8-1-2017

A Comparison of Outdoor Bioaerosol and Particulate Measurements in Las Vegas

Tanviben Yogeshkumar Patel
University of Nevada, Las Vegas, tanvibenypatel@gmail.com

A COMPARISON OF OUTDOOR BIOAEROSOL AND PARTICULATE MEASUREMENTS IN LAS VEGAS

By

Tanviben Y. Patel

Bachelor of Science - Biology
University of Nevada, Las Vegas
2010

Master of Public Health
University of Nevada, Las Vegas
2013

A dissertation submitted in partial fulfillment
of the requirements for the

Doctor of Philosophy – Public Health

Department of Environmental and Occupational Health
School of Community Health Sciences
Division of Health Sciences
The Graduate College

University of Nevada, Las Vegas
August 2017

UNLV | GRADUATE COLLEGE

Dissertation Approval

The Graduate College
The University of Nevada, Las Vegas

July 25, 2017

This dissertation prepared by

Tanviben Y. Patel

entitled

A Comparison of Outdoor Bioaerosol and Particulate Measurements in Las Vegas

is approved in partial fulfillment of the requirements for the degree of

Doctor of Philosophy – Public Health
Department of Environmental and Occupational Health

Mark Buttner, Ph.D.
Examination Committee Chair

Lung-Wen Chen, Ph.D.
Examination Committee Member

Chad Cross, Ph.D.
Examination Committee Member

Patricia Cruz, Ph.D.
Examination Committee Member

Dennis Bazylinski, Ph.D.
Graduate College Faculty Representative

Kathryn Hausbeck Korgan, Ph.D.
Graduate College Interim Dean

Abstract

The urbanization of the Las Vegas Valley has turned the desert into a green oasis by introducing many non-native plant species, some of which are allergenic. Outdoor bioaerosols consist of microorganisms, pollen, spores, and other agents that could cause infections or affect the health of humans. Studies have suggested that exposure to bioaerosols through inhalation can lead to various human health risks. Typically, one monitoring station is established per city to obtain pollen and mold counts for an entire metropolitan area, and the site may not be representative of community exposures. The objective of this study was to measure and compare pollen, mold, bacterial DNA, fungal DNA, and particulate matter concentrations at five locations in Las Vegas to determine if there are differences between microenvironments within the city.

Air samples were collected from five sites across the Las Vegas Valley over a one-year period. Samples were collected in 2015, and analyzed for six air quality parameters: pollen counts, mold spore counts, total bacterial and fungal DNA concentrations, and fine and coarse particulate matter ($PM_{2.5}$ and PM_{10}). A mixed-model analysis was used to examine potential differences. A non-parametric Kendall's tau correlation was used to examine potential associations between mold spore microscopy counts and total fungal DNA.

There were several differences among sites with respect to concentrations of individual tree pollen species. Differences were also observed between the sites for total weed and grass concentrations. Smuts (basidiomycetes) were the dominant spores for all five sites during the spring season. *Cladosporium* was the second dominant spore with the highest concentrations occurring during the summer and fall months. Overall bacterial DNA concentrations were the highest bioaerosol measurements, with the highest concentrations observed during the winter.

The variability among the sites could be due to the differences in geography and landscaping practices near the sampling sites. The results provide bioaerosol measurements for one year in Las Vegas, which may lead to a better characterization of ambient bioaerosols and how they relate to outdoor air quality and human exposure.

Acknowledgements

I would first like to thank my dissertation committee, Dr. Mark Buttner, Dr. Patricia Cruz, Dr. Chad Cross, Dr. Lung-Wen (Antony) Chen, and Dr. Dennis Bazylinski for their guidance, motivation, and support throughout my Ph.D. Process. My committee members were vital in every aspect of the project, from teaching me new lab techniques, statistical analysis methods, and providing new data and reviews of my manuscripts. I would especially like to thank Dr. Mark Buttner, who spent many long hours guiding me on my laboratory data collection and review of my horrendous writings. I know there were many times he probably wanted to kill me for writing, “data was” instead of “data were.” I also want to thank Dr. Cruz for her constant motivational encouragement every time I would see her.

Next, I would like to thank my parents, Nayna and Yogesh and my sister Roma. They have supported me throughout my whole college career, all 12+ years. Even though I had to miss family and friends events multiple times, they always understood and knew that my education and research was important and never discouraged me from it. Thank you to my many friends, Ana Maria Mogos, Noe Antolin, Jenny Lucas, Khaye Rufin, Dante Layola, David Rivas, and Asma Tahir who listened to my many frustrating rants, and gave me little bits of encouragement when it was needed, and forced me to take breaks when it was badly needed. I would also like to thank my pharmacy family at Walgreens, that had always asked how school was going and would understand when I had to cancel my work shifts because of due dates.

I would like to thank the School of Community Health Sciences staff and faculty who have assisted me. Thank you Valearia for helping with all of the tedious paperwork process and always encouraging me to finish my Ph.D. and telling me to stop taking on more work. Dr.

Shawn Gerstenberger thank you for always asking me if “I was done yet” and providing me with numerous opportunities to grow in the program, during my masters and Ph.D. Dr. Brian Labus and Dr. Ge Kan, thank you for taking the time to give me advice about my project and showing me how to run the ArcGIS software. Last, I would like thank Xan Goodman for showing me the various sources available to me to look for journal articles.

Thank you to the UNLV Emerging Disease Lab current and former staff, Theresa Trice, Jerry Wills, Vanessa Ortiz, Jordan Luttrell-Freeman and David Woodard for showing how to extract DNA, run the PCR machine, and assisting me with the whole laboratory process.

Thank you to Dr. Dave Slattery with Las Vegas Fire and Rescue for providing me with the opportunity to conduct research since undergrad. He has always been a great resource for me and assisted in any way possible to enhance my educational experiences.

Last, I would like to thank the funding agency, Clark County School District for their continued support of the UNLV Pollen Program, which has greatly benefited the community. I could not have completed my Ph.D. project without the assistance of everyone mentioned and many more people who have shown me encouragement and interest in my work.

.

Table of Contents

List of Tables

List of Figures

List of Equations

Chapter 1: Introduction

Bioaerosols are particulate matter that contain biological or chemical components and viable and non-viable bacteria, fungal spores, pollen grains, and various other airborne debris (Faridi et al., 2017). Bioaerosols are a concern outdoors because of the potential to distribute allergens and pathogens, which can affect human health and agriculture (Sofiev et al., 2013). Outdoor bioaerosols consist of microorganisms, pollen, spores, and other agents that could cause infections or affect the health of humans. Pollen is the reproductive grain that carries plant DNA for fertilization; it contains known allergens that can elicit many respiratory responses, especially in sensitive populations. In the Mojave Desert, there are numerous species of vegetation that produce allergenic pollen, but few of these species are native. Urban development turned the desert into a green oasis by introducing many non-native plant species, some of which are allergenic, such as *Acer* (Maple), *Fraxinus* (Ash), *Morus* (Mulberry), *Olea* (Olive), *Pinaceae* (Pine), *Platanus* (Sycamore), and *Ulmus* (Elm). The National Allergy Bureau (NAB) has established the following for pollen to be considered an allergen: the pollen has to be (1) produced in high quantities, (2) buoyant enough to be transported over long distances, and (3) produced by dominant species of plants in the region (Bastl, Kmenta, Geller-Bernstein, Berger, & Jager, 2015). Typically, one monitoring station is established per city to obtain pollen counts for an entire metropolitan area in the U.S.

Fungal spores are also allergens that are naturally occurring and can trigger allergic responses in the respiratory tract. Several top species of fungal spores include *Cladosporium*, *Alternaria*, Smuts, and Basidospores. In addition, mycotoxins are byproducts of molds that are a threat to human and animal health (Alassane-Kpembi et al., 2017). Dispersal of the spores is dependent on various factors, including airflow, water content, animal activity, and the movement of hosts

(Lee et al., 2010). Meteorological and climate conditions, such as temperature and relative humidity, influence the concentrations of spores in the air (Ponce-Caballero et al., 2013). Typically, fungal spore concentrations increase during spring and reach high levels in the summer (Haas et al., 2014). During high concentrations of fungal spores in the outdoor air, there are relatively higher concentrations than normal found indoors. Little is known about airborne fungal spore concentrations in the Mojave Desert.

Airborne bacteria, a component of bioaerosols, can reach concentrations up to hundreds of thousands of cells per m^3 of various species in the urban environment (Genitsaris et al., 2017) and high concentrations may cause a health response. These microbes can be aerosolized from terrestrial and aquatic surfaces and travel distances from several meters to thousands of kilometers (Dueker et al., 2012). Particulate matter (PM) is a non-living substance that is made up of various chemical compositions depending upon location. PM_{10} are particles with a diameter smaller than 10µm, while $PM_{2.5}$ are particles with a diameter smaller than 2.5µm. The common sources of PM are dust, sulfur, traffic emissions, soil, and oil combustion (Dimitriou and Kassomenos, 2017). Bioaerosols are considered a minor fraction of PM, in terms of both particle number and mass (Chow et al., 2015).

Bioaerosols can be comprised of pathogenic or non-pathogenic microorganisms (Douwes, Thorne, Pearce, & Heederik, 2003). Studies have suggested that exposure to bioaerosols through inhalation can lead to asthma, chronic obstructive pulmonary disease, and various other respiratory illnesses (Rajput, Anjum, & Gupta, 2017). They can transmit diseases that can affect human and agricultural health via airflow (Hurst et al., 2007). It is estimated that one-fourth of the particles in the atmosphere is composed of pollen, microbes, plant and animal debris (Jalava et al., 2016). The size of the particles determines where the particle will deposit in the respiratory tract. Typically, the particle size ranges from 0.5 to 30 μm in diameter. PM containing certain metals can be toxic. PM_{10} and $PM_{2.5}$ have been shown to deposit into the respiratory tract and thus are considered a health risk and criteria air pollutants (Phalen & Phalen, 2013). All of these parameters have been studied extensively on their own, but their relationship and their combined risk to human health remain unknown.

The objective of the study was to compare measurements of bioaerosols and PM in Las Vegas. Weekly samples were collected from five sites around the Las Vegas Valley during 2015. Particulate Matter $(PM)_{2.5}$ and PM_{10} data from the Clark County Department of Air Quality were obtained for the selected sampling dates, and the parameters were analyzed for relationships. Three manuscripts were prepared from data collected during this project and have been submitted to peer reviewed journals for publication (Chapters 3, 4, and 5). The results from this study will provide previously unavailable baseline data on bioaerosols that can affect outdoor air quality and respiratory health in the Las Vegas Valley.

Chapter 2: Literature Review

Pollen

Airborne pollen is a mature reproductive delivery package that carries the plant male genetic material for sexual reproduction. The pollen grain is the male gametophyte that transfers to the female reproductive organ to initiate the pollination process. Pollen grains have either a furrow, pore, or both which causes compounds to escape the inner confines of the pollen. Proteins inside of the male pollen grains are allergenic (Sofiev et al., 2013). These proteins that escape the pollen contribute to the allergenic response of immunoglobulin E (IgE) production (Lewis, Vinay, & Zenger, 1983). IgE are antibodies produced by an immune response and typically, clinicians can use IgE in the blood serum as a biomarker to identify allergenicity (Sears et al., 1991). In addition to eliciting an IgE response, several other criteria are necessary for allergenicity. The pollen has to be produced in high quantities, it has to be buoyant to be transported over long distances, and produced by dominant species of plants in the region (Bastl et al., 2015). Several pollen species are dominant and primary triggers for allergic reactions. These species include birch (*Betula*), oak (*Quercus*), ragweed (*Ambrosia*), mugwort (*Artemesia*), and grass (*Poaceae*) (Zhang, Bielory, Cai, Mi, & Georgopoulos, 2015). Grass pollen affects 50% of the population who have IgE reactions. The incidence of pollen allergies is typically observed during flower blooming and pollination season, which is linked to temperature and the wind (Roopashree, Somashekar, & Kumar, 2014).

Symptoms of pollen allergenicity include sneezing, runny nose, itchy throat, eczema, and other irritating skin conditions (Kim, Jahan, & Kabir, 2013). Pollen allergies are not limited to allergic rhinitis; allergic airway disease is estimated to affect 5 – 30 % of the population in industrialized countries (Zhang et al., 2015). Allergic airway disease is a category of diseases that are caused by an allergic agent that narrows the airways. The constriction of the airways results in conditions such as asthma, chronic obstructive pulmonary disease, and viral upper respiratory illness (Duke & Keech, 2015). Previous studies have indicated that certain species of pollen are associated with specific respiratory illnesses and increase physician visits during blooming seasons (Davies et al., 2015). The increase in physician visits has raised the question of the exact role of pollen concentrations and their effect on respiratory illnesses, as pollen is not considered an air pollutant (Ørby et al., 2015).

Pollen size and abundance vary from species to species. Typical pollen sizes range from 10 μm to 200 μm. The released amount of pollen can impact human health at longer distances, even on a continental scale (Sofiev et al., 2013). Grass species of pollen have been known to release 10-700 grains per square meter per second, dependent on weather factors. *Ambrosia* (ragweed) is released in large clumps containing hundreds of grains. Winds will break these clumps up into smaller particles. *Platanus* (sycamore) pollen grains, on the other hand, disperse close to the tree and diminish at distances greater than 400 meters (Sofiev et al., 2013).

The National Allergy Bureau has established a standard to determine the concentration range that could elicit an allergic reaction in most people. For tree pollen, concentrations above 15 grains/m^3 of air, for grass, above 5 grains/m^3, and for weeds, concentrations above 10 grains/m^3can elicit allergies in sensitive populations (Reading the Charts, 2016).

Fungal Spores

Fungal spores allow reproduction of fungi and are naturally occurring particles that are present everywhere in the outdoor air. Fungal spores typically range in size from 2 – 20 μm in diameter (O'Gorman & Fuller, 2008) and up to 200 μm in length. During fungal growth, spores are formed at the hyphae and released into the environment. Fungal spore dispersal is dependent on various factors, such as airflow, water content, animal activity, and the movement of hosts (Lee, Hwang, Jung, Lee, & Lee, 2010). Meteorological and climate conditions of temperature (21-30°C) and relative humidity (75%) influence the concentrations of spores in the air (Ponce-Caballero et al., 2013). Studies have shown airborne dispersal of spores at distances greater than 1000 km from the source. Dry air spore fungi (*Cladosporium* and *Alternaria*) can disperse long distances under low relative humidity and high wind speed. Wet weather spores (*ascospores* and *basidiospores*) disperse during and after rainfall. Typically, fungal spore concentrations increase during spring and reach high levels in the summer. During the winter, fungal levels are low (Haas et al., 2014). When there are high concentrations of fungal spores in the outdoor air, there are relatively higher concentrations than normal found indoors. Indoors, spores are transported through air conditioning systems, windows, and doors (Ponce-Caballero et al., 2013).

Exposure to outdoor fungal spores has been shown to be a potential human health risk because of toxic substances called mycotoxins, produced by certain species (Fernández-Rodríguez, Tormo-Molina, Maya-Manzano, Silva-Palacios, & Gonzalo-Garijo, 2014). In addition, spores that are smaller than 5μm can penetrate into the alveoli and lead to respiratory disorder (Ponce-Caballero et al., 2013). Allergic respiratory disorders include decreased lung function, asthma, and respiratory infections. The National Allergy Bureau indicates a concentration of 6500 spores/m^3 can illicit immune responses in humans (Reading the Charts, 2016).

Airborne Bacteria

Much like fungal spores, bacteria are naturally present in the air. Airborne transmissions of bacteria are the main route of spreading infectious diseases in urban environments (Ekhaise & Ogboghodo, 2011). Outdoor activities, such as high personal traffic, vehicle flow, and construction can aerosolize dust and bacteria from the ground into the air. Previous studies have shown that aerosolized bacteria can attach to dust particles and travel long distances, but there have been limited studies that demonstrated the movement of bacteria in the air and the effect on human health (Griffin, 2007). There have been associations of outbreaks of meningitis occurring because of bacteria carried in dust clouds. These outbreaks typically have taken place in desert regions of North Africa between the months of February and May (Sultan, Labadi, Guégan, & Janicot, 2005). The current literature focuses on Gram-negative bacterial endotoxins that are known to increase the risk for asthma. These endotoxins increase the inflammatory responses in the lungs (Jalava et al., 2016).

The presence of airborne bacteria varies depending on environmental conditions, such as relative humidity, temperature, and wind velocity. Large airborne concentrations have been observed in urban areas where human density and activity is high compared to rural areas (Yadav et al., 2015). In the densely populated city of Beijing, China researchers found that airborne bacteria reached high concentrations during the fall and spring season, where mean temperatures are 25°C for fall and 11-20°C in spring (Griffin, 2007). The city of Montreal, Canada has observed high microbial concentrations during the summer season with mean temperatures of 21°C. Airborne bacteria in the outdoor environment have caused irritations in the nasopharyngeal mucosa, asthma, bronchitis, and other lung diseases (Griffin, 2007). Research on the effect of outdoor airborne bacteria on human health is still limited.

Particulate Matter ($PM_{2.5}$ and PM_{10})

The National Ambient Air Quality Standards are based on airborne particulate matter (PM) less than 10 µm in diameter (PM_{10}) and particles less than 2.5 µm ($PM_{2.5}$) (Cheung et al., 2011). PM is comprised of various chemical compositions depending upon location. PM can be toxic when certain metals adhere to it. PM_{10} and $PM_{2.5}$ have been shown to deposit into the respiratory tract and thus are considered a health risk and a criteria air pollutant (Phalen & Phalen, 2013). $PM_{2.5}$ and PM_{10} consist mainly of particles generated from agriculture, mining, construction, and road traffic. PM_{10} is quantified by measuring the mass of particles that pass through a size-selective orifice with a cut off at 10 µm, mimicking the particles most likely to be inhaled (Seaton, Godden, MacNee, & Donaldson, 1995). $PM_{2.5}$ is primarily composed of combustion particles from motor vehicles and the burning of coal, oil, and wood (Laden, Neas, Dockery, & Schwartz, 2000). $PM_{2.5}$ can increase the inflammatory proteins and heart rate thus contributing to cardiovascular disease (Weber, Insaf, Hall, Talbot, & Huff, 2016). High concentrations of $PM_{2.5}$ can cause wheezing, coughing, and eye, nose, throat, and lung irritation. The elderly and children are particularly sensitive to $PM_{2.5}$ concentrations. Wildfires can contribute to the amount of particulate matter in the air. Wildfire particles have been seen up to hundreds of miles away from the actual burn areas. Cities close to 100 miles of the burn areas have seen air quality worsen by 5 to 15 times (Kenward, Adams-Smith, & Raja, 2013).

The risk for human health is known for PM as it can go into the olfactory region of the nose and travel to deposit into the respiratory tract (Phalen & Phalen, 2013). Penetration into the lung wall is known to induce inflammation in the pulmonary system leading to blood clotting and heart disease (Harrison & Yin, 2000). Associations have been observed in epidemiological studies between particulate matter and the rates of asthma, chronic obstructive pulmonary disease, pneumonia, and other respiratory conditions (Kappos et al., 2004). The Environmental

Protection Agency has established standards of 35 µg/m^3 in 24 hours for $PM_{2.5}$ and 150 µg/m^3 in 24 hours for PM_{10} (total particles ≤ 10 µm) to protect human health.

Purpose of the Study

The objective of the study was to compare measurements of outdoor air quality parameters and determine their relationships in Las Vegas. Air filter samples were obtained from five sites around the Las Vegas Valley as part of a local air-monitoring program, representing different microenvironments at various times (seasons) during 2015. DNA was extracted from these air filters and amplified with universal bacterial and universal fungal primers and probes that were developed in the University of Nevada, Las Vegas' Emerging Diseases Laboratory. The PCR fungal data were compared with airborne microscopic mold data. $PM_{2.5}$ and PM_{10} data from the Clark County Air Quality Division were analyzed for relationships with other air quality measurements. A review of the literature has not produced any publications assessing all of these parameters together in the Mojave Desert. The results from this study will provide previously unavailable baseline data into aerobiological components that may affect human health.

Research Questions and Hypotheses.

Outdoor air quality parameters measured:

a. Pollen – microscopic counts
b. Mold – microscopic counts
c. Bacteria – DNA templates
d. Fungal - DNA templates
e. $PM_{2.5}$ – secondary reference data

f. PM_{10} - secondary reference data

Research Question 1: Is there a relationship between the various pollen types among the five sample locations in the Las Vegas Valley?

- **Ho:** There will be no relationship between various pollen types among the five sample locations.
- **Ha:** There will be one or more relationships between various pollen types among the five sample locations.

Research Question 2: Is there a relationship between the various mold spores among the five sample locations in the Las Vegas Valley?

- **Ho:** There will be no relationship between various mold spores among the five sample locations.
- **Ha:** There will be one or more relationships between various mold spores among the five sample locations.

Research Question 3: How do the measurements of outdoor air quality variables compare by season and location?

- **Ho:** There will be no relationship between the outdoor air quality variables by location and season.
- **Ha_1:** There will be one or more relationships between the outdoor air quality variables by location.
- **Ha_2:** There will be one or more relationships between the outdoor air quality variables by season.

Chapter 3: Comparison of Airborne Pollen Concentrations in Five Monitoring Locations in Las Vegas, NV.

Abstract

The urbanization of the Las Vegas Valley has turned the desert into a green oasis by introducing many non-native plant species, some of which are allergenic. Typically, one monitoring station is established per city to obtain pollen counts for an entire metropolitan area. However, variations in pollen concentrations could occur among microenvironments. The objective of this study was to measure and compare pollen concentrations in five locations in Las Vegas to determine if there are differences between microenvironments within the city. Air samples were collected from five sites across the Las Vegas Valley over a one-year period (2015). Prepared slides were analyzed with a light microscope for pollen grains and converted into airborne pollen concentrations. Mixed-model methods were used to determine mean differences. There were several differences among sites with respect to pollen grain concentrations of individual tree species. Differences were also observed between the sites for total weed and grass pollen concentrations. We observed significant variations in concentration and composition among the five pollen collection stations that were established across the Las Vegas Valley. This study presented new outdoor pollen data for the southwest region of the United States, focusing on the Las Vegas Valley. The results indicate that more sites and additional monitoring of outdoor allergens are needed to provide accurate information to the community about outdoor air quality conditions.

Introduction

In the Mojave Desert, there are numerous species of vegetation, but few are native; these include several species of the tree family *Cupressaceae* (Cedar/Juniper), and the genera *Pinus* (Pine), and *Prosopis* (Mesquite). Most species of weeds native to the Mojave Desert belong to the genera *Artemisia* (Sagebrush), *Ambrosia* (Ragweed), and the family *Chenopodiaceae/Amaranthaceae* (Goosefoot/Pigweed) (Holmgren, Betancourt, & Rylander, 2010). The urbanization of the Las Vegas Valley, located in a relatively high-altitude area of the Mojave Desert, boomed in the 1960s and 70s owing to tourism and a nationwide migration. Currently, the population of Las Vegas is approximately 2.1 million (Acevedo, et al., 2016). This growth in the population triggered a large increase in housing development and landscaping. Development turned the desert into a green oasis by introducing many non-native plant species, some of which are allergenic, such as *Acer* (Maple), *Fraxinus* (Ash), *Morus* (Mulberry), *Olea* (Olive), *Pinaceae* (Pine), *Platanus* (Sycamore), and *Ulmus* (Elm).

In the Las Vegas Valley, temperatures range from a monthly average high of 104°F to an average low of 38°F (Table 1). The relative humidity ranges from 17% to 30% during the spring season and the driest days are typically in June, with a relative humidity of 13%. The average precipitation is 4 to 5 inches per year. The typical wind speed ranges from 0 to 10 mph, with average wind gusts of 26 miles per hour (mph).

Table 1: Meteorological Data for Las Vegas, NV in 2015 and 2016 (Source: timeanddate.com and wunderground.com).

Year	Month	Avg. High and Low Temperature (°F)	Avg. Relative Humidity (%)	Total Precipitation (in)	Avg. Wind Speed/Gusts (mph)
2015	April	80/57	17	0.26	11/25
	May	85/64	25	0.24	10/23
	June	104/80	13	0.00	11/24
	July	101/80	21	0.19	10/25
	August	104/82	21	0.68	7/21
	September	98/76	22	0.02	6/21
	October	84/65	36	1.16	6/23
	November	64/44	31	0.24	7/26
	December	56/38	35	0.01	7/25
2016	January	57/40	46	0.46	5/24
	February	70/46	29	0.09	6/26
	March	75/53	24	0.00	8/23
	April	79/58	30	2.26	8/24

Pollen allergies are observed during flower blooming and pollination season, and are linked to temperature and wind (Roopashree, Somashekar, & Kumar, 2014). The National Allergy Bureau (NAB) has established the following for pollen to be considered an allergen: the pollen has to be (1) produced in high quantities, (2) buoyant enough to be transported over long distances, and (3) produced by dominant species of plants in the region (Bastl, Kmenta, Geller-Bernstein, Berger, & Jager, 2015). The NAB has established a standard to determine the concentration range that could elicit an allergic reaction in most people. For tree pollen, concentrations above 15 grains/m^3 of air, for grass, concentrations above 5 grains/m^3, and for weeds, concentrations above 10 grains/m^{3}can elicit allergies in populations of sensitive individuals.

Typically, one monitoring station is established per city to obtain pollen counts for an entire metropolitan area. However, variations in pollen concentrations could occur among microenvironments resulting in differences in human exposure to allergenic pollens. The objective of this study was to measure and compare pollen concentrations in five locations in Las Vegas to determine if there are differences between microenvironments within the city.

Methods and Materials

Air Sampling, Collection, and Analysis

Air samples were collected from sites across the Las Vegas Valley using a Burkard spore trap (Burkard Manufacturing Company, Rickmansworth, Hertfordshire, England). For 24-hour samples, a 3”x 1” plain glass microscope slide was coated with a thin film of High Vacuum grease (Dow Corning Corporation, Midland, Michigan) and inserted into the sampler. Airborne particles were impacted onto the slide for 24 hours at an air flow rate of 10 liters per minute (Rogers & Hall, 2000). The sample was collected daily and the slide was placed onto a slide warmer for 10 minutes (Electron Microscopy Sciences® , Hatfield, Pennsylvania). A coverslip was then applied with a few drops of glycerin jelly stained with basic fuchsin (Rogers & Hall, 2000). For 7-day samples, a strip of Melinex® (New Berlin, Wisconsin) tape was fixed to the 7-day sampler drum and coated with a thin film of grease. The sampler drums were changed weekly and the tapes were cut into 48 mm segments, representing 24-hour increments. The cut sections were adhered to a microscope slide with a 10% Gelvatol solution (Robert E. Esch, Lenoir, North Carolina) and allowed to dry for 10 minutes. Coverslips were then applied with a few drops of glycerin jelly stained with basic fuchsin. The prepared slides were analyzed with a light microscope at a total magnification of 400X for pollen grains. A single longitudinal traverse was counted. Pollen grains were identified, if possible, and counts were converted into airborne concentrations and expressed as pollen grains/m^3 (Khattab & Levetin, 2008).

Sampling Locations

Five monitoring locations were established in Las Vegas (Figure 1). Sites A, C, and E are located in suburban, newer developed areas in the city close to housing and small roads. Sites B, and D are located in densely packed urban areas, in older parts of the city close to busy roads.

Statistical Analysis

A Shapiro-Wilk test and observation of skewness and kurtosis measures were used to determine if the data were normally distributed. For the analyses that follow, all data were log-transformed prior to analysis to meet the assumptions of the modeling approach. A mixed-model analysis was used to assess potential differences among locations and months, while treating measurements as repeated factors. The mixed-model approach allowed for inclusion of both location and time, and additionally provided a means to account for an auto-regressive time lag in the data, which was important owing to the temporal nature of the data collection. A planned post-hoc analysis based on marginal mean differences was used to determine differences among locations and months when the overall model suggested differences in main effects. The mixed model is more robust than the two-way ANOVA and also accounts for repeated measurements. IBM SPSS software version 24 was used to analyze the data.

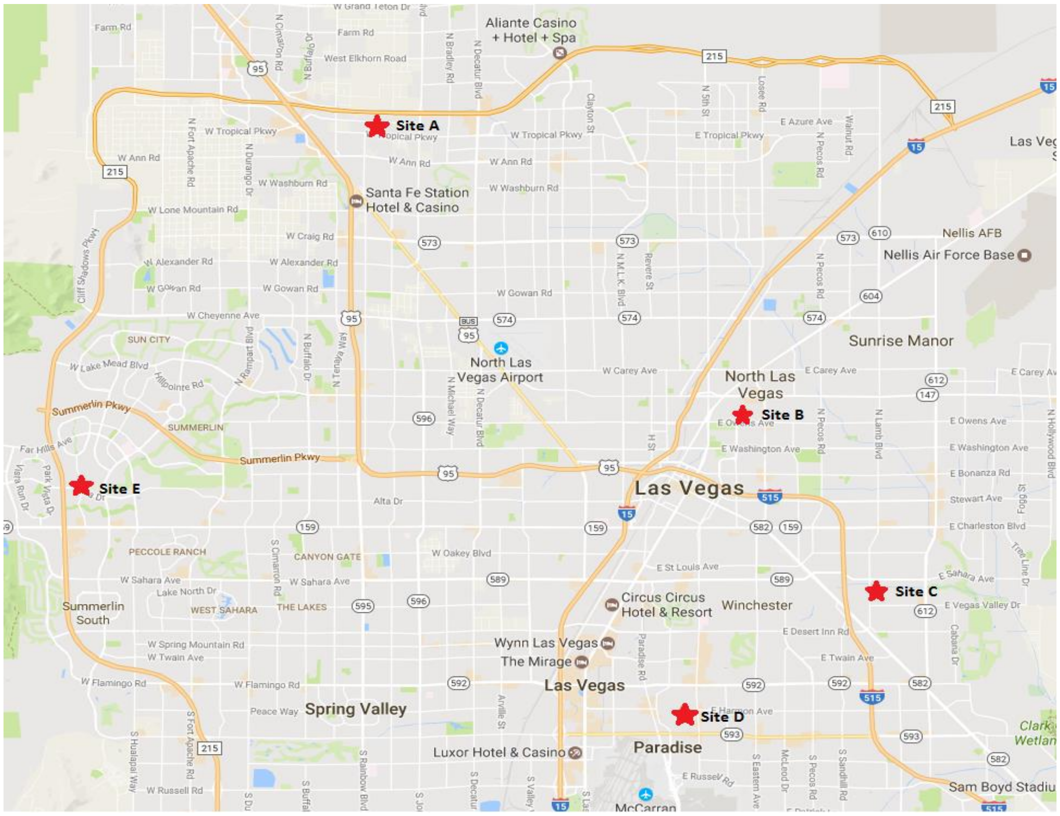


Figure 1: Map of Airborne Pollen Collection Sites in Las Vegas, NV

Results

Total Pollen

Tree pollen was by far the greatest contributor to airborne pollen concentrations (mean = 130 grains/m^3) compared to weeds (mean = 6 grains/m^3) and grass (mean = 3 grains/m^3) in terms of annual averages. The primary tree pollen season occurred in the months of February to June. The largest peak was at Site D in March 2016 (9,589 total grains/m^3). The second largest peak was at Site A in March 2016 (3,500 total grains/m^3) (Figure 2). Overall, when total tree pollen data were combined, there was no significant difference among the five locations for annual average tree pollen concentrations ($p>0.05$). However, there were significant differences by month in total tree pollen concentrations, with March being statistically greater than all other months ($p<0.05$) (Appendix A).

Weed pollen concentrations were the largest during the spring months of March to May and the fall months of August to October. Weed pollen at Site B and D had the largest peaks in April (104 grains/m^3) (Figure 3). There were differences among the sites for total weed concentrations. For weed pollen, Sites A, B, and C were all statistically greater than Sites D and E ($p<0.05$). Sites A and E had the largest mean difference in total weed pollen concentrations (Log Mean Difference = 0.093 grains/m^3).

Grass pollen concentrations were consistent and similar between the months of March and November. The largest peak was at Site B in September (57 grains/m^3). Site D had the second largest peak during the month of March (44 grains/m^3) (Figure 4). Total grass concentrations were significantly greater in Site A compared with C (Log Mean Difference = 0.091) and Site A compared with D (Log Mean Difference = 0.080 grains/m^3). Site B was statistically different from all other sites ($p < 0.05$). Site B had the greatest mean difference compared to Site C (Log Mean Difference = 0.221 grains/m^3).

NAB high concentrations of trees are concentrations above log 1.95, grass concentrations above log 1.30, and weed concentrations above log 1.70. At various times during the year, high concentrations were observed for total tree, grass, and weed pollen, per the NAB criteria.

Individual Tree Pollen Species

There were several differences observed among sites with respect to individual pollen species. At Site E, there was a large peak in *Acer* pollen concentrations during the month of May (138 grains/m^3) (Figure 5). Site D had the largest spike of *Morus* in March 2016 (8,820 grains/m^3). Site B had the largest peak in *Olea* concentration in April 2015 (591 grains/m^3). At

Site D, the highest peak of *Platanus* was in March (795 grains/m^3). *Ulmus* had a large peak in October at all sites, with the largest concentration at Site E (834 grains/m^3).

There were significant differences among sites for several individual tree pollen species (Table 2). Statistically, there was a difference in *Acer* pollen concentrations among Sites A, C, D, and E, with the largest mean difference at Site E vs. Site A (Log Mean difference = 0.116 grains/m^3). *Morus* approached statistical significant difference between Site D vs. Site E (Log Mean difference = 0.360 grains/m^3). *Olea* was statistically different at Sites A, B, C and D, with the biggest mean difference at Site D vs. A (Log Mean difference = 0.086 grains/m^3). *Platanus* was different at Site D compared to all other sites, with a mean difference at Site D vs. Site B (Log Mean Difference = 0.112 grains/m^3) (Appendix B).

It should be noted that Site B had missing data from a sampler malfunction from 2/24/16 – 3/8/16.

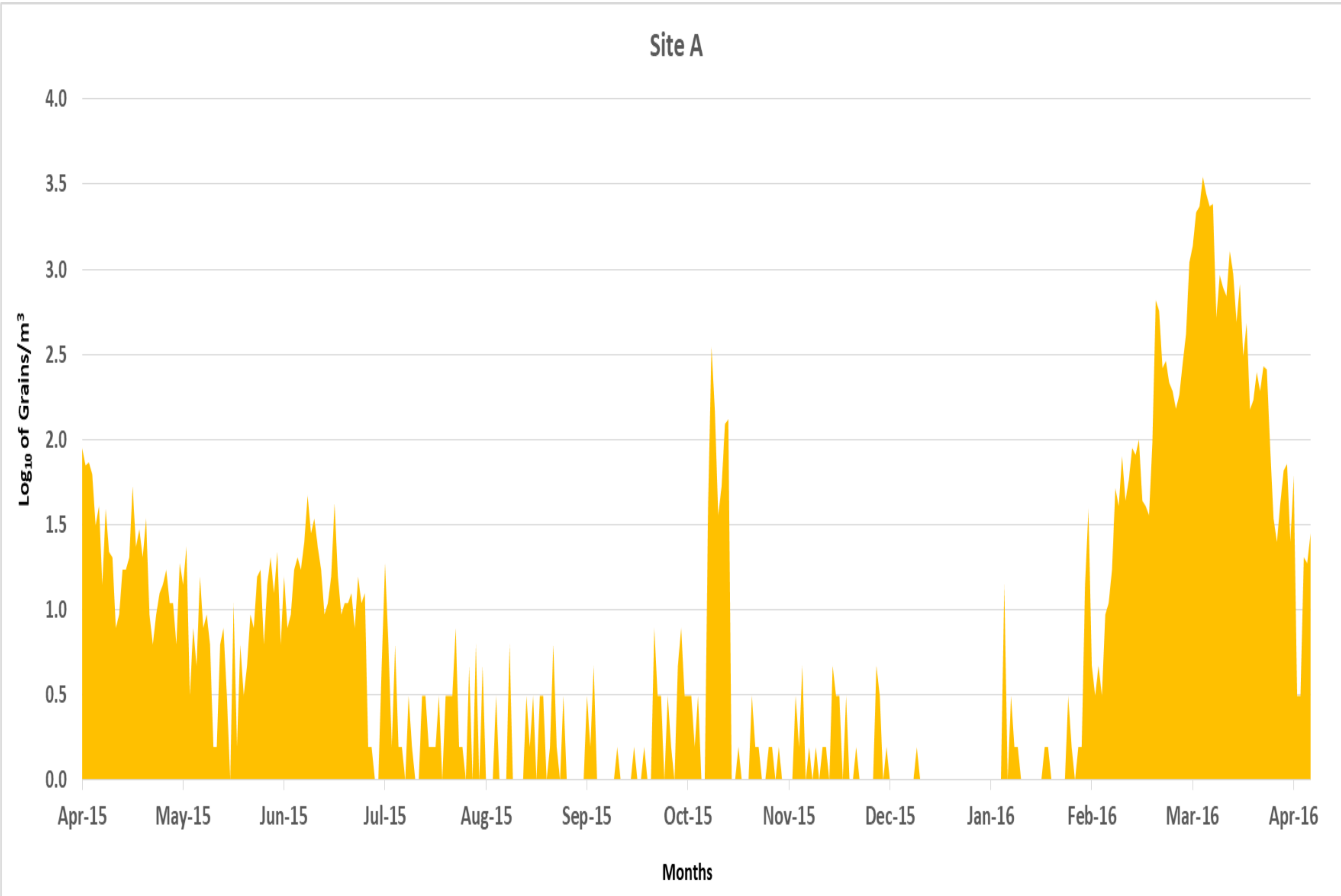


Figure 2.a: Total Tree Pollen Counts for Site A from April 2015 – April 2016.

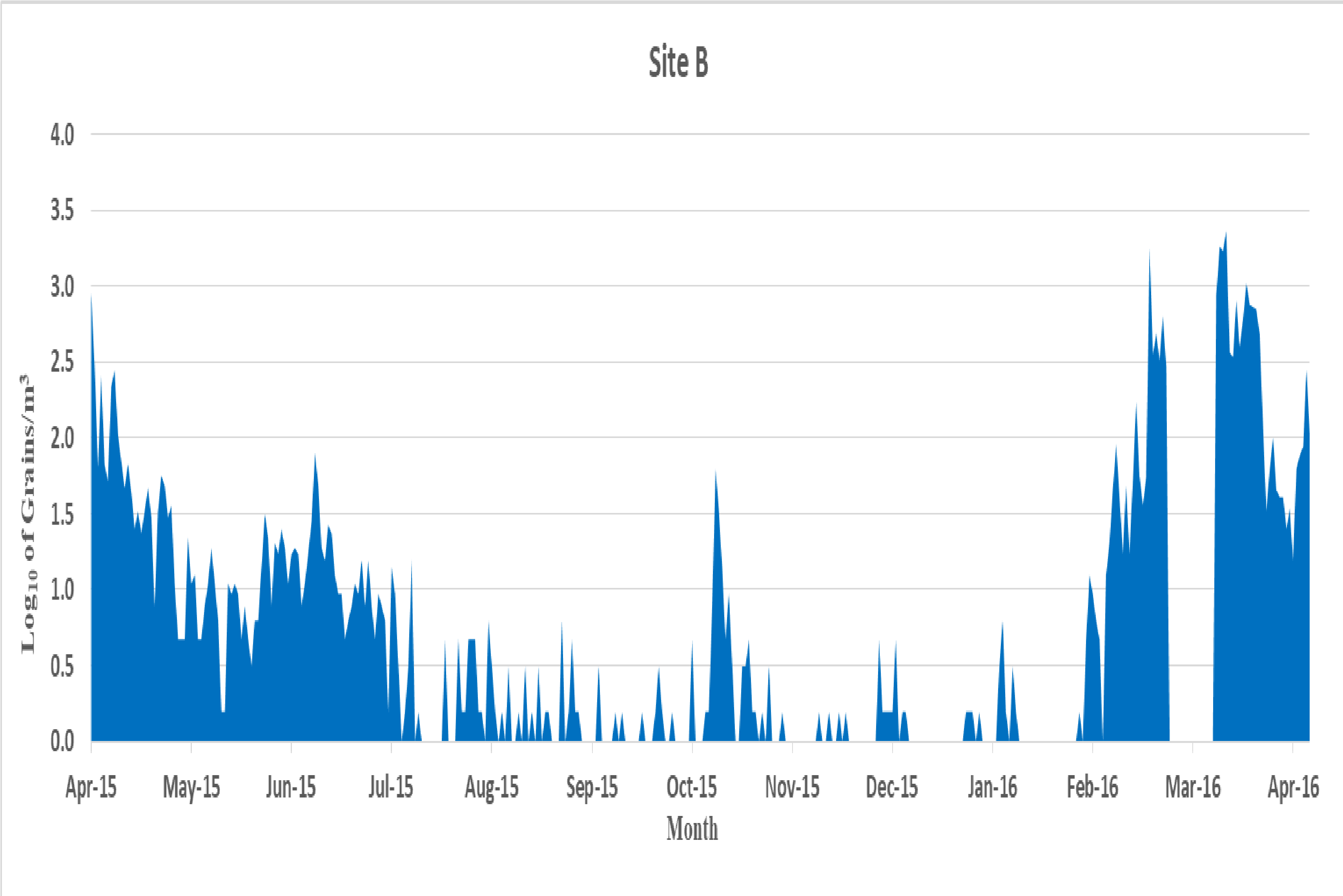


Figure 2.b: Total Tree Pollen Counts for Site B from April 2015 – April 2016 (Missing data from 2/24/16 – 3/8/16).

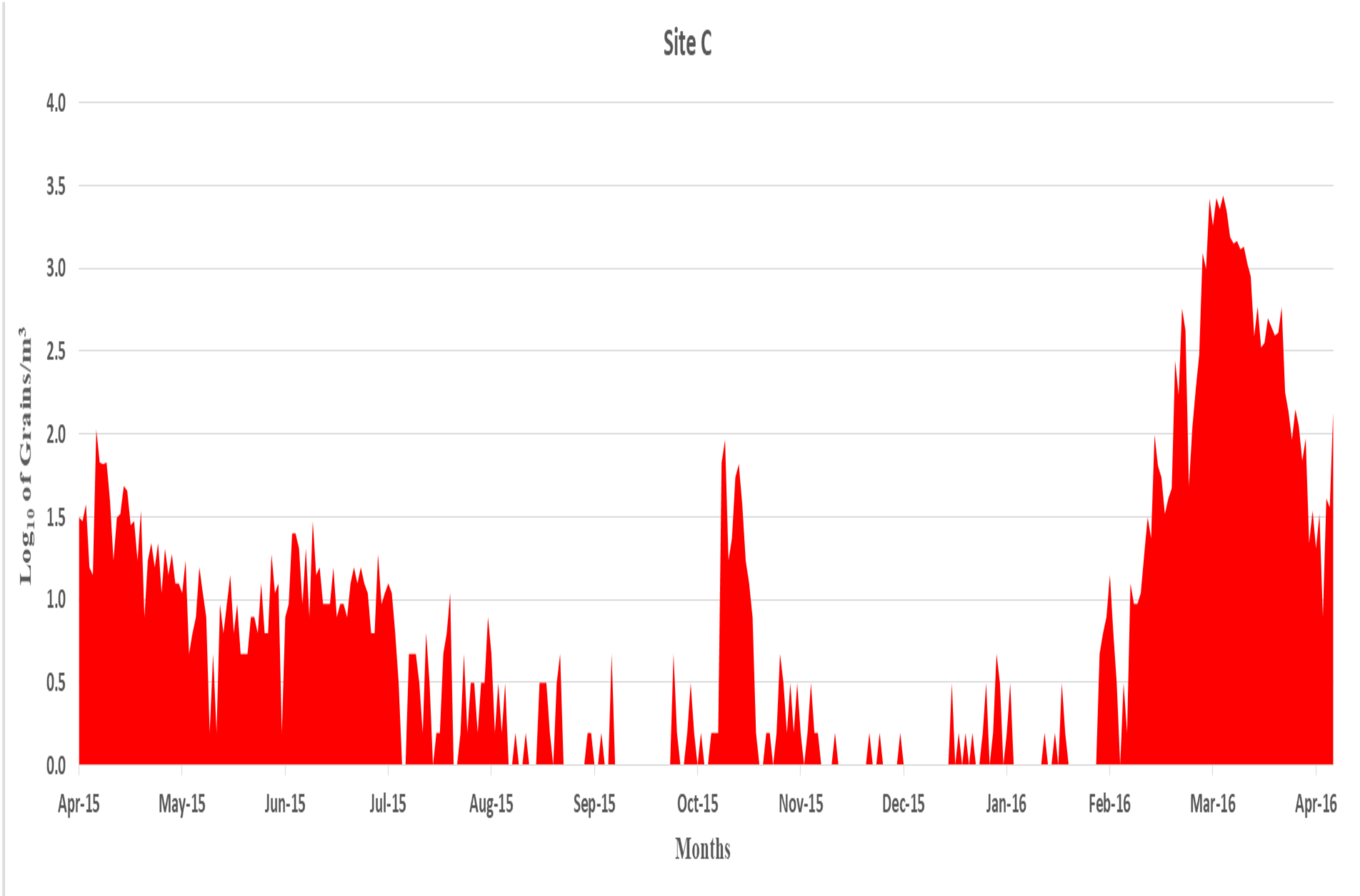


Figure 2.c: Total Tree Pollen Counts for Site C from April 2015 – April 2016.

