. Nematoda spp. Physella cubensis Hydroblidae spp. Leptocheliidae spp. Leptocheliidae spp. Leptocheliidae spp. Sinelobus stanfordi Cyathura polita Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Hyalella azteca sp. complex Palaemonetes spp. Taphromysis bowmani Callibaetis floridanus Oxyethira spp. Tanytarsus spp. Polypedilum illinoense group Dicrotendipes spp. Paralauterborniella spp. Pentaneura spp. Larsia spp. Tarisa spp. Trienemanniella spp. Cricotopus or Orthocladius Nematoda spp. Limnodrius hoffmeisteri Sphaeroma spp.	3 3 1 1 9 9 411 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 6 6 3 6 19 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 3 3 6 6 7 6 7	4

Table B-1. Chassahowitzka River Macroinvertebrate Data

Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Count	Abundance (Count/m ²)	Notes
CHA-S-2-Sed	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	1	43	
CHA-S-2-Sed	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	1	43	
CHA-S-2-Sed	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladopelma spp.	1	43	
CHA-S-2-Snag	9/11/201	5 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	8	16	Immature and/or damaged
CHA-S-2-Snag	9/11/201	5 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	64	128	
CHA-S-2-Snag	9/11/201	5 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero pectinata	8	16	
CHA-S-2-Snag	9/11/201	5 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Bratislavia unidentata	72	144	
CHA-S-2-Snag	9/11/201	5 Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Lumbriculus cf. variegatus	16	32	
CHA-S-2-Snag	9/11/201	5 Annelida		Clitellata	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae spp.	8	16	
CHA-S-2-Snag	9/11/201	5 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	48	96	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	1256	2512	females
CHA-S-2-Snag	9/11/201	5 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	8	16	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	16	32	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	72	144	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	48	96	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	16	32	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	8	16	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	8	16	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	80	160	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	16	32	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	8	16	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	192	384	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	32	64	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Beardius spp.	8	16	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	8	16	
CHA-S-2-Snag	9/11/201	5 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	Neumania spp.	8	16	

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										Abundance(Coun
Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count	t/m²) Notes
HOM-HAL-1-MA		Platyhelminthes						Platyhelminthes spp.	48	
HOM-HAL-1-MA		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	192	3840
HOM-HAL-1-MA	9/14/2015	Annelida		Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata	24	
HOM-HAL-1-MA HOM-HAL-1-MA	9/14/2015 9/14/2015	Mollusca		Gastropoda Gastropoda	Caenogastropoda	Littorinimorpha	Pleuroceridae Hydrobiidae	Pleurocera floridensis Hydrobiidae spp.	24 2808	480 56160
HOM-HAL-1-MA		Arthropoda	Crustacea	Malacostraca	Caenogastropoda Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	2160	43200 females
HOM-HAL-1-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	72	1440 males
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Nannastacidae	Almyracuma bacescui	48	
HOM-HAL-1-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	72	
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Idoteidae	Edotia triloba	24	
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Gammaridea spp.	48	
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	696	13920
HOM-HAL-1-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	168	3360
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiidae spp.	240	4800 Damaged and/or juveniles
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium spp.	120	2400 Damaged and/or juveniles
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	1200	24000
HOM-HAL-1-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Cerapus spp.	456	
HOM-HAL-1-MA	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Callibaetis floridanus	24	480
HOM-HAL-1-MA	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	408	
HOM-HAL-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Apedilum spp.	192	
HOM-HAL-1-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus longistylus	48	
HOM-HAL-1-MA	9/14/2015			Dalaska sta	Delegate	Astaulata	Manadalida	Nematoda spp.	24	
HOM-HAL-1-Sed	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	153	6652
HOM-HAL-1-Sed	9/14/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	2	87 Immature and/or damaged
HOM-HAL-1-Sed	9/14/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodriloidinae spp.	3	130
HOM-HAL-1-Sed HOM-HAL-1-Sed	9/14/2015 9/14/2015	Mollusca Mollusca		Gastropoda Bivalvia	Caenogastropoda Heterodonta	Littorinimorpha Veneroida	Hydrobiidae Sphaeriidae	Hydrobiidae spp. Sphaeriidae spp.	8	348 87
HOM-HAL-1-Sed HOM-HAL-1-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Spnaeriidae Leptocheliidae	Leptocheliidae spp.	38	**
HOM-HAL-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	38	87 male
HOM-HAL-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	32	
HOM-HAL-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	32	130
HOM-HAL-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	38	
HOM-HAL-1-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	51	
HOM-HAL-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiidae spp.	8	348 juvenile or damaged
HOM-HAL-1-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	131	5696
HOM-HAL-1-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Cerapus spp.	96	4174 ovigerous females present
HOM-HAL-1-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Panopeidae	Rhithropanopeus harrisii	2	87
HOM-HAL-1-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	8	348
HOM-HAL-1-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	14	609
HOM-HAL-1-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	5	217
HOM-HAL-1-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	2	87
HOM-HAL-1-Sed	9/14/2015	Nematoda						Nematoda spp.	3	130
HOM-HAL-2-Sed	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	1	43
HOM-HAL-2-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Americorophium ellisi	5	217
HOM-HAL-3-Sed	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	1	43
HOM-HAL-3-Sed		Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	50	
HOM-HAL-3-Sed	9/14/2015		Countries	Bivalvia	F	A In I II	Consultitute	Bivalvia spp.	20	
HOM-HAL-3-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiidae spp.	1	43 juvenile
HOM-HAL-3-Sed HOM-HAL-3-Sed		Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Diptera Diptera	Chironomidae Chironomidae	Procladius spp. Tanypus neopunctipennis	14	
HOM-HAL-S-MA	9/14/2015		пехароца	Polychaeta	Pterygota Palpata	Aciculata	Nereididae	Laeonereis culveri	14	3
HOM-HAL-S-MA	9/14/2015	Annelida		Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata		10
HOM-HAL-S-MA		Mollusca		Gastropoda	Caenogastropoda	Arriyrichobacıllaa	Pleuroceridae	Pleurocera floridensis	1	2
HOM-HAL-S-MA		Mollusca	1	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1	2
HOM-HAL-S-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	5	10 females
HOM-HAL-S-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	1	2
HOM-HAL-S-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	15	30
HOM-HAL-S-MA	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	1	2
HOM-HAL-S-MA	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Callibaetis floridanus	1	2
HOM-HAL-S-MA	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	1	2
HOM-HAL-S-MA	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	1	2
HOM-HAL-S-MA	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	1	2
HOM-HAL-S-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	66	132
HOM-HAL-S-MA	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Larsia spp.	2	4
HOM-HAL-S-Rock		Cnidaria		Anthozoa	ļ	ļ		Anthozoa spp.	8	16
HOM-HAL-S-Rock	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	156	312
HOM-HAL-S-Rock		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	4	8 Immature and/or damaged
HOM-HAL-S-Rock		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodriloidinae spp.	12	
HOM-HAL-S-Rock		Mollusca	Caustone	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	308	
HOM-HAL-S-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae Leptocheliidae	Leptocheliidae spp.	160	
HOM-HAL-S-Rock HOM-HAL-S-Rock		Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Tanaidacea Isopoda	Anthuridae	Hargeria rapax Cyathura polita	- 4	8 male 16
HOM-HAL-S-ROCK		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	8	8
HOM-HAL-S-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	φ 9	16
HOM-HAL-S-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Idoteidae	Edotia triloba	1	8
HOM-HAL-S-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Gammaridea spp.	4	8 damaged/juvenile
HOM-HAL-S-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	40	
HOM-HAL-S-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	20	
	5, 1-1, 2015					FP				

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								L	. .	Abundance(Cour	'l
Sample ID HOM-HAL-S-Rock	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Count 604	t/m²)	Notes
HOM-HAL-S-Rock	9/14/2015 9/14/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Aoridae Corophiidae	Grandidierella bonnieroides Apocorophium spp.	604	1208	Damaged and/or juveniles
HOM-HAL-S-Rock	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	4	1	pupa
HOM-HAL-S-Rock	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	4		3
HOM-HAL-S-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	60	120	
HOM-HAL-S-Rock	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	20	40)
HOM-HAL-S-Sed	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	23	1000	
HOM-HAL-S-Sed	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Stenoninereis martini	6	26:	Į.
HOM-HAL-S-Sed	9/14/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodriloidinae spp.	31	1348	3
HOM-HAL-S-Sed	9/14/2015	Annelida		Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata	1	4:	
HOM-HAL-S-Sed	9/14/2015	Mollusca		Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	7	304	
HOM-HAL-S-Sed	9/14/2015	Mollusca	Countries	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1/	739	
HOM-HAL-S-Sed HOM-HAL-S-Sed	9/14/2015 9/14/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Isopoda Isopoda	Anthuridae Idoteidae	Cyathura polita Edotia triloba	1	4:	
HOM-HAL-S-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	2	8	
HOM-HAL-S-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	6	26:	
HOM-HAL-S-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	1	4:	
HOM-HAL-S-Snag	9/14/2015	Cnidaria		Anthozoa	, ,			Anthozoa spp.	8	10	i
HOM-HAL-S-Snag	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	8	10	i
HOM-HAL-S-Snag	9/14/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	8	16	
HOM-HAL-S-Snag	9/14/2015			Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	16	32	
HOM-HAL-S-Snag	9/14/2015			Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1000	2000	
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	848	1696	
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	48	96	
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	128 136	256	
HOM-HAL-S-Snag HOM-HAL-S-Snag	9/14/2015 9/14/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Aoridae Corophiidae	Grandidierella bonnieroides Corophiidae spp.	136	277	
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	64	128	njavenine
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Taphromysis bowmani	8	16	
HOM-HAL-S-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	8		no posterior end
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	40		pupae
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	336	672	!
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	8	16	
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Larsia spp.	8	10	
HOM-HAL-S-Snag	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	16	32	!
HOM-HAL-S-Snag	9/14/2015	Nematoda						Nematoda spp.	8	16	j .
HOM-R-1-MA	9/15/2015	Platyhelminthes						Platyhelminthes spp.	5	10	
HOM-R-1-MA	9/15/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Naidinae spp.	5		damaged
HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015	Annelida Annelida		Clitellata Clitellata	Oligochaeta Oligochaeta	Tubificida Tubificida	Naididae Naididae	Dero spp. Bratislavia unidentata	16 11	3.	no posterior end, missing most needles & hairs
HOM-R-1-MA	9/15/2015	Annelida		Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella tetragon	11	10	
HOM-R-1-MA	9/15/2015	Annelida		Clitellata	Branchiobdellida	Arriyiichobaciilaa	Branchiobdellidae	Branchiobdellidae spp.	11	2	
HOM-R-1-MA	9/15/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	323	646	
HOM-R-1-MA	9/15/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Pyrgophorus platyrachis	5	10	
HOM-R-1-MA	9/15/2015	Mollusca		Bivalvia				Bivalvia spp.	5	10	maybe Unionidae spp.
HOM-R-1-MA	9/15/2015	IVIOIIUSCa					Leptocheliidae		4.40		la .
HOM-R-1-MA	9/15/2015		Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptochellidae	Leptocheliidae spp.	143	286	females
	9/15/2015	Arthropoda Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	5	10	
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Isopoda Isopoda	Sphaeromatidae Munnidae	Cassidinidea ovalis Uromunna reynoldsi	5 313		
HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015	Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea	Malacostraca Malacostraca Malacostraca	Eumalacostraca Eumalacostraca Eumalacostraca	Isopoda Isopoda Amphipoda	Sphaeromatidae Munnidae Gammaridae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp.	5	10	
HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea Crustacea	Malacostraca Malacostraca Malacostraca Malacostraca	Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Isopoda Isopoda Amphipoda Amphipoda	Sphaeromatidae Munnidae Gammaridae Melitidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex	5 313 27 5	10 620 54	
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea	Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Isopoda Isopoda Amphipoda Amphipoda Amphipoda	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides	5 313 27 5 959	10 620 54 10 1918	
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea	Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophildae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp.	5 313 27 5 959 42	10 620 54 10 1918	Damaged and/or juveniles
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea	Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophilidae spp. Apocorophium spp.	5 313 27 5 959	10 620 54 10 1918	Damaged and/or juveniles
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda	Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea Crustacea	Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca Malacostraca	Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca Eumalacostraca	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophiidae Corophiidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp.	5 313 27 5 959 42 42	10 620 54 10 1911 84	Damaged and/or juveniles
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophiidae Corophiidae Corophiidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophilidae spp. Apocorophium spp. Apocorophium louisianum	5 313 27 5 959 42 42	10 620 5- 10 1911 8- 8- 190	Damaged and/or juveniles
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda Hexapoda	Malacostraca Insecta Insecta	Eumalacostraca	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Decapoda Ephemeroptera Ephemeroptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophilidae Corophilidae Corophilidae Corophilidae Caphilidae Corophilidae Caphilidae Caphilidae Caphilidae Caphilidae Caphilidae Caphilidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp. Apocorophium spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp.	5 313 27 5 959 42 42 95 5 32	10 626 55 10 1914 84 88 190 10 66	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda Hexapoda Hexapoda	Malacostraca Insecta Insecta Insecta Insecta	Eumalacostraca Puenygota Pterygota Pterygota	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Decapoda Ephemeroptera Ephemeroptera Ephemeroptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophiidae Corophiidae Corophiidae Palaemonidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp.	5 313 27 5 959 42 42 95 5	10 626 5- 10 10 1911 8- 8- 190 10 6- 121 21:	Damaged and/or juveniles
HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda Hexapoda Hexapoda Hexapoda	Malacostraca Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Eumalacostraca Puenygota Pterygota Pterygota Pterygota	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Eccapoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae Corophiidae Caenidae Caenidae Coenagrionidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophildae spp. Apocorophium spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis diminuta Coenagrionidae spp.	5 313 27 5 959 42 42 95 5 32	10 620 54 11 1911 8. 8. 194 10 6. 121 211	Damaged and/or juveniles
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HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Decapoda Decapoda Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Trichoptera Diptera Diptera Diptera Diptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophilidae Corophilidae Corophilidae Corophilidae Caenidae Caenidae Caenidae Caenidae Caenidae Leptoceridae Leptoceridae Leptoceridae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophilida spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis spp. Libellulidae spp. Decetis spp. Decetis spp. Cetis spp. Chrionomidae spp. Divinomidae spp. Docetis sp. Chrionomidae spp. Polypedilum halterale group Procladius spp.	5 313 27 5 959 42 42 42 95 5 32 64 106 5 5 5 5	10 620 55 11 1911 84 88 199 10 66 122 211 11 11 11 12 22 11 11 12 13 14 14 15 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Decapoda Ephemeroptera Ephemeroptera Odonata Odonata Trichoptera Trichoptera Diptera Diptera Diptera Diptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophildae Corophildae Corophildae Palaemonidae Caenidae Caenidae Caenidae Caenidae Caenidae Libellulidae Libellulidae Libelluceridae Lieptoceridae Liptoceridae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis diminuta Coenagrionidae spp. Libellulidae spp. Oecetis sp. Oecetis sp. Polymelium papp. Oecetis sp. Oecetis sp. Polypedilum halterale group Procladius spp. Glyptotendipes spp. Ablabesmyla rhamphe group	5 3133 27 5 959 42 42 955 5 32 32 64 64 5 5 5 5 5 106 66 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10 62/5 52/5 14/1914 8.8 8.8 199 10 11/19 221: 11/19 11/19 12/19 13/19 14/19 1	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Trichoptera Trichoptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Caenidae Caenidae Caenidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis spp. Caenis spp. Oecetis spp. Oecetis sp. Chronomidae spp. Dirotendipes spp. Silyptotendipes spp. Glyptotendipes spp. Glyptotendipes spp. Glyptotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Pseudochironomus spp. Pseudochironomus spp. Phelendenniella spp.	5 313 277 5 959 42 422 95 5 5 644 106 5 5 5 5 5 5 111 5 16 6 16 16 16 16 16 16 16 16 16 16 16 1	10 622 5- 10 1911 8- 8- 199 11 12 21: 11 11 11 12 2: 11 11 11 12 2: 11 11 11 11 12 11 11 11 11 11 11 11 11	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Trichoptera Trichoptera Trichoptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophiidae Corophiidae Corophiidae Palaemonidae Caenidae Caenidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Liptoceridae Leptoceridae Liptoceridae Leptoceridae Liptoceridae Leptoceridae Leptoceridae Liptoceridae Leptoceridae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophilida espp. Apocorophium louislanum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis spp. Libellulidae spp. Oecetis spp. Oecetis spp. Oecetis spp. Oecetis spp. Oecetis spp. Oicetis spp. Oic	5 313 277 5 959 42 42 95 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10 62 5 10 1911 8 8 199 11 10 11 11 11 11 11 11 11 11 11 11 11	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Amphipoda Decapoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Odonata Trichoptera Trichoptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophilidae Corophilidae Corophilidae Corophilidae Caenidae Caenidae Caenidae Caenidae Caenidae Coenagrionidae Libelluildae Leptoceridae Leptoceridae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiida espp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis diminuta Coenagrionidae spp. Ubellulidae spp. Oecetis spp. Oecetis spp. Cipemeroptera spp. Caenis diminuta Coenagrionidae spp. Ubellulidae spp. Oecetis spp. Oecetis spp. Dicrotendiges spp. Pseudochironomus spp. Thienemanniella spp. Paratanytarsus spp. Labrundinia spp.	5 313 377 5 9599 422 422 421 55 55 55 55 55 166 55 55 160 277 55	10 626 52 11 1911 8.1 8.2 199 10 10 11 11 11 11 11 11 12 12 11 11 11 11 11	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Decapoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Odonata Trichoptera Trichoptera Trichoptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophildae Corophildae Corophildae Palaemonidae Caenidae Caenidae Caenidae Caenidae Caenidae Caenidae Caenidae Chionomidae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophidae spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis spp. Ucaenis spp. Oecetis spp. Oecetis spp. Decetis spp. Decetis spp. Oecetis spp. Oecetis spp. Docetis spp. Dicrotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Dicrotendipes spp. Daraarnatyarsus spp. Labrundinia spp. Paramerina spp.	5 313 277 5 959 42 42 42 42 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10 626 55 110 1911 88 88 199 100 110 110 110 110 110 110 110 110	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Trichoptera Trichoptera Trichoptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Caenidae Caenidae Caenidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophilida espp. Apocorophium louislanum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis spp. Libellulidae spp. Oecetis spp. Oecetis spp. Oecetis spp. Oecetis spp. Oicetis spp. Diromonidae spp. Oicetis spp. Oiromonidae spp. Oiromonidae spp. Poypedilum halterale group Procladius spp. Dirotendipes spp. Dirotendipes spp. Dirotendipes spp. Dirotendipes spp. Dirotendipes spp. Dirotendipes spp. Dirotendipas spp. Dirotendipas spp. Dirotendipas spp. Dirotendipas spp. Labrundinia spp. Paratamyniarius spp. Caratopogonidae spp.	5 313 377 5 9599 422 422 421 55 55 55 55 55 166 55 55 160 277 55	10 622 55 10 1911 8. 84 199 11 10 11 11 11 11 11 11 11 11 11 11 11	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Decapoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Odonata Trichoptera Trichoptera Trichoptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophildae Corophildae Corophildae Palaemonidae Caenidae Caenidae Caenidae Caenidae Caenidae Caenidae Caenidae Chionomidae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis diminuta Coenagrionidae spp. Ubellulidae spp. Oecetis spp. Oecetis spp. Cipemeroptera spp. Caenis diminuta Coenagrionidae spp. Ubellulidae spp. Oecetis spp. Oecetis spp. Deteit spp. Deteit spp. Dotoria spp. Dotoria spp. Dotoria spp. Dotoria spp. Dotoria spp. Dotoria spp. Polypedilum halterale group Procladius spp. Dicrotendipes spp. Beaudochironomus spp. Thienemanniella spp. Paratanytarsus spp. Labrundinia spp. Paratanytarsus spp. Labrundinia spp. Paratanytarsus spp. Labrundinia spp. Paramerina spp. Ceratopogonidae spp.	5 313 277 5 959 422 42 42 5 5 5 5 5 5 5 5 5 5 5 16 6 4 6 106 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10 626 52 52 52 52 52 52 52 52 52 52 52 52 52	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Decapoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Odonata Trichoptera Trichoptera Diptera Trombidiformes	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophiidae Corophiidae Corophiidae Palaemonidae Caenidae Caenidae Caenidae Caenidae Caenidae Caenidae Caenidae Ciptonomidae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis spp. Caenis spp. Caenis spp. Oecetis spp. Oecetis spp. Oecetis sp. Ciphium hatterale group Procladius spp. Bolypedilum hatterale group Procladius spp. Glyptotendipes spp. Dicrotendipes spp. Dirotendipes spp. Dirotendipes spp. Paratamytarsus spp. Thienemanniella spp. Paramerina spp. Paramerina spp. Ceratogogonidae spp. Labrundinia spp. Paramerina spp. Ceratopogonidae spp. Plaona spp. Paramerina spp. Ceratopogonidae spp. Piona spp. Paramerina spp. Ceratopogonidae spp. Piona spp. Nematoda spp.	5 313 277 5 959 42 42 42 42 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10 626 526 11 1911 8 8 8 8 199 190 10 6 6 122 11 11 11 11 11 11 11 11 11 11 11 11 11	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile
HOM-R-1-MA	9/15/2015 9/15/2015	Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Isopoda Isopoda Isopoda Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Trichoptera Trichoptera Trichoptera Diptera	Sphaeromatidae Munnidae Gammaridae Melitidae Aoridae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Corophildae Caenidae Caenidae Caenidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Chironomidae	Cassidinidea ovalis Uromunna reynoldsi Gammarus spp. Melita nitida complex Grandidierella bonnieroides Corophiidae spp. Apocorophium louisianum Palaemonetes spp. Ephemeroptera spp. Caenis diminuta Coenagrionidae spp. Ubellulidae spp. Oecetis spp. Oecetis spp. Cipemeroptera spp. Caenis diminuta Coenagrionidae spp. Ubellulidae spp. Oecetis spp. Oecetis spp. Deteit spp. Deteit spp. Dotoria spp. Dotoria spp. Dotoria spp. Dotoria spp. Dotoria spp. Dotoria spp. Polypedilum halterale group Procladius spp. Dicrotendipes spp. Beaudochironomus spp. Thienemanniella spp. Paratanytarsus spp. Labrundinia spp. Paratanytarsus spp. Labrundinia spp. Paratanytarsus spp. Labrundinia spp. Paramerina spp. Ceratopogonidae spp.	5 313 277 5 959 422 42 42 5 5 5 5 5 5 5 5 5 5 5 16 6 4 6 106 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10 622 5-5 10 1911 8-8 8-7 199 110 111 111 111 112 22: 111 111 112 113 114 115 115 116 117 117 117 117 117 117 117 117 117	Damaged and/or juveniles Damaged and/or juveniles damaged and/or juveniles damaged and/or juveniles juvenile juvenile juvenile

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										Abundance(Coun	1
Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count	t/m²)	Notes
HOM-R-1-Sed		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	6	261	
HOM-R-1-Sed		Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	2	87	
HOM-R-1-Sed		Mollusca		Bivalvia				Bivalvia spp.	11	478	
HOM-R-1-Sed		Arthropoda Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	28	1217	
HOM-R-1-Sed			Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae Munnidae	Hargeria rapax	2	87 87	males
HOM-R-1-Sed HOM-R-1-Sed	9/15/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca	Isopoda Amphipoda	Aoridae	Uromunna reynoldsi Grandidierella bonnieroides	70	3304	
HOM-R-1-Sed	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	24	1043	
HOM-R-1-Sed		Arthropoda	Hexapoda	Insecta		Trichoptera	Leptoceridae	Oecetis sp. E	1	43	
HOM-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Diptera	Chironomidae	Tanytarsus spp.	7	304	1
HOM-R-1-Sed	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	1	43	
HOM-R-1-Sed	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Procladius spp.	3	130	
HOM-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	2	87	
HOM-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	18	783	
HOM-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Labrundinia spp.	3	130	
HOM-R-1-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	2	87	
HOM-R-2-Sed		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	2	87	
HOM-R-2-Sed	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	1	43	Immature and/or damaged
HOM-R-2-Sed	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero spp.	3	130	No posterior end, missing most needles & hairs
HOM-R-2-Sed	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero pectinata	3	130	
HOM-R-2-Sed	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero nivea	2	87	
HOM-R-2-Sed		Annelida			Oligochaeta	Tubificida	Naididae	Bratislavia unidentata	1	43	
HOM-R-2-Sed	9/15/2015	Annelida	ļ		Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata	1	43	
HOM-R-2-Sed	9/15/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	6	261	
HOM-R-2-Sed		Mollusca		Bivalvia		ļ		Bivalvia spp.	1		damaged
HOM-R-2-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	8	348	
HOM-R-2-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	1	43	
HOM-R-2-Sed	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	1	43	
HOM-R-2-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	1	43	
HOM-R-2-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	48	2087	
HOM-R-2-Sed HOM-R-2-Sed		Arthropoda	Crustacea	Malacostraca Insecta	Eumalacostraca	Amphipoda	Corophiidae Chironomidae	Apocorophium louisianum Chironomus spp.	3	130	
HOM-R-2-Sed		Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae	Tanytarsus spp.	1	43	
HOM-R-2-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	1	43	
HOM-R-2-Sed	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	2	87	
HOM-R-2-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	3	130	1
HOM-R-2-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	3	130	1
HOM-R-2-Snag	9/15/2015		Пехароаа	Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	1	2	Immature and/or damaged
HOM-R-2-Snag		Annelida			Oligochaeta	Tubificida	Naididae	Dero nivea	1	2	
HOM-R-2-Snag		Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1	2	
HOM-R-2-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	33	66	females
HOM-R-2-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	3	6	males
HOM-R-2-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	23	46	i
HOM-R-2-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda		Flabellifera spp.	1	2	
HOM-R-2-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	3	6	
HOM-R-2-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	1	2	
HOM-R-2-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	1	2	!
HOM-R-2-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	6	12	!
HOM-R-2-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	23	46	i e
HOM-R-2-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Callibaetis floridanus	3	6	i e
HOM-R-2-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	Argia spp.	1	2	
HOM-R-2-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	1	2	pupa
HOM-R-2-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi	1	2	
HOM-R-2-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Stenochironomus spp.	1 -	2	
HOM-R-2-Snag HOM-R-2-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	5	10	1
HOM-R-2-Snag HOM-R-2-Snag	9/15/2015 9/15/2015	Arthropoda Arthropoda	Hexapoda	Insecta	Pterygota	Diptera Diptera	Chironomidae	Labrundinia spp. Cricotopus or Orthocladius	1	4	
HOM-R-2-Snag	9/15/2015	Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Neuroptera	Chironomidae Sisyridae	Sisyra apicalis	1	2	
HOM-R-3-MA		Annelida	пелароца	Clitellata	Oligochaeta	Tubificida	Naididae	Dero pectinata	3	- 2	
HOM-R-3-MA	9/15/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	170	340	
HOM-R-3-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	27	54	
HOM-R-3-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	3	6	
HOM-R-3-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	3	6	
HOM-R-3-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	41	82	
HOM-R-3-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	108	216	
HOM-R-3-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	68	136	i
HOM-R-3-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	3	6	j
HOM-R-3-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	Caenis diminuta	14	28	3
HOM-R-3-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	5	10	
HOM-R-3-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	280	560	
HOM-R-3-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Labrundinia spp.	3	6	
HOM-R-3-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	5	10	
HOM-R-3-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	11	22	
HOM-R-3-Sed		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	47	2043	
HOM-R-3-Sed		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	2	87	
HOM-R-3-Sed		Annelida			Oligochaeta	Tubificida	Naididae	Tubificinae spp.	45	1957	
HOM-R-3-Sed		Annelida			Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	9	391	
HOM-R-3-Sed	9/15/2015	Annelida	1	Clitellata	Oligochaeta	Tubificida	Naididae	Dero spp.	2	87	can't see needles, either D. pectinata or D. nivea

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Sample ID HOM-R-3-Sed	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Count	t/m²)	Notes
HOM-R-3-Sed		Mollusca Arthropoda	Crustacea	Gastropoda Malacostraca	Caenogastropoda Eumalacostraca	Littorinimorpha Tanaidacea	Hydrobiidae Leptocheliidae	Hydrobiidae spp. Leptocheliidae spp.	42		87 female
HOM-R-3-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	65		
HOM-R-3-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium Iouisianum	3		30
HOM-R-3-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Libellulidae	Libellulidae spp.	2		87 early instar
HOM-R-3-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	2		87
HOM-R-3-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	2		87
HOM-R-3-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	3		30
HOM-R-3-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	54		
HOM-R-3-Snag HOM-R-3-Snag		Annelida Annelida		Polychaeta Clitellata	Palpata Oligochaeta	Aciculata Tubificida	Nereididae Naididae	Laeonereis culveri Tubificinae spp.	16		32 16 Immature and/or damaged
HOM-R-3-Snag	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero pectinata	72		44
HOM-R-3-Snag		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Slavina appendiculata	16		32
HOM-R-3-Snag		Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	72		44
HOM-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	144	2	88 females
HOM-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	8		16 male
HOM-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	16		32
HOM-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	48		96
HOM-R-3-Snag HOM-R-3-Snag		Arthropoda Arthropoda	Crustacea	Malacostraca Malacostraca	Eumalacostraca	Amphipoda Amphipoda	Melitidae Aoridae	Melita nitida complex	696		16
HOM-R-3-Snag		Arthropoda	Crustacea Crustacea	Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda	Corophiidae	Grandidierella bonnieroides Apocorophium louisianum	728		
HOM-R-3-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Taphromysis bowmani	24		48
HOM-R-3-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	Caenis diminuta	24		48
HOM-R-3-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	16		32
HOM-R-3-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum spp.	8		16 maybe sp. A (of Epler, 2001)
HOM-R-3-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	8		16
HOM-R-3-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Procladius spp.	16		32
HOM-R-3-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Rheotanytarsus spp.			16
HOM-R-3-Snag HOM-R-3-Snag		Arthropoda Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	128		56 16
HOM-R-4-Sed		Annelida	Hexapoda	Insecta Polychaeta	Pterygota Palpata	Diptera Aciculata	Chironomidae Nereididae	Stenochironomus spp. Laeonereis culveri	11		78
HOM-R-4-Sed		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	23		00 Immature and/or damaged
HOM-R-4-Sed	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	3		30
HOM-R-4-Sed		Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1		43
HOM-R-4-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	1		43
HOM-R-4-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	3		30
HOM-R-4-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	2		87
HOM-R-4-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	2		87
HOM-R-4-Sed HOM-R-4-Sed		Arthropoda	Hexapoda	Insecta Insecta	Pterygota	Diptera Diptera	Chironomidae Chironomidae	Dicrotendipes spp. Nanocladius spp.			87 43
HOM-R-4-Snag	9/15/2015	Arthropoda Annelida	Hexapoda	Polychaeta	Pterygota Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	1		2
HOM-R-4-Snag		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	1		2
HOM-R-4-Snag		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	3		6 Immature and/or damaged
HOM-R-4-Snag	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	1		2
HOM-R-4-Snag	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero spp.	1		2 No posterior end, missing most needles & hairs
HOM-R-4-Snag		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero pectinata	1		2
HOM-R-4-Snag	9/15/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Bratislavia unidentata	1		2
HOM-R-4-Snag		Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1		2
HOM-R-4-Snag HOM-R-4-Snag		Mollusca Arthropoda	Crustacea	Bivalvia Malacostraca	Heterodonta Eumalacostraca	Veneroida Tanaidacea	Dreissenidae Leptocheliidae	Mytilopsis leucophaeata Leptocheliidae spp.	15		30 females
HOM-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	9		18
HOM-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Idoteidae	Edotia triloba	2		4
HOM-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Gammaridea spp.	2		4 damaged and/or juveniles
HOM-R-4-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiidae spp.	4		8 damaged and/or juveniles
HOM-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium spp.	32		64 Voucher - damaged and/or juveniles
HOM-R-4-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	81	1	62 Voucher
HOM-R-4-Snag		Arthropoda	Hexapoda	Insecta	Dtonumeto	Collembola	Chironomida -	Collembola spp.	1	-	4 0,000
HOM-R-4-Snag HOM-R-4-Snag		Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Chironomidae spp. Tanytarsus spp.	1	-	4 pupae
HOM-R-4-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	2	1	4
HOM-R-4-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	8		16
HOM-R-4-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	1		2
HOM-R-4-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	2		4
HOM-R-4-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	1		2
HOM-R-4-Snag		Nematoda						Nematoda spp.	1		2
HOM-R-5-Sed	9/15/2015	Annelida		Polychaeta	Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	45		
HOM-R-5-Sed		Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	4		74
HOM-R-5-Sed HOM-R-5-Sed		Annelida Mollusca		Clitellata Gastropoda	Oligochaeta Caenogastropoda	Tubificida Littorinimorpha	Naididae Hydrobiidae	Tubificinae spp. Hydrobiidae spp.	1		43 Immature and/or damaged 17
HOM-R-5-Sed		Mollusca		Bivalvia	Heterodonta	Veneroida	Dreissenidae	Mytilopsis leucophaeata	1		43
HOM-R-5-Sed		Mollusca		Bivalvia	Heterodonta	Veneroida	Corbiculidae	Polymesoda caroliniana	2		87
HOM-R-5-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	1		43
HOM-R-5-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	58		
HOM-R-5-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Cerapus spp.	1		43
HOM-R-5-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Panopeidae	Rhithropanopeus harrisii	7		04 Voucher
HOM-R-5-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	3		30
HOM-R-5-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	2	-	2
HOM-R-5-Snag	9/15/2015	Annenga	1	Polychaeta	Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	1	<u> </u>	4

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										Abundance(Coun	'
Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count	t/m²)	Notes
HOM-R-5-Snag	9/15/2015	Mollusca		Bivalvia	Heterodonta	Veneroida	Dreissenidae	Mytilopsis leucophaeata	1	2	
HOM-R-5-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	2	4	females
HOM-R-5-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	15	30	
HOM-R-5-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	1	2	
HOM-R-5-Snag	9/15/2015	Arthropoda	Crustacea		Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	4	8	
HOM-R-5-Snag HOM-R-5-Snag	9/15/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Amphilochidae Corophiidae	Hourstonius laguna Apocorophium louisianum	111	222	
HOM-R-5-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Cerapus spp.	111	222	
HOM-R-5-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Panopeidae	Rhithropanopeus harrisii	2		juveniles
HOM-R-5-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Americamysis spp.	2		Juverinies
HOM-R-5-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	1	2	
HOM-R-5-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Procladius spp.	1	2	
HOM-R-5-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	6	12	
HOM-R-6-Sed	9/15/2015	Annelida		Polychaeta	Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	2	87	
HOM-R-6-Sed	9/15/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	2	87	
HOM-R-6-Sed	9/15/2015	Annelida		Polychaeta	Palpata	Canalipalpata	Serpulidae	Ficopomatus miamiensis	1	43	
HOM-R-6-Sed	9/15/2015	Annelida		Polychaeta	Palpata	Canalipalpata	Serpulidae	Ficopomatus uschakovi	4	174	1
HOM-R-6-Sed	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	1	43	Immature and/or damaged
HOM-R-6-Sed	9/15/2015	Mollusca		Bivalvia	Pteriomorphia	Mytiloida	Mytilidae	Brachidontes exustus	1	43	1
HOM-R-6-Sed	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Parapseudidae	Halmyrapseudes cf. bahamensis	5	217	Voucher
HOM-R-6-Sed	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	2	87	
HOM-R-6-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Panopeidae	Rhithropanopeus harrisii	2	87	1
HOM-R-6-Sed	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	2	87	'
HOM-R-6-Snag	9/15/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	1		
HOM-R-6-Snag	9/15/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	10	20	
HOM-R-6-Snag		Mollusca	_	Bivalvia	Heterodonta	Veneroida	Dreissenidae	Mytilopsis leucophaeata	7	14	
HOM-R-6-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	1		female
HOM-R-6-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	16	32	
HOM-R-6-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	1	2	
HOM-R-6-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	1	2	
HOM-R-6-Snag			Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda	Amphilochidae	Hourstonius laguna	11	12	
HOM-R-6-Snag HOM-R-6-Snag	9/15/2015 9/15/2015	Arthropoda Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda Decapoda	Corophiidae	Apocorophium louisianum Xanthoidea spp.	11	- 22	juvenile
HOM-R-6-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Panopeidae	Rhithropanopeus harrisii	2		juverine
HOM-R-6-Snag	9/15/2015	Arthropoda	Crustacea	Maxillopoda	Thecostraca	Sessilia	Balanidae	Amphibalanus spp.	2	16	
HOM-Sou-MA	9/15/2015	Mollusca	Crustaccu	Gastropoda	Heterobranchia	Hygrophila	Planorbidae	Planorbella scalaris	7	14	
HOM-Sou-MA	9/15/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	76	152	
HOM-Sou-MA		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	7	14	
HOM-Sou-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Idoteidae	Edotia triloba	35	70	
HOM-Sou-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	276	552	
HOM-Sou-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	27	54	
HOM-Sou-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	16	32	
HOM-Sou-MA	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	14	28	3
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Callibaetis floridanus	90	180	
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptilidae spp.	7	14	juvenile
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	21	42	!
HOM-Sou-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	7	14	
HOM-Sou-MA		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	7	14	l .
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	7	14	l .
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	27	54	
HOM-Sou-MA			Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi	89	178	
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia (Karelia) peleensis	7	14	
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	336	672	
HOM-Sou-MA HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	41	82	
	9/15/2015 9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Larsia spp.	14	14	
HOM-Sou-MA HOM-Sou-MA	9/15/2015	Arthropoda Arthropoda	Hexapoda	Insecta	Pterygota	Diptera Diptera	Chironomidae	Nanocladius spp.	- /	14	
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera	Chironomidae Chironomidae	Labrundinia spp. Cricotopus or Orthocladius	41	82	
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Beardius spp.	7	14	
HOM-Sou-MA	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	14	28	
HOM-Sou-Rock	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	3	- 26	Immature and/or damaged
HOM-Sou-Rock	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Psammoryctides convolutus	1	2	initiate and or damaged
HOM-Sou-Rock				Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata	1	2	
HOM-Sou-Rock	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Idoteidae	Edotia triloba	1	2	
HOM-Sou-Rock			Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	1	2	
HOM-Sou-Rock	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	38	76	
HOM-Sou-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	49	98	
HOM-Sou-Rock	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	1	2	!
HOM-Sou-Rock	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Taphromysis bowmani	7	14	
HOM-Sou-Rock	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Callibaetis floridanus	8	16	
HOM-Sou-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Leptohyphidae	Tricorythodes albilineatus	1	2	
HOM-Sou-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	4	8	3
HOM-Sou-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Diptera spp.	1	2	larvae- very small
HOM-Sou-Rock	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	1	2	
HOM-Sou-Rock	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	67	134	
HOM-Sou-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	4	8	
HOM-Sou-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	3	- 6	
HOM-Sou-Rock	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi	12	24	

				I						Abundance(Cou	n
Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count	t/m²)	Notes
HOM-Sou-Rock	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	36	7	2
HOM-Sou-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paralauterborniella spp.	3		6
HOM-Sou-Rock HOM-Sou-Rock	9/15/2015 9/15/2015	Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Pseudochironomus spp. Cricotopus or Orthocladius	15	1	
HOM-Sou-Rock	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Psychodidae	Psychodidae spp.	8	3	6
HOM-Sou-Sed	9/15/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	20	87	0 Immature and/or damaged
HOM-Sou-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	1	4	
HOM-Sou-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	10		
HOM-Sou-Sed HOM-Sou-Sed	9/15/2015 9/15/2015	Arthropoda Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca Pterygota	Amphipoda Ephemeroptera	Dogielinotidae Baetidae	Hyalella azteca sp. complex Callibaetis floridanus	1	26	
HOM-Sou-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	3	13	
HOM-Sou-Sed	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	20		
HOM-Sou-Sed	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	8	34	8
HOM-Sou-Sed	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paralauterborniella nigrohalteralis	1	4	
HOM-Sou-Sed HOM-Sou-Sed	9/15/2015 9/15/2015	Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Psychodidae	Pseudochironomus spp. Psychodidae spp.	1	4	
HOM-Sou-Snag	9/15/2015	Annelida	Пехароца	Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	1	4	2 Immature and/or damaged
HOM-Sou-Snag	9/15/2015	Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis	1		2
HOM-Sou-Snag	9/15/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	3		6
HOM-Sou-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	2		4
HOM-Sou-Snag HOM-Sou-Snag	9/15/2015 9/15/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Aoridae Dogielinotidae	Grandidierella bonnieroides Hyalella azteca sp. complex	11	2	3
HOM-Sou-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Callibaetis floridanus	11		2
HOM-Sou-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Stenelmis spp.	6	1	2
HOM-Sou-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	1		2
HOM-Sou-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Procladius spp.	2		4
HOM-Sou-Snag HOM-Sou-Snag	9/15/2015 9/15/2015	Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota	Diptera Diptera	Chironomidae Chironomidae	Ablabesmyia mallochi Tribelos fuscicorne	17	3	8
HOM-Sou-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	16	3	
HOM-Sou-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Stenochironomus spp.	1	~	2
HOM-Sou-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	6	1	2
HOM-Sou-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	2		4
HOM-S-Rock HOM-S-Rock	9/14/2015 9/14/2015	Platyhelminthes Annelida		Rhabditophora Polychaeta	Palpata	Polycladida Aciculata	Nereididae	Acotylea spp. Laeonereis culveri	4		8
HOM-S-Rock	9/14/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	4		8
HOM-S-Rock		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	1100	220	0 females
HOM-S-Rock	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	12		
HOM-S-Rock	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	40	8	0
HOM-S-Rock HOM-S-Rock	9/14/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Melitidae Aoridae	Melita nitida complex Grandidierella bonnieroides	160	32	8
HOM-S-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cryptochironomus spp.	4	32	8
HOM-S-Rock	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	4		8
HOM-S-Sed	9/14/2015	Annelida		Polychaeta	Palpata	Aciculata	Nereididae	Laeonereis culveri	31	134	8
HOM-S-Sed	9/14/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	9		1 Immature and/or damaged
HOM-S-Sed HOM-S-Sed	9/14/2015 9/14/2015	Annelida Mollusca		Clitellata Gastropoda	Oligochaeta Caenogastropoda	Tubificida Littorinimorpha	Naididae Hydrobiidae	Limnodrilus hoffmeisteri Hydrobiidae spp.	1	26	
HOM-S-Sed	9/14/2015	Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Musculium spp.	2	8	~
HOM-S-Sed		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	21	91	
HOM-S-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	3	13	
HOM-S-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	2	8	1
HOM-S-Sed HOM-S-Sed	9/14/2015 9/14/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Gammaridae Aoridae	Gammarus spp. Grandidierella bonnieroides	51	221	
HOM-S-Sed	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	1	4	
HOM-S-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomus spp.	3	13	
HOM-S-Sed	9/14/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum halterale group	5	21	
HOM-S-Sed		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Procladius spp.	1	4	3
HOM-S-Snag HOM-S-Snag	9/14/2015 9/14/2015	Platyhelminthes Annelida	1	Rhabditophora Clitellata	Oligochaeta	Polycladida Tubificida	Naididae	Acotylea spp. Pristina leidyi	1		2
HOM-S-Snag	9/14/2015	Mollusca	<u> </u>	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	5	1	0
HOM-S-Snag	9/14/2015			Bivalvia				Bivalvia spp.	1		2 Damaged
HOM-S-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	73	14	
HOM-S-Snag	9/14/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	5	1	0 males
HOM-S-Snag HOM-S-Snag	9/14/2015	Arthropoda Arthropoda	Crustacea Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Isopoda Amphipoda	Munnidae Gammaridae	Uromunna reynoldsi Gammarus spp.	2	1	4 n
HOM-S-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	19	3	8
HOM-S-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Taphromysis bowmani	1		2 Voucher
HOM-S-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	1		2
HOM-S-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	2		4
HOM-R-1-Snag HOM-R-1-Snag	9/15/2015 9/15/2015	Platyhelminthes	 	Clitellata	Oligochaeta	Tubificida	Naididae	Platyhelminthes spp. Tubificinae spp.	4		8 Immature and/or damaged
HOM-R-1-Snag				Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	4		8
HOM-R-1-Snag	9/15/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Dero pectinata	64	12	8
HOM-R-1-Snag	9/15/2015			Clitellata	Oligochaeta	Tubificida	Naididae	Dero nivea	20	4	7
HOM-R-1-Snag	9/15/2015	Annelida	1	Clitellata	Oligochaeta	Tubificida	Naididae	Haemonais waldvogeli	8	1	
HOM-R-1-Snag HOM-R-1-Snag	9/15/2015 9/15/2015	Mollusca Arthropoda	Crustacea	Gastropoda Malacostraca	Caenogastropoda Eumalacostraca	Littorinimorpha Tanaidacea	Hydrobiidae Leptocheliidae	Hydrobiidae spp. Leptocheliidae spp.	112	22	-
HOM-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	8		6 males
HOM-R-1-Snag		Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeromatidae spp.	4		8 female
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										Abundance(Cour	
Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count	t/m²)	Notes
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	8	16	5
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus spp.	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	12	24	
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	508	1016	5
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium louisianum	172	344	
HOM-R-1-Snag	9/15/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida		Mysida spp.	4		no posterior end
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Caenidae	Caenis diminuta	8	16	5
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	4		pupa
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum illinoense group	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia rhamphe group	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tribelos fuscicorne	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	88	176	i
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Stenochironomus spp.	4		3
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	12	24	1
HOM-R-1-Snag	9/15/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Larsia spp.	4		3

							1		
	Date Collected Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count	Abundance (Count/m²) Notes
WEE-R-1-MA	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	32	64 Immature and/or damaged
WEE-R-1-MA	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	16	32
WEE-R-1-MA	8/28/2015 Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella elongata	16	32
WEE-R-1-MA	8/28/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	64	128
WEE-R-1-MA	8/28/2015 Mollusca	<u>.</u>	Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	96	192
WEE-R-1-MA	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	12896	25792 vial tag says Hyalella sp.
WEE-R-1-MA	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	16	32
WEE-R-1-SAV	8/28/2015 Platyhelminthes		Clin III	Oli I I -	T Information	Market and a second	Platyhelminthes spp.		4
WEE-R-1-SAV	8/28/2015 Annelida 8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida Tubificida	Naididae	Tubificinae spp.	b	12 Immature and/or damaged
WEE-R-1-SAV WEE-R-1-SAV	8/28/2015 Annelida 8/28/2015 Annelida		Clitellata Clitellata	Oligochaeta Oligochaeta	Tubificida	Naididae Naididae	Aulodrilus pigueti Pristina leidyi	0	12
WEE-R-1-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais pardalis	16	32
WEE-R-1-SAV	8/28/2015 Mollusca		Gastropoda	Oligochaeta	TUDITICIUA	Naluluae	Gastropoda spp.	12	24 Damaged
WEE-R-1-SAV	8/28/2015 Mollusca		Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	12	z4 Dalliageu
WEE-R-1-SAV	8/28/2015 Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis	2	4
WEE-R-1-SAV	8/28/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrohiidae spp.	132	264
WEE-R-1-SAV	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Asellidae	Caecidotea spp.	2	4
WEE-R-1-SAV	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	86	172 vial tag says Hyalella sp.
WEE-R-1-SAV	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	14	28
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Libellulidae	Libellula incesta	2	4 Voucher
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptilidae spp.	2	4 pupa
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	10	20
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	24	48 pupae
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	80	160
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	195	390
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	85	170
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	5	10
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	155	310
WEE-R-1-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Petrophila santafealis	4	8
WEE-R-1-SAV	8/28/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Krendowskiidae	Geayia spp.	2	4 Voucher
WEE-R-1-SAV	8/28/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	Lebertia spp.	2	4
WEE-R-1-Sed	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	15	652 Immature and/or damaged
WEE-R-1-Sed	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	31	1348
WEE-R-1-Sed	8/28/2015 Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella elongata	4	174
WEE-R-1-Sed	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	42	1826 vial tag says Hyalella sp.
WEE-R-1-Sed	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	1	43 pupa
WEE-R-1-Sed	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	3	130
WEE-R-1-Sed	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	1	43
WEE-R-1-Sed	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cryptochironomus spp.	1	43
WEE-R-1-Sed	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	5	217
WEE-R-1-Sed	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paracladopelma spp.	15	652
WEE-R-1-Sed	8/28/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Pseudochironomus spp.	2	87
WEE-R-1-Sed WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes		Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp. Platyhelminthes spp.	2	87 20
WEE-R-1-Sed WEE-R-1-Snag WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida		Insecta Clitellata	Pterygota Oligochaeta	Diptera Tubificida	Chironomidae Naididae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp.	2	87 20 20 Immature and/or damaged
WEE-R-1-Sed WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida		Insecta Clitellata Clitellata	Pterygota	Diptera	Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp.	2 10 10 3	87 20 20 Immature and/or damaged 6 can't see needles
WEE-R-1-Sed WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca		Insecta Clitellata Clitellata Gastropoda	Pterygota Oligochaeta Oligochaeta	Diptera Tubificida Tubificida	Chironomidae Naididae Naididae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Gastropoda spp.	2	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged
WEE-R-1-Sed WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca		Insecta Clitellata Clitellata Gastropoda Gastropoda	Pterygota Oligochaeta Oligochaeta Heterobranchia	Diptera Tubificida Tubificida Hygrophila	Chironomidae Naididae Naididae Physidae	Pseudochironomus spp. Platyhelminthes spp. Tublificinae spp. Naidinae spp. Gastropoda spp. Physelia cubensis	2 10 10 3	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 21 21 22 22 23 24 24 25 25 25 25 26 26 26 26 26 26 26 26 26 26 26 26 26
WEE-R-1-Sed WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca		Insecta Clitellata Clitellata Castropoda Gastropoda Gastropoda	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia	Diptera Tubificida Tubificida Hygrophila Hygrophila	Chironomidae Naididae Naididae Physidae Planorbidae	Pseudochironomus spp. Platyhelminthes spp. Tublifcinae spp. Naidinae spp. Gastropoda spp. Physella cubensis Planorbella scalaris	2 10 10 3 16 6	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12
WEE-R-1-Sed WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca		Insecta Clitellata Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda	Diptera Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Gastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp.	2 10 10 3	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 21 21 22 22 23 24 24 25 25 25 25 26 26 26 26 26 26 26 26 26 26 26 26 26
WEE-R-1-Sed WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca	Hexapoda	Insecta Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda	Diptera Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Gastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi	2 10 10 3 16 6 426	87 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 852 6
WEE-R-1-Sed WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Arthropoda	Hexapoda Crustacea	Insecta Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca	Diptera Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Amphipoda	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Dogielinotidae	Pseudochironomus spp. Platyhelminthes spp. Tublifcinae spp. Naidinae spp. Gastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalella azteca sp. complex	2 10 10 3 16 6 426 3 390	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 852 6 780 vial tag says Hyalella sp.
WEE-R-1-Sed WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda Crustacea Hexapoda	Insecta Ciitellata Ciitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Logielinotidae Leptohyphidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Sastropoda spp. Plysella cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherbyi Hydiela azteca sp. Tricorythodes albilineatus	2 10 10 3 16 6 426	87 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 852 6
WEE.R.1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda Crustacea Hexapoda Hexapoda	Insecta Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera Trichoptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropsychidae Hydropsychidae	Pseudochironomus spp. Platyhelminthes spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalella azteca sp. complex Tricorythodes albilineatus Cheumatopsyche spp.	2 10 10 3 16 6 6 426 3 390	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 185 6 780 vial tag says Hyalella sp. 20
WEE-R-1-Sed WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda Crustacea Hexapoda	Insecta Ciitellata Ciitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Logielinotidae Leptohyphidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Sastropoda spp. Plysella cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherbyi Hydiela azteca sp. Tricorythodes albilineatus	2 10 10 3 16 6 6 426 3 390	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 185 6 780 vial tag says Hyalella sp. 20
WEE-R-1-Sead WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Нехарода Стизтасеа Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta Cittellata Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Insecta Insecta Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Pterygota Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera Trichoptera Trichoptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Leptohyphidae Hydroptidae Hydroptidae Hydroptidae Hydroptilidae	Pseudochironomus spp. Platyhelminthes spp. Tublificinae spp. Naidinae spp. Gastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalella aztea sp. complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp.	2 10 10 3 16 6 6 426 3 390	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 185 6 780 vial tag says Hyalella sp. 20
WEE.R.1-Snag	8/28/2015 Arthropoda 8/28/2015 Platyhelminthes 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda Crustacea Hexapoda Hexapoda Hexapoda	Insecta Cittellata Cittellata Castropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Insecta Insecta Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Trichoptera Trichoptera Trichoptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae	Pseudochironomus spp. Platyhelminthes spp. Tublificinae spp. Naidinae spp. Naidinae spp. Naidinae spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalella azteca sp. complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp.	2 10 10 3 16 6 6 426 3 390 10 16 3 3	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 852 6 780 vial tag says Hyalella sp. 20 32 6 6 6
WEE.R-1-Send WEE.R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Arnopoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Insecta Insecta Insecta Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Pterygota Pterygota	Oiptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera Trichoptera Trichoptera Coleoptera Diptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydroptilidae Hydroptilidae Hydroptilidae Chironomidae Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Sastropoda spp. Physelia cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherby Hydroliae azteca sp. complex Tricorythodes ablilmeatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp.	2 10 10 3 16 6 6 426 3 390 10 16 3 3	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 852 6 780 vial tag says Hyalella sp. 20 32 6 6 6
WEE.R-1-Send WEE.R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Cittellata Cittellata Cistellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Ephemeroptera Trichoptera Trichoptera Trichoptera Coleoptera Diptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Leptohyphidae Leptohyphidae Chironomidae Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Saidinae spp. Physelia cubensis Planorbelia scalaris Hydrobiidae spp. Notogillia wetherbyi Hydreliadae spp. Notogillia wetherbyi Hydelia azteca sp. Complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Stenelmis spp. Cladotanytarsus spp.	2 2 10 10 10 10 10 16 16 3 3 29 9 3 3	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 12 852 6 780 vial tag says Hyalella sp. 20 32 6 6 6 58 9 upae
WEE.R-1-Send WEE.R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Стизтасеа Нехарода	Insecta Cittellata Cittellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumilacostraca Pterygota	Oiptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Uittorinimorpha Uittorinimorpha Uittorinimorpha Trichoptera Trichoptera Trichoptera Diptera Diptera Diptera Diptera	Chironomidae Naididae Naididae Physidae Planorbidae Plydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Chironomidae Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Sastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalelia azteca sp. complex Tricorythodes abilimeatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotamytarsus spp. Cladotamytarsus spp.	2 2 10 10 10 10 10 16 16 3 3 29 9 3 3	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 12 852 6 780 vial tag says Hyalella sp. 20 32 6 6 6 58 9 upae
WEE.R.1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Ciitellata Ciitellata Cistellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Oiptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera Trichoptera Trichoptera Oiptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Chironomidae Naididae Naididae Physidae Planorbidae Plydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropiidae Hydropythidae Hydropythidae Hydropythidae Hydropythidae Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalella azteca sp. complex Tricorythodes ablilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp.	2 10 10 10 3 3 16 6 6 426 426 3 3 390 10 16 16 3 3 3 90 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 Immature and/or damaged 6 can't see needles 32 Damaged 11 12 12 852 6 vial tag says Hyalella sp. 20 32 6 6 58 pupae 6 58 pupae 6 44 38
WEE.R-1-Send WEE.R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Стизтасеа Нехарода	Insecta Cittellata Cittellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Caenogastropoda Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Coleoptera Trichoptera Trichoptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Dogielinotidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Satropoda spp. Physelia cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyaleila azteca sp. complex Tricorythodes abilimeatus Cheumatopsyche spp. Ooyethira spp. Stenelmis spp. Stenelmis spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendiges spp.	2 10 10 10 3 3 10 10 3 3 22 2 2 19 3 3 5 3 5 5	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 32 Damaged 32 See See See See See See See See See Se
WEE.R.1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Ciitellata Ciitellata Cistellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Colephera Trichoptera Trichoptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Tubificinae spp. Naidinae spp. Sastropoda spp. Physelia cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherby Hydrobildae spp. Notogillia wetherby Hyaleila azteca sp. complex Tricoryhodes ablilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotamytarsus spp. Tamytarsus spp. Tamytarsus spp. Tamytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp.	2 10 10 3 3 16 6 6 6 426 3 3 390 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 11 12 852 6 780 vial tag says Hyalella sp. 20 32 6 6 58 pupae 6 6 780 vial tag says Hyalella sp. 20 32 4 6 6 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8
WEE.R.1-Snag	8/28/2015 Arthropoda 8/28/2015 Armolida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Oiptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera Trichoptera Trichoptera Oiptera Diptera	Chironomidae Naididae Naididae Physidae Planorbidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrophydidae Hydrophydidae Hydroppychidae Hydroppychidae Hydroppychidae Hydroppilidae Elmidae Chironomidae	Pseudochironomus spp. Platyhelminthes spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalella azteca sp. complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp.	2 10 10 3 3 16 6 6 426 3 3 390 0 10 16 3 3 3 10 10 3 3 29 11 10 3 3 22 2 2 19 19 35 1688 112	87 20 Immature and/or damaged 6 can't see needles 32 Damaged 112 12 852 6 Fig. 12 852 6 Sig. 12 852 6 Sig. 12 853 854 855 86 Sig. 12 855 86 Sig. 12 856 86 Sig. 12 857 858 Sig. 12 858 Sig
WEE.R-1-Sead WEE.R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Clitellata Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Zittorinimorpha Amphipoda Ephemeroptera Trichoptera Trichoptera Trichoptera Coleoptera Diptera Tubificida Tubificida	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Dogielinotidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Chironomidae Naididae Naididae	Pseudochironomus spp. Platyhelminthes spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Saidinae spp. Physella cubensis Planorbella scalaris Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Notogillia wetherbyi Hyaleila azteca sp. complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Claidotanytarsus spp. Tamytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Naidinae spp. Naidinae spp.	2 10 3 16 6 6 6 3 3 390 10 16 3 3 3 3 2 9 3 3 10 3 10 16 16 16 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 12 852 6 780 vial tag says Hyalella sp. 20 32 6 6 6 6 9 58 pupae 6 6 9 180
WEE.R.1-Snag	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Cittellata Cittellata Cittellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta	Oiptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Trichoptera Trichoptera Trichoptera Oiptera Diptera Tubificida Tubificida Tubificida Tubificida	Chironomidae Naididae Naididae Physidae Planorbidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Naididae Naididae Naididae	Pseudochironomus spp. Platyhelminthes spp. Naldinae spp. Naldinae spp. Sastropoda spp. Physelia cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherby Hyalelia azteca sp. complex Tricoryhodes ablilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotamytarsus spp. Tanytarsus spp. Polygedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Platyhelminthes spp. Tubificinae spp. Pristina leidyi	2 100 100 100 100 100 100 100 100 100 10	87 20 Immature and/or damaged 6 can't see needles 32 Damaged 11 12 852 6 6 780 vial tag says Hyalella sp. 20 32 6 6 6 5 8 pupae 6 6 6 4 44 38 70 336 24 Immature and/or damaged 24 Dried up
WEE.R-1-Sed WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Clitellata Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta Clitellata Clitellata Clitellata Clitellata	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Trichoptera Trichoptera Trichoptera Diptera Tubificida Tubificida Tubificida Tubificida	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Naididae Naididae Naididae Naididae	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Naidinae spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogilla wetherby Hydrobiidae spp. Notogilla wetherby Hydrelidae spp. Notogilla wetherby Hydella azteca sp. complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chadotanytarsus spp. Cladotanytarsus spp. Tamytarsus spp. Tamytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Naidinae spp. Naidinae spp. Pristina leidyl Nais pardalis	2 10 10 3 16 6 6 426 390 10 116 3 3 3 29 3 3 10 10 12 12 12 12 12 12 12	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 12 852 6 Fig. 10 780 vial tag says Hyalella sp. 20 32 6 Fig. 10 5
WEE.R-1-Sead WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Cittellata Cittellata Cittellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta	Oiptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Trichoptera Trichoptera Trichoptera Oiptera Diptera Tubificida Tubificida Tubificida Tubificida	Chironomidae Naididae Naididae Physidae Planorbidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Naididae Naididae Naididae	Pseudochironomus spp. Platyhelminthes spp. Naldinae spp. Naldinae spp. Sastropoda spp. Physelia cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherby Hyalelia azteca sp. complex Tricoryhodes ablilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotamytarsus spp. Tanytarsus spp. Polygedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Platyhelminthes spp. Tubificinae spp. Pristina leidyi	2 100 100 100 100 100 100 100 100 100 10	87 20 Immature and/or damaged 6 can't see needles 32 Damaged 11 12 852 6 6 780 vial tag says Hyalella sp. 20 32 6 6 6 5 8 pupae 6 6 6 4 44 38 70 336 24 Immature and/or damaged 24 Dried up
WEE.R-1-Sead WEE.R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida	Нехарода Сгизтасеа Нехарода	Insecta Cittellata Cittellata Cittellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Caenogastropoda Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta	Oiptera Tubificida Tubificida Hygrophila Hygrophila Hygrophila Uittorinimorpha Uittorinimorpha Uittorinimorpha Trichoptera Trichoptera Trichoptera Oiptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Tubificida	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae Naididae Naididae Naididae Naididae Naididae Giossiphoniidae Giossiphoniidae	Pseudochironomus spp. Platyhelminthes spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hyalella azteca sp. complex Tricorythodes ablilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotanytarsus spp. Cladotanytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Naidinae spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp.	2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 12 852 6 780 vial tag says Hyalella sp. 20 32 6 6 6 58 pupae 6 6 6 58 pupae 6 6 4 44 38 70 38 70 36 24 Immature and/or damaged 24 Dried up 24 24 24
WEE.R-1-Sead WEE.R-1-Snag WEE.R-2-MA	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8	Нехарода Сгизтасеа Нехарода	Insecta Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Clitellata Clitellata Clitellata Clitellata Clitellata Clitellata Clitellata Clitellata Clitellata	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Hirudinida Hirudinida	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Elittorinimorpha Amphipoda Ephemeroptera Trichoptera Trichoptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Tubificida Tubificida Tubificida Tubificida Tubificida Tubificida Tubificida	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Chironomidae Naididae Naididae Naididae Naididae Naididae Naididae Naididae Siossiphoniidae Giossiphoniidae	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Plysella cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherbyi Hydrobildae spp. Oscalilia wetherbyi Hydrobildae spp. Chironomidae spp. Chironomidae spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Palypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Todificiae spp. Naidinae spp. Pristina eleidyi Nais pardalis Dero digitata Glossiphoniidae spp.	2 100 100 100 100 100 100 100 100 100 10	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 12 12 12 18 25 6 Farming and the properties of the prope
WEE.R-1-Sead WEE-R-1-Snag	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida	Нехарода Сгизтасеа Нехарода	Insecta Ciitellata Ciitellata Cistellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Caenogastropoda Pterygota Pt	Oiptera Tubificida Tubificida Hygrophila Hygrophila Hygrophila Uittorinimorpha Uittorinimorpha Uittorinimorpha Trichoptera Trichoptera Trichoptera Oiptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Tubificida	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Naididae Naididae Naididae Naididae Naididae Naididae Slossiphoniidae Glossiphoniidae Glossiphoniidae	Pseudochironomus spp. Platyhelminthes spp. Naldinae spp. Naldinae spp. Sastropoda spp. Physelia cubensis Planorbella scalaris Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Chironomidae spp. Cladotanytarsus spp. Tamytarsus spp. Tamytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Pretudochironomus spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Pleurocera floridensis	2 100 100 100 100 100 100 100 100 100 10	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 11 12 12 852 6 6 780 vial tag says Hyalella sp. 20 32 6 6 6 5 8 pupae 6 6 20 6 6 44 44 3 38 7 70 336 44 Immature and/or damaged 44 Dried up 24 Juvenile 24 Juvenile 24 Juvenile
WEE.R-1-Sead WEE-R-1-Snag WEE-R	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Anthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca	Нехарода Сгизтасеа Нехарода	Insecta Clitellata Clitellata Castropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta Inse	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Leaenogastropoda Caenogastropoda Eumalacostraca Pterygota Ptery	Diptera Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Trichoptera Trichoptera Trichoptera Diptera Tubificida Tubificida Tubificida Tubificida Tubificida Rhynchobdellida Rhynchobdellida	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropythidae Hydropythidae Hydropythidae Chironomidae Anaididae Naididae Naididae Naididae Naididae Naididae Naididae Anaidiae Glossiphoniidae Glossiphoniidae Glossiphoniidae	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Naidinae spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogilla wetherby Hydrobiidae spp. Notogilla wetherby Hydrelidae spp. Notogilla wetherby Hydella azteca sp. complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chadotanytarsus spp. Cladotanytarsus spp. Tamytarsus spp. Tamytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Naidinae spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Helobdella spp. Helobdella spp. Pleurocera floridensis Pomacea paludosa	2 2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 20 Immature and/or damaged 6 can't see needles 31 Damaged 12 12 12 18 85 6 For the same of the s
WEE.R-1-Sead WEE.R-1-Snag WEE.R-2-MA	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca	Нехарода Стизтасеа Нехарода Пехарода Нехарода Нехарода Нехарода Нехарода Нехарода Пехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta Clitellata Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Clitellata Clitellata Clitellata Clitellata Clitellata Clitellata Clitellata Gastropoda	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Cenengastropoda	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Ephemeroptera Trichoptera Trichoptera Trichoptera Coleoptera Diptera Littorinimorpha Tubificida Tubificida Tubificida Tubificida Tubificida Tubificida Tubificida Rhynchobdellida Amphipoda	Chironomidae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Naididae Naididae Naididae Naididae Naididae Naididae Slossiphoniidae Glossiphoniidae Glossiphoniidae	Pseudochironomus spp. Platyhelminthes spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Plyselia cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherbyi Hyaleila azteca sp. complex Tricorythodes abilinieatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendiges spp. Pseudochironomus spp. Cricotopus or Orthochadius Platyhelminthes spp. Tubificinae spp. Pristina leidyi Naidinae spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Pleurocera floridensis Pomacea paludosa Hyaleila atzeca sp. complex	2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 20 Immature and/or damaged 6 can't see needles 31 Damaged 11 12 12 852 6 Farson vial tag says Hyalella sp. 20 32 6 Farson vial tag says Hyalella sp. 20 6 Farson vial tag says Hyalella sp. 21 22 23 24 24 24 25 26 27 28 28 29 29 20 20 20 20 20 21 21 22 22 23 24 24 25 26 27 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20
WEE.R-1-Sed WEE-R-1-Snag WEE-R-	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Atthropoda 8/28/2015 Annelida	Нехарода Стизтасеа Нехарода Стизтасеа Стизтасеа	Insecta Citiellata Citiellata Citiellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Citiellata	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Caenogastropoda Pterygota Cigochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Hirudinida Caenogastropoda Caenogastropoda Caenogastropoda Eumalacostraca Eumalacostraca	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Diptera Trichoptera Trichoptera Trichoptera Diptera Tubificida Tubificida Tubificida Tubificida Rhynchobdellida Rhynchobdellida Rhynchobdellida Amphipoda Mysida	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropythidae Hydropythidae Hydropythidae Chironomidae Anaididae Naididae Naididae Naididae Naididae Naididae Naididae Anaidiae Glossiphoniidae Glossiphoniidae Glossiphoniidae	Pseudochironomus spp. Platyhelminthes spp. Naldinae spp. Naldinae spp. Sastropoda spp. Physella cubensis Planorbella scalaris Hydrobildae spp. Notogillia wetherbyi Hyaleila azteca sp. complex Tricoryhodes abilimeatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Claidotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthodidus Platyhelminthes spp. Pseudochironomus spp. Tubificinae spp. Pristina ledyi Nais pardalis Dero digitata Glossiphoniidae spp. Helobdella spp. Helobdella spp. Pleurocera floridensis Pomacea paludosa Hyaleila azteca sp. complex Mysida spp.	2 100 100 100 100 100 100 100 100 100 10	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 112 12 852 6 780 vial tag says Hyalella sp. 20 6 6 6 58 pupae 6 6 780 vial tag says Hyalella sp. 20 6 6 20 6 780 vial tag says Hyalella sp. 20 4 4 4 4 5 8 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
WEE.R-1-Sed WEE-R-1-Snag WEE-R-	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Arthropoda 8/28/2015	Нехарода Сгизтасеа Нехарода	Insecta Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Clitellata	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Hirudinida Hirudinida Hirudinida Laenogastropoda Caenogastropoda	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Ephemeroptera Trichoptera Trichoptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Tubificida Tubificida Tubificida Tubificida Tubificida Tubificida Tubificida Tubificida Rhynchobdellida Rhynchobdellida Rhynchobdellida Amphipoda Mysida Mysida	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Chironomidae Raididae Naididae Ogosiphoniidae Glossiphoniidae Glossiphoniidae Ogosiphoniidae Ogosiphoniidae	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Saidinae spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hydrobiidae spp. Notogillia wetherbyi Hydreliadae spp. Notogillia wetherbyi Hydreliadae spp. Notogillia wetherbyi Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Tanytarsus spp. Palypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Naidinae spp. Naidinae spp. Pristin aleidyi Nais pardalis Dero digitata Glossiphoniidae spp. Pleurocera floridensis Pomorcera floridensis Pomorcera floridensis Phemacera floridensis Phemacera floridensis Physelia a streas pp. Mysidala spp. Ephemeroptera spp.	2 100 100 100 100 100 100 100 100 100 10	87 20 20 Immature and/or damaged 6 can't see needles 31 Damaged 32 Damaged 33 Damaged 34 Damaged 35 Damaged 36 Damaged 37 Damaged 38 Damaged 39 Damaged 30 Damaged 30 Damaged 31 Damaged 32 Damaged 33 Damaged 34 Damaged 35 Damaged 36 Damaged 37 Damaged 38 Damaged 39 Damaged 30 Damaged 30 Damaged 31 Damaged 32 Damaged 33 Damaged 34 Damaged 35 Damaged 36 Damaged 37 Damaged 38 Damaged 39 Damaged 30 Damaged 30 Damaged 30 Damaged 30 Damaged 30 Damaged 31 Damaged 32 Damaged 33 Damaged 34 Damaged 35 Damaged 36 Damaged 37 Damaged 38 Damaged 38 Damaged 39 Damaged 30 Damaged 31 Damaged 32 Damaged 32 Damaged 33 Damaged 34 Damaged 34 Damaged 35 Damaged 36 Damaged 36 Damaged 37 Damaged 38
WEE.R-1-Sed WEE.R-1-Snag WEE.R-2-MA	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Anthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Нехарода Стизтасеа Нехарода	Insecta Clitellata Clitellata Clitellata Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Coleoptera Trichoptera Trichoptera Trichoptera Trichoptera Diptera Rubificida Tubificida Tubificida Tubificida Tubificida Tubificida Rhynchobdellida Rhynchobdellida Amphipoda Mysida Ephemeroptera Ephemeroptera	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Dispinomidae Roilossiphoniidae Glossiphoniidae Pleuroceridae Ampulariidae Dogielinotidae Leptohyphidae	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Physelia cubensis Planorbelia scalaris Hydrobildae spp. Notogillia wetherbyi Hydrelia azteca sp. complex Tricorythodes abilinieatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Chironomidae spp. Cladotanytarsus spp. Panytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthochadius Platyhelminthes spp. Pseudochironomus spp. Triciotopus or Orthochadius Platyhelminthes spp. Pristina leidyi Naidinae spp. Pristina leidyi Nais pardaiis Dero digitata Glossiphoniidae spp. Pleurocera floridensis Pomacea paludosa Hydella atzeca sp. complex Mysida spp. Ephemeroptera spp. Tricorythodes albilineatus	2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 mmature and/or damaged 6 can't see needles 32 Damaged 12 12 12 12 12 13 14 15 14 15 15 15 15 15
WEE.R-1-Sed WEE-R-1-Snag WEE-R-	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Anthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Anthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Нехароба Сгизтасеа Нехароба	Insecta Clitellata Clitellata Castropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Hirudinida Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Eumalacostraca Etemplacostraca Pterygota Pterygota Pterygota	Diptera Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Trichoptera Trichoptera Trichoptera Diptera Dip	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropythidae Hydropythidae Chironomidae Chiro	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Naidinae spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogilla wetherby Hydrobiidae spp. Notogilla wetherby Hydrelidae spp. Notogilla wetherby Hyalella azteca sp. complex Tricorythodes albilineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chadotanytarsus spp. Cladotanytarsus spp. Tamytarsus spp. Tamytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochronomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Naidinae spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Helobdella spp. Pleurocera floridensis Pomacea paludosa Hyalella azteca sp. complex Mysida spp. Ephemeroptera spp. Ephemeroptera spp. Ephemeroptera spp. Tricorythodes albilineatus Aphylla williamsonii	2 100 33 166 66 426 33 390 00 166 33 390 00 166 32 120 120 120 120 120 120 120 120 120 12	87 20 20 Immature and/or damaged 6 can't see needles 32 Damaged 112 12 852 6 6 780 vial tag says Hyalella sp. 20 32 6 6 6 8 58 pupae 6 6 6 9 6 9 780 vial tag says Hyalella sp. 20 21 22 24 Immature and/or damaged 24 Dried up 24 Juvenile 24 Juvenile 24 Juvenile 24 Juvenile 24 No posterior end present 24 Damaged, probably Baetidae sp. 26 Damaged, probably Baetidae sp.
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WEE.R-1-Sed WEE-R-1-Snag WEE-R-	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Anthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Arthropoda	Нехарода Сгизтасеа Нехарода	Insecta Ciitellata Ciitellata Cisterio da Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Heterobranchia Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Coleoptera Trichoptera Trichoptera Trichoptera Diptera Tubificida Tubificida Tubificida Tubificida Rhynchobdellida Rhynchobdellida Rhynchobdellida Rhynchobdellida Ephemeroptera Ephemeroptera Godonata Odonata Odonata	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropschidae Hydropschidae Hydropschidae Hydropschidae Hydropschidae Hydropschidae Chironomidae Lepionomidae Naididae Clossiphoniidae Glossiphoniidae Glossiphoniidae Glossiphoniidae Leptorphyphidae Gomphidae Leptocridae Leptocridae	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Sastropoda spp. Physelia cubensis Planorbella scalaris Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Notogillia wetherbyi Hydroblidae spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Chironomidae spp. Claidotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Pleurocera floridensis Pomacea paludosa Hydella atrea sp. Physida spp. Pleurocera floridensis Pomacea paludosa Hydella atrea sp. Mysida spp. Ephemeroptera spliminusus Libellula incesta Oceetis sp. E	2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 Immature and/or damaged 6 can't see needles 31 Damaged 11
WEE.R-1-Sead WEE.R-1-Snag WEE.R	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Arthropoda 8/28/20	Нехарода Сгизтасеа Нехарода Insecta Clitellata Clitellata Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Hirudinida Hirudinida Hirudinida Hirudinida Hirudinida Eumalacostraca Eumalacostraca Pterygota	Diptera Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Chir	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Saidinae spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hydrobiidae spp. Notogillia wetherbyi Hydrelidae spp. Notogillia wetherbyi Hydrelidae spp. Notogillia wetherbyi Hydrelidae spp. Notogillia wetherbyi Cheumatopsyche spp. Osyethira spp. Stenelmis spp. Cladotanytarsus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Ciadotanytarsus spp. Tanytarsus spp. Pratyna spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Helobdella spp. Pleurocera floridensis Pomacea paludosa Hyalella atteca sp. complex Mysida spp. Ephemeroptera spp. Tricorythodes albilineatus Abylyla willamsoni Lubellula incesta Occetti spp.	2 2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 20 Immature and/or damaged 6 can't see needles 31 Damaged 32 Damaged 32 Damaged 32 See See See See See See See See See Se	
WEE.R-1-Sead WEE.R-1-Snag WEE.R	8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Anthropoda 8/28/2015 Arthropoda	Нехарода Стизтасеа Нехарода	Insecta Clitellata Clitellata Cistenda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Malacostraca Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Hirudinida Hirudinida Hirudinida Hirudinida Caenogastropoda Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Tubificida Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Amphipoda Ephemeroptera Trichoptera Trichoptera Trichoptera Diptera Littorinimorpha Amphipoda Roberta Rubificida Tubificida Tubificida Tubificida Tubificida Tubificida Rhynchobdellida Amphipoda Mysida Ephemeroptera Ephemeroptera Ephemeroptera Godonata Godonata Trichoptera	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydropschidae Hydropschidae Hydropschidae Hydropschidae Chironomidae Leptonymidae Naididae	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Satropoda spp. Physelia cubensis Planorbelia scalaris Hydrobiidae spp. Notogillia wetherbyi Hyaleila azteca sp. complex Tricorythodes abillineatus Cheumatopsyche spp. Oxyethira spp. Stenelmis spp. Chironomidae spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendipes spp. Dictorendipes spp. Tanytarsus spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Pristina leidyi Naidinae spp. Pristina leidyi Naisi pardalis Dero digitala Glossiphoniidae spp. Pleurocra floridensis Pomacea paludosa Phayelia spp. Pleurocra floridensis Pomacea paludosa Phyaleila azteca sp. complex Mysida spp. Pjeurocra floridensis Pomacea paludosa Phyaleila azteca sp. complex Mysida spp. Ephemeroptera spp. Tricorythodes abilineatus Aphylia williamnsoni Libellula incesta Oecetis sp. E Oxyethira spp. Chironomidae spp.	2 2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 mmature and/or damaged 6 can't see needles 31 Damaged 32 Damaged 32 Samaged 33 Samaged 34 Samaged 35 Samaged 36 Samaged 37 Samaged 38 Samaged 39 Samaged 30 Samaged 30 Samaged 31 Samaged 32 Samaged 33 Samaged 34 Samaged 36 Samaged 37 Samaged 38 Samaged 39 Samaged 30 Samaged 31 Samaged 32 Samaged 33 Samaged 34 Samaged 35 Samaged 36 Samaged 37 Samaged 38 Samaged 39 Samaged 30 Samaged 30 Samaged 31 Samaged 32 Samaged 33 Samaged 34 Samaged 34 Samaged 35 Samaged 36 Samaged 37 Samaged 38 Samaged 38 Samaged 39 Samaged 30 Samaged 30 Samaged 31 Samaged 31 Samaged 32 Samaged 33 Samaged 34 Samaged 35 Samaged 36 Samaged 36 Samaged 37 Samaged 38 Samaged 38 Samaged 38 Samaged 39 Samaged 30 Samaged 30 Samaged 31 Samaged 31 Samaged 32 Samaged 33 Samaged 34 Samaged 35 Samaged 36 Samaged 36 Samaged 37 Samaged 38
WEE.R-1-Sed WEE.R-1-Snag WEE.R-	8/28/2015 Arthropoda 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Annelida 8/28/2015 Mollusca 8/28/2015 Arthropoda 8/28/2015 Annelida 8/28/2015 Arthropoda 8/28/20	Нехарода Сгизтасеа Нехарода Insecta Clitellata Clitellata Gastropoda Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Heterobranchia Heterobranchia Caenogastropoda Caenogastropoda Eumalacostraca Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Oligochaeta Hirudinida Hirudinida Hirudinida Hirudinida Hirudinida Eumalacostraca Eumalacostraca Pterygota	Diptera Tubificida Tubificida Hygrophila Hygrophila Hygrophila Littorinimorpha	Chironomidae Naididae Naididae Naididae Physidae Planorbidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Leptohyphidae Hydropychidae Hydropychidae Hydropychidae Hydropychidae Chironomidae Chir	Pseudochironomus spp. Platyhelminthes spp. Naidinae spp. Naidinae spp. Saidinae spp. Physella cubensis Planorbella scalaris Hydrobiidae spp. Notogillia wetherbyi Hydrobiidae spp. Notogillia wetherbyi Hydrelidae spp. Notogillia wetherbyi Hydrelidae spp. Notogillia wetherbyi Hydrelidae spp. Notogillia wetherbyi Cheumatopsyche spp. Osyethira spp. Stenelmis spp. Cladotanytarsus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Dicrotendipes spp. Pseudochironomus spp. Ciadotanytarsus spp. Tanytarsus spp. Pratyna spp. Pseudochironomus spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Pristina leidyi Nais pardalis Dero digitata Glossiphoniidae spp. Helobdella spp. Pleurocera floridensis Pomacea paludosa Hyalella atteca sp. complex Mysida spp. Ephemeroptera spp. Tricorythodes albilineatus Abylyla willamsoni Lubellula incesta Occetti spp.	2 2 10 10 10 10 10 10 10 10 10 10 10 10 10	87 20 mmature and/or damaged 6 can't see needles 32 Damaged 12 12 852 6 780 vial tag says Hyalella sp. 20 31 32 35 36 36 36 37 38 39 30 30 31 32 33 34 35 36 36 37 38 39 30 30 31 32 33 34 35 36 36 37 38 39 30 31 32 33 34 35 35 36 37 38 39 39 30 30 31 32 33 34 35 36 37 38 39 39 30 30 31 32 33 34 35 35 36 37 38 39 30 30 31 32 33 34 35 36 37 38 39 30 30 31 32 33 34 35 36 37 38 39 30 30 31 32 33 34 35 36 37 38 39 30 30 31 31 32 33 34 35 36 37 38 39 30 30 30 30 30 30 30 30	