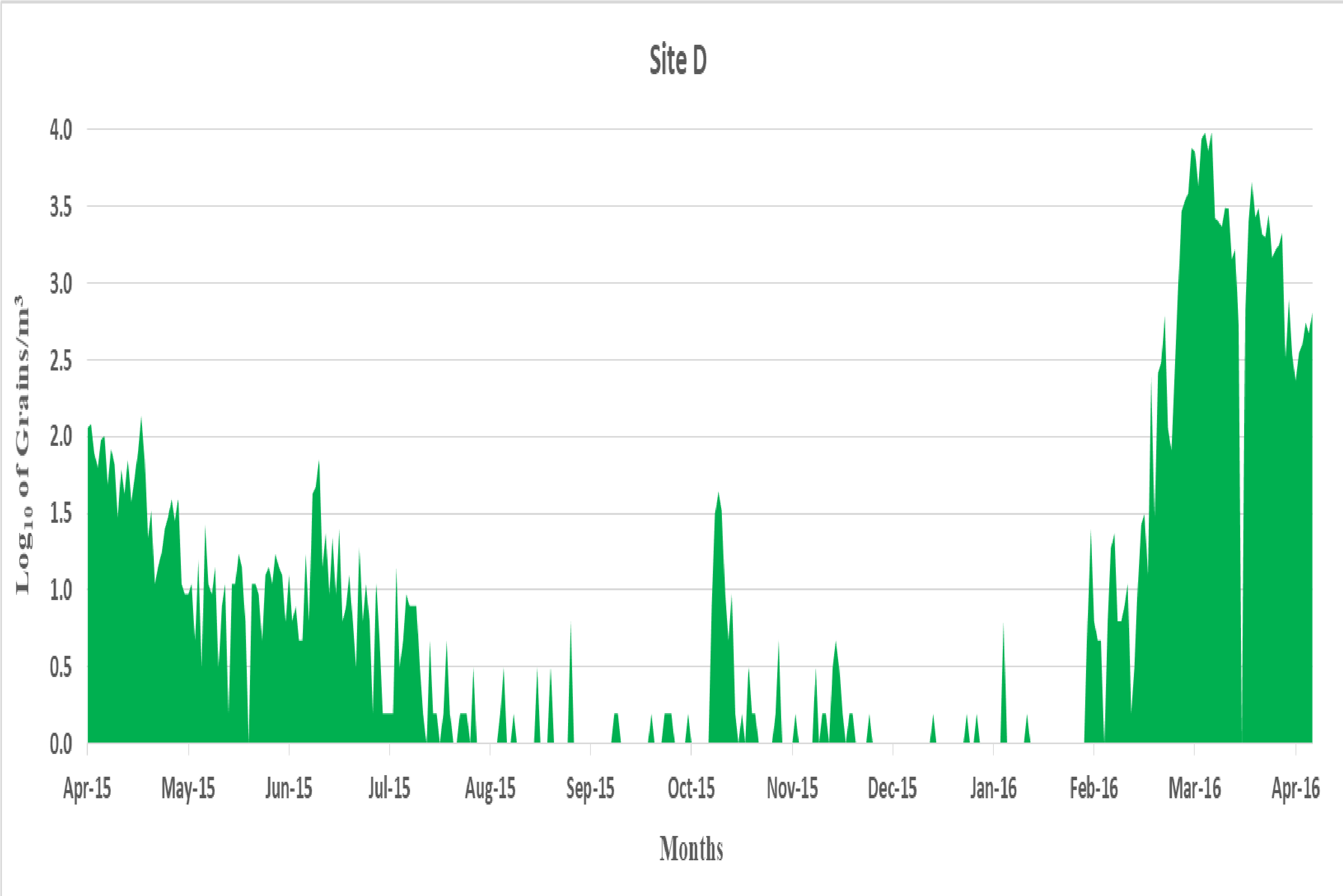


Figure 2.d: Total Tree Pollen Counts for Site D from April 2015 – April 2016.

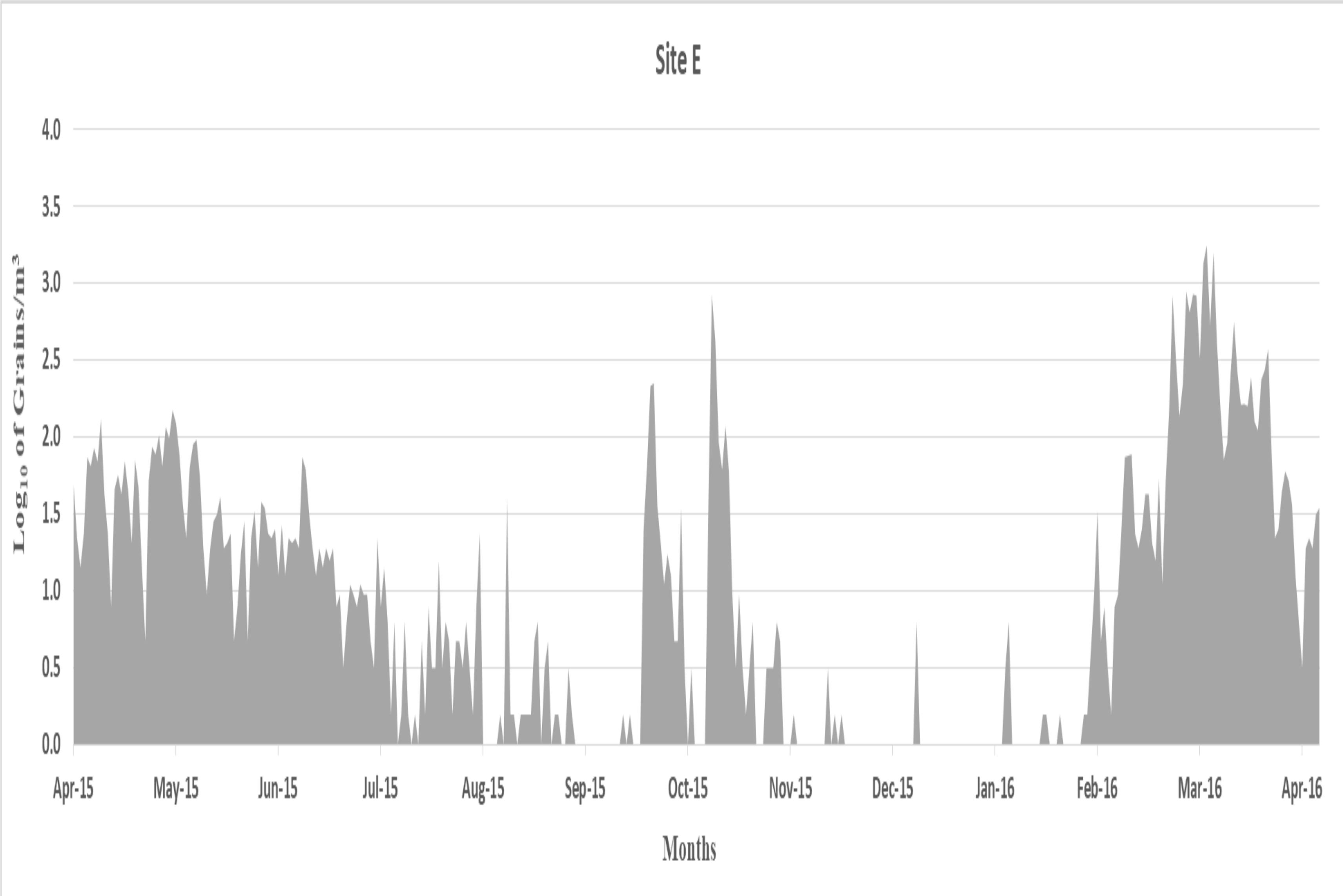


Figure 2.e: Total Tree Pollen Counts for Site E from April 2015 – April 2016.

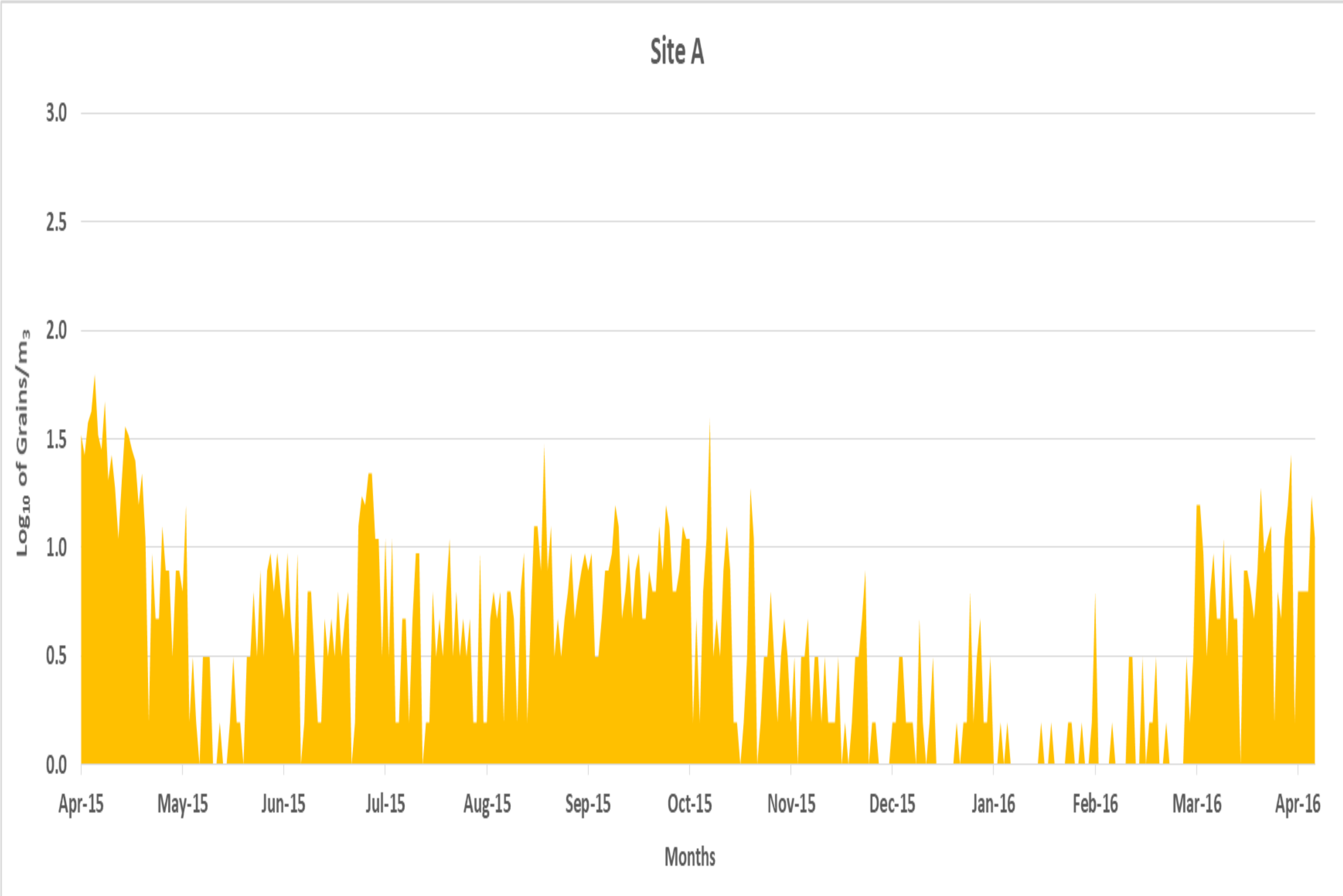


Figure 3.a: Total Weed Pollen Counts for Site A from April 2015 – April 2016

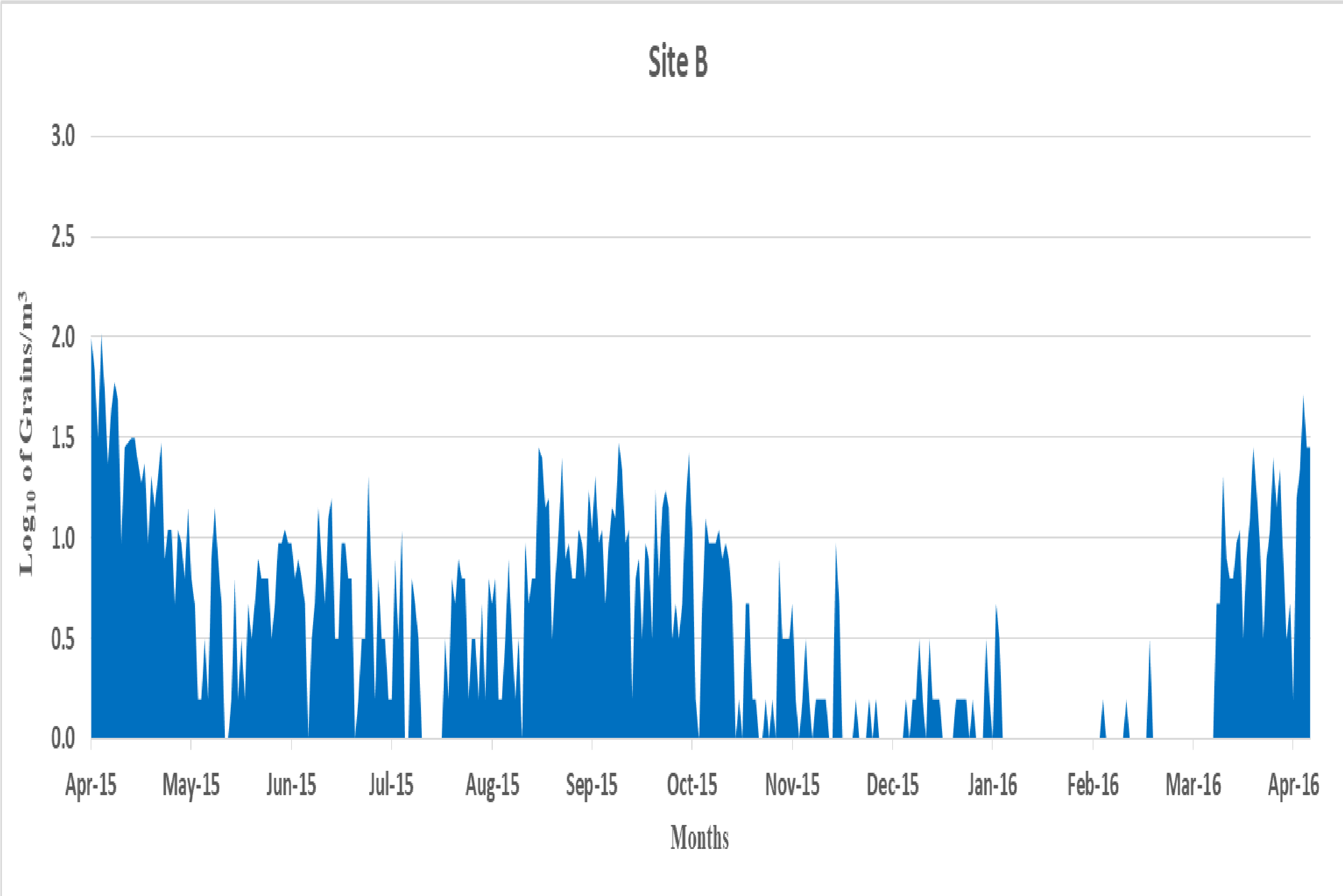


Figure 3.b: Total Weed Pollen Counts for Site B from April 2015 – April 2016 (Missing data from 2/24/16 – 3/8/16).

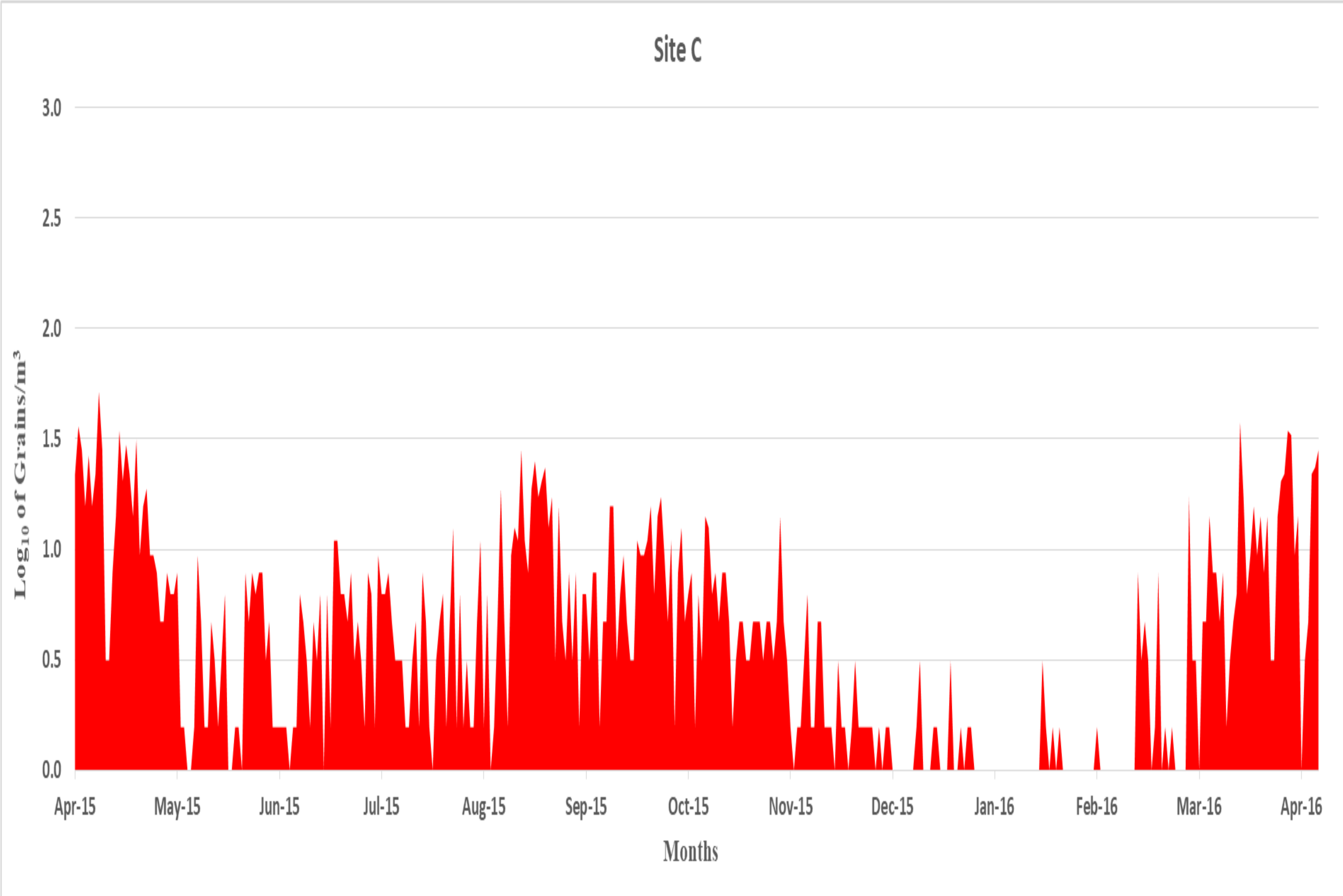


Figure 3.c: Total Weed Pollen Counts for Site C from April 2015 – April 2016.

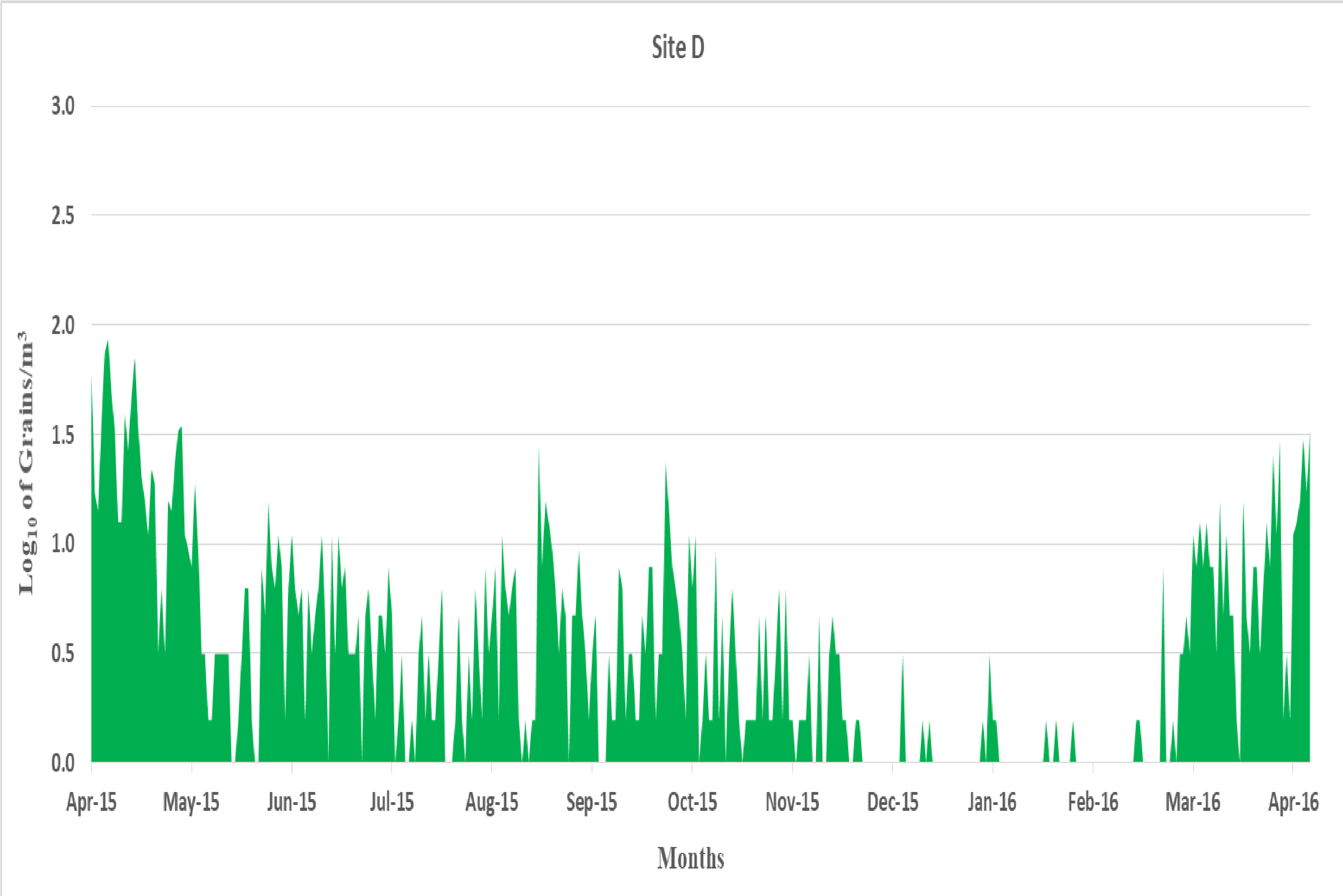


Figure 3.d: Total Weed Pollen Counts for Site D from April 2015 – April 2016.

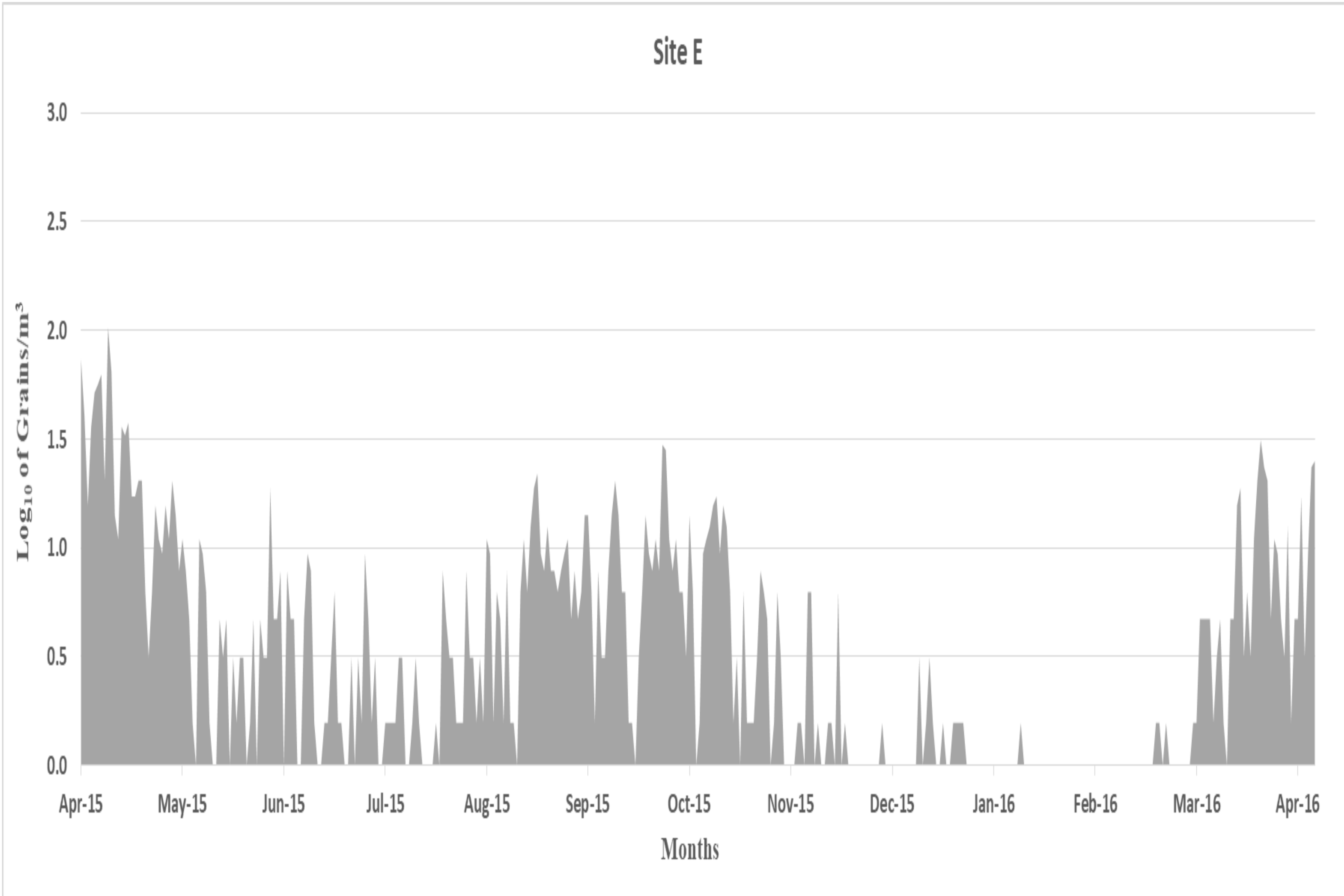


Figure 3.e: Total Weed Pollen Counts for Site E from April 2015 – April 2016.

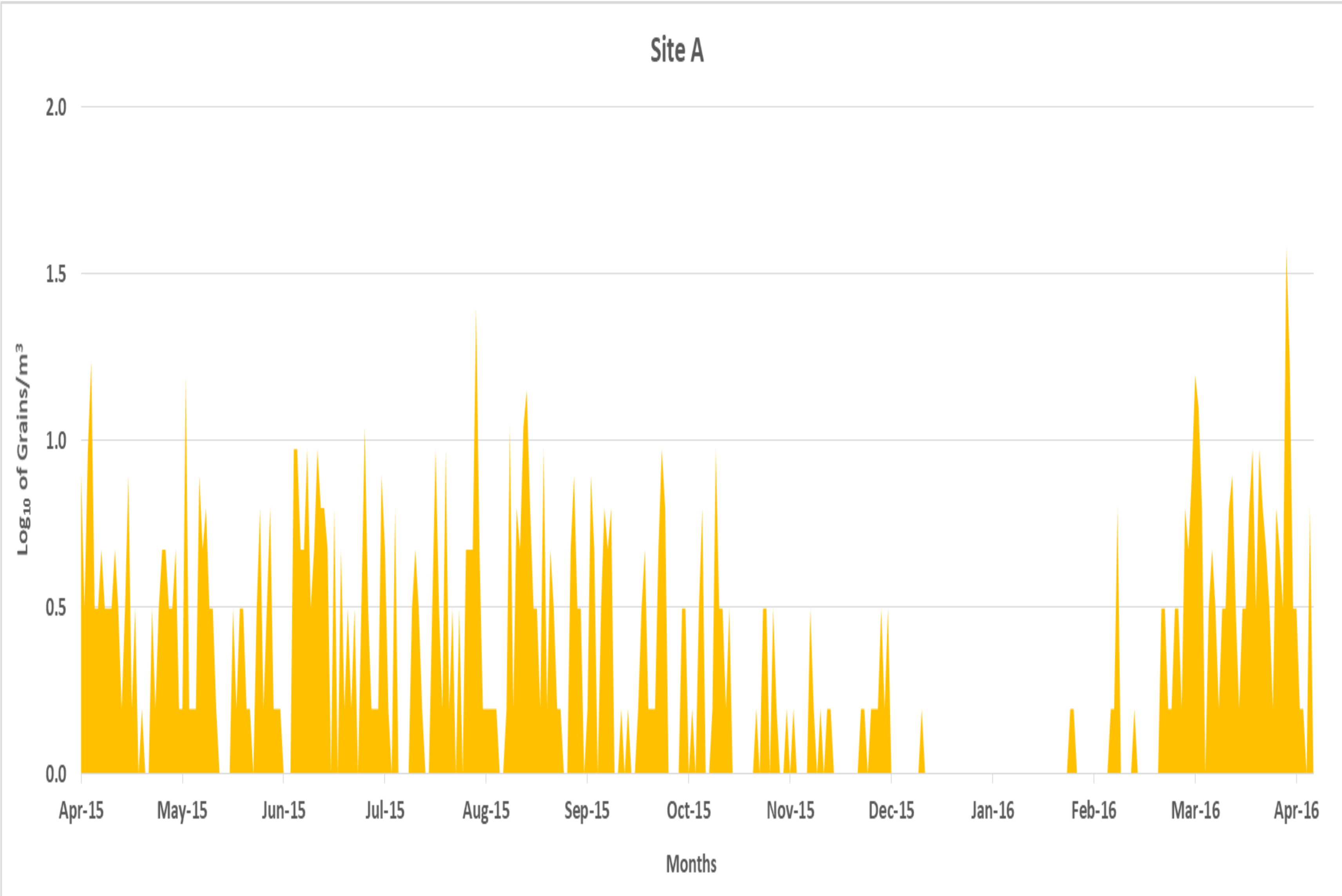


Figure 4.a: Total Grass Pollen Counts for Site A from April 2015 – April 2016.

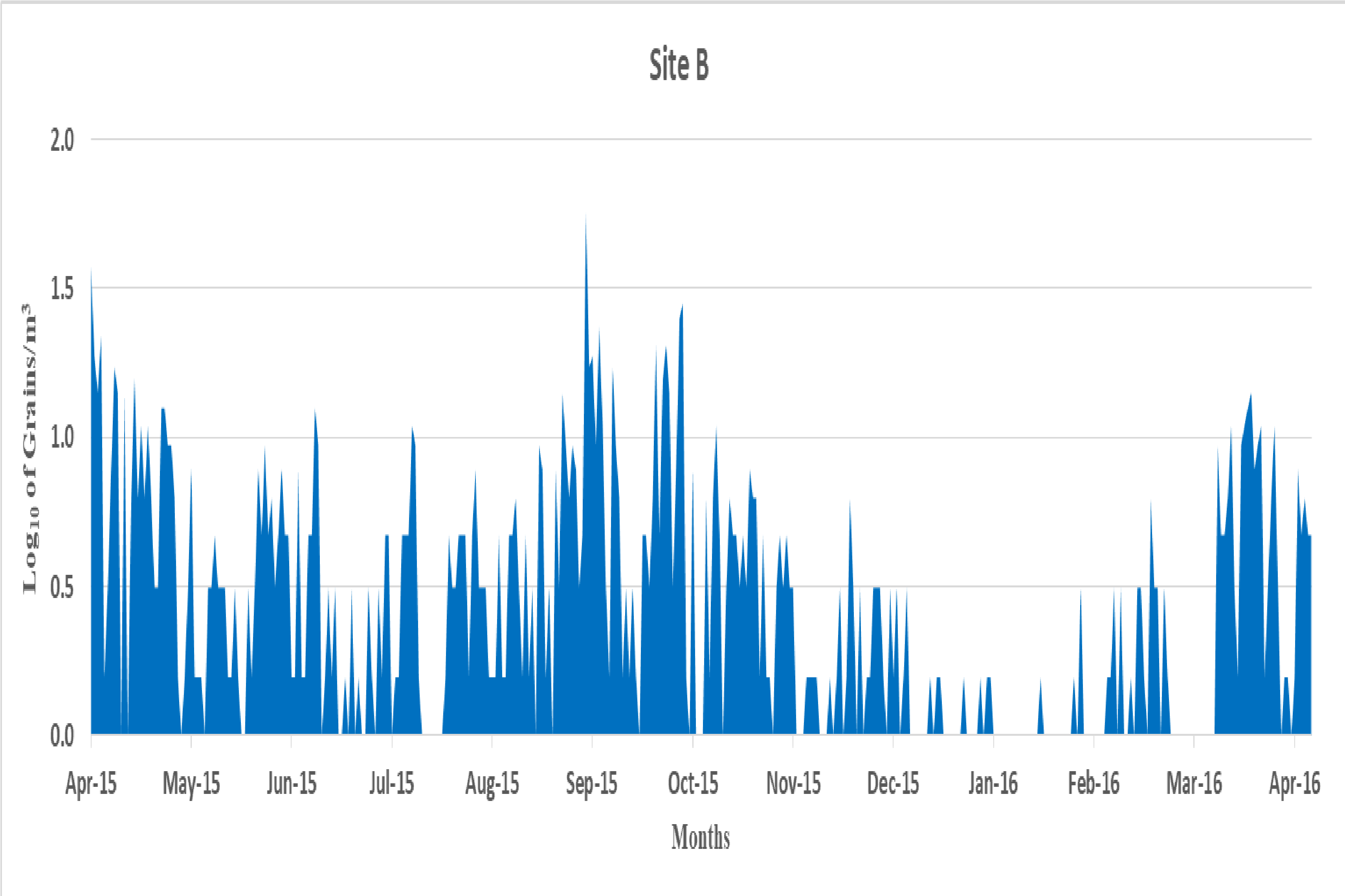


Figure 4.b: Total Grass Pollen Counts for Site B from April 2015 – April 2016 (Missing data from 2/24/16 – 3/8/16).

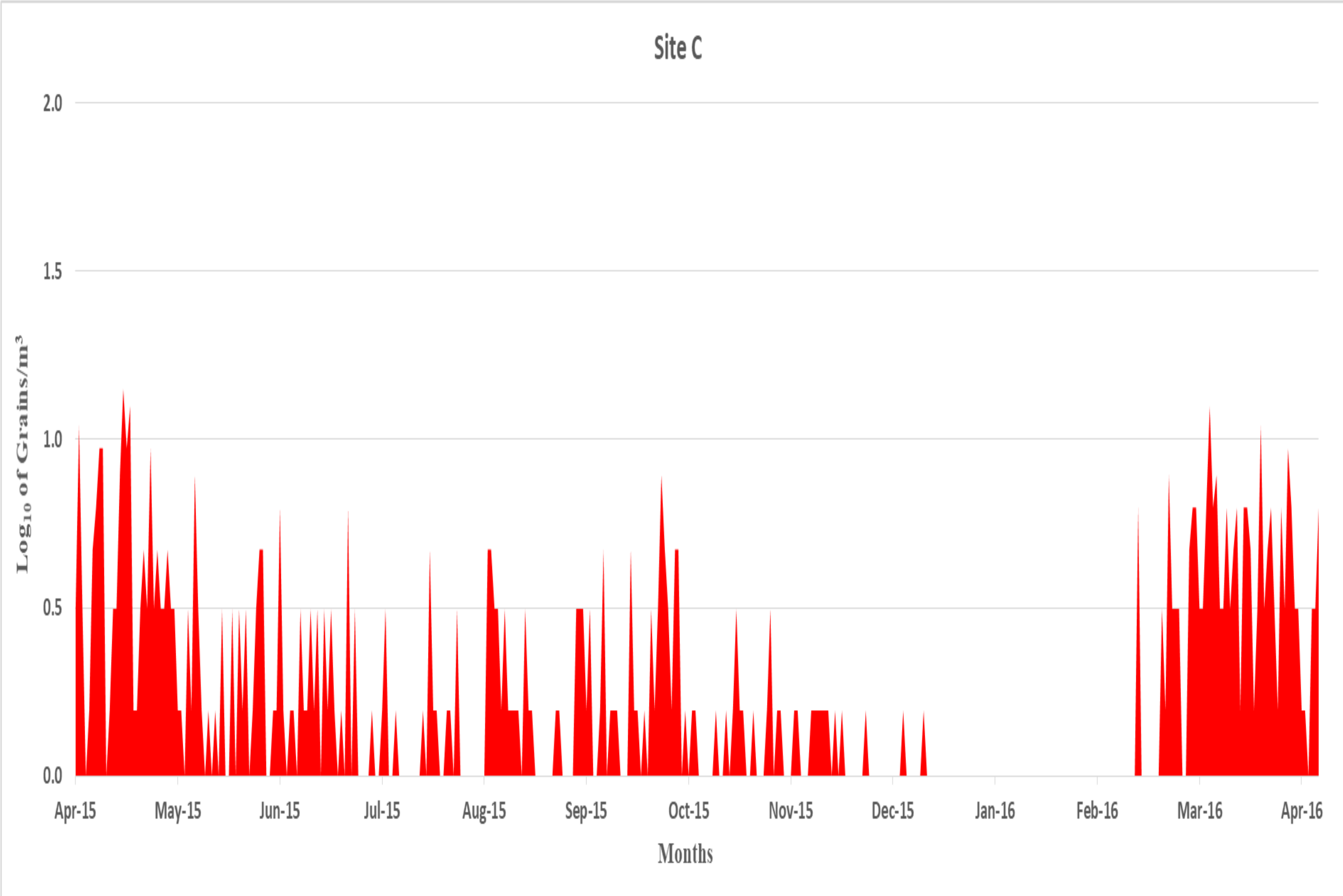


Figure 4.c: Total Grass Pollen Counts for Site C from April 2015 – April 2016.

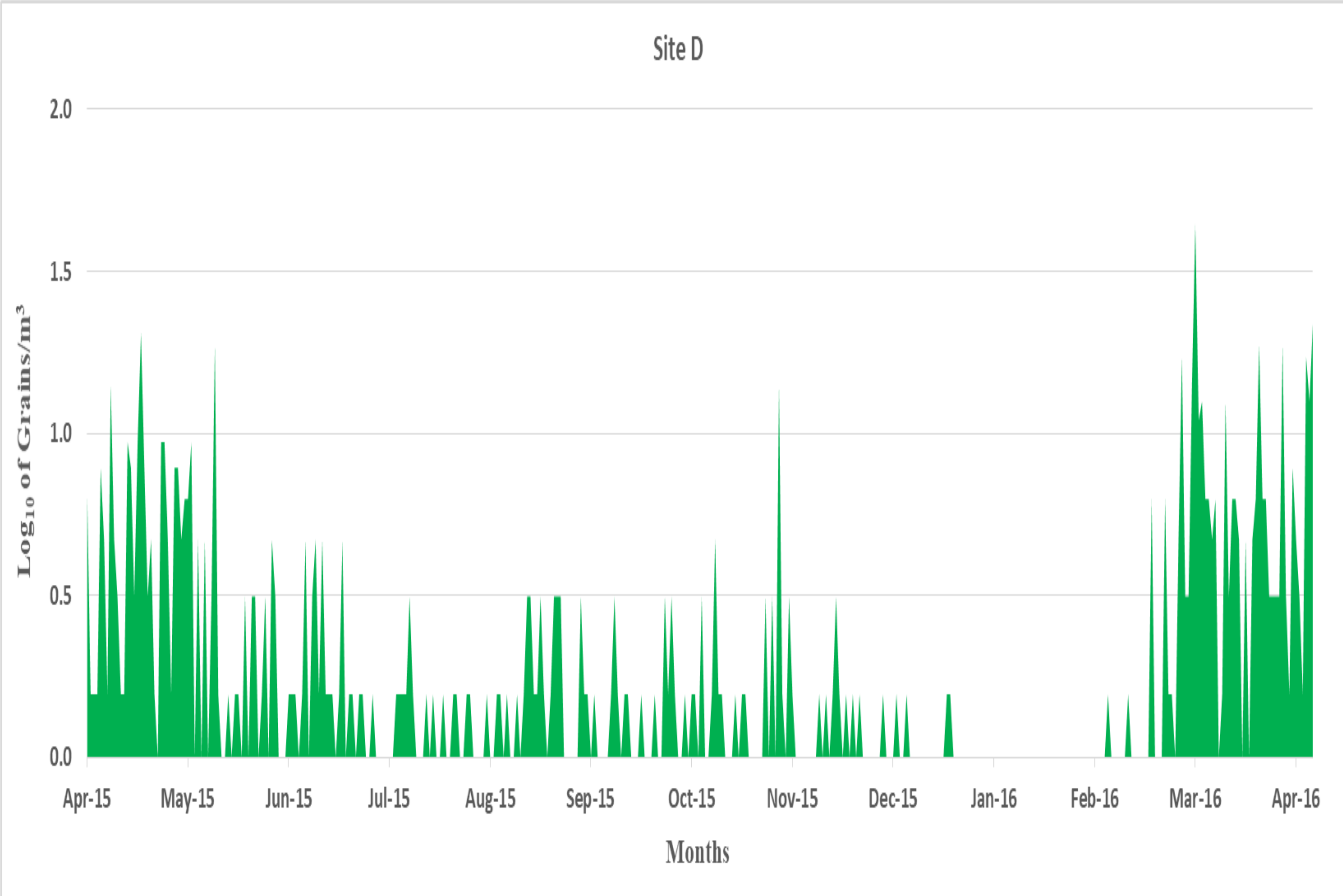


Figure 4.d: Total Grass Pollen Counts for Site D from April 2015 – April 2016.

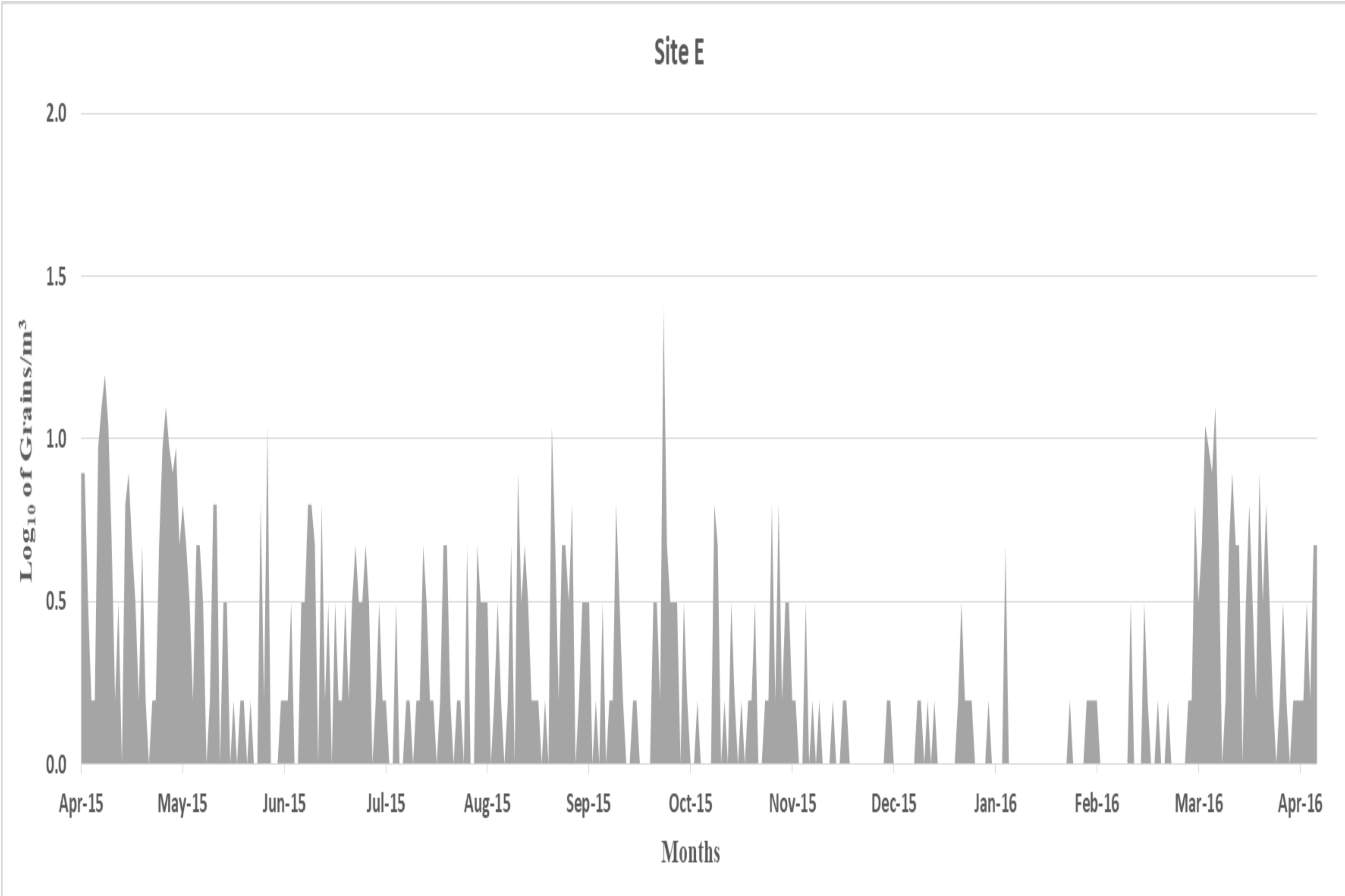


Figure 4.e: Total Grass Pollen Counts for Site E from April 2015 – April 2016.

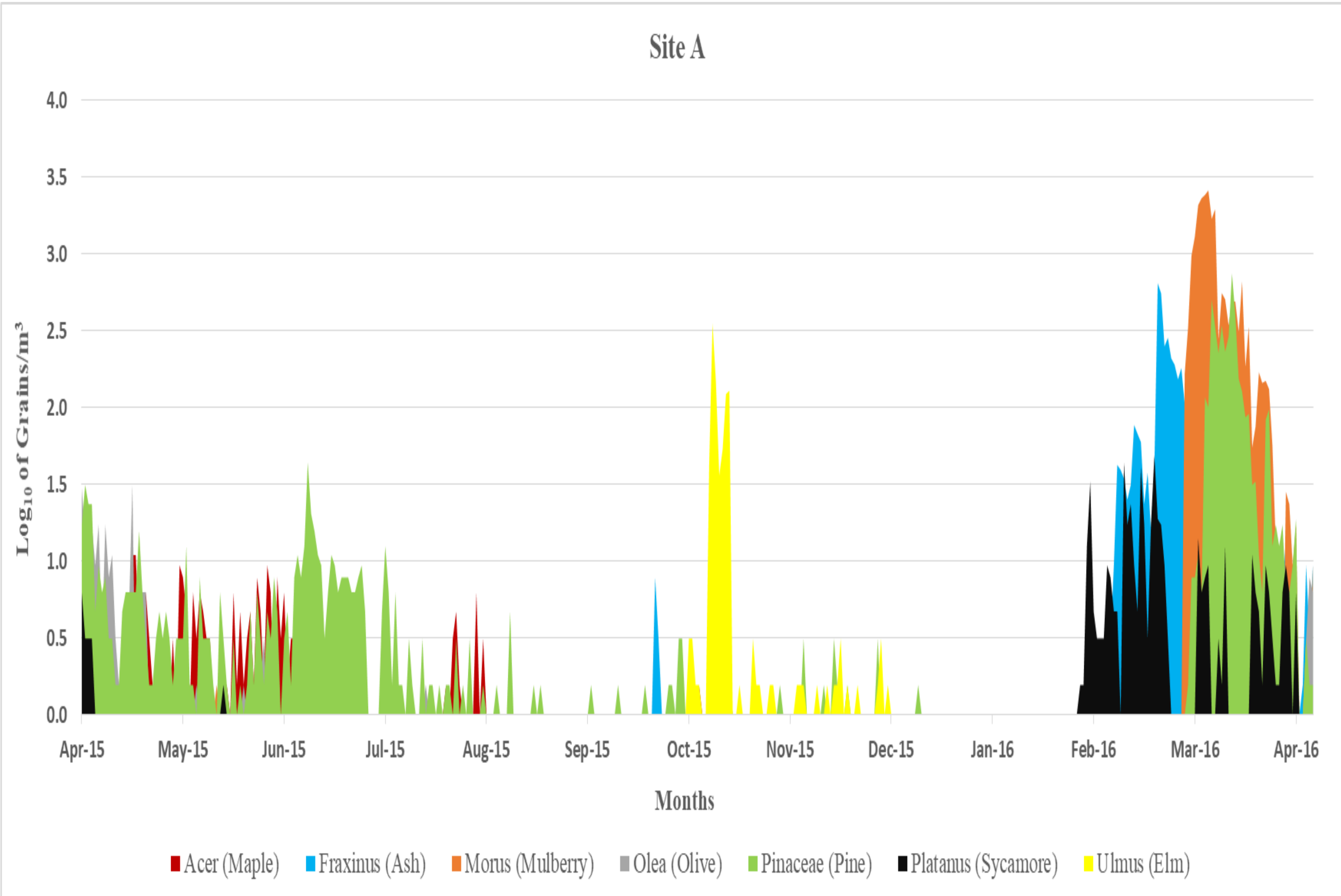


Figure 5.a: Variation in Tree Pollen for Site A from April 2015 – April 2016.