	1	1	1		1	1				
Sample ID	Date Collected Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Count	Abundance (Count/m²)	Notes
WEE-R-2-MA	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	1	2 2	
WEE-R-2-MA	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	1	-	
WEE-R-2-Rock	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	41	6 1:	
WEE-R-2-Rock WEE-R-2-Rock	8/28/2015 Annelida 8/28/2015 Annelida	+	Clitellata Clitellata	Oligochaeta	Tubificida Tubificida	Naididae Naididae	Pristina leidyi	9		
WEE-R-2-ROCK	8/28/2015 Annelida 8/28/2015 Annelida	+	Clitellata	Oligochaeta Oligochaeta	Tubificida	Naididae	Nais pardalis Nais pseudobtusa	3		
WEE-R-2-Rock	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais magnaseta	10		Voucher
WEE-R-2-Rock	8/28/2015 Mollusca	+	Gastropoda	Heterobranchia	Hygrophila	Planorbidae	Planorbella scalaris	10	2	Voucher
WEE-R-2-Rock	8/28/2015 Mollusca		Gastropoda	Caenogastropoda	Пудгорина	Thiaridae	Melanoides spp.		4	
WEE-R-2-Rock	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	1	2 2	l vial tag says Hyalella sp.
WEE-R-2-Rock	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	1		y via tag says riyatena sp.
WEE-R-2-Rock	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2		pupae & larvae slide-mounted that were too small
WEE-R-2-Rock	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.		4	Papac & larvae slide modified that were too small
WEE-R-2-Rock	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	29	2 58	
WEE-R-2-Rock	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	5		
WEE-R-2-Rock	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.		8 1	
WEE-R-2-Rock	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	2		
WEE-R-2-Rock	8/28/2015 Nematoda						Nematoda spp.	1	2 2	1
WEE-R-2-SAV	8/28/2015 Platyhelminthes						Platyhelminthes spp.	4	4 8	3
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	4	8 9	Immature and/or damaged
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Aulodrilus pigueti	2	4 4:	3
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naidinae spp.		4	Immature and/or damaged
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	1	6 3:	2
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais pardalis	2	0 40	
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais pseudobtusa		4	3
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero digitata	1	6 3.	
WEE-R-2-SAV	8/28/2015 Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Eclipidrilus palustris		4	3
WEE-R-2-SAV	8/28/2015 Mollusca		Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis		8 1	juveniles
WEE-R-2-SAV	8/28/2015 Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis		8 1	5
WEE-R-2-SAV	8/28/2015 Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	Planorbella scalaris		4	3
WEE-R-2-SAV	8/28/2015 Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	4	8 9	i
WEE-R-2-SAV	8/28/2015 Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.		4	3
WEE-R-2-SAV	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	35	2 70-	vial tag says Hyalella sp.
WEE-R-2-SAV	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.		8 1	5
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Leptohyphidae	Tricorythodes albilineatus	4	4 8	3
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Oecetis avara		4	Voucher
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Nectopsyche tavara			Voucher
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	2	4 4:	3
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi		4	Voucher
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptilidae spp.	1		pupae
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	4		
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.		8 1	i e e e e e e e e e e e e e e e e e e e
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Ochrotrichia spp.		4	3
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	7		pupae
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	36		
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi		7 1	
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	24		
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	8		
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella similis		7 1	
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	14		
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	1	6 3	2
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae	Hemerodromia spp.	<u> </u>	4	3
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Elophila spp.		8 1	
WEE-R-2-SAV	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Petrophila santafealis		4	3
WEE-R-2-SAV	8/28/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	Lebertia spp.	1	2 2	
WEE-R-2-SAV	8/28/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Hygrobatidae	Hygrobates spp.		4	Voucher
WEE-R-2-SAV	8/28/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Hygrobatidae	Atractides spp.			Voucher
WEE-R-2-SAV WEE-R-2-Sed	8/28/2015 Nematoda 8/28/2015 Annelida	+	Clitellata	Oligoshanta	Tubificida	Naididae	Nematoda spp. Tubificinae spp.		8 1	
WEE-R-2-Sed WEE-R-2-Sed	8/28/2015 Annelida 8/28/2015 Annelida	+	Clitellata	Oligochaeta Oligochaeta	Tubificida	Naididae Naididae	Limnodrilus hoffmeisteri		3 21	Immature and/or damaged
WEE-R-2-Sed WEE-R-2-Sed		Crustacea	Malacostraca	-						Wial tag says Hyalella sp
WEE-R-2-Sed WEE-R-2-Sed	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta	Eumalacostraca Ptengota	Amphipoda Diptera	Dogielinotidae Chironomidae	Hyalella azteca sp. complex Chironomidae spp.			Vial tag says Hyalella sp. pupae & damaged slide-mounted larvae
WEE-R-2-Sed WEE-R-2-Sed	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda Hexapoda	Insecta	Pterygota Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	—	1 4	
WEE-R-2-Sed	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta		Diptera	Chironomidae	Polypedilum scalaenum group	2		
WEE-R-2-Sed	8/28/2015 Arthropoda 8/28/2015 Arthropoda		Insecta	Pterygota	Diptera	Chironomidae	Paracladopelma spp.		5 21	
WEE-R-2-Sed WEE-R-2-Snag	8/28/2015 Annelida	Hexapoda	Clitellata	Pterygota Oligochaeta	Tubificida	Naididae	Allonais inaequalis		21	
WEE-R-2-Snag	8/28/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex		8 1	vial tag says Hyalella sp.
WEE-R-2-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetis intercalaris		7 1	
WFF-R-2-Snag	8/28/2015 Arthropoda	Hexanoda	Insecta	Ptervgota	Enhemerontera	Lentohynhidae	Tricopythodes albilineatus	—	7 1	1
WEE-R-2-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	ceptonypmade	Trichoptera spp.		1	p juvenile
WEE-R-2-Snag	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Leptoceridae spp.			pupa
WEE-R-2-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsychidae spp.			juveniles
WEE-R-2-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	5		
WEE-R-2-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	2		
WEE-R-2-Snag	8/28/2015 Arthropoda 8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.		1	1
WEE-R-2-Snag	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2	4	pupae
WEE-R-2-Snag	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.		8 1	
WEE-R-2-Snag	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	2		1
WEE-R-2-Snag	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum convictum	2		
	8/28/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Rheotanytarsus spp.		1	
						Chironomidae	Dicrotendipes spp.		3	
WEE-R-2-Snag		Hexapoda	Insecta	Pterventa						
WEE-R-2-Snag WEE-R-2-Snag	8/28/2015 Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera			1	7 3.	
WEE-R-2-Snag		Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta	Pterygota Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Pseudochironomus spp. Cricotopus or Orthocladius	1 3		

Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Count Abundance (Count/m²)	Notes
WEE-R-2-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	1 2	
WEE-R-2-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae	Hemerodromia spp.	1 2	
WEE-R-2-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Psychodidae	Psychoda spp.	10 20	Voucher
WEE-R-2-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Petrophila santafealis	1 2	
WEE-R-3-MA	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	16 32	
WEE-R-3-MA	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Notogillia wetherbyi	16 32	Voucher
WEE-R-3-MA	8/28/2015	Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	624 1248	
WEE-R-3-MA	8/28/2015	Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaeriidae spp.	16 32	maybe Sphaerium sp.
WEE-R-3-MA	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	4144 8288	vial tag says Hyalella sp.
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetis intercalaris	48 96	
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Leptohyphidae	Tricorythodes albilineatus	32 64	
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	Coenagrionidae spp.	16 32	Damaged and juvenile
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Leptoceridae spp.		juvenile
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	640 1280	
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	128 256	
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	32 64	
WEE-R-3-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	32 64	
WEE-R-3-Rock	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.		Immature and/or damaged
WEE-R-3-Rock	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	4 8	
WEE-R-3-Rock	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	1 2	
WEE-R-3-Rock	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Electorisminorphia	Thiaridae	Melanoides spp.	60 120	
WEE-R-3-Rock	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex		vial tag says Hyalella sp.
WEE-R-3-ROCK	8/28/2015	Arthropoda	Hexapoda	Insecta		Ephemeroptera	Baetidae	Baetis intercalaris	69 138	viol to 5 July 3 Tryaicila 3p.
WEE-R-3-ROCK WEE-R-3-ROCK	8/28/2015 8/28/2015			Insecta	Pterygota	Ephemeroptera Ephemeroptera			40 80	
		Arthropoda	Hexapoda		Pterygota		Leptohyphidae	Tricorythodes albilineatus	40 80	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Oecetis sp. E	5 10	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Oecetis avara		
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsychidae spp.		pupa
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	6 12	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	30 60	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	3 6	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	1 2	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Ochrotrichia spp.	1 2	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Stenelmis spp.	5 10	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	16 32	pupae & slide-mounted larvae
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	4 8	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	5 10	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum convictum	5 10	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	10 20	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	14 28	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	16 32	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae	Hemerodromia spp.	3 6	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Psychodidae	Psychoda spp.	3 6	
WEE-R-3-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Petrophila santafealis	3	
WEE-R-3-SAV	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	6 12	vial tag says Hyalella sp.
WEE-R-3-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetis intercalaris	44 88	
WEE-R-3-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Leptohyphidae	Tricorythodes albilineatus	2 4	
WEE-R-3-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	24 48	
WEE-R-3-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptilidae spp.		pupae
WFF-R-3-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	6 12	
WEE-R-3-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	6 12	
WEE-R-3-SAV	8/28/2015	Arthropoda			Pterygota	Trichoptera	Hydroptilidae			
WEE-R-3-SAV	8/28/2015	Aitiiiopoua							24	
	8/28/2015	Authoropodo	Hexapoda	Insecta				Ochrotrichia spp.	24 48	
WEE-R-3-SAV	0/20/2045	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.		
WEE-R-3-SAV	8/28/2015	Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Chironomidae spp. Tanytarsus spp.	54 108	pupae
	8/28/2015	Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta	Pterygota Pterygota Pterygota	Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum	54 108 4 8 12 24	pupae
WEE-R-3-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae Chironomidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis	54 108 4 8 12 24 28 56	pupae
WEE-R-3-SAV WEE-R-3-SAV	8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius	54 108 4 8 112 24 28 55 396 792	pupae
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae	Chironomidae spp. Palyrasus spp. Palypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis	54 106 4 8 12 24 28 56 396 792 32 64	рирае
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Crustacea	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Malacostraca	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Eumalacostraca	Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crironomidae Crambidae Dogielinotidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex	54 106 4 8 112 242 28 56 396 792 32 64 2 87	pupae
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Сгиstасеа Нехароdа	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Malacostraca Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Eumalacostraca Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp.	54 108 4 8 12 24 28 55 396 792 32 66 2 87 1 43	pupae vial tag says Hyalella sp.
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Crustacea	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Malacostraca	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Eumalacostraca	Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crironomidae Crambidae Dogielinotidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius	54 106 4 8 112 242 28 56 396 792 32 64 2 87	pupae vial tag says Hyalella sp.
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Platyhelminthes	Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Сгиstасеа Нехароdа	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Malacostraca Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Eumalacostraca Pterygota Pterygota Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Diptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp.	54 106 4 8 112 242 28 56 396 792 32 66 2 87 1 42 4 4 88	pupae vial tag says Hyalella sp.
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Snag	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida	Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Сгиstасеа Нехароdа	Insecta	Pterygota Oligochaeta	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Diptera Tubificida	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Crambidae Crambidae Chironomidae Chironomidae Chironomidae Chironomidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyaleila azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp.	54 106 4 8 51 12 24 28 55 396 792 32 66 2 2 83 1 4 4 8 4 8 2 4 8	pupae vial tag says Hyalella sp. Immature and/or damaged
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Annelida Annelida	Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Сгиstасеа Нехароdа	Insecta Malacostraca Insecta Insecta Cittellata Cittellata	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Eumalacostraca Pterygota Pterygota Oligochaeta Oligochaeta	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Tubificida Tubificida	Chironomidae Naididae Naididae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Naidinae spp.	54 106 4 8 51 12 24 28 55 396 792 32 66 2 2 83 1 4 4 8 4 8 2 4 8	pupae vial tag says Hyalella sp.
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Anthropoda Anthropoda Anthropoda Anthropoda Anthropoda Anthropoda Annelida Annelida Annelida	Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Сгиstасеа Нехароdа	Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Eumalacostraca Pterygota Pterygota Oligochaeta Oligochaeta Oligochaeta	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Lepidoptera Amphipoda Diptera Diptera Tubfficida Tubfficida Lumbriculida	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae Lumbriculidae Lumbriculidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyaleila azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platylelmintens spp. Tubificinae spp. Tubificinae spp. Naidinae spp. Eclipidrilus palustris	54 106 4 8 51 12 24 28 55 396 792 32 66 2 2 83 1 4 4 8 4 8 2 4 8	pupae vial tag says Hyalella sp. Immature and/or damaged
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Annelida Annelida Mollusca	Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Сгиstасеа Нехароdа	Insecta Clitellata Clitellata Clitellata Clitellata Clitellata	Pterygota Oligochaeta Oligochaeta Oligochaeta Caenogastropoda	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Tubificida Tubificida	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Crambidae Dogielinotidae Chironomidae Chironomidae Naididae Naididae Naididae Hydrobiidae Hydrobiidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tublificinae spp. Naidinae spp. Naidinae spp. Eclipidrilus palustris Hydrobiidae spp.	54 106 4 8 51 12 24 28 55 396 792 32 66 2 2 83 1 4 4 8 4 8 2 4 8	pupae vial tag says Hyalella sp. Immature and/or damaged
WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-SAV WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Sed WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag WEE-R-3-Snag	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Annelida Mollusca Mollusca	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Стизтасеа Нехарода Нехарода Нехарода	Insecta Clitellata Clitellata Clitellata Gastropoda Gastropoda	Pterygota Oligochaeta Oligochaeta Oligochaeta Caenogastropoda Caenogastropoda	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Tubificida Tubificida Lumbriculida Littorinimorpha	Chironomidae Lironidae Naididae Naididae Lumbriculidae Hydrobiidae Thiaridae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Naidinae spp. Eclipidrilus palustris Hydrobildae spp. Melanoides spp.	54 106 4 8 4 8 112 24 28 56 396 792 32 66 2 2 87 1 42 4 8 2 4 8 2 4 4 2 4 4 6 112	vial tag says Hyalella sp. limmature and/or damaged limmature and/or damaged
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WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Snag	8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Mollusca Mollusca Arthropoda	Нехарода	Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Lepidoptera Amphipoda Diptera Diptera Diptera Diptera Diptera Lumbriculda Lumbriculda Luttorinimorpha Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Tephemeroptera Tephemeroptera Trichoptera Trichoptera Trichoptera Trichoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Lumbriculidae Hydrobiidae Hydrobiidae Thiaridae Dogielinotidae Baetidae Heptageniidae Leptohyphidae Coenagrionidae Coenagrionidae Leptoceridae Hydropsychidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyaleila azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Tubificinae spp. Eclipidrilus palustris Hydrobiidae spp. Melanoides spp. Melanoides spp. Hyaleila azteca sp. complex Baetis intercalaris Macacaffortium exiguum Tricorythodes albilineatus Argia spp. Argia spp. Argia sedula Decetis avara Hydropsychidae spp. Cheumatopsyche spp.	54 106 4 8 5 112 24 28 55 396 792 32 66 2 2 83 1 1 43 1 1 43 4 8 2 4 8 2 4 4 2 2 4 4 2 1 6 113 16 3352 316 227 38 116 32 666 11 12 16 3552 31 66 11 16 3552 31 66 11 16 3552 31 66 11 17 18 3552 31 36 352 35 352 354	vial tag says Hyalella sp. Immature and/or damaged Immature and/or damaged Vial tag says Hyalella sp. Voucher no posterior end Voucher Damaged and/or immature
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WEER-3-SAV WEER-3-SAV WEER-3-SAV WEER-3-Sed WEER-3-Sed WEER-3-Sed WEER-3-Snag	8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Mollusca Mollusca Arthropoda	Нехарода	Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Lepidoptera Amphipoda Diptera Diptera Tubificida Lumbriculida Littorinimorpha Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Todonata Odonata Odonata Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Lumbriculidae Hydrobildae Thiaridae Dogielinotidae Baetidae Heptagenidae Leptohyphidae Coenagrionidae Coenagrionidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Naidinae spp. Eclipidrilus palustris Hydroblidae spp. Hyalella azteca sp. complex Baetis intercalaris Maccaffertium exiguum Tricorythodes albilineatus Argia spp. Argia sedula Oecetis avara Hydropsychidae spp. Cheumatopsychiae spp. Cheumatopsychiae spp.	54 108 4 8 8 112 24 22 28 55 396 792 32 66 2 2 88 1 1 43 1 1 43 1 1 43 2 4 6 6 112 176 352 8 8 116 32 6 6 22 4 4 2 2 4 6 6 112 144 2 2 4 2 4 6 6 114 144 2 2 4 2 4 7 2 7 3 8 8 116 3 9 7 4 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	vial tag says Hyalella sp. Immature and/or damaged Immature and/or damaged vial tag says Hyalella sp. Voucher no posterior end Voucher Damaged and/or immature
WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Snag	8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Annelida Annelida Anthropoda Arthropoda	Нехарода	Insecta	Pterygota Dilgochaeta Oligochaeta Oligochaeta Caenogastropoda Caenogastropoda Caenogastropoda Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Diptera Diptera Tubificida Lumbriculida Littorinimorpha Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Tubificida Littorinimorpha Amphipoda Trichoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Lumbriculidae Naididae Lumbriculidae Hydrobiidae Thiaridae Dogielinotidae Baetidae Heptageniidae Leptohyphidae Coenagrionidae Leptoridae Leptoreridae Hydropsychidae	Chironomidae spp. Chironomidae spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyaleila azteca sp. complex Cladotanytarus spp. Cricotopus or Orthocladius Platyhelminthes spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Eclipidrilus palustris Hydrobiidae spp. Melanoides spp. Melanoides spp. Melanoides spp. Hyaleila azteca sp. complex Baetis intercalaris Maccaffertium exiguum Tricorythodes albilineatus Argia spp. Argia spp. Argia spp. Argia sedula Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Oxyethira spp. Oxyethira spp. Oxyethira spp.	54 106 4 8 8 112 24 22 8 55 396 792 32 66 2 2 83 1 1 43 1 1 43 1 1 43 2 4 6 6 112 176 3352 136 22 4 6 6 12 176 352 136 22 4 6 2 2 4 7 2 4 7 2 4 7 3 8 16 3 1 16 3 1 16 3 1 1 16 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	vial tag says Hyalella sp. limmature and/or damaged Immature and/or damaged Vial tag says Hyalella sp. Voucher no posterior end Voucher Damaged and/or immature
WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Snag	8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Annelida Annelida Annelida Annelida Arthropoda	Нехарода	Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Diptera Diptera Diptera Tubificida Tubificida Lumbriculida Littorinimorpha Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Odonata Odonata Trichoptera Coleoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae Lumbriculidae Hydrobiidae Thiaridae Dogielinotidae Baetidae Heptageniidae Leptohyphidae Coenagrionidae Coenagrionidae Leptoceridae Hydropsychidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tublificinae spp. Naidinae spp. Relianoides spp. Melanoides spp. Melanoides spp. Melanoides spp. Melanoides spp. Melanoides spp. Madinae spp. Audinae spp. Audinae spp. Cricotopus or Orthocladius Platyhelminthes spp. Melanoides spp. Melanoides spp. Melanoides spp. Melanoides spp. Augia satteca sp. complex Baetis intercalaris Maccaffertium exiguum Tricorythodes albilineatus Argia spp. Argia sedula Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsych esps. Dyderbira spp. Dubiraphia spp. Stenelmis spp.	54 108 4 8 8 112 24 22 28 55 396 792 32 66 2 2 88 1 1 43 1 1 43 1 1 43 2 4 6 6 112 176 352 8 8 116 32 6 6 22 4 4 2 2 4 6 6 112 144 2 2 4 2 4 6 6 114 144 2 2 4 2 4 7 2 7 3 8 8 116 3 9 7 4 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	vial tag says Hyalella sp. Immature and/or damaged Immature and/or damaged Vial tag says Hyalella sp. Voucher no posterior end Voucher Damaged and/or immature
WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Snag	8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Mollusca Mollusca Arthropoda	Нехарода	Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Diptera Diptera Diptera Diptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Coleoptera Coleoptera Coleoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae Naididae Naididae Naididae Naididae Lumbriculidae Hydrobiidae Thiaridae Dogielinotidae Baetidae Heptagenidae Leptohyphidae Coenagrionidae Coenagrionidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Tubificinae spp. Eclipidrilus palustris Hydroblidae spp. Melanoides spp. Melanoides spp. Hydroblidae spp. Melanoides spp. Tubificinae spp. Melanoides spp. Melanoides spp. Melanoides spp. Melanoides spp. Hydropsidae spp. Argia sedula Oecetis avara Ityropsychidae spp. Cheumatopsychidae spp. Cheumatopsychidae spp. Cheumatopsychidae spp. Uydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Oxyethira spp. Oxyethira spp. Oxyethira spp. Gyrinus spp. Gyrinus spp.	54 106 4 8 8 112 24 28 55 396 792 31 66 2 2 88 1 1 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 3 35 3 66 3 32 6 6 12 3 6 6 12 3 6 6 12 3 6 6 3 12 3 7 4 4 14 4 2 8 8 116 3 5 7 7 4 14 8 14 4 8 8 11 4 8 8 11 5 7 7 6 35 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	vial tag says Hyalella sp. Immature and/or damaged Immature and/or damaged Immature and/or damaged vial tag says Hyalella sp. Voucher no posterior end Voucher Damaged and/or immature
WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Snag	8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Annelida Annelida Annelida Anthropoda Arthropoda	Нехарода	Insecta	Pterygota Dilgochaeta Oiligochaeta Oiligochaeta Caenogastropoda Caenogastropoda Eumalacostraca Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Diptera Diptera Diptera Tubificida Lumbriculida Luttorinimorpha Amphipoda Ephemeroptera Ephemeroptera Odonata Odonata Trichoptera Coleoptera Coleoptera Coleoptera Coleoptera Coleoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Neptorphidae Neptorphidae Nydropsychidae	Chironomidae spp. Thiravsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalelia sattealis Hyalelia sattealis Hyalelia sattealis Hyalelia azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Naidinae spp. Naidinae spp. Eclipidrilus palustris Hydrobiidae spp. Melanoides spp. Hyalelia azteca sp. complex Baetis intercalaris Maccaffertium exiguum Triconythodes albilineatus Argia spp. Argia sedula Oecetis avara Hydropsychidae spp. Cheumatopsyches pp. Hydropsyche spp. Hydropsyche rossi Oxyethira spp. Dubiraphia spp. Stenelmis spp. Stenelmis spp. Stenelmis spp.	54 106 4 8 8 112 242 28 55 396 792 32 66 2 2 88 1 1 44 2 1 1 43 4 8 8 2 4 4 2 4 4 8 8 11 176 3555 136 277 8 8 116 32 66 12 1 4 2 4 4 8 8 11 1 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	vial tag says Hyalella sp. Immature and/or damaged Immature and/or damaged vial tag says Hyalella sp. Voucher no posterior end Voucher Damaged and/or immature
WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-SAV WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Sed WEE.R-3-Snag	8/28/2015 8/28/2015	Arthropoda Platyhelminthes Annelida Annelida Mollusca Mollusca Arthropoda	Нехарода	Insecta	Pterygota Oligochaeta Oligochaeta Oligochaeta Oligochaeta Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Amphipoda Diptera Diptera Diptera Diptera Diptera Diptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Coleoptera Coleoptera Coleoptera	Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crambidae Dogielinotidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Naididae Naididae Naididae Naididae Naididae Naididae Lumbriculidae Hydrobiidae Thiaridae Dogielinotidae Baetidae Heptagenidae Leptohyphidae Coenagrionidae Coenagrionidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae	Chironomidae spp. Tanytarsus spp. Polypedilum convictum Thienemanniella similis Cricotopus or Orthocladius Petrophila santafealis Hyalella azteca sp. complex Cladotanytarsus spp. Cricotopus or Orthocladius Platyhelminthes spp. Tubificinae spp. Tubificinae spp. Eclipidrilus palustris Hydroblidae spp. Melanoides spp. Melanoides spp. Hydroblidae spp. Melanoides spp. Tubificinae spp. Melanoides spp. Melanoides spp. Melanoides spp. Melanoides spp. Hydropsidae spp. Argia sedula Oecetis avara Ityropsychidae spp. Cheumatopsychidae spp. Cheumatopsychidae spp. Cheumatopsychidae spp. Uydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Oxyethira spp. Oxyethira spp. Oxyethira spp. Gyrinus spp. Gyrinus spp.	54 106 4 8 8 112 24 28 55 396 792 31 66 2 2 88 1 1 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 2 2 44 3 35 3 66 3 32 6 6 12 3 6 6 12 3 6 6 12 3 6 6 3 12 3 7 4 4 14 4 2 8 8 116 3 5 7 7 4 14 8 14 4 8 8 11 4 8 8 11 5 7 7 6 35 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	vial tag says Hyalella sp. Immature and/or damaged Immature and/or damaged Vial tag says Hyalella sp. Voucher no posterior end Voucher Damaged and/or immature

Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count Abundance (Count/m²)	Notes
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum convictum	28 56	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	6 12	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pentaneura spp.	4 8	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Corynoneura spp.	2 4	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	6 12	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella xena	4 8	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	2 4	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	4 8	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Heteroptera	Gerridae	Trepobates spp.	2 4	
WEE-R-3-Snag	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Petrophila santafealis	8 16	
WEE-R-3-Snag	8/28/2015	Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Krendowskiidae	Krendowskia spp.	2 4	
WEE-R-4-MA	8/28/2015	Platyhelminthes						Platyhelminthes spp.	16 32	
WEE-R-4-MA	8/28/2015	Nemertea		Enopla		Hoplonemertea	Tetrastemmatidae	Prostoma spp.	16 32	
WEE-R-4-MA	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	96 192	Immature and/or damaged
WEE-R-4-MA		Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	64 128	
WEE-R-4-MA	8/28/2015	Mollusca		Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	64 128	
WEE-R-4-MA	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	32 64	
WEE-R-4-MA	8/28/2015	Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	256 512	
WEE-R-4-MA	8/28/2015	Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaerium spp.	352 704	
WEE-R-4-MA	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	3440 6880	
WEE-R-4-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	64 128	
WEE-R-4-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	16 32	
WEE-R-4-MA	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	128 256	
WEE-R-4-MA		Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Hygrobatidae	Atractides spp.	32 64	
WEE-R-4-MA WEE-R-4-Rock	8/28/2015 8/28/2015		CHERCETALA			11 OHIDIUHOHITES			32 64	
WEE-R-4-ROCK WEE-R-4-ROCK		Mollusca	Crustacoa	Gastropoda	Caenogastropoda	Amphinada	Thiaridae Dogiolinotidae	Melanoides spp.	10 20	vial tag says Hyalella sp.
	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae Raetidae	Hyalella azteca sp. complex		viai tag says Nydielid Sp.
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetis intercalaris		
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Leptohyphidae	Tricorythodes albilineatus	5 10	
WEE-R-4-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	Argia spp.	1 2	
WEE-R-4-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Oecetis avara	3 6	
WEE-R-4-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	4 8	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	18 36	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Ochrotrichia spp.	1 2	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Helicopsychidae	Helicopsyche borealis	1 2	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	6 12	pupae
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	8 16	
WEE-R-4-Rock		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum convictum	7 14	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	2 4	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella xena	1 2	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera				
					i terygota	Diptera	Chironomidae	Cricotopus or Orthocladius	9 18	
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae Empididae	Cricotopus or Orthocladius Empididae spp.		pupa
WEE-R-4-Rock WEE-R-4-Rock	8/28/2015 8/28/2015	Arthropoda Arthropoda								рира
			Hexapoda	Insecta	Pterygota	Diptera	Empididae	Empididae spp.		рира
WEE-R-4-Rock	8/28/2015	Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota Pterygota	Diptera Diptera	Empididae Empididae	Empididae spp. Hemerodromia spp.		pupa
WEE-R-4-Rock WEE-R-4-Rock	8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta	Pterygota Pterygota	Diptera Diptera Lepidoptera	Empididae Empididae Crambidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus	1 2 1 2 1 2 1 2 1 2	
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Gastropoda	Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Lepidoptera	Empididae Empididae Crambidae Corydalidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp.	1 2 1 2 1 2 1 2 1 2	pupa very small juveniles
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda	Diptera Diptera Lepidoptera Megaloptera	Empididae Empididae Crambidae Corydalidae Pleuroceridae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus	1 2 1 2 1 2 1 2 1 2	
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda	Pterygota Pterygota Pterygota Pterygota	Diptera Diptera Lepidoptera Megaloptera Littorinimorpha	Empididae Empididae Crambidae Corydalidae Pleuroceridae Hydrobiidae	Empididae spp. Hemerodromia spp. Petrophila santfaelis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp.	1 2 1 2 1 2 1 2 1 2	
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda	Diptera Diptera Lepidoptera Megaloptera	Empididae Empididae Crambidae Corydalidae Pleuroceridae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis	1 2 1 2 1 2 1 2 1 2	
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda	Diptera Diptera Lepidoptera Megaloptera Metaloptera Littorinimorpha Littorinimorpha	Empididae Empididae Crambidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogillia wetherbyi Melanoides spp.	1 2 1 2 1 1 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 4 4 8 8 2 2 4 4 1 1 2 2 4 1 8 8 2 2 1 4 1 8 8 2 1 1 8 2 2 4 1 1 8 8 2 1 1 8 2 2 4 1 1 8 8 2 1 1 8 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 1	very small juveniles
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta	Diptera Diptera Lepidoptera Megaloptera Mittorinimorpha Littorinimorpha Veneroida	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobilidae Hydrobilidae Thiaridae Sphaeriidae	Empididae spp. Hemerodromia spp. Petrophila santfaelis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp.	1 2 1 2 1 1 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 2 4 4 8 8 2 2 4 4 1 1 2 2 4 1 8 8 2 2 1 4 1 8 8 2 1 1 8 2 2 4 1 1 8 8 2 1 1 8 2 2 4 1 1 8 8 2 1 1 8 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 8 2 2 1 1 1 1	
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca	Нехарода Нехарода Нехарода Нехарода	Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta	Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Veneroida Veneroida	Empididae Empididae Crambidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera fioridensis Hydrobiidae spp. Notogillia wetherbyi Melanoides spp. Sphaeridae spp. Sphaeridae spp. Sphaerims spp.	1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1 1 1 1 2 2 1 1 1 1 2 2 1 1 1 1 2 2 1 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota	Diptera Diptera Lepidoptera Megaloptera Mission Silveria Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobildae spp. Notogillia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaerima spp. Ephemeroptera spp.	1 2 1 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles juvenile Damaged
WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota Pterygota	Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobilidae Hydrobilidae Thiaridae Sphaeriidae Sphaeriidae Hydroptilidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobilidae spp. Notogillia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp.	1 2 1 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda Arthropoda Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota	Diptera Diptera Lepidoptera Megaloptera Mission Silveria Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogillia wetherbyi Melanoides spp. Sphaeriinae spp. Sphaeriinae spp. Sphaeriinae spp. Ephemeroptera spp. Hydroptilidae spp. Strenelmis spp. Eptemenyspp.	1 2 1 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles juvenile Damaged
WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-SOCK WEE.R-4-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Platyhelminthes	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Pterygota Pterygota Pterygota	Diptera Diptera Diptera Lepidoptera Megaloptera Mittorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Coleoptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobilidae Hydrobilidae Thiaridae Sphaerildae Sphaerildae Hydroptilidae Empidae Emidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogillia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Ephemeroptera spp. Hydropilidae spp. Stenelmis spp. Stenelmis spp.	1 2 1 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles juvenile Damaged
WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Annelida Annelida	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota Pterygota Pterygota Pterygota Oligochaeta	Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Coleoptera Tubificida	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobilidae Hydrobilidae Thiaridae Sphaeriidae Sphaeriidae Hydroptilidae Hydroptilidae Hydroptilidae Emidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogillia wetherbyi Melanoides spp. Sphaeridae spp. Spheemoptera spp. Hydroptilidae spp. Stenelmis spp. Platyhelminthes spp.	1 2 1 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles juvenile Damaged
WEE.R.A-ROCK WEE.R.A-ROCK WEE.R.A-ROCK WEE.R.A-ROCK WEE.R.A-SAV	8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Platyhelminthes Annelida Annelida	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta Insecta Insecta Clitellata Clitellata	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Pterygota Pterygota Pterygota	Diptera Diptera Diptera Lepidoptera Megaloptera Mittorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Coleoptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobilidae Hydrobilidae Thiaridae Sphaerildae Sphaerildae Hydroptilidae Empidae Emidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogillia weherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Hydrobiidae spp. Sphaeriidae spp. Sphaeriidae spp. Stenlemis spp. Ephemeroptera spp. Hydroptilidae spp. Stenelmis spp. Platyhelminthes spp. Platyhelminthes spp. Pristina leidyi Nais pardalis	1 2 1 2 1 1 2 2 1 1 2 2 4 4 2 2 4 4 2 2 4 4 1 2 2 4 4 2 2 4 4 2 2 4 4 2 2 4 4 2 2 4 4 2 2 4 4 2 2 4 4 2 2 4 4 2 2 4 4 4 2 2 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 4 2 2 4 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4 4 4 2 2 4	very small juveniles juvenile Damaged pupae
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arnelida Annelida Mollusca	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Heterodonta Pterygota Pterygota Oligochaeta	Diptera Diptera Diptera Lepidoptera Megaloptera Megaloptera Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Coleoptera Tubificida Tubificida	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Sphaeriidae Sphaeriidae Sphaeriidae Elmidae Naididae Naididae Naididae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Hydropilidae spp. Hydropilidae spp. Stenelmis spp. Platyhelmiithes spp. Platyhelmiithes spp. Platyhelmiithes spp. Pristina leidyi Nais pardalis Gastropoda spp.	1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1	very small juveniles juvenile Damaged pupae Damaged, shell dissolved
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Annelida Annelida Mollusca Mollusca	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta Insecta Insecta Insecta Clitellata Clitellata Gastropoda	Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota Pterygota Pterygota Pterygota Heterodonta Heterodonta Heterodonta Heterodonta Pterygota Pterygota Pterygota Heterodonta Heterodonta	Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Coleoptera Tubificida Tubificida Veneroida	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Hydroptilidae Elmidae Naididae Naididae Naididae Sphaeriidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeriidae spp. Stenelmis spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Spaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp.	1 2 1 2 1 1 2 2 1 1 2 2 1 4 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 2 2 4 4 1 1 1 2 2 4 4 1 1 1 1	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved
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WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda	Нехарода	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Veneroida Tubificida Tubificida Veneroida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Empididae Empididae Corydalidae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Maididae Naididae Naididae Naididae Naididae Sphaeriidae Leptoeridae Leptofyphidae Leptoeridae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogillia wetherbyi Melanoides spp. Sphaeridae spp. Platyhelimithes spp. Baetiae spp. Sphaeriidae spp. Hyaleila azteca sp. complex Baetidae spp. Baetia intercalaris Maccaffertium exiguum Tricorythodes albilineatus Trichoptera spp. Occetts avara Hydropsychidae spp. Cheumatopsyche spp.	1 2 1 2 1 1 2 2 1 1 2 2 1 4 1 2 2 4 4 1 2 2 4 4 1 2 2 4 4 1 2 2 4 4 2 2 4 4 2 2 4 4 2 2 6 5 532 4 8 8 6 6 5 12 2	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile juvenile Damaged and/or juveniles
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WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Sock WEE.R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda	Нехарода	Insecta Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta Insecta Insecta Clitellata Clitellata Clitellata Gastropoda Bivalvia Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota Pterygota Oligochaeta Oligochaeta Oligochaeta Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Ephemeroptera Trichoptera Coleoptera Tubificida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Hydroptilidae Elmidae Naididae Naididae Naididae Sphaeriidae Sphaeriidae Naididae Leptohybidae Leptoepidae Hydroptilidae Hydroptilidae Heptageniidae Leptohybidae Leptohybidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia weherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Pleurocera floridensis Hydrobiidae spp. Sphaeriidae spp. Sphaeriidae spp. Pleurocera spp. Hydroptilidae spp. Stenelmis spp. Platyhelmithes spp. Platyhelmithes spp. Pristina leidyi Nais pardalis Gastropoda spp. Sphaeriidae spp. Hydroptilidae spp. Bateliae spp. Hyalella azteca sp. complex Baetidae spp. Baetia intercalaris Maccaffertium exiguum Tricorythodes albilineatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsychia spp. Lydropsychidae spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Hydropsychidae spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Hydropsychidae spp. Chetortichia spp.	1 2 1 2 1 1 2 2 1 1 2 2 4 4 1 1 2 2 2 4 4 1 2 2 4 4 1 8 8 1 6 6 4 128 4 4 8 8 1 6 6 4 128 8 1 6 6 4 4 8 8 1 6 6 4 4 8 8 1 6 6 4 4 8 8 1 6 6 4 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 8 1 6 6 4 8 8 1 6 6 4 8 8 8 1 6 6 6 4 8 8 8 1 6 6 6 8 2 2 2 2 4 4 8 8 8 1 6 6 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile juvenile juvenile Damaged and/or juveniles
WEE.R.A-Rock WEE.R.A-Rock WEE.R.A-Rock WEE.R.A-Rock WEE.R.A-SOCK WEE.R.A-SAV WEE.R.A-SAN	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda	Нехарода	Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta	Perrygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Megaloptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Tubificida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera	Empididae Empididae Corydalidae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Sphaeriidae Maididae Maididae Naididae Naididae Naididae Leptolae Sphaeriidae Leptolyphidae Leptolyphidae Leptolyphidae Leptoceridae Hydropsychidae Hydroptiidae Hydropsychidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeridae spp. Stenelmis spp. Pistylemis spp. Pistylemis spp. Pristina leidyi Nais pardalis Gastropoda spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Trictura leidyi Nais pardalis Gastropoda spp. Sphaeridae spp. Baetis intercalaris Maccaffertium edjaum Tricorythodes albilineatus Trichoptera spp. Oceetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche possi Ovyethira spp. Hydropsyche possi Ovyethira spp. Ochrotrichia spp. Hydropsyche borealis Stenelmis spp.	1 2 1 2 1 1 2 2 1 1 2 2 4 4 1 1 2 2 2 4 4 1 2 2 4 4 1 8 8 1 6 6 4 128 4 4 8 8 1 6 6 4 128 8 1 6 6 4 4 8 8 1 6 6 4 4 8 8 1 6 6 4 4 8 8 1 6 6 4 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 1 6 6 3 2 2 2 4 4 8 8 8 1 6 6 4 8 8 1 6 6 4 8 8 8 1 6 6 6 4 8 8 8 1 6 6 6 8 2 2 2 2 4 4 8 8 8 1 6 6 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	very small juveniles Juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile juvenile Damaged and/or juveniles
WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Sook WEE.R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Platyhelminthes Annelida Mollusca Mollusca Arthropoda Platyhelminthes Annelida Annelida Annelida Annelida Arthropoda	Нехарода	Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Ephemeroptera Trichoptera Tubificida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera	Empididae Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Hydroptilidae Elmidae Naididae Naididae Naididae Naididae Sphaeriidae Sphaeriidae Sphaeriidae Dagielinotidae Baetidae Baetidae Baetidae Baetidae Baetidae Heptageniidae Leptohyphidae Leptoceridae Hydropythidae Hydropythidae Hydropythidae Hydropythidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Helicopsychidae Helicopsychidae Helicopsychidae Helicopsychidae Helicopsychidae Helicopsychidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Stenelmis spp. Eptemeroptera spp. Hydroptilidae spp. Stenelmis spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Pastelliae spp. Stenelmis spp. Platyhelminthes spp. Pastelliae spp. Baetidae spp. Coettis aufaretium exiguum Tricorythodes abililineatus Trichoptera spp. Coecetis awara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Cheumstopsyche spp. Hydropsyche spp. Hydropsyche spp. Hydropsyche spp. Hydropsyche spp. Hydropsyche spp. Hydropsyche spp. Helicopsyche borealis Stenelmis spp. Chironomidae spp.	1 2 1 2 1 1 2 2 1 1 2 2 1 4 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1 2 1 1 1 1 1 2 2 1 2 1	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile juvenile Damaged and/or juveniles
WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda	Нехарода	Insecta	Perrygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Ephemeroptera Trichoptera Coleoptera Tubificida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Hydrobiidae Hydrobiidae Hydroptilidae Elmidae Naididae Naididae Naididae Sphaeriidae Sphaeriidae Oogielinotidae Baetidae Baetidae Baetidae Leptoeridae Hydroptilidae Leptoeridae Hydropythidae Leptoeridae Hydropythidae Hydropythidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Chironomidae Chironomidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobildae spp. Notogilia wetherbyi Melanoides spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Stenelmis spp. Pistyrdropilidae spp. Stenelmis spp. Pristina leidyi Nais pardalis Gastropoda spp. Sphaeridae spp. Sphaeridae spp. Hydropilidae spp. Sphaeridae spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche spp. Hydropsyche spp. Ochrotichia spp. Ochrotichia spp. Ochrotichia spp. Ochrotichia spp. Chironomidae spp. Chironomida	1 2 1 2 1 1 2 2 1 4 4 8 8 1 6 6 1 12 16 3 2 2 4 4 8 8 1 16 3 2 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 4 8 8 4 8 8 96 5 50 1000	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile juvenile Damaged and/or juveniles
WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-Rock WEE-R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda	Нехарода	Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Megaloptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Veneroida Tubificida Tubificida Veneroida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera	Empididae Empididae Corydalidae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Sphaeriidae Maididae Naididae Naididae Naididae Naididae Leptoeridae Baetidae Baetidae Leptohyphidae Leptohyphidae Leptopsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Helicopsychidae Elimidae Chironomidae Chironomidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogillia wetherbyi Melanoides spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Sphaeridae spp. Stenelmis spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Phyalella arteca sp. Hydropilidae spp. Sphaeridae spp. Sphaeridae spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Platyhelminthes spp. Battiae spp. Battiae spp. Sphaeriidae sp	1 2 1 2 1 1 2 2 1 4 4 8 8 1 5 6 6 1 12 1 6 32 2 4 4 8 8 1 6 6 32 2 4 4 8 8 1 6 6 32 2 2 4 4 8 8 4 8 8 6 5 5 0 100 5 5 4 108 8	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile Damaged and/or juveniles
WEE.R.A-Rock WEE.R.A-Rock WEE.R.A-Rock WEE.R.A-Rock WEE.R.A-Rock WEE.R.A-SAV W	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda Arthropoda Arthropoda Platyhelminthes Annelida Mollusca Mollusca Arthropoda	Нехарода	Insecta Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta	Perrygota Perrygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Heterodonta Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Ephemeroptera Trichoptera Coleoptera Tubificida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera Diptera	Empididae Empididae Corydalidae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Hydroptilidae Elmidae Naididae Naididae Naididae Sphaeriidae Sphaeriidae Naididae Naididae Leptoridae Baetidae Baetidae Beetidae Beetidae Hydroptilidae Leptohyphidae Leptohyphidae Hydropychidae Hydropychidae Hydropychidae Hydropytilidae Hydropytilidae Hydropytilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hidromomidae Chironomidae Chironomidae Chironomidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Stenelmis spp. Ephemeroptera spp. Hydroptilidae spp. Stenelmis spp. Platyhelminthes spp. Baetia prodia spp. Sphaeriidae spp. Hyalella arteca sp. complex Baetidae spp. Baetia mercalaris Maccaffertium exiguum Tricorythodea splilineatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsychae spp. Hydropsychidae spp. Hydropsychidae spp. Hydropsyche rossi Oxyethira spp. Hydropsyche spp. Hydropsyche borealis Stenelmis spp. Cheirornomidae spp. Cladotanytarsus spp. Polypedilum convictum	1 2 1 2 1 1 2 2 1 1 2 2 1 4 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile Damaged and/or juveniles
WEE.R-4-Snock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-SAV	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda	Нехарода	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Gistropoda Gistropoda Gistropoda Gistropoda Gistropoda Gistropoda Gistropoda Gistropoda Givalvia Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Diptera Megaloptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Tubificida Tubificida Weneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Empididae Empididae Croydalidae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Hydroptilidae Elmidae Naididae Naididae Naididae Sphaeriidae Sphaeriidae Leptoceridae Baetidae Baetidae Baetidae Leptoceridae Hydroptilidae Leptoceridae Hydropythidae Leptoceridae Hydropythidae Leptoceridae Hydropythidae Hydropiidae Hydropiidae Hydropiidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae	Empididae spp. Hemerodromia spp. Petrophia santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeridae spp. Stenelmis spp. Platyhelminthes spp. Pristina leidyi Nais pardalis Gastropoda spp. Sphaeridae spp. Sphaeridae spp. Hyalela ateca sp. complex Baetidae spp. Baetis intercalaris Maccaffertium eviguum Tricorythodes albilineatus Trichoptera spp. Orecetis avara Hydropsychidae spp. Chematopsyche forssi Onyethira spp. Hydropsyche pp. Chematopsyche borealis Stenelmis spp. Chicnomidae spp. Chaladotanytarsus spp. Tanytarsus spp.	1 2 1 2 1 1 2 2 1 1 2 2 1 4 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 1 1 1 2 2 1	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile Damaged and/or juveniles pupae & slide-mounted larvae
WEE.R.A-ROCK WEE.R.A-ROCK WEE.R.A-ROCK WEE.R.A-ROCK WEE.R.A-SOCK WEE.R.A-SAV W	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda	Нехарода	Insecta Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Insecta Insecta Insecta Clitellata Clitellata Clitellata Gastropoda Bivalvia Insecta	Perrygota Perrygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Lepidoptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Ephemeroptera Trichoptera Coleoptera Tubificida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Empididae Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Sphaeriidae Hydroptilidae Elmidae Naididae Naididae Naididae Sphaeriidae Sphaeriidae Lepidae Sphaeriidae Sphaeriidae Naididae Naididae Naididae Lepidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Himidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Sphaeriidae spp. Pleurocera floridensis Hydrobiidae spp. Sphaeriidae spp. Sphaeriidae spp. Pleurocera spp. Hydroptilidae spp. Stenelmis spp. Platyhelmithes spp. Platyhelmithes spp. Platyhelmithes spp. Platyhelmithes spp. Platyhelmithes spp. Platyhelmithes spp. Patarolidae spp. Hydroptilidae spp. Sphaeriidae spp. Hydrolidae spp. Sphaeriidae spp. Hydrolidae spp. Sphaeriidae spp. Hydrolidae spp. Sphaeriidae spp. Hydrolidae spp. Decetis avara Hydropychidae spp. Cheumatopsychae spp. Hydropychidae spp. Cheumatopsyche spp. Hydropychidae spp. Hydropychidae spp. Cheumatopsyche borealis Stenelmis spp. Cheirorichia spp. Helicopsyche borealis Stenelmis spp. Cladotanytarsus spp. Tanytarsus spp. Tanytarsus spp. Polypedilum convictum Pseudochironomus spp. Thienemanniella spp. Cricotopus or Orthocladius	1 2 1 2 1 1 2 2 1 4 1 2 2 4 4 1 2 2 4 4 8 8 16 6 12 2 4 4 8 8 16 6 12 2 4 4 8 8 4 8 8 6 50 100 54 108 8 4 8 8 6 50 100 54 108 8 16 50 100 54 108 100 100 54 108 100 100 100 54 108 100 100 100 100 100 100 100 100 100	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vail tag says Hyalella sp. juvenile juvenile Damaged and/or juveniles
WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-Rock WEE.R-4-SAV W	8/28/2015 8/28/2015	Arthropoda Arthropoda Arthropoda Mollusca Arthropoda Arthropoda Arthropoda Arthropoda Platyhelminthes Annelida Mollusca Mollusca Arthropoda Platyhelminthes Annelida Annelida Annelida Annelida Arthropoda	Нехарода	Insecta Gastropoda Gastropoda Gastropoda Gastropoda Gastropoda Bivalvia Bivalvia Bivalvia Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Caenogastropoda Heterodonta Heterodonta Pterygota	Diptera Diptera Diptera Diptera Diptera Megaloptera Megaloptera Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Littorinimorpha Veneroida Veneroida Ephemeroptera Trichoptera Tubificida Veneroida Amphipoda Ephemeroptera Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Empididae Empididae Corydalidae Corydalidae Pleuroceridae Hydrobiidae Hydrobiidae Thiaridae Sphaeriidae Sphaeriidae Elmidae Naididae Neptoceridae Hydropythidae Hydropythidae Hydropythidae Hydropythidae Hydropytilidae Hydropytilidae Hydropytilidae Helicopsychidae Hydropytilidae Helicopsychidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Empididae spp. Hemerodromia spp. Petrophila santafealis Corydalus cornutus Gastropoda spp. Pleurocera floridensis Hydrobiidae spp. Notogilia wetherbyi Melanoides spp. Sphaeriidae spp. Pleurocera spp. Hydropilidae spp. Stenelmis spp. Platyhelminthes spp. Baetidae spp. Baetis intercalaris Maccaffertium exiguum Tricorythodes abililineatus Trichoptera spp. Cheumatopsycha spp. Hydropyschidae spp. Cheumatopsyche spp. Hydropyschidae spp. Cheumatopsyche spp. Hydropyschidae spp. Cheumatopsyche spp. Hydropysche spp. Hydropysche spp. Hydropysche spp. Hydropysche spp. Hydropysche spp. Hydropysche spp. Holtcopsyche borealis Stenelmis spp. Chironomidae spp. Cladotanytarsus spp. Tanytarsus spp. Tanytarsus spp. Polypedilum convictum Pseudochironomus spp. Thienemanniella spp.	1 2 1 2 1 1 2 2 1 1 2 2 1 4 1 2 2 1 1 1 2 2 1 1 1 2 2 1	very small juveniles juvenile Damaged pupae Damaged, shell dissolved Damaged, shell dissolved vial tag says Hyalella sp. juvenile juvenile Damaged and/or juveniles

	Date Collected Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Count	Abundance (Count/m²) Notes
WEE-R-4-Snag	8/28/2015 Nematoda						Nematoda spp.	2	4
WEE-R-5-MA	9/10/2015 Platyhelminthes						Platyhelminthes spp.	96	192
WEE-R-5-MA	9/10/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	704	
WEE-R-5-MA	9/10/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	128	
WEE-R-5-MA	9/10/2015 Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella stagnalis	32	
WEE-R-5-MA	9/10/2015 Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis	32	
WEE-R-5-MA WEE-R-5-MA	9/10/2015 Mollusca		Gastropoda	Caenogastropoda	v	Thiaridae	Melanoides spp.	256 32	512 64
	9/10/2015 Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaeriidae spp.	128	256
WEE-R-5-MA WEE-R-5-MA	9/10/2015 Mollusca	C	Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaerium spp.		
WEE-R-5-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda	Crustacea Hexapoda	Malacostraca Insecta	Eumalacostraca	Amphipoda Odonata	Dogielinotidae Coenagrionidae	Hyalella azteca sp. complex	6976 32	13952 vial tag says Hyalella sp. 64
WEE-R-5-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Coenagnonidae	Argia spp. Trichoptera spp.	32	
WEE-R-5-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	32	
WEE-R-5-MA	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota Pterygota	Coleoptera	Elmidae	Dubiraphia spp.	32	
WEE-R-5-MA	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	192	
WEE-R-5-MA	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmvia mallochi	96	
WEE-R-5-MA	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pentaneura spp.	32	
WEE-R-5-MA	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Heteroptera		Heteroptera spp.	32	
WEE-R-5-SAV	9/10/2015 Platyhelminthes			, , , ,			Platyhelminthes spp.	16	
WEE-R-5-SAV	9/10/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	8	16 Immature and/or damaged
WEE-R-5-SAV	9/10/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	88	
WEE-R-5-SAV	9/10/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Aulodrilus pigueti	8	16
WEE-R-5-SAV	9/10/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero furcata	8	16
WEE-R-5-SAV	9/10/2015 Annelida	Ì	Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Eclipidrilus palustris	24	48
WEE-R-5-SAV	9/10/2015 Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaeriidae spp.		16
WEE-R-5-SAV	9/10/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	968	1936
WEE-R-5-SAV	9/10/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	8	16
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	48	96 maybe Acerpenna pygmaea or Pseudocloeon ephippiatum
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetis intercalaris	176	
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	Argia sedula	8	16
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	96	
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	24	
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	16	32
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	16	32
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Dubiraphia spp.	16	32
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	24	48 pupae
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	16	32
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	8	16
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum convictum	32	64
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pentaneura spp.	40	80
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Stenochironomus spp.	8	16
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella spp.	144	288
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella xena	32	64
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	16	32
WEE-R-5-SAV	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	16	32
WEE-R-5-SAV	9/10/2015 Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	Lebertia spp.	40	
WEE-R-5-Sed	9/10/2015 Mollusca		Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	2	87
WEE-R-5-Sed	9/10/2015 Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	4	174
WEE-R-5-Sed	9/10/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	1	43 vial tag says Hyalella sp.
WEE-R-5-Sed	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	3	130
WEE-R-5-Sed	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2	87 pupae
WEE-R-5-Sed	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	25	1087
WEE-R-5-Sed	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	1	43
WEE-R-5-Snag	9/10/2015 Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Allonais inaequalis	1	2
WEE-R-5-Snag	9/10/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	147	
WEE-R-5-Snag	9/10/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	5	10 some are zoea
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	2	4 maybe Acerpenna pygmaea or Pseudocloeon ephippiatum
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera		Trichoptera spp.	1	2 juvenile
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	9	18
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	5	10
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	1	2
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Stenelmis spp.	1	2
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Microcylloepus spp.	4	8
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum convictum	1	2
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pentaneura spp.	1	2
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Stenochironomus spp.	1	2
WEE-R-5-Snag	9/10/2015 Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	1	2
WEE-R-6-MA	9/10/2015 Platyhelminthes	-	Clitallata	l liandiaida	Dhuashahalida	Classiahasiidas	Platyhelminthes spp.	36	= 1
WEE-R-6-MA WEE-R-6-MA	9/10/2015 Annelida 9/10/2015 Annelida	-	Clitellata	Hirudinida	Rhynchobdellida Rhynchobdellida	Glossiphoniidae	Helobdella elongata Helobdella stagnalis	36 24	
				Hirudinida	кнунспораеннаа	Glossiphoniidae			
WEE-R-6-MA	9/10/2015 Mollusca	-	Gastropoda	Caenogastropoda	l bassashila	Pleuroceridae	Pleurocera floridensis	12	
WEE-R-6-MA	9/10/2015 Mollusca	-	Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis	12	
WEE-R-6-MA	9/10/2015 Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	12	
WEE-R-6-MA	9/10/2015 Mollusca	Crustacea	Gastropoda	Caenogastropoda	Amakinada	Thiaridae	Melanoides spp.	12	
	0/10/2015 4 11 11 11	n nistacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae Palaemonidae	Hyalella azteca sp. complex	3876	
WEE-R-6-MA	9/10/2015 Arthropoda		Malaaastaa			• Paraemonidae	Palaemonetes spp.	12	
WEE-R-6-MA	9/10/2015 Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda				
WEE-R-6-MA WEE-R-6-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda	Crustacea Hexapoda	Insecta	Pterygota	Odonata	Gomphidae	Aphylla williamsoni	12	24
WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda	Crustacea Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Odonata Odonata	Gomphidae Coenagrionidae	Aphylla williamsoni Argia spp.	12 12	24 24 missing posterior end
WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda	Crustacea Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta	Pterygota Pterygota Pterygota	Odonata Odonata Trichoptera	Gomphidae Coenagrionidae Leptoceridae	Aphylla williamsoni Argia spp. Oecetis sp. E	12 12 12	24 24 missing posterior end 24
WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda	Crustacea Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota	Odonata Odonata Trichoptera Trichoptera	Gomphidae Coenagrionidae Leptoceridae Leptoceridae	Aphylla williamsoni Argia spp. Oecetis sp. E Nectopsyche pavida	12 12 12 12	24 missing posterior end 24 24 Voucher
WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA	9/10/2015 Arthropoda	Crustacea Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota	Odonata Odonata Trichoptera Trichoptera Trichoptera	Gomphidae Coenagrionidae Leptoceridae Leptoceridae Hydropsychidae	Aphylla williamsoni Argia spp. Oecetis sp. E Nectopsyche pavida Hydropsychidae spp.	12 12 12 12 12	24
WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA WEE-R-6-MA	9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda 9/10/2015 Arthropoda	Crustacea Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Odonata Odonata Trichoptera Trichoptera	Gomphidae Coenagrionidae Leptoceridae Leptoceridae	Aphylla williamsoni Argia spp. Oecetis sp. E Nectopsyche pavida	12 12 12 12	24 24 missing posterior end 24 24 Voucher 24 pupa 24

Sample ID	Date Collected	Phylum	Subphylum	Class	Subclass	Order	Family	Таха	Count Abundance (Count/m²)	Notes
WEE-R-6-MA	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Stenelmis spp.	24 48	missing posterior ends
WEE-R-6-MA	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	12 24	
WEE-R-6-MA	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	36 72	
WEE-R-6-MA	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi	24 48	
WEE-R-6-MA	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	24 48	
WEE-R-6-MA	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella spp.	12 24	
WEE-R-6-MA	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	12 24	
WEE-R-6-SAV	9/10/2015	Platyhelminthes						Platyhelminthes spp.	35 70	
WEE-R-6-SAV	9/10/2015	Nemertea		Enopla		Hoplonemertea	Tetrastemmatidae	Prostoma spp.	11 22	
WEE-R-6-SAV	9/10/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	76 152	Immature and/or damaged
WEE-R-6-SAV	9/10/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	3 6	
WEE-R-6-SAV	9/10/2015	Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Lumbriculidae spp.	3 6	Immature and/or damaged
WEE-R-6-SAV	9/10/2015	Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Lumbriculus cf. variegatus	5 10	
WEE-R-6-SAV	9/10/2015	Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella elongata	5 10	
WEE-R-6-SAV	9/10/2015	Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella stagnalis	8 16	
WEE-R-6-SAV	9/10/2015	Mollusca		Gastropoda	Heterobranchia	Hygrophila	Ancylidae	Laevapex fuscus	3 6	
WEE-R-6-SAV	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	297 594	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetidae spp.	3 6	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae	Baetis intercalaris	5 10	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Macromiidae	Macromia illinoiensis georgina	3 6	Voucher
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera		Trichoptera spp.	3 6	juvenile
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	5 10	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydropsychidae	Hydropsyche rossi	3 6	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	3 6	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Elmidae	Microcylloepus spp.	3 6	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	11 27	pupae & slide-mounted larvae
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanypodinae spp.	3 6	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	5 10	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Tanytarsus spp.	3 6	
WEE-R-6-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	232 464	
WEE-R-6-SAV		Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella similis	14 28	
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	3 28	
WFF-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta		Diptera		Ceratopogonidae spp.	3 6	
WEE-R-6-SAV		_			Pterygota		Ceratopogonidae Phoridae		3 6	Marrahaa
	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Phoridae spp.	3 6	Voucher
WEE-R-6-SAV	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Parapoynx spp.	3 b	
WEE-R-6-SAV	9/10/2015	Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	Lebertia spp.	14 28	
WEE-R-6-Sed	9/10/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.		Immature and/or damaged
WEE-R-6-Sed	9/10/2015	Mollusca		Bivalvia	Heterodonta	Veneroida	Corbiculidae	Corbicula spp.	1 43	
WEE-R-6-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladotanytarsus spp.	1 43	
WEE-R-6-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cryptochironomus spp.	2 87	
WEE-R-6-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	6 261	
WEE-R-6-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Corynoneura spp.	38 1652	
WEE-R-6-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	1 43	
WEE-R-6-Sed	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Psychodidae	Psychodidae spp.		Voucher, pupae
WEE-R-6-Snag	9/10/2015	Mollusca		Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	12 24	
WEE-R-6-Snag	9/10/2015	Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	4 8	
WEE-R-6-Snag	9/10/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	144 288	
WEE-R-6-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Baetidae			
WEE-R-6-Snag	9/10/2015							Baetis intercalaris	144 288	
WEE-R-6-Snag	9/10/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	Heptageniidae spp.	12 24	juveniles
WEE-R-6-Snag		Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	Heptageniidae spp. Maccaffertium exiguum		
WEE-R-6-Snag	9/10/2015	_	Hexapoda Hexapoda					Heptageniidae spp.	12 24 16 32 4 8	
	9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Heptageniidae	Heptageniidae spp. Maccaffertium exiguum	12 24	
WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta	Pterygota Pterygota	Ephemeroptera Ephemeroptera Trichoptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes albilineatus Trichoptera spp. Oecetis avara	12 24 16 32 4 8 8 16 8 16	juveniles
WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota	Ephemeroptera Ephemeroptera Trichoptera Trichoptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes sibilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp.	12 24 16 32 4 8 8 16 8 16 52 104	juveniles juveniles
WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Ephemeroptera Ephemeroptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes abilineatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp.	12 24 16 32 4 8 8 16 8 16 8 10 52 104 220 4404	juveniles juveniles
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota	Ephemeroptera Ephemeroptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes albilineatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi	12 24 16 32 4 8 8 8 16 8 16 52 104 220 440 240 480	juveniles juveniles
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Ephemeroptera Ephemeroptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptiidae	Heptageniidae spp. Maccaffertium exiguum Tricorphodes abilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsycher ossi Hydropsycher sossi Hydroptia spp.	12 24 16 32 4 8 8 16 8 16 52 104 220 440 240 480 8 16	juveniles juveniles
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Ephemeroptera Ephemeroptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes albilineatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi	12 24 16 32 4 8 8 16 8 16 52 104 220 440 240 488 8 16 12 24	juveniles juveniles Voucher
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа Нехароdа	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae	Heptageniidae spp. Maccaffertium exiguum Tricorphodes abilimeatus Trichoptera spp. Oecettis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychiae spp. Hydropsychiae spp. Chimarra spp. Chimarra spp. Chimarra spp.	12 24 16 32 4 8 8 16 8 16 52 104 220 440 240 480 8 16	juveniles juveniles Voucher
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Philopotamidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes abiliimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydropsyche rossi Hydropsyche spp. Chimarra spp. Chimarra spp. Stenelmis spp. Microcylloepus spp.	12 24 16 32 4 8 8 8 16 8 16 52 104 220 440 240 480 8 16 12 24 48 4 8 8	juveniles juveniles Voucher
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae	Heptageniidae spp. Maccaffertium exiguum Tricorphodes abilimeatus Trichoptera spp. Oecettis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychiae spp. Hydropsychiae spp. Chimarra spp. Chimarra spp. Chimarra spp.	12 24 16 32 4 8 8 16 8 16 52 104 220 440 240 488 8 16 12 24	juveniles juveniles Voucher
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptiidae Philopotamidae Elmidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes abiliimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydropsyche rossi Hydropsyche spp. Chimarra spp. Chimarra spp. Stenelmis spp. Microcylloepus spp.	12 24 16 32 4 8 8 8 16 8 16 52 104 220 440 240 480 8 16 12 24 48 4 8 8	juveniles juveniles Voucher
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Opiptera	Heptageniidae Leptohyphidae Leptohyphidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Philopotamidae Elmidae Elmidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes abilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydropsyche rossi Hydropsyche spp. Chimarra spp. Stenelmis spp. Microcylleepus spp. Cladotanytarsus spp.	12 24 16 32 4 8 8 8 16 8 16 52 104 220 440 240 480 8 16 12 24 48 4 8 8	juveniles juveniles Voucher
WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sabilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydroptila spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Ciadotanytarsus spp. Tanytarsus spp.	12 24 16 32 4 8 8 16 8 16 52 104 220 440 240 488 8 16 112 24 4 8 8 4 8 8 4 8 4 4 8 8	juveniles juveniles Voucher
WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera Diptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes abiliimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydropsyche rossi Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum scalaenum group	12 24 16 32 16 32 4 8 8 16 8 16 8 16 52 104 220 440 220 440 220 440 480 8 16 12 244 48 4 8 8 24 48 8 8 16	juveniles juveniles Voucher
WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sabilinieatus Trichoptera spp. Oceetis wara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche spp. Hydropsyche sps. Hydropsylae rossi Hydropsylae psp. Stenelmis spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum scalaenum group Polypedilum convictum	12 24 16 32 4 8 8 8 16 8 16 52 104 220 440 240 480 8 15 12 24 44 48 4 4 8 8 4 4 8 8 6 6 16 6 152	juveniles juveniles Voucher
WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag WEE.R-G-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera Diptera Diptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Philopotamidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea subilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydroptila spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum calaenum group Polypedilum calaenum group Polypedilum convictum Cricotopus or Orthocladius	12 24 16 32 4 8 8 8 16 8 16 52 104 220 440 240 480 8 15 12 24 44 48 4 4 8 8 4 4 8 8 6 6 16 6 152	juveniles juveniles Voucher
WEE-R-6-Snag	9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015 9/10/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Olieptera Oliptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorythodes abiliimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum scalaenum group Polypedilum scalaenum group Polypedilum convictum Cricotopus or Orthodidus Ceratopogonidae spp.	12 24 16 32 4 8 8 8 16 8 16 52 104 220 440 240 480 8 15 12 24 44 48 4 4 8 8 4 4 8 8 6 6 16 6 152	juveniles juveniles Voucher
WEE.R-6-Snag	9/10/2015 9/10/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Heteroptera	Heptageniidae Leptohyphidae Leptotyphidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Veliidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sibilinieatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelmis spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Tanytarsus spp. Polypedilum coaleanum group Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella Choreutes	12 24 16 32 16 32 4 8 8 16 8 16 52 104 220 440 240 480 8 16 12 24 48 4 4 8 8 6 16 12 24 48 6 4 8 8 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	juveniles juveniles Voucher
WEE-R-6-Snag	9/10/2015 9/10/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Lepidoptera	Heptageniidae Leptohyphidae Leptoeridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Crambidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sabilinieatus Trichoptera spp. Oceetis wara Hydropsychidae spp. Cheumatopsyche spp. Hydropythe rossi Hydropythe rossi Hydropythe spp. Cheumatopsyche spp. Hydropythe spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tamytarsus spp. Polypedilum scalaenum group Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovelia choreutes Petrophila santafealis Corydalus cornutus	12 24 24 16 32 16	juveniles juveniles Voucher
WEE.R-6-Snag	9/10/2015 9/10/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Lepidoptera Lepidoptera Megaloptera Megaloptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chronomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sibilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Tanytarsus spp. Polypedilum calaenum group Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Corydalus comutus Tubificinae spp.	12 24 24 16 32 16	juveniles juveniles Voucher Immature and/or damaged
WEE-R-6-Snag	9/10/2015 9/10/2015	Arthropoda Annelida Annelida	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Regaloptera Megaloptera Megaloptera Tubificida Rhynchobdellida	Heptageniidae Leptohyphidae Leptoeridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsididae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Corydalidae Ceratopogonidae Veliidae Ceratopogonidae Veliidae Corydalidae Corydalidae Naididae Glossiphoniidae Glossiphoniidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sbillineatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Gricotopus or Orthocladius Ceratopgonidae spp. Rhagovella choreutes Retrophila santafealis Corydalus cornutus Tubficinae spp. Placobdella spp.	12 24 16 32 16 32 16 32 18 8 16 8 8 16 52 104 220 440 220 440 240 488 4 16 12 244 48 4 4 88 24 4 88 6 16 76 152 16 32 4 8 8 16 76 152 16 32 4 8 8 16 4 8 8 16 5 32 5 6 64	juveniles juveniles Voucher Immature and/or damaged
WEE.R-6-Snag	9/10/2015 9/10/2015	Arthropoda Annelida Annelida Mollusca	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Lepidoptera Lepidoptera Megaloptera Megaloptera	Heptageniidae Leptohyphidae Leptoteridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sibilinieatus Trichoptera spp. Oceetis awara Hydropsychidae spp. Cheumatopsyche spp. Hydropytia spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladatamytarsus spp. Tanytarsus spp. Tanytarsus spp. Polypedilum scalaenum group Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Corydalus cornutus Tublificiane spp. Placobdella spp.	12 24 16 32 16 32 16 32 18 8 16 8 16 52 104 220 440 240 488 8 15 12 24 24 48 4 8 8 16 56 15 24 88 16 32 4 88 16 32 4 88 8 16 32 6 4 88 8 16 32 6 5 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	juveniles juveniles Voucher Immature and/or damaged
WEE.R-6-Snag	9/10/2015 9/10/2015	Arthropoda Annelida Mollusca	Нехарода	Insecta	Pterygota Oligochaeta Hirudinida Caenogastropoda Caenogastropoda	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Heteroptera Lepidoptera Megaloptera Tubificida Rhynchobdellida Littorinimorpha	Heptageniidae Leptohyphidae Leptoeridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsidae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Craropsychidae Ceratopogonidae Veilidae Crambidae Corydalidae Naididae Glossiphoniidae Hydrobiidae Thiaridae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea subilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydroptila spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Tanytarsus spp. Polypedilum calaenum group Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Corydalus comutus Tubificinae spp. Placobdella spp. Hydrobiidae spp. Helanoides tuberculata	12 24 16 32 16 32 16 32 18 8 16 8 16 52 104 220 440 220 440 240 488 8 16 112 24 4 8 8 4 4 8 8 54 6 15 76 152 16 32 4 4 8 8 8 16 32 4 8 8 8 16 32 4 4 8 8 8 16 32 4 4 8 8 8 16 32 4 4 8 8 8 16 4 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 16 4 8 8 8 8 16 4 8 8 8 8 16 4 8 8 8 8 16 4 8 8 8 8 16 4 8 8 8 8 16 4 8 8 8 8 16 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	juveniles juveniles Voucher Immature and/or damaged
WEE.R-6-Snag	9/10/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Annelida Mollusca Mollusca	Нехарода	Insecta Insect	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Lepidoptera Megaloptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsidiae Philopotamidae Elmidae Elmidae Elmidae Chironomidae Thironomidae Crambidae Corydalidae Naididae Glossiphoniidae Hydrobiidae Thiaridae Corbiculidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sabilinieatus Trichoptera spp. Oceetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyle ossi Hydropsyle ossi Hydropsyle ossi Hydropsyle psp. Stenelmis spp. Stenelmis spp. Stenelmis spp. Stenelmis spp. Tamytarsus spp. Jenelmis spp. Jenelmis spp. Tamytarsus spp. Polypedilum scalaenum group Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovelia choreutes Petrophila santafealis Corydalus cornutus Tubificinae spp. Hydrobiidae spp.	12 24 16 32 16 32 16 32 18 8 16 8 8 16 52 104 220 440 220 440 240 488 8 16 12 2224 24 48 4 8 8 16 55 1	juveniles juveniles Voucher Immature and/or damaged
WEE.R-G-Snag WEE.S-MA	9/10/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda Annelida Mollusca Mollusca Mollusca	Нехарода	Insecta Insect	Plerygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Coleoptera Diptera Heteroptera Lepidoptera Megaloptera Tubificida Rhynchobdellida Littorinimorpha Veneroida Amphipoda	Heptageniidae Leptohyphidae Leptoreridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptidae Philopotamidae Elmidae Elmidae Chironomidae Thironomidae Crambidae Corydalidae Naididae Naididae Naididae Thiaridae Corbiculidae Dogielinotidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sibilinieatus Trichoptera spp. Oecettis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenefimis spp. Microcylloepus spp. Climarra spp. Stenefimis spp. Microcylloepus spp. Cladadamytarsus spp. Tanytarsus spp. Polypedilum convictum Cricotopus or Orthocaldius Ceratopogonidae spp. Rhagovelia choreutes Petrophila santafealis Corydalus cornutus Tubificinae spp. Placobdella spp. Hydrobiidae spp. Melanoides tuberculata Corbicula spp. Hydrobiidae spp. Melanoides tuberculata Corbicula spp. Hyalella azteca sp. complex	12 24 16 32 16 32 4 8 8 16 8 16 52 104 220 440 220 440 240 480 8 16 12 24 24 4 8 8 4 4 8 8 6 16 15 16 16 32 17 18 8 16 17 18 8 16 18 8 16 19 8 16 10 32 10 4 8 8 10 6 32 10 6 8 8 16 10 32 10 6 8 8 16 10 32 10 6 8 8 16 10 32 10 6 8 8 16 10 6 32 10 6 6 8 8 16 10 76 1	juveniles juveniles Voucher Immature and/or damaged
WEE-R-6-Snag	9/10/2015 8/10/2015 8/10/2015	Arthropoda	Нехарода	Insecta Insect	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Lepidoptera Megaloptera Megaloptera Trubificida Rhynchobdellida Littorinimorpha Veneroida Amphipoda Trichoptera	Heptageniidae Leptohyphidae Leptoeridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsididae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Cortanomidae Ceratopogonidae Vellidae Ceratopogonidae Velidae Corydalidae Naididae Glossiphoniidae Hydrobiidae Thiaridae Corbiculidae Corpiculidae Corpiculidae Dogielinotidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea subilimeatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Corydalus cormutus Trubificinae spp. Hydrobiidae spp.	12 24 16 32 16 32 16 32 18 8 16 8 16 52 104 220 440 220 440 240 488 8 16 112 24 48 4 4 88 6 16 15 16 32 16 16 32 17 16 32 18 8 16 18 8 16 19 10 32 19 10 32 10 48 10 32 10 48 10 48 10 52 10 53 10 53 10 54 10 54 10 55 10 53 10 54 10 55 10 53 10 54 10 54 10 55	juveniles juveniles Voucher Immature and/or damaged
WEE.R-G-Snag WEE.S-MA	9/10/2015 9/10/2	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Uniformatical Registriction Megaloptera Megaloptera Tubficida Rhynchobdellida Uttorinimorpha Veneroida Amphipoda Trichoptera Diptera	Heptageniidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Crarabidae Corydalidae Naididae Glossiphoniidae Hydrobiidae Thiaridae Corbiculidae Dogielinotidae Hydroptilidae Chironomidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sabilinieatus Trichoptera spp. Oceetis wara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche spp. Hydropsyche spp. Hydropsyche spp. Hydropsyche spp. Stenelmis spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tamytarsus spp. Polypedilum scalaenum group Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovelia choreutes Petrophila santafealis Corydalus cornutus Tubificinae spp. Placobdella spp. Hydroblidae spp.	12 24 16 32 16 32 16 8 8 16 8 8 16 52 104 220 440 220 440 240 480 8 16 12 224 24 48 4 8 8 16 55 16 55 17 56 15 15 57 16 32 4 8 8 16 4 8 8 16 57 15 15 57 16 57 16 57 16 57 17 57 17 57 18	juveniles juveniles Voucher Immature and/or damaged
WEE-R-6-Snag WEE-S-MA WEE-S-MA WEE-S-MA WEE-S-MA WEE-S-MA	9/10/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015 8/28/2015	Arthropoda	Нехарода	Insecta	Perrygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Lepidoptera Lepidoptera Megaloptera Tubificida Rhynchobdellida Littorinimorpha Veneroida Amphipoda Trichoptera Diptera Diptera	Heptageniidae Leptohyphidae Leptoreidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Philopotamidae Elmidae Elmidae Chironomidae Crambidae Corabidae Corydalidae Naididae Thiaridae Corbiculidae Thiaridae Corbiculidae Dogielinotidae Hydroptilidae Lydroptilidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sibilinieatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelinis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Polypedilium scalaenum group Polypedilum comovictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Croydalus cornutus Tubificinae spp. Placobdella spp. Hydrobiidae spp. Melanoides tuberculata Corbicula spp. Hydrobiidae spp. Melanoides tuberculata Corbicula spp. Hydrobiidae spp. Hydrobiidae spp. Hydrobiidae spp. Hydrobiidae spp. Hydrobiidae spp. Polypedilum scalaenum group Dicrotendipes spp. Polypedilum scalaenum group	12 24 16 32 16 32 16 32 18 8 16 8 8 16 52 104 220 440 220 440 240 488 8 16 112 24 4 8 8 24 4 8 8 4 4 8 8 16 32 16 32 16 4 8 8 16 32 16 4 8 8 16 32 17 6 4 8 8 18 6 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8	juveniles juveniles Voucher Immature and/or damaged
WEE.R-G-Snag WEE.R	9/10/2015 8/28/2015 8/28/2015	Arthropoda	Нехарода	Insecta	Pterygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Uspiera Diptera Megaloptera Megaloptera Megaloptera Megaloptera Trichidoptera Megaloptera Trichidoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Heptageniidae Leptohyphidae Leptoeridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsididae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Corydalidae Naididae Glossiphoniidae Hydropiidae Thiaridae Corydalidae Orgielinotidae Corpiculidae Chironomidae Chironomidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphodes abilinineatus Trichoptera spp. Oceetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyle ossi Hydropsyle ossi Hydropsyle ossi Hydropsyle psp. Stenelmis spp. Stenelmis spp. Stenelmis spp. Stenelmis spp. Jenelmis spp. Jertophila santafealis Jenelmis spp. Jertophila santafealis Jenelmis spp. J	12 24 16 32 16 32 18 8 16 8 8 16 8 16 52 104 220 440 220 440 220 440 244 48 8 16 12 242 44 24 48 4 4 8 8 16 76 152 16 32 16 4 8 8 8 16 76 152 16 32 16 4 8 8 8 16 4 8 8 16 76 152 16 32 17 18 18 18 19 10 10 10 10 10 10 10 10 10 10 10 10 10	juveniles juveniles Voucher Immature and/or damaged
WEE.R-6-Snag WEE.R-M-S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA	9/10/2015 8/28/2015 8/28/2015	Arthropoda	Нехарода	Insecta	Plerygota	Ephemeroptera Ephemeroptera Ephemeroptera Tehemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Tubifolda Tubifolda Rhynchobdellida Littorinimorpha Veneroida Amphipoda Trichoptera Diptera Diptera Diptera Tubifolda Amphipoda Trichoptera Diptera	Heptageniidae Leptohyphidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crarabogonidae Veliidae Crarabidae Corydalidae Naididae Roissiphoniidae Hydroptiidae Thiaridae Corbiculidae Dogielinotidae Hydroptiidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sibilinieatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelimis spp. Microcylloepus spp. Chimarra spp. Stenelimis spp. Microcylloepus spp. Cladotamytarsus spp. Tanytarsus spp. Polypedilum condictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Corydalus cornutus Tubificinae spp. Placobdella spp. Hydrobiidae spp. Melanoides tuberculata Corbicula spp. Hyalella azteca sp. complex Owyethira spp. Polypelilum scalaenum group Dicrotendipes spp. Hyalella azteca sp. complex Owyethira spp. Polypelilum scalaenum group Dicrotendipes spp. Petnaenura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp.	12 24 16 32 16 32 16 32 18 8 16 8 8 16 52 104 220 440 220 440 240 488 8 15 12 24 24 48 4 8 8 16 76 152 16 32 16 32 16 4 8 8 16 52 16 32 26 64 28 8 1366 32 64 64 128	juveniles juveniles Voucher Immature and/or damaged
WEE.R-G-Snag WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA WEE.S-MA	9/10/2015 9/10/2	Arthropoda	Нехарода	Insecta	Perrygota Petrygota	Ephemeroptera Ephemeroptera Ephemeroptera Trichoptera Diptera Lepidoptera Megaloptera Trubificida Rhynchobdellida Littorinimorpha Veneroida Amphipoda Trichoptera Diptera	Heptageniidae Leptohyphidae Leptokyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsidae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crarabjogonidae Veilidae Cordulidae Roisidae Glossiphoniidae Hydropiidae Thiaridae Corbiculidae Dogielinotidae Hydroptilidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea splilineatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelmis spp. Microcylloepus spp. Cladotanytarsus spp. Tanytarsus spp. Tanytarsus spp. Polypedilum convictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Corydalus comutus Tubificinae spp. Placobdella spp. Hydrobiidae spp. Polypedilum conurus Tubificinae spp. Polypedilum scalaenum group Dicrotendipses spp. Polypedilum scalaenum group Dicrotendipses spp. Pentaneura spp. Pentaneura spp. Pertinotopus or Orthocladius Antichaeta spp.	12 24 16 32 16 32 16 32 16 8 16 8 16 8 16 52 104 220 440 220 440 240 488 8 16 112 24 4 8 8 4 4 8 8 6 16 12 6 8 16 13 6 8 16 14 8 8 16 15 16 16 32 16 16 32 16 16 32 16 17 16 32 16 18 8 16 18 8 16 19 10 10 10 10 10 10 10 10 10 10 10 10 10	juveniles juveniles Voucher Immature and/or damaged
WEE.R-G-Snag WEE-R-G-Snag WEE-S-MA WEE-S-MA WEE-S-MA WEE-S-MA WEE-S-MA WEE-S-MA WEE-S-MA	9/10/2015 9/10/2	Arthropoda	Нехарода	Insecta	Plerygota	Ephemeroptera Ephemeroptera Ephemeroptera Tehemeroptera Trichoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Tubifolda Tubifolda Rhynchobdellida Littorinimorpha Veneroida Amphipoda Trichoptera Diptera Diptera Diptera Tubifolda Amphipoda Trichoptera Diptera	Heptageniidae Leptohyphidae Leptohyphidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Crarabogonidae Veliidae Crarabidae Corydalidae Naididae Roissiphoniidae Hydroptiidae Thiaridae Corbiculidae Dogielinotidae Hydroptiidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Heptageniidae spp. Maccaffertium exiguum Tricorphotea sibilinieatus Trichoptera spp. Oecetis avara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Chimarra spp. Stenelimis spp. Microcylloepus spp. Chimarra spp. Stenelimis spp. Microcylloepus spp. Cladotamytarsus spp. Tanytarsus spp. Polypedilum condictum Cricotopus or Orthocladius Ceratopogonidae spp. Rhagovella choreutes Petrophila santafealis Corydalus cornutus Tubificinae spp. Placobdella spp. Hydrobiidae spp. Melanoides tuberculata Corbicula spp. Hyalella azteca sp. complex Owyethira spp. Polypelilum scalaenum group Dicrotendipes spp. Hyalella azteca sp. complex Owyethira spp. Polypelilum scalaenum group Dicrotendipes spp. Petnaenura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp. Pentaneura spp.	12 24 16 32 16 32 16 32 18 8 16 8 8 16 52 104 220 440 220 440 240 488 8 15 12 24 24 48 4 8 8 16 76 152 16 32 16 32 16 4 8 8 16 52 16 32 26 64 28 8 1366 32 64 64 128	juveniles Joueniles Voucher Immature and/or damaged

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Sample ID	Date Collected	Phylum	Subphylum	Class		Order	Family	Таха	Count	Abundance (Count/m²) Notes
WEE-S-Rock	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	265	
WEE-S-Rock	8/28/2015	Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	23	46
WEE-S-Rock	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Asellidae	Caecidotea spp.	5	10
WEE-S-Rock	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	281	562 vial tag says Hyalella sp.
WEE-S-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	,0	Diptera	Chironomidae	Cladotanytarsus spp.	2	4
WEE-S-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	16	
WEE-S-Rock	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	14	28
WEE-S-SAV	8/28/2015	Nemertea		Enopla		Hoplonemertea	Tetrastemmatidae	Prostoma spp.	2	4
WEE-S-SAV	8/28/2015	Mollusca		Gastropoda				Gastropoda spp.	2	4 no shell
WEE-S-SAV	8/28/2015	Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis	6	12
WEE-S-SAV	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	22	44
WEE-S-SAV	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	13	26
WEE-S-SAV	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	72	144
WEE-S-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Orthotrichia spp.	1	2
WEE-S-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	1	2
WEE-S-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	6	12
WEE-S-SAV	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	2	4
WEE-S-Sed-Dipnet	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	16	32 Immature and/or damaged
WEE-S-Sed-Dipnet	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	4	8
WEE-S-Sed-Dipnet	8/28/2015	Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella elongata	4	8
WEE-S-Sed-Dipnet	8/28/2015	Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella stagnalis	1	2
WEE-S-Sed-Dipnet	8/28/2015	Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis	3	6
WEE-S-Sed-Dipnet	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	352	704
WEE-S-Sed-Dipnet	8/28/2015	Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	71	142
WEE-S-Sed-Dipnet	8/28/2015	Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaeriidae spp.	1	2 juvenile and damaged
WEE-S-Sed-Dipnet	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	10	20
WEE-S-Sed-Dipnet	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Trichoptera	Leptoceridae	Oecetis sp. E	1	2
WEE-S-Sed-Dipnet	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera		Diptera spp.	1	2 pupa, no posterior end
WEE-S-Sed-Dipnet	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	33	66
WEE-S-Sed-Dipnet	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paracladopelma spp.	2	4
WEE-S-Sed-Ponar	8/28/2019	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	286	12435 Immature and/or damaged
WEE-S-Sed-Ponar	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	44	1913
WEE-S-Sed-Ponar	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naidinae spp.	3	130 No posterior end, either Nais or Dero species
WEE-S-Sed-Ponar	8/28/2015	Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero digitata	3	130
WEE-S-Sed-Ponar	8/28/2015	Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Helobdella elongata	2	87
WEE-S-Sed-Ponar	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	67	2913
WEE-S-Sed-Ponar	8/28/2015	Mollusca		Gastropoda	Caenogastropoda	,	Thiaridae	Melanoides spp.	8	348
WEE-S-Sed-Ponar	8/28/2015	Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaeriidae spp.	2	87
WEE-S-Sed-Ponar	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	3	130 vial tag says Hyallela sp.
WEE-S-Sed-Ponar	8/28/2015	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	3	130
WEE-S-Sed-Ponar	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironomidae spp.	2	87 pupa
WEE-S-Sed-Ponar	8/28/2015	Arthropoda	Hexapoda	Insecta	,,,	Diptera	Chironomidae	Cladotanytarsus spp.	2	87
WEE-S-Sed-Ponar	8/28/2015	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Dicrotendipes spp.	10	435

Table B-4. Chassahowitzka River Macroinvertebrate Taxa List

Phylum	Subphylum	Clare	Subclass	Order	Family	Taxa	Common Name (if available)	Motor	Reference Long-lived	Concitius	Tolorant	Tanutarrini C	ngor E0% Eiltoror	100% Filtoro	Enhamorantara	Trichoptera Primary FFG	Secondary FFG	Life Habi
Platyhelminthes	Juophyrum	Class .	ounciass	Oldel	railiny	Platyhelminthes spp.	flatworm	Notes	Reference Long-lived	0 0	0	0	0	0	0 0	0	Secondary FFG	Life riabi
Nemertea		Enopla			Tetrastemmatidae	Prostoma spp.	ribbon worm			0 0	1	0	0	0	0 0	0 Predator		
Nemertea		Enopla		Hoplonemertea		Kirsteueriella biocellata	ribbon worm	=Paranemertes cf. biocellatus		0 0		0	0	0	0 0	0	0.11. 611. 60	
Annelida Annelida				Canalipalpata Canalipalpata	Spionidae Spionidae	Spionidae spp. Dipolydora socialis	polychaete worm polychaete worm	=Polydora socialis	Blake, 1996	0 0		0	0	1	0 0	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder	+
Annelida				Canalipalpata		Boccardiella ligerica	polychaete worm	,		0 0	0	0	0	1	0 0	0 Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder	
Annelida				Aciculata		Laeonereis culveri	ragworm			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Predator	
Annelida Annelida			Palpata Oligochaeta	Canalipalpata Tubificida	Ampharetidae Naididae	Hobsonia florida Limnodriloidinae spp.	polychaete worm oligochaete worm	Subfamily		0 0	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder		+
Annelida						Tubificinae spp.	oligochaete worm	Subfamily		0 0	0	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		+
Annelida				Tubificida	Naididae	Limnodrilus hoffmeisteri	oligochaete worm			0 0	1	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Aulodrilus pigueti	oligochaete worm			0 0	0	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Annelida			Oligochaeta			Pristina leidyi	oligochaete worm			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Annelida Annelida			Oligochaeta Oligochaeta	Tubificida Tubificida	Naididae Naididae	Nais communis Nais pardalis	oligochaete worm oligochaete worm			0 0	1 1	0	0	0	0 0	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder		+
Annelida			Oligochaeta	Tubificida		Dero spp.	oligochaete worm			0 0	1	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		-
Annelida			Oligochaeta			Dero furcata	oligochaete worm			0 0	1	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Annelida						Dero pectinata	oligochaete worm			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Annelida			Oligochaeta	Tubificida		Dero nivea	oligochaete worm			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Annelida Annelida			Oligochaeta Oligochaeta	Tubificida Lumbriculida		Bratislavia unidentata Eclipidrilus palustris	oligochaete worm oligochaete worm			0 0		0	0	0	0 0	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder		
Annelida			Oligochaeta	Lumbriculida	Lumbriculidae	Lumbriculus cf. variegatus	oligochaete worm			0 0		0	0	0	0 0	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder		+
Annelida			Oligochaeta			Enchytraeidae spp.	oligochaete worm			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Annelida						Erpobdella punctata	leech			0 0		0	0	0	0 0	0 Predator		
Annelida Annelida			Hirudinida Hirudinida	Rhynchobdellida Rhynchobdellida		Glossiphoniidae spp. Helobdella elongata	leech leech	=Gloiobdella elongata	Siddall & Borda, 2002	0 0		0	0	0	0 0	0 Predator 0 Predator		-
Mollusca				Hygrophila		Physella cubensis	Carib physa	=Physa/Haitia cubensis	Siddali & Borda, 2002	0 0	_	0	0	0	0 0	0 Scraper		+-
Mollusca				Hygrophila		Planorbella scalaris	mesa rams-horn	pany		0 0		0	0	0	0 0	0 Scraper		1
Mollusca		Gastropoda (Littorinimorpha		Hydrobiidae spp.	mud snail			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Mollusca		Bivalvia				Bivalvia spp.	bivalve			0 0	0	0	0	0	1 0	0 Collector-Filterer/Suspension Feeder		+
Mollusca Mollusca				Veneroida Veneroida	Sphaeriidae Sphaeriidae	Sphaeriidae spp. Musculium spp.	peaclam peaclam		+	0 0	0	0	0	0	1 0	Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder	+	+
						Leptocheliidae spp.	tanaid			0 0		0	0	0	0 0	Collector-Filterer/Suspension Feeder Collector-Gatherer/Deposit Feeder	1	+
Arthropoda		Malacostraca		Tanaidacea	Leptocheliidae	Hargeria rapax	tanaid	males		0 0	0	0	0	0	1 0	0 Collector-Filterer/Suspension Feeder		
Arthropoda		Malacostraca I		Tanaidacea	Tanaidae	Sinelobus stanfordi	tanaid			0 0		0	0	0	0 0	0 Browser-Grazer		
Arthropoda		Malacostraca I		Isopoda		Asellota spp.	isopod	Suborder		0 0		0	0	0	0 0	0 Browser-Grazer	1	+
Arthropoda Arthropoda		Malacostraca I		Isopoda Isopoda	Anthuridae Sphaeromatidae	Cyathura polita Cassidinidea ovalis	isopod	+		0 0		0	0	0	0 0	0 Browser-Grazer 0 Shredder	+	+-
Arthropoda		Malacostraca I		Isopoda Isopoda		Sphaeroma spp.	isopod isopod		<u> </u>	0 0		0	0	0	0 0	0 Browser-Grazer	<u> </u>	+-
Arthropoda	Crustacea	Malacostraca I	Eumalacostraca	Isopoda	Asellidae	Caecidotea spp.	isopod			0 1	. 0	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
Arthropoda		Malacostraca I	Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	isopod			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		
		Malacostraca I		Isopoda Amphipada		Edotia triloba	isopod	=Edotea		0 0		0	0	0	0 0	Collector-Gatherer/Deposit Feeder Requests Grayon	+	+
Arthropoda Arthropoda		Malacostraca I	umalacostraca umalacostraca	Amphipoda Amphipoda		Gammaridea spp. Gammarida spp.	amphipod amphipod	Suborder Marine Group	Barnard & Barnard, 1983; Lecroy, 2000	0 0		0	0	0	0 0	0 Browser-Grazer 0	+	+-
		Malacostraca I		Amphipoda	Gammaridae	Gammarus spp.	amphipod			0 0	0	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		_
Arthropoda	Crustacea	Malacostraca I		Amphipoda	Melitidae	Melita nitida complex	amphipod			0 0	0	0	0	0	0 0	0 Browser-Grazer		
Arthropoda		Malacostraca I		Amphipoda	Aoridae	Grandidierella bonnieroides	amphipod			0 0		0	0	0	0 0	0 Browser-Grazer		
		Malacostraca I		Amphipoda		Hourstonius laguna	amphipod	=Gitanopsis laguna		0 0	_	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		-
Arthropoda Arthropoda			umalacostraca umalacostraca	Amphipoda Amphipoda		Corophiidae spp. Apocorophium spp.	amphipod amphipod	=Corophium spp.		0 0		0	0	0	0 0	0 Collector-Filterer/Suspension Feeder 0 Collector-Gatherer/Deposit Feeder		
Arthropoda							amphipod	=Corophium Iouisianum		0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		_
Arthropoda			umalacostraca			Cerapus spp.	amphipod			0 0	0	0	0	0	1 0	0 Collector-Filterer/Suspension Feeder		
Arthropoda				Amphipoda	Corophiidae	Americorophium ellisi	amphipod	=Corophium ellisi		0 0	0	0	0	0	1 0	0 Collector-Gatherer/Deposit Feeder		
		Malacostraca I		Amphipoda Amphipoda	Corophiidae Talitridae	Americorophium sp. A Talitridae spp.	amphipod sandhopper		of LeCroy, 2004	0 0		0	0	n	0 0	0 Collector-Gatherer/Deposit Feeder 0 Collector-Gatherer/Deposit Feeder	Shredder	-
Arthropoda		Malacostraca I				Hyalella azteca sp. complex	amphipod			0 0	0	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Shredder	
	Crustacea	Malacostraca I	umalacostraca	Decapoda		Decapoda spp.	decapod			1 0	0	0	0	0	0 0	0		
Arthropoda		Malacostraca				Palaemonetes spp.	decapod			1 0	0	0	0	0	0 0	0 Browser-Grazer		
Arthropoda Arthropoda		Malacostraca I				Americamysis spp. Taphromysis bowmani	mysid shrimp mysid shrimp	=Mysidopsis spp.		0 0	0	0	0	0	0 0	0 Collector-Filterer/Suspension Feeder		
	Hexapoda		umaiacostraca	Collembola	iviysidae	Collembola spp.	springtail			0 0		0	0	0	0 0	Collector-Filterer/Suspension Feeder Collector-Gatherer/Deposit Feeder		+-
	Hexapoda	Insecta	eterygota	Ephemeroptera	Caenidae	Caenis spp.	mayfly			0 0		0	0	0	0 1	0 Collector-Gatherer/Deposit Feeder	Scraper	Sprawler
	Hexapoda	Insecta I	eterygota	Ephemeroptera		Caenis diminuta	mayfly			0 0		0	0	0	0 1	0 Collector-Gatherer/Deposit Feeder	Scraper	Sprawler
Arthropoda			Pterygota	Ephemeroptera		Baetidae spp.	small minnow mayfly			0 0		0	0	0	0 1	0 Collector-Gatherer/Deposit Feeder	Scraper	Swimme
	Hexapoda Hexapoda		Pterygota Pterygota	Ephemeroptera Ephemeroptera	Baetidae Baetidae	Callibaetis spp. Callibaetis floridanus	mayfly mayfly			0 0		0	0	0	0 1	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder		Swimme Swimme
	Hexapoda					Acerpenna pygmaea	tiny blue-winged olive			0 1		0	0	0	0 1	0 Collector-Gatherer/Deposit Feeder		Swimme
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata		Zygoptera spp.	damselfly	Suborder		0 0		0	0	0	0 0	0 Predator		Climber
		Insecta I				Coenagrionidae spp.	narrow-winged damselfly			0 0		0	0	0	0 0	0 Predator	+	Climber
	Hexapoda Hexapoda	Insecta I	Pterygota Pterygota	Odonata Trichoptera	Coenagrionidae	Nehalennia minuta Trichoptera spp.	tropical sprite caddisfly		+	0 0		0	0	0	0 0	0 Predator	+	Climber
			Pterygota	Trichoptera	Polycentropodidae	Polycentropodidae spp.	tube-making caddisfly			0 0	0	0	1	1	0 0	1 Predator	Collector-Filterer/Suspension Feeder	Clinger
Arthropoda	Hexapoda	Insecta I	eterygota	Trichoptera	Polycentropodidae	Cernotina spp.	caddisfly			0 0		0	1	0	0 0	1 Predator		Clinger
	Hexapoda	Insecta I	eterygota			Leptoceridae spp.	long-horn caddisfly			0 0		0	0	0	0 0	1 Collector-Gatherer/Deposit Feeder	Shredder	Climber
				Trichoptera Trichoptera		Oecetis avara Nectopsyche spp.	caddisfly caddisfly			0 0		0	0	0	0	1 Predator 1 Collector-Gatherer/Deposit Feeder	Shredder Shredder	Climber
	Hexapoda		Pterygota Pterygota			Nectopsyche spp.	caddisfly			0 0		0	0	0	0 0	1 Collector-Gatherer/Deposit Feeder	Shredder	Climber
			Pterygota	Trichoptera	Leptoceridae	Triaenodes spp.	caddisfly			0 1	. 0	0	0	0	0 0	1 Shredder		Climber
Arthropoda	Hexapoda	Insecta I	Pterygota	Trichoptera	Hydropsychidae	Cheumatopsyche spp.	caddisfly			0 0		0	1	0	1 0	1 Collector-Filterer/Suspension Feeder		Clinger
	Hexapoda			Trichoptera		Hydropsyche rossi	caddisfly			0 1		0	1	D	0 0	1 0	+	Clinger
	Hexapoda Hexapoda			Trichoptera Trichoptera		Hydroptilidae spp. Orthotrichia spp.	micro caddisfly caddisfly		+	0 0		0	0	0	0 0	1 Piercer 1 Piercer	+	Clinger
Arthropoda			Pterygota	Trichoptera		Oxyethira spp.	caddisfly			0 0	0	0	0	0	0 0	1 Collector-Gatherer/Deposit Feeder	Piercer	Clinger
Arthropoda	Hexapoda	Insecta I	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	caddisfly			0 0		0	1	0	0 0	1 Piercer		Clinger
	Hexapoda				Philopotamidae	Chimarra spp.	little black caddis			0 1		0	1	0	1 0	1 Collector-Filterer/Suspension Feeder		Clinger
Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta I				Stenelmis spp. Microcylloenus spp.	beetle beetle	 		0 0	0	0	1	0	0 0	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Scraper	Clinger
			Pterygota Pterygota	Coleoptera Diptera		Microcylloepus spp. Diptera spp.	beetle two-winged fly		+	0 0	0	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Scraper	Clinger
Arthropoda	Hexapoda	Insecta	Pterygota			Chironomidae spp.	non-biting midge			0 0	0	0	ő	0	0 0	0		Burrowe
Arthropoda	Hexapoda	Insecta I	Pterygota	Diptera	Chironomidae	Tanypodinae spp.	two-winged fly	Subfamily		0 0	0	0	0	0	0 0	0		Sprawler
Arthropoda		Insecta	Pterygota	Diptera		Chironomus spp.	two-winged fly			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Shredder	Burrowe
	Hexapoda Hexapoda					Cladotanytarsus spp.	two-winged fly			0 0		1	0	1	0 0	Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder	Climber
				Diptera Diptera		Tanytarsus spp. Cryptochironomus spp.	two-winged fly two-winged fly		+	0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder 0 Predator	conector-rinterer/suspension Feeder	Sprawler
	Hexapoda						two-winged fly			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Shredder	Climber
Arthropoda	Hexapoda	Insecta I	Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	two-winged fly			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Shredder	Climber
Arthropoda	Hexapoda	Insecta I					two-winged fly			0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Shredder	Climber
						Procladius spp.	two-winged fly	-		0 0	_	0	1	0	1 0	Predator Collector-Filterer/Suspension Feeder	+	Sprawler
	Hexapoda Hexapoda					Rheotanytarsus spp. Ablabesmyla mallochi	two-winged fly two-winged fly			0 0		0	0	o l	0 0	0 Collector-Filterer/Suspension Feeder 0 Collector-Gatherer/Deposit Feeder	Predator	Clinger Sprawler
Arthropoda	Hexapoda	Insecta					two-winged fly	=Ablabesmyia rhamphe		0 0		0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder	Predator	Sprawler
	Hexapoda	Insecta I	Pterygota	Diptera	Chironomidae	Tribelos jucundum	two-winged fly		Epler, 2001	0 1	. 0	0	0	0	0 0	0 Collector-Gatherer/Deposit Feeder		Burrowe
			eterygota	Diptera	Chironomidae	Dicrotendipes spp.	two-winged fly	1		0 0	0	0	0	1	0	0 Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder	Burrowe
Arthropoda					China and '		accessorianced files									0 0-11	Callantes Filteres/C	D
Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda	Insecta I	eterygota	Diptera		Dicrotendipes lobus Paralauterborniella spp.	two-winged fly two-winged fly			0 0		0	0	1	0 0	0 Collector-Gatherer/Deposit Feeder 0 Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder	Burrow

Table B-4. Chassahowitzka River Macroinvertebrate Taxa List

	1	1	1		1	1		1							-	1			1		
Phylum	Subphylum		Subclass	Order	Family	Taxa	Common Name (if available)	Notes	Reference	Long-lived	Sensitive	Tolera	int Tanytarsi	ini Cli	inger 50% Filterer	100% Filterer	Ephemeroptera			Secondary FFG	Life Habit
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pentaneura spp.	two-winged fly)	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pentaneura inconspicua	two-winged fly			C)	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Stenochironomus spp.	two-winged fly			()	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder	Shredder	Burrower
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Pseudochironomus spp.	two-winged fly)	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Larsia spp.	two-winged fly			C)	0	1	0	0 0	0	0		Predator		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cladopelma spp.	two-winged fly			C)	0	1	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella spp.	two-winged fly			C)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Xestochironomus spp.	two-winged fly)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder	Shredder	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Nanocladius spp.	two-winged fly)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	two-winged fly)	0	0	1	0 1	0	0	0	Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Labrundinia spp.	two-winged fly)	0	0	0	0 0	0	0	0	Predator		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	two-winged fly		of FDEP)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder	Shredder	Clinger
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Beardius spp.	two-winged fly)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder	Scraper	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	biting midge)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae	Empididae spp.	dance-fly)	0	0	0	0 0	0	0	0	Predator		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Psychodidae	Psychodidae spp.	moth-fly)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ptychopteridae	Ptychopteridae spp.	phantom crane fly)	0	0	0	0 0	0	0	0	Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda	Hexapoda	Insecta	Pterygota	Heteroptera	Corixidae	Micronecta ludibunda	true bug)	0	0	0	0 0	0	0	0	Predator	Piercer	Swimmer
Arthropoda	Hexapoda	Insecta	Pterygota	Lepidoptera	Crambidae	Parapoynx spp.	moth)	0	1	0	0 0	0	0	0	Shredder		Climber
Arthropoda	Chelicerata	Arachnida				Acariformes spp.	mite	Superorder)	0	0	0	0 0	0	0	0	Predator		
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	Neumania spp.	mite)	0	0	0	0 0	0	0	0	Predator		
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	Koenikea spp.	mite)	0	0	0	0 0	0	0	0	Predator		
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Unionicolidae	Unionicola spp.	mite)	0	0	0	0 0	0	0	0	Predator		
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Lebertiidae	Lebertia spp.	mite)	1	0	0	0 0	0	0	0	Predator		
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Limnesiidae	Limnesia spp.	mite)	0	0	0	0 0	0	0	0	Predator		
Nematoda						Nematoda spp.	roundworm)	0	0	0	0 0	0	0	0			