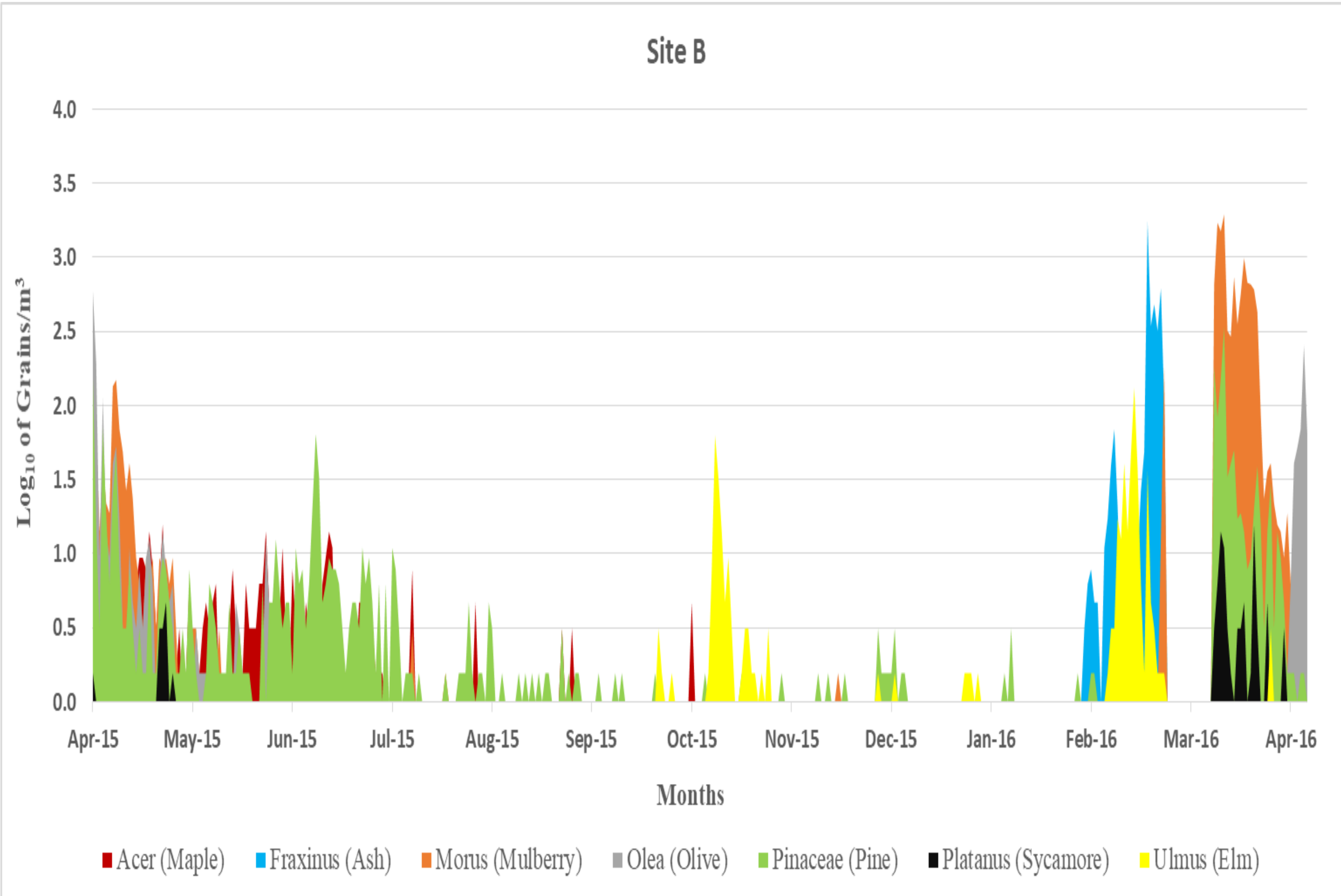


Figure 5.b: Variation in Tree Pollen for Site B from April 2015 – April 2016 (Missing data from 2/24/16 – 3/8/16).

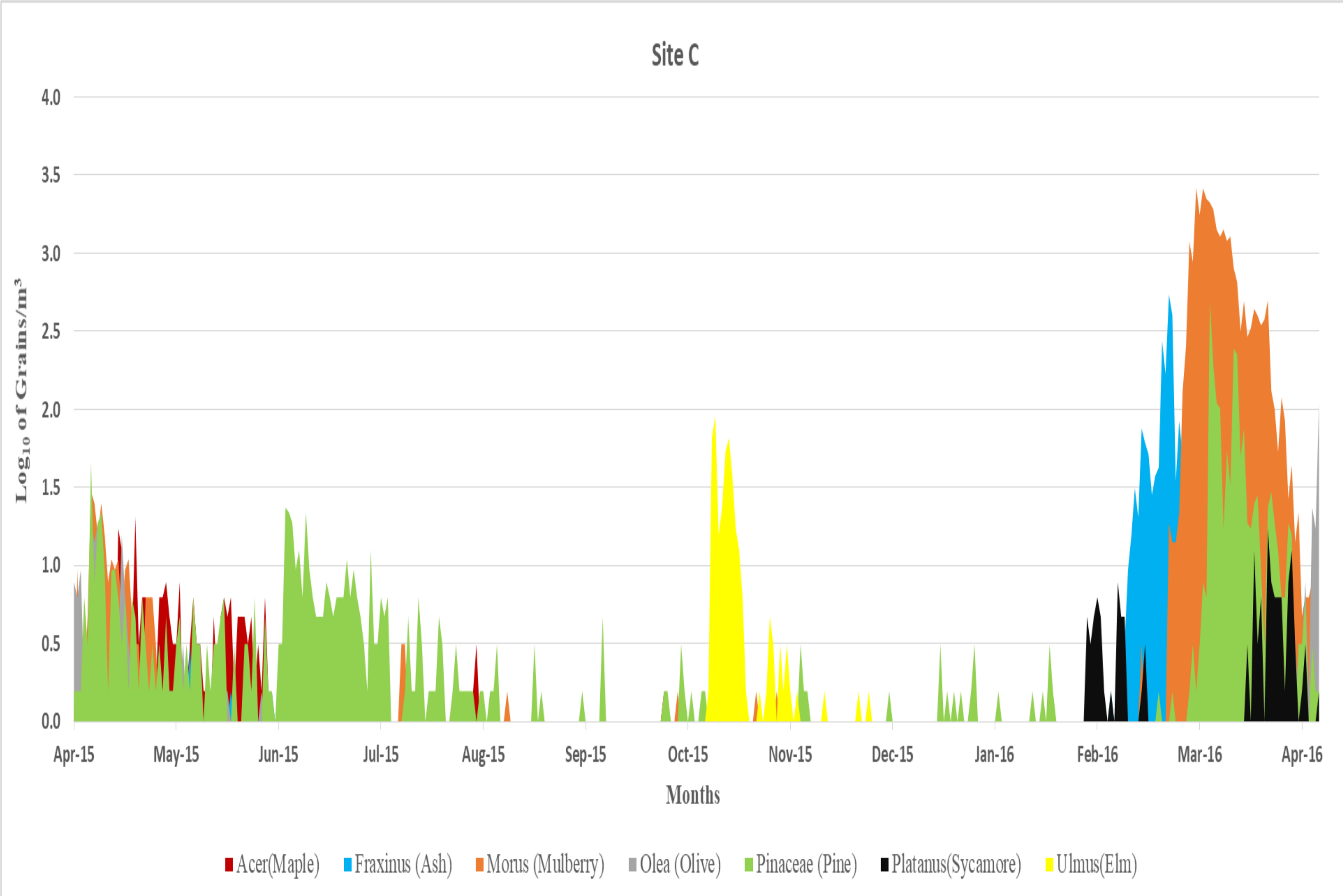


Figure 5.c: Variation in Tree Pollen for Site C from April 2015 – April 2016.

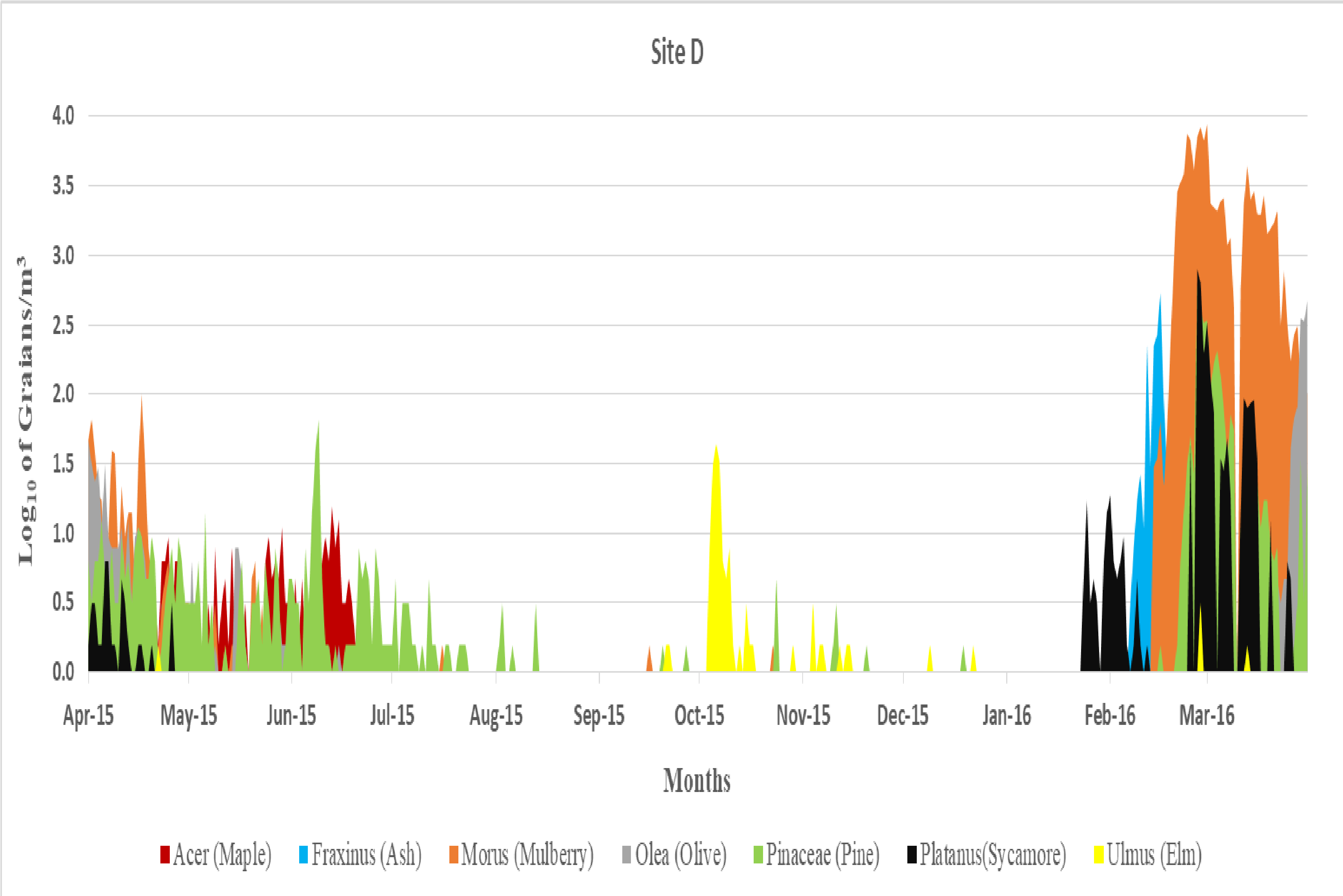


Figure 5.d: Variation in Tree Pollen for Site D from April 2015 – April 2016.

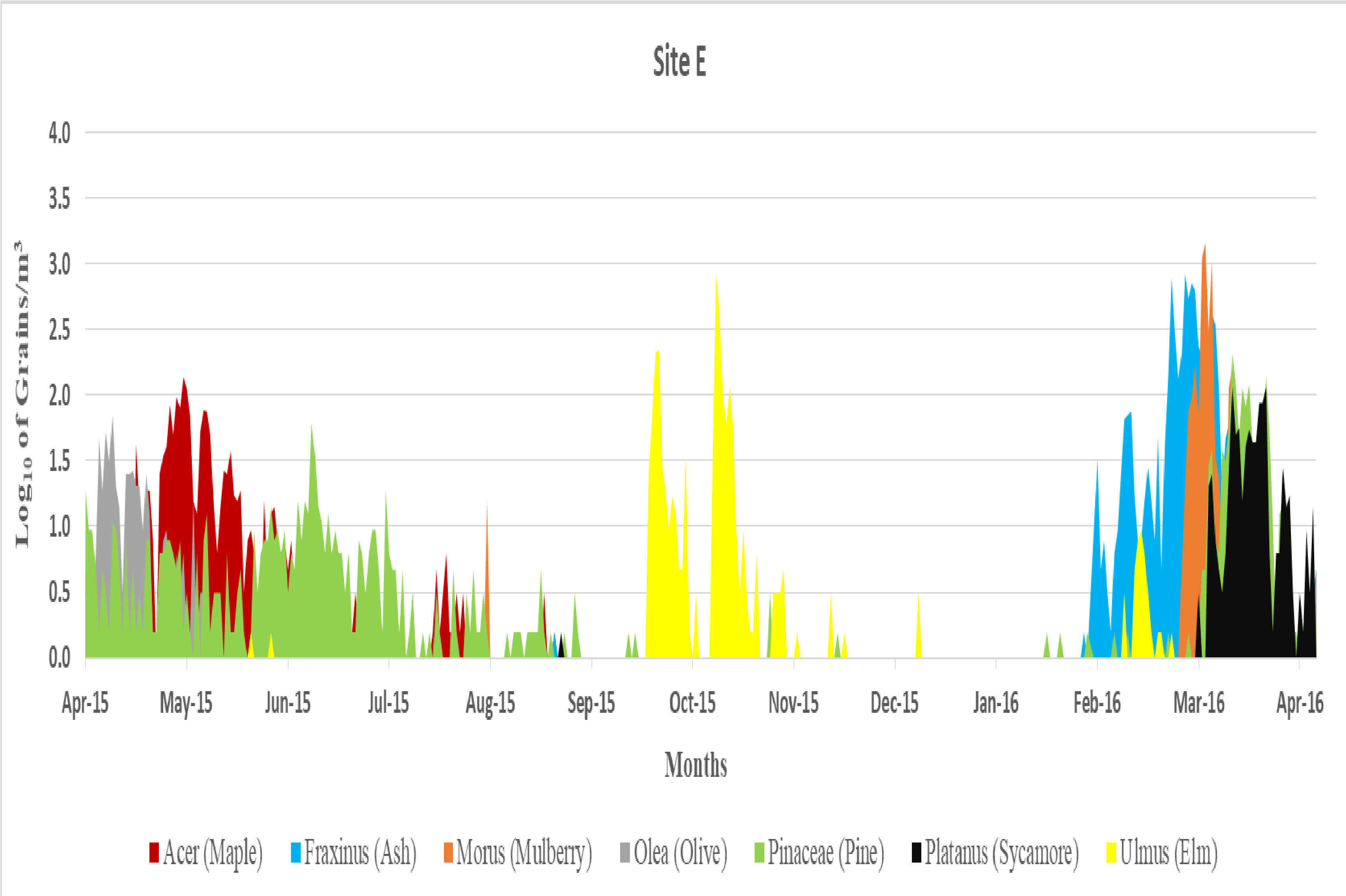


Figure 5.e: Variation in Tree Pollen for Site E from April 2015 – April 2016.

Table 2: Comparison of Airborne Pollen Concentrations among Five Sampling Locations for Various Species of Trees.

Pollen Type	Location (Log Mean)	Location (Log Mean)	Log Mean Difference	P-Value	95% Confidence Interval	
					Lower Bound	Upper Bound
***Acer* (Maple)**	A (0.110)	D (0.210)	-0.099	0.015	-0.179	-0.020
	A (0.110)	E (0.230)	-0.116	0.005	-0.196	-0.037
	C (0.150)	D (0.210)	-0.083	0.042	-0.163	-0.003
***Fraxinus* (Ash)**	No significant difference among locations					
***Morus* (Mulberry)**	D (0.540)	E (0.170)	0.360	0.051	-0.001	0.722
***Olea europea* (Olive)**	A (0.076)	B (0.156)	-0.080	0.012	-0.143	-0.018
	A (0.076)	D (0.162)	-0.086	0.007	-0.148	-0.024
	B (0.156)	C (0.088)	0.067	0.035	0.005	0.130
	C (0.088)	D (0.162)	-0.073	0.021	-0.135	-0.011
***Pinaceae* (Pine)**	No significant difference among locations					
***Platanus* (Sycamore)**	B (0.044)	D (0.156)	-0.112	0.017	-0.204	-0.021
	C (0.057)	D (0.156)	-0.099	0.034	-0.191	-0.008
***Ulmus* (Elm)**	No significant difference among locations					

Discussion

Many airborne pollens are known allergens, but there are certain criteria that are necessary for allergenicity. The pollen has to be produced in high quantities, it has to be buoyant enough to be transported over long distances, and be produced by dominant species of plants in the region (Bastl, Kmenta, Geller-Bernstein, Berger, & Jager, 2015). While one collection station is generally established to quantify the dominant allergenic pollen species for a given metropolitan area, spatial theories have concluded that an air sampler will collect pollen within only 2 km of the source (McLauchlan, Barnes, & Craine, 2011). We observed significant variations in concentration and composition among the five pollen collection stations that were established across the Las Vegas Valley.

Individually, there were some differences among tree pollen species. For example, *Acer* pollen concentrations were higher at Site E compared to all other sites. *Olea* and *Platanus* had their highest concentrations at Site D. Interestingly, ragweed pollen was observed in higher concentrations in spring months than in the fall, whereas it is typically present in the fall in other parts of the United Stated (Frenz, Palmer, Hokanson, & Scamehorn, 1995).

The variability in pollen concentrations could be explained by the geography and landscaping practices near the sampling sites. Sites A and E are in suburban, residential areas, while Sites B, C, and D are in densely populated, urban areas, with older vegetation. The weed pollen concentration difference at Site A might be due to the developing residential area along the outer edge of the city.

Site D is the official NAB sampling site that is used to report the concentration of pollen for the city of Las Vegas. The concentrations at that site are displayed for the pollen forecast of the day. The public health implication is that when concentrations of certain pollen species are low at Site D they may be higher or lower at other sites located in different parts of the city, which could lead to inaccurate allergen predictions. For example, in October at Site E, the mean for *Ulmus* pollen concentration is much higher compared to Site D. In February, the mean of *Platanus* for Site A was greater than Site D. March had the greatest concentration of *Morus* at

Site D compared to all of the other sites. Historically, *Morus* and *Olea* are pollinated later in March and April, respectively (unpublished data). The data shown in this study indicated earlier pollination for these species. Whether this is a trend related to climate change is unknown.

The primary limitation of our study is related to having only a single year of data, which provides limited information about seasonal consistency and long-term temporal patterns of pollen in this geographic area. Additionally, having only five sites may not provide a complete spatial picture of airborne pollen around the Las Vegas Valley.

Typically, there is one station per metropolitan area to quantify the concentrations of pollen grains for the area, but the results obtained from the five stations established in Las Vegas have shown that there are variations among the five sites. The results of the study indicate that more sites and additional monitoring of outdoor allergens are needed to provide information needed to inform the community of outdoor air quality conditions. This study presented new outdoor pollen data for the southwest region of the United States, focused in the Las Vegas Valley. Pollen concentrations should continue to be monitored over several years to establish variability within the microenvironments in the Las Vegas Valley.

Chapter 4: Comparison of Airborne Mold Concentrations in Five Monitoring Locations in Las Vegas, NV

Abstract

Fungal spores are biological particles that are ubiquitous in the outdoor air. Several very common species are known allergens, with the potential to cause respiratory illnesses by exacerbating asthma and allergic rhinitis. The National Allergy Bureau typically has one monitoring station established per city to obtain the airborne mold counts for an entire metropolitan area. However, variations in mold concentrations could occur among different locations. The objective of this study was to measure and compare airborne mold concentrations in five locations in Las Vegas for the year 2015 to determine if there are differences among microenvironments in the city. Twenty-four hour air samples were collected from five sites across the Las Vegas Valley. Prepared slides were analyzed with a light microscope for mold spores and converted into air concentrations. Mixed-model methods were used to evaluate mean differences. Results showed that smuts (basidiomycetes) were the dominant spores for all five sites during the spring season. *Cladosporium* was the second dominant spore with the highest concentrations occurring during the summer and fall months. The results obtained from the five stations established in Las Vegas have shown that there are important variations among the sites. The data suggest more sites and additional monitoring of outdoor allergens are needed to provide information necessary to inform the community of outdoor air quality conditions and their potential effects on public health. This study presented new outdoor mold spore data for the southwest region of the United States, focused in the Las Vegas Valley.

Introduction

Fungal spores are biological particles that are ubiquitous in the outdoor air. They typically range in size from 2 – 50 µm in diameter, with most allergenic spores in the respirable size range of 3 to 10 µm (Filippo et al., 2013; Hurst and Crawford 2007). Dispersal of the spores is dependent on various factors, including airflow, water content, animal activity, and the movement of hosts (Lee et al., 2010). Meteorological and climate conditions, such as temperature and relative humidity, influence the concentrations of spores in the air (Ponce-Caballero et al., 2013). For example, dry air spore fungi can disperse long distances under low relative humidity and high wind speed (Kasprzyk and Worek 2006). Wet weather spores tend to disperse during and after rainfall (Khattab and Levetin 2008). Typically, fungal spore concentrations increase during spring and reach high levels in the summer (Haas et al., 2014). During high concentrations of fungal spores in the outdoor air, there are relatively higher concentrations than normally found indoors. Outdoor spores are transported indoors through air conditioning systems, windows, and doors (Ponce-Caballero et al., 2013).

The National Allergy Bureau (NAB) indicates that a concentration of 6500 spores/m^3 can elicit immune responses in humans. Several very common species are known allergens, including *Cladosporium, Penicillium, Aspergillus,* Basidiomycetes, and *Alternaria* (Yates et al., 2016). In a previous study conducted in Spain and Brazil, Ascomycetes spores were the most prevalent in the urban environment, with *Cladosporium* accounting for the major taxa (Núñez et al., 2016). In addition, exposure to outdoor fungal spores has been shown to be a potential human health risk because of toxic substances called mycotoxins, produced by certain species (Fernández-Rodríguez et al., 2014). Fungal spores have the potential to cause respiratory illnesses by exacerbating asthma and allergic rhinitis (Yates et al., 2016). Fungal spores require only a small amount of moisture and oxygen, thus making the Mojave Desert a suitable environment for their survival (Levetin et al., 2012). In the Las Vegas Valley, temperatures range from an average high of 104°F to an average low of 38°F (Table 3). The relative humidity ranges from 17% to 30% during the spring season and the driest days are typically in June, with a relative humidity of 13%. Average precipitation is 4 to 5 inches per year. The typical wind speed is from 0 to 10 mph, with average wind gusts of 26 miles per hour. The NAB typically has one monitoring station established per city to obtain the airborne mold counts for an entire metropolitan area. However, variations in mold concentrations could occur among different locations in Las Vegas. The objective of this study was to measure and compare airborne mold concentrations in five locations in Las Vegas to determine if there are differences among microenvironments in the city.

Table 3: Meteorological Data for Las Vegas, NV (Source: timeanddate.com and wunderground.com).

Year	Month	Avg. High and Low Temperature (°F)	Avg. Relative Humidity (%)	Total Precipitation (in)	Avg. Wind Speed/Gusts (mph)
2015	April	80/57	17	0.26	11/25
	May	85/64	25	0.24	10/23
	June	104/80	13	0.00	11/24
	July	101/80	21	0.19	10/25
	August	104/82	21	0.68	7/21
	September	98/76	22	0.02	6/21
	October	84/65	36	1.16	6/23
	November	64/44	31	0.24	7/26
	December	56/38	35	0.01	7/25
2016	January	57/40	46	0.46	5/24
	February	70/46	29	0.09	6/26
	March	75/53	24	0.00	8/23

	April	79/58	30	2.26	8/24

Methods and Materials

Air Sample Collection and Analysis

Air samples were collected from five different sites in the Las Vegas Valley using a Burkard spore trap (Burkard Manufacturing Company, Rickmansworth, Hertfordshire, England). For 24-hour samples, a 3”x 1” plain glass microscope slide was coated with a thin film of High Vacuum grease (Dow Corning Corporation, Midland, Michigan) and inserted into the sampler. Airborne particles were impacted onto the slide for 24 hours at an air flow rate of 10 liters per minute (Rogers & Hall, 2000). The samples were collected daily, and each slide was placed onto a slide warmer for 10 minutes (Electron Microscopy Sciences® Hatfield, Pennsylvania). A coverslip was then applied with a few drops of glycerin jelly stained with basic fuchsin (Rogers & Hall, 2000). For 7-day samples, a strip of Melinex® (New Berlin, Wisconsin), tape was affixed to the 7-day sampler drum and coated with a thin film of Dow Corning ® grease. The sampler drums were changed weekly, and the tapes were cut into 48mm segments, representing 24-hour increments. The cut sections were adhered to a microscope slide with a 10% Gelvatol solution (Robert E. Esch, Lenoir, North Carolina) and allowed to dry for 10 minutes. Coverslips were then applied with a few drops of glycerin jelly stained with basic fuchsin. The prepared slides were analyzed with a light microscope at a total magnification of 1,000X for mold spores. A single longitudinal traverse was counted. Mold spores were identified, if possible, and counts were converted into airborne concentrations and expressed as mold spores/m^3 (Khattab & Levetin, 2008).

Sampling Locations

Five monitoring locations were established in Las Vegas (Figure 6). Sites A, C, and E are located in newer developed areas in the city close to housing and small roads. Sites B and D are located in densely populated areas, in older parts of the city near busy roads.

Statistical Analysis

A Shapiro-Wilk test and observation of skewness and kurtosis measures were used to determine if the data were normally distributed. For the analyses that followed, all data were log-transformed prior to meet the assumptions of the modeling approach. A parametric mixed-model analysis was used to assess potential differences among locations and months while treating measurements as repeated factors. The mixed-model approach allowed for the inclusion of both location and time, and additionally provided a means to account for an auto-regressive time lag in the data, which was important owing to the temporal nature of the data collection. A planned post-hoc analysis based on marginal mean differences was used to determine differences among locations and months when the overall model suggested differences in main effects. This method is more robust and accounts for repeated methods compared to the two-way ANOVA. IBM SPSS software version 24 was used to analyze the data.

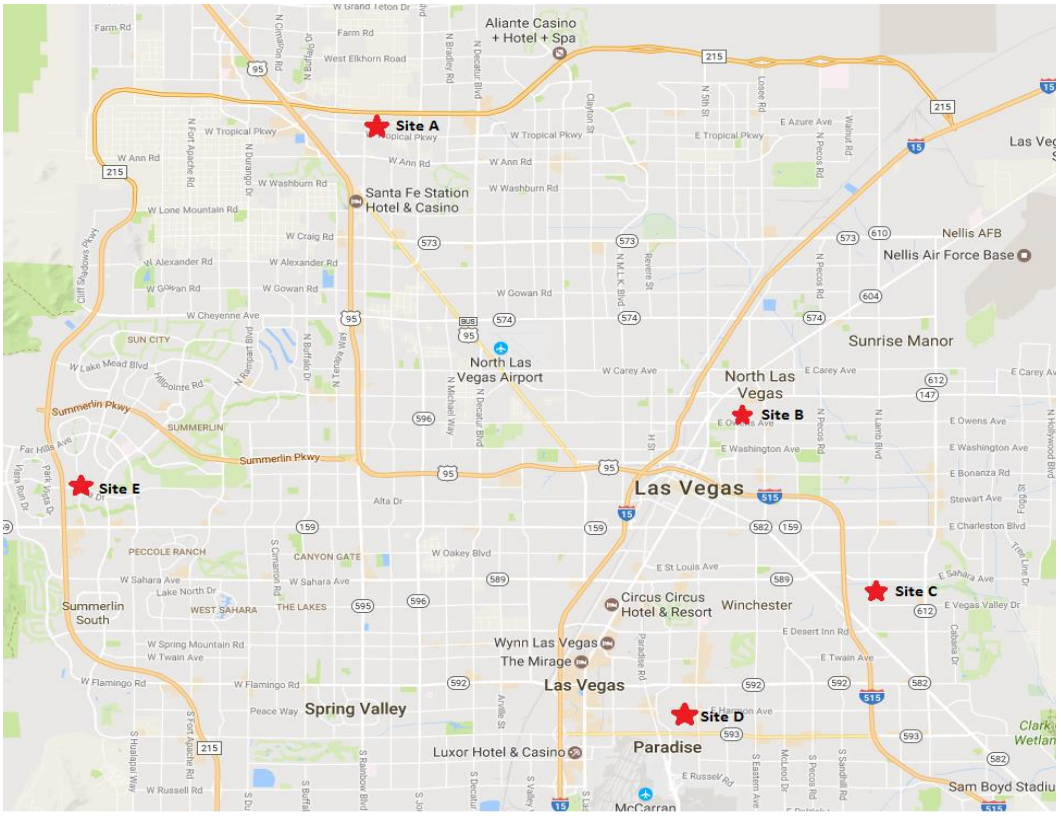


Figure 6: Map of Airborne Mold Collection Sites in Las Vegas, NV

Results

The mold season typically starts at the beginning of the spring and peaks in the summer. Site E had the greatest total mold concentration (6,393 spores/m^3) in May 2015 and had the highest total mold concentration mean (488 spores/m^3) compared to Sites A (329 spores/m^3), B (366 spores/m^3), C (318 spores/m^3), and D (373 spores/m^3). Sites A and B had the highest peaks during the fall months of September to November (Figure 7).

Smuts were the dominant spore type for all five sites during the spring season (Figure 8 a-e). The highest concentration of smuts was at Site E (5,970 spores/m^3) in May (Figure 7, 8e). Smut concentrations were the lowest at Site B when compared to all of the other sites ($p<0.05$). *Cladosporium* was the second dominant spore with the highest concentrations occurring during the summer and fall months. Sites D (mean = 162 spores/m^3) and E (mean = 158 spores/m^3) had the highest concentrations of *Cladosporium* annually (Figure 8 d-e). Total *Cladosporium* concentrations showed no differences among the five sites.

Airborne mold concentrations were significantly different among locations (Table 4). The greatest mean differences for *Alternaria* were between Sites B and C. Ascospores had the greatest mean difference between Sites B and A. Basidiospores also had the greatest difference between Sites B and A. The total mold concentration had the largest mean difference between Sites B vs C and Sites E vs C.

Alternaria spores had significant differences in concentrations across at all sites, particularly Site B, which had the largest mean differences from all other sites. Site E had significant mean differences among Sites A, C, and D. Ascospores at Site B had the largest differences in means versus Sites A, Site C, Site D, and Site E. Basidiospores at Site B also had the largest differences in means versus Site A, C, D, and E. The concentrations of total mold spores showed large mean differences at Sites B versus A, C, and D. There were also significant differences seen at Sites E versus A, C, and D (Appendix C).

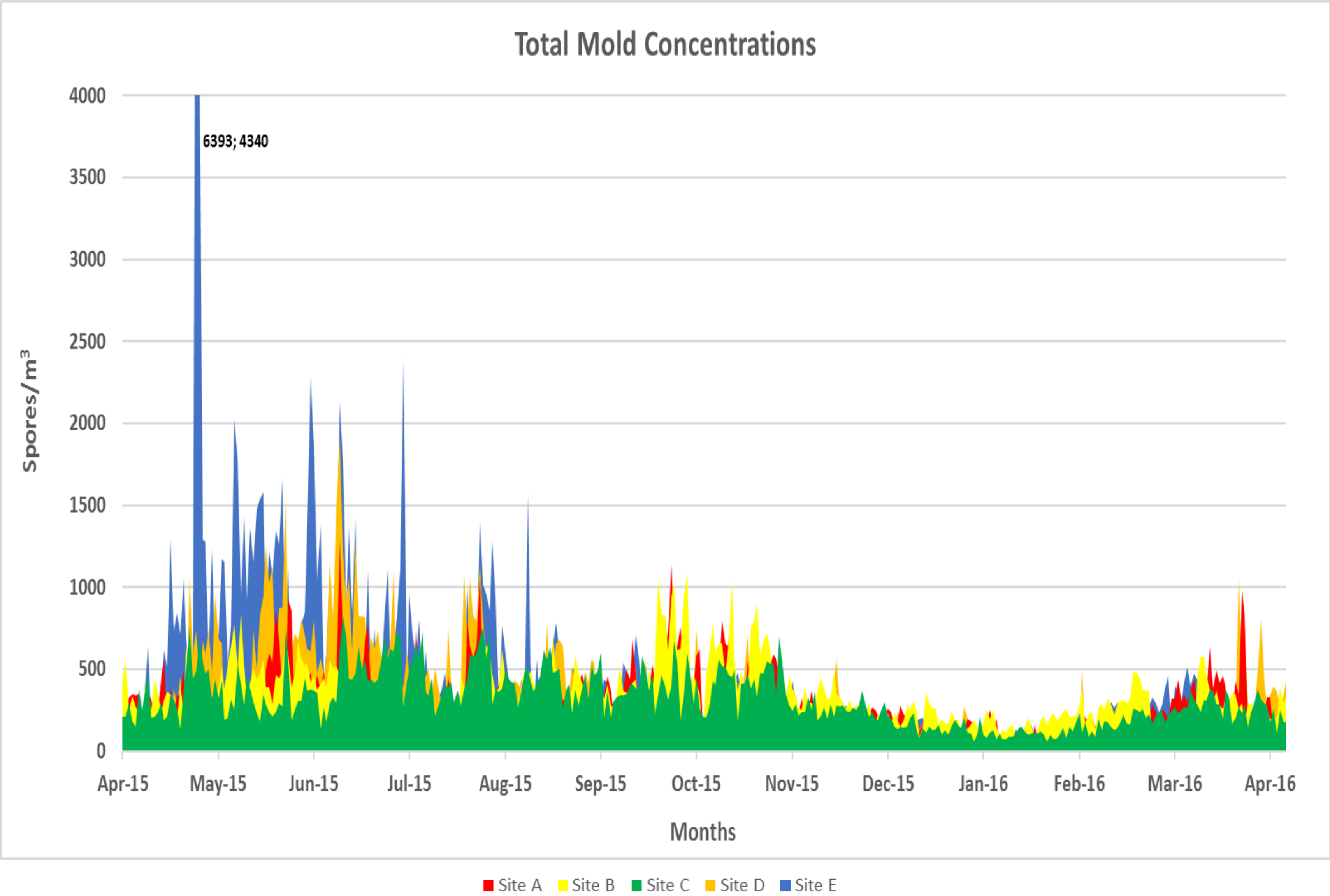


Figure 7: Total Mold Counts at Five locations in Las Vegas from April 2015- April 2016 (Spores/m^3).

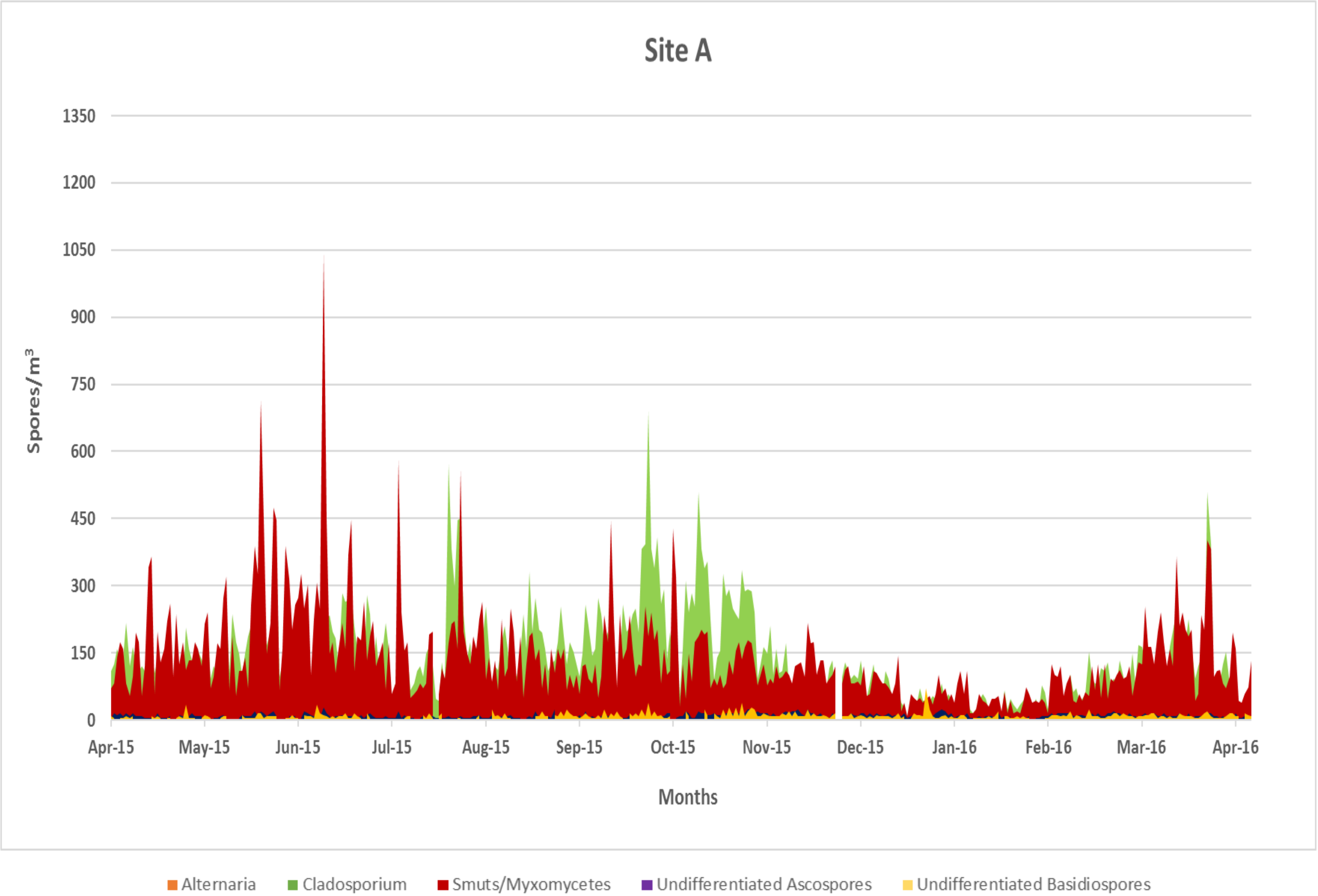


Figure 8.a: Variation in Airborne Mold Spores for Site A across the Las Vegas Valley (Spores/m^3).

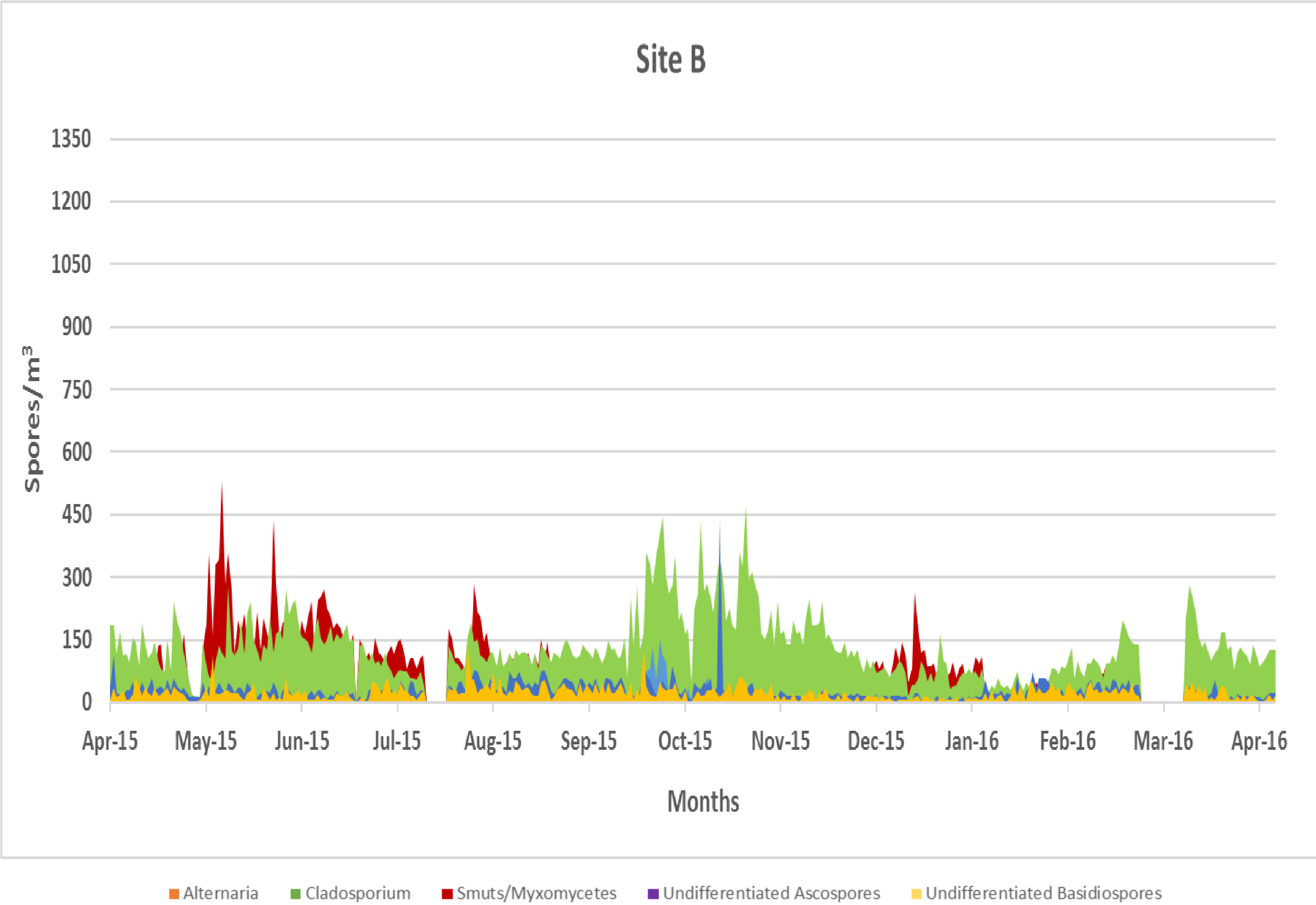


Figure 8.b: Variation in Airborne Mold Spores for Site B across the Las Vegas Valley (Spores/m^3).

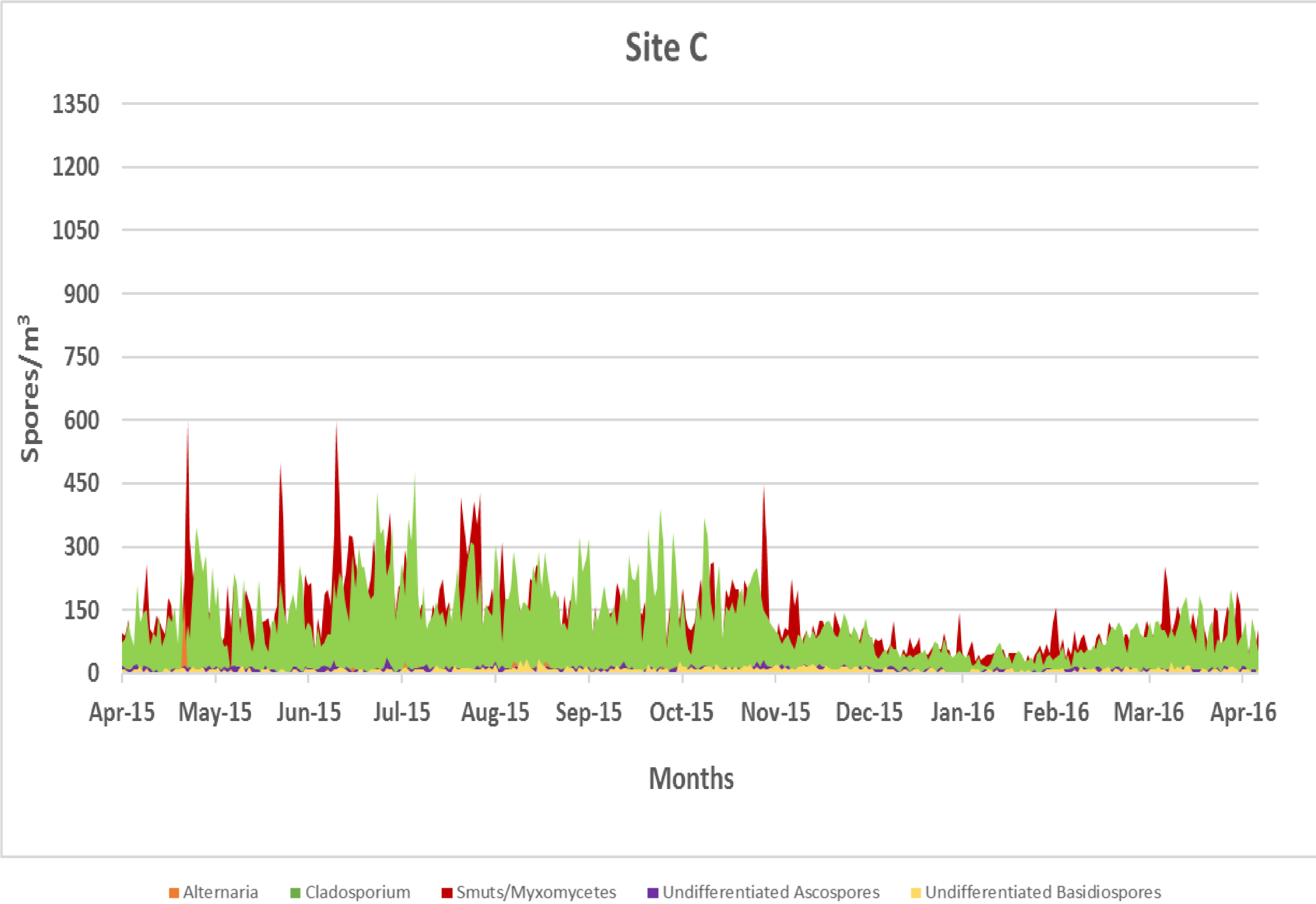


Figure 8.c: Variation in Airborne Mold Spores for Site C across the Las Vegas Valley (Spores/m^3).