Table B-5. Homorassa River Macroinvertebrate Taxa List

les s	Tes.		la i		T-		In .	la d				E00/ E71	Lance are			In	100 00 00
Phylum Subphylum Cnidaria	Anthozoa	Subclass	Order	Family	Taxa Anthozoa spp.	Common Name (if available) sea anemone	Notes	Reference Long-lived	Sensitive	Tolerant	Tanytarsini Cli	nger 50% Filter	o 100% Filterer Ephemer	O Trichoptera	Primary FFG Predator	Secondary FFG	Life Habit
Platyhelminthes					Platyhelminthes spp.	flatworm			0	0	0	0	0 0	0 0	0		1
Platyhelminthes	Rhabditophora		Polycladida		Acotylea spp.	flatworm	Suborder	Prudhoe, 1985	0	0	0	0	0 0	0 (0		
Annelida		Palpata	Canalipalpata	Spionidae	Boccardiella ligerica	polychaete worm		(0	0	0	0	1 0		Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder	
Annelida		Palpata	Aciculata	Nereididae	Laeonereis culveri	ragworm		(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Predator	
Annelida Annelida	Polychaeta Polychaeta	Palpata Palpata	Aciculata Canalipalpata	Nereididae Serpulidae	Stenoninereis martini Ficopomatus miamiensis	ragworm tubeworm		Wesenberg-Lund, 1958 (ten Hove & Weerdenburg, 1978 (0	0	0	0	0 0		D Piercer Collector-Filterer/Suspension Feeder		+
Annelida		Palpata	Canalipalpata	Serpulidae	Ficopomatus uschakovi	tubeworm		ten Hove & Weerdenburg, 1978 (0	0	0	0	0 0	0 0) Collector-ritterer/suspension reeder		+
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	oligochaete worm	=Tubificidae spp.	Erseus et al., 2008	0	0	0	0	0 0	0 (Collector-Gatherer/Deposit Feeder		
Annelida		Oligochaeta	Tubificida	Naididae	Limnodriloidinae spp.		Subfamily	(0		0	0	0 0		Collector-Gatherer/Deposit Feeder		
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	oligochaete worm	Subfamily	(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	oligochaete worm			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		+
Annelida Annelida	Clitellata	Oligochaeta Oligochaeta	Tubificida Tubificida	Naididae Naididae	Psammoryctides convolutus Naidinae spp.	oligochaete worm oligochaete worm	Subfamily		0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder		+
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	oligochaete worm	Subrumny		0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		+
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Dero spp.	oligochaete worm		(0	1	0	0	0 0	0 (Collector-Gatherer/Deposit Feeder		
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Dero pectinata	oligochaete worm		(0	1	0	0	0 0	0 (Collector-Gatherer/Deposit Feeder		
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Dero nivea	oligochaete worm		(0	1	0	0	0 0		Collector-Gatherer/Deposit Feeder		
Annelida	Clitellata	Oligochaeta	Tubificida	Naididae	Bratislavia unidentata	oligochaete worm			0	1 0	0	0	0 0		Collector-Gatherer/Deposit Feeder		+
Annelida Annelida	Clitellata	Oligochaeta Oligochaeta	Tubificida Tubificida	Naididae Naididae	Slavina appendiculata Haemonais waldvogeli	oligochaete worm oligochaete worm			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder		+
Annelida	Clitellata	Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella punctata	leech			0	0	0	0	0 0		Predator		+
Annelida		Hirudinida	Arhynchobdellida	Erpobdellidae	Erpobdella tetragon	leech		(0	0	0	0	0 0		Predator		
Annelida		Branchiobdellida		Branchiobdellidae	Branchiobdellidae spp.	crayfish worm		(0	0	0	0	0 0		Predator		
Mollusca	Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	freshwater snail	=Elimia floridensis	Dillon, 2011 (0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Scraper	+
Mollusca Mollusca	Gastropoda Gastropoda	Heterobranchia Heterobranchia	Hygrophila Hygrophila	Physidae Planorbidae	Physella cubensis Planorbella scalaris	Carib physa mesa rams-horn	=Physa/Haitia cubensis		0	1	0	0	0 0		O Scraper O Scraper		+
Mollusca	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	mud snail			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		+
Mollusca	Gastropoda	Caenogastropoda		Hydrobiidae	Pyrgophorus platyrachis	serrate crownsnail			0	1	0	0	0 0		Collector-Gatherer/Deposit Feeder	Scraper	+-
Mollusca	Bivalvia				Bivalvia spp.	bivalve			0	0	0	0	0 1	0 (Collector-Filterer/Suspension Feeder		
Mollusca	Bivalvia	Pteriomorphia	Mytiloida	Mytilidae	Brachidontes exustus	scorched mussel	=Branchidontes exustus	(0	0	0	0	0 1		Collector-Filterer/Suspension Feeder		4
Mollusca		Heterodonta	Veneroida	Dreissenidae		dark falsemussel			0		0	0	0 1		Collector-Filterer/Suspension Feeder		+
Mollusca Mollusca	Bivalvia Bivalvia	Heterodonta Heterodonta	Veneroida Veneroida	Corbiculidae Sphaeriidae	Polymesoda caroliniana Sphaeriidae spp.	Carolina marshclam			0	0	0	0	0 1		Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder		+
Mollusca	Bivalvia	Heterodonta	Veneroida	Sphaeriidae Sphaeriidae	Spnaeriidae spp. Musculium spp.	peaclam peaclam			0	0	0	0	0 1		Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder	1	+
	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Leptocheliidae spp.	tanaid			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		+-
Arthropoda Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Leptocheliidae	Hargeria rapax	tanaid	males		0	0	0	0	0 1	0 (Collector-Filterer/Suspension Feeder		
	Malacostraca	Eumalacostraca	Tanaidacea	Parapseudidae	Halmyrapseudes cf. bahamensis	tanaid	,	Heard et al., 2003	0	0	0	0	0 1		Collector-Filterer/Suspension Feeder		
		Eumalacostraca	Tanaidacea	Tanaidae	Sinelobus stanfordi	tanaid		(0	0	0	0	0 0		Browser-Grazer	1	+
	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Cumacea	Nannastacidae	Almyracuma bacescui Flabellifera spp.	cumacean isopod	=Almyracuma proximoculi Suborder		0	0	0	0	0 1		Collector-Filterer/Suspension Feeder Browser-Grazer		+
	Malacostraca	Eumalacostraca	Isopoda	Anthuridae	Cyathura polita	isopod	Juddiuei		0	0	0	0	0 0		D Browser-Grazer D Browser-Grazer	1	+
	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeromatidae spp.	isopod			0	0	0	0	0 0		D Browser-Grazer		+
	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Cassidinidea ovalis	isopod		(0	0	0	0	0 0	0 (Shredder		
	Malacostraca	Eumalacostraca	Isopoda	Sphaeromatidae	Sphaeroma spp.	isopod		(0	0	0	0	0 0		Browser-Grazer		
		Eumalacostraca	Isopoda	Munnidae	Uromunna reynoldsi	isopod		(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		
Arthropoda Crustacea		Eumalacostraca	Isopoda	Idoteidae	Edotia triloba	isopod	=Edotea Suborder		0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		+
		Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Gammaridae	Gammaridea spp. Gammarus spp.	amphipod amphipod	Suborder		0	0	0	0	0 0		D Browser-Grazer Collector-Gatherer/Deposit Feeder		+
		Eumalacostraca	Amphipoda	Melitidae	Melita nitida complex	amphipod			0	0	0	0	0 0		D Browser-Grazer		+
	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	Grandidierella bonnieroides	amphipod			0	0	0	0	0 0		Browser-Grazer		_
Arthropoda Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Amphilochidae	Hourstonius laguna	amphipod	=Gitanopsis laguna	(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		
Arthropoda Crustacea		Eumalacostraca	Amphipoda	Corophiidae	Corophiidae spp.	amphipod		(0	0	0	0	0 1	0 (Collector-Filterer/Suspension Feeder		
	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Apocorophium spp.		=Corophium spp.	(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		
	Malacostraca Malacostraca	Eumalacostraca	Amphipoda	Corophildae	Apocorophium Iouisianum	amphipod	=Corophium louisianum		0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder		+
		Eumalacostraca Eumalacostraca	Amphipoda Amphipoda	Ischyroceridae Corophiidae	Cerapus spp. Americorophium ellisi	amphipod amphipod	=Corophium ellisi		0	0	0	0	0 1		Collector-Filterer/Suspension Feeder		
		Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	amphipod			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Shredder	_
	Malacostraca	Eumalacostraca	Decapoda		Xanthoidea spp.	mud crab	Superfamily	1	0	0	0	0	0 0	0 (
		Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	decapod		1	0	0	0	0	0 0		Browser-Grazer		
	Malacostraca	Eumalacostraca	Decapoda	Panopeidae	Rhithropanopeus harrisii	Zuiderzee crab		1	0	0	0	0	0 0		Predator		
	Malacostraca	Eumalacostraca	Mysida	M. alda a	Mysida spp.	mysid shrimp	AA aldaasis saa		0	0	0	0	0 1	0 0	Collector-Filterer/Suspension Feeder		+
Arthropoda Crustacea Arthropoda Crustacea	Malacostraca Malacostraca	Eumalacostraca Eumalacostraca	Mysida Mysida	Mysidae Mysidae	Americamysis spp. Taphromysis bowmani	mysid shrimp mysid shrimp	=Mysidopsis spp.		0	0	0	0	0 0	0 1	Collector-Filterer/Suspension Feeder		
	Maxillopoda	Thecostraca	Sessilia	Balanidae	Amphibalanus spp.	sessile barnacle	=Balanus spp.	Pitombo, 2004	0	0	0	0	0 1		Collector-Filterer/Suspension Feeder		_
Arthropoda Hexapoda			Collembola		Collembola spp.	springtail		(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		
Arthropoda Hexapoda	Insecta	Pterygota	Ephemeroptera	1	Ephemeroptera spp.	mayfly		(0	0	0	0	0 0	1 (
Arthropoda Hexapoda		Pterygota	Ephemeroptera	Caenidae	Caenis spp.	mayfly			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Scraper	Sprawler
Arthropoda Hexapoda Arthropoda Hexapoda		Pterygota	Ephemeroptera	Caenidae Baetidae	Caenis diminuta Baetidae spp.	mayfly small minnow mayfly			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Scraper Scraper	Sprawler
Arthropoda Hexapoda Arthropoda Hexapoda		Pterygota Pterygota	Ephemeroptera Ephemeroptera	Baetidae	Callibaetis floridanus	mayfly			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Scraper	Swimmer
Arthropoda Hexapoda		Pterygota	Ephemeroptera	Leptohyphidae	Tricorythodes albilineatus	mayfly			1	0	0	0	0 0		Collector-Gatherer/Deposit Feeder		Sprawler
Arthropoda Hexapoda		Pterygota	Odonata	Coenagrionidae	Coenagrionidae spp.	narrow-winged damselfly			0	0	0	0	0 0	0 (Predator		Climber
Arthropoda Hexapoda		Pterygota	Odonata	Coenagrionidae	Argia spp.	dancer		(0	0	0	0	0 0		Predator		Climber
Arthropoda Hexapoda		Pterygota	Odonata	Libellulidae	Libellulidae spp.	common skimmer		(0	0	0	0	0 0		Predator		Sprawler
Arthropoda Hexapoda		Pterygota	Trichoptera	Leptoceridae	Oecetis spp. Oecetis sp. E	caddisfly caddisfly		of Floyd, 1994	0	0	0	0	0 0		1 Predator 1 Predator	Shredder Shredder	Climber
Arthropoda Hexapoda Arthropoda Hexapoda		Pterygota Pterygota	Trichoptera Trichoptera	Leptoceridae Hydropsychidae	Oecetis sp. E Hydropsyche rossi	caddisfly		oi rioyd, 1994 (1	0	0	1	0 0	0	rieudtur	Simedider	Climber
Arthropoda Hexapoda		Pterygota	Trichoptera	Hydroptilidae	Hydroptilidae spp.	micro caddisfly			0	0	0	0	0 0	0	1 Piercer		Clinger
Arthropoda Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Oxyethira spp.	caddisfly			0	0	0	0	0 0		1 Collector-Gatherer/Deposit Feeder	Piercer	Climber
Arthropoda Hexapoda	Insecta	Pterygota	Trichoptera	Hydroptilidae	Hydroptila spp.	caddisfly		(0	0	0	1	0 0	0	1 Piercer		Clinger
Arthropoda Hexapoda		Pterygota	Coleoptera	Elmidae	Stenelmis spp.	beetle		(0	0	0	1	0 0	0 (Collector-Gatherer/Deposit Feeder	Scraper	Clinger
		Pterygota	Diptera	er i	Diptera spp.	two-winged fly		(0	0	0	0	0 0	0 0			
Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae Chironomidae	Chironomidae spp.	non-biting midge			0	0	0	0	0 0	0 0	Collector Cathoros (Caracit Face)	Shredder	Burrower
Arthropoda Hexapoda Arthropoda Hexapoda	Insecta	Pterygota Pterygota	Diptera Diptera	Chironomidae	Chironomus spp. Cladotanytarsus spp.	two-winged fly two-winged fly			0	0	1	0	1 0		Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Shredder Collector-Filterer/Suspension Feeder	Burrower
Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae	Tanytarsus spp.	two-winged fly			0	0	1	0	1 0		Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder	Climber
Arthropoda Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cryptochironomus spp.	two-winged fly			0	1	0	0	0 0	0 (Predator		Sprawler
Arthropoda Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Polypedilum spp.	two-winged fly		(0	0	0	0	0 0	0 (Collector-Gatherer/Deposit Feeder	Shredder	Climber
Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae	Polypedilum halterale group	two-winged fly		(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Shredder	Climber
Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae	Polypedilum scalaenum group	two-winged fly			0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Shredder	Climber
Arthropoda Hexapoda Arthropoda Hexapoda		Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Polypedilum illinoense group Procladius spp.	two-winged fly two-winged fly			0	0	0	0	0 0	0 1	Collector-Gatherer/Deposit Feeder Predator	Shredder	Climber Sprawler
		Pterygota	Diptera	Chironomidae	Rheotanytarsus spp.	two-winged fly			0			1	0 1		Collector-Filterer/Suspension Feeder	1	Clinger
Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae	Glyptotendipes spp.	two-winged fly			0	1	0	0	0 0		Collector-Gatherer/Deposit Feeder	Shredder	Burrower
Arthropoda Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyia mallochi	two-winged fly		(0	0	0	0	0 0	0 (Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Ablabesmyla rhamphe group	two-winged fly	=Ablabesmyia rhamphe	(0	0	0	0	0 0	0 (Collector-Gatherer/Deposit Feeder	Predator	Sprawler
		Pterygota	Diptera	Chironomidae	Ablabesmyia (Karelia) peleensis	two-winged fly		(0	0	0	0	0 0		Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae	Tanypus neopunctipennis	two-winged fly			0	1	0	0	0 0		Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae	Tribelos fuscicorne Dicrotendines son	two-winged fly			0	0	0	0	1 0		Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder	Burrower
		Pterygota Pterygota	Diptera Diptera	Chironomidae Chironomidae	Dicrotendipes spp. Paralauterborniella spp.	two-winged fly two-winged fly			0	0	0	1	0 0	0	Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda Hexapoda Arthropoda Hexapoda	Insecta					Paralauterborniellan chironomid	1		1 0	,	-		al - ā			+	Clinger
Arthropoda Hexapoda Arthropoda Hexapoda Arthropoda Hexapoda		Pterygota	Diptera	Chironomidae	Paralauterborniella nigrohalteralis	r ai aiau tei boi illellali Cilli Ollollilu			0	U	U	1	0 0	U	Collector-Gatherer/Deposit Feeder		
Arthropoda Hexapoda Arthropoda Hexapoda Arthropoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Diptera	Chironomidae	Stenochironomus spp.	two-winged fly			0	0	0	0	0 0	0 (Collector-Gatherer/Deposit Feeder	Shredder	Burrower
Arthropoda Hexapoda Arthropoda Hexapoda	Insecta Insecta	Pterygota		Chironomidae				(0		0	0	0 0	0 (Shredder	

Table B-S. Homosassa River Macroinvertebrate Taxa List

Phylum	Subphylum	Class	Subclass	Order	Family	Taxa	Common Name (if available)	Notes	Reference	Long-lived	Sensitive	Tolerant T	anytarsini	Clinger	50% Filterer	100% Filterer	Ephemeroptera	Trichoptera	Primary FFG	Secondary FFG	Life Habit
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Larsia spp.	two-winged fly			0	C	1	0	0	0		- 1	0 0	Predator		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Thienemanniella spp.	two-winged fly			0	C	0	0	0	0		- 1	0 0	Collector-Gatherer/Deposit Feeder		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Nanocladius spp.	two-winged fly			0		0	0	0	0	C	-	0 0	Collector-Gatherer/Deposit Feeder		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Apedilum spp.	two-winged fly			0	C	0	0	0	0		- 1	0 0	Collector-Gatherer/Deposit Feeder		T
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus spp.	two-winged fly			0		0	1	0	1	C	-	0 0	Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paratanytarsus longistylus	two-winged fly			0		0	1	0	1			0 0	Collector-Gatherer/Deposit Feeder	Collector-Filterer/Suspension Feeder	Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Labrundinia spp.	two-winged fly			0		0	0	0	0	C	-	0 0	Predator		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Paramerina spp.	two-winged fly			0	0	0	0	0	0	0		0 0	Predator		Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Cricotopus or Orthocladius	two-winged fly		of FDEP	0	C	0	0	0	0		- 1	0 0	Collector-Gatherer/Deposit Feeder	Shredder	Clinger
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Beardius spp.	two-winged fly			0		0	0	0	0	C	-	0 0	Collector-Gatherer/Deposit Feeder	Scraper	
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Ceratopogonidae	Ceratopogonidae spp.	biting midge			0	C	0	0	0	0		- 1	0 0	Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Psychodidae	Psychodidae spp.	moth-fly			0		0	0	0	0	C	-	0 0	Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda	Hexapoda	Insecta	Pterygota	Neuroptera	Sisyridae	Sisyra apicalis	lacewing			0	C	0	0	0	0		- 1	0 0	Predator		T
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Pionidae	Piona spp.	mite			0		0	0	0	0	C	-	0 0	Predator		
Nematoda						Nematoda spp.	roundworm			0		0	0	0	0		-	0 0			T

Phylum Platyhelminthes Nemertea	Subphylum		Subclass	Order	Family	Taxa	Common Name (if available)	Notes	Reference	Long-lived Sensiti	ive Tolerant	Tanytarsini (Clinger 50% Filter	er 100% Filter					Life Habit
		Ciuss	Subciuss	o.uc.		Platyhelminthes spp.	flatworm	Notes	Neierenee	0	0 0	0	0	0	0	0 0	· · · · · · · · · · · · · · · · · · ·	Secondary FFG	Liic Hubit
		Enopla		Hoplonemertea	Tetrastemmatidae		ribbon worm			0	0 1	0	0	0	0	0 0	Predator		_
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naididae spp.	oligochaete worm	=Tubificidae spp.	Erseus et al., 2008	0	0 0	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Tubificinae spp.	oligochaete worm	Subfamily	,	0	0 0	0	0	0	0		Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Limnodrilus hoffmeisteri	oligochaete worm	·		0	0 1	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Aulodrilus pigueti	oligochaete worm			0	0 0	0	0	0	0		Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Naidinae spp.	oligochaete worm	Subfamily		0	0 0	0	0	0	0		Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Pristina leidyi	oligochaete worm			0	0 0	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais pardalis	oligochaete worm			0	0 1	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais pseudobtusa	oligochaete worm			0	0 0	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Nais magnaseta	oligochaete worm			0	0 0	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero digitata	oligochaete worm			0	0 1	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Dero furcata	oligochaete worm			0	0 1	0	0	0	0		Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	Allonais inaequalis	oligochaete worm			0	0 0	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Lumbriculidae spp.	oligochaete worm			0	0 0	0	0	0	0		Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Eclipidrilus palustris	oligochaete worm			0	0 0	0	0	0	0		Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Oligochaeta	Lumbriculida	Lumbriculidae	Lumbriculus cf. variegatus	oligochaete worm			0	0 1	0	0	0	0	0 0	Collector-Gatherer/Deposit Feeder		
Annelida		Clitellata	Hirudinida		Glossiphoniidae	Glossiphoniidae spp.	leech			0	0 1	0	0	0	0		Predator		
Annelida		Clitellata	Hirudinida	Rhynchobdellida		Helobdella spp.	leech			0	0 1	0	0	0	0		Parasite		
Annelida		Clitellata	Hirudinida			Helobdella elongata	leech	=Gloiobdella elongata	Siddall & Borda, 2002	0	0 1	0	0	0	0		Predator		
Annelida		Clitellata	Hirudinida		Glossiphoniidae	Helobdella stagnalis	leech			0	0 1	0	0	0	0		Predator		
Annelida		Clitellata	Hirudinida	Rhynchobdellida	Glossiphoniidae	Placobdella spp.	leech			0	0 1	0	0	0	-		Parasite		
Mollusca		Gastropoda				Gastropoda spp.	gastropod			0	0 0	Ü	0	0			Scraper	_	
Mollusca		Gastropoda	Caenogastropoda		Pleuroceridae	Pleurocera floridensis	freshwater snail	=Elimia floridensis	Dillon, 2011	0	0 0	0	0	0	0		Collector-Gatherer/Deposit Feeder	Scraper	
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Ancylidae	Laevapex fuscus	dusky ancylid			0	0 1	0	0	0	0		Scraper		
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Physidae	Physella cubensis	Carib physa	=Physa/Haitia cubensis	-	0	0 1	0	0	U	-		Scraper		+
Mollusca		Gastropoda	Heterobranchia	Hygrophila	Planorbidae	Planorbella scalaris	mesa rams-horn			0	0 1	0	U	U	U		Scraper		+
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Hydrobiidae spp.	mud snail			0	0 0	0	0	U	U		Collector-Gatherer/Deposit Feeder	S	++
Mollusca		Gastropoda	Caenogastropoda	Littorinimorpha	Hydrobiidae	Notogillia wetherbyi	alligator siltsnail		-	0	0 0	0	0	U	-		Collector-Gatherer/Deposit Feeder	Scraper	+
Mollusca		Gastropoda	Caenogastropoda		Thiaridae	Melanoides spp.	thiarid	***		0	0 1	0	-	0	-		Scraper		+
Mollusca		Gastropoda	Caenogastropoda	1	Thiaridae	Melanoides tuberculata	red-rim melania	=Melanoides tuberculatus	-	0	0 1	0	0	U	U		Scraper		+
Mollusca		Gastropoda	Caenogastropoda	Managali	Ampullariidae	Pomacea paludosa	Florida apple snail		-	1	0 0	0	0	U	U		Scraper		+
Mollusca		Bivalvia	Heterodonta	Veneroida	Corbiculidae	Corbicula spp.	clam		-	1	0 0	0	0	U	1		Collector-Filterer/Suspension Feeder		+
Mollusca		Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaeriidae spp.	peaclam	1		0	0 0	0	0	0	1		Collector-Filterer/Suspension Feeder		++
Mollusca	_	Bivalvia	Heterodonta	Veneroida	Sphaeriidae	Sphaerium spp.	fingernail clam			0	0 0	0	0	0	1		Collector-Filterer/Suspension Feeder		+
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Asellidae	Caecidotea spp.	isopod		-	0	1 0	0	0	0	0		Collector-Gatherer/Deposit Feeder		+
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dogielinotidae	Hyalella azteca sp. complex	amphipod			0	0 0	0	0	0			Collector-Gatherer/Deposit Feeder	Shredder	+
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Palaemonidae	Palaemonetes spp.	decapod			1	0 0	0	0	0	0		Browser-Grazer		
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida		Mysida spp.	mysid shrimp			0	0 0	-	0	0	1	0	Collector-Filterer/Suspension Feeder		
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera		Ephemeroptera spp.	mayfly			0	0 0		0	0	0	1 0		_	
Arthropoda	Hexapoda		Pterygota		Baetidae	Baetidae spp.	small minnow mayfly			0	0 0		0	0	0		Collector-Gatherer/Deposit Feeder	Scraper	Swimmer
Arthropoda		Insecta	Pterygota	Ephemeroptera	Baetidae	Baetis intercalaris	mayfly			0	0 0		0	0	0		Collector-Gatherer/Deposit Feeder	Scraper	Swimmer
Arthropoda	Hexapoda		Pterygota	Ephemeroptera	Heptageniidae	Heptageniidae spp.	stream mayfly			0	1 0	0	1	0	0		Collector-Gatherer/Deposit Feeder	Scraper	Clinger
Arthropoda	Hexapoda		Pterygota	Ephemeroptera	Heptageniidae	Maccaffertium exiguum	mayfly			0	1 0	0	1	0	0		Collector-Gatherer/Deposit Feeder	Scraper	Clinger
Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera	Leptohyphidae	Tricorythodes albilineatus	mayfly			0	1 0	0	0	0	0		Collector-Gatherer/Deposit Feeder		Sprawler
Arthropoda		Insecta	Pterygota	Odonata	Gomphidae	Aphylla williamsoni	two-striped forceptail			0	0 0	0	0	0	0		Predator		Burrower
Arthropoda		Insecta	Pterygota														Predator		Sprawler
	Hexapoda			Odonata	Macromiidae	Macromia illinoiensis georgina	Georgia river cruiser			1	1 0	U	- U	U	U				
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata	Coenagrionidae	Coenagrionidae spp.	narrow-winged damselfly			0	0 0	Ü	0	0	-	0 0	Predator		Climber
Arthropoda Arthropoda	Hexapoda Hexapoda	Insecta Insecta	Pterygota Pterygota	Odonata Odonata	Coenagrionidae Coenagrionidae	Coenagrionidae spp. Argia spp.	narrow-winged damselfly dancer			0	0 0	-	0	0	-	0 0	Predator Predator		Climber Climber
Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta	Pterygota Pterygota Pterygota	Odonata Odonata Odonata	Coenagrionidae Coenagrionidae Coenagrionidae	Coenagrionidae spp. Argia spp. Argia sedula	narrow-winged damselfly dancer blue-ringed dancer				0 0 0		0 0	0	0	0 0	Predator Predator Predator		Climber Climber Climber
Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota	Odonata Odonata Odonata Odonata	Coenagrionidae Coenagrionidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer				0 0 0 1 0 0	0 0	0	0 0 0 0 0 0	0 0	0 0 0	Predator Predator		Climber Climber
Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly				0 0 0 1 0 0 0 0	0 0	0 0	0 0 0 0 0	0 0 0	0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator		Climber Climber Climber Sprawler
Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Odonata Odonata Odonata Odonata Trichoptera Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly			0 0 0 0	0 0 0 1 0 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 1	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder	Shredder	Climber Climber Climber Sprawler Climber
Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta Insecta	Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota Pterygota	Odonata Odonata Odonata Odonata Trichoptera Trichoptera Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly		of Floyd, 1994	0 0 0 0 0	0 0 0 1 0 0 0 0 0 0	0 0 0 0	0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 1 1	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator	Shredder	Climber Climber Sprawler Climber Climber Climber
Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta	Pterygota	Odonata Odonata Odonata Odonata Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis avara	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly		of Floyd, 1994	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator	Shredder Shredder	Climber Climber Sprawler Climber Climber Climber Climber Climber
Arthropoda	Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda Hexapoda	Insecta	Pterygota	Odonata Odonata Odonata Odonata Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Decetis sp. E Oecetis surra Nectopsyche pavida	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly caddisfly		of Floyd, 1994	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 1 1 1 0 0 1	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder	Climber Climber Sprawler Climber Climber Climber Climber Climber Climber
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata Odonata Odonata Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis avara Nectopsyche tavara Nectopsyche tavara	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly Tavares white miller caddisfly		of Floyd, 1994	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Shredder Shredder	Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climber
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae	Coenagrionidae spp. Argia spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis sp. E Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly ravares white miller caddisfly netspinning caddisfly netspinning caddisfly		of Floyd, 1994	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder	Shredder Shredder Shredder	Climber Climber Sprawler Climber
Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda Arthropoda	Hexapoda	Insecta	Pterygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis svara Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche sp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly Tavares white miller caddisfly netspinning caddisfly caddisfly		of Floyd, 1994	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder	Climber Climber Sprawler Climber Climper Climper
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Arthropoda	Hexapoda	Insecta	Pterygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Loenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Coecetis sp. E Oecetis savra Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche spp. Hydropsyche rossi Hydropsyche spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Ollector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gilleterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer	Shredder Shredder Shredder	Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Climper Climper Climger Clinger Clinger Clinger
Arthropoda	Hexapoda	Insecta	Pterygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsythidae	Coenagrionidae spp. Argia spp. Argia sepu. Argia sedua Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecettis sp. E Oecettis sp. E Oecettis sp. E Oecettis vara Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche sp. Hydroptilidae spp. Cyrhotrichia spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly readisfly readisfly caddisfly caddisfly caddisfly caddisfly metspinning caddisfly		of Floyd, 1994	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Predator Predator Predator-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Precer Piercer	Shredder Shredder Shredder Shredder	Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climber Climper Climger Clinger Clinger Clinger Clinger Clinger
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Arthropoda	Нехарода	Insecta	Pterygota	Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae	Coenagrionidae spp. Argia spp. Argia sepua Argia sedua Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecettis sp. E Oecettis sp. o Oecettis sp. o Orthorichia spp. Orthorichia spp. Orthorichia spp. Oyvethira spp. Hydroptilia spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly ravares white miller caddisfly netspinning caddisfly		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder	Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climger Clinger
Arthropoda	Нехарода	Insecta	Plerygota Pterygota	Odonata Odonata Odonata Odonata Todonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsylidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae	Coenagrionidae spp. Argia spp. Argia sepu. Argia sedula Lubellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. Oecetis sp. Oecetis sp. Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche spp. Hydroptilidae spp. Orytethia spp. Oyyethia spp. Nydroptila spp. Oyyethia spp. Nydroptila spp. Nydroptila spp. Neotrichia spp.	narrow-winged damselfly dancer blue-ringed dancer slary skimmer caddisfly long-horn caddisfly		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder	Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climper Climger Clinger
Arthropoda	Нехарода	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis savara Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyches pa- Hydropsyche sp. Hydropsyche sp. Orthortrichia spp. Overthira spp. Neotrichia spp. Neotrichia spp. Ochrotrichia spp. Ochrotrichia spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Scraper Scraper	Shredder Shredder Shredder Shredder	Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Climper Climger Clinger
Arthropoda	Нехарода	Insecta	Plerygota Pterygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsylidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae	Coenagrionidae spp. Argia spp. Argia spp. Argia sedua Libellula incesta Trichoptera spp. Leptoceridae spp. Cecetis sp. E Oecetis sp. E Oecetis sp. E Oecetis avia Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche spp. Hydropsidae spp. Chydropsidae spp. Oyvethia spp. Oyvethia spp. Oyvethia spp. Neotrichia spp. Ochrorichia spp. Ochrorichia spp. Chimarra spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly ravares white miller caddisfly netspinning caddisfly little black caddis		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder	Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climber Climper Climger Clinger
Arthropoda	Нехарода	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis savara Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropychidae spp. Cheumatopsyche sps. Hydropsyche rossi Hydropsyche spp. Hydropsyche spp. Orthortichia spp. Ochrotrichia spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly long-horn caddisfly caddisfly caddisfly caddisfly linter caddisfly caddisfly caddisfly caddisfly linter line caddisfly		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Gatherer/Deposit Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Suspension Feeder Scraper	Shredder Shredder Shredder Shredder Shredder Piercer	Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Clinger
Arthropoda	Нехарода	Insecta	Plerygota Pterygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae	Coenagrionidae spp. Argia spp. Argia sepua Argia sedua Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Decettis pp. E Decettis pp. C Decettis pp. Detropyche tavara Hydropyche tavara Hydropyche spp. Hydropyche spp. Dribotrichia spp. Dothotrichia spp. Detrotrichia spp. Dehrotrichia spp. Chimarra spp. Helicopsyche borealis Dubraphia spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly ravares white miller caddisfly netspinning caddisfly becaddisfly caddisfle caddisfle caddisfle caddisfle caddisfle becaddisfle caddisfle becaddisfle caddisfle caddisfle caddisfle becaddisfle caddisfle becaddisfle caddisfle becaddisfle caddisfle becaddisfle becad		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Scraper Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Scraper Collector-Filterer/Suspension Feeder Scraper Collector-Filterer/Suspension Feeder Scraper	Shredder Shredder Shredder Shredder Shredder Shredder Shredder Shredder Shredder	Climber Climber Sprawler Climber Sprawler Climber Climber Climber Climber Climber Climper Climger Clinger
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Arthropoda	Нехарода	Insecta	Plerrygota Piterygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Elmidae Elmidae Elmidae	Coenagrionidae spp. Argia sepul Argia sepul Libellula incesta Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis svara Nectopsyche pavida Nectopsyche tavara Hydropychidae spp. Cheumatopsyche spa. Hydropychidae spp. Orthortrichis spp. Ozyethira spp. Hydropiliae spp. Ozyethira spp. Neotrichia spp. Ochrotrichia spp. Chimarra spp. Helicopsyche borealis Dubiraphia spp. Steeleims spp. Helicopsyche borealis Dubiraphia spp. Steeleims spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly respinning caddisfly caddisfly caddisfly caddisfly caddisfly caddisfly caddisfly caddisfly caddisfly little black caddisfly little black caddisfly beetle beetle beetle		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gilterer/Suspension Feeder Collector-Filterer/Suspension Feeder Collector-Gatherer/Deposit Feeder Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Shredder Shredder Shredder	Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Climger Clinger
Arthropoda	Нехарода	Insecta	Plerrygota Piterygota	Odonata Odonata Odonata Odonata Odonata Trichoptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Lipeluceridae spp. Oecetis sp. E Oecetis sp. E Oecetis sp. E Oecetis savara Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropsychakae spp. Cheumatopsyche rossi Hydropsychakae spp. Orthortichia spp. Oyrehira spp. Hydroptila spp. Netrichia spp. Chriortichia spp. Chriortichia spp. Lellicipsyche borealis Dubiraphia spp. Stenelmis spp. Microcylicepus spp. Microcylicepus spp. Microcylicepus spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfle bette beette beette beette		of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Scraper Scraper	Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climper Climger Clinger
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Arthropoda	Нехароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera Diptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Elmidae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae	Coenagrionidae spp. Argia sepu. Argia sedul Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis savara Nectopsyche pavida Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsychespp. Hydropsycher ossi Hydropsycher ossi Hydropsycher ossi Hydropsychespp. Hydroptiliae spp. Orthorichia spp. Overthira spp. Nectorichia spp. Chimarra spp. Helicopsyche borealis Dubiraphia spp. Microcylioepus spp. Microcylioepus spp. Gyrinus spp. Diptera spp. Diptera spp. Diptera spp. Diptera spp. Diptera spp. Tarnyodinae spp. Tarnyodinae spp. Tarnyodinae spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly incro caddisfly caddisfly caddisfly caddisfly caddisfly intro caddisfly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Shredder Piercer Fiercer Scraper Scraper Scraper	Climber Climber Climber Sprawler Climber Glimber Climber Climber Climber Climber Climber Climper Climper Clinger
Arthropoda	Некароба	Insecta	Plerygota	Odonata Odonata Odonata Odonata Odonata Todonata Trichoptera Coleoptera Coleoptera Coleoptera Coleoptera Diptera Diptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropychidae Hydropychidae Hydropytlidae Hydropytlidae Hydroptlidae Gyrinidae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae	Coenagrionidae spp. Argia spp. Argia spp. Argia sedua Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Decettis sp. E Decettis sp. D Diptera sp. D Diptera sp. D Diptera sp. D Diptera sp. C Livinosimical sp. C Ladotamytarsus sp. C Ladotamytarsus sp. C	narrow-winged damselfly dancer blue-ringed dancer slary skimmer caddisfly long-horn caddisfly ca	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Scraper Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder	Climber Climber Climber Sprawler Sprawler Climber Climber Climber Climber Climber Climber Climger Clinger Swimmer Burrower Sprawler
Arthropoda	Нехароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Trichoptera Oloptera Coleoptera Coleoptera Coleoptera Diptera Diptera Diptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis savara Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche sps. Hydropsychidae spp. Ochorirchia spp. Orthorirchia spp. Ochorirchia spp. Ochorirchia spp. Ochorirchia spp. Ochorirchia spp. Diptara spp. Hidropylidae spp. Stenelmis spp. Microcylidepus spp. Microcylidepus spp. Ochromidae spp. Chionomidae spp. Chionomidae spp. Chionomidae spp. Chionomidae spp. Cladotanytarsus spp. Lanyadniae spp. Cladotanytarsus spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly tucediffly two-winged fly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Shredder Piercer Fiercer Scraper Scraper Scraper	Climber Climber Climber Sprawler Climber Glimber Climber Climber Climber Climber Climber Climper Climger Clinger Cling
Arthropoda	Нехарода	Insecta	Plerygota	Odonata Odonata Odonata Odonata Odonata Todonata Odonata Trichoptera Diptera Diptera Diptera Diptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropychidae Hydropychidae Hydropytlidae Elmidae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae	Coenagrionidae spp. Argia sepu. Argia sepu. Argia sedua Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Decettis sp. E Decettis sp. E Decettis avara Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropychidae spp. Cheumatopsyche sp. Hydropyche rossi Hydropytilae spp. Orthotrichia spp. Orthotrichia spp. Dydropsyche sp. Neotrichia spp. Lelicopsyche borealis Dubiraphia spp. Helicopsyche borealis Dubiraphia spp. Stenelmis spp. Microcylioepus spp. Gyrinus spp. Diptera spp. Chromomidae spp. Chromomidae spp. Chromomidae spp. Tanypodinae spp. Cadotarytarsus spp. Cadotarytarsus spp. Cadotarytarsus spp. Carytochironomus spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly caddisfly respinning caddisfly little black caddisfly tuo-winged fly two-winged fly two-winged fly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gilterer/Suspension Feeder Collector-Gilterer/Suspension Feeder Collector-Gilterer/Suspension Feeder Piercer Piercer Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Predator	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper	Climber Climber Climber Sprawler Sprawler Climber Climber Climber Climber Climber Climber Climber Climper Climper Clinger Sprawler Sprawler Clinger Swimmer
Arthropoda	Нехароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis savra Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Orthortichia spp. Orthortichia spp. Orthortichia spp. Orthortichia spp. Chimarra spp. Hydroptildae spp. Chimarra spp. Helicopsyche borealis Dubraphia spp. Stenelmis spp. Microcylicepus spp. Gyrinus spp. Diptera spp. Chronomidae spp. Tanypodinae spp. Tanypotinae spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly two-winged fly two-winged fly two-winged fly two-winged fly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder Shredder	Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Climper Clinger Sprawler Climber Sprawler Climber Cli
Arthropoda	Нехароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluiridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Elmidae Elmidae Elmidae Elmidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae Chironomidae	Coenagrionidae spp. Argia sedua Libellula incesta Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis svara Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyches pp. Hydropsyche rossi Hydropsyche spp. Hydropsyche spp. Orthortrichia spp. Orthortrichia spp. Orthortrichia spp. Hydropsyche possi Hydropsyche possi Hydropsyche spp. Hydropsyche borealis Dubirajahia spp. Stenelmis spp. Microcylloepus spp. Gyrinus spp. Diptera spp. Diptera spp. Chromomidae spp. Tanypodinae spp. Tanypodinae spp. Cadadanytarsus spp. Cryptochironomus spp. Pobypedilum scalaenum group	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly line beginning caddisfly caddisfly caddisfly incro caddisfly c	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper	Climber Climber Climber Sprawler Climber Glimber Climber Climber Climber Climber Climber Climber Climper Climper Clinger Climber Climber Climber Climber Climber Climber Climber Climber
Arthropoda	Нехароба	Insecta	Plerrygota Piterygota	Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libeliulidae Libeliulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Chironomidae	Coenagrionidae spp. Argia spp. Argia spp. Argia sedula Libelula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. D Oethorichia sp. Cheumatopsyche rossi Hydropsyche sps. Orthorichia sp. Orthorichia spp. Orthorichia spp. Helicopsyche borealis Dubraphia spp. Helicopsyche borealis Dubraphia spp. Microcylloepus spp. Gyrinus spp. Diptera spp. Chironomidae spp. Carlottorionomus spp. Tamyarsus spp. Tamyarsus spp. Tamyarsus spp. Tamyarsus spp. Tamyarsus spp. Tamyarsus spp. Tamydarsus spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly tuce beetle boetle boetle boetle two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Schedder Shredder Shredder Shredder Shredder	Climber Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Clinger Sprawler Limber Sprawler Climber Climber Climber Climber Climber Climber Climber Clinger Clinger Climber Climber Climber Clinger Clinger Climber Climber Climber Clinger Clinger Clinger Climber Climber Climber Climber Clinger Clinger Clinger
Arthropoda	Некароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Elmidae Elmidae Elmidae Elmidae Chironomidae	Coenagrionidae spp. Argia spp. Argia sedul Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis svara Nectopsyche pavida Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsychespp. Hydropsycher ossi Hydropsycher ossi Hydropsyche spp. Hydroptilae spp. Orthortrichia spp. Ovyethira spp. Hydroptila spp. Hedrichia spp. Chimarra spp. Helicopsyche borealis Dubiraphia spp. Stenelmis spp. Microcylicepus spp. Gyrinus spp. Diptera spp. Diptera spp. Tarnyodinae spp. Cadotanytarsus spp. Tanyadraus spp. Tanyadraus spp. Captochironomus spp. Polypedilum scalaenum group Polypedilum convictum Rheotanytarsus spp. Rhospydaenum convictum Rheotanytarsus spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly ca	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Scraper Scraper Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Shredder Predator	Climber Climber Climber Sprawler Climber Glimber Climber Climber Climber Climber Climber Climper Climger Clinger Swimmer
Arthropoda	Некароба	Insecta	Plerrygota	Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libeliulidae Libeliulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Chironomidae	Coenagrionidae spp. Argia spp. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. C Cheumatopsyche pavida Netropsyche svis Nydropsyche rossi Nydropsyche spp. Hydroptidae spp. Orthortichia spp. Othortichia spp. Ochrotrichia spp. Ochrotrichia spp. Ochrotrichia spp. Oethortichia spp. Oethortichia spp. Oethortichia spp. Stenelmis spp. Microcyloepus spp. Gyrinus spp. Oiptera spp. Chronomidae spp. Tanypodinae spp. Caladatanytarus spp. Tanypodinae spp. Caladatanytarus spp. Tanypodinae spp. Caladatanytarus spp. Tanypodinae spp. Caladatanytarus spp. Tanytarus spp. Polypedilum convictum Rebotanytarus spp. Abiabasemyla mallochi	narrow-winged damselfly dancer blue-ringed dancer slary skimmer caddisfly long-horn caddisfly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper	Climber Climper Clinger Sprawler Climber Climber Climber Climber Climber Climber Sprawler
Arthropoda	Нехарода	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Elmidae Elmidae Chrionomidae Chironomidae	Coenagrionidae spp. Argia spe. Argia spe. Argia sedula Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis sp. E Oecetis sp. B Oecetis sp. E Oecetis sp. E Oecetis svara Nectopsyche pavida Nectopsyche pavida Nectopsyche pavida Nectopsyche pavida Nectopsyche sp. Hydropsyche forssi Hydropsycher ossi Hydropsycher ossi Hydropsidae spp. Orthorichia spp. Orthorichia spp. Ochrotrichia spp. Ochr	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly two-display caddisfly caddisfly caddisfly caddisfly caddisfly caddisfly caddisfly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Suspension Feeder Collector-Gilterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder Shredder Predator Collector-Filterer/Suspension Feeder Predator	Climber Climber Climber Sprawler Climber Glimber Climber Climber Climber Climber Climber Climper Climger Clinger Syrawler Climber Climber Climber Climber Climber Climber Sprawler Climber Sprawler
Arthropoda	Некароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropytildae Elmidae Elmidae Elmidae Elmidae Elmidae Chironomidae	Coenagrionidae spp. Argia sep. Argia sedula Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis sura Nectopsyche pavida Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheumatopsyche spp. Hydropsychidae spp. Orthorichia spp. Orthorichia spp. Oyentrichia spp. Ochrotrichia spp. Ochrotrichia spp. Ochrotrichia spp. Netropsyche borealis Dubiraphia spp. Helicopsyche borealis Dubiraphia spp. Stenelmis spp. Microcylioepus spp. Seyrinus spp. Stenelmis spp. Ochrotrichia spp. Ochrotrichia spp. Ochrotrichia spp. Ochrotrichia spp. Tamyodinae spp. Cyrinus spp. Stenelmis spp. Tamyodinae spp. Cadatamytarsus spp. Tamyodinae spp. Cadatamytarsus spp. Tamyodinae spp. Cadatamytarsus spp. Tamyodinae spp. Cadatamytarsus spp. Polypedilum calaenum group Polypedilum convictum Rheotamytarsus spp. Polypedilum calaenum group	narrow-winged damselfly dancer blue-ringed dancer slary skimmer caddisfly long-horn caddisfly caddisfly caddisfly caddisfly ravers white miller caddisfly responsible to the caddisfly towelf caddisfly the black caddis speckled Peter beetle bee	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper	Climber Climber Climber Sprawler Sprawler Climber Climber Climber Climber Climber Climber Climber Climper Climper Climper Clinger Swimmer Sprawler Sprawler Burrower Sprawler Burrower Sprawler Burrower Sprawler Burrower Sprawler Burrower
Arthropoda	Нехароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libellulidae Libellulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Elmidae Elmidae Elmidae Chironomidae	Coenagrionidae spp. Argia spe. Argia spe. Argia sedula Libelulia incesta Libelulia incesta Libelulia incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis sp. E Oecetis avara Nectopsyche pavida Nectopsyche tavara Hydropsychidae spp. Cheunatopsyche spp. Hydropsychidae spp. Orthortichia spp. Orthortichia spp. Ozhortichia spp. Hydropilidae spp. Chimarra spp. Hydropilidae spp. Ochrotrichia spp. Debrotrichia spp. Stenelmis spp. Microcylicepus spp. Grimarra spp. Microcylicepus spp. Ojetra spp. Chimarra spp. Tanypodinae spp. Tanypodinae spp. Tanypodinae spp. Tanypodinae spp. Cyptochironomus spp. Polypedilum convictum Rheotanytarsus spp. Polypedilum convictum Rheotanytarsus spp. Ablabaennyia mallochi Dicrotendipes spp. Pentaneura spp. Stenochironomus spp. Paracalooplemia spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly tucedisfly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Collector-Gilterer/Suspension Feeder Piercer Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder Predator	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder Shredder Predator Collector-Filterer/Suspension Feeder Predator	Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Climper Climper Climper Clinger Sprawler Climber Climber Climber Climber Climber Sprawler Spraw
Arthropoda	Нехароба	Insecta	Plerrygota	Odonata Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Liptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Hydroptilidae Elmidae Elmidae Elmidae Elmidae Chironomidae	Coenagrionidae spp. Argia sepu. Argia sepu. Argia sedua Lubellula incesta Lubellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis sp. E Oecetis sp. E Oecetis svara Nectopsyche pavida Nectopsyche tavara Hydropychidae spp. Cheumatopsych spp. Hydropychidae spp. Orthortrichis spp. Orthortrichis spp. Orthortrichis spp. Orthortrichis spp. Ochrotrichia spp. Hydropylidae spp. Chimarra spp. Helicopsyche borealis Dubiraphia spp. Microcylioepus spp. Microcylioepus spp. Gyrinus spp. Diptera spp. Cyromomidae spp. Cladatanytarsus spp. Cladatanytarsus spp. Cryotochironomius spp. Pohypedilum convictum Rheotanytarsus spp. Cryotochironomius spp. Pohypedilum convictum Rheotanytarsus spp. Alabaesmyia mallochi Dicrotendipes spp. Pentaneura spp. Pentaneura spp. Pertaneura spp. Pertaneura spp. Paracloopelma spp. Sarenchironomus spp. Paracloopelma spp. Paracloopelma spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly lifte black caddisfly thous only caddisfly thous only caddisfly thous only caddisfly thuo-winged fly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder Shredder Predator Collector-Filterer/Suspension Feeder Predator	Climber Climber Climber Glimber Sprawler Climber Climber Climber Climber Climber Climber Climber Climber Climger Clinger Sprawler Sprawler Burrower Sprawler
Arthropoda	Некароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Oloeoptera Coleoptera Coleoptera Coleoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libeliulidae Libeliulidae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Elmidae Elmidae Chironomidae	Coenagrionidae spp. Argia spp. Argia sedula Libelulai nicesta Libelulai nicesta Libelulai nicesta Libelulai nicesta Libelulai nicesta Libelulai nicesta Lipelulai nicesta Lipelulai nicesta Lipelulai nicesta Lipelulai nicesta Nectopsyche spp. Leptoceridae spp. Oecetis sp. E Oecetis savra Nectopsyche pavida Nectopsyche tavara Hydropychidae spp. Cheunatopsyche spp. Hydropychidae spp. Orthortichia spp. Orthortichia spp. Orthortichia spp. Orthortichia spp. Helicopsyche borealis Dubraphia spp. Stenelmis spp. Microcylicepus spp. Gladotanytarsus spp. Liadotanytarsus spp. Lanytarsus spp. Lanytarsus spp. Lanytarsus spp. Lanytarsus spp. Cryptochironomus spp. Potypedilum convictum Rebeatnytarsus spp. Potypedilum convictum Rebeatnytarsus spp. Potypedilum convictum Rebeatnytarsus spp. Paracladopelulium convictum Rebeatnytarsus spp. Paracladopelulium convictum Rebeatnytarsus spp. Paracladopelum spp. Pertaneura spp. Stenochironomus spp. Peracladopelma spp. Corynoneura spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder Shredder Predator Collector-Filterer/Suspension Feeder Predator	Climber Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Climper Clinger Sprawler
Arthropoda	Нехароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Chironomidae	Coenagrionidae spp. Argia spe. Argia spe. Argia sedula Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Decettis sp. Decettis sp. Decettis sp. Decettis sp. Decettis avara Nectopsyche pavada Nectopsyche pavada Nectopsyche pavada Nectopsyche pavada Nectopsyche pavada Nectopsyche pavada Nectopsyche spp. Hydropsyche fep. Hydropsyche fep. Hydropsyche fep. Hydropsyche spp. Dribortichia spp. Orthortichia spp. Orthortichia spp. Detrotrichia spp. Hydroptilia spp. Hedrichia spp. Delirar spp. Hydroptilia spp. Stenelmis spp. Merocylloepus spp. Gyrinus spp. Diptera spp. Diptera spp. Tanypadinae spp. Claddanytarsus spp. Tanypadinae spp. Cryptochironomus spp. Polypedilum scalaenum group Polypedilum scalaenum group Polypedilum convictum Rheotanytarsus spp. Stenochironomus spp. Petanecira spp. Stenochironomus spp. Paracladopelma spp. Corynoneura spp. Stenochironomus spp. Paracladopelma spp. Corynoneura spp. Peradochironomus spp.	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly intro caddisfly titte black caddis speckled Peter beetle b	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder Shredder Predator Collector-Filterer/Suspension Feeder Predator	Climber Climber Climber Sprawler Climber Glimber Climber Climber Climber Climber Climber Climber Climger Clinger Swimmer Burrower Sprawler Climber Climber Sprawler Climber Sprawler Climber Sprawler
Arthropoda	Нехарода	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Drichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libeliulidae Libeliulidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Chironomidae	Coenagrionidae spp. Argia sep. Argia sedula Libelulai nicesta Lipeluceridae spp. Leptoceridae spp. Oecetis sp. E Nydropsyche tavara Hydropsyche savara Hydropsyche spp. Hydropsyche spp. Hydropsyche spp. Orthorichia spp. Orthorichia spp. Orthorichia spp. Ochrorichia spp. Helicopsyche borealis Dubraphia spp. Stenelmis spp. Helicopsyche borealis Dubraphia spp. Stenelmis spp. Ochrorichia spp. Chimarra spp. Hicrocylicepus spp. Gyrinus spp. Cryptochironomus spp. Tanypadinae spp. Cadatamytarsus spp. Tanypadinae spp. Cadatamytarsus spp. Tanypadinae spp. Cadatamytarsus spp. Tanytarsus spp. Tanytarsus spp. Tanytarsus spp. Stenochironomus spp. Pohyedilum convictum Pohyedilum convictum Pohyedilum scalaenum group Pohyedilum scalaenum group Pohyedilum scalaenum spp. Stenochironomus spp. Pentaneura spp. Paracladopelma spp. Corynoneura spp. Paracladopelma spp. Corynoneura spp. Thenemanniella spmli	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly two-winged fly	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Predator Predator Predator Predator Predator Predator Predator Predator Collector-Gatherer/Deposit Feeder Predator Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Collector-Filterer/Suspension Feeder Shredder Predator Collector-Filterer/Suspension Feeder Predator	Climber Climber Climber Climber Sprawler Climber Climber Climber Climber Climber Climber Climper Clinger Sprawler
Arthropoda	Нехароба	Insecta	Pierrygota	Odonata Odonata Odonata Odonata Odonata Odonata Odonata Trichoptera Diptera	Coenagrionidae Coenagrionidae Coenagrionidae Libelluidae Leptoceridae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydropsychidae Hydroptilidae Chironomidae	Coenagrionidae spp. Argia spel. Argia spp. Argia sedula Libellula incesta Libellula incesta Trichoptera spp. Leptoceridae spp. Oecetis sp. E Oecetis svara Nectopsyche pavida Nectopsyche pavida Nectopsyche pavida Nectopsyche pavida Nectopsyche spp. Hydropsyche fopp. Hydropsyche fopp. Hydropsyche fopp. Orthorichia spp. Orthorichia spp. Ochrotrichia spp. Ochrotrichia spp. Hydroptilia spp. Hydroptilia spp. Hydroptilia spp. Neotrichia spp. Ochrotrichia spp. Ochrotrichia spp. Chimara spp. Hydroptilia spp. Chimara spp. Hydroptilia spp. Chimara spp. Hicropyloepus spp. Ozyrimus spp. Diptera spp. Diptera spp. Cadotanytarsus spp. Tanyadinae spp. Cadotanytarsus spp. Cayptochironomus spp. Cryptochironomus spp. Potypedilium convictum Rheotanytarsus spp. Ablabesmyla mallochi Dicrotendipes spp. Pentaneura spp. Stenochironomus spp. Paracladopelma spp. Corynoneura spp. Stenochironomus spp. Thenemannielia smiii	narrow-winged damselfly dancer blue-ringed dancer slaty skimmer caddisfly long-horn caddisfly intro caddisfly titte black caddis speckled Peter beetle b	Subfamily	of Floyd, 1994	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Predator Collector-Gatherer/Deposit Feeder Collector-Gatherer/Deposit Feeder Collector-Filterer/Suspension Feeder Collector-Filterer/Suspension Feeder Piercer Piercer Piercer Collector-Gatherer/Deposit Feeder	Shredder Shredder Shredder Shredder Shredder Shredder Shredder Piercer Piercer Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Scraper Shredder	Climber Climber Climber Sprawler Climber Glimber Climber Climber Climber Climber Climber Climber Climger Clinger Swimmer Burrower Sprawler Climber Climber Sprawler Climber Sprawler Climber Sprawler