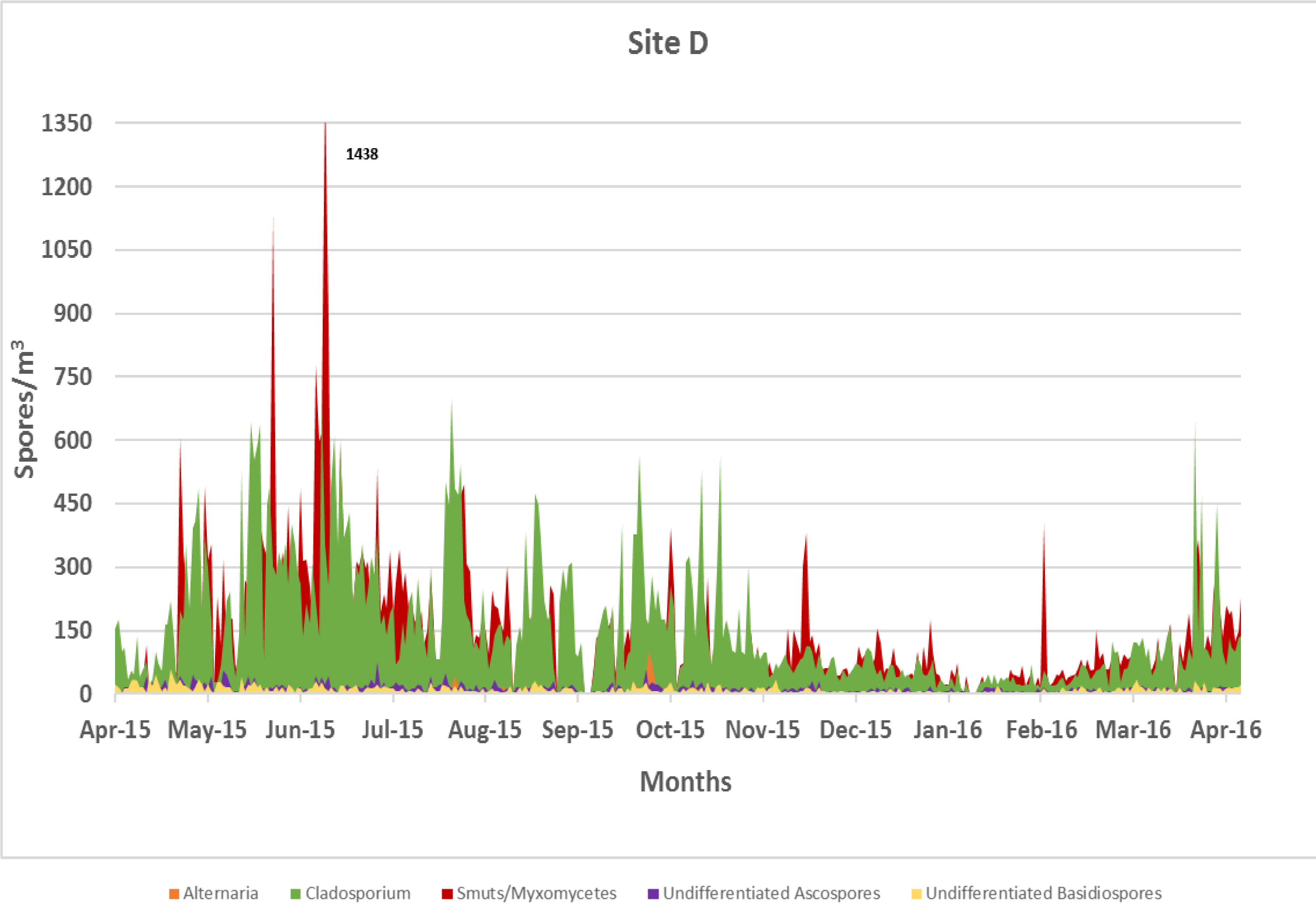


Figure 8.d: Variation in Airborne Mold Spores for Site D across the Las Vegas Valley (Spores/m^3).

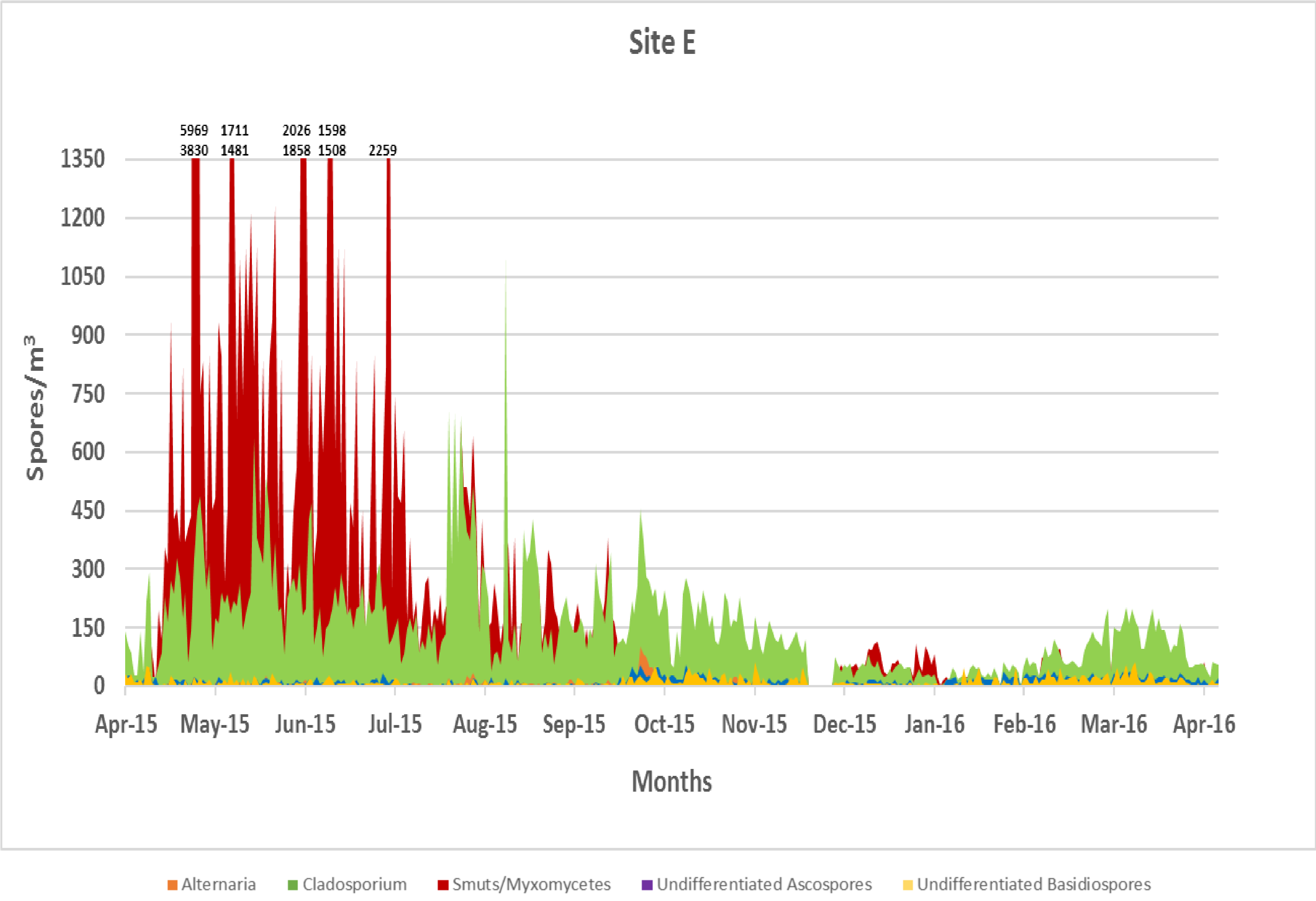


Figure 8.e: Variation in Airborne Mold Spores for Site E across the Las Vegas Valley (Spores/m^3).

Table 4: Comparison of Airborne Mold Concentrations in Las Vegas (Only Significant Differences are shown).

Mold Type	Location (Log Mean)	Location (Log Mean)	Log Mean Difference	P-Value	95% Confidence Interval	
					Lower Bound	Upper Bound
Alternaria	A (0.419)	C (0.344)	0.075	0.044	0.002	0.149
	B (0.736)	A (0.419)	0.316	< 0.001	0.242	0.391
	B (0.736)	C (0.344)	0.392	< 0.001	0.317	0.466
	B (0.736)	D (0.422)	0.314	< 0.001	0.239	0.389
	B (0.736)	E (0.516)	0.220	< 0.001	0.144	0.295
	D (0.422)	C (0.344)	0.078	0.039	0.004	0.151
	E (0.516)	A (0.419)	0.097	0.011	0.023	0.171
	E (0.516)	C (0.344)	0.172	< 0.001	0.098	0.246
	E (0.516)	D (0.422)	0.095	0.013	0.020	0.169
Cladosporium	No differences among the five sites.					
Smuts	A (2.018)	B (1.881)	0.137	0.002	0.051	0.224
	C (2.022)	B (1.881)	0.141	0.001	0.055	0.228
	D (1.972)	B (1.881)	0.092	0.038	0.005	0.178
	E (2.025)	B (1.881)	0.153	0.001	0.066	0.239
Ascospores Undifferentiated	B (1.386)	A (0.906)	0.480	< 0.001	0.417	0.543
	B (1.386)	C (0.992)	0.395	< 0.001	0.332	0.458
	B (1.386)	D (1.090)	0.296	< 0.001	0.233	0.359
	B (1.386)	E (1.034)	0.353	< 0.001	0.289	0.416
	C (0.992)	A (0.906)	0.086	0.007	0.023	0.148
	D (1.090)	A (0.906)	0.184	< 0.001	0.122	0.247
	D (1.090)	C (0.992)	0.099	0.002	0.036	0.161
	E (1.034)	A (0.906)	0.128	< 0.001	0.065	0.190
Basidiospores Undifferentiated	B (1.289)	A (0.804)	0.486	< 0.001	0.421	0.551
	B (1.289)	C (0.920)	0.370	< 0.001	0.305	0.435
	B (1.289)	D (0.998)	0.292	< 0.001	0.227	0.357
	B (1.289)	E (0.958)	0.331	< 0.001	0.266	0.396
	C (0.920)	A (0.804)	0.116	< 0.001	0.052	0.180
	D (0.998)	A (0.804)	0.194	< 0.001	0.130	0.258
	D (0.998)	C (0.920)	0.078	0.017	0.014	0.142
	E (0.958)	A (0.804)	0.155	< 0.001	0.091	0.219
Total Mold	B (2.476)	A (2.410)	0.066	0.019	0.011	0.121
	B (2.476)	C (2.404)	0.072	0.011	0.017	0.128
	B (2.476)	D (2.408)	0.068	0.017	0.012	0.123
	E (2.475)	A (2.410)	0.065	0.020	0.011	0.120
	E (2.475)	C (2.404)	0.072	0.011	0.017	0.127
	E (2.475)	D (2.408)	0.067	0.017	0.012	0.122

Discussion

Data are relatively sparse for outdoor airborne mold spore concentrations in Las Vegas. In our study, the total concentrations of mold showed variation among the five sites, specifically at Site E, which had the highest concentrations. The total mold concentrations obtained in Las Vegas were two to five times greater than those obtained in a study that measured outdoor colony forming units (CFU) of mold in the far western United States (Shelton, Kirkland, Flanders, & Morris, 2002). Our results were similar to a study in New Delhi where total spore concentrations from slide counts showed site-to-site variations (Gupta, Pereira, Singh, 1993). A study in New Orleans, Louisiana showed significant differences in daily mold concentrations between flooded (66,167 spores/m^3) and non-flooded (33,179 spores/m^3) sites (Solomon, Hjelmroos-Koski, Rotkin-Ellman, & Hammond, 2006). A study in the state of West Bengal, India had total mold concentrations of approximately 2,500 spores/m^3 at one of their five collection sites during the spring months (Adhikari, Sen, Gupta-Bhattacharya, & Chanda, 2004). These results ranged from several times larger (New Orleans) or several times smaller (West Bengal) than the peak concentration seen for total mold at Site E (6,393 spores/m^3) in Las Vegas, presumably due to variation in climates between the regions.

Cladosporium spore concentrations showed no significant differences among the five sites in Las Vegas. These results were consistent with findings from a study conducted in 2005, in Dublin, Ireland that showed only marginal differences in *Cladosporium* concentrations among the four sites and no statistical difference (O'Gorman & Fuller, 2008). One explanation for the similarities between sites is the observation that *Cladosporium* is the most commonly found outdoor airborne fungal spore in various regions of the United States (Shelton, Kirkland, Flanders, Morris, 2002). However, our results showed variations in concentrations of *Alternaria* spores at the five locations in Las Vegas. Our results were consistent with studies done in Saudi Arabia, in which there were differences in *Alternaria* concentrations between two different centers sampled (Hasnain, Al-Frayh, Gad-el-Rab, & Al-Sedairy, 1998). A study in Porto, Portugal identified higher concentrations of spores of *Alternaria* in the urban environment compared to other spores (Oliveira, Ribeiro, Delgado, Fonseca, Castel- Branco, Abreu, 2010).

Smuts (basidiomycetes) were the dominant spores for all five sites during the spring season. The highest peak of smuts was 5,970 spores/m^3. The study in New Delhi conducted in 1989 – 1990 collected from five sites around the city, showed significant variations between the sites for smuts and total airborne mold concentrations. The highest peak for smuts in New Delhi was 3,000 spores/m^3 in March, similar to our results (Gupta, Pereira, Singh, 1993). A study in Mexico City showed variation among two sampling sites for basidiomycete spores, which included smuts during the dry seasons (October – May) (Calderon, Lacey, McCartney, & Rosas, 1995).

While urban mold concentrations have been measured, variability of data within urban microenvironments has not been reported, to our knowledge. The results of this study indicated that there were differences among the five sites, especially between Site B and Site D. Site B showed the most variation for Ascospores, Basidiospores, and total mold spores when compared to the other sites. Site E displayed the greatest differences when compared to sites A and C for *Alternaria*, Ascospores, Basidiospores, and total mold spores. There was also a difference between Site E and Site B for smut concentrations. The reasons for the observed differences in airborne mold concentrations are unknown. There were also no observed relationships between precipitation amount and total mold concentrations (Table 3).

The primary limitation of this study is the availability of data for a limited timeframe. One-year of data provides interesting information about the seasonal variation of spores, but additional years of data would provide a more complete temporal picture. Additionally, five sites may not provide a complete geographic picture of airborne mold around the Las Vegas Valley, particularly if microenvironments differ markedly across geography.

Typically, there is one NAB station per metropolitan area to quantify the concentrations of mold spores for the area. The results obtained from the five stations established in Las Vegas have shown that there are important variations among the five sites. Our study suggests that more sites and additional monitoring of outdoor allergens are needed to provide information necessary to inform the community of outdoor air quality conditions and their effects on public health. This study presented new outdoor mold spore data for the southwest region of the United States, focused in the Las Vegas Valley. The results demonstrated variability among the mold concentrations at different locations in the valley and provide a baseline for future research in outdoor air quality in the Mojave Desert.

Chapter 5:Comparison of Outdoor Bioaerosol and Particulate Matter Measurements in the Las Vegas Valley

Abstract

Outdoor bioaerosols consist of microorganisms, pollen, spores, and other agents that could cause infections or affect the health of humans. Studies have suggested that exposure to bioaerosols through inhalation can lead to asthma, chronic obstructive pulmonary disease, and various other respiratory illnesses. In addition, airborne particulate matter (PM) is considered a health risk and a criteria air pollutant. The objective of this study was to compare various bioaerosol measurements and particulate matter from five outdoor monitoring sites in Las Vegas to determine their relationships. Samples were collected weekly for a year in 2015 from five sites for a total of 260 samples. Six parameters were measured for each sample: pollen counts, mold spore counts, total bacterial and fungal concentrations, and PM_{10} and $PM_{2.5}$. The results showed significant variations in concentrations among the air quality variables and the collection stations that were established across the Las Vegas Valley. The overall bacterial DNA concentrations were the highest bioaerosol measurements, with the highest concentrations observed during the winter months. PM_{10} had lower concentrations in winter and higher amounts in late summer. Fungal DNA, pollen, and mold spore concentrations were high during the spring months, which could be explained by the increased vegetation bloom and winds. The variability among the sites could be due to the differences in geography and landscaping practices near the sampling sites. The results provide bioaerosol measurements for one year in Las Vegas and may lead to a better understanding of bioaerosols and how they relate to outdoor air quality and exposure.

Introduction

Bioaerosols are a concern because of their potential to distribute allergens and pathogens (Sofiev et al., 2013). Outdoor bioaerosols consist of microorganisms, pollen, spores, and other agents that could cause infections or affect the health of humans. They can be comprised of pathogenic or non-pathogenic substances (Douwes, Thorne, Pearce, & Heederik, 2003). Studies have suggested that exposure to bioaerosols through inhalation can lead to asthma, chronic obstructive pulmonary disease, and various other respiratory illnesses (Rajput, Anjum, & Gupta, 2017).

Pollen allergens are important because of their potential to trigger illnesses in humans. High concentrations of pollen have been associated with asthma and allergic diseases, while other studies have linked pollen concentrations to strokes and myocardial infarctions (Stickley, Sheng Ng, Konishi, Koyanagi, & Watanabe, 2017). Variation in pollen counts is influenced by local vegetation, geographical region, and meteorological factors (Singh, Singh, Singh, Daya, & Singh, 2017).

Airborne fungal spores have become an increasing area of study owing to their ability to cause respiratory allergies in humans.). It is known that fungal spores impact human health by inducing respiratory illnesses (Dueker, O'Mullan, Juhl, Weathers, & Uriarte, 2012). There are 80 different fungal genera that produce allergens (Ianovici, 2017). The most common genera are *Aspergillus, Penicillium, Cladosporium,* and *Alternaria* (Pakpour, Li, & Klironomos, 2015). Spore formation and release are dependent on various meteorological conditions, including humidity, precipitation and wind speed (Pakpour et al., 2015).

The atmosphere contains microorganisms, including airborne bacteria, which can reach concentrations up to hundreds of thousands of cells per cubic meter of air of various species in the urban environment (Genitsaris et al., 2017). These microbes can be aerosolized from terrestrial and aquatic surfaces and travel distances from several meters to thousands of kilometers (Dueker et al., 2012). Various studies have monitored airborne bacterial populations without the need for traditional culture and microscopy, by using total counts or microarrays to identify bacterial molecular DNA (Brodie et al., 2007), but few have quantified the amount of bacterial DNA templates in the air.

Particulate matter (PM) is comprised of solid or liquid particles with various chemical compositions depending upon the sources and location, and PM containing certain metals can be toxic. PM_{10} (≤ 10 μm in diameter) and $PM_{2.5}$ (≤ 2.5 μm in diameter) have been shown to deposit in the respiratory tract and thus are considered a health risk and a criteria air pollutant (Phalen & Phalen, 2013). The U.S. Environmental Protection Agency has established exposure standards of 35 $\mu g/m^3$ in 24 hours for $PM_{2.5}$ and 150 $\mu g/m^3$ in 24 hours for PM_{10} to protect human health. It is unknown how PM relates to bioaerosol concentrations.

Meteorological data, such as temperature, relative humidity, precipitation, and wind speed can all be factors in determining the spread and concentrations of bioaerosols. In the Las Vegas Valley, temperatures can range from an average high of 112°F to an average low of 30°F. The relative humidity ranges from 17% to 30% during the spring season, and the driest days are typically in June, with an average relative humidity of 13%. Average precipitation is 4 to 5 inches per year. The typical wind speed in the Valley is from 0 to 10 mph, with average wind gusts of 26 miles per hour (Table 5).

Table 5: Meteorological Data for Las Vegas, NV in 2015 (Source: timeanddate.com and wunderground.com).

Month	Avg. High and Low Temperature (°F)	Avg. Relative Humidity (%)	Total Precipitation (in)	Avg. Wind Speed/Gusts (mph)
January	62/44	45	0.87	6/20
February	71/49	32	0.54	8/22
March	78/56	25	0.28	8/23
April	80/57	17	0.26	11/25
May	85/64	25	0.24	10/23
June	104/80	13	0.00	11/24
July	101/80	21	0.19	10/25
August	104/82	21	0.68	7/21
September	98/76	22	0.02	6/21
October	84/65	36	1.16	6/23
November	64/44	31	0.24	7/26
December	56/38	35	0.01	7/25

While the aforementioned air quality parameters are potentially harmful to human health individually, their combined effects are not known. A systematic review in 2015 concluded that acceptable levels are 1000 CFU/m^3 and 300 CFU/m^3 for total and gram-negative bacteria, respectively (Pearson et al., 2015). A two-month study in Seoul, Korea sampled five daycare centers and five schools, collecting both indoor and outdoor air samples. The study showed that the outdoor air bacterial and fungal community did not vary from those indoors and were not dependent on human activities (Shin et al., 2015). Another study showed differences in relative abundance of bioaerosols between two cities in Colorado (Bowers et al., 2013), but the variability among bioaerosols within a single city is not known. The objective of this study was to compare various bioaerosol measurements and particulate matter from five monitoring sites in Las Vegas to determine their relationships. This is an important step in assessing the bioaerosol component of outdoor air quality in Las Vegas.

Methods and Materials

Sample selection

Air samples were collected from five existing pollen and mold monitoring program sites in Las Vegas, Nevada. Sampling sites from a local air monitoring program and Clark County Air Quality monitoring stations within a 5-mile radius were matched with the existing pollen sites (Figure 9) for comparison. Samples were selected weekly for a year in 2015 from five sites for a total of 260 samples. The day of the week for sample collection was selected randomly. Six parameters were measured for each sample: pollen counts, mold spore counts, total bacterial and fungal concentrations, and $PM_{2.5}$, and PM_{10} data (Figure 10 a-e) (Appendix D).

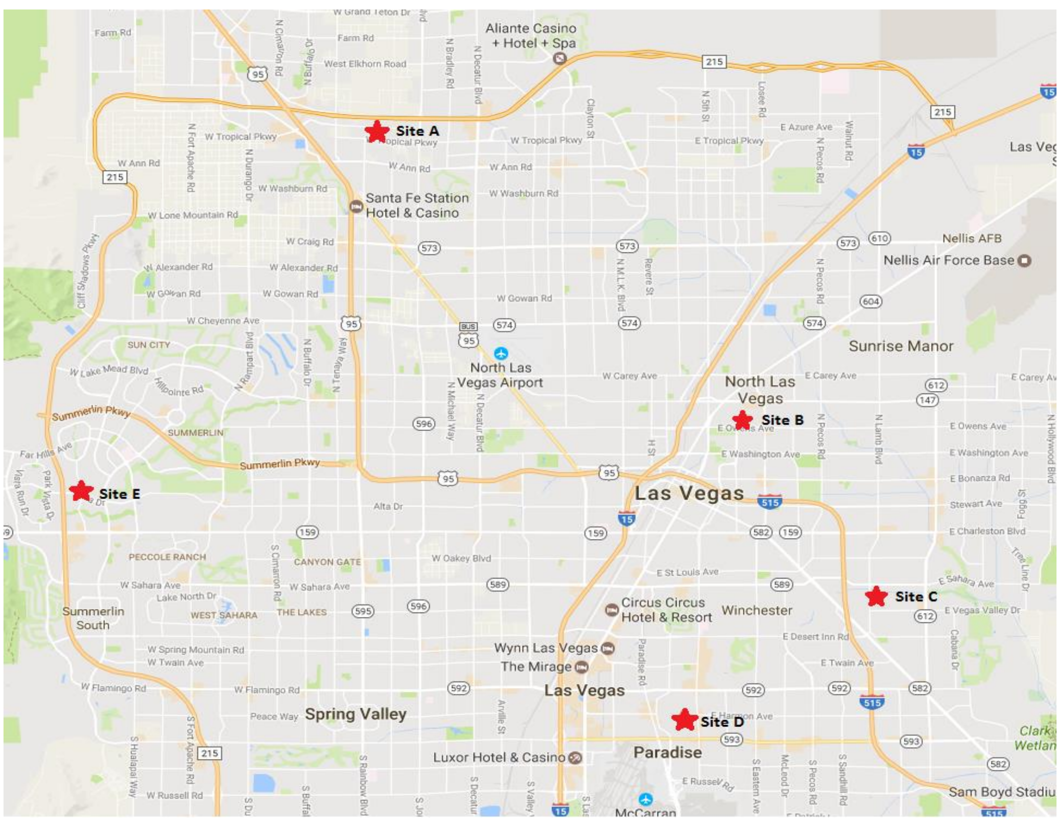


Figure 9: Map of pollen/mold air sampling sites in Las Vegas, NV (sites shown in red).

Pollen and Mold Spore Collection and Analysis

At each site a strip of Melinex® (New Berlin, Wisconsin) tape was affixed to the drum of a Burkard 7-day sampler (Burkard Manufacturing Company, Rickmansworth, Hertfordshire, England) and coated with a thin film of grease (Dow Corning Corporation, Midland, Michigan). The samples were collected weekly as part of the University of Nevada, Las Vegas pollen monitoring program and transported to the laboratory. The tapes were cut into 48mm segments, representing each day of sampling. For this study, one predetermined day was selected from each week for analysis. The cut sections were adhered to a microscope slide with a 10% Gelvatol solution (Courtesy of Robert E. Esch, Lenoir, North Carolina) and allowed to dry for 10 minutes. Coverslips were applied with a few drops of glycerin jelly stained with basic fuchsin (Courtesy of Robert E. Esch, Lenoir, North Carolina). The prepared slides were analyzed under a light microscope at a total magnification of 400× for pollen grains and 1000× for mold spores using a single longitudinal traverse. Pollen and mold counts were converted into atmospheric concentrations and expressed as pollen grains/m^3 and spores/m^3, respectively (Khattab & Levetin, 2008). The lower detection limit (LDL) was 1.57 grains/m^3 for pollen and 3.89 spores/m^3 for mold spores.

Total Bacteria and Fungi Collection and Analysis

A local air monitoring program provided 24-hour air samples collected on Polytetrafluoroethylene (PTFE) membrane filters (EMD Millipore Corporation, Billerica, Massachusetts) at an airflow rate of 100 L/min for a total volume of 144 m^3 from five selected sites in the Las Vegas Valley. The air filters were cut into quarter pieces and one-quarter was processed to extract DNA. The filter quarter was placed in a bead beater tube with 500 µl of sodium phosphate ($NaPO_4$) and glass beads (0.1 mm and 0.5 mm) (Supelco Inc., Bellefonte, Pennsylvania). Briefly, samples were bead beaten for 3 minutes, and the supernatant was purified using the Amicon DNA Extraction Kit ® (EMD Millipore Corporation). A final volume of 100 µl was obtained for the months of April to October and 200 µl for the months of January to March and November to December of purified DNA at the end of the process (Appendix E).

Real-Time Polymerase Chain Reaction (PCR)

Extracted DNA samples were analyzed using real – time PCR to determine the amount of target gene sequences that were present in the sample. A universal primer and probe set that targets 16S rDNA of bacteria in the Domain Bacteria (Appendix F) was used to detect and quantify total bacteria (Nadkarni, Martin, Jacques, & Hunter, 2002). A total reaction volume of 25 µl included a final concentration of 0.1% Bovine Serum Albumin (Rockland Immunochemicals Inc., Limerick, Pennsylvania), 1× of TaqMan® UNG (uracil N-glycosylase) Universal PCR Master Mix (Applied Biosystems, Foster City, California), 0.2 µM of forward primer (5′-TCCTACGGGAGGCAGCAGT-3′), 0.5 µM of the reverse primer (5′-GGACTACCAGGGTATCTAATCCTGTT-3′) (Eurofins MWG Operon, Louisville, Kentucky), 0.15 µM of the fluorescently labeled probe (6-FAM-5’CGTATTACCGCGGCTGCTGGCAC 3’-TAMRA) (Applied Biosystems) and 5µl of template DNA. The sample was quantified with a 7900 Applied Biosystems Fast PCR machine operated in standard mode with the following parameters: 2 minutes at 50°C, 10 minutes at 95°C, 40 cycles of 15 seconds at 95°C and 1 minute at 60°C. PCR amplification analysis was conducted using the SDS software version 2.3 (Applied Biosystems).

A universal fungal primer and probe set developed in our laboratory that targets the ITS2 region of fungi (Appendix G) was used to detect and quantify total fungi in the extracted air filter samples (Cruz, 2006; Cruz, 2010). A total reaction volume of 25 µl included 1× of TaqMan® Universal Fast PCR Master Mix with AmpErase® UNG (uracil N-glycosylase) (Applied

Biosystems), 0.9 µM of the forward primer ASP1S (5'-ATGCCTGTCCGAGCGT-3') (Eurofins MWG Operon), 0.9 µM of the reverse primer ITS4 (5'-TCCTCCGCTTATTGATATGC-3') (Eurofins MWG Operon), 0.2 µM of the fluorescently labeled probe UfP (6-FAM-5'CRRATCAGGTAGGRATACCCGCTGAACTTAA 3'-TAMRA) (Applied Biosystems) and 5µl of template DNA (Cruz, 2006; Cruz, 2010). The samples were amplified with a 7900 Applied Biosystems Fast PCR machine operated in fast mode with the following parameters: 2 min at 50°C, 20 seconds at 95°C, 40 cycles of 1 second at 95°C and 20 seconds at 60°C. PCR amplification analysis was conducted using the SDS software version 2.3.

Both bacterial and fungal real-time PCR amplifications produced a cycle threshold that can be used to determine target DNA concentration (Targonski, Persky, & Ramekrishnan, 1995). The C_T value is the number of cycles required for the fluorescent signal to cross a threshold. C_T values are inversely proportional to the amount of target nucleic acid present in the samples.

The samples included positive controls of *Clostridium difficile* DNA for bacterial samples and *Aspergillus flavus* DNA for fungal samples. The negative controls consisted of water instead of DNA template to represent no amplification. Duplicate samples were amplified and then an average C_T value was determined. An Internal Positive Control (IPC) (Applied Biosystems) was used to detect PCR inhibition. The IPC kit consisted of 10× Primer and Probe (VIC™), 10× Blocking Reagent, and 50× IPC DNA. The absence or decrease of amplification of the IPC DNA in each PCR reaction indicated the presence of PCR inhibitors. Bacterial samples were diluted to 1:10 to remove PCR inhibitors, while fungal samples were amplified undiluted. The lower detection limit (LDL) for bacterial DNA concentrations was 4.08×10^3 templates/m^3 (100 µl elution volume) and 2.04×10^3 templates/m^3 (200 µl elution volume). Fungal DNA concentrations LDL were 1.89×10^{-2} templates/m^3 (100 µl) and 3.78×10^{-2} templates/m^3 (200 µl).

Template Calculations

The C_T values from real-time PCR for each sample were converted to templates/m^3 to estimate concentrations of bacterial and fungal DNA in the air. For bacterial C_T values, a standard curve determined from a previous study (Buttner et al., 2004) used the following formula:

$y = mx + b$ where, y = PCR C_T value m = slope x = log concentration b = y-intercept

PCR standards of 10^0 to 10^5 templates/reaction mixture were amplified in standard conditions for bacteria, in fast mode for fungi, and run in duplicate. The amplification was analyzed by the SDS software, and a standard curve of C_T versus concentration was produced.

The standard curve produced with *Bacillus atrophaeus* ($m = -3.907$, $b = 49.920$) determined in a previous study was used to estimate total bacterial DNA concentrations (Buttner et al., 2004). The standard curve of *Aspergillus flavus* ($m = -3.477$, $b = 34.796$) was used to estimate total fungal DNA concentrations (Cruz & Buttner, 2008).

PM 2.5 and PM 10

Particulate matter data were obtained from the Clark County Department of Air Quality for sites located in the Las Vegas Valley. The Urban Air Quality Laboratory, under the direction of Dr. Lung-Wen (Antony) Chen, provided the UNLV site data. PM data were expressed as μg/m^3 at local conditions of pressure and temperature. All monitoring stations were matched with other monitoring sites.

Statistical Analysis

Descriptive statistics were calculated and are reported. Additionally, a Shapiro-Wilk test and observation of skewness and kurtosis measures were used to determine if the data were normally distributed. For the analyses that followed, all data were log-transformed before analysis to meet the assumptions of the modeling approach. A mixed-model analysis was used to assess potential differences among locations and months while treating measurements as repeated factors. The mixed-model approach allowed for the inclusion of both location and time, and additionally provided a means to account for an auto-regressive time lag in the data, which was important owing to the temporal nature of the data collection. A planned posthoc analysis based on marginal mean differences was used to determine differences among locations and months when the overall model suggested differences in main effects. Finally, a non-parametric Kendall's tau correlation was used to examine potential associations between mold spore microscopic counts and fungal DNA. IBM SPSS software version 24 was used to analyze the data.

Results

Overall Mean

Bacterial DNA (mean = 4.96×10^5 templates/m^3 ± 4.93×10^4 SE) was by far the greatest contributor to the overall bioaerosol concentrations in the air in Las Vegas. For the two fungal measurements used, mean fungal DNA concentration was 737 templates/m^3 ± 87.86 and the mean mold spore concentration was 420 spores/m^3 ± 23.51. Mean total pollen was 126 grains/m^3 ± 43.01, while mean $PM_{2.5}$ was 9 μg/m^3 ± 0.35 and mean PM_{10} was 21 μg/m^3 ± 0.73.

Seasonal Variation

Measurements obtained for six parameters for the year 2015 are shown in Figure 10 ($PM_{2.5}$ was not obtained for Sites A and E). The total bacterial concentrations were significantly lower during the month of December (mean = 1.37×10^6 templates/m^3, $p<0.05$) compared to all of the other months. The highest peak for bacterial concentrations was in February (6.51×10^6 templates/m^3) for Site A, while the lowest peak was in October (4.47×10^3 templates/m^3) for Site E (Figure 10 a-e).

Total Fungal DNA concentrations were significantly different during the month of March (mean = 2.5×10^3 templates/m^3, $p<0.05$) compared to the months of January to August and October. Fungal concentrations comparing March versus September ($p = 0.087$), November ($p = 0.100$), and December ($p = 0.084$) were not significantly different. The highest concentration was in March (1.63×10^4 templates/m^3) at Site D, while the lowest was in November (2 templates/m^3) at site E.

Pollen concentrations were significantly greater for the month of March (mean = 1.9×10^3 grains/m^3, $p < 0.05$) compared to the all of the other months. The highest peak for pollen grains was in March (7.3×10^3 grains/m^3) for Site D, while the lowest were during the months of January, February, July, October, November, and December (mean = 0 grains/m^3) for the majority of the sites.

Mold spores concentrations were significantly greater for the spring months of March (mean = 254 spores/m^3), April (mean = 560 spores/m^3), and May (mean = 637 spores/m^3), ($p<0.05$) compared to the winter months of December (mean = 148 spores/m^3), January (mean = 71 spores/m^3), and February (mean = 149 spores/m^3). The highest peak for mold spores was in

April (3.5×10^3 spores/m^3) and the lowest concentration was in January (23 spores/m^3) both at Site D.

$PM_{2.5}$ was compared at only Sites B, C, and D because of the limited monitors for $PM_{2.5}$ set up at the time. The months of May (mean = 7 µg/m^3) and October (mean = 6 µg/m^3) were significantly lower than all of the other months ($p<0.05$). The highest peak was in the month of December (29 µg/m^3) and the lowest in October (2 µg/m^3) both at Site C.

PM_{10} for the month of January was significantly lower compared to all of the other months (mean = 14 µg/m^3, $p<0.05$). The highest peak was in August (74 µg/m^3) at Site A, while the lowest was in January (2 µg/m^3) at Site B (Appendix F-G).

Site Differences

There were no significant differences among sites for total pollen, mold, and $PM_{2.5}$ (Table 6). At all sites the bacterial DNA concentrations were higher compared to the other bioaerosol measurements (Figure 10 a-e). Statistically, Site A had greater bacterial concentrations compared to Sites B, C, D, and E ($p<0.05$). Sites A vs. B, A vs. D, and A vs. E were all statistically different ($p<0.05$) for fungal DNA concentrations. PM_{10} concentrations for Site A were significantly greater than Sites D and E ($p<0.05$).

Table 6: Comparison of Air Quality Measurements Among Five Sampling Sites.

Type	Location (Log Mean	Location (Log Mean)	Log Mean Difference	P-Value	Lower Bound	Upper Bound
Pollen	No Significant Differences among sites					
Mold	No Significant Differences among sites					
Bacterial DNA	A (5.748)	B (5.296)	0.453	< 0.001	0.314	0.592
	A (5.748)	C (5.487)	0.261	< 0.001	0.123	0.400
	A (5.748)	D (5.127)	0.621	< 0.001	0.482	0.760
	A (5.748)	E (4.807)	0.942	< 0.001	0.803	1.081
	B (5.296)	D (5.127)	0.168	0.018	0.029	0.307
	B (5.296)	E (4.807)	0.489	< 0.001	0.350	0.628
	C (5.487)	B (5.296)	0.191	0.007	0.053	0.330
	C (5.487)	D (5.127)	0.360	< 0.001	0.221	0.499
	C (5.487)	E (4.807)	0.680	< 0.001	0.541	0.819
	D (5.127)	E (4.807)	0.320	< 0.001	0.182	0.459
Fungal DNA	A (2.749)	B (2.403)	0.346	< 0.001	0.170	0.521
	A (2.749)	D (2.474)	0.275	0.003	0.099	0.450
	A (2.749)	E (2.143)	0.605	< 0.001	0.430	0.781
	B (2.403)	E (2.143)	0.259	0.004	0.084	0.435
	C (2.657)	B (2.403)	0.254	0.005	0.079	0.430
	C (2.657)	D (2.474)	0.183	0.041	0.008	0.359
	C (2.657)	E (2.143)	0.514	< 0.001	0.338	0.689
	D (2.474)	E (2.143)	0.330	< 0.001	0.155	0.506
PM 2.5	No Significant Differences among sites					
PM 10	A (1.301)	D (1.097)	0.204	< 0.001	0.122	0.286
	A (1.301)	E (1.175)	0.126	< 0.001	0.062	0.190
	B (1.332)	D (1.097)	0.236	< 0.001	0.154	0.317
	B (1.332)	E (1.175)	0.157	< 0.001	0.094	0.221
	C (1.414)	A (1.301)	0.114	0.001	0.050	0.178
	C (1.414)	B (1.332)	0.082	0.012	0.019	0.146
	C (1.414)	D (1.097)	0.318	< 0.001	0.237	0.399
	C (1.414)	E (1.175)	0.239	< 0.001	0.176	0.303

At Site B, the bacterial concentrations (mean = 3.5×10^5 templates/m^3) were also higher than the other air quality variables (Figure 10b). Sites B vs. D and B vs. E had significant mean differences ($p < 0.05$) for bacterial concentrations, while only B vs. E had a significant mean difference for fungal concentration ($p<0.05$). PM_{10} concentrations showed differences among Site B versus D and E ($p<0.05$).

At Site C, the bacterial concentrations showed differences with Sites B, D, and E ($p<0.05$). At site C, the fungal concentrations were significantly different compared to Sites B, D and E ($p<0.05$). PM_{10} at Site C was significantly different compared to all of the other four sites ($p<0.05$), with the greatest log difference at Site D.

Sites D vs. E were different for bacterial and fungal concentrations ($p<0.05$). These sites were not significantly different for PM_{10} when compared to the other sites.

There was a strong, positive correlation between bacterial DNA concentrations and fungal DNA concentrations at site A ($\tau_b = 0.499$, $p = <0.001$), site B ($\tau_b = 0.567$, $p = <0.001$), site C ($\tau_b = 0.465$, $p = <0.001$), site D ($\tau_b = 0.533$, $p = <0.000$), and site E ($\tau_b = 0.316$, $p = 0.001$). Similarities were observed between the peaks and lows of bacterial DNA templates/m^3 and fungal DNA templates/m^3 (Figure 10 a-e). For example, at site A on October 21st, there were spikes in bacterial DNA concentrations and fungal DNA concentrations. On May 15th and October 7th, there was a dip in the concentrations of bacterial and fungal concentrations. Sites B, C, D and E had corresponding spikes and dips for bacterial and fungal concentrations.

The association between fungal DNA and mold concentrations was also determined (Figure 10 a-e). There was a negative correlation between fungal DNA and mold concentrations at site D ($\tau_b = -0.206$, $p = 0.032$), while site A ($\tau_b = 0.067$, $p = 0.536$), site B ($\tau_b = -0.075$, $p =$

0.493), site C (τ_b = 0.123, p = 0.280), and site E (τ_b = 0.020, p = 0.856) measurements were not correlated.

The variability of replicate measurements obtained by real-time PCR was determined. The mean standard deviation of the Ct value of 520 replicates for bacterial DNA was 0.231. The mean standard deviation of the Ct value of 520 replicates for fungal DNA was 0.706.

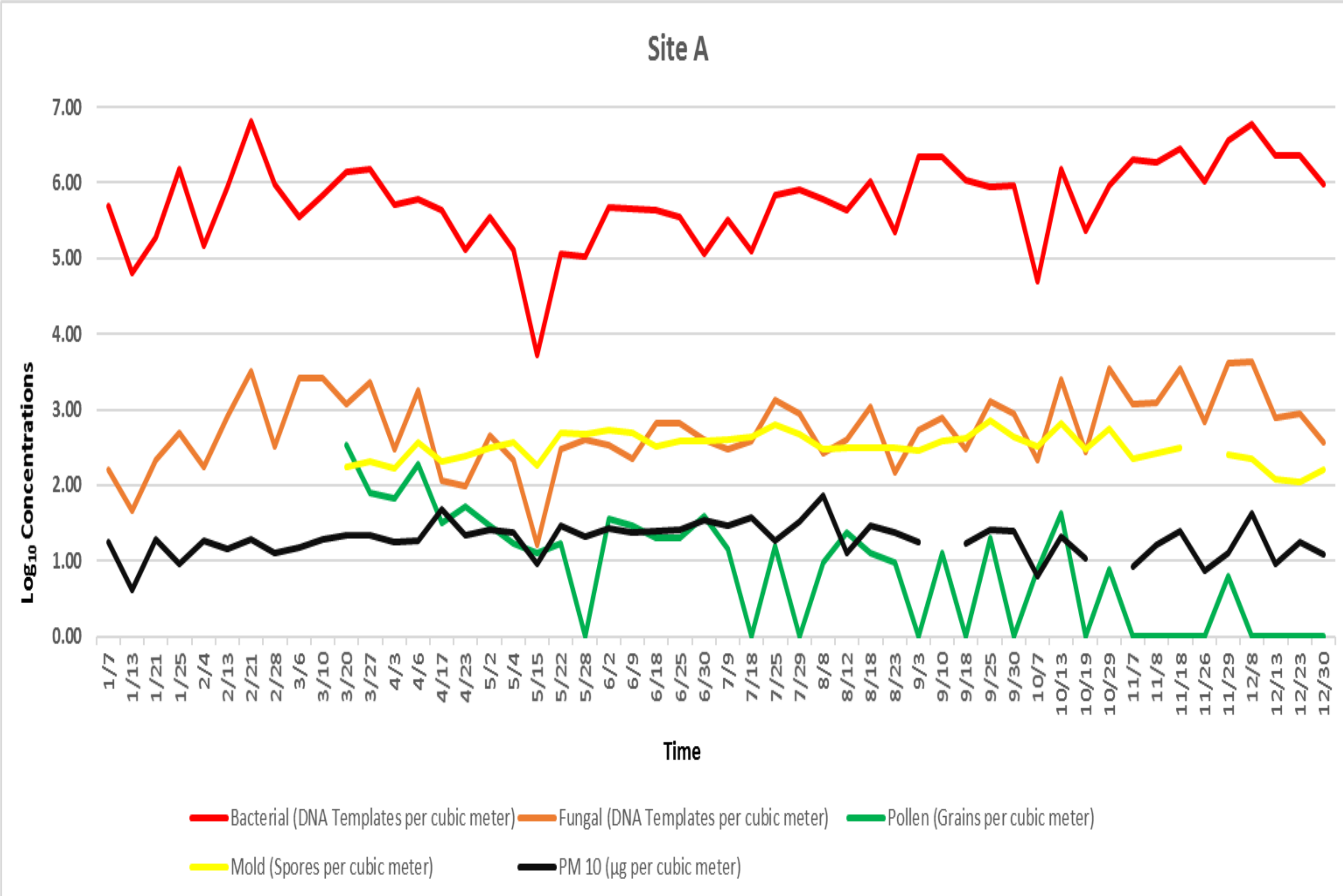


Figure 10.a: Total Bioaerosol Concentrations for Site A in 2015 ($PM_{2.5}$ Data Missing).

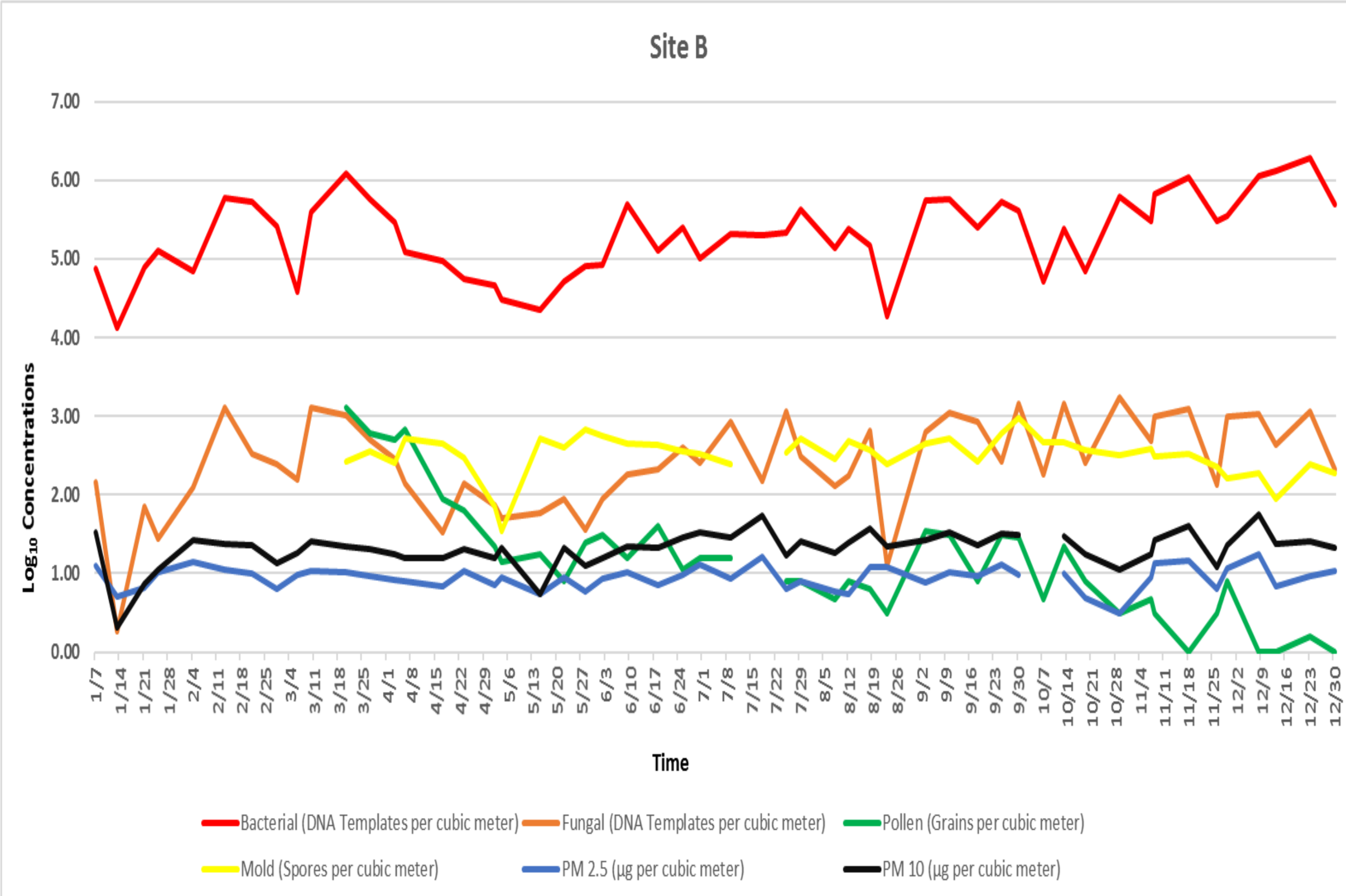


Figure 10.b: Total Bioaerosol Concentrations for Site B in 2015.

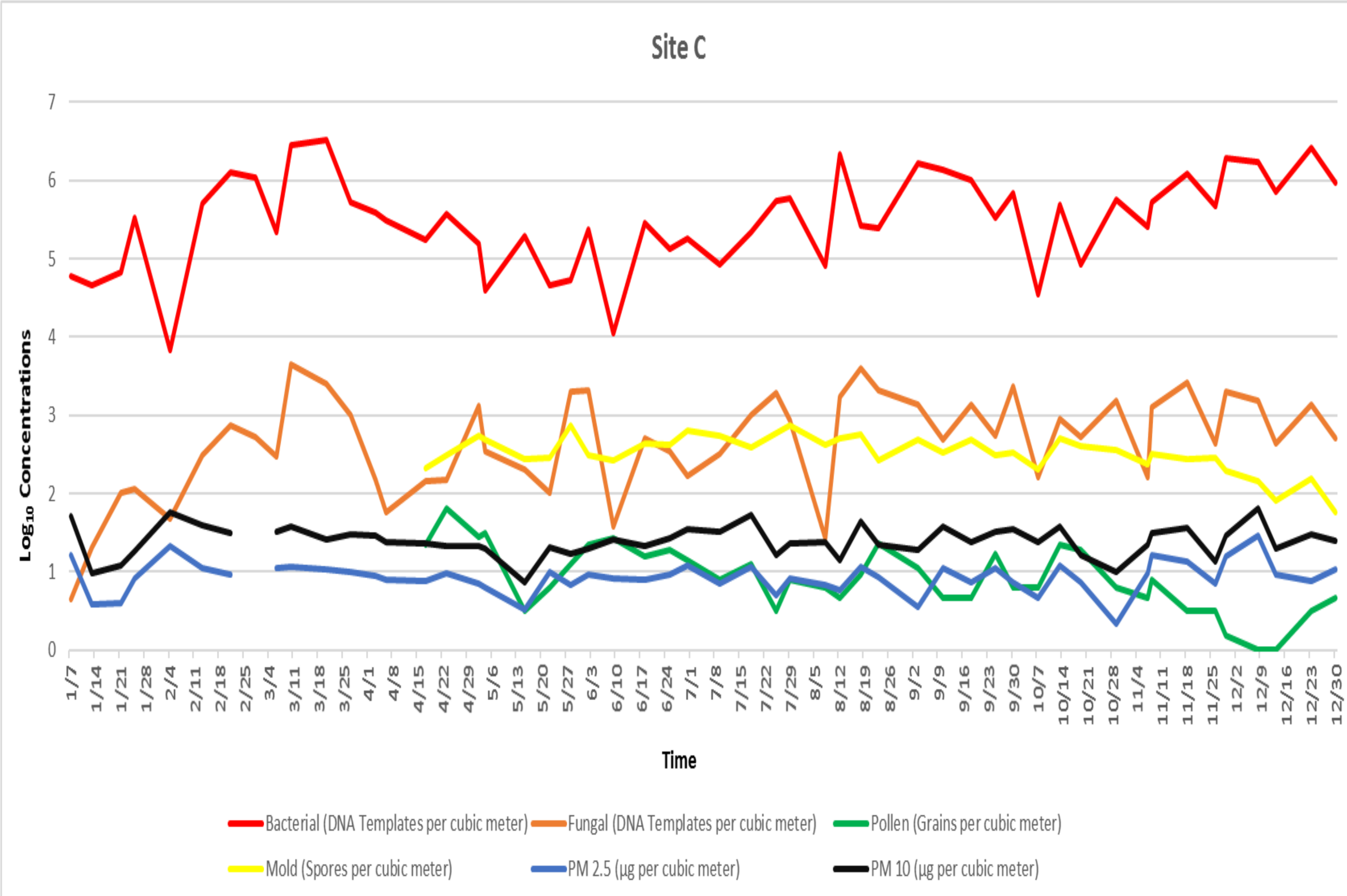


Figure 10.c: Total Bioaerosol Concentrations for Site C in 2015.

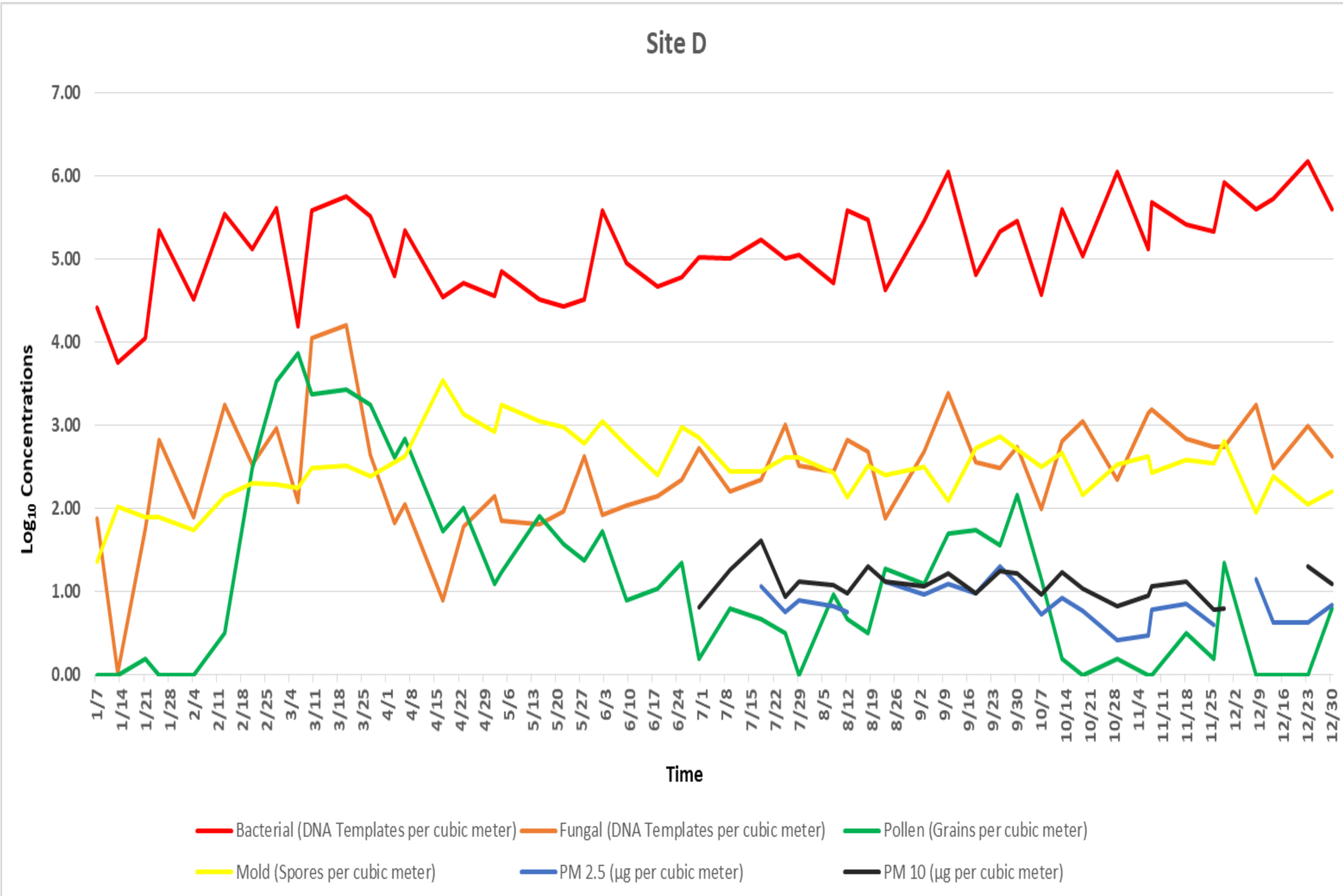


Figure 10.d: Total Bioaerosol Concentrations for Site D in 2015.

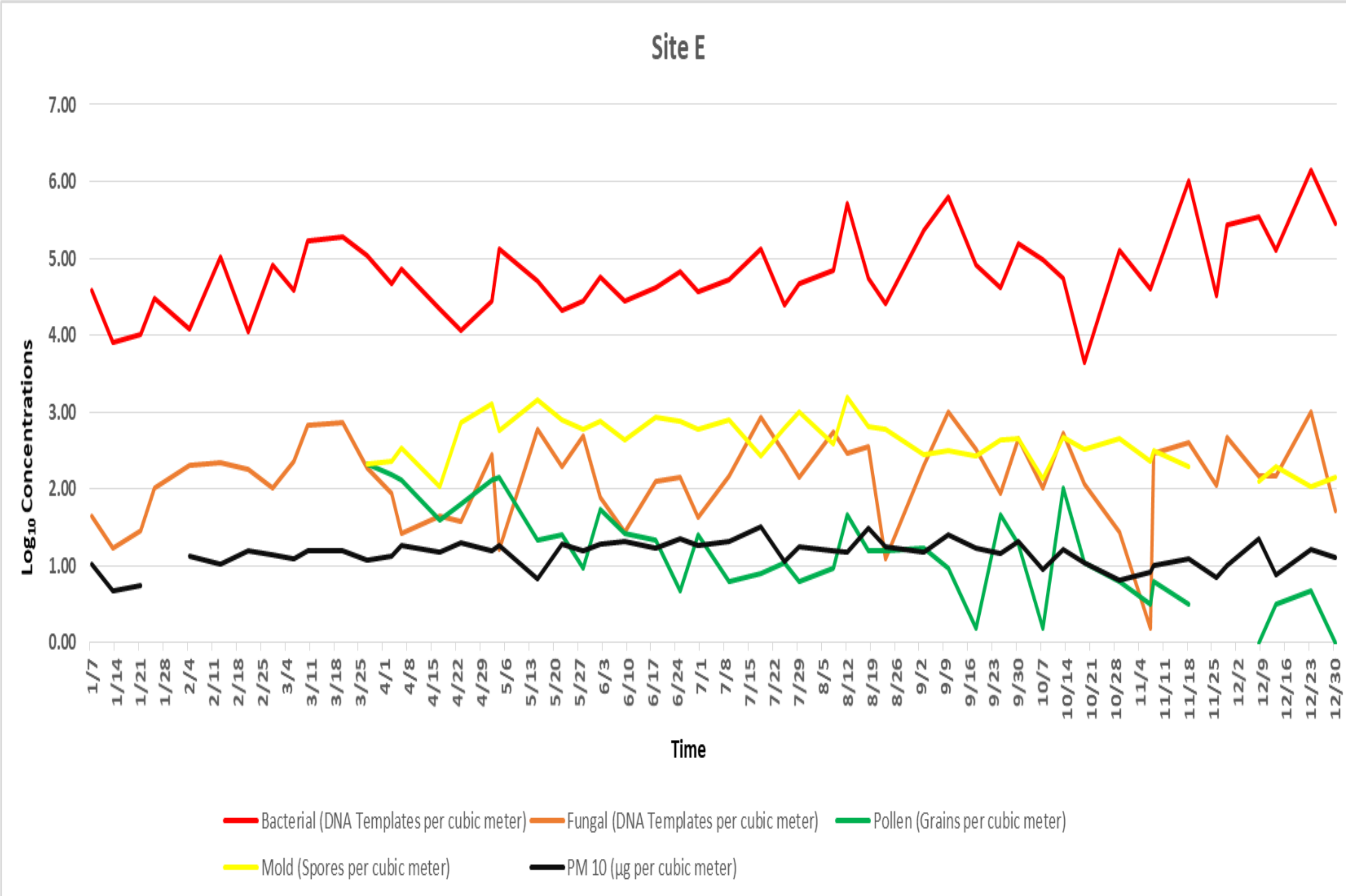


Figure 10.e: Total Bioaerosol Concentrations for Site E in 2015 ($PM_{2.5}$ Data Missing).

Discussion

Previous studies on bioaerosols have established that they are potentially harmful to human health. They are known to cause infections, asthma, allergic diseases, and in some cases heart disease (Rajput et al., 2017). While relationships have been established among bioaerosols such as pollen, particulate matter, and mold spores, their relationships to bacterial and fungal DNA concentrations are unknown. Two studies conducted by Bowers et al. (2011 and 2013) have looked at urban vs. rural environments, but data are lacking for microenvironments.

In this study, we observed significant variations in concentrations among the air quality variables and the collection stations that were established across the Las Vegas Valley. The overall bacterial DNA concentrations were the highest bioaerosol measurements, with the highest concentrations observed during the winter months. A study in the Midwest showed high concentrations of bacterial airborne communities during the summer and lower amounts during the winter. This could be explained by the change in climate and bloom in vegetation in the surrounding area (Bowers et al., 2011). In our study, fungal, pollen, and mold concentrations were high during the spring months, which could be explained by the increased vegetation bloom and winds. $PM_{2.5}$ had lower concentrations during the fall and winter months for the three sites compared, while PM_{10} had lower concentrations in winter and higher amounts in late summer. These results concur with a previous study that showed seasonal variability of PM concentrations, with summer concentrations being higher than winter (Cheung, Shafer, Schauer, & Sioutas, 2012).

The variability among the sites could be explained by the geography and landscaping practices near the sampling sites. Sites A and E are in suburban, residential areas, while Sites B, C, and D are in densely populated, urban areas, with older vegetation.

The comparison of bacterial and fungal DNA concentrations showed significant relationships among all five sites. It is unknown why the measurements correlated, as it was expected that measurements of bacterial and fungal DNA concentrations were independent. One explanation could be that variability in extraction efficiency affected the total DNA concentration in the samples, resulting in patterns of high and low concentrations observed for both of the two measurements.

The comparison between fungal DNA concentrations and mold spore counts showed a slight negative relationship at only one site. While other studies have not compared fungal DNA concentrations to mold spore counts, one study did show a relationship between qPCR and culture analysis for indoor air samples (Lignell et al., 2008). Another study showed that culture methods underestimated the amount of fungal concentrations compared to real-time PCR (Yamamoto, Kimura, Matsuki, & Yanagisawa, 2010). Daily data collection may show a stronger correlation between the two variables.

A primary limitation to this study was the lack of daily data. Collection of more data may result in more robust results. In addition, most of the sites had missing data from the months of January to mid-March. While no other study has used multiple sites for bioaerosol monitoring, five sites may not provide a complete geographic picture of bioaerosols around the Las Vegas Valley. The DNA concentrations were determined by using a single species as a standard for estimating total fungal and bacterial DNA concentrations, which may not be an accurate representation of all species. Different sampling methods could also have an effect on sampling efficiency and the quality of the samples. The sensitivity of the PCR differed between the fungal and bacterial PCR assays due to the efficiency of amplification of the primers and probes. Furthermore, DNA degradation could have affected the sensitivity of the assays. Air filters were collected in 2015 and stored at room temperature for a prolonged period of time, which could have resulted in DNA degradation. The presence of multicopy genes in cells could explain the higher DNA concentrations versus microscopic spore counts.

Overall, there were numerous differences between the six air quality variables among the five collection stations. The results of this study showed variability between seasons and bioaerosol measurements. The results provide bioaerosol measurements for one year in Las Vegas and may lead to a better understanding of bioaerosols and how they relate to outdoor air quality and exposure.

Chapter 6: Overall Discussion

Bioaerosols are known to cause various illnesses in humans when inhaled. They can cause infections, asthma, allergic diseases, cancer, and cardiac diseases (Rajput et al., 2017). Relationships between bioaerosols and air quality measurements have been studied, but there are limited data for the Las Vegas Valley. While one National Allergy Bureau collection station is generally established to quantify the dominant allergenic pollen species for a given metropolitan area, spatial theories have concluded that an air sampler will collect pollen within only 2 km of the source (McLauchlan et al., 2011). We observed significant variations in concentration and composition among the five pollen collection stations that were established across the Las Vegas Valley, which supports the theory of an important spatial contribution to observed data.

Pollen concentrations varied seasonally among the sites, as expected, with differences among individual species of pollen. Interestingly, ragweed pollen was observed in higher concentrations in spring months than in the fall, whereas it is typically present only in the fall in other parts of the United Stated (Frenz et al., 1995). The variability in pollen concentrations among sites could be explained by the geography and landscaping practices near the sampling sites. Sites A and E are in suburban, residential areas, while Sites B, C, and D are in densely populated, urban areas, with older vegetation. The weed pollen concentration difference at Site A was higher than all other sites and might be due to the developing residential area along the outer edge of the city. Site D is the official NAB sampling site that is used to report the concentration of pollen for the city of Las Vegas. However, pollen concentrations varied among sites. For example, in October 2015 at Site E, the means for *Ulmus* were much higher compared to Site D. In February, the mean of *Platanus* for Site A was slightly greater than Site D. The pollen results indicated that more sites and additional monitoring of outdoor allergens are needed to provide information needed to accurately inform the community of outdoor air quality conditions. Therefore, these results show evidence that support the claim that that there will be one or more relationships between various pollen types among the five sample locations.

For mold, the total concentrations showed variation among the five sites, specifically at Site E, which had the highest concentrations. The total mold concentrations obtained in Las Vegas were two to five times greater than those obtained in a study that measured outdoor colony forming units (CFU) of mold in the far western United States (Shelton et al., 2002). This may be due to the differences in measurement methods, because culture counts are expected to be lower than total counts. Our results were similar to a study in New Delhi where total spore concentrations from slide counts showed site-to-site variations (Gupta et al., 1993). A study in New Orleans, Louisiana showed significant differences in daily mold concentrations between flooded (66,167 spores/m^3) and non-flooded (33,179 spores/m^3) sites (Solomon et al., 2006). A study in the state of West Bengal, India had total mold concentrations of approximately 2,500 spores/m^3 at one of their five collection sites during the spring months (Adhikari et al., 2004). By comparison, our highest mean was at Site E (699 spores/m^3) for spring, which was much lower when compared to New Orleans and West Bengal.

The *Cladosporium* spore concentrations measured in our study were consistent with a study conducted in 2005, in Dublin that showed only marginal differences among the four sites and no statistical difference (O'Gorman and Fuller, 2008). *Alternaria* concentrations in Las Vegas varied. A similar study done in Saudi Arabia, showed differences in *Alternaria* concentrations between two different locations sampled (Hasnain et al., 1998). In Porto, Portugal a study identified higher concentrations of spores of *Alternaria* in the urban environment compared to other spores (Oliveira et al., 2010). In our study, smuts (basidiomycetes) were the dominant spores for all five sites during the spring season. The highest concentration of smuts in our study was 5,970 spores/m^3. A study in Mexico City showed variation among two sampling sites for basidiomycete spores, which included smuts during the dry seasons (October – May). Their results showed spores/m^3 for site 1 ranging from 0 – 605 and site 2 ranging from 0 – 37 (Calderon et al., 1995). Therefore, these results show evidence that support the claim that there will be one or more relationships between various mold spores among the five sample locations.

We observed significant variations in concentration and composition among bacteria. The overall bacterial DNA concentrations were the highest bioaerosol measurement. The largest difference was seen at Site A when compared to the other four sites. During the winter months the concentrations of bacterial DNA were higher compared to summer, spring, and fall. A study in the Midwest showed high concentrations of airborne bacteria during the summer and lower concentrations during the winter (Bowers et al., 2011). The differences in bacterial DNA concentrations could be explained by the contrast in climates and surrounding vegetation between the Midwest and the Mojave Desert. Therefore, the results shown can support the claim that there will be one or more relationships between the outdoor air quality variables by location and season.

Geographical Information System

The Geographical Information System (GIS) was used to map the air quality variables by seasons to show graphically the variation in the concentrations observed in this study (Appendix J).

During all four seasons, the highest bacterial DNA concentrations were seen at Site A. According to the GIS maps Site A had the greatest influence in the surrounding area compared to all of the other sites. Statistical analysis showed that overall, Site A had the greatest difference from the other four sites.

The fungal DNA concentrations were the largest at Site A, and the GIS maps showed that this location had the most influence on the surrounding area in winter, summer, and fall. In spring, Site D had the largest concentration of fungal DNA and the greatest influence on the surrounding area compared to all of the other sites. But, Site A had the greatest mean differences compared with the other sites.

Mold spore concentrations were the highest at Site B, with that site having the greatest influence in the area in the winter and fall. In the spring and summer, the mold concentrations were the highest at Site D and E. Sites D and E had the greatest influence in the surrounding area compared to the other sites. The GIS maps supported the statistical analysis results that showed Site E having the greatest mean differences among all of the other sites. In addition, there were greater differences seen among individual mold species.

$PM_{2.5}$ only had three sites that collected data, Sites B, C, and D. The limited data showed no meaningful trends among the sites.

GIS maps showed PM_{10} in the winter had the highest concentration and influence at site C. In the spring, Sites A and C had the highest concentrations and influence. Summer had the highest concentrations at Sites A, B, and C. The increased bloom in vegetation and wind speed could explain the increase in concentrations of PM_{10} in the summer compared to winter (Cheung, Shafer, Schauer, & Sioutas, 2012). A study on the island of Cyprus showed that the dry climate had higher levels of PM_{10} concentrations during the months of February to mid-October (Bari, Baumbach, Sarachage-Ruiz, & Kleanthous, 2009). These results were similar to the results of our study that showed PM_{10} concentrations peaking in August.

Limitations

While differences between the air quality variables were measured, there were limitations to the study. The data were only collected for a one year period. Collecting more data would increase the statistical power and determine historical trends. The collection sites were limited to only five sites. Increasing sampling sites would provide a more complete picture into to the differences of urban versus suburban communities in the city, as well as new development versus old. The precision of the longitudinal transverse method used for pollen grains and mold spore counts were not specified in NAB training course and materials. A single longitudinal traverse count is considered an adequatestandard for NAB daily monitoring. Having only five sites was a large limitation on GIS analysis. To conduct a statistical analysis with IDW the data points should be dense but not exceed 45 million points, determined by Watson and Philip (1985). The results from the GIS mapping was similar to what was seen statistically, but the GIS maps provided a visual representation of the data.

Conclusions

Overall, there were differences among the six air quality variables among the five collection stations. Site A was different in bacterial concentrations compared to all of the sites while Site D and E were only different from each other for bacterial and fungal concentrations. Total pollen, mold, and $PM_{2.5}$ were not significantly different for all of the five sites, but when the concentrations were compared on a daily basis there were significant differences among pollen and mold species.

In this study, bioaerosols showed variation in concentrations among sites and seasons in the Las Vegas Valley. The variability between the sites could be explained by the geography and landscaping practices near the sampling sites. The results may lead to a better understanding of bioaerosols and how they relate to outdoor air quality and exposure. The measurements and GIS maps could be used to determine future monitoring sites in newly developing communities in Henderson and the Southwest neighborhoods in the valley. Future studies can focus on more site establishment and how these air quality variables relate directly to human health.

Appendix A: Comparison among Months of Pollen Concentrations.

Table 7: Monthly comparison of tree pollen concentrations among all of the five sites.

Month (Log Mean ± SE)		Log Mean Difference	Std. Error	df	P-value[a]	95% Confidence Interval for Difference [b]	
						Lower Bound	Upper Bound
1 vs. (0.390 ± 0.099)	2	-1.060*	0.106	333.307	<0.001	-1.268	-0.852
	3	-1.880*	0.114	212.347	<0.001	-2.105	-1.655
	4	-1.268*	0.112	200.442	<0.001	-1.49	-1.047
	5	-0.757*	0.115	185.521	<0.001	-0.984	-0.53
	6	-0.766*	0.116	184.969	<0.001	-0.994	-0.538
	7	-0.236*	0.115	184.026	0.042	-0.463	-0.008
	8	0.122	0.115	182.939	0.289	-0.105	0.349
	9	0.191	0.116	186.639	0.099	-0.037	0.419
	10	-0.168	0.115	190.249	0.145	-0.394	0.058
	11	0.221	0.114	220.263	0.054	-0.004	0.445
	12	0.251*	0.104	317.367	0.016	0.047	0.455
2 vs. (1.450 ± 0.102)	1	1.060*	0.106	333.307	<0.001	0.852	1.268
	3	-0.820*	0.108	301.169	<0.001	-1.033	-0.607
	4	-0.209	0.114	226.395	0.068	-0.433	0.015
	5	0.303*	0.117	194.831	0.011	0.072	0.534
	6	0.294*	0.118	190.497	0.014	0.061	0.527
	7	0.824*	0.118	188.568	<0.001	0.592	1.056
	8	1.182*	0.118	187.037	<0.001	0.95	1.414
	9	1.251*	0.118	189.471	<0.001	1.018	1.484
	10	0.892*	0.118	188.696	<0.001	0.66	1.124
	11	1.281*	0.118	200.253	<0.001	1.048	1.513
	12	1.311*	0.115	220.957	<0.001	1.083	1.538
3 vs. (2.270 ± 0.100)	1	1.880*	0.114	212.347	<0.001	1.655	2.105
	2	0.820*	0.108	301.169	<0.001	0.607	1.033
	4	0.611*	0.103	332.426	<0.001	0.41	0.813
	5	1.123*	0.114	215.285	<0.001	0.899	1.347
	6	1.114*	0.116	194.157	<0.001	0.885	1.343
	7	1.644*	0.116	187.762	<0.001	1.416	1.873
	8	2.002*	0.116	185.01	<0.001	1.774	2.23

Month (Log Mean ± SE)		Log Mean Difference	Std. Error	df	P-value[a]	95% Confidence Interval for Difference [b]	
						Lower Bound	Upper Bound
	9	2.071*	0.116	186.927	<0.001	1.842	2.301
	10	1.712*	0.116	184.761	<0.001	1.483	1.94
	11	2.101*	0.117	191.029	<0.001	1.871	2.331
	12	2.131*	0.115	191.716	<0.001	1.903	2.358
4 vs. (1.659 ± 0.096)	1	1.268*	0.112	200.442	<0.001	1.047	1.49
	2	0.209	0.114	226.395	0.068	-0.015	0.433
	3	-0.611*	0.103	332.426	<0.001	-0.813	-0.41
	5	0.512*	0.102	330.199	<0.001	0.311	0.712
	6	0.502*	0.111	229.32	<0.001	0.283	0.722
	7	1.033*	0.112	203.794	<0.001	0.811	1.254
	8	1.391*	0.113	195.894	<0.001	1.169	1.613
	9	1.460*	0.113	196.725	<0.001	1.236	1.683
	10	1.100*	0.113	193.802	<0.001	0.878	1.323
	11	1.489*	0.113	199.427	<0.001	1.265	1.713
	12	1.519*	0.113	195.604	<0.001	1.297	1.741
5 vs. (1.47± 0.099)	1	0.757*	0.115	185.521	<0.001	0.53	0.984
	2	-0.303*	0.117	194.831	0.011	-0.534	-0.072
	3	-1.123*	0.114	215.285	<0.001	-1.347	-0.899
	4	-0.512*	0.102	330.199	<0.001	-0.712	-0.311
	6	-0.009	0.104	326.59	0.931	-0.214	0.196
	7	0.521*	0.113	219.012	<0.001	0.299	0.744
	8	0.879*	0.114	192.8	<0.001	0.653	1.105
	9	0.948*	0.115	188.889	<0.001	0.721	1.176
	10	0.589*	0.115	184.905	<0.001	0.362	0.815
	11	0.978*	0.116	189.556	<0.001	0.749	1.206
	12	1.008*	0.115	184.986	<0.001	0.781	1.234
6 vs. (1.156 ± 0.100)	1	0.766*	0.116	184.969	<0.001	0.538	0.994
	2	-0.294*	0.118	190.497	0.014	-0.527	-0.061
	3	-1.114*	0.116	194.157	<0.001	-1.343	-0.885
	4	-0.502*	0.111	229.32	<0.001	-0.722	-0.283
	5	0.009	0.104	326.59	0.931	-0.196	0.214

Month (Log Mean ± SE)		Log Mean Difference	Std. Error	df	P-value[a]	95% Confidence Interval for Difference [b]	
						Lower Bound	Upper Bound
	7	0.530*	0.104	327.189	<0.001	0.325	0.735
	8	0.888*	0.114	217.92	<0.001	0.664	1.112
	9	0.957*	0.116	195.829	<0.001	0.729	1.186
	10	0.598*	0.116	187.072	<0.001	0.37	0.826
	11	0.987*	0.116	190.471	<0.001	0.757	1.216
	12	1.017*	0.116	185.431	<0.001	0.789	1.245
7 vs. (0.626 ± 0.099)	1	0.236*	0.115	184.026	0.042	0.008	0.463
	2	-0.824*	0.118	188.568	<0.001	-1.056	-0.592
	3	-1.644*	0.116	187.762	<0.001	-1.873	-1.416
	4	-1.033*	0.112	203.794	<0.001	-1.254	-0.811
	5	-0.521*	0.113	219.012	<0.001	-0.744	-0.299
	6	-0.530*	0.104	327.189	<0.001	-0.735	-0.325
	8	0.358*	0.104	321.31	0.001	0.154	0.562
	9	0.427*	0.114	219.76	<0.001	0.203	0.651
	10	0.068	0.115	192.475	0.557	-0.159	0.294
	11	0.456*	0.116	191.334	<0.001	0.228	0.685
	12	0.487*	0.115	184.996	<0.001	0.26	0.714
8 vs. (0.268 ± 0.099)	1	-0.122	0.115	182.939	0.289	-0.349	0.105
	2	-1.182*	0.118	187.037	<0.001	-1.414	-0.95
	3	-2.002*	0.116	185.01	<0.001	-2.23	-1.774
	4	-1.391*	0.113	195.894	<0.001	-1.613	-1.169
	5	-0.879*	0.114	192.8	<0.001	-1.105	-0.653
	6	-0.888*	0.114	217.92	<0.001	-1.112	-0.664
	7	-0.358*	0.104	321.31	0.001	-0.562	-0.154
	9	0.069	0.104	324.531	0.507	-0.136	0.274
	10	-0.290*	0.113	215.221	0.011	-0.513	-0.068
	11	0.099	0.115	196.295	0.394	-0.129	0.326
	12	0.129	0.115	185.115	0.264	-0.098	0.355
9 vs. (0.199 ± 0.100)	1	-0.191	0.116	186.639	0.099	-0.419	0.037
	2	-1.251*	0.118	189.471	<0.001	-1.484	-1.018
	3	-2.071*	0.116	186.927	<0.001	-2.301	-1.842

Month (Log Mean ± SE)		Log Mean Difference	Std. Error	df	P-value[a]	95% Confidence Interval for Difference [b]	
						Lower Bound	Upper Bound
	4	-1.460*	0.113	196.725	<0.001	-1.683	-1.236
	5	-0.948*	0.115	188.889	<0.001	-1.176	-0.721
	6	-0.957*	0.116	195.829	<0.001	-1.186	-0.729
	7	-0.427*	0.114	219.76	<0.001	-0.651	-0.203
	8	-0.069	0.104	324.531	0.507	-0.274	0.136
	10	-0.359*	0.104	324.195	0.001	-0.564	-0.154
	11	0.029	0.114	224.23	0.797	-0.196	0.255
	12	0.06	0.115	193.598	0.606	-0.168	0.287
10 vs. (0.558 ± 0.099)	1	0.168	0.115	190.249	0.145	-0.058	0.394
	2	-0.892*	0.118	188.696	<0.001	-1.124	-0.66
	3	-1.712*	0.116	184.761	<0.001	-1.94	-1.483
	4	-1.100*	0.113	193.802	<0.001	-1.323	-0.878
	5	-0.589*	0.115	184.905	<0.001	-0.815	-0.362
	6	-0.598*	0.116	187.072	<0.001	-0.826	-0.37
	7	-0.068	0.115	192.475	0.557	-0.294	0.159
	8	0.290*	0.113	215.221	0.011	0.068	0.513
	9	0.359*	0.104	324.195	0.001	0.154	0.564
	11	0.389*	0.104	329.35	<0.001	0.184	0.594
	12	0.419*	0.113	215.184	<0.001	0.196	0.642
11 vs. (0.170 ± 0.100)	1	-0.221	0.114	220.263	0.054	-0.445	0.004
	2	-1.281*	0.118	200.253	<0.001	-1.513	-1.048
	3	-2.101*	0.117	191.029	<0.001	-2.331	-1.871
	4	-1.489*	0.113	199.427	<0.001	-1.713	-1.265
	5	-0.978*	0.116	189.556	<0.001	-1.206	-0.749
	6	-0.987*	0.116	190.471	<0.001	-1.216	-0.757
	7	-0.456*	0.116	191.334	<0.001	-0.685	-0.228
	8	-0.099	0.115	196.295	0.394	-0.326	0.129
	9	-0.029	0.114	224.23	0.797	-0.255	0.196
	10	-0.389*	0.104	329.35	<0.001	-0.594	-0.184
	12	0.03	0.104	329.567	0.773	-0.175	0.235
12 vs.	1	-0.251*	0.104	317.367	0.016	-0.455	-0.047
	2	-1.311*	0.115	220.957	<0.001	-1.538	-1.083

Month (Log Mean ± SE)		Log Mean Difference	Std. Error	df	P-value[a]	95% Confidence Interval for Difference [b]	
						Lower Bound	Upper Bound
(0.139 ± 0.099)	3	-2.131*	0.115	191.716	<0.001	-2.358	-1.903
	4	-1.519*	0.113	195.604	<0.001	-1.741	-1.297
	5	-1.008*	0.115	184.986	<0.001	-1.234	-0.781
	6	-1.017*	0.116	185.431	<0.001	-1.245	-0.789
	7	-0.487*	0.115	184.996	<0.001	-0.714	-0.26
	8	-0.129	0.115	185.115	0.264	-0.355	0.098
	9	-0.06	0.115	193.598	0.606	-0.287	0.168
	10	-0.419*	0.113	215.184	<0.001	-0.642	-0.196
	11	-0.03	0.104	329.567	0.773	-0.235	0.175

Based on estimated marginal means

*** The mean difference is significant at the .05 level.**

a. Dependent Variable: logPollen.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix B: Pollen Concentrations of Five Sites from April 2015-2016.

Table 8: Pollen Concentrations (Grains/m^3) for Site A (Daily Counts from April 2015-2016).

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/7/2015	0.00	3.14	12.54	29.79	17.25	6.27	0.00	7.84	89.38	32.93
4/8/2015	0.00	7.84	1.57	14.11	31.36	3.14	0.00	3.14	70.56	26.66
4/9/2015	0.00	6.27	6.27	15.68	23.52	3.14	0.00	9.41	73.70	37.63
4/10/2015	0.00	6.27	0.00	17.25	23.52	3.14	0.00	17.25	62.72	42.34
4/11/2015	4.70	4.70	0.00	9.41	4.70	0.00	0.00	3.14	31.36	62.72
4/12/2015	0.00	1.57	0.00	17.25	9.41	0.00	0.00	3.14	40.77	32.93
4/13/2015	0.00	0.00	0.00	3.14	6.27	0.00	0.00	4.70	14.11	28.23
4/14/2015	3.14	0.00	0.00	17.25	7.84	0.00	0.00	3.14	39.20	47.04
4/15/2015	0.00	1.57	4.70	7.84	3.14	0.00	0.00	3.14	21.95	20.39
4/16/2015	0.00	1.57	0.00	10.98	3.14	0.00	0.00	3.14	20.39	26.66
4/17/2015	0.00	0.00	0.00	3.14	1.57	0.00	0.00	4.70	7.84	18.82
4/18/2015	0.00	0.00	0.00	1.57	1.57	0.00	0.00	3.14	9.41	10.98
4/19/2015	0.00	0.00	0.00	3.14	4.70	0.00	0.00	1.57	17.25	20.39
4/20/2015	1.57	0.00	1.57	4.70	6.27	0.00	0.00	3.14	17.25	36.07
4/21/2015	3.14	1.57	0.00	4.70	6.27	0.00	0.00	7.84	20.39	32.93
4/22/2015	10.98	0.00	0.00	31.36	6.27	0.00	0.00	1.57	53.32	28.23
4/23/2015	10.98	0.00	0.00	0.00	6.27	0.00	0.00	3.14	23.52	25.09
4/24/2015	3.14	0.00	6.27	1.57	15.68	0.00	0.00	0.00	29.79	15.68
4/25/2015	3.14	0.00	3.14	6.27	6.27	0.00	0.00	1.57	20.39	21.95
4/26/2015	6.27	0.00	1.57	6.27	3.14	0.00	0.00	0.00	34.50	10.98
4/27/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	0.00	9.41	1.57
4/28/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	3.14	6.27	9.41
4/29/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	9.41	4.70
4/30/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	3.14	12.54	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
5/1/2015	0.00	0.00	0.00	1.57	3.14	0.00	0.00	4.70	14.11	12.54
5/2/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	4.70	17.25	7.84
5/3/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	10.98	7.84
5/4/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	3.14	10.98	3.14
5/5/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	4.70	6.27	7.84
5/6/2015	9.41	0.00	0.00	0.00	3.14	0.00	0.00	1.57	18.82	7.84
5/7/2015	7.84	0.00	0.00	0.00	3.14	0.00	0.00	1.57	14.11	6.27
5/8/2015	4.70	0.00	1.57	3.14	12.54	0.00	0.00	15.68	23.52	15.68
5/9/2015	0.00	0.00	1.57	0.00	1.57	0.00	0.00	1.57	3.14	1.57
5/10/2015	6.27	0.00	0.00	0.00	1.57	0.00	0.00	1.57	7.84	3.14
5/11/2015	3.14	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70	1.57
5/12/2015	6.27	0.00	1.57	0.00	7.84	0.00	0.00	7.84	15.68	0.00
5/13/2015	4.70	0.00	0.00	0.00	3.14	0.00	0.00	4.70	7.84	3.14
5/14/2015	3.14	0.00	0.00	3.14	3.14	0.00	0.00	6.27	9.41	3.14
5/15/2015	3.14	0.00	0.00	0.00	3.14	0.00	0.00	3.14	6.27	3.14
5/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	0.00
5/17/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	1.57	1.57	0.00
5/18/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	0.00	6.27	1.57
5/19/2015	1.57	0.00	1.57	0.00	3.14	1.57	0.00	0.00	7.84	0.00
5/20/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	0.00
5/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
5/22/2015	6.27	0.00	0.00	1.57	3.14	0.00	0.00	3.14	10.98	3.14
5/23/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57
5/24/2015	4.70	0.00	0.00	0.00	1.57	0.00	0.00	3.14	6.27	1.57
5/25/2015	1.57	0.00	0.00	1.57	0.00	0.00	0.00	3.14	3.14	0.00
5/26/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	1.57	4.70	3.14

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
5/27/2015	4.70	0.00	0.00	0.00	4.70	0.00	0.00	1.57	9.41	3.14
5/28/2015	1.57	0.00	1.57	0.00	1.57	0.00	0.00	0.00	7.84	6.27
5/29/2015	7.84	0.00	0.00	0.00	6.27	0.00	0.00	3.14	15.68	3.14
5/30/2015	4.70	0.00	0.00	1.57	3.14	0.00	0.00	6.27	17.25	7.84
5/31/2015	1.57	0.00	0.00	3.14	1.57	0.00	0.00	1.57	6.27	3.14
6/1/2015	9.41	0.00	0.00	0.00	4.70	0.00	0.00	3.14	14.11	7.84
6/2/2015	6.27	0.00	0.00	0.00	3.14	0.00	0.00	6.27	20.39	9.41
6/3/2015	0.00	0.00	0.00	0.00	7.84	0.00	0.00	1.57	12.54	6.27
6/4/2015	7.84	0.00	0.00	0.00	4.70	0.00	0.00	1.57	21.95	9.41
6/5/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	1.57	6.27	6.27
6/6/2015	6.27	0.00	0.00	0.00	3.14	0.00	0.00	0.00	15.68	4.70
6/7/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	0.00	7.84	9.41
6/8/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	0.00	9.41	4.70
6/9/2015	3.14	0.00	0.00	0.00	7.84	0.00	0.00	9.41	17.25	3.14
6/10/2015	3.14	0.00	0.00	0.00	10.98	0.00	0.00	9.41	20.39	9.41
6/11/2015	3.14	0.00	0.00	1.57	7.84	0.00	0.00	4.70	17.25	0.00
6/12/2015	4.70	0.00	0.00	1.57	12.54	0.00	0.00	4.70	25.09	1.57
6/13/2015	0.00	0.00	0.00	1.57	43.91	0.00	0.00	9.41	47.04	6.27
6/14/2015	3.14	0.00	0.00	1.57	20.39	0.00	0.00	3.14	28.23	6.27
6/15/2015	0.00	0.00	1.57	0.00	15.68	0.00	0.00	4.70	34.50	3.14
6/16/2015	0.00	1.57	0.00	0.00	10.98	0.00	0.00	9.41	23.52	1.57
6/17/2015	1.57	0.00	0.00	0.00	9.41	0.00	0.00	6.27	17.25	1.57
6/18/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	6.27	9.41	4.70
6/19/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	4.70	10.98	3.14
6/20/2015	1.57	0.00	0.00	0.00	10.98	0.00	0.00	0.00	15.68	4.70
6/21/2015	0.00	0.00	0.00	0.00	9.41	0.00	0.00	6.27	42.34	3.14

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
6/22/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	0.00	15.68	6.27
6/23/2015	0.00	0.00	0.00	0.00	7.84	0.00	0.00	4.70	9.41	3.14
6/24/2015	1.57	0.00	0.00	0.00	7.84	0.00	0.00	1.57	10.98	4.70
6/25/2015	0.00	0.00	0.00	0.00	7.84	0.00	0.00	3.14	10.98	6.27
6/26/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	1.57	12.54	0.00
6/27/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	3.14	7.84	1.57
6/28/2015	1.57	0.00	0.00	0.00	7.84	0.00	0.00	0.00	15.68	12.54
6/29/2015	0.00	0.00	0.00	0.00	9.41	0.00	0.00	3.14	10.98	17.25
6/30/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	10.98	12.54	15.68
7/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	21.95
7/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	21.95
7/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	10.98
7/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	10.98
7/5/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	7.84	4.70	3.14
7/6/2015	0.00	0.00	0.00	0.00	12.54	0.00	0.00	4.70	18.82	10.98
7/7/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	1.57	6.27	3.14
7/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	10.98
7/9/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	6.27	6.27	1.57
7/10/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
7/11/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70
7/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
7/13/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	1.57
7/14/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	4.70
7/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	9.41
7/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	9.41
7/17/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	3.14	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
7/18/2015	0.00	0.00	0.00	1.57	0.00	0.00	0.00	0.00	3.14	1.57
7/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
7/20/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	6.27
7/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41	1.57	3.14
7/22/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	3.14	4.70
7/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
7/24/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	9.41	3.14	6.27
7/25/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	3.14	10.98
7/26/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	3.14	3.14	3.14
7/27/2015	4.70	0.00	0.00	0.00	3.14	0.00	0.00	0.00	7.84	6.27
7/28/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	3.14
7/29/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70
7/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	3.14
7/31/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	4.70	4.70	4.70
8/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	1.57
8/2/2015	6.27	0.00	0.00	0.00	0.00	0.00	0.00	25.09	6.27	1.57
8/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	9.41
8/4/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	1.57	4.70	1.57
8/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
8/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
8/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
8/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	3.14	4.70
8/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
8/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
8/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
8/12/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	10.98	6.27	6.27

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
8/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
8/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	1.57
8/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	6.27
8/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.98	0.00	9.41
8/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.11	3.14	1.57
8/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	1.57	4.70
8/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	3.14	12.54
8/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	12.54
8/21/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	3.14	7.84
8/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41	3.14	29.79
8/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	7.84
8/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	1.57	12.54
8/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	6.27	3.14
8/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	4.70
8/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
8/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	4.70
8/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
8/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	9.41
8/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84	0.00	4.70
9/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	6.27
9/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	7.84
9/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41
9/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	7.84
9/5/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	7.84	1.57	9.41
9/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	4.70	3.14
9/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
9/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
9/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	7.84
9/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	7.84
9/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	9.41
9/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.68
9/13/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	12.54
9/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
9/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
9/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	9.41
9/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
9/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	7.84
9/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	9.41
9/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
9/21/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	4.70
9/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	7.84
9/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
9/24/2015	0.00	7.84	0.00	0.00	0.00	0.00	0.00	1.57	7.84	6.27
9/25/2015	0.00	3.14	0.00	0.00	0.00	0.00	0.00	4.70	3.14	12.54
9/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41	3.14	7.84
9/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	15.68
9/28/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	12.54
9/29/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	6.27
9/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
10/1/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	4.70	7.84
10/2/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	7.84	12.54
10/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	3.14	10.98