Table B-6. Weeki Wachee River Macroinvertebrate Taxa List

Phylum	Subphylum Class	Subclass	Order Family	/ Taxa	Common Name (if available)	Notes	Reference	Long-lived Sensi	tive Toler:	ant Tanyta	rsini Clinge	er 50% Filterer	100% Filterer	Enhemerontera	Trichonter	Primary FEG	Secondary FFG	Life Habit
Arthropoda	Hexapoda Insecta	Pterygota		nomidae Cricotopus or Orthocladius	two-winged fly		of FDEP	0	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder	Shredder	Clinger
Arthropoda	Hexapoda Insecta	Pterygota		opogonidae Ceratopogonidae spp.	biting midge			0	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder	Predator	Sprawler
Arthropoda	Hexapoda Insecta	Pterygota	Diptera Empid		dance-fly			0	0	0	0	0 0	0	0		Predator		Sprawler
Arthropoda	Hexapoda Insecta	Pterygota	Diptera Empid		two-winged fly			0	1	0	0	0 0	0	0		Predator		Sprawler
Arthropoda	Hexapoda Insecta	Pterygota		odidae Psychodidae spp.	moth-fly			0	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda	Hexapoda Insecta	Pterygota	Diptera Psycho		two-winged fly			0	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder		Burrower
Arthropoda	Hexapoda Insecta	Pterygota	Diptera Phorio		scuttle fly			0	0	0	0	0 0	0	0		Collector-Gatherer/Deposit Feeder	Predator	Burrower
Arthropoda	Hexapoda Insecta	Pterygota	Diptera Sciom	yzidae Antichaeta spp.	two-winged fly			0	0	0	0	0 0	0	0		Parasite	Predator	Burrower
Arthropoda	Hexapoda Insecta	Pterygota	Heteroptera	Heteroptera spp.	true bug			0	0	0	0	0 0	0	0				
Arthropoda	Hexapoda Insecta	Pterygota	Heteroptera Veliida	e Rhagovelia choreutes	true bug			0	0	0	0	0 0	0	0		Predator		Skater
Arthropoda	Hexapoda Insecta	Pterygota	Heteroptera Gerrid	ae Trepobates spp.	true bug			0	0	0	0	0 0	0	0		Predator		Skater
Arthropoda	Hexapoda Insecta	Pterygota	Lepidoptera Cramb	pidae Elophila spp.	moth			0	0	1	0	0 0	0	0		Shredder		Climber
Arthropoda	Hexapoda Insecta	Pterygota	Lepidoptera Cramb	pidae Petrophila santafealis	moth			0	0	1	0	1 0	0	0)		Clinger
Arthropoda	Hexapoda Insecta	Pterygota	Lepidoptera Cramb	pidae Parapoynx spp.	moth			0	0	1	0	0 0	0	0		Shredder		Climber
Arthropoda	Hexapoda Insecta	Pterygota	Megaloptera Coryd	alidae Corydalus cornutus	dobsonfly			1	0	0	0	0 0	0	0		Predator		Clinger
Arthropoda	Chelicerata Arachnida	Acari	Trombidiformes Krend	owskiidae Geayia spp.	mite			0	0	0	0	0 0	0	0		Parasite	Predator	
Arthropoda	Chelicerata Arachnida	Acari	Trombidiformes Krend	owskiidae Krendowskia spp.	mite			0	0	0	0	0 0	0	0		Predator		
Arthropoda	Chelicerata Arachnida	Acari	Trombidiformes Lebert	tiidae Lebertia spp.	mite			0	1	0	0	0 0	0	0		Predator		
Arthropoda	Chelicerata Arachnida	Acari	Trombidiformes Hygro	batidae Hygrobates spp.	mite			0	0	0	0	0 0	0	0		Predator		
Arthropoda	Chelicerata Arachnida	Acari	Trombidiformes Hygro	batidae Atractides spp.	mite			0	0	0	0	0 0	0	0		Predator		
Nematoda				Nematoda spp.	roundworm			0	0	0	0	0 0	0	0				

		Abundance (total # of	Margalef's Richness	Pielous Evenness	Shannons Diversity	Simpsons Diversity
	Richness (# of taxa)	individuals/m²)	Index	Index	Index	Index
Sample ID	S	N	d	J'	H'(loge)	1-Lambda'
CHA-S-1-Rock (2015-09-11)	18	102	3.68	0.87	2.52	0.90
CHA-S-1-SAV (2015-09-11)	21	198	3.78	0.70	2.13	0.78
CHA-S-1-Sed (2015-09-11)	10	565	1.42	0.96	2.20	0.88
CHA-S-1-Snag (2015-09-11)	21	174	3.88	0.72	2.18	0.78
CHA-S-2-MA (2015-09-11)	22	2896	2.63	0.58	1.80	0.74
CHA-S-2-Rock (2015-09-11)	25	10144	2.60	0.56	1.79	0.73
CHA-S-2-SAV (2015-09-11)	24	952	3.35	0.62	1.97	0.73
CHA-S-2-Sed (2015-09-11)	9	609	1.25	0.85	1.87	0.78
CHA-S-2-Snag (2015-09-11)	23	4016	2.65	0.51	1.61	0.59
CHA-R-1-MA (2015-09-11)	28	9760	2.94	0.65	2.15	0.79
CHA-R-1-SAV (2015-09-11)	19	11322	1.93	0.58	1.71	0.69
CHA-R-1-Sed (2015-09-11)	23	20826	2.21	0.61	1.93	0.75
CHA-R-1-Snag (2015-09-11)	19	4520	2.14	0.60	1.77	0.74
CHA-R-2-MA (2015-09-11)	20	7422	2.13	0.73	2.19	0.85
CHA-R-2-Rock (2015-09-11)	14	2912	1.63	0.47	1.23	0.52
CHA-R-2-SAV (2015-09-11)	29	2762	3.53	0.74	2.51	0.85
CHA-R-2-Sed (2015-09-11)	13	5391	1.40	0.64	1.65	0.66
CHA-R-2-Snag (2015-09-11)	14	9856	1.41	0.45	1.18	0.54
CHA-R-3-MA (2015-09-11)	18	19712	1.72	0.74	2.14	0.86
CHA-R-3-SAV (2015-09-11)	27	6100	2.98	0.76	2.49	0.88
CHA-R-3-Sed (2015-09-11)	18	34304	1.63	0.71	2.06	0.81
CHA-R-3-Snag (2015-09-11)	17	2288	2.07	0.63	1.80	0.76
CHA-R-4-MA (2015-09-11)	11	2120	1.31	0.23	0.55	0.21
CHA-R-4-Sed (2015-09-11)	1	43	0.00		0.00	0.00
CHA-R-4-Snag (2015-09-11)	21	652	3.09	0.70	2.14	0.80
CHA-R-5-Sed (2015-09-11)	6	2043	0.66	0.76	1.37	0.67
CHA-R-5-Snag (2015-09-11)	19	3544	2.20	0.69	2.04	0.83
CHA-R-6-Sed (2015-09-11)	6	783	0.75	0.90	1.61	0.77
CHA-R-6-Snag (2015-09-11)	16	17856	1.53	0.63	1.76	0.78
CHA-CRA-Rock (2015-09-10)	15	392	2.34	0.67	1.83	0.76
CHA-CRA-SAV (2015-09-10)	13	2436	1.54	0.63	1.61	0.74
CHA-CRA-Sed (2015-09-10)	16	12478	1.59	0.72	2.01	0.81
CHA-CRA-Snag (2015-09-10)	23	2464	2.82	0.62	1.95	0.79
CHA-POT-S-SAV (2015-09-10)	19	870	2.66	0.57	1.69	0.75
CHA-POT-S-Sed (2015-09-10)	2	174	0.19	1.00	0.69	0.50
CHA-POT-S-Snag (2015-09-10)	14	1076	1.86	0.47	1.24	0.49

		Abundance (total # of	Margalef's Richness	Pielous Evenness	Shannons Diversity	Simpsons Diversity
	Richness (# of taxa)	individuals/m²)	Index	Index	Index	Index
Sample ID	S	N	d	J'	H'(loge)	1-Lambda'
CHA-POT-1-SAV (2015-09-10)	22	2072	2.75	0.80	2.48	0.89
CHA-POT-1-Sed (2015-09-10)	6	3391	0.62	0.56	1.00	0.55
CHA-POT-1-Snag (2015-09-10)	25	1646	3.24	0.51	1.64	0.59
CHA-POT-2-SAV (2015-09-10)	17	1984	2.11	0.63	1.78	0.74
CHA-POT-2-Sed (2015-09-10)	8	1870	0.93	0.71	1.48	0.68
CHA-POT-2-Snag (2015-09-10)	19	732	2.73	0.49	1.45	0.53
CHA-POT-3-Sed (2015-09-10)	7	2609	0.76	0.96	1.87	0.84
CHA-POT-3-Snag (2015-09-10)	19	6672	2.04	0.42	1.24	0.50
HOM-S-Rock (2015-09-14)	10	2672	1.14	0.29	0.67	0.31
HOM-S-Sed (2015-09-14)	14	5957	1.50	0.71	1.86	0.78
HOM-S-Snag (2015-09-14)	12	232	2.02	0.54	1.34	0.57
HOM-R-1-MA (2015-09-15)	40	5094	4.57	0.64	2.37	0.82
HOM-R-1-Sed (2015-09-15)	18	9957	1.85	0.73	2.12	0.82
HOM-R-1-Snag (2015-09-15)	28	2176	3.51	0.57	1.91	0.74
HOM-R-2-Sed (2015-09-15)	21	4043	2.41	0.66	2.02	0.71
HOM-R-2-Snag (2015-09-15)	21	226	3.69	0.71	2.16	0.83
HOM-R-3-MA (2015-09-15)	15	1488	1.92	0.66	1.80	0.77
HOM-R-3-Sed (2015-09-15)	14	12174	1.38	0.74	1.95	0.83
HOM-R-3-Snag (2015-09-15)	21	4144	2.40	0.61	1.85	0.75
HOM-R-4-Sed (2015-09-15)	10	2130	1.17	0.72	1.66	0.72
HOM-R-4-Snag (2015-09-15)	25	356	4.09	0.62	2.01	0.75
HOM-R-5-Sed (2015-09-15)	12	5652	1.27	0.60	1.48	0.67
HOM-R-5-Snag (2015-09-15)	14	300	2.28	0.42	1.11	0.44
HOM-R-6-Sed (2015-09-15)	10	957	1.31	0.94	2.16	0.87
HOM-R-6-Snag (2015-09-15)	12	130	2.26	0.84	2.08	0.86
HOM-Sou-MA (2015-09-15)	25	2374	3.09	0.73	2.36	0.85
HOM-Sou-Rock (2015-09-15)	23	544	3.49	0.74	2.33	0.86
HOM-Sou-Sed (2015-09-15)	11	3130	1.24	0.78	1.87	0.80
HOM-Sou-Snag (2015-09-15)	16	152	2.99	0.83	2.29	0.87
HOM-HAL-S-MA (2015-09-14)	14	204	2.44	0.51	1.34	0.56
HOM-HAL-S-Rock (2015-09-14)	20	2880	2.39	0.60	1.80	0.75
HOM-HAL-S-Sed (2015-09-14)	11	4174	1.20	0.76	1.82	0.79
HOM-HAL-S-Snag (2015-09-14)	19	5408	2.09	0.59	1.72	0.74
HOM-HAL-1-MA (2015-09-14)	22	18192	2.14	0.68	2.11	0.82
HOM-HAL-1-Sed (2015-09-14)	20		1.87	0.72	2.16	0.84
HOM-HAL-2-Sed (2015-09-14)	2	261	0.18	0.65	0.45	0.28

		Abundance (total # of	Margalef's Richness	Pielous Evenness	Shannons Diversity	Simpsons Diversity
	Richness (# of taxa)	individuals/m²)	Index	Index	Index	Index
Sample ID	S	N	d	J'	H'(loge)	1-Lambda'
HOM-HAL-3-Sed (2015-09-14)	6	3783	0.61	0.62	1.10	0.59
WEE-S-MA (2015-08-28)	12	17088	1.13	0.34	0.85	0.39
WEE-S-Rock (2015-08-28)	9	1236	1.12	0.53	1.17	0.61
WEE-S-SAV (2015-08-28)	10	254	1.63	0.62	1.42	0.64
WEE-S-Sed-Dipnet (2015-08-28)	13	998	1.74	0.42	1.07	0.48
WEE-S-Sed-Ponar (2015-08-28)	13	18913	1.22	0.46	1.19	0.53
WEE-R-1-MA (2015-08-28)	7	26272	0.59	0.06	0.12	0.04
WEE-R-1-SAV (2015-08-28)	24	1712	3.09	0.71	2.26	0.86
WEE-R-1-Sed (2015-08-28)	11	5217	1.17	0.74	1.76	0.78
WEE-R-1-Snag (2015-08-28)	20	2046	2.49	0.53	1.58	0.68
WEE-R-2-MA (2015-08-28)	23	6504	2.51	0.34	1.08	0.39
WEE-R-2-Rock (2015-08-28)	16	2216	1.95	0.67	1.85	0.77
WEE-R-2-SAV (2015-08-28)	39	3504	4.66	0.72	2.62	0.88
WEE-R-2-Sed (2015-08-28)	7	1696	0.81	0.76	1.49	0.69
WEE-R-2-Snag (2015-08-28)	22	512	3.37	0.82	2.52	0.90
WEE-R-3-MA (2015-08-28)	13	11520	1.28	0.40	1.01	0.46
WEE-R-3-Rock (2015-08-28)	25	850	3.56	0.75	2.41	0.86
WEE-R-3-SAV (2015-08-28)	13	1300	1.67	0.59	1.52	0.61
WEE-R-3-Sed (2015-08-28)	3	174	0.39	0.95	1.04	0.63
WEE-R-3-Snag (2015-08-28)	34	1608	4.47	0.67	2.38	0.85
WEE-R-4-MA (2015-08-28)	13	9152	1.32	0.41	1.06	0.42
WEE-R-4-Rock (2015-08-28)	20	338	3.26	0.64	1.91	0.71
WEE-R-4-SAV (2015-08-28)	10	140	1.82	0.57	1.32	0.60
WEE-R-4-Snag (2015-08-28)	29	1576	3.80	0.74	2.49	0.85
WEE-R-5-MA (2015-09-10)	17	17728	1.64	0.35	0.98	0.37
WEE-R-5-SAV (2015-09-10)	28	3824	3.27	0.62	2.07	0.72
WEE-R-5-Sed (2015-09-10)	7	1652	0.81	0.62	1.21	0.54
WEE-R-5-Snag (2015-09-10)	14	360	2.21	0.33	0.88	0.33
WEE-R-6-MA (2015-09-10)	23	8520	2.43	0.18	0.57	0.17
WEE-R-6-SAV (2015-09-10)	29	1536	3.82	0.57	1.90	0.75
WEE-R-6-Sed (2015-09-10)	8	2304	0.90	0.52	1.08	0.47
WEE-R-6-Snag (2015-09-10)	25	2120	3.13	0.72	2.32	0.86

Appendix C Raw Statistical Output

APPENDIX C - Raw Statistical Output

Table C-1. All Zones from all River Systems Pooled Raw Correlation Matrix Results

ALL ZONES FROM ALL SYSTEMS

Spearman Rho: habitats, Temp, DO, DO%, Sal, Cond, pH, Turb, ...

Temp	habitats -0.694 0.000	Temp	DO	DO%	Sal	Cond	рН	Turb
DO	-0.318 0.076	0.626 0.000						
DO%	-0.353 0.048	0.666	0.996					
Sal	-0.691 0.000	0.520 0.002	0.290 0.108	0.321 0.073				
Cond	-0.699 0.000	0.529 0.002	0.308 0.087	0.338 0.059	0.973 0.000			
Нд	-0.299 0.097	0.386 0.029	0.803	0.799	0.159 0.385	0.196 0.283		
Turb	-0.656 0.000	0.754 0.000	0.369	0.410 0.020	0.600 0.000	0.605 0.000	0.295 0.101	
Canopy	0.451 0.010	-0.667 0.000	-0.343 0.054	-0.386 0.029	-0.469 0.007	-0.501 0.004	-0.121 0.508	-0.476 0.006
Rich	0.420 0.017	-0.260 0.151	0.077 0.674	0.052 0.779	-0.408 0.020	-0.487 0.005	0.123 0.504	-0.353 0.048
Abund	0.207 0.255	-0.100 0.585	0.052 0.778	0.043 0.813	-0.170 0.353	-0.153 0.405	0.120 0.514	-0.202 0.268
Piel	-0.316	0.148	-0.054	-0.038	0.299	0.303	-0.112	0.157

	0.078	0.418	0.767	0.834	0.097	0.092	0.540	0.392
Shann	habitats 0.151 0.409	Temp -0.125 0.495	DO 0.052 0.779	DO% 0.034 0.854	Sal -0.036 0.846	Cond -0.064 0.726	pH 0.001 0.995	Turb -0.099 0.590
Simps	-0.030 0.869 habitats	-0.029 0.877 Temp	0.012 0.949 DO	-0.002 0.991 DO%	0.155 0.398 Sal	0.155 0.397 Cond	-0.042 0.818 pH	-0.005 0.978 Turb
Marg	0.501 0.004	-0.404 0.022	-0.073 0.691	-0.109 0.554	-0.410 0.020	-0.494 0.004	-0.061 0.741	-0.422 0.016
sed	-0.492 0.004	0.441 0.012	0.274 0.128	0.275 0.127	0.409 0.020	0.350 0.049	0.213 0.242	0.562 0.001
Rich	Canopy 0.296 0.100	Rich	Abund	Piel	Shann	Simps	Marg	
Abund	-0.219 0.228	0.481 0.005						
Piel	0.031 0.865	0.054 0.769	-0.210 0.249					
Shann	0.307 0.088	0.594	0.092 0.618	0.655 0.000				
Simps	0.187 0.306	0.379 0.033	0.093 0.612	0.790	0.937 0.000			
Marg	0.625 0.000	0.786 0.000	0.002 0.992	0.161 0.380	0.701	0.481 0.005		
sed	-0.127 0.489	0.005 0.980	-0.116 0.528	0.207 0.255	0.156 0.393	0.233 0.200	-0.003 0.988	

Cell Contents: Spearman rho P-Value

<u>Table C-2. Chassahowitzka River System Pooled Zones Raw Correlation Matrix Results</u> **ALL ZONES FROM CHASSAHOWITZKA**

Spearman Rho: habitats_1, Temp_1, DO_1, DO%_1, Sal_1, Cond_1, pH_1, Turb_1, ...

Temp_1	habitats_1 -0.732 0.004	Temp_1	DO_1	DO%_1	Sal_1	Cond_1
DO_1	0.393 0.184	0.278 0.358				
DO%_1	0.307 0.307	0.368 0.216	0.982			
Sal_1	-0.629 0.021	0.374	-0.382 0.197	-0.396 0.181		
Cond_1	-0.643 0.018	0.407 0.168	-0.300 0.320	-0.313 0.297	0.846	
pH_1	0.262 0.387	0.399 0.177	0.934	0.971 0.000	-0.487 0.091	-0.327 0.275
Turb_1	-0.720 0.005	0.863	0.003 0.993	0.115 0.707	0.489	0.527 0.064
Canopy_1	0.361 0.226	-0.597 0.031	-0.290 0.336	-0.381 0.199	-0.276 0.361	-0.331 0.269
Rich_1	0.586 0.035	-0.360 0.226	0.282 0.350	0.316 0.292	-0.514 0.072	-0.680 0.011
Abund_1	0.310 0.302	-0.137 0.655	0.223 0.464	0.302 0.316	-0.176 0.566	-0.203 0.505
Piel_1	-0.344 0.249	-0.176 0.566	-0.613 0.026	-0.560 0.046	0.143 0.642	0.247 0.415
Shann_1	0.649	-0.654	0.127	0.077	-0.308	-0.308

	0.016	0.015	0.680	0.803	0.306	0.306
	habitats_1	Temp_1	DO_1	DO%_1	Sal_1	Cond_1
Simps_1	0.285 0.346	-0.527 0.064	-0.173 0.571	-0.187 0.541	-0.016 0.957	0.066 0.831
Marg_1	0.794	-0.670 0.012	0.248 0.415	0.176 0.566	-0.495 0.086	-0.698 0.008
sed_1	-0.204 0.504	0.135 0.660	-0.180 0.556	-0.112 0.715	0.096 0.756	-0.152 0.621
Turb_1	pH_1 0.179 0.559	Turb_1	Canopy_1	Rich_1	Abund_1	Piel_1
Canopy_1	-0.429 0.144	-0.696 0.008				
Rich_1	0.304 0.312	-0.303 0.315	0.044 0.886			
Abund_1	0.316 0.292	0.055 0.859	-0.409 0.165	0.762 0.002		
Piel_1	-0.531 0.062	0.011 0.972	0.155 0.614	-0.102 0.741	-0.033 0.915	
Shann_1	0.017 0.957	-0.566 0.044	0.337 0.260	0.578 0.039	0.407 0.168	0.286 0.344
Simps_1	-0.223 0.464	-0.313 0.297	0.155 0.614	0.294 0.329	0.363 0.223	0.637 0.019
Marg_1	0.066 0.830	-0.764 0.002	0.619 0.024	0.630 0.021	0.187 0.541	-0.121 0.694
sed_1	-0.079 0.798	0.124 0.687	-0.141 0.645	0.264 0.383	0.354 0.235	-0.326 0.277

Simps_1	Shann_1 0.863 0.000	Simps_1	Marg_1
Marg_1	0.742	0.379 0.201	
sed_1	-0.326 0.277	-0.388 0.191	-0.062 0.841

Cell Contents: Spearman rho P-Value

Table C-3. Homosassa River System Pooled Zones Raw Correlation Matrix Results

ALL ZONES FROM HOMOSASSA

Spearman Rho: habitats_1_1, Temp_1_1, DO_1_1, DO%_1_1, Sal_1_1, Cond_1_1, pH_1_1, ...