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
10/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	10.98
10/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	3.14	1.57
10/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	4.70
10/7/2015	1.57	0.00	0.00	0.00	0.00	0.00	1.57	3.14	3.14	1.57
10/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	6.27
10/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.98
10/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	42.34	0.00	42.34	39.20
10/11/2015	0.00	0.00	1.57	0.00	0.00	0.00	351.25	1.57	352.82	3.14
10/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	147.40	9.41	147.40	4.70
10/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	36.07	3.14	36.07	3.14
10/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	53.32	3.14	53.32	7.84
10/15/2015	0.00	0.00	0.00	0.00	1.57	0.00	122.31	1.57	123.88	12.54
10/16/2015	0.00	0.00	1.57	0.00	1.57	0.00	128.58	3.14	131.72	7.84
10/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00
10/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
10/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.82
10/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	10.98
10/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	0.00
10/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
10/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14
10/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14
10/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	6.27
10/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	1.57	3.14

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
10/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
10/31/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	3.14
11/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
11/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
11/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
11/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14	0.00
11/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	3.14
11/7/2015	0.00	0.00	0.00	0.00	3.14	0.00	1.57	0.00	4.70	3.14
11/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
11/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	1.57
11/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
11/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	3.14
11/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/13/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	3.14
11/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	1.57
11/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/16/2015	0.00	0.00	0.00	0.00	3.14	0.00	1.57	0.00	4.70	1.57
11/17/2015	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00	3.14	3.14
11/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	0.00
11/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/20/2015	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00	3.14	0.00
11/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
11/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	3.14
11/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
11/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	7.84
11/26/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/29/2015	0.00	0.00	0.00	0.00	3.14	0.00	1.57	1.57	4.70	0.00
11/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	3.14	3.14	0.00
12/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	1.57	0.00
12/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70
12/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
12/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
12/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
12/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
12/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/1/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
1/2/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/3/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/5/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/6/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.11	1.57
1/7/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/8/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00
1/9/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/10/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/11/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/12/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/13/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/14/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/15/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
1/16/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/17/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/18/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/19/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57
1/20/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/21/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/22/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/23/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/24/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/25/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	1.57
1/26/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	0.00
1/27/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/28/2016	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57
1/29/2016	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	0.00
1/30/2016	0.00	0.00	0.00	0.00	0.00	12.54	0.00	0.00	14.11	0.00
1/31/2016	0.00	0.00	0.00	0.00	0.00	32.93	0.00	0.00	39.20	1.57
2/1/2016	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	4.70	6.27
2/2/2016	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	0.00
2/3/2016	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00	4.70	0.00
2/4/2016	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	0.00
2/5/2016	0.00	0.00	0.00	0.00	0.00	9.41	0.00	0.00	9.41	0.00
2/6/2016	0.00	3.14	0.00	0.00	0.00	7.84	0.00	1.57	10.98	1.57
2/7/2016	0.00	9.41	0.00	0.00	0.00	4.70	0.00	1.57	17.25	0.00
2/8/2016	0.00	42.34	0.00	0.00	0.00	4.70	0.00	6.27	51.75	0.00
2/9/2016	0.00	39.20	0.00	0.00	0.00	0.00	0.00	0.00	40.77	0.00
2/10/2016	0.00	34.50	0.00	0.00	0.00	43.91	0.00	0.00	79.97	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
2/11/2016	0.00	25.09	0.00	0.00	0.00	17.25	0.00	0.00	43.91	3.14
2/12/2016	0.00	31.36	0.00	0.00	0.00	23.52	0.00	0.00	58.02	3.14
2/13/2016	0.00	76.84	0.00	0.00	0.00	9.41	0.00	1.57	89.38	0.00
2/14/2016	0.00	67.43	0.00	0.00	0.00	4.70	0.00	0.00	81.54	0.00
2/15/2016	0.00	59.59	0.00	0.00	0.00	40.77	0.00	0.00	100.36	3.14
2/16/2016	0.00	23.52	0.00	0.00	0.00	17.25	0.00	0.00	43.91	0.00
2/17/2016	0.00	37.63	0.00	0.00	0.00	3.14	0.00	0.00	40.77	1.57
2/18/2016	0.00	15.68	0.00	0.00	0.00	17.25	0.00	0.00	36.07	1.57
2/19/2016	0.00	40.77	0.00	0.00	0.00	48.61	0.00	0.00	95.65	3.14
2/20/2016	0.00	641.35	0.00	0.00	0.00	18.82	0.00	0.00	661.74	0.00
2/21/2016	0.00	551.97	0.00	0.00	0.00	17.25	0.00	3.14	572.36	0.00
2/22/2016	0.00	249.33	0.00	0.00	0.00	9.41	0.00	3.14	263.44	1.57
2/23/2016	0.00	283.83	0.00	0.00	0.00	3.14	0.00	1.57	290.10	0.00
2/24/2016	0.00	208.56	0.00	0.00	0.00	0.00	0.00	1.57	216.40	0.00
2/25/2016	0.00	189.74	0.00	0.00	0.00	0.00	0.00	3.14	192.88	0.00
2/26/2016	0.00	152.11	0.00	0.00	0.00	0.00	0.00	3.14	152.11	0.00
2/27/2016	0.00	180.33	0.00	0.00	0.00	0.00	0.00	1.57	183.47	0.00
2/28/2016	0.00	105.06	166.22	0.00	0.00	0.00	0.00	6.27	280.69	3.14
2/29/2016	0.00	81.54	330.87	0.00	1.57	0.00	0.00	4.70	418.68	1.57
3/1/2016	0.00	112.90	972.22	0.00	7.84	0.00	0.00	7.84	1102.37	3.14
3/2/2016	0.00	69.00	1290.55	0.00	7.84	0.00	0.00	15.68	1376.79	15.68
3/3/2016	0.00	61.16	2073.03	0.00	10.98	14.11	0.00	12.54	2168.68	15.68
3/4/2016	0.00	32.93	2295.70	0.00	6.27	6.27	0.00	6.27	2344.31	9.41
3/5/2016	0.00	964.38	2410.17	0.00	116.04	7.84	0.00	0.00	3500.00	3.14
3/6/2016	0.00	84.68	2577.96	0.00	100.36	9.41	0.00	3.14	2781.81	6.27
3/7/2016	0.00	155.24	1685.71	0.00	504.93	0.00	0.00	4.70	2350.58	9.41

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
3/8/2016	0.00	134.86	1946.01	0.00	335.57	0.00	0.00	3.14	2424.28	4.70
3/9/2016	0.00	12.54	277.55	0.00	225.81	3.14	0.00	1.57	519.04	4.70
3/10/2016	0.00	28.23	555.11	0.00	341.85	1.57	0.00	3.14	928.32	10.98
3/11/2016	0.00	34.50	504.93	0.00	230.51	12.54	0.00	3.14	784.05	3.14
3/12/2016	3.14	64.29	341.85	0.00	288.53	0.00	0.00	6.27	697.80	9.41
3/13/2016	3.14	47.04	493.95	0.00	743.28	0.00	0.00	7.84	1287.41	4.70
3/14/2016	1.57	54.88	487.68	0.00	401.43	0.00	0.00	3.14	948.70	4.70
3/15/2016	4.70	15.68	310.48	0.00	153.67	0.00	0.00	1.57	489.25	0.00
3/16/2016	1.57	32.93	660.17	0.00	127.02	0.00	0.00	3.14	821.68	7.84
3/17/2016	6.27	26.66	183.47	0.00	86.25	0.00	0.00	3.14	308.92	7.84
3/18/2016	4.70	43.91	335.57	0.00	90.95	0.00	0.00	6.27	482.97	6.27
3/19/2016	0.00	10.98	54.88	0.00	31.36	10.98	0.00	9.41	150.54	4.70
3/20/2016	0.00	17.25	75.27	0.00	32.93	6.27	0.00	3.14	170.92	7.84
3/21/2016	0.00	10.98	169.35	0.00	10.98	4.70	0.00	9.41	249.33	18.82
3/22/2016	0.00	9.41	144.27	0.00	6.27	1.57	0.00	6.27	192.88	9.41
3/23/2016	0.00	18.82	148.97	0.00	83.11	9.41	0.00	4.70	269.71	10.98
3/24/2016	0.00	15.68	131.72	0.00	97.22	6.27	0.00	3.14	258.74	12.54
3/25/2016	0.00	17.25	56.45	0.00	12.54	3.14	0.00	1.57	89.38	1.57
3/26/2016	0.00	3.14	12.54	0.00	17.25	1.57	0.00	6.27	34.50	6.27
3/27/2016	0.00	4.70	0.00	0.00	12.54	1.57	0.00	4.70	25.09	4.70
3/28/2016	0.00	6.27	0.00	0.00	17.25	6.27	0.00	3.14	42.34	10.98
3/29/2016	0.00	14.11	28.23	0.00	6.27	9.41	0.00	37.63	65.86	15.68
3/30/2016	0.00	12.54	23.52	0.00	6.27	6.27	0.00	17.25	72.13	26.66
3/31/2016	0.00	6.27	9.41	0.00	9.41	0.00	0.00	3.14	25.09	1.57
4/1/2016	0.00	9.41	17.25	0.00	18.82	6.27	0.00	3.14	61.16	6.27
4/2/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	6.27

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/3/2016	0.00	1.57	0.00	0.00	0.00	0.00	0.00	1.57	3.14	6.27
4/4/2016	0.00	9.41	3.14	3.14	3.14	0.00	0.00	0.00	20.39	6.27
4/5/2016	0.00	3.14	1.57	7.84	1.57	0.00	0.00	6.27	18.82	17.25
4/6/2016	0.00	9.41	9.41	6.27	1.57	0.00	0.00	0.00	28.23	10.98

Missing data = nd (not determined)

Table 9: Pollen Concentrations (Grains/m^3) for Site B (Daily Counts from April 2015-2016).

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/7/2015	0.00	10.98	87.81	591.17	152.11	1.57	0.00	37.63	900.09	98.79
4/8/2015	0.00	6.27	65.86	192.88	15.68	0.00	0.00	18.82	305.78	69.00
4/9/2015	0.00	9.41	14.11	9.41	3.14	0.00	0.00	14.11	64.29	31.36
4/10/2015	0.00	4.70	40.77	111.34	70.56	0.00	0.00	21.95	257.17	103.49
4/11/2015	0.00	0.00	21.95	14.11	18.82	0.00	0.00	1.57	67.43	54.88
4/12/2015	0.00	3.14	18.82	9.41	6.27	0.00	0.00	3.14	51.75	23.52
4/13/2015	6.27	3.14	134.86	40.77	25.09	0.00	0.00	7.84	217.97	43.91
4/14/2015	10.98	7.84	148.97	53.32	47.04	0.00	0.00	17.25	280.69	59.59
4/15/2015	4.70	1.57	69.00	17.25	7.84	0.00	0.00	14.11	105.06	48.61
4/16/2015	3.14	4.70	48.61	3.14	3.14	0.00	0.00	0.00	70.56	9.41
4/17/2015	6.27	0.00	26.66	1.57	3.14	0.00	0.00	14.11	47.04	28.23
4/18/2015	4.70	0.00	40.77	10.98	7.84	0.00	0.00	0.00	67.43	29.79
4/19/2015	3.14	3.14	23.52	4.70	3.14	0.00	0.00	6.27	43.91	31.36
4/20/2015	6.27	0.00	9.41	3.14	1.57	0.00	0.00	15.68	25.09	31.36
4/21/2015	9.41	1.57	6.27	7.84	3.14	0.00	0.00	6.27	32.93	23.52
4/22/2015	9.41	3.14	3.14	3.14	1.57	0.00	0.00	10.98	23.52	18.82
4/23/2015	7.84	0.00	9.41	9.41	1.57	0.00	0.00	6.27	32.93	23.52
4/24/2015	14.11	1.57	6.27	12.54	7.84	0.00	0.00	10.98	47.04	9.41
4/25/2015	7.84	0.00	9.41	6.27	1.57	0.00	0.00	6.27	29.79	20.39
4/26/2015	3.14	0.00	3.14	0.00	1.57	0.00	0.00	3.14	7.84	14.11
4/27/2015	6.27	0.00	9.41	6.27	6.27	3.14	0.00	3.14	32.93	20.39
4/28/2015	15.68	3.14	7.84	14.11	9.41	3.14	0.00	12.54	56.45	29.79
4/29/2015	4.70	0.00	9.41	7.84	7.84	4.70	0.00	12.54	48.61	7.84
4/30/2015	6.27	0.00	6.27	4.70	4.70	0.00	0.00	9.41	29.79	10.98
5/1/2015	4.70	1.57	9.41	6.27	3.14	1.57	0.00	9.41	36.07	10.98
5/2/2015	1.57	0.00	3.14	0.00	1.57	0.00	0.00	6.27	10.98	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
5/3/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	1.57	4.70	10.98
5/4/2015	0.00	0.00	1.57	0.00	3.14	0.00	0.00	0.00	4.70	9.41
5/5/2015	1.57	0.00	0.00	1.57	1.57	0.00	0.00	1.57	4.70	6.27
5/6/2015	6.27	1.57	3.14	0.00	7.84	0.00	0.00	3.14	21.95	14.11
5/7/2015	1.57	0.00	3.14	0.00	3.14	0.00	0.00	7.84	10.98	6.27
5/8/2015	1.57	0.00	3.14	3.14	1.57	0.00	0.00	1.57	12.54	4.70
5/9/2015	1.57	0.00	1.57	1.57	0.00	0.00	0.00	1.57	4.70	1.57
5/10/2015	3.14	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70	1.57
5/11/2015	4.70	0.00	0.00	1.57	1.57	0.00	0.00	0.00	7.84	3.14
5/12/2015	3.14	0.00	0.00	1.57	6.27	0.00	0.00	3.14	10.98	1.57
5/13/2015	4.70	0.00	1.57	0.00	4.70	0.00	0.00	3.14	18.82	7.84
5/14/2015	6.27	0.00	1.57	0.00	3.14	0.00	0.00	4.70	10.98	14.11
5/15/2015	0.00	0.00	3.14	1.57	1.57	0.00	0.00	3.14	6.27	7.84
5/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	4.70
5/17/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	0.00
5/18/2015	3.14	0.00	3.14	0.00	4.70	0.00	0.00	1.57	10.98	0.00
5/19/2015	7.84	0.00	0.00	0.00	1.57	0.00	0.00	1.57	9.41	1.57
5/20/2015	3.14	0.00	0.00	4.70	1.57	0.00	0.00	3.14	10.98	6.27
5/21/2015	0.00	0.00	0.00	3.14	3.14	0.00	0.00	1.57	9.41	1.57
5/22/2015	1.57	0.00	0.00	1.57	1.57	0.00	0.00	0.00	4.70	3.14
5/23/2015	6.27	0.00	0.00	0.00	1.57	0.00	0.00	0.00	7.84	1.57
5/24/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	3.14	4.70	4.70
5/25/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	3.14
5/26/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	3.14	6.27	4.70
5/27/2015	6.27	0.00	0.00	0.00	0.00	0.00	0.00	7.84	6.27	7.84
5/28/2015	6.27	0.00	0.00	1.57	6.27	0.00	0.00	4.70	14.11	6.27

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
5/29/2015	14.11	0.00	3.14	12.54	0.00	0.00	0.00	9.41	31.36	6.27
5/30/2015	4.70	0.00	1.57	4.70	4.70	0.00	0.00	4.70	21.95	6.27
5/31/2015	1.57	0.00	0.00	1.57	4.70	0.00	0.00	6.27	7.84	3.14
6/1/2015	7.84	0.00	0.00	0.00	12.54	0.00	0.00	3.14	20.39	4.70
6/2/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	4.70	17.25	9.41
6/3/2015	10.98	1.57	0.00	1.57	3.14	0.00	0.00	7.84	25.09	9.41
6/4/2015	3.14	0.00	0.00	0.00	4.70	0.00	0.00	4.70	18.82	10.98
6/5/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	4.70	10.98	9.41
6/6/2015	7.84	0.00	1.57	0.00	1.57	0.00	0.00	1.57	17.25	9.41
6/7/2015	3.14	0.00	0.00	1.57	10.98	0.00	0.00	1.57	18.82	6.27
6/8/2015	4.70	0.00	0.00	3.14	6.27	0.00	0.00	7.84	17.25	7.84
6/9/2015	0.00	0.00	0.00	0.00	7.84	0.00	0.00	1.57	7.84	6.27
6/10/2015	4.70	0.00	0.00	1.57	3.14	0.00	0.00	1.57	10.98	4.70
6/11/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	4.70	17.25	0.00
6/12/2015	1.57	0.00	0.00	0.00	20.39	0.00	0.00	4.70	28.23	3.14
6/13/2015	1.57	0.00	0.00	3.14	64.29	0.00	0.00	12.54	79.97	4.70
6/14/2015	1.57	0.00	0.00	0.00	32.93	0.00	0.00	9.41	48.61	14.11
6/15/2015	6.27	0.00	0.00	0.00	4.70	0.00	0.00	0.00	18.82	7.84
6/16/2015	9.41	0.00	0.00	0.00	6.27	0.00	0.00	1.57	15.68	4.70
6/17/2015	14.11	0.00	0.00	0.00	9.41	0.00	0.00	3.14	26.66	12.54
6/18/2015	10.98	0.00	0.00	0.00	7.84	0.00	0.00	1.57	23.52	15.68
6/19/2015	1.57	0.00	0.00	0.00	7.84	0.00	0.00	3.14	12.54	3.14
6/20/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	0.00	9.41	3.14
6/21/2015	1.57	0.00	1.57	0.00	3.14	0.00	0.00	0.00	9.41	9.41
6/22/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	1.57	4.70	9.41
6/23/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	0.00	6.27	6.27

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
6/24/2015	3.14	0.00	0.00	0.00	4.70	0.00	0.00	3.14	7.84	6.27
6/25/2015	1.57	0.00	1.57	0.00	4.70	0.00	0.00	0.00	10.98	0.00
6/26/2015	4.70	0.00	0.00	0.00	3.14	0.00	0.00	1.57	9.41	1.57
6/27/2015	4.70	0.00	0.00	0.00	10.98	0.00	0.00	0.00	15.68	3.14
6/28/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	0.00	7.84	3.14
6/29/2015	0.00	0.00	1.57	0.00	9.41	0.00	0.00	3.14	15.68	20.39
6/30/2015	3.14	0.00	0.00	0.00	4.70	0.00	0.00	1.57	7.84	6.27
7/1/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	0.00	4.70	1.57
7/2/2015	1.57	0.00	0.00	1.57	6.27	0.00	0.00	3.14	9.41	6.27
7/3/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	7.84	3.14
7/4/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	4.70	6.27	3.14
7/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	1.57	1.57
7/6/2015	0.00	0.00	0.00	0.00	10.98	0.00	0.00	0.00	14.11	1.57
7/7/2015	0.00	0.00	0.00	0.00	7.84	0.00	0.00	1.57	9.41	7.84
7/8/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	3.14	3.14
7/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	10.98
7/10/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	0.00
7/11/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	4.70	3.14	0.00
7/12/2015	7.84	0.00	3.14	0.00	1.57	0.00	0.00	10.98	15.68	6.27
7/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41	0.00	4.70
7/14/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	3.14
7/15/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
7/16/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
7/17/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
7/18/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
7/19/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
7/20/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
7/21/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
7/22/2015	0.00	0.00	1.57	0.00	1.57	0.00	0.00	1.57	4.70	3.14
7/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	1.57
7/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	6.27
7/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
7/26/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	4.70	7.84
7/27/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	6.27
7/28/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	6.27
7/29/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	1.57	4.70	1.57
7/30/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	4.70	3.14
7/31/2015	4.70	0.00	0.00	0.00	0.00	0.00	0.00	7.84	4.70	3.14
8/1/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	1.57
8/2/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	4.70
8/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
8/4/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	1.57	6.27	6.27
8/5/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	3.14	4.70
8/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	6.27
8/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	1.57
8/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	1.57
8/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
8/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	3.14	7.84
8/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	3.14
8/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	1.57
8/13/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	3.14
8/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
8/15/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	3.14	9.41
8/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
8/17/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	6.27
8/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
8/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	9.41	3.14	28.23
8/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84	0.00	25.09
8/21/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	14.11
8/22/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	15.68
8/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
8/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84	0.00	6.27
8/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	10.98
8/26/2015	3.14	0.00	0.00	0.00	3.14	0.00	0.00	14.11	6.27	25.09
8/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41	0.00	7.84
8/28/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	6.27	1.57	9.41
8/29/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	9.41	4.70	6.27
8/30/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	7.84	1.57	6.27
8/31/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	10.98
9/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	9.41
9/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.45	0.00	6.27
9/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.25	0.00	17.25
9/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.82	0.00	10.98
9/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41	0.00	20.39
9/6/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	23.52	3.14	9.41
9/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.98	0.00	10.98
9/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
9/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	9.41

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
9/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.25	0.00	14.11
9/11/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	9.41	1.57	12.54
9/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	29.79
9/13/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	21.95
9/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	9.41
9/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	10.98
9/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
9/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
9/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84
9/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	1.57	3.14
9/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	9.41
9/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	7.84
9/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	3.14
9/23/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	20.39	1.57	17.25
9/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	4.70	3.14	6.27
9/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	15.68	1.57	14.11
9/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.39	0.00	17.25
9/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.11	0.00	14.11
9/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	1.57	3.14
9/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84	0.00	4.70
9/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.09	0.00	3.14
10/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.23	0.00	4.70
10/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	14.11
10/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.66
10/4/2015	4.70	0.00	0.00	0.00	0.00	0.00	0.00	7.84	4.70	10.98
10/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
10/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
10/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	6.27	1.57	12.54
10/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	9.41
10/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	7.84	6.27	7.84	9.41
10/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	62.72	10.98	62.72	9.41
10/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	32.93	4.70	32.93	10.98
10/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	14.11	0.00	14.11	7.84
10/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	4.70	3.14	4.70	9.41
10/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	9.41	6.27	9.41	7.84
10/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	4.70	3.14	4.70
10/17/201	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00
10/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
10/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	1.57	4.70	3.14	0.00
10/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	3.14	3.14	4.70
10/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	7.84	4.70	4.70
10/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	6.27	1.57	1.57
10/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	6.27	1.57	1.57
10/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
10/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	4.70	1.57	0.00
10/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
10/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	3.14	0.00
10/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
10/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	7.84
10/31/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	3.14

Date	***Acer*** **(Maple)**	***Fraxinus*** **(Ash)**	***Morus*** **(Mulberry)**	***Olea*** **(Olive)**	***Pinaceae*** **(Pine)**	***Platanus*** **(Sycamore)**	***Ulmus*** **(Elm)**	**Total Grass**	**Total Tree**	**Total Weed**
11/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	3.14
11/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14
11/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
11/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
11/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
11/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/11/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
11/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/14/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
11/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	9.41
11/17/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	3.14	1.57	4.70
11/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
11/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	0.00
11/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
11/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
11/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
11/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
11/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
11/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
11/29/2015	0.00	0.00	0.00	0.00	3.14	0.00	1.57	3.14	4.70	0.00
11/30/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
12/1/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
12/2/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	0.00
12/3/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
12/4/2015	0.00	0.00	0.00	0.00	3.14	0.00	1.57	3.14	4.70	0.00
12/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/6/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
12/7/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	1.57
12/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
12/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
12/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
12/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
12/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
12/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
12/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00
12/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
12/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	0.00
12/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
1/1/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
1/2/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/3/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
1/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	3.14
1/5/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00
1/6/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
1/7/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/8/2016	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	0.00
1/9/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/10/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/11/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/12/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/13/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/14/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/15/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
1/17/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
1/18/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/19/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/20/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/21/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/22/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/23/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/24/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/25/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/26/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
1/27/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/28/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	0.00
1/29/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/30/2016	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00
1/31/2016	0.00	6.27	0.00	0.00	0.00	0.00	0.00	0.00	12.54	0.00
2/1/2016	0.00	7.84	0.00	0.00	1.57	0.00	0.00	0.00	9.41	0.00
2/2/2016	0.00	4.70	0.00	0.00	1.57	0.00	0.00	0.00	6.27	0.00
2/3/2016	0.00	4.70	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00
2/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
2/5/2016	0.00	10.98	0.00	0.00	0.00	0.00	0.00	1.57	12.54	0.00
2/6/2016	0.00	17.25	0.00	0.00	0.00	0.00	1.57	1.57	20.39	0.00
2/7/2016	0.00	39.20	0.00	0.00	0.00	0.00	3.14	3.14	45.47	0.00
2/8/2016	0.00	69.00	0.00	0.00	0.00	0.00	3.14	0.00	90.95	0.00
2/9/2016	0.00	20.39	0.00	0.00	0.00	0.00	17.25	3.14	40.77	0.00
2/10/2016	0.00	4.70	0.00	0.00	0.00	0.00	12.54	0.00	17.25	0.00
2/11/2016	0.00	4.70	0.00	0.00	0.00	0.00	40.77	0.00	48.61	1.57
2/12/2016	0.00	3.14	0.00	0.00	0.00	0.00	14.11	1.57	17.25	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
2/13/2016	0.00	1.57	0.00	0.00	1.57	0.00	47.04	0.00	53.32	0.00
2/14/2016	0.00	12.54	0.00	0.00	0.00	0.00	131.72	3.14	172.49	0.00
2/15/2016	0.00	9.41	0.00	0.00	0.00	0.00	37.63	3.14	56.45	0.00
2/16/2016	0.00	26.66	0.00	0.00	0.00	0.00	6.27	1.57	36.07	0.00
2/17/2016	0.00	48.61	0.00	0.00	0.00	0.00	1.57	0.00	54.88	0.00
2/18/2016	0.00	1728.05	0.00	0.00	4.70	0.00	36.07	6.27	1803.32	3.14
2/19/2016	0.00	343.41	0.00	0.00	0.00	0.00	4.70	3.14	354.39	0.00
2/20/2016	0.00	481.41	0.00	0.00	0.00	0.00	3.14	3.14	492.38	0.00
2/21/2016	0.00	318.32	0.00	0.00	0.00	0.00	1.57	0.00	324.60	0.00
2/22/2016	0.00	616.26	12.54	0.00	0.00	0.00	1.57	3.14	636.65	0.00
2/23/2016	0.00	103.49	188.17	0.00	0.00	0.00	1.57	1.57	294.80	0.00
2/24/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2/25/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2/26/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2/27/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2/28/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2/29/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/1/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/2/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/3/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/4/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/5/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/6/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/7/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/8/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/9/2016	0.00	25.09	653.90	0.00	183.47	3.14	0.00	9.41	878.14	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
3/10/2016	0.00	25.09	1712.37	0.00	83.11	6.27	0.00	4.70	1828.40	4.70
3/11/2016	0.00	17.25	1500.67	1.57	153.67	14.11	0.00	4.70	1695.12	20.39
3/12/2016	0.00	18.82	1946.01	0.00	338.71	10.98	0.00	6.27	2319.22	7.84
3/13/2016	0.00	7.84	319.89	0.00	32.93	3.14	0.00	10.98	366.94	6.27
3/14/2016	0.00	3.14	291.67	0.00	40.77	1.57	0.00	3.14	341.85	6.27
3/15/2016	0.00	6.27	738.58	0.00	50.18	0.00	0.00	1.57	807.57	9.41
3/16/2016	0.00	6.27	352.82	0.00	17.25	3.14	0.00	9.41	398.30	10.98
3/17/2016	0.00	1.57	566.08	0.00	18.82	3.14	0.00	10.98	597.45	3.14
3/18/2016	0.00	10.98	989.47	0.00	14.11	4.70	0.00	12.54	1047.49	7.84
3/19/2016	0.00	7.84	675.85	0.00	7.84	0.00	0.00	14.11	757.39	12.54
3/20/2016	0.00	3.14	657.03	0.00	9.41	1.57	0.00	7.84	729.17	28.23
3/21/2016	0.00	15.68	606.85	0.00	20.39	15.68	0.00	9.41	702.51	17.25
3/22/2016	0.00	1.57	426.52	0.00	39.20	3.14	0.00	10.98	479.84	9.41
3/23/2016	0.00	4.70	87.81	0.00	15.68	0.00	0.00	1.57	116.04	3.14
3/24/2016	0.00	0.00	23.52	0.00	3.14	0.00	0.00	3.14	32.93	7.84
3/25/2016	0.00	0.00	36.07	0.00	14.11	4.70	0.00	6.27	62.72	10.98
3/26/2016	0.00	0.00	40.77	0.00	29.79	0.00	3.14	10.98	100.36	25.09
3/27/2016	0.00	0.00	21.95	3.14	3.14	0.00	0.00	3.14	45.47	14.11
3/28/2016	0.00	1.57	15.68	4.70	14.11	0.00	0.00	0.00	40.77	21.95
3/29/2016	0.00	3.14	14.11	3.14	9.41	0.00	0.00	1.57	40.77	7.84
3/30/2016	0.00	0.00	9.41	3.14	4.70	3.14	0.00	1.57	25.09	3.14
3/31/2016	0.00	1.57	18.82	1.57	1.57	0.00	0.00	0.00	34.50	4.70
4/1/2016	0.00	0.00	6.27	6.27	1.57	0.00	0.00	1.57	15.68	1.57
4/2/2016	0.00	0.00	12.54	40.77	1.57	0.00	0.00	7.84	62.72	15.68
4/3/2016	0.00	0.00	12.54	51.75	0.00	0.00	0.00	4.70	76.84	21.95
4/4/2016	0.00	0.00	9.41	69.00	1.57	0.00	0.00	6.27	87.81	51.75

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/5/2016	0.00	0.00	6.27	254.03	1.57	0.00	0.00	4.70	279.12	28.23
4/6/2016	0.00	0.00	7.84	64.29	0.00	0.00	0.00	4.70	106.63	28.23

Missing Data= nd (not determined)

Table 10: Pollen Concentrations (Grains/m^3) for Site C (Daily Counts from April 2015-2016).

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/7/2015	0.00	0.00	0.00	7.84	1.57	0.00	0.00	3.14	31.36	21.95
4/8/2015	0.00	1.57	9.41	6.27	1.57	0.00	0.00	10.98	29.79	36.07
4/9/2015	0.00	0.00	0.00	9.41	1.57	0.00	0.00	3.14	37.63	28.23
4/10/2015	0.00	0.00	1.57	1.57	6.27	0.00	0.00	0.00	15.68	15.68
4/11/2015	0.00	0.00	4.70	1.57	3.14	0.00	0.00	1.57	14.11	26.66
4/12/2015	0.00	0.00	29.79	18.82	45.47	0.00	0.00	4.70	106.63	15.68
4/13/2015	6.27	3.14	25.09	14.11	7.84	0.00	0.00	6.27	67.43	21.95
4/14/2015	0.00	1.57	15.68	18.82	18.82	0.00	0.00	9.41	65.86	51.75
4/15/2015	3.14	1.57	25.09	12.54	21.95	0.00	0.00	9.41	67.43	28.23
4/16/2015	3.14	0.00	15.68	6.27	9.41	0.00	0.00	0.00	39.20	3.14
4/17/2015	4.70	0.00	7.84	0.00	1.57	0.00	0.00	1.57	17.25	3.14
4/18/2015	3.14	0.00	10.98	6.27	9.41	0.00	0.00	3.14	31.36	7.84
4/19/2015	1.57	1.57	9.41	6.27	9.41	0.00	0.00	3.14	32.93	14.11
4/20/2015	17.25	3.14	10.98	3.14	6.27	0.00	0.00	7.84	48.61	34.50
4/21/2015	12.54	4.70	4.70	15.68	3.14	0.00	0.00	14.11	45.47	20.39
4/22/2015	4.70	0.00	9.41	6.27	6.27	0.00	0.00	9.41	28.23	29.79
4/23/2015	7.84	0.00	10.98	3.14	1.57	0.00	0.00	12.54	29.79	21.95
4/24/2015	3.14	0.00	4.70	1.57	6.27	0.00	0.00	1.57	17.25	14.11
4/25/2015	20.39	0.00	3.14	4.70	4.70	0.00	0.00	1.57	34.50	31.36
4/26/2015	3.14	0.00	3.14	0.00	1.57	0.00	0.00	3.14	7.84	9.41
4/27/2015	6.27	0.00	0.00	3.14	6.27	0.00	0.00	4.70	17.25	15.68
4/28/2015	6.27	0.00	6.27	3.14	3.14	0.00	0.00	3.14	21.95	18.82
4/29/2015	3.14	0.00	6.27	0.00	1.57	0.00	0.00	9.41	15.68	9.41
4/30/2015	6.27	0.00	6.27	1.57	3.14	0.00	0.00	3.14	21.95	9.41
5/1/2015	1.57	0.00	3.14	0.00	1.57	0.00	0.00	4.70	10.98	7.84
5/2/2015	6.27	3.14	0.00	3.14	3.14	0.00	0.00	3.14	20.39	4.70
5/3/2015	6.27	0.00	1.57	0.00	1.57	0.00	0.00	3.14	14.11	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
5/4/2015	7.84	0.00	0.00	1.57	4.70	0.00	0.00	4.70	18.82	7.84
5/5/2015	4.70	0.00	0.00	1.57	1.57	0.00	0.00	3.14	12.54	6.27
5/6/2015	3.14	0.00	1.57	1.57	1.57	0.00	0.00	3.14	12.54	6.27
5/7/2015	3.14	1.57	1.57	1.57	3.14	0.00	0.00	1.57	10.98	7.84
5/8/2015	7.84	0.00	1.57	1.57	4.70	0.00	0.00	1.57	17.25	1.57
5/9/2015	0.00	0.00	0.00	3.14	1.57	0.00	0.00	0.00	4.70	1.57
5/10/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	3.14	6.27	0.00
5/11/2015	3.14	3.14	0.00	0.00	1.57	0.00	0.00	1.57	7.84	0.00
5/12/2015	6.27	0.00	0.00	0.00	6.27	0.00	0.00	7.84	15.68	1.57
5/13/2015	3.14	1.57	1.57	1.57	3.14	0.00	0.00	3.14	10.98	9.41
5/14/2015	3.14	1.57	0.00	0.00	3.14	0.00	0.00	1.57	7.84	4.70
5/15/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57
5/16/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	1.57	4.70	1.57
5/17/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70
5/18/2015	4.70	0.00	1.57	0.00	3.14	0.00	0.00	1.57	9.41	3.14
5/19/2015	1.57	0.00	0.00	1.57	3.14	0.00	0.00	0.00	6.27	1.57
5/20/2015	4.70	0.00	0.00	0.00	4.70	0.00	0.00	3.14	9.41	3.14
5/21/2015	6.27	0.00	0.00	1.57	6.27	0.00	0.00	0.00	14.11	6.27
5/22/2015	4.70	0.00	0.00	1.57	0.00	0.00	0.00	0.00	6.27	0.00
5/23/2015	6.27	1.57	0.00	0.00	0.00	0.00	0.00	3.14	9.41	0.00
5/24/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	0.00	4.70	1.57
5/25/2015	4.70	0.00	0.00	0.00	0.00	0.00	0.00	3.14	4.70	1.57
5/26/2015	4.70	0.00	0.00	0.00	0.00	0.00	0.00	1.57	4.70	0.00
5/27/2015	4.70	0.00	0.00	0.00	3.14	0.00	0.00	3.14	7.84	7.84
5/28/2015	3.14	0.00	1.57	0.00	3.14	0.00	0.00	0.00	7.84	4.70
5/29/2015	4.70	0.00	0.00	0.00	1.57	0.00	0.00	1.57	6.27	7.84
5/30/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	3.14	12.54	6.27
5/31/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	4.70	6.27	7.84

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
6/1/2015	1.57	0.00	0.00	1.57	0.00	0.00	0.00	4.70	6.27	7.84
6/2/2015	6.27	0.00	0.00	0.00	4.70	0.00	0.00	0.00	18.82	3.14
6/3/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	0.00	10.98	4.70
6/4/2015	0.00	1.57	0.00	0.00	1.57	0.00	0.00	1.57	12.54	1.57
6/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57
6/6/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	6.27	7.84	1.57
6/7/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	1.57	9.41	1.57
6/8/2015	1.57	0.00	0.00	0.00	23.52	0.00	0.00	0.00	25.09	1.57
6/9/2015	0.00	0.00	0.00	0.00	21.95	0.00	0.00	1.57	25.09	0.00
6/10/2015	1.57	0.00	0.00	0.00	18.82	0.00	0.00	1.57	20.39	1.57
6/11/2015	0.00	0.00	0.00	0.00	9.41	0.00	0.00	0.00	9.41	1.57
6/12/2015	3.14	0.00	0.00	0.00	12.54	0.00	0.00	3.14	20.39	6.27
6/13/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	1.57	7.84	4.70
6/14/2015	3.14	0.00	0.00	0.00	21.95	0.00	0.00	1.57	29.79	3.14
6/15/2015	3.14	0.00	0.00	0.00	9.41	0.00	0.00	3.14	14.11	1.57
6/16/2015	3.14	0.00	1.57	0.00	6.27	0.00	0.00	1.57	15.68	4.70
6/17/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	3.14	9.41	3.14
6/18/2015	3.14	0.00	0.00	0.00	4.70	0.00	0.00	0.00	9.41	6.27
6/19/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	3.14	9.41	0.00
6/20/2015	4.70	0.00	1.57	0.00	7.84	0.00	0.00	1.57	15.68	6.27
6/21/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	3.14	7.84	1.57
6/22/2015	0.00	0.00	1.57	0.00	4.70	0.00	0.00	1.57	9.41	10.98
6/23/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	0.00	9.41	10.98
6/24/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	1.57	7.84	6.27
6/25/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	0.00	12.54	6.27
6/26/2015	1.57	0.00	0.00	0.00	10.98	0.00	0.00	6.27	15.68	4.70
6/27/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	0.00	12.54	7.84
6/28/2015	3.14	0.00	0.00	0.00	9.41	0.00	0.00	3.14	15.68	3.14

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
6/29/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	0.00	12.54	4.70
6/30/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	0.00	10.98	3.14
7/1/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	6.27	1.57
7/2/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	6.27	7.84
7/3/2015	0.00	0.00	0.00	0.00	12.54	0.00	0.00	1.57	18.82	6.27
7/4/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	9.41	1.57
7/5/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	0.00	10.98	9.41
7/6/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	1.57	12.54	6.27
7/7/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	3.14	10.98	6.27
7/8/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	0.00	6.27	7.84
7/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	4.70
7/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
7/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
7/12/2015	0.00	0.00	3.14	0.00	0.00	0.00	0.00	0.00	4.70	3.14
7/13/2015	0.00	0.00	3.14	0.00	1.57	0.00	0.00	0.00	4.70	1.57
7/14/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	4.70	1.57
7/15/2015	0.00	0.00	1.57	0.00	1.57	0.00	0.00	0.00	3.14	3.14
7/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70
7/17/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	0.00	6.27	1.57
7/18/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	3.14	7.84
7/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
7/20/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	1.57
7/21/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
7/22/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	4.70	3.14
7/23/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	6.27	4.70
7/24/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	10.98	6.27
7/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
7/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
7/27/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	12.54
7/28/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	4.70	1.57
7/29/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	6.27
7/30/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	1.57
7/31/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	3.14
8/1/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
8/2/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	1.57
8/3/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	4.70
8/4/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	7.84	10.98
8/5/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	4.70	1.57
8/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	1.57	6.27
8/7/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	3.14	0.00
8/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	1.57
8/9/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	3.14	4.70
8/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	18.82
8/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
8/12/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	1.57	1.57	1.57
8/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	9.41
8/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	12.54
8/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	10.98
8/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.23
8/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	10.98
8/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	7.84
8/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	18.82
8/20/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	25.09
8/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	17.25
8/22/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	20.39
8/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.52

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
8/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	12.54
8/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	17.25
8/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
8/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	15.68
8/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
8/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
8/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84
8/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	7.84
9/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	1.57
9/3/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	6.27
9/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
9/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14
9/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	7.84
9/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84
9/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
9/9/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	4.70	4.70	4.70
9/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
9/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	15.68
9/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	15.68
9/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
9/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
9/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41
9/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
9/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	3.14
9/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
9/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	10.98
9/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
9/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	9.41
9/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.98
9/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	15.68
9/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
9/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	14.11
9/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84	0.00	17.25
9/27/2015	1.57	0.00	1.57	0.00	1.57	0.00	0.00	4.70	4.70	9.41
9/28/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	4.70
9/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	10.98
9/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	1.57
10/1/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	4.70	1.57	7.84
10/2/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	12.54
10/3/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	4.70
10/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
10/5/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	7.84
10/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
10/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
10/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	3.14
10/9/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	14.11
10/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	12.54
10/11/2015	0.00	0.00	1.57	0.00	0.00	0.00	65.86	0.00	67.43	6.27
10/12/2015	0.00	0.00	0.00	0.00	1.57	0.00	90.95	1.57	92.52	7.84
10/13/2015	0.00	0.00	0.00	0.00	1.57	0.00	15.68	0.00	17.25	4.70
10/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	23.52	0.00	23.52	7.84
10/15/2015	0.00	0.00	1.57	0.00	0.00	0.00	53.32	1.57	54.88	7.84
10/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	65.86	0.00	65.86	4.70
10/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	37.63	1.57	37.63	1.57
10/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	17.25	3.14	17.25	3.14

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
10/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	12.54	1.57	12.54	4.70
10/20/2015	0.00	0.00	1.57	0.00	0.00	0.00	6.27	1.57	7.84	4.70
10/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	3.14
10/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
10/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
10/24/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	0.00	1.57	4.70
10/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	4.70
10/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
10/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	4.70
10/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	4.70	3.14	4.70	4.70
10/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	3.14
10/30/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	1.57	1.57	4.70
10/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	3.14	14.11
11/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	4.70
11/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	3.14
11/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
11/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
11/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	1.57
11/6/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	1.57
11/7/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	3.14
11/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	6.27
11/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
11/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
11/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	1.57
11/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
11/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
11/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
11/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
11/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
11/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
11/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/2/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
12/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
12/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/17/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	0.00
12/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
12/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/21/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
12/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/23/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
12/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/26/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
12/27/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	0.00
12/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
12/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00
12/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00
1/1/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/2/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/3/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	0.00
1/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/5/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/6/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/7/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/8/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/9/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/10/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
1/11/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/12/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/13/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
1/14/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/15/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	3.14
1/17/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/18/2016	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	0.00
1/19/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
1/20/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/21/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/22/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/23/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/24/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/25/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/26/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/27/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/28/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/29/2016	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	4.70	0.00
1/30/2016	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00	6.27	0.00
1/31/2016	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	7.84	0.00
2/1/2016	0.00	0.00	0.00	0.00	1.57	6.27	0.00	0.00	14.11	1.57
2/2/2016	0.00	0.00	0.00	0.00	1.57	4.70	0.00	0.00	6.27	0.00
2/3/2016	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	0.00
2/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/5/2016	0.00	1.57	0.00	0.00	0.00	1.57	0.00	0.00	3.14	0.00
2/6/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
2/7/2016	0.00	3.14	0.00	0.00	0.00	7.84	0.00	0.00	12.54	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
2/8/2016	0.00	3.14	0.00	0.00	0.00	4.70	0.00	0.00	9.41	0.00
2/9/2016	0.00	3.14	0.00	0.00	0.00	4.70	0.00	0.00	9.41	0.00
2/10/2016	0.00	9.41	0.00	0.00	0.00	0.00	0.00	0.00	10.98	0.00
2/11/2016	0.00	15.68	0.00	0.00	0.00	0.00	0.00	0.00	18.82	0.00
2/12/2016	0.00	31.36	0.00	0.00	0.00	0.00	0.00	0.00	31.36	0.00
2/13/2016	0.00	20.39	0.00	0.00	0.00	0.00	0.00	6.27	23.52	7.84
2/14/2016	0.00	75.27	3.14	0.00	0.00	1.57	0.00	0.00	98.79	3.14
2/15/2016	0.00	61.16	0.00	0.00	0.00	3.14	0.00	0.00	64.29	4.70
2/16/2016	0.00	51.75	0.00	0.00	0.00	0.00	0.00	0.00	54.88	3.14
2/17/2016	0.00	28.23	0.00	0.00	0.00	0.00	0.00	0.00	32.93	0.00
2/18/2016	0.00	37.63	0.00	0.00	0.00	0.00	0.00	0.00	40.77	1.57
2/19/2016	0.00	42.34	0.00	0.00	1.57	0.00	0.00	0.00	47.04	7.84
2/20/2016	0.00	274.42	0.00	0.00	0.00	0.00	0.00	3.14	277.55	0.00
2/21/2016	0.00	169.35	0.00	0.00	0.00	0.00	0.00	1.57	172.49	1.57
2/22/2016	0.00	544.13	18.82	0.00	0.00	0.00	0.00	7.84	573.92	0.00
2/23/2016	0.00	401.43	14.11	0.00	1.57	0.00	0.00	3.14	423.39	1.57
2/24/2016	0.00	34.50	14.11	0.00	0.00	0.00	0.00	3.14	48.61	0.00
2/25/2016	0.00	84.68	21.95	0.00	0.00	0.00	0.00	3.14	109.77	0.00
2/26/2016	0.00	50.18	130.15	0.00	0.00	0.00	0.00	0.00	188.17	0.00
2/27/2016	0.00	43.91	254.03	0.00	0.00	0.00	0.00	0.00	302.64	0.00
2/28/2016	0.00	54.88	1182.35	0.00	1.57	0.00	0.00	4.70	1245.07	17.25
2/29/2016	0.00	106.63	881.27	0.00	3.14	0.00	0.00	6.27	994.18	3.14
3/1/2016	0.00	31.36	2618.73	0.00	1.57	0.00	0.00	6.27	2656.36	3.14
3/2/2016	0.00	50.18	1764.11	0.00	3.14	0.00	0.00	3.14	1819.00	0.00
3/3/2016	0.00	40.77	2606.18	0.00	7.84	0.00	0.00	3.14	2665.77	4.70
3/4/2016	0.00	48.61	2229.84	0.00	6.27	0.00	0.00	6.27	2289.43	4.70
3/5/2016	0.00	136.42	2112.23	0.00	501.79	0.00	0.00	12.54	2756.72	14.11
3/6/2016	0.00	112.90	1909.95	0.00	194.44	0.00	0.00	6.27	2223.57	7.84

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
3/7/2016	0.00	26.66	1415.99	0.00	109.77	0.00	0.00	7.84	1552.42	7.84
3/8/2016	0.00	37.63	1276.43	0.00	101.93	0.00	0.00	3.14	1417.56	4.70
3/9/2016	10.98	18.82	1420.70	0.00	17.25	0.00	0.00	3.14	1467.74	7.84
3/10/2016	0.00	53.32	1199.60	0.00	54.88	0.00	0.00	6.27	1307.80	1.57
3/11/2016	0.00	43.91	1279.57	0.00	32.93	0.00	0.00	3.14	1356.41	3.14
3/12/2016	6.27	17.25	801.30	0.00	246.19	0.00	0.00	4.70	1075.72	4.70
3/13/2016	3.14	14.11	652.33	0.00	225.81	0.00	0.00	6.27	896.95	6.27
3/14/2016	3.14	17.25	316.76	0.00	50.18	0.00	0.00	1.57	388.89	37.63
3/15/2016	1.57	18.82	492.38	0.00	75.27	0.00	0.00	6.27	589.61	17.25
3/16/2016	12.54	4.70	291.67	0.00	18.82	3.14	0.00	6.27	334.01	6.27
3/17/2016	3.14	3.14	330.87	0.00	17.25	0.00	0.00	4.70	355.96	9.41
3/18/2016	12.54	6.27	440.64	0.00	25.09	12.54	0.00	1.57	501.79	15.68
3/19/2016	3.14	9.41	398.30	0.00	28.23	3.14	0.00	3.14	445.34	9.41
3/20/2016	0.00	7.84	344.98	0.00	9.41	6.27	0.00	10.98	395.16	14.11
3/21/2016	0.00	9.41	377.91	0.00	3.14	0.00	0.00	3.14	409.27	7.84
3/22/2016	1.57	17.25	498.66	0.00	23.52	17.25	0.00	4.70	584.90	14.11
3/23/2016	0.00	3.14	131.72	0.00	29.79	7.84	0.00	6.27	178.76	3.14
3/24/2016	0.00	9.41	100.36	0.00	18.82	6.27	0.00	3.14	136.42	3.14
3/25/2016	0.00	7.84	53.32	0.00	12.54	6.27	0.00	1.57	92.52	14.11
3/26/2016	0.00	7.84	119.18	0.00	6.27	6.27	0.00	6.27	141.13	20.39
3/27/2016	0.00	15.68	84.68	0.00	6.27	1.57	0.00	3.14	111.34	21.95
3/28/2016	0.00	4.70	26.66	0.00	18.82	7.84	0.00	9.41	69.00	34.50
3/29/2016	0.00	12.54	43.91	0.00	15.68	12.54	0.00	6.27	94.09	32.93
3/30/2016	0.00	0.00	14.11	3.14	0.00	3.14	0.00	3.14	21.95	9.41
3/31/2016	0.00	6.27	21.95	1.57	3.14	0.00	0.00	3.14	34.50	14.11
4/1/2016	0.00	4.70	4.70	3.14	3.14	1.57	0.00	1.57	20.39	0.00
4/2/2016	0.00	6.27	6.27	7.84	6.27	3.14	0.00	1.57	32.93	3.14
4/3/2016	0.00	0.00	6.27	1.57	0.00	0.00	0.00	0.00	7.84	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/4/2016	0.00	0.00	7.84	23.52	3.14	0.00	0.00	3.14	40.77	21.95
4/5/2016	0.00	3.14	6.27	17.25	1.57	0.00	0.00	3.14	36.07	23.52
4/6/2016	0.00	0.00	0.00	112.90	1.57	1.57	0.00	6.27	137.99	28.23

Table 11: Pollen Concentrations (Grains/m^3) for Site D (Daily Counts from April 2015-2016).

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/7/2015	0.00	1.57	47.04	47.04	6.27	1.57	0.00	6.27	114.47	61.16
4/8/2015	0.00	0.00	65.86	31.36	3.14	3.14	0.00	1.57	120.74	17.25
4/9/2015	0.00	0.00	39.20	23.52	6.27	3.14	0.00	1.57	78.41	14.11
4/10/2015	0.00	0.00	18.82	29.79	6.27	1.57	0.00	1.57	62.72	36.07
4/11/2015	6.27	0.00	17.25	10.98	12.54	1.57	0.00	7.84	95.65	75.27
4/12/2015	15.68	1.57	4.70	31.36	4.70	6.27	0.00	4.70	100.36	86.25
4/13/2015	3.14	0.00	9.41	9.41	3.14	6.27	0.00	1.57	48.61	48.61
4/14/2015	20.39	0.00	39.20	7.84	7.84	1.57	0.00	14.11	83.11	32.93
4/15/2015	9.41	3.14	37.63	7.84	3.14	1.57	0.00	4.70	65.86	12.54
4/16/2015	4.70	1.57	6.27	7.84	3.14	0.00	0.00	3.14	29.79	12.54
4/17/2015	6.27	0.00	21.95	10.98	9.41	4.70	0.00	1.57	61.16	39.20
4/18/2015	1.57	0.00	9.41	4.70	4.70	3.14	0.00	1.57	42.34	26.66
4/19/2015	0.00	1.57	14.11	12.54	6.27	1.57	0.00	9.41	70.56	47.04
4/20/2015	0.00	0.00	14.11	3.14	3.14	0.00	0.00	7.84	37.63	70.56
4/21/2015	0.00	0.00	4.70	9.41	7.84	0.00	0.00	3.14	53.32	34.50
4/22/2015	6.27	1.57	32.93	10.98	10.98	1.57	0.00	9.41	79.97	20.39
4/23/2015	10.98	0.00	100.36	9.41	9.41	1.57	0.00	20.39	136.42	15.68
4/24/2015	9.41	3.14	31.36	6.27	4.70	0.00	0.00	7.84	72.13	10.98
4/25/2015	0.00	0.00	7.84	3.14	4.70	0.00	0.00	3.14	21.95	21.95
4/26/2015	3.14	0.00	4.70	4.70	9.41	1.57	0.00	4.70	32.93	18.82
4/27/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	1.57	10.98	3.14
4/28/2015	1.57	0.00	1.57	1.57	0.00	0.00	1.57	0.00	14.11	6.27
4/29/2015	6.27	3.14	3.14	0.00	1.57	0.00	0.00	9.41	17.25	3.14
4/30/2015	6.27	1.57	4.70	3.14	3.14	0.00	0.00	9.41	25.09	15.68
5/1/2015	9.41	0.00	6.27	0.00	4.70	0.00	0.00	4.70	29.79	14.11
5/2/2015	1.57	0.00	0.00	4.70	7.84	3.14	0.00	1.57	39.20	23.52
5/3/2015	6.27	0.00	0.00	0.00	3.14	0.00	0.00	7.84	28.23	32.93

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
5/4/2015	6.27	0.00	1.57	1.57	9.41	0.00	0.00	7.84	39.20	34.50
5/5/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	4.70	10.98	10.98
5/6/2015	1.57	0.00	3.14	0.00	3.14	0.00	0.00	6.27	9.41	9.41
5/7/2015	1.57	0.00	3.14	0.00	3.14	0.00	0.00	6.27	9.41	7.84
5/8/2015	1.57	0.00	0.00	6.27	3.14	0.00	0.00	9.41	10.98	18.82
5/9/2015	0.00	0.00	0.00	1.57	3.14	0.00	0.00	0.00	4.70	9.41
5/10/2015	0.00	1.57	1.57	3.14	6.27	0.00	0.00	4.70	15.68	3.14
5/11/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	3.14
5/12/2015	0.00	0.00	0.00	3.14	14.11	0.00	0.00	4.70	26.66	1.57
5/13/2015	3.14	1.57	1.57	0.00	1.57	0.00	0.00	0.00	10.98	1.57
5/14/2015	0.00	0.00	1.57	0.00	3.14	0.00	0.00	3.14	9.41	3.14
5/15/2015	7.84	0.00	3.14	1.57	0.00	0.00	0.00	18.82	14.11	3.14
5/16/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	3.14
5/17/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84	3.14
5/18/2015	4.70	0.00	1.57	0.00	1.57	0.00	0.00	0.00	10.98	3.14
5/19/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	0.00
5/20/2015	7.84	0.00	1.57	0.00	0.00	0.00	0.00	0.00	10.98	0.00
5/21/2015	1.57	0.00	1.57	7.84	0.00	0.00	0.00	1.57	10.98	1.57
5/22/2015	4.70	0.00	0.00	7.84	3.14	0.00	0.00	1.57	17.25	3.14
5/23/2015	1.57	0.00	0.00	4.70	6.27	0.00	0.00	0.00	14.11	6.27
5/24/2015	3.14	0.00	0.00	1.57	1.57	0.00	0.00	3.14	6.27	6.27
5/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
5/26/2015	1.57	1.57	4.70	0.00	3.14	0.00	0.00	3.14	10.98	0.00
5/27/2015	1.57	0.00	6.27	0.00	3.14	0.00	0.00	3.14	10.98	0.00
5/28/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	0.00	9.41	7.84
5/29/2015	0.00	0.00	3.14	0.00	1.57	0.00	0.00	1.57	4.70	4.70
5/30/2015	6.27	0.00	0.00	0.00	6.27	0.00	0.00	3.14	12.54	15.68
5/31/2015	9.41	0.00	0.00	1.57	3.14	0.00	0.00	0.00	14.11	7.84

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
6/1/2015	4.70	0.00	0.00	0.00	1.57	0.00	0.00	4.70	10.98	6.27
6/2/2015	6.27	0.00	0.00	3.14	7.84	0.00	0.00	3.14	17.25	10.98
6/3/2015	4.70	0.00	1.57	3.14	4.70	0.00	0.00	0.00	14.11	7.84
6/4/2015	10.98	0.00	0.00	1.57	0.00	0.00	0.00	0.00	12.54	1.57
6/5/2015	3.14	0.00	0.00	1.57	1.57	0.00	0.00	0.00	6.27	6.27
6/6/2015	3.14	0.00	0.00	1.57	4.70	0.00	0.00	1.57	12.54	10.98
6/7/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	1.57	6.27	6.27
6/8/2015	4.70	0.00	0.00	0.00	3.14	0.00	0.00	1.57	7.84	4.70
6/9/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	0.00	4.70	6.27
6/10/2015	4.70	0.00	0.00	0.00	0.00	0.00	0.00	1.57	4.70	1.57
6/11/2015	1.57	0.00	4.70	3.14	7.84	0.00	0.00	4.70	17.25	6.27
6/12/2015	1.57	0.00	0.00	1.57	3.14	0.00	0.00	0.00	6.27	3.14
6/13/2015	7.84	3.14	1.57	6.27	14.11	0.00	0.00	3.14	42.34	4.70
6/14/2015	6.27	0.00	0.00	1.57	39.20	0.00	0.00	4.70	47.04	6.27
6/15/2015	3.14	0.00	1.57	0.00	65.86	0.00	0.00	1.57	70.56	10.98
6/16/2015	6.27	1.57	0.00	1.57	4.70	0.00	0.00	4.70	14.11	4.70
6/17/2015	9.41	0.00	0.00	0.00	1.57	0.00	0.00	1.57	23.52	0.00
6/18/2015	6.27	0.00	0.00	1.57	1.57	0.00	0.00	1.57	9.41	10.98
6/19/2015	15.68	0.00	0.00	0.00	0.00	0.00	0.00	1.57	21.95	3.14
6/20/2015	7.84	0.00	0.00	0.00	1.57	0.00	0.00	0.00	9.41	10.98
6/21/2015	12.54	0.00	0.00	1.57	0.00	0.00	0.00	1.57	25.09	6.27
6/22/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	4.70	6.27	7.84
6/23/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	0.00	7.84	3.14
6/24/2015	4.70	0.00	0.00	1.57	1.57	0.00	0.00	1.57	12.54	3.14
6/25/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	1.57	6.27	3.14
6/26/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	4.70
6/27/2015	4.70	0.00	0.00	0.00	7.84	0.00	0.00	1.57	18.82	0.00
6/28/2015	0.00	0.00	0.00	1.57	4.70	0.00	0.00	1.57	6.27	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
6/29/2015	4.70	0.00	0.00	0.00	6.27	0.00	0.00	0.00	10.98	6.27
6/30/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	0.00	6.27	3.14
7/1/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	1.57
7/2/2015	0.00	0.00	0.00	0.00	7.84	0.00	0.00	0.00	10.98	4.70
7/3/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	4.70	4.70
7/4/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	3.14
7/5/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	7.84
7/6/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	4.70
7/7/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
7/8/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	1.57	14.11	1.57
7/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	3.14
7/10/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	1.57	4.70	0.00
7/11/2015	0.00	0.00	3.14	0.00	3.14	0.00	0.00	1.57	9.41	0.00
7/12/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	3.14	7.84	1.57
7/13/2015	1.57	0.00	1.57	0.00	1.57	0.00	0.00	1.57	7.84	0.00
7/14/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	7.84	3.14
7/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	4.70
7/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
7/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
7/18/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	4.70	1.57
7/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	1.57
7/20/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	3.14
7/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
7/22/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	1.57	1.57	0.00
7/23/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	4.70	0.00
7/24/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
7/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
7/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
7/27/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
7/28/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
7/29/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	3.14
7/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
7/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	6.27
8/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
8/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
8/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84
8/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
8/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
8/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84
8/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
8/8/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	10.98
8/9/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	3.14	6.27
8/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
8/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
8/12/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	7.84
8/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
8/14/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
8/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
8/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
8/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
8/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
8/19/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	3.14	28.23
8/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	7.84
8/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	15.68
8/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.54
8/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	9.41

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
8/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	6.27
8/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14
8/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	6.27
8/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
8/28/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
8/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	4.70
8/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
8/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41
9/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
9/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
9/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
9/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
9/6/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
9/7/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
9/8/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
9/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
9/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	1.57
9/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	7.84
9/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
9/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
9/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
9/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
9/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
9/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
9/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
9/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84
9/22/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	0.00	1.57	7.84
9/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
9/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/26/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	23.52
9/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	14.11
9/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	1.57	7.84
9/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
9/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
10/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
10/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
10/3/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	10.98
10/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
10/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	10.98
10/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
10/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
10/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	7.84	1.57	7.84	1.57
10/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	31.36	4.70	31.36	9.41
10/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	43.91	1.57	43.91	1.57
10/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	32.93	1.57	32.93	4.70
10/14/2015	0.00	0.00	1.57	0.00	0.00	0.00	6.27	0.00	9.41	0.00
10/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	4.70	3.14
10/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	7.84	0.00	9.41	6.27
10/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	3.14
10/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
10/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	0.00
10/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
10/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	1.57
10/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
10/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
10/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70
10/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	4.70
10/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
10/29/2015	0.00	0.00	1.57	0.00	0.00	0.00	0.00	0.00	1.57	3.14
10/30/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	14.11	4.70	6.27
10/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
11/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
11/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00
11/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
11/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	0.00
11/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
11/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00
11/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	0.00
11/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
11/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
11/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	4.70	3.14
11/17/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	3.14	3.14
11/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57
11/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00
11/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	0.00
11/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/26/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
11/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
12/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00
12/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/25/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
12/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	0.00
12/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/1/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
1/2/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/3/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/5/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00
1/6/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/7/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/8/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/9/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1/10/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
1/11/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1/12/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/13/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/14/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/15/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/17/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/18/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/19/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/20/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/21/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/22/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/23/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/24/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/25/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/26/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/27/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/28/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/29/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/30/2016	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	6.27	0.00
1/31/2016	0.00	0.00	0.00	0.00	1.57	17.25	0.00	0.00	25.09	0.00
2/1/2016	0.00	0.00	0.00	0.00	1.57	3.14	0.00	0.00	6.27	0.00
2/2/2016	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	4.70	0.00
2/3/2016	0.00	0.00	0.00	0.00	1.57	3.14	0.00	0.00	4.70	0.00
2/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/5/2016	0.00	0.00	0.00	0.00	0.00	6.27	0.00	1.57	6.27	0.00
2/6/2016	0.00	0.00	0.00	0.00	0.00	14.11	0.00	0.00	18.82	0.00
2/7/2016	0.00	0.00	0.00	0.00	0.00	18.82	0.00	0.00	23.52	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
2/8/2016	0.00	0.00	0.00	0.00	0.00	6.27	0.00	0.00	6.27	0.00
2/9/2016	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	6.27	0.00
2/10/2016	0.00	0.00	0.00	0.00	0.00	6.27	0.00	0.00	7.84	0.00
2/11/2016	0.00	0.00	0.00	0.00	0.00	9.41	0.00	1.57	10.98	0.00
2/12/2016	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	0.00
2/13/2016	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00
2/14/2016	0.00	7.84	0.00	0.00	0.00	1.57	0.00	0.00	10.98	1.57
2/15/2016	0.00	17.25	0.00	0.00	0.00	4.70	0.00	0.00	26.66	1.57
2/16/2016	0.00	26.66	0.00	0.00	0.00	1.57	0.00	0.00	31.36	0.00
2/17/2016	0.00	10.98	0.00	0.00	0.00	0.00	0.00	0.00	12.54	0.00
2/18/2016	0.00	228.94	0.00	0.00	0.00	1.57	0.00	6.27	243.06	0.00
2/19/2016	0.00	29.79	0.00	0.00	0.00	0.00	0.00	0.00	29.79	0.00
2/20/2016	0.00	222.67	29.79	0.00	0.00	0.00	0.00	0.00	258.74	0.00
2/21/2016	0.00	266.58	34.50	0.00	0.00	0.00	0.00	0.00	305.78	0.00
2/22/2016	0.00	537.86	64.29	0.00	1.57	0.00	0.00	6.27	617.83	7.84
2/23/2016	0.00	90.95	21.95	0.00	0.00	0.00	0.00	1.57	114.47	0.00
2/24/2016	0.00	26.66	53.32	0.00	0.00	0.00	0.00	1.57	81.54	0.00
2/25/2016	0.00	37.63	228.94	0.00	0.00	0.00	0.00	0.00	266.58	1.57
2/26/2016	0.00	28.23	864.02	0.00	0.00	0.00	0.00	4.70	898.52	0.00
2/27/2016	0.00	69.00	2860.21	0.00	1.57	0.00	0.00	17.25	2938.62	3.14
2/28/2016	0.00	48.61	3358.87	0.00	6.27	0.00	0.00	3.14	3418.46	3.14
2/29/2016	0.00	37.63	3819.89	0.00	14.11	0.00	0.00	3.14	3884.18	4.70
3/1/2016	0.00	83.11	7500.22	0.00	31.36	0.00	0.00	14.11	7616.26	3.14
3/2/2016	75.27	338.71	6713.04	0.00	50.18	45.47	0.00	43.91	7263.44	10.98
3/3/2016	0.00	161.51	4094.31	0.00	26.66	0.00	0.00	10.98	4299.73	7.84
3/4/2016	20.39	131.72	7117.61	0.00	600.58	795.03	0.00	12.54	8701.39	12.54
3/5/2016	12.54	166.22	8339.16	0.00	401.43	644.49	3.14	6.27	9588.93	7.84
3/6/2016	1.57	50.18	6720.88	4.70	327.73	197.58	0.00	6.27	7307.35	12.54

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
3/7/2016	3.14	87.81	8809.59	1.57	341.85	330.87	0.00	4.70	9585.80	7.84
3/8/2016	0.00	28.23	2367.83	0.00	111.34	133.29	0.00	6.27	2643.82	7.84
3/9/2016	0.00	79.97	2207.88	0.00	167.79	73.70	0.00	0.00	2534.05	3.14
3/10/2016	0.00	31.36	2088.71	0.00	206.99	0.00	0.00	1.57	2336.47	15.68
3/11/2016	161.51	301.08	2450.94	0.00	137.99	34.50	0.00	12.54	3092.29	4.70
3/12/2016	134.86	241.49	2579.52	0.00	79.97	28.23	0.00	3.14	3067.20	10.98
3/13/2016	28.23	128.58	1188.62	0.00	34.50	48.61	0.00	6.27	1431.68	4.70
3/14/2016	48.61	188.17	1336.02	0.00	72.13	18.82	0.00	6.27	1663.75	4.70
3/15/2016	26.66	29.79	417.11	0.00	54.88	0.00	0.00	4.70	530.02	1.57
3/16/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3/17/2016	10.98	26.66	586.47	0.00	10.98	14.11	0.00	4.70	669.58	15.68
3/18/2016	25.09	42.34	2342.74	0.00	6.27	94.09	0.00	0.00	2523.07	4.70
3/19/2016	17.25	53.32	4415.77	0.00	3.14	79.97	1.57	4.70	4574.15	3.14
3/20/2016	15.68	36.07	2501.12	0.00	17.25	86.25	0.00	6.27	2689.29	7.84
3/21/2016	17.25	45.47	2904.12	0.00	10.98	90.95	0.00	18.82	3081.32	7.84
3/22/2016	0.00	31.36	1980.51	0.00	23.52	34.50	0.00	6.27	2080.87	3.14
3/23/2016	4.70	14.11	1966.40	0.00	10.98	0.00	0.00	6.27	1996.19	6.27
3/24/2016	3.14	75.27	2703.40	0.00	17.25	0.00	0.00	3.14	2799.06	12.54
3/25/2016	10.98	18.82	1420.70	0.00	17.25	0.00	0.00	3.14	1467.74	7.84
3/26/2016	14.11	21.95	1561.83	4.70	7.84	12.54	0.00	3.14	1635.53	25.09
3/27/2016	6.27	28.23	1726.48	3.14	6.27	0.00	0.00	3.14	1775.09	10.98
3/28/2016	0.00	21.95	2082.44	4.70	7.84	0.00	0.00	18.82	2124.78	29.79
3/29/2016	0.00	12.54	312.05	3.14	0.00	0.00	0.00	3.14	327.73	1.57
3/30/2016	0.00	6.27	771.51	4.70	0.00	0.00	0.00	1.57	784.05	3.14
3/31/2016	6.27	3.14	326.16	4.70	1.57	6.27	0.00	7.84	348.12	1.57
4/1/2016	1.57	9.41	172.49	40.77	0.00	4.70	0.00	4.70	230.51	10.98
4/2/2016	6.27	0.00	268.15	67.43	1.57	0.00	0.00	3.14	348.12	12.54
4/3/2016	3.14	0.00	308.92	81.54	3.14	0.00	0.00	1.57	398.30	15.68

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/4/2016	0.00	20.39	122.31	352.82	34.50	0.00	0.00	17.25	553.54	29.79
4/5/2016	0.00	20.39	105.06	335.57	3.14	0.00	0.00	12.54	472.00	17.25
4/6/2016	0.00	21.95	100.36	473.57	31.36	0.00	0.00	21.95	647.63	32.93

Missing Data= nd (not determined)

Table 12: Pollen Concentrations (Grains/m^3) for Site E (Daily Counts from April 2015-2016).

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
4/7/2015	0.00	0.00	4.70	9.41	18.82	0.00	0.00	7.84	48.61	73.70
4/8/2015	0.00	0.00	1.57	6.27	9.41	0.00	0.00	7.84	21.95	40.77
4/9/2015	0.00	0.00	0.00	1.57	9.41	0.00	0.00	3.14	14.11	15.68
4/10/2015	0.00	3.14	3.14	6.27	4.70	0.00	0.00	1.57	23.52	36.07
4/11/2015	7.84	0.00	0.00	47.04	1.57	0.00	0.00	1.57	73.70	51.75
4/12/2015	0.00	4.70	1.57	18.82	4.70	0.00	0.00	9.41	64.29	56.45
4/13/2015	0.00	1.57	4.70	53.32	3.14	0.00	0.00	12.54	84.68	62.72
4/14/2015	0.00	7.84	0.00	31.36	1.57	0.00	0.00	15.68	69.00	20.39
4/15/2015	0.00	7.84	0.00	70.56	10.98	0.00	0.00	10.98	130.15	103.49
4/16/2015	0.00	4.70	0.00	20.39	9.41	0.00	0.00	4.70	42.34	64.29
4/17/2015	0.00	0.00	0.00	14.11	4.70	0.00	0.00	1.57	23.52	14.11
4/18/2015	0.00	0.00	3.14	3.14	1.57	0.00	0.00	3.14	7.84	10.98
4/19/2015	3.14	0.00	0.00	25.09	7.84	0.00	0.00	0.00	45.47	36.07
4/20/2015	25.09	0.00	0.00	25.09	1.57	0.00	0.00	6.27	56.45	32.93
4/21/2015	3.14	0.00	0.00	26.66	4.70	0.00	0.00	7.84	42.34	37.63
4/22/2015	42.34	0.00	0.00	20.39	1.57	0.00	0.00	4.70	69.00	17.25
4/23/2015	14.11	0.00	0.00	20.39	3.14	0.00	0.00	3.14	43.91	17.25
4/24/2015	7.84	0.00	0.00	9.41	1.57	0.00	0.00	1.57	20.39	20.39
4/25/2015	18.82	0.00	0.00	25.09	7.84	0.00	0.00	4.70	70.56	20.39
4/26/2015	18.82	3.14	0.00	12.54	7.84	0.00	0.00	1.57	47.04	6.27
4/27/2015	7.84	0.00	1.57	0.00	1.57	0.00	0.00	0.00	14.11	3.14
4/28/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	4.70	6.27
4/29/2015	25.09	0.00	0.00	3.14	6.27	0.00	0.00	1.57	51.75	15.68
4/30/2015	34.50	0.00	1.57	7.84	6.27	0.00	0.00	4.70	86.25	10.98
5/1/2015	40.77	0.00	0.00	9.41	7.84	0.00	0.00	9.41	76.84	9.41
5/2/2015	84.68	1.57	0.00	3.14	7.84	0.00	0.00	12.54	101.93	15.68
5/3/2015	50.18	0.00	0.00	1.57	6.27	0.00	0.00	9.41	64.29	10.98
5/4/2015	97.22	1.57	0.00	6.27	4.70	0.00	0.00	7.84	116.04	20.39

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
5/5/2015	79.97	0.00	0.00	3.14	7.84	0.00	0.00	9.41	97.22	14.11
5/6/2015	137.99	0.00	0.00	6.27	1.57	0.00	0.00	4.70	148.97	7.84
5/7/2015	112.90	0.00	0.00	1.57	3.14	0.00	0.00	6.27	122.31	10.98
5/8/2015	70.56	1.57	0.00	1.57	1.57	0.00	0.00	4.70	76.84	7.84
5/9/2015	15.68	3.14	0.00	15.68	0.00	0.00	0.00	3.14	36.07	4.70
5/10/2015	12.54	0.00	1.57	1.57	6.27	0.00	0.00	1.57	21.95	1.57
5/11/2015	53.32	3.14	0.00	3.14	0.00	0.00	0.00	4.70	62.72	0.00
5/12/2015	76.84	0.00	0.00	3.14	7.84	0.00	0.00	4.70	89.38	10.98
5/13/2015	75.27	4.70	0.00	0.00	12.54	0.00	0.00	3.14	95.65	9.41
5/14/2015	50.18	0.00	0.00	0.00	1.57	0.00	0.00	0.00	54.88	6.27
5/15/2015	14.11	0.00	0.00	1.57	3.14	0.00	0.00	1.57	18.82	1.57
5/16/2015	6.27	0.00	0.00	0.00	3.14	0.00	0.00	6.27	9.41	0.00
5/17/2015	14.11	0.00	0.00	1.57	3.14	0.00	0.00	6.27	18.82	0.00
5/18/2015	26.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.23	4.70
5/19/2015	25.09	0.00	0.00	0.00	6.27	0.00	0.00	3.14	31.36	3.14
5/20/2015	37.63	0.00	0.00	1.57	1.57	0.00	0.00	3.14	40.77	4.70
5/21/2015	17.25	0.00	0.00	0.00	1.57	0.00	0.00	0.00	18.82	0.00
5/22/2015	15.68	0.00	0.00	0.00	3.14	0.00	0.00	1.57	20.39	3.14
5/23/2015	18.82	0.00	0.00	0.00	4.70	0.00	0.00	0.00	23.52	1.57
5/24/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	1.57	4.70	3.14
5/25/2015	7.84	0.00	0.00	0.00	0.00	0.00	0.00	1.57	7.84	3.14
5/26/2015	9.41	0.00	0.00	0.00	1.57	0.00	1.57	0.00	17.25	0.00
5/27/2015	6.27	1.57	0.00	6.27	9.41	0.00	0.00	1.57	28.23	1.57
5/28/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	0.00	4.70	4.70
5/29/2015	1.57	0.00	0.00	6.27	6.27	0.00	0.00	0.00	21.95	0.00
5/30/2015	15.68	1.57	0.00	3.14	7.84	0.00	0.00	6.27	32.93	4.70
5/31/2015	3.14	0.00	0.00	1.57	7.84	0.00	0.00	1.57	14.11	3.14
6/1/2015	12.54	1.57	0.00	0.00	14.11	0.00	1.57	10.98	37.63	3.14
6/2/2015	14.11	0.00	0.00	1.57	7.84	0.00	0.00	0.00	34.50	18.82

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
6/3/2015	7.84	0.00	0.00	1.57	9.41	0.00	0.00	0.00	23.52	4.70
6/4/2015	6.27	0.00	0.00	0.00	6.27	0.00	0.00	0.00	21.95	4.70
6/5/2015	7.84	0.00	0.00	4.70	9.41	0.00	0.00	1.57	25.09	7.84
6/6/2015	4.70	0.00	0.00	0.00	3.14	0.00	0.00	1.57	12.54	0.00
6/7/2015	7.84	0.00	0.00	4.70	6.27	0.00	0.00	1.57	26.66	7.84
6/8/2015	3.14	0.00	0.00	0.00	4.70	0.00	0.00	3.14	12.54	4.70
6/9/2015	6.27	0.00	0.00	0.00	15.68	0.00	0.00	0.00	21.95	4.70
6/10/2015	6.27	0.00	0.00	0.00	7.84	0.00	0.00	0.00	20.39	0.00
6/11/2015	3.14	0.00	0.00	0.00	15.68	0.00	0.00	3.14	21.95	0.00
6/12/2015	4.70	0.00	0.00	0.00	12.54	0.00	0.00	3.14	18.82	4.70
6/13/2015	9.41	0.00	0.00	0.00	61.16	0.00	0.00	6.27	73.70	9.41
6/14/2015	10.98	0.00	0.00	3.14	36.07	0.00	0.00	6.27	61.16	7.84
6/15/2015	3.14	0.00	0.00	0.00	14.11	0.00	0.00	4.70	31.36	1.57
6/16/2015	1.57	0.00	0.00	0.00	10.98	0.00	0.00	0.00	18.82	0.00
6/17/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	6.27	12.54	0.00
6/18/2015	3.14	0.00	0.00	0.00	12.54	0.00	0.00	1.57	18.82	1.57
6/19/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	3.14	14.11	1.57
6/20/2015	4.70	0.00	0.00	0.00	9.41	0.00	0.00	0.00	18.82	3.14
6/21/2015	6.27	0.00	0.00	0.00	6.27	0.00	0.00	3.14	15.68	6.27
6/22/2015	3.14	0.00	0.00	0.00	6.27	0.00	0.00	1.57	18.82	1.57
6/23/2015	1.57	0.00	0.00	0.00	3.14	0.00	0.00	1.57	7.84	1.57
6/24/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	3.14	9.41	0.00
6/25/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	1.57	3.14	0.00
6/26/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	3.14	6.27	3.14
6/27/2015	1.57	0.00	0.00	0.00	7.84	0.00	0.00	4.70	10.98	0.00
6/28/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	3.14	9.41	3.14
6/29/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	7.84	1.57
6/30/2015	1.57	0.00	0.00	0.00	6.27	0.00	0.00	4.70	10.98	9.41
7/1/2015	0.00	0.00	0.00	0.00	9.41	0.00	0.00	3.14	9.41	4.70

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
7/2/2015	0.00	0.00	0.00	0.00	9.41	0.00	0.00	0.00	9.41	1.57
7/3/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	1.57	4.70	3.14
7/4/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	3.14	0.00
7/5/2015	0.00	0.00	0.00	0.00	18.82	0.00	0.00	1.57	21.95	0.00
7/6/2015	0.00	0.00	0.00	0.00	6.27	0.00	0.00	1.57	7.84	1.57
7/7/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	14.11	1.57
7/8/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	6.27	1.57
7/9/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	1.57
7/10/2015	0.00	0.00	0.00	1.57	4.70	0.00	0.00	0.00	6.27	3.14
7/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
7/12/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
7/13/2015	0.00	0.00	0.00	3.14	3.14	0.00	0.00	1.57	6.27	0.00
7/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57
7/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
7/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	1.57
7/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00
7/18/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	4.70	0.00
7/19/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	0.00
7/20/2015	4.70	0.00	0.00	0.00	3.14	0.00	0.00	1.57	7.84	0.00
7/21/2015	1.57	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	1.57
7/22/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	1.57	3.14	0.00
7/23/2015	6.27	0.00	0.00	0.00	0.00	0.00	0.00	4.70	15.68	7.84
7/24/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	4.70	3.14	4.70
7/25/2015	1.57	0.00	0.00	0.00	4.70	0.00	0.00	1.57	6.27	3.14
7/26/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	0.00	4.70	3.14
7/27/2015	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57
7/28/2015	3.14	0.00	0.00	0.00	0.00	0.00	0.00	1.57	4.70	1.57
7/29/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	0.00	4.70	1.57
7/30/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	3.14	7.84

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
7/31/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	6.27	3.14
8/1/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	3.14
8/2/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	1.57
8/3/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	3.14	7.84	3.14
8/4/2015	0.00	0.00	15.68	0.00	1.57	0.00	0.00	3.14	23.52	1.57
8/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	10.98
8/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41
8/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
8/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	6.27
8/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
8/10/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
8/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	7.84
8/12/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	39.20	1.57
8/13/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	1.57
8/14/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	7.84	1.57	0.00
8/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	6.27
8/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	10.98
8/17/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	3.14	1.57	6.27
8/18/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	12.54
8/19/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	18.82
8/20/2015	0.00	0.00	0.00	0.00	4.70	0.00	0.00	1.57	4.70	21.95
8/21/2015	3.14	0.00	0.00	0.00	1.57	0.00	0.00	0.00	6.27	9.41
8/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	7.84
8/23/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	3.14	12.54
8/24/2015	1.57	1.57	0.00	0.00	0.00	0.00	0.00	10.98	4.70	7.84
8/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	7.84
8/26/2015	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57	6.27
8/27/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	4.70	1.57	7.84
8/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	9.41

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
8/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	10.98
8/30/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	6.27	3.14	4.70
8/31/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	7.84
9/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	4.70
9/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	6.27
9/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	14.11
9/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	14.11
9/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
9/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
9/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84
9/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14
9/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	7.84
9/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	14.11
9/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00	20.39
9/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	14.11
9/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
9/15/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	6.27
9/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
9/17/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	1.57
9/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
9/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
9/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
9/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	25.09	0.00	25.09	14.11
9/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	64.29	0.00	64.29	9.41
9/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	213.26	3.14	213.26	7.84
9/24/2015	1.57	0.00	0.00	0.00	0.00	0.00	221.10	3.14	222.67	10.98
9/25/2015	6.27	0.00	0.00	0.00	0.00	0.00	29.79	1.57	36.07	7.84
9/26/2015	1.57	0.00	0.00	0.00	0.00	0.00	18.82	25.09	20.39	29.79

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
9/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	9.41	4.70	10.98	28.23
9/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	17.25	3.14	17.25	10.98
9/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	12.54	3.14	12.54	7.84
9/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	4.70	3.14	4.70	10.98
10/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	4.70	6.27
10/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	34.50	3.14	34.50	6.27
10/3/2015	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57	3.14	3.14
10/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.11
10/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	6.27
10/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
10/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
10/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.41
10/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.98
10/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	37.63	0.00	37.63	12.54
10/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	834.23	6.27	834.23	15.68
10/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	423.39	4.70	423.39	17.25
10/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	92.52	0.00	92.52	9.41
10/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	61.16	1.57	61.16	15.68
10/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	117.61	0.00	117.61	12.54
10/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	59.59	3.14	59.59	6.27
10/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	9.41	1.57	9.41	1.57
10/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	3.14
10/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	9.41	1.57	9.41	0.00
10/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	6.27
10/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	1.57
10/22/2015	0.00	0.00	0.00	0.00	1.57	0.00	1.57	1.57	3.14	1.57
10/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	6.27	3.14	6.27	1.57
10/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
10/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.84

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
10/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
10/27/2015	0.00	0.00	0.00	0.00	3.14	0.00	0.00	1.57	3.14	4.70
10/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	6.27	3.14	0.00
10/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	3.14	1.57
10/30/2015	0.00	0.00	0.00	0.00	3.14	0.00	3.14	6.27	6.27	6.27
10/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	4.70	1.57	4.70	3.14
11/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
11/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
11/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
11/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	0.00
11/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
11/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	0.00
11/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
11/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	6.27
11/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	3.14	1.57
11/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/16/2015	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
11/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27
11/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	1.57	0.00
11/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
11/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/21/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/22/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/23/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
11/24/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/25/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/26/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/27/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/28/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/29/2015	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/1/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/2/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/3/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/5/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/6/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/8/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	3.14	1.57	6.27	0.00
12/11/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	3.14
12/12/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/13/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
12/14/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14
12/15/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
12/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/19/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/21/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
12/22/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
12/23/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57
12/24/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	1.57
12/25/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/26/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
12/27/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/29/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/31/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
1/1/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/2/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/3/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/4/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/5/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	3.14	0.00
1/6/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.27	0.00
1/7/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/8/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/9/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/10/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1/11/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/12/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/13/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/14/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/15/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/17/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
1/18/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/19/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/20/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
1/21/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.00
1/22/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/23/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1/24/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00
1/25/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/26/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/27/2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/28/2016	0.00	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
1/29/2016	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.57	1.57	0.00
1/30/2016	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1/31/2016	0.00	9.41	0.00	0.00	0.00	0.00	0.00	1.57	9.41	0.00
2/1/2016	0.00	32.93	0.00	0.00	0.00	0.00	0.00	1.57	32.93	0.00
2/2/2016	0.00	4.70	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00
2/3/2016	0.00	7.84	0.00	0.00	0.00	0.00	0.00	0.00	7.84	0.00
2/4/2016	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.00
2/5/2016	0.00	1.57	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
2/6/2016	0.00	6.27	0.00	0.00	1.57	0.00	0.00	0.00	7.84	0.00
2/7/2016	0.00	9.41	0.00	0.00	0.00	0.00	0.00	0.00	9.41	0.00
2/8/2016	0.00	25.09	0.00	0.00	0.00	0.00	0.00	0.00	25.09	0.00
2/9/2016	0.00	65.86	0.00	0.00	0.00	0.00	3.14	0.00	73.70	0.00
2/10/2016	0.00	70.56	0.00	0.00	1.57	0.00	0.00	0.00	75.27	0.00
2/11/2016	0.00	75.27	0.00	0.00	0.00	0.00	0.00	3.14	76.84	0.00
2/12/2016	0.00	17.25	0.00	0.00	0.00	0.00	4.70	0.00	23.52	0.00
2/13/2016	0.00	7.84	0.00	0.00	0.00	0.00	7.84	0.00	18.82	0.00
2/14/2016	0.00	7.84	0.00	0.00	0.00	0.00	9.41	0.00	25.09	0.00
2/15/2016	0.00	15.68	0.00	0.00	0.00	0.00	6.27	3.14	42.34	0.00
2/16/2016	0.00	28.23	0.00	0.00	0.00	0.00	3.14	1.57	42.34	0.00
2/17/2016	0.00	15.68	0.00	0.00	0.00	0.00	1.57	0.00	20.39	0.00
2/18/2016	0.00	7.84	0.00	0.00	0.00	0.00	0.00	0.00	15.68	0.00

Date	*Acer* (Maple)	*Fraxinus* (Ash)	*Morus* (Mulberry)	*Olea* (Olive)	*Pinaceae* (Pine)	*Platanus* (Sycamore)	*Ulmus* (Elm)	Total Grass	Total Tree	Total Weed
2/19/2016	0.00	48.61	0.00	0.00	0.00	0.00	1.57	1.57	53.32	1.57
2/20/2016	0.00	4.70	0.00	0.00	0.00	0.00	1.57	0.00	10.98	1.57
2/21/2016	0.00	43.91	0.00	0.00	0.00	0.00	0.00	0.00	53.32	0.00
2/22/2016	1.57	141.13	0.00	0.00	1.57	0.00	0.00	1.57	148.97	1.57
2/23/2016	0.00	790.32	0.00	0.00	0.00	0.00	1.57	0.00	821.68	0.00
2/24/2016	0.00	301.08	0.00	0.00	0.00	0.00	0.00	0.00	313.62	0.00
2/25/2016	0.00	134.86	0.00	0.00	0.00	0.00	0.00	0.00	136.42	0.00
2/26/2016	0.00	208.56	4.70	0.00	0.00	0.00	0.00	0.00	219.53	0.00
2/27/2016	0.00	837.37	21.95	0.00	0.00	0.00	0.00	0.00	881.27	0.00
2/28/2016	0.00	547.27	76.84	0.00	1.57	0.00	0.00	1.57	641.35	0.00
2/29/2016	0.00	716.62	95.65	0.00	0.00	0.00	0.00	1.57	843.64	0.00
3/1/2016	0.00	630.38	170.92	0.00	0.00	0.00	0.00	6.27	824.82	1.57
3/2/2016	0.00	235.22	73.70	0.00	1.57	3.14	0.00	3.14	321.46	1.57
3/3/2016	0.00	199.15	1110.21	0.00	4.70	0.00	0.00	4.70	1332.89	4.70
3/4/2016	0.00	254.03	1452.06	0.00	4.70	0.00	0.00	10.98	1750.00	4.70
3/5/2016	0.00	161.51	305.78	0.00	29.79	20.39	0.00	9.41	522.18	4.70
3/6/2016	0.00	426.52	1067.88	0.00	39.20	25.09	0.00	7.84	1571.24	4.70
3/7/2016	0.00	344.98	34.50	0.00	7.84	7.84	0.00	12.54	406.14	1.57
3/8/2016	0.00	112.90	23.52	0.00	6.27	4.70	0.00	4.70	153.67	3.14
3/9/2016	0.00	18.82	7.84	0.00	39.20	3.14	0.00	0.00	70.56	4.70
3/10/2016	0.00	47.04	4.70	0.00	31.36	6.27	0.00	1.57	90.95	1.57
3/11/2016	0.00	59.59	112.90	0.00	54.88	26.66	0.00	4.70	258.74	0.00
3/12/2016	0.00	51.75	159.95	0.00	208.56	116.04	0.00	7.84	556.68	4.70
3/13/2016	0.00	42.34	36.07	0.00	122.31	50.18	0.00	4.70	261.87	4.70
3/14/2016	0.00	6.27	50.18	0.00	48.61	56.45	0.00	4.70	161.51	15.68
3/15/2016	0.00	12.54	17.25	0.00	114.47	15.68	0.00	0.00	163.08	18.82
3/16/2016	0.00	18.82	14.11	0.00	81.54	40.77	0.00	3.14	158.38	3.14
3/17/2016	0.00	7.84	56.45	0.00	120.74	54.88	0.00	6.27	243.06	6.27
3/18/2016	0.00	7.84	31.36	0.00	39.20	43.91	0.00	3.14	125.45	3.14

Date	***Acer* (Maple)**	***Fraxinus* (Ash)**	***Morus* (Mulberry)**	***Olea* (Olive)**	***Pinaceae* (Pine)**	***Platanus* (Sycamore)**	***Ulmus* (Elm)**	**Total Grass**	**Total Tree**	**Total Weed**
3/19/2016	0.00	3.14	25.09	0.00	31.36	43.91	0.00	1.57	109.77	10.98
3/20/2016	0.00	6.27	54.88	0.00	39.20	87.81	0.00	7.84	235.22	20.39
3/21/2016	0.00	7.84	84.68	0.00	25.09	87.81	0.00	3.14	271.28	31.36
3/22/2016	0.00	10.98	51.75	0.00	144.27	114.47	0.00	6.27	370.07	23.52
3/23/2016	0.00	4.70	6.27	0.00	53.32	6.27	0.00	3.14	78.41	20.39
3/24/2016	0.00	1.57	3.14	0.00	10.98	1.57	0.00	1.57	21.95	4.70
3/25/2016	0.00	4.70	1.57	0.00	1.57	6.27	0.00	0.00	25.09	10.98
3/26/2016	0.00	3.14	1.57	0.00	12.54	6.27	0.00	1.57	43.91	9.41
3/27/2016	0.00	1.57	0.00	0.00	14.11	28.23	0.00	3.14	59.59	4.70
3/28/2016	0.00	4.70	3.14	0.00	4.70	14.11	0.00	1.57	51.75	3.14
3/29/2016	0.00	0.00	3.14	0.00	1.57	17.25	0.00	0.00	36.07	12.54
3/30/2016	0.00	0.00	0.00	0.00	1.57	3.14	0.00	1.57	12.54	1.57
3/31/2016	0.00	0.00	1.57	0.00	1.57	0.00	0.00	1.57	6.27	4.70
4/1/2016	0.00	0.00	0.00	0.00	0.00	3.14	0.00	1.57	3.14	4.70
4/2/2016	0.00	0.00	1.57	1.57	1.57	1.57	0.00	1.57	18.82	17.25
4/3/2016	0.00	0.00	0.00	0.00	3.14	9.41	0.00	3.14	21.95	3.14
4/4/2016	0.00	1.57	1.57	3.14	1.57	3.14	0.00	1.57	18.82	9.41
4/5/2016	0.00	3.14	1.57	1.57	3.14	14.11	0.00	4.70	31.36	23.52
4/6/2016	0.00	4.70	4.70	4.70	1.57	0.00	0.00	4.70	34.50	25.09

Missing Data = nd (not determined)

Appendix C: Mold Concentrations of Five Sites from April 2015-2016.

Table 13: Mold Concentrations (Spores/m^3) for Site A (Daily Counts from April 2015-2016).