Temp_1_1	habitats_1_1 -0.829 0.001	Temp_1_1	DO_1_1	DO%_1_1	Sal_1_1
DO_1_1	-0.645 0.023	0.664 0.018			
DO%_1_1	-0.730 0.007	0.685 0.014	0.979 0.000		
Sal_1_1	-0.403 0.193	0.427 0.167	0.378 0.226	0.469 0.124	
Cond_1_1	-0.403 0.193	0.427 0.167	0.378 0.226	0.469 0.124	1.000
pH_1_1	-0.314 0.320	0.347 0.269	0.757	0.736 0.006	0.140 0.664

Turb_1_1	-0.554	0.587	0.266	0.301	0.140
	0.062	0.045	0.404	0.342	0.665
	habitats_1_1	Temp_1_1	DO_1_1	DO%_1_1	Sal_1_1
Canopy_1_1	0.772	-0.796	-0.669	-0.768	-0.775
	0.003	0.002	0.017	0.004	0.003
Rich_1_1	0.456	-0.434	-0.259	-0.277	-0.504
	0.137	0.158	0.416	0.384	0.094
Abund_1_1	0.249	-0.077	0.273	0.210	0.056
	0.434	0.812	0.391	0.513	0.863
Piel_1_1	-0.037	-0.077	0.077	0.091	-0.196
	0.910	0.812	0.812	0.779	0.542
Shann_1_1	0.462	-0.406	-0.224	-0.238	-0.441
	0.130	0.191	0.484	0.457	0.152
Simps_1_1	0.334	-0.217	-0.091	-0.126	-0.322
	0.289	0.499	0.779	0.697	0.308
Marg_1_1	0.539	-0.476	-0.497	-0.524	-0.545
	0.071	0.118	0.101	0.080	0.067
sed_1_1	-0.239	0.398	0.228	0.137	-0.410
	0.455	0.200	0.477	0.672	0.186
pH_1_1	Cond_1_1 0.140 0.664	pH_1_1	Turb_1_1	Canopy_1_1	Rich_1_1
Turb_1_1	0.140 0.665	0.326 0.301			
Canopy_1_1	-0.775 0.003	-0.332 0.292	-0.296 0.351		
Rich_1_1	-0.504 0.094	-0.174 0.589	-0.308 0.330	0.430 0.163	

Abund_1_1	0.056	-0.014	-0.406	-0.056	0.424
	0.863	0.966	0.191	0.862	0.170
	Cond_1_1	pH_1_1	Turb_1_1	Canopy_1_1	Rich_1_1
Piel_1_1	-0.196	0.298	-0.105	0.092	0.319
	0.542	0.347	0.746	0.777	0.313
Shann_1_1	-0.441	0.035	-0.343	0.373	0.781
	0.152	0.914	0.276	0.232	0.003
Simps_1_1	-0.322	0.081	-0.308	0.239	0.564
	0.308	0.803	0.331	0.454	0.056
Marg_1_1	-0.545	-0.396	-0.350	0.542	0.911
	0.067	0.203	0.265	0.069	0.000
sed_1_1	-0.410	0.120	0.546	0.069	0.085
	0.186	0.711	0.066	0.832	0.792
Piel_1_1	Abund_1_1 -0.266 0.404	Piel_1_1	Shann_1_1	Simps_1_1	Marg_1_1
Shann_1_1	0.217 0.499	0.706 0.010			
Simps_1_1	0.154 0.633	0.797 0.002	0.930 0.000		
Marg_1_1	0.168 0.602	0.378 0.226	0.762 0.004	0.608 0.036	
sed_1_1	-0.137	0.000	-0.023	0.057	0.148
	0.672	1.000	0.944	0.861	0.646

Cell Contents: Spearman rho P-Value

Table C-4. Weeki Wachee River System Pooled Zones Raw Correlation Matrix Results

ALL ZONES FROM WEEKI WACHEE

Spearman Rho: habitats_1_1, Temp_1_1_1, DO_1_1_1, DO%_1_1_1, Sal_1_1_1, Cond_1_1_1, ...

Spearman Kir	0. nabitats_t_t, 16	:iiib_1_1_1, DO_1	_1_1, DO	_1,	I_ ±_ ±_±,
	habitats 1 1 1	Temp 1 1 1	DO_1_1_1	DO%_1_1_1	
Temp 1 1 1	0.364				
	0.422				
DO 1 1 1	0.144	0.955			
	0.758	0.001			
	0.700	0.001			
DO% 1 1 1	0.144	0.955	1.000		
200_=_=	0.758	0.001	*		
	0.756	0.001			
Sal 1 1 1	-0.548	0.399	0.632	0.632	
	0.203	0.375	0.127	0.127	
	0.203	0.373	0.127	0.127	
Cond 1 1 1	-0.882	-0.083	0.164	0.164	
00114_1_1_1	0.009	0.860	0.726	0.726	
	0.009	0.000	0.726	0.726	
pH 1 1 1	-0.144	0.450	0.643	0.643	
P11_1_1_1	0.758	0.310	0.119	0.119	
	0.738	0.310	0.119	0.119	
Turb 1 1 1	-0.433	-0.252	0.000	0.000	
1415_1_1_1	0.332	0.585	1.000	1.000	
	0.332	0.363	1.000	1.000	
Canopy 1 1 1	0.144	0.180	0.321	0.321	
oanopy_i_i_i	0.758	0.699	0.482	0.482	
	0.756	0.099	0.402	0.402	
Rich 1 1 1	0.289	0.955	0.893	0.893	
1(1011_1_1	0.530	0.001	0.007	0.007	
	0.330	0.001	0.007	0.007	
Abund 1 1 1	-0.866	-0.541	-0.429	-0.429	
130 0110	0.012	0.210	0.337	0.337	
	0.012	0.210	0.557	0.337	
Piel 1 1 1	0.289	0.505	0.357	0.357	
1101_1_1	0.530	0.248	0.432	0.432	
	0.550	0.240	0.402	0.402	
Shann 1 1 1	0.577	0.757	0.607	0.607	
~	0.175	0.049	0.148	0.148	
	0.1/3	0.043	0.140	0.140	

Simps_1_1_1	Habitats_1_1_1	Temp_1_1_1_1	DO_1_1_1	DO%_1_1_1
	0.433	0.414	0.214	0.214
	0.332	0.355	0.645	0.645
Marg_1_1_1	0.577	0.937	0.857	0.857
	0.175	0.002	0.014	0.014
sed_1_1_1	0.730	-0.080	-0.158	-0.158
	0.062	0.865	0.735	0.735
Cond_1_1_1	Sal_1_1_1 0.805 0.029	Cond_1_1_1	pH_1_1_1	Turb_1_1_1
pH_1_1_1	0.791 0.034	0.491 0.263		
Turb_1_1_1	0.474 0.282	0.473 0.284	0.393 0.383	
Canopy_1_1_1	0.474	0.073	0.750	0.464
	0.282	0.877	0.052	0.294
Rich_1_1_1	0.316	-0.055	0.393	-0.393
	0.490	0.908	0.383	0.383
Abund_1_1_1	0.158	0.655	-0.143	0.036
	0.735	0.111	0.760	0.939
Piel_1_1_1	-0.158	-0.182	0.071	-0.750
	0.735	0.696	0.879	0.052
Shann_1_1_1	-0.158	-0.455	0.143	-0.536
	0.735	0.305	0.760	0.215
Simps_1_1_1	-0.474	-0.473	-0.286	-0.679
	0.282	0.284	0.535	0.094
Marg_1_1_1	0.158	-0.327	0.357	-0.214
	0.735	0.474	0.432	0.645

	Sal_1_1_1	Cond_1_1_1	pH_1_1_1	Turb_1_1_1
sed_1_1_1	-0.400 0.374	-0.564 0.188	0.158 0.735	0.000
Rich_1_1_1	Canopy_1_1_1_1 0.000 1.000	Rich_1_1_1	Abund_1_1_1	Piel_1_1_1
Abund_1_1_1	-0.429 0.337	-0.357 0.432		
Piel_1_1_1	-0.357 0.432	0.714 0.071	0.000 1.000	
Shann_1_1_1	-0.107 0.819	0.857 0.014	-0.464 0.294	0.821 0.023
Simps_1_1_1	-0.571 0.180	0.607 0.148	-0.143 0.760	0.857 0.014
Marg_1_1_1	0.179 0.702	0.893 0.007	-0.714 0.071	0.500 0.253
sed_1_1_1	0.474 0.282	-0.158 0.735	-0.632 0.127	0.000
Simps_1_1_1	Shann_1_1_1 0.857 0.014	Simps_1_1_1	Marg_1_1_1	
Marg_1_1_1	0.857 0.014	0.536 0.215		
sed_1_1_1	0.158 0.735	0.000 1.000	0.158 0.735	

Cell Contents: Spearman rho P-Value

<u>Table C-5. Springs Only Zones from all Systems Pooled Raw Correlation Matrix Results</u>

Spearman Rho: %grz-gpod, Temp, DO mg/L, DO %, Salinity ppt, Sp.Cond, pH, Turbidity NT, ...

Temp	%grz-gpod -0.048 0.911	Temp	DO mg/L	DO %
DO mg/L	-0.095 0.823	0.048 0.911		
DO %	-0.095 0.823	0.048 0.911	1.000	
Salinity ppt	0.024	-0.119	0.167	0.167
	0.955	0.779	0.693	0.693
Sp.Cond	0.024	-0.119	0.167	0.167
	0.955	0.779	0.693	0.693
рН	-0.595	-0.190	0.405	0.405
	0.120	0.651	0.320	0.320
Turbidity NTU	-0.214	0.310	0.500	0.500
	0.610	0.456	0.207	0.207
Canopy Cover %	-0.571	-0.214	0.643	0.643
	0.139	0.610	0.086	0.086
Richness	-0.405	0.262	0.524	0.524
	0.320	0.531	0.183	0.183
Abundance	0.071	0.190	-0.262	-0.262
	0.867	0.651	0.531	0.531
Margalefs	-0.286	0.071	0.667	0.667
	0.493	0.867	0.071	0.071
Pielous	-0.500	0.095	0.214	0.214
	0.207	0.823	0.610	0.610

Shannons	-0.238	-0.310	0.571	0.571
	0.570	0.456	0.139	0.139
Simpsons	-0.405	-0.286	0.381	0.381
1	0.320	0.493	0.352	0.352
Log Shannons	-0.238	-0.310	0.571	0.571
5	0.570	0.456	0.139	0.139
Log Richness	-0.405	0.262	0.524	0.524
	0.320	0.531	0.183	0.183
Log abundance	0.071	0.190	-0.262	-0.262
	0.867	0.651	0.531	0.531
grz-gpod ab	0.238	0.143	-0.381	-0.381
	0.570	0.736	0.352	0.352
Sp.Cond	Salinity ppt 1.000	Sp.Cond	рН	Turbidity NTU
•	*			
рН	-0.048	-0.048		
-	0.911	0.911		
Turbidity NTU	0.238	0.238	0.024	
	0.570	0.570	0.955	
Canopy Cover %	-0.238	-0.238	0.786	0.000
	0.570	0.570	0.021	1.000
Richness	-0.262	-0.262	0.762	-0.095
	0.531	0.531	0.028	0.823
Abundance	-0.548	-0.548	0.190	-0.238
	0.160	0.160	0.651	0.570
Margalefs	-0.048	-0.048	0.333	-0.119
	0.911	0.911	0.420	0.779

Pielous	-0.048	-0.048	0.190	-0.214
	0.911	0.911	0.651	0.610
Shannons	-0.048	-0.048	0.381	-0.262
	0.911	0.911	0.352	0.531
Simpsons	-0.048	-0.048	0.381	-0.381
	0.911	0.911	0.352	0.352
Log Shannons	-0.048	-0.048	0.381	-0.262
	0.911	0.911	0.352	0.531
Log Richness	-0.262	-0.262	0.762	-0.095
	0.531	0.531	0.028	0.823
Log abundance	-0.548	-0.548	0.190	-0.238
	0.160	0.160	0.651	0.570
grz-gpod ab	-0.786	-0.786	-0.048	-0.357
	0.021	0.021	0.911	0.385
Richness	Canopy Cover % 0.786 0.021	Richness	Abundance	Margalefs
Richness	0.786	0.357 0.385	Abundance	Margalefs
	0.786 0.021 0.000	0.357	-0.262 0.531	Margalefs
Abundance	0.786 0.021 0.000 1.000	0.357 0.385 0.667	-0.262	Margalefs 0.762 0.028
Abundance Margalefs	0.786 0.021 0.000 1.000 0.762 0.028	0.357 0.385 0.667 0.071	-0.262 0.531 -0.524	0.762
Abundance Margalefs Pielous	0.786 0.021 0.000 1.000 0.762 0.028 0.524 0.183 0.786	0.357 0.385 0.667 0.071 0.357 0.385	-0.262 0.531 -0.524 0.183 -0.405	0.762 0.028 0.905

	0.021	0.207	0.320	0.002
Log Richness	0.786 0.021	1.000	0.357 0.385	0.667 0.071
Log abundance	0.000 1.000	0.357 0.385	1.000	-0.262 0.531
grz-gpod ab	-0.095 0.823	0.048 0.911	0.333 0.420	-0.214 0.610
Shannons	Pielous 0.762 0.028	Shannons	Simpsons	Log Shannons
Simpsons	0.833 0.010	0.952 0.000		
Log Shannons	0.762 0.028	1.000	0.952 0.000	
Log Richness	0.357 0.385	0.500 0.207	0.500 0.207	0.500 0.207
Log abundance	-0.524 0.183	-0.405 0.320	-0.333 0.420	-0.405 0.320
grz-gpod ab	0.000 1.000	-0.119 0.779	-0.167 0.693	-0.119 0.779
Log abundance	Log Richness 0.357 0.385	Log abundance		
grz-gpod ab	0.048 0.911	0.333 0.420		

Cell Contents: Spearman rho P-Value

Appendix D Correlation Matrix Tables

Table D-1. Chassahowitzka River System Pooled Zones Correlation Matrix Data

Physical-Chemical Parameters	Distance from Headspring (km)	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index (d)	Pielou's Evenness Index (J')	Shannon's Diversity Index (H'(loge))	Simpson's Diversity Index (1-Lambda')
		R = -0.861, p = 0.006	R = 0.049, p = 0.908	R = -0.917, p = 0.001	R = -0.080, p = 0.851	R = -0.519, p = 0.187	R = -0.263, p = 0.530
Distance from Headspring (km)	NA	Rho = -0.743, p = 0.035	Rho = 0.143, p = 0.736	Rho = -0.952, p = 0.000	Rho = 0.095, p = 0.823	Rho = -0.690, p = 0.058	Rho = 0.024, p = 0.955
		Tau = -0.536 , p = 0.081	Tau = 0.143, p = 0.711	Tau = -0.857, p = 0.004	Tau = 0.071, p = 0.902	Tau = -0.500, p = 0.108	Tau = 0.000, p = 1.000
	R = 0.887, p = 0.003	R = -0.837, p = 0.010	R = -0.138, p = 0.745	R = -0.868, p = 0.005	R = -0.462, p = 0.250	R = -0.795, p = 0.018	R = -0.616, p = 0.104
Water Temperature (°C)	Rho = 0.812, p = 0.015	Rho = -0.551, p = 0.157	Rho = 0.048, p = 0.911	Rho = -0.810, p = 0.015	Rho = -0.310, p =0.456	Rho = -0.786, p = 0.021	Rho = -0.357, p = 0.385
	Tau = 0.571, p = 0.063	Tau = -0.321, p = 0.319	Tau = 0.000, p = 1.000	Tau = -0.571, p = 0.063	Tau = -0.214, p = 0.536	Tau = -0.643, p = 0.035	Tau = -0.286, p = 0.386
	R = -0.015, p = 0.971	R = -0.071, p = 0.867	R = -0.083, p = 0.845	R = -0.106, p = 0.803	R = -0.909, p = 0.002	R = -0.663, p = 0.073	R = -0.836, p = 0.010
Dissolved Oxygen (mg/L)	Rho = -0.252., p = 0.548	Rho = 0.331, p = 0.423	Rho = 0.204, p = 0.629	Rho = 0.252, p = 0.548	Rho = -0.802, p = 0.017	Rho = 0.036, p = 0.932	Rho = -0.515, p = 0.192
	Tau = -0.107, p = 0.803	Tau = 0.357, p = 0.258	Tau = 0.179, p = 0.618	Tau = 0.107, p = 0.803	Tau = -0.607, p = 0.046	Tau = 0.036, p = 1.000	Tau = -0.393, p = 0.212
	R = 0.045, p = 0.915	R = -0.132, p = 0.756	R = -0.098, p = 0.817	R = -0.159, p = 0.706	R = -0.917, p = 0.001	R = -0.702, p = 0.052	R = -0.859, p = 0.006
Dissolved Oxygen (%)	Rho = -0.238 , p = 0.570	Rho = 0.311, p = 0.453	Rho = 0.238, p = 0.570	Rho = 0.238, p = 0.570	Rho = -0.786, p = 0.021	Rho = 0.024, p = 0.955	Rho = -0.500, p = 0.207
	Tau = -0.071, p = 0.902	Tau = 0.321, p = 0.319	Tau = 0.214, p = 0.536	Tau = 0.071, p = 0.902	Tau = -0.571, p = 0.063	Tau = 0.000, p = 1.000	Tau = -0.357, p = 0.266
	R = 0.918, p = 0.001	R = -0.624, p = 0.098	R = 0.357, p = 0.386	R = -0.912, p = 0.002	R = -0.174, p = 0.680	R = -0.471, p = 0.239	R = -0.248, p = 0.553
Salinity (ppt)	Rho = 0.929, p = 0.001	Rho = -0.491, p = 0.217	Rho = 0.405, p = 0.320	Rho = -0.881, p = 0.004	Rho = 0.119, p = 0.779	Rho = -0.571, p = 0.139	Rho = 0.095, p = 0.823
	Tau = 0.786, p = 0.009	Tau = -0.321, p = 0.319	Tau = 0.357, p = 0.266	Tau = -0.786, p = 0.009	Tau = 0.143, p = 0.711	Tau = -0.429, p = 0.174	Tau = 0.071, p = 0.902
	R = 0.914, p = 0.001	R = -0.617, p = 0.103	R = 0.362, p = 0.378	R = -0.913, p = 0.002	R = -0.182, p = 0.667	R = -0.475, p = 0.234	R = -0.253, p = 0.546
Conductivity (µS/cm)	Rho = 0.929, p = 0.001	Rho = -0.491, p = 0.217	Rho = 0.405, p = 0.320	Rho = -0.881, p = 0.004	Rho = 0.119, p = 0.779	Rho = -0.571, p = 0.139	Rho = 0.095, p = 0.823
	Tau = 0.786, p = 0.009	Tau = -0.321, p = 0.319	Tau = 0.357, p = 0.266	Tau = -0.786, p = 0.009	Tau = 0.143, p = 0.711	Tau = -0.429, p = 0.174	Tau = 0.071, p = 0.092
	R = 0.121, p = 0.775	R = -0.211, p = 0.616	R = -0.139, p = 0.742	R = -0.243, p = 0.562	R = -0.943, p = 0.000	R = -0.776, p = 0.023	R = -0.904, p = 0.002
рН	Rho = -0.275, p = 0.509	Rho = 0.307, p = 0.459	Rho = 0.132, p = 0.756	Rho = 0.228, p = 0.588	Rho = -0.874, p = 0.005	Rho = -0.036, p = 0.933	Rho = -0.635, p = 0.091
	Tau = -0.182, p = 0.618	Tau = 0.286, p = 0.379	Tau = 0.107, p = 0.803	Tau = 0.036, p = 1.000	Tau = -0.679, p = 0.025	Tau = -0.036, p = 1.000	Tau = -0.464, p = 0.135
	R = 0.723, p = 0.043	R = -0.619, p = 0.102	R = -0.210, p = 0.618	R = -0.638, p = 0.089	R = 0.128, p = 0.762	R = -0.268, p = 0.520	R = -0.032, p = 0.939
Turbidity (NTU)	Rho = 0.881, p = 0.004	Rho = -0.683, p = 0.062	Rho = 0.000, p = 1.000	Rho = -0.952, p = 0.000	Rho = -0.071, p = 0.867	Rho = -0.833, p = 0.010	Rho = -0.262, p = 0.531
	Tau = 0.714, p = 0.019	Tau = -0.536, p = 0.081	Tau = 0.000, p = 1.000	Tau = -0.857, p = 0.004	Tau = -0.071, p = 0.902	Tau = -0.643, p = 0.035	Tau = -0.286, p = 0.386
	R = -0.684, p = 0.061	R = 0.404, p = 0.321	R = -0.437, p = 0.278	R = 0.779, p = 0.023	R = 0.266, p = 0.524	R = 0.416, p = 0.306	R = 0.267, p = 0.523
Canopy Cover (%)	Rho = -0.756, p = 0.030	Rho = 0.614, p = 0.106	Rho = -0.195, p = 0.643	Rho = 0.781, p = 0.022	Rho = 0.342, p = 0.408	Rho = 0.659, p = 0.076	Rho = 0.317, p = 0.444
	Tau = -0.607, p = 0.042	Tau = 0.464, p = 0.124	Tau = -0.107, p = 0.799	Tau = 0.643, p = 0.042	Tau = 0.250, p = 0.445	Tau = 0.464, p = 0.126	Tau = 0.179, p = 0.610

Physical-Chemical Parameters	Distance from Headspring (km)	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index (d)	Pielou's Evenness Index (J')	Shannon's Diversity Index (H'(loge))	Simpson's Diversity Index (1-Lambda')
		R = -0.541, p = 0.210	R = -0.579, p = 0.173	R = -0.381, p = 0.398	R = 0.503, p = 0.250	R = 0.062, p = 0.895	R = 0.212, p = 0.649
Distance from Headspring (km)	NA	Rho = -0.429, p = 0.337	Rho = -0.429, p = 0.337	Rho = -0.179, p = 0.702	Rho = 0.357, p = 0.432	Rho = 0.107, p = 0.819	Rho = 0.321, p = 0.482
		Tau = -0.429, p = 0.230	Tau = -0.333, p = 0.368	Tau = -0.238, p = 0.548	Tau = 0.333, p = 0.368	Tau = -0.048, p = 1.000	Tau = 0.143, p = 0.764
	R = 0.887, p = 0.008	R = -0.315, p = 0.492	R = -0.508, p = 0.245	R = -0.123, p = 0.793	R = 0.344, p = 0.450	R = 0.064, p = 0.892	R = 0.161, p = 0.730
Water Temperature (°C)	Rho = 0.893, p = 0.007	Rho = -0.214, p = 0.645	Rho = -0.250, p = 0.589	Rho = -0.143, p = 0.760	Rho = 0.071, p = 0.879	Rho = -0.143, p = 0.760	Rho = 0.000, p = 1.000
	Tau = 0.810, p = 0.016	Tau = -0.238, p = 0.548	Tau = -0.143, p = 0.764	Tau = -0.238, p = 0.548	Tau = 0.143, p = 0.764	Tau = -0.238, p = 0.548	Tau = -0.048, p = 1.000
	R = 0.530, p = 0.221	R = -0.376, p = 0.406	R = 0.167, p = 0.720	R = -0.458, p = 0.301	R = 0.215, p = 0.643	R = -0.029, p = 0.950	R = 0.189, p = 0.685
Dissolved Oxygen (mg/L)	Rho = 0.750, p = 0.052	Rho = -0.250, p = 0.589	Rho = 0.179, p = 0.702	Rho = -0.143, p = 0.760	Rho = 0.107, p = 0.819	Rho = 0.000, p = 1.000	Rho = 0.250, p = 0.589
	Tau = 0.619, p = 0.072	Tau = -0.238, p = 0.548	Tau = 0.048, p = 1.000	Tau = -0.238, p = 0.548	Tau = 0.143, p = 0.764	Tau = -0.048, p = 1.000	Tau = 0.143, p = 0.764
	R = 0.588, p = 0.165	R = -0.400, p = 0.373	R = 0.104, p = 0.824	R = -0.461, p = 0.298	R = 0.228, p = 0.622	R = -0.037, p = 0.937	R = 0.181, p = 0.698
Dissolved Oxygen (%)	Rho = 0.750, p = 0.052	Rho = -0.250, p = 0.589	Rho = 0.179, p = 0.702	Rho = -0.143, p = 0.760	Rho = 0.107, p = 0.819	Rho = 0.000, p = 1.000	Rho = 0.250, p = 0.589
	Tau = 0.619, p = 0.072	Tau = -0.238, p = 0.548	Tau = 0.048, p = 1.000	Tau = -0.238, p = 0.548	Tau = 0.143, p = 0.764	Tau = -0.048, p = 1.000	Tau = 0.143, p = 0.764
	R = 0.813, p = 0.026	R = -0.759, p = 0.048	R = -0.629, p = 0.130	R = -0.622, p = 0.136	R = 0.126, p = 0.788	R = -0.383, p = 0.397	R = -0.214, p = 0.645
Salinity (ppt)	Rho = 0.786, p = 0.036	Rho = -0.821, p = 0.023	Rho = -0.571, p = 0.180	Rho = -0.679, p = 0.094	Rho = 0.107, p = 0.819	Rho = -0.357, p = 0.432	Rho = -0.107, p = 0.819
	Tau = 0.714, p = 0.035	Tau = -0.714, p = 0.035	Tau = -0.429, p = 0.230	Tau = -0.524, p = 0.133	Tau = 0.048, p = 1.000	Tau = -0.333, p = 0.368	Tau = -0.143, p = 0.764
	R = 0.831, p = 0.020	R = -0.790, p = 0.035	R = -0.615, p = 0.142	R = -0.665, p = 0.103	R = 0.126, p = 0.787	R = -0.398, p = 0.377	R = -0.223, p = 0.631
Conductivity (µS/cm)	Rho = 0.786, p = 0.036	Rho = -0.821, p = 0.023	Rho = -0.571, p = 0.180	Rho = -0.679, p = 0.094	Rho = 0.107, p = 0.819	Rho = -0.357, p = 0.432	Rho = -0.107, p = 0.819
	Tau = 0.714, p = 0.035	Tau = -0.714, p = 0.035	Tau = -0.429, p = 0.230	Tau = -0.524, p = 0.133	Tau = 0.048, p = 1.000	Tau = -0.333, p = 0.368	Tau = -0.143, p = 0.764
	R = 0.137, p = 0.769	R = -0.249, p = 0.590	R = 0.430, p = 0.336	R = -0.416, p = 0.353	R = 0.083, p = 0.859	R = -0.037, p = 0.937	R = 0.163, p = 0.727
рН	Rho = 0.643, p = 0.119	Rho = -0.571, p = 0.180	Rho = 0.143, p = 0.760	Rho = -0.536, p = 0.215	Rho = -0.072, p = 0.879	Rho = -0.357, p = 0.432	Rho = -0.036, p = 0.939
	Tau = 0.429, p = 0.230	Tau = -0.429, p = 0.230	Tau = 0.048, p = 1.000	Tau = -0.429, p = 0.230	Tau = -0.048, p = 1.000	Tau = -0.238, p = 0.548	Tau = -0.048, p = 1.000
	R = 0.689, p = 0.087	R = -0.646, p = 0.117	R = -0.576, p = 0.175	R = -0.500, p = 0.253	R = -0.224, p = 0.629	R = -0.589, p = 0.164	R = -0.523, p = 0.229
Turbidity (NTU)	Rho = 0.643, p = 0.119	Rho = -0.536, p = 0.215	Rho = -0.536, p = 0.215	Rho = -0.571, p = 0.180	Rho = -0.107, p = 0.819	Rho = -0.571, p = 0.180	Rho = -0.464, p = 0.294
	Tau = 0.429, p = 0.230	Tau = -0.429, p = 0.230	Tau = -0.333, p = 0.368	Tau = -0.429, p = 0.230	Tau = -0.048, p = 1.000	Tau = -0.429, p = 0.230	Tau = -0.429, p = 0.230
	R = -0.862, p = 0.013	R = 0.275, p = 0.550	R = 0.347, p = 0.446	R = 0.170, p = 0.716	R = -0.147, p = 0.753	R = 0.092, p = 0.844	R = 0.021, p = 0.965
Canopy Cover (%)	Rho = -0.857, p = 0.014	Rho = 0.214, p = 0.644	Rho = 0.214, p = 0.645	Rho = 0.071, p = 0.879	Rho = 0.000, p = 1.000	Rho = -0.143, p = 0.760	Rho = -0.250, p = 0.589
	Tau = -0.714, p = 0.035	Tau = 0.143, p = 0.764	Tau = 0.238, p = 0.548	Tau = 0.143, p = 0.764	Tau = -0.048, p = 1.000	Tau = -0.048, p = 1.000	Tau = -0.238, p = 0.548

Table D-3. Weeki Wachee River System Pooled Zones Correlation Matrix Data

Physical-Chemical Parameters	Distance from Headspring (km)	Richness (# of taxa)	Abundance (total # of individuals/m²)	Margalef's Richness Index (d)	Pielou's Evenness Index (J')	Shannon's Diversity Index (H'(loge))	Simpson's Diversity Index (1-Lambda')
		R = 0.519, p = 0.233	R = -0.312, p = 0.495	R = 0.471, p = 0.287	R = -0.268, p = 0.561	R = -0.085, p = 0.857	R = -0.340, p = 0.456
Distance from Headspring (km)	NA	Rho = 0.429, p = 0.337	Rho = -0.393, p = 0.383	Rho = 0.500, p = 0.253	Rho = -0.107, p = 0.819	Rho = 0.143, p = 0.760	Rho = -0.357, p = 0.432
		Tau = 0.333, p = 0.368	Tau = -0.238, p = 0.548	Tau = 0.333, p = 0.368	Tau = 0.048, p = 1.000	Tau = 0.048, p = 1.000	Tau = -0.238, p = 0.548
	R = 0.510, p = 0.242	R = 0.946, p = 0.001	R = -0.720, p = 0.068	R = 0.970, p = 0.000	R = 0.476, p = 0.281	R = 0.754, p = 0.050	R = 0.502, p = 0.252
Water Temperature (°C)	Rho = 0.577, p = 0.175	Rho = 0.955, p = 0.001	Rho = -0.541, p = 0.210	Rho = 0.937, p = 0.002	Rho = 0.505, p = 0.248	Rho = 0.757, p = 0.049	Rho = 0.414, p = 0.355
	Tau = 0.476, p = 0.172	Tau = 0.857, p = 0.010	Tau = -0.381, p = 0.288	Tau = 0.857, p = 0.010	Tau = 0.381, p = 0.288	Tau = 0.571, p = 0.095	Tau = 0.286, p = 0.448
	R = 0.707, p = 0.076	R = 0.878, p = 0.009	R = -0.722, p = 0.067	R = 0.909, p = 0.005	R = 0.343, p = 0.452	R = 0.583, p = 0.169	R = 0.281, p = 0.542
Dissolved Oxygen (mg/L)	Rho = 0.750, p = 0.052	Rho = 0.893, p = 0.007	Rho = -0.429, p = 0.337	Rho = 0.857, p = 0.014	Rho = 0.357, p = 0.432	Rho = 0.607, p = 0.148	Rho = 0.214, p = 0.645
	Tau = 0.619, p = 0.072	Tau = 0.714, p = 0.035	Tau = -0.238, p = 0.548	Tau = 0.714, p = 0.035	Tau = 0.238, p = 0.548	Tau = 0.429, p = 0.230	Tau = 0.143, p = 0.764
	R = 0.715, p = 0.071	R = 0.877, p = 0.010	R = -0.720, p = 0.068	R = 0.907, p = 0.005	R = 0.337, p = 0.460	R = 0.576, p = 0.176	R = 0.274, p = 0.552
Dissolved Oxygen (%)	Rho = 0.750, p = 0.052	Rho = 0.893, p = 0.007	Rho = -0.429, p = 0.337	Rho = 0.857, p = 0.014	Rho = 0.357, p = 0.432	Rho = 0.607, p = 0.148	Rho = 0.214, p = 0.645
	Tau = 0.619, p = 0.072	Tau = 0.714, p = 0.035	Tau = -0.238, p = 0.548	Tau = 0.714, p = 0.035	Tau = 0.238, p = 0.548	Tau = 0.429, p = 0.230	Tau = 0.143, p = 0.764
	R = 0.940, p = 0.002	R = 0.380, p = 0.400	R = -0.036, p = 0.939	R = 0.265, p = 0.565	R = -0.378, p = 0.403	R = -0.238, p = 0.608	R = -0.457, p = 0.303
Salinity (ppt)	Rho = 0.791, p = 0.034	Rho = 0.316, p = 0.490	Rho = 0.158, p = 0.735	Rho = 0.158, p = 0.735	Rho = -0.158, p = 0.735	Rho = -0.158, p = 0.735	Rho = -0.474, p = 0.282
	Tau = 0.476, p = 0.081	Tau = 0.190, p = 0.561	Tau = 0.095, p = 0.846	Tau = 0.095, p = 0.846	Tau = -0.095, p = 0.846	Tau = -0.095, p = 0.846	Tau = -0.286, p = 0.333
	R = 0.891, p = 0.007	R = 0.276, p = 0.549	R = 0.108, p = 0.817	R = 0.134, p = 0.775	R = -0.443, p = 0.320	R = -0.343, p = 0.451	R = -0.513, p = 0.239
Conductivity (µS/cm)	Rho = 0.346, p = 0.448	Rho = -0.055, p = 0.908	Rho = 0.655, p = 0.111	Rho = -0.327, p = 0.474	Rho = -0.182, p = 0.696	Rho = -0.455, p = 0.305	Rho = -0.473, p = 0.284
	Tau = 0.143, p = 0.759	Tau = -0.048, p = 1.000	Tau = 0.429, p = 0.219	Tau = -0.238, p = 0.539	Tau = -0.143, p = 0.759	Tau = -0.333, p = 0.356	Tau = -0.429, p = 0.219
	R = 0.927, p = 0.003	R = 0.558, p = 0.193	R = -0.339, p = 0.456	R = 0.539, p = 0.212	R = -0.124, p = 0.791	R = 0.050, p = 0.914	R = -0.222, p = 0.632
рН	Rho = 0.929, p = 0.003	Rho = 0.393, p = 0.383	Rho = -0.143, p = 0.760	Rho = 0.357, p = 0.432	Rho = 0.071, p = 0.879	Rho = 0.143, p = 0.760	Rho = -0.286, p = 0.535
	Tau = 0.810, p = 0.016	Tau = 0.333, p = 0.368	Tau = -0.048, p = 1.000	Tau = 0.333, p = 0.368	Tau = 0.048, p = 1.000	Tau = 0.048, p = 1.000	Tau = -0.238, p = 0.548
	R = 0.685, p = 0.090	R = -0.002, p = 0.996	R = 0.028, p = 0.953	R = -0.040, p = 0.932	R = -0.713, p = 0.072	R = -0.547, p = 0.204	R = -0.652, p = 0.113
Turbidity (NTU)	Rho = 0.464, p = 0.294	Rho = -0.393, p = 0.383	Rho = 0.036, p = 0.939	Rho = -0.214, p = 0.645	Rho = -0.750, p = 0.052	Rho = -0.536, p = 0.215	Rho = -0.679, p = 0.094
	Tau = 0.333, p = 0.368	Tau = -0.333, p = 0.368	Tau = 0.048, p = 1.000	Tau = -0.143, p = 0.764	Tau = -0.619, p = 0.072	Tau = -0.429, p = 0.230	Tau = -0.524, p = 0.133
	R = 0.536, p = 0.215	R = 0.129, p = 0.784	R = -0.530, p = 0.221	R = 0.291, p = 0.526	R = -0.287, p = 0.533	R = -0.096, p = 0.837	R = -0.395, p = 0.380
Canopy Cover (%)	Rho = 0.821, p = 0.023	Rho = 0.000, p = 1.000	Rho = -0.429, p = 0.337	Rho = 0.179, p = 0.702	Rho = -0.357, p = 0.432	Rho = -0.107, p = 0.819	Rho = -0.571, p = 0.180
	Tau = 0.619, p = 0.072	Tau = -0.048, p = 1.000	Tau = -0.238, p = 0.548	Tau = 0.143, p = 0.764	Tau = -0.333, p = 0.368	Tau = -0.143, p = 0.764	Tau = -0.429, p = 0.230