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
4/7/2015	0.00	108.89	70.00	3.89	7.78	198.33
4/8/2015	3.89	124.44	81.67	15.56	3.89	245.00
4/9/2015	0.00	159.44	140.00	11.67	0.00	326.67
4/10/2015	3.89	132.22	175.00	15.56	3.89	346.11
4/11/2015	3.89	140.00	159.44	7.78	3.89	338.33
4/12/2015	3.89	217.78	81.67	15.56	7.78	346.11
4/13/2015	7.78	120.56	54.44	7.78	3.89	202.22
4/14/2015	7.78	163.33	97.22	15.56	7.78	315.00
4/15/2015	7.78	124.44	194.45	7.78	0.00	357.78
4/16/2015	3.89	108.89	175.00	7.78	3.89	315.00
4/17/2015	0.00	120.56	54.44	7.78	0.00	202.22
4/18/2015	7.78	108.89	120.56	3.89	0.00	260.56
4/19/2015	3.89	89.44	342.22	3.89	0.00	447.22
4/20/2015	3.89	159.44	365.56	3.89	7.78	571.67
4/21/2015	3.89	105.00	58.33	3.89	3.89	182.78
4/22/2015	3.89	132.22	198.33	15.56	7.78	385.00
4/23/2015	7.78	81.67	128.33	3.89	3.89	241.11
4/24/2015	3.89	147.78	159.44	3.89	0.00	334.45
4/25/2015	0.00	116.67	221.67	3.89	3.89	353.89
4/26/2015	3.89	198.33	260.56	7.78	3.89	501.67
4/27/2015	0.00	66.11	97.22	0.00	0.00	171.11
4/28/2015	3.89	132.22	237.22	0.00	3.89	404.45
4/29/2015	0.00	42.78	124.44	11.67	7.78	198.33
4/30/2015	3.89	93.33	175.00	7.78	3.89	303.33
5/1/2015	0.00	206.11	112.78	3.89	35.00	365.56
5/2/2015	3.89	159.44	132.22	7.78	3.89	318.89

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/3/2015	3.89	132.22	132.22	15.56	3.89	295.56
5/4/2015	3.89	159.44	175.00	7.78	3.89	369.45
5/5/2015	3.89	155.56	159.44	7.78	0.00	330.56
5/6/2015	3.89	136.11	120.56	7.78	3.89	283.89
5/7/2015	0.00	120.56	213.89	0.00	11.67	357.78
5/8/2015	3.89	186.67	241.11	3.89	7.78	462.78
5/9/2015	0.00	93.33	70.00	0.00	3.89	175.00
5/10/2015	3.89	120.56	97.22	3.89	0.00	248.89
5/11/2015	0.00	105.00	171.11	3.89	0.00	287.78
5/12/2015	3.89	147.78	159.44	7.78	3.89	342.22
5/13/2015	3.89	217.78	272.22	11.67	7.78	536.67
5/14/2015	3.89	256.67	318.89	3.89	7.78	614.45
5/15/2015	3.89	105.00	66.11	0.00	0.00	182.78
5/16/2015	3.89	237.22	186.67	3.89	0.00	447.22
5/17/2015	0.00	175.00	54.44	0.00	0.00	229.45
5/18/2015	0.00	147.78	108.89	3.89	0.00	272.22
5/19/2015	0.00	101.11	108.89	11.67	11.67	276.11
5/20/2015	3.89	147.78	140.00	7.78	3.89	330.56
5/21/2015	0.00	186.67	70.00	7.78	3.89	283.89
5/22/2015	3.89	210.00	256.67	7.78	3.89	497.78
5/23/2015	3.89	147.78	388.89	19.44	3.89	598.89
5/24/2015	3.89	159.44	326.67	7.78	15.56	540.56
5/25/2015	0.00	89.44	711.67	19.44	15.56	863.34
5/26/2015	3.89	186.67	447.22	15.56	3.89	680.56
5/27/2015	3.89	167.22	147.78	7.78	7.78	342.22
5/28/2015	3.89	198.33	217.78	15.56	7.78	466.67
5/29/2015	0.00	396.67	474.45	19.44	7.78	921.67
5/30/2015	3.89	353.89	447.22	7.78	7.78	859.45
5/31/2015	0.00	97.22	66.11	0.00	0.00	167.22

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
6/1/2015	3.89	124.44	159.44	3.89	0.00	307.22
6/2/2015	11.67	120.56	388.89	0.00	3.89	544.45
6/3/2015	3.89	175.00	315.00	7.78	3.89	528.89
6/4/2015	3.89	190.56	202.22	7.78	11.67	431.67
6/5/2015	3.89	175.00	256.67	7.78	3.89	478.33
6/6/2015	0.00	54.44	272.22	0.00	3.89	342.22
6/7/2015	3.89	108.89	326.67	3.89	0.00	466.67
6/8/2015	0.00	73.89	248.89	19.44	11.67	365.56
6/9/2015	3.89	132.22	303.33	15.56	7.78	490.00
6/10/2015	3.89	70.00	101.11	11.67	7.78	206.11
6/11/2015	3.89	186.67	225.56	7.78	3.89	451.11
6/12/2015	0.00	38.89	307.22	7.78	35.00	404.45
6/13/2015	3.89	132.22	248.89	3.89	15.56	427.78
6/14/2015	7.78	167.22	1038.34	27.22	11.67	1287.23
6/15/2015	3.89	225.56	447.22	15.56	7.78	723.34
6/16/2015	7.78	233.33	147.78	7.78	3.89	404.45
6/17/2015	3.89	198.33	175.00	3.89	7.78	412.22
6/18/2015	7.78	182.78	105.00	7.78	3.89	326.67
6/19/2015	3.89	120.56	159.44	7.78	7.78	318.89
6/20/2015	0.00	283.89	217.78	11.67	7.78	544.45
6/21/2015	3.89	264.45	159.44	7.78	15.56	474.45
6/22/2015	19.44	268.33	369.45	7.78	3.89	680.56
6/23/2015	3.89	280.00	447.22	7.78	3.89	773.89
6/24/2015	7.78	210.00	108.89	11.67	15.56	357.78
6/25/2015	3.89	159.44	186.67	3.89	7.78	381.11
6/26/2015	0.00	89.44	178.89	11.67	3.89	303.33
6/27/2015	3.89	120.56	264.45	3.89	0.00	416.11
6/28/2015	7.78	280.00	132.22	11.67	15.56	478.33
6/29/2015	3.89	237.22	186.67	15.56	3.89	478.33

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
6/30/2015	15.56	105.00	221.67	7.78	0.00	381.11
7/1/2015	7.78	186.67	120.56	3.89	0.00	353.89
7/2/2015	0.00	97.22	147.78	3.89	3.89	256.67
7/3/2015	3.89	159.44	175.00	3.89	0.00	353.89
7/4/2015	0.00	217.78	66.11	7.78	0.00	295.56
7/5/2015	3.89	159.44	171.11	3.89	0.00	361.67
7/6/2015	0.00	42.78	58.33	3.89	7.78	136.11
7/7/2015	3.89	81.67	81.67	3.89	0.00	194.45
7/8/2015	7.78	93.33	579.45	19.44	3.89	738.89
7/9/2015	3.89	124.44	241.11	3.89	0.00	396.67
7/10/2015	11.67	159.44	155.56	11.67	3.89	357.78
7/11/2015	7.78	147.78	175.00	3.89	7.78	365.56
7/12/2015	15.56	66.11	50.56	3.89	7.78	155.56
7/13/2015	7.78	81.67	58.33	3.89	0.00	186.67
7/14/2015	3.89	108.89	66.11	0.00	0.00	182.78
7/15/2015	3.89	120.56	81.67	3.89	0.00	225.56
7/16/2015	3.89	97.22	70.00	7.78	11.67	198.33
7/17/2015	7.78	147.78	81.67	3.89	3.89	264.45
7/18/2015	15.56	163.33	190.56	7.78	15.56	443.33
7/19/2015	7.78	120.56	198.33	7.78	3.89	369.45
7/20/2015	0.00	46.67	0.00	3.89	0.00	101.11
7/21/2015	7.78	42.78	58.33	3.89	7.78	147.78
7/22/2015	3.89	128.33	116.67	3.89	15.56	295.56
7/23/2015	3.89	81.67	93.33	3.89	0.00	217.78
7/24/2015	23.33	571.67	171.11	7.78	15.56	797.22
7/25/2015	7.78	381.11	213.89	3.89	0.00	645.56
7/26/2015	15.56	299.45	221.67	3.89	0.00	571.67
7/27/2015	7.78	447.22	159.44	3.89	3.89	641.67
7/28/2015	7.78	451.11	556.11	7.78	3.89	1057.78

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
7/29/2015	3.89	237.22	198.33	3.89	0.00	466.67
7/30/2015	3.89	140.00	147.78	3.89	0.00	311.11
7/31/2015	0.00	175.00	124.44	3.89	0.00	326.67
8/1/2015	15.56	70.00	186.67	7.78	0.00	361.67
8/2/2015	7.78	132.22	159.44	7.78	3.89	350.00
8/3/2015	19.44	105.00	225.56	11.67	11.67	400.56
8/4/2015	11.67	175.00	264.45	3.89	0.00	490.00
8/5/2015	7.78	252.78	89.44	3.89	3.89	365.56
8/6/2015	3.89	159.44	140.00	3.89	0.00	322.78
8/7/2015	0.00	66.11	85.56	11.67	23.33	213.89
8/8/2015	3.89	120.56	132.22	3.89	7.78	295.56
8/9/2015	3.89	112.78	66.11	3.89	11.67	221.67
8/10/2015	3.89	175.00	225.56	7.78	3.89	439.45
8/11/2015	11.67	210.00	97.22	3.89	15.56	361.67
8/12/2015	7.78	159.44	116.67	7.78	3.89	318.89
8/13/2015	3.89	66.11	248.89	11.67	3.89	373.33
8/14/2015	7.78	108.89	198.33	3.89	0.00	353.89
8/15/2015	11.67	97.22	85.56	3.89	15.56	248.89
8/16/2015	3.89	147.78	186.67	3.89	0.00	381.11
8/17/2015	3.89	237.22	50.56	0.00	3.89	318.89
8/18/2015	3.89	159.44	124.44	3.89	0.00	315.00
8/19/2015	15.56	330.56	186.67	7.78	15.56	575.56
8/20/2015	7.78	198.33	194.45	3.89	0.00	431.67
8/21/2015	3.89	272.22	132.22	19.44	7.78	458.89
8/22/2015	3.89	202.22	159.44	3.89	7.78	400.56
8/23/2015	0.00	194.45	70.00	0.00	19.44	307.22
8/24/2015	0.00	159.44	124.44	3.89	7.78	330.56
8/25/2015	11.67	108.89	54.44	7.78	7.78	206.11
8/26/2015	3.89	124.44	159.44	3.89	0.00	311.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
8/27/2015	3.89	132.22	105.00	23.33	11.67	326.67
8/28/2015	7.78	175.00	159.44	0.00	7.78	400.56
8/29/2015	0.00	252.78	136.11	15.56	19.44	470.56
8/30/2015	0.00	186.67	159.44	7.78	7.78	392.78
8/31/2015	7.78	124.44	66.11	7.78	23.33	260.56
9/1/2015	7.78	175.00	101.11	3.89	15.56	326.67
9/2/2015	19.44	151.67	70.00	0.00	7.78	268.33
9/3/2015	11.67	124.44	101.11	3.89	7.78	287.78
9/4/2015	7.78	97.22	58.33	11.67	3.89	194.45
9/5/2015	15.56	147.78	120.56	3.89	7.78	338.33
9/6/2015	15.56	256.67	124.44	19.44	15.56	458.89
9/7/2015	7.78	210.00	93.33	3.89	7.78	365.56
9/8/2015	0.00	143.89	81.67	7.78	3.89	241.11
9/9/2015	7.78	159.44	124.44	3.89	3.89	315.00
9/10/2015	7.78	272.22	50.56	3.89	11.67	388.89
9/11/2015	3.89	237.22	97.22	7.78	3.89	381.11
9/12/2015	7.78	175.00	233.33	15.56	23.33	501.67
9/13/2015	3.89	198.33	175.00	7.78	3.89	435.56
9/14/2015	11.67	155.56	443.33	11.67	15.56	676.67
9/15/2015	7.78	202.22	217.78	3.89	7.78	470.56
9/16/2015	7.78	54.44	73.89	3.89	19.44	186.67
9/17/2015	7.78	124.44	237.22	3.89	7.78	420.00
9/18/2015	3.89	256.67	136.11	3.89	3.89	412.22
9/19/2015	3.89	198.33	159.44	3.89	0.00	385.00
9/20/2015	0.00	206.11	233.33	11.67	15.56	525.00
9/21/2015	7.78	237.22	159.44	7.78	7.78	443.33
9/22/2015	15.56	248.89	97.22	15.56	15.56	427.78
9/23/2015	11.67	194.45	124.44	3.89	7.78	373.33
9/24/2015	3.89	381.11	120.56	11.67	23.33	587.22

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
9/25/2015	7.78	392.78	252.78	11.67	7.78	727.22
9/26/2015	85.56	688.34	186.67	15.56	38.89	1139.45
9/27/2015	42.78	381.11	241.11	7.78	7.78	773.89
9/28/2015	73.89	338.33	178.89	11.67	19.44	637.78
9/29/2015	81.67	408.33	202.22	3.89	7.78	762.22
9/30/2015	27.22	260.56	81.67	7.78	11.67	435.56
10/1/2015	23.33	291.67	159.44	7.78	3.89	544.45
10/2/2015	15.56	136.11	101.11	15.56	3.89	283.89
10/3/2015	50.56	198.33	108.89	15.56	7.78	416.11
10/4/2015	3.89	128.33	427.78	0.00	0.00	583.34
10/5/2015	15.56	248.89	318.89	3.89	0.00	626.11
10/6/2015	3.89	54.44	31.11	7.78	11.67	112.78
10/7/2015	7.78	159.44	124.44	7.78	0.00	326.67
10/8/2015	3.89	311.11	46.67	19.44	19.44	486.11
10/9/2015	7.78	241.11	147.78	15.56	7.78	455.00
10/10/2015	15.56	283.89	85.56	3.89	0.00	451.11
10/11/2015	7.78	252.78	175.00	3.89	0.00	474.45
10/12/2015	15.56	509.45	186.67	19.44	19.44	797.22
10/13/2015	15.56	381.11	202.22	15.56	0.00	657.22
10/14/2015	19.44	338.33	190.56	15.56	23.33	633.89
10/15/2015	11.67	353.89	198.33	11.67	11.67	637.78
10/16/2015	7.78	225.56	70.00	11.67	0.00	361.67
10/17/2015	7.78	89.44	93.33	15.56	15.56	248.89
10/18/2015	0.00	140.00	77.78	11.67	7.78	248.89
10/19/2015	0.00	155.56	101.11	11.67	3.89	295.56
10/20/2015	11.67	326.67	70.00	7.78	23.33	552.22
10/21/2015	7.78	276.11	81.67	15.56	7.78	443.33
10/22/2015	11.67	291.67	132.22	15.56	27.22	513.33
10/23/2015	7.78	248.89	101.11	15.56	7.78	416.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
10/24/2015	3.89	237.22	155.56	7.78	27.22	462.78
10/25/2015	3.89	225.56	175.00	15.56	7.78	470.56
10/26/2015	15.56	334.45	136.11	15.56	38.89	598.89
10/27/2015	3.89	287.78	163.33	15.56	7.78	528.89
10/28/2015	7.78	291.67	178.89	23.33	19.44	591.11
10/29/2015	7.78	287.78	171.11	23.33	27.22	567.78
10/30/2015	3.89	241.11	124.44	15.56	23.33	427.78
10/31/2015	11.67	93.33	77.78	19.44	7.78	217.78
11/1/2015	3.89	124.44	101.11	15.56	7.78	272.22
11/2/2015	3.89	163.33	124.44	15.56	15.56	342.22
11/3/2015	0.00	147.78	77.78	15.56	11.67	287.78
11/4/2015	3.89	210.00	93.33	7.78	7.78	338.33
11/5/2015	3.89	101.11	81.67	15.56	7.78	225.56
11/6/2015	0.00	159.44	120.56	7.78	7.78	318.89
11/7/2015	0.00	105.00	93.33	3.89	7.78	221.67
11/8/2015	3.89	108.89	97.22	15.56	15.56	260.56
11/9/2015	3.89	171.11	108.89	19.44	11.67	365.56
11/10/2015	3.89	73.89	101.11	15.56	19.44	245.00
11/11/2015	3.89	58.33	81.67	19.44	7.78	194.45
11/12/2015	3.89	93.33	120.56	19.44	19.44	276.11
11/13/2015	3.89	85.56	124.44	23.33	7.78	283.89
11/14/2015	11.67	97.22	128.33	15.56	7.78	291.67
11/15/2015	3.89	81.67	97.22	7.78	7.78	213.89
11/16/2015	3.89	132.22	217.78	23.33	23.33	435.56
11/17/2015	3.89	120.56	171.11	15.56	7.78	338.33
11/18/2015	0.00	85.56	175.00	15.56	15.56	318.89
11/19/2015	3.89	70.00	101.11	7.78	7.78	198.33
11/20/2015	0.00	81.67	132.22	15.56	7.78	248.89
11/21/2015	0.00	97.22	132.22	7.78	11.67	272.22

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
11/22/2015	3.89	70.00	81.67	7.78	7.78	178.89
11/23/2015	0.00	116.67	93.33	3.89	3.89	225.56
11/24/2015	0.00	132.22	101.11	15.56	11.67	280.00
11/25/2015	0.00	58.33	120.56	11.67	15.56	225.56
11/26/2015	nd	nd	nd	nd	nd	nd
11/27/2015	0.00	97.22	81.67	11.67	7.78	217.78
11/28/2015	0.00	128.33	112.78	3.89	7.78	264.45
11/29/2015	0.00	108.89	120.56	7.78	7.78	252.78
11/30/2015	0.00	93.33	81.67	15.56	15.56	217.78
12/1/2015	0.00	101.11	81.67	11.67	3.89	213.89
12/2/2015	3.89	93.33	85.56	7.78	7.78	225.56
12/3/2015	0.00	132.22	77.78	15.56	11.67	260.56
12/4/2015	0.00	81.67	120.56	15.56	7.78	241.11
12/5/2015	0.00	50.56	54.44	7.78	3.89	128.33
12/6/2015	0.00	81.67	58.33	15.56	7.78	186.67
12/7/2015	0.00	124.44	108.89	7.78	3.89	276.11
12/8/2015	0.00	70.00	105.00	15.56	11.67	221.67
12/9/2015	0.00	81.67	93.33	11.67	7.78	213.89
12/10/2015	0.00	58.33	81.67	7.78	7.78	163.33
12/11/2015	0.00	108.89	81.67	11.67	7.78	229.45
12/12/2015	0.00	93.33	73.89	15.56	7.78	206.11
12/13/2015	0.00	46.67	58.33	7.78	3.89	120.56
12/14/2015	0.00	58.33	81.67	11.67	7.78	167.22
12/15/2015	0.00	66.11	143.89	11.67	15.56	252.78
12/16/2015	0.00	38.89	19.44	7.78	3.89	73.89
12/17/2015	0.00	31.11	38.89	15.56	7.78	105.00
12/18/2015	0.00	3.89	7.78	3.89	0.00	15.56
12/19/2015	0.00	38.89	58.33	7.78	3.89	112.78
12/20/2015	3.89	46.67	50.56	11.67	15.56	147.78

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
12/21/2015	0.00	38.89	42.78	7.78	11.67	112.78
12/22/2015	3.89	70.00	50.56	11.67	11.67	155.56
12/23/2015	0.00	42.78	38.89	7.78	7.78	108.89
12/24/2015	0.00	42.78	46.67	15.56	70.00	190.56
12/25/2015	3.89	42.78	54.44	7.78	23.33	155.56
12/26/2015	0.00	54.44	35.00	7.78	7.78	116.67
12/27/2015	0.00	46.67	58.33	15.56	3.89	128.33
12/28/2015	0.00	50.56	101.11	19.44	3.89	194.45
12/29/2015	3.89	81.67	58.33	23.33	7.78	182.78
12/30/2015	0.00	42.78	70.00	19.44	11.67	159.44
12/31/2015	0.00	58.33	42.78	11.67	3.89	136.11
1/1/2016	0.00	46.67	58.33	15.56	7.78	143.89
1/2/2016	0.00	31.11	38.89	3.89	3.89	81.67
1/3/2016	3.89	70.00	81.67	7.78	3.89	175.00
1/4/2016	3.89	105.00	108.89	11.67	11.67	252.78
1/5/2016	0.00	42.78	58.33	7.78	11.67	132.22
1/6/2016	0.00	50.56	108.89	15.56	3.89	194.45
1/7/2016	0.00	23.33	15.56	3.89	0.00	46.67
1/8/2016	0.00	15.56	15.56	3.89	3.89	46.67
1/9/2016	0.00	23.33	23.33	3.89	3.89	62.22
1/10/2016	0.00	42.78	58.33	7.78	3.89	120.56
1/11/2016	0.00	58.33	42.78	3.89	3.89	112.78
1/12/2016	0.00	46.67	38.89	7.78	3.89	105.00
1/13/2016	7.78	23.33	31.11	7.78	7.78	85.56
1/14/2016	3.89	42.78	46.67	7.78	3.89	112.78
1/15/2016	3.89	38.89	46.67	3.89	7.78	108.89
1/16/2016	0.00	31.11	54.44	15.56	19.44	132.22
1/17/2016	0.00	7.78	19.44	3.89	0.00	38.89
1/18/2016	0.00	66.11	62.22	7.78	7.78	159.44

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/19/2016	0.00	23.33	15.56	3.89	7.78	62.22
1/20/2016	0.00	46.67	42.78	7.78	3.89	105.00
1/21/2016	0.00	35.00	15.56	0.00	3.89	54.44
1/22/2016	0.00	23.33	19.44	3.89	7.78	66.11
1/23/2016	0.00	35.00	15.56	3.89	3.89	62.22
1/24/2016	0.00	42.78	38.89	3.89	7.78	101.11
1/25/2016	3.89	54.44	73.89	3.89	3.89	155.56
1/26/2016	0.00	42.78	58.33	7.78	3.89	120.56
1/27/2016	0.00	27.22	38.89	0.00	0.00	73.89
1/28/2016	0.00	46.67	42.78	3.89	0.00	97.22
1/29/2016	0.00	23.33	38.89	3.89	7.78	85.56
1/30/2016	0.00	77.78	46.67	7.78	0.00	140.00
1/31/2016	0.00	62.22	38.89	7.78	3.89	120.56
2/1/2016	0.00	23.33	15.56	7.78	3.89	54.44
2/2/2016	0.00	70.00	124.44	15.56	11.67	245.00
2/3/2016	0.00	70.00	101.11	7.78	11.67	206.11
2/4/2016	0.00	42.78	97.22	15.56	11.67	182.78
2/5/2016	0.00	46.67	120.56	15.56	7.78	210.00
2/6/2016	0.00	50.56	54.44	15.56	11.67	147.78
2/7/2016	3.89	70.00	81.67	15.56	7.78	190.56
2/8/2016	3.89	101.11	101.11	15.56	19.44	256.67
2/9/2016	0.00	62.22	42.78	7.78	3.89	132.22
2/10/2016	0.00	70.00	38.89	7.78	11.67	140.00
2/11/2016	3.89	42.78	58.33	11.67	7.78	143.89
2/12/2016	0.00	46.67	42.78	11.67	3.89	120.56
2/13/2016	0.00	58.33	62.22	7.78	3.89	140.00
2/14/2016	0.00	151.67	54.44	7.78	23.33	252.78
2/15/2016	0.00	93.33	120.56	15.56	7.78	252.78
2/16/2016	0.00	81.67	66.11	7.78	7.78	175.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
2/17/2016	0.00	81.67	124.44	15.56	7.78	241.11
2/18/2016	0.00	116.67	50.56	7.78	3.89	198.33
2/19/2016	3.89	108.89	124.44	7.78	3.89	260.56
2/20/2016	0.00	128.33	46.67	15.56	7.78	210.00
2/21/2016	0.00	81.67	93.33	15.56	7.78	213.89
2/22/2016	0.00	93.33	85.56	19.44	15.56	229.45
2/23/2016	0.00	81.67	101.11	15.56	15.56	221.67
2/24/2016	3.89	132.22	112.78	15.56	7.78	287.78
2/25/2016	0.00	97.22	93.33	7.78	15.56	241.11
2/26/2016	0.00	62.22	97.22	7.78	11.67	186.67
2/27/2016	3.89	81.67	120.56	15.56	7.78	248.89
2/28/2016	0.00	147.78	54.44	7.78	7.78	237.22
2/29/2016	0.00	81.67	93.33	7.78	3.89	198.33
3/1/2016	3.89	167.22	128.33	3.89	7.78	322.78
3/2/2016	3.89	163.33	124.44	11.67	7.78	322.78
3/3/2016	0.00	128.33	252.78	15.56	11.67	439.45
3/4/2016	0.00	101.11	163.33	7.78	11.67	303.33
3/5/2016	3.89	120.56	163.33	15.56	15.56	338.33
3/6/2016	0.00	120.56	124.44	15.56	15.56	303.33
3/7/2016	3.89	143.89	198.33	7.78	3.89	369.45
3/8/2016	0.00	163.33	241.11	7.78	7.78	435.56
3/9/2016	0.00	93.33	175.00	15.56	7.78	315.00
3/10/2016	0.00	81.67	120.56	7.78	3.89	225.56
3/11/2016	0.00	163.33	159.44	7.78	7.78	346.11
3/12/2016	0.00	198.33	120.56	7.78	3.89	350.00
3/13/2016	0.00	245.00	365.56	7.78	3.89	633.89
3/14/2016	3.89	108.89	210.00	15.56	15.56	381.11
3/15/2016	3.89	206.11	241.11	3.89	11.67	493.89
3/16/2016	7.78	171.11	202.22	3.89	7.78	416.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
3/17/2016	3.89	225.56	186.67	15.56	7.78	458.89
3/18/2016	0.00	159.44	202.22	3.89	7.78	392.78
3/19/2016	0.00	93.33	42.78	7.78	3.89	167.22
3/20/2016	0.00	120.56	58.33	7.78	3.89	221.67
3/21/2016	0.00	140.00	233.33	7.78	7.78	423.89
3/22/2016	0.00	93.33	202.22	7.78	15.56	350.00
3/23/2016	7.78	509.45	400.56	15.56	19.44	980.00
3/24/2016	3.89	392.78	381.11	15.56	7.78	832.22
3/25/2016	0.00	46.67	97.22	7.78	3.89	171.11
3/26/2016	0.00	81.67	108.89	7.78	3.89	221.67
3/27/2016	0.00	85.56	112.78	3.89	3.89	217.78
3/28/2016	3.89	124.44	81.67	7.78	3.89	233.33
3/29/2016	0.00	151.67	70.00	3.89	7.78	260.56
3/30/2016	3.89	81.67	97.22	7.78	15.56	241.11
3/31/2016	0.00	108.89	194.45	3.89	15.56	330.56
4/1/2016	0.00	120.56	159.44	15.56	7.78	326.67
4/2/2016	0.00	23.33	42.78	3.89	7.78	85.56
4/3/2016	0.00	23.33	38.89	3.89	0.00	77.78
4/4/2016	0.00	42.78	58.33	7.78	15.56	147.78
4/5/2016	0.00	66.11	73.89	7.78	11.67	167.22
4/6/2016	3.89	85.56	132.22	3.89	7.78	252.78

Missing Data = nd (not determined)

Table 14: Mold Concentrations (Spores/m^3) for Site B (Daily Counts from April 2015-2016).

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
4/7/2015	0.00	73.89	97.22	19.44	7.78	213.89
4/8/2015	3.89	81.67	89.44	11.67	7.78	210.00
4/9/2015	0.00	124.44	128.33	7.78	3.89	295.56
4/10/2015	0.00	93.33	58.33	7.78	3.89	182.78
4/11/2015	0.00	62.22	46.67	19.44	7.78	147.78
4/12/2015	0.00	210.00	112.78	23.33	7.78	373.33
4/13/2015	3.89	120.56	93.33	3.89	15.56	252.78
4/14/2015	3.89	143.89	159.44	19.44	3.89	353.89
4/15/2015	0.00	151.67	260.56	15.56	11.67	462.78
4/16/2015	11.67	66.11	105.00	11.67	3.89	202.22
4/17/2015	0.00	97.22	93.33	3.89	0.00	210.00
4/18/2015	0.00	85.56	136.11	7.78	3.89	241.11
4/19/2015	3.89	136.11	128.33	3.89	3.89	303.33
4/20/2015	3.89	62.22	108.89	3.89	3.89	186.67
4/21/2015	0.00	89.44	93.33	7.78	11.67	213.89
4/22/2015	7.78	136.11	178.89	3.89	7.78	338.33
4/23/2015	3.89	120.56	159.44	7.78	3.89	311.11
4/24/2015	7.78	155.56	62.22	11.67	7.78	256.67
4/25/2015	7.78	70.00	38.89	3.89	7.78	136.11
4/26/2015	11.67	252.78	89.44	7.78	11.67	385.00
4/27/2015	176.44	38.89	225.56	19.44	11.67	491.44
4/28/2015	0.00	116.67	598.89	11.67	3.89	758.34
4/29/2015	3.89	81.67	318.89	15.56	7.78	447.22
4/30/2015	0.00	210.00	225.56	7.78	15.56	486.11
5/1/2015	11.67	346.11	283.89	7.78	7.78	680.56
5/2/2015	3.89	295.56	213.89	3.89	7.78	548.33

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/3/2015	7.78	241.11	159.44	15.56	15.56	474.45
5/4/2015	3.89	280.00	159.44	11.67	3.89	497.78
5/5/2015	0.00	124.44	143.89	19.44	7.78	311.11
5/6/2015	0.00	252.78	147.78	7.78	7.78	435.56
5/7/2015	0.00	159.44	97.22	15.56	7.78	318.89
5/8/2015	3.89	210.00	163.33	15.56	15.56	427.78
5/9/2015	0.00	89.44	70.00	7.78	3.89	190.56
5/10/2015	3.89	62.22	85.56	15.56	7.78	202.22
5/11/2015	3.89	66.11	210.00	11.67	3.89	315.00
5/12/2015	0.00	3.89	108.89	15.56	7.78	252.78
5/13/2015	7.78	237.22	217.78	19.44	3.89	536.67
5/14/2015	3.89	210.00	159.44	15.56	3.89	412.22
5/15/2015	0.00	93.33	124.44	15.56	15.56	280.00
5/16/2015	7.78	225.56	163.33	15.56	15.56	455.00
5/17/2015	0.00	143.89	198.33	7.78	0.00	381.11
5/18/2015	3.89	81.67	171.11	15.56	15.56	303.33
5/19/2015	0.00	50.56	147.78	15.56	3.89	229.45
5/20/2015	0.00	93.33	58.33	7.78	3.89	182.78
5/21/2015	3.89	221.67	93.33	7.78	0.00	346.11
5/22/2015	0.00	132.22	120.56	3.89	7.78	287.78
5/23/2015	3.89	70.00	124.44	19.44	7.78	237.22
5/24/2015	0.00	50.56	132.22	7.78	11.67	210.00
5/25/2015	0.00	120.56	93.33	7.78	3.89	237.22
5/26/2015	3.89	128.33	140.00	7.78	3.89	291.67
5/27/2015	3.89	93.33	159.44	3.89	0.00	272.22
5/28/2015	0.00	217.78	497.78	0.00	7.78	754.45
5/29/2015	0.00	159.44	365.56	3.89	7.78	556.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/30/2015	0.00	116.67	58.33	0.00	3.89	182.78
5/31/2015	0.00	159.44	81.67	3.89	0.00	252.78
6/1/2015	0.00	190.56	93.33	15.56	7.78	307.22
6/2/2015	0.00	147.78	120.56	15.56	7.78	307.22
6/3/2015	3.89	256.67	159.44	7.78	3.89	443.33
6/4/2015	0.00	210.00	132.22	3.89	0.00	369.45
6/5/2015	0.00	101.11	233.33	15.56	11.67	373.33
6/6/2015	0.00	120.56	210.00	11.67	7.78	369.45
6/7/2015	3.89	108.89	213.89	11.67	7.78	353.89
6/8/2015	0.00	58.33	46.67	7.78	7.78	132.22
6/9/2015	0.00	108.89	132.22	7.78	3.89	268.33
6/10/2015	0.00	62.22	81.67	15.56	3.89	175.00
6/11/2015	0.00	73.89	186.67	19.44	3.89	295.56
6/12/2015	0.00	93.33	198.33	15.56	7.78	330.56
6/13/2015	3.89	93.33	159.44	11.67	3.89	291.67
6/14/2015	0.00	225.56	326.67	31.11	7.78	614.45
6/15/2015	3.89	175.00	598.89	15.56	7.78	824.45
6/16/2015	0.00	241.11	412.22	15.56	15.56	700.00
6/17/2015	3.89	217.78	194.45	3.89	11.67	447.22
6/18/2015	0.00	159.44	237.22	15.56	7.78	435.56
6/19/2015	3.89	120.56	326.67	11.67	3.89	474.45
6/20/2015	15.56	283.89	322.78	3.89	0.00	637.78
6/21/2015	7.78	202.22	264.45	7.78	0.00	497.78
6/22/2015	3.89	299.45	225.56	7.78	7.78	552.22
6/23/2015	0.00	248.89	159.44	3.89	7.78	427.78
6/24/2015	0.00	252.78	159.44	7.78	3.89	439.45
6/25/2015	0.00	202.22	182.78	3.89	3.89	420.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
6/26/2015	3.89	175.00	225.56	3.89	7.78	439.45
6/27/2015	3.89	186.67	318.89	7.78	7.78	540.56
6/28/2015	15.56	431.67	206.11	11.67	7.78	696.11
6/29/2015	7.78	330.56	186.67	7.78	7.78	567.78
6/30/2015	0.00	342.22	248.89	11.67	3.89	626.11
7/1/2015	0.00	229.45	307.22	38.89	11.67	610.56
7/2/2015	7.78	264.45	381.11	23.33	7.78	723.34
7/3/2015	3.89	357.78	287.78	15.56	7.78	692.22
7/4/2015	3.89	124.44	136.11	0.00	0.00	264.45
7/5/2015	3.89	186.67	210.00	7.78	3.89	423.89
7/6/2015	3.89	264.45	198.33	7.78	7.78	497.78
7/7/2015	27.22	182.78	291.67	3.89	15.56	548.33
7/8/2015	3.89	365.56	241.11	15.56	7.78	653.34
7/9/2015	3.89	315.00	202.22	7.78	3.89	552.22
7/10/2015	3.89	478.33	186.67	11.67	7.78	735.00
7/11/2015	19.44	186.67	120.56	11.67	7.78	353.89
7/12/2015	7.78	124.44	159.44	15.56	7.78	342.22
7/13/2015	11.67	210.00	171.11	15.56	7.78	443.33
7/14/2015	0.00	105.00	66.11	23.33	3.89	217.78
7/15/2015	3.89	124.44	108.89	7.78	3.89	272.22
7/16/2015	0.00	136.11	163.33	15.56	7.78	342.22
7/17/2015	0.00	171.11	132.22	11.67	19.44	400.56
7/18/2015	7.78	136.11	198.33	3.89	11.67	392.78
7/19/2015	3.89	147.78	225.56	3.89	7.78	423.89
7/20/2015	7.78	108.89	147.78	19.44	7.78	299.45
7/21/2015	3.89	163.33	171.11	7.78	3.89	369.45
7/22/2015	7.78	120.56	108.89	15.56	3.89	280.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
7/23/2015	7.78	190.56	66.11	15.56	19.44	377.22
7/24/2015	7.78	248.89	120.56	11.67	7.78	443.33
7/25/2015	3.89	120.56	416.11	11.67	11.67	587.22
7/26/2015	7.78	186.67	342.22	3.89	11.67	575.56
7/27/2015	3.89	264.45	280.00	11.67	11.67	595.00
7/28/2015	11.67	311.11	326.67	3.89	11.67	692.22
7/29/2015	3.89	303.33	408.33	7.78	7.78	754.45
7/30/2015	3.89	159.44	353.89	19.44	7.78	567.78
7/31/2015	3.89	241.11	427.78	11.67	7.78	719.45
8/1/2015	7.78	112.78	108.89	23.33	15.56	283.89
8/2/2015	3.89	163.33	155.56	15.56	7.78	373.33
8/3/2015	3.89	147.78	159.44	15.56	15.56	361.67
8/4/2015	0.00	136.11	202.22	15.56	7.78	385.00
8/5/2015	7.78	303.33	116.67	27.22	23.33	497.78
8/6/2015	3.89	237.22	159.44	7.78	3.89	439.45
8/7/2015	0.00	73.89	311.11	19.44	3.89	423.89
8/8/2015	11.67	175.00	186.67	11.67	7.78	412.22
8/9/2015	11.67	175.00	50.56	11.67	7.78	268.33
8/10/2015	7.78	198.33	120.56	7.78	7.78	365.56
8/11/2015	27.22	287.78	105.00	15.56	15.56	486.11
8/12/2015	23.33	225.56	186.67	15.56	7.78	505.56
8/13/2015	0.00	143.89	151.67	15.56	31.11	431.67
8/14/2015	0.00	171.11	116.67	15.56	15.56	361.67
8/15/2015	27.22	163.33	116.67	15.56	35.00	416.11
8/16/2015	15.56	147.78	225.56	11.67	15.56	455.00
8/17/2015	11.67	256.67	217.78	11.67	7.78	614.45
8/18/2015	15.56	210.00	256.67	15.56	3.89	560.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
8/19/2015	3.89	287.78	252.78	11.67	35.00	637.78
8/20/2015	3.89	202.22	198.33	15.56	23.33	482.22
8/21/2015	27.22	287.78	105.00	15.56	15.56	486.11
8/22/2015	23.33	225.56	186.67	15.56	7.78	505.56
8/23/2015	11.67	175.00	50.56	11.67	7.78	268.33
8/24/2015	7.78	198.33	120.56	7.78	7.78	365.56
8/25/2015	11.67	175.00	186.67	11.67	7.78	412.22
8/26/2015	3.89	112.78	93.33	7.78	0.00	229.45
8/27/2015	7.78	120.56	186.67	11.67	7.78	373.33
8/28/2015	0.00	101.11	124.44	3.89	19.44	276.11
8/29/2015	3.89	147.78	171.11	7.78	11.67	373.33
8/30/2015	0.00	233.33	182.78	19.44	11.67	462.78
8/31/2015	0.00	159.44	124.44	7.78	3.89	311.11
9/1/2015	3.89	322.78	136.11	19.44	15.56	528.89
9/2/2015	0.00	241.11	163.33	15.56	7.78	466.67
9/3/2015	0.00	268.33	101.11	7.78	15.56	486.11
9/4/2015	3.89	318.89	198.33	15.56	7.78	602.78
9/5/2015	7.78	93.33	85.56	0.00	0.00	202.22
9/6/2015	3.89	147.78	159.44	15.56	7.78	369.45
9/7/2015	0.00	124.44	50.56	7.78	7.78	206.11
9/8/2015	3.89	159.44	108.89	11.67	3.89	303.33
9/9/2015	3.89	210.00	85.56	7.78	7.78	330.56
9/10/2015	3.89	159.44	132.22	7.78	3.89	338.33
9/11/2015	3.89	132.22	143.89	19.44	11.67	338.33
9/12/2015	0.00	159.44	147.78	15.56	7.78	350.00
9/13/2015	3.89	112.78	213.89	11.67	19.44	404.45
9/14/2015	0.00	175.00	186.67	15.56	7.78	412.22

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
9/15/2015	0.00	206.11	120.56	27.22	11.67	381.11
9/16/2015	3.89	171.11	163.33	15.56	11.67	396.67
9/17/2015	0.00	283.89	167.22	7.78	7.78	579.45
9/18/2015	3.89	225.56	198.33	15.56	7.78	493.89
9/19/2015	3.89	221.67	124.44	0.00	7.78	365.56
9/20/2015	3.89	264.45	159.44	7.78	7.78	478.33
9/21/2015	0.00	73.89	136.11	3.89	7.78	225.56
9/22/2015	3.89	132.22	171.11	7.78	3.89	338.33
9/23/2015	3.89	342.22	73.89	15.56	23.33	466.67
9/24/2015	3.89	248.89	101.11	15.56	7.78	404.45
9/25/2015	7.78	182.78	93.33	3.89	11.67	315.00
9/26/2015	3.89	202.22	147.78	7.78	3.89	396.67
9/27/2015	3.89	392.78	198.33	15.56	11.67	672.78
9/28/2015	19.44	315.00	163.33	11.67	7.78	544.45
9/29/2015	3.89	58.33	77.78	0.00	11.67	190.56
9/30/2015	3.89	140.00	159.44	7.78	3.89	338.33
10/1/2015	7.78	334.45	101.11	11.67	0.00	595.00
10/2/2015	3.89	248.89	147.78	15.56	3.89	462.78
10/3/2015	3.89	105.00	128.33	11.67	27.22	287.78
10/4/2015	7.78	186.67	202.22	15.56	15.56	451.11
10/5/2015	0.00	93.33	132.22	7.78	15.56	260.56
10/6/2015	0.00	58.33	108.89	11.67	7.78	210.00
10/7/2015	7.78	42.78	101.11	23.33	15.56	202.22
10/8/2015	3.89	108.89	120.56	15.56	7.78	280.00
10/9/2015	7.78	182.78	175.00	7.78	7.78	431.67
10/10/2015	3.89	124.44	225.56	15.56	7.78	400.56
10/11/2015	19.44	369.45	105.00	19.44	15.56	563.89

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
10/12/2015	3.89	326.67	132.22	15.56	15.56	521.11
10/13/2015	11.67	171.11	260.56	7.78	15.56	513.33
10/14/2015	7.78	120.56	264.45	15.56	7.78	466.67
10/15/2015	19.44	194.45	97.22	7.78	23.33	451.11
10/16/2015	7.78	256.67	147.78	15.56	15.56	501.67
10/17/2015	11.67	77.78	58.33	7.78	7.78	178.89
10/18/2015	3.89	159.44	198.33	15.56	7.78	412.22
10/19/2015	7.78	147.78	178.89	3.89	15.56	408.33
10/20/2015	7.78	171.11	225.56	15.56	7.78	470.56
10/21/2015	3.89	140.00	198.33	3.89	15.56	381.11
10/22/2015	3.89	186.67	198.33	15.56	7.78	443.33
10/23/2015	11.67	202.22	70.00	0.00	11.67	326.67
10/24/2015	3.89	155.56	221.67	11.67	19.44	478.33
10/25/2015	7.78	202.22	202.22	7.78	15.56	470.56
10/26/2015	3.89	217.78	167.22	19.44	23.33	548.33
10/27/2015	3.89	241.11	202.22	15.56	7.78	536.67
10/28/2015	11.67	248.89	140.00	27.22	15.56	540.56
10/29/2015	7.78	198.33	93.33	15.56	7.78	357.78
10/30/2015	7.78	151.67	447.22	31.11	11.67	700.00
10/31/2015	3.89	136.11	315.00	19.44	7.78	521.11
11/1/2015	7.78	120.56	81.67	15.56	11.67	346.11
11/2/2015	3.89	108.89	97.22	15.56	15.56	276.11
11/3/2015	3.89	101.11	58.33	23.33	23.33	245.00
11/4/2015	0.00	93.33	120.56	15.56	19.44	287.78
11/5/2015	0.00	70.00	81.67	23.33	7.78	217.78
11/6/2015	0.00	81.67	108.89	15.56	15.56	241.11
11/7/2015	3.89	93.33	101.11	19.44	7.78	241.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
11/8/2015	0.00	70.00	225.56	7.78	11.67	326.67
11/9/2015	0.00	58.33	159.44	7.78	7.78	252.78
11/10/2015	7.78	93.33	198.33	15.56	15.56	361.67
11/11/2015	3.89	85.56	58.33	15.56	15.56	190.56
11/12/2015	0.00	70.00	81.67	23.33	23.33	213.89
11/13/2015	0.00	101.11	101.11	19.44	15.56	264.45
11/14/2015	0.00	81.67	58.33	15.56	19.44	198.33
11/15/2015	3.89	101.11	116.67	15.56	23.33	283.89
11/16/2015	3.89	81.67	85.56	15.56	15.56	213.89
11/17/2015	3.89	93.33	124.44	23.33	7.78	280.00
11/18/2015	0.00	108.89	124.44	15.56	7.78	272.22
11/19/2015	7.78	120.56	101.11	15.56	19.44	276.11
11/20/2015	3.89	124.44	62.22	3.89	11.67	245.00
11/21/2015	3.89	108.89	81.67	7.78	7.78	237.22
11/22/2015	0.00	93.33	147.78	3.89	7.78	264.45
11/23/2015	0.00	85.56	120.56	7.78	7.78	252.78
11/24/2015	3.89	108.89	101.11	15.56	15.56	276.11
11/25/2015	11.67	143.89	116.67	23.33	15.56	369.45
11/26/2015	7.78	120.56	101.11	15.56	15.56	283.89
11/27/2015	3.89	85.56	93.33	7.78	7.78	210.00
11/28/2015	3.89	112.78	81.67	15.56	15.56	241.11
11/29/2015	0.00	97.22	70.00	7.78	15.56	198.33
11/30/2015	0.00	70.00	81.67	19.44	7.78	190.56
12/1/2015	3.89	97.22	108.89	7.78	7.78	252.78
12/2/2015	3.89	132.22	97.22	19.44	19.44	299.45
12/3/2015	0.00	85.56	93.33	15.56	7.78	217.78
12/4/2015	0.00	85.56	58.33	11.67	11.67	194.45

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
12/5/2015	0.00	42.78	81.67	7.78	3.89	151.67
12/6/2015	0.00	35.00	77.78	7.78	3.89	136.11
12/7/2015	0.00	46.67	81.67	7.78	3.89	151.67
12/8/2015	0.00	58.33	42.78	7.78	15.56	143.89
12/9/2015	0.00	42.78	58.33	15.56	7.78	147.78
12/10/2015	3.89	70.00	70.00	19.44	7.78	206.11
12/11/2015	3.89	58.33	124.44	15.56	7.78	229.45
12/12/2015	3.89	58.33	42.78	7.78	3.89	124.44
12/13/2015	0.00	38.89	31.11	3.89	3.89	81.67
12/14/2015	3.89	46.67	58.33	15.56	7.78	140.00
12/15/2015	0.00	38.89	42.78	15.56	7.78	116.67
12/16/2015	3.89	42.78	85.56	3.89	3.89	151.67
12/17/2015	0.00	38.89	58.33	11.67	7.78	128.33
12/18/2015	0.00	42.78	66.11	7.78	7.78	132.22
12/19/2015	3.89	46.67	85.56	7.78	7.78	163.33
12/20/2015	3.89	46.67	27.22	0.00	3.89	97.22
12/21/2015	3.89	58.33	46.67	7.78	3.89	128.33
12/22/2015	0.00	31.11	42.78	11.67	7.78	101.11
12/23/2015	0.00	46.67	58.33	15.56	15.56	155.56
12/24/2015	3.89	77.78	70.00	3.89	7.78	186.67
12/25/2015	0.00	70.00	58.33	7.78	3.89	155.56
12/26/2015	0.00	46.67	58.33	15.56	7.78	143.89
12/27/2015	0.00	81.67	97.22	7.78	7.78	206.11
12/28/2015	0.00	50.56	58.33	0.00	0.00	112.78
12/29/2015	0.00	42.78	54.44	3.89	3.89	105.00
12/30/2015	0.00	38.89	15.56	3.89	0.00	58.33
12/31/2015	0.00	42.78	46.67	3.89	3.89	105.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/1/2016	0.00	54.44	143.89	3.89	3.89	210.00
1/2/2016	0.00	42.78	46.67	3.89	0.00	101.11
1/3/2016	0.00	38.89	31.11	3.89	3.89	81.67
1/4/2016	0.00	42.78	58.33	3.89	3.89	116.67
1/5/2016	3.89	19.44	77.78	7.78	11.67	128.33
1/6/2016	0.00	23.33	27.22	7.78	7.78	70.00
1/7/2016	0.00	38.89	42.78	3.89	7.78	105.00
1/8/2016	0.00	23.33	31.11	3.89	3.89	70.00
1/9/2016	0.00	19.44	38.89	7.78	3.89	70.00
1/10/2016	0.00	15.56	42.78	7.78	7.78	89.44
1/11/2016	0.00	23.33	42.78	3.89	7.78	85.56
1/12/2016	0.00	42.78	46.67	7.78	3.89	108.89
1/13/2016	0.00	62.22	46.67	15.56	7.78	143.89
1/14/2016	0.00	73.89	50.56	7.78	0.00	147.78
1/15/2016	0.00	42.78	58.33	7.78	3.89	120.56
1/16/2016	0.00	35.00	31.11	11.67	11.67	97.22
1/17/2016	0.00	42.78	46.67	7.78	7.78	108.89
1/18/2016	0.00	23.33	46.67	15.56	15.56	116.67
1/19/2016	0.00	42.78	46.67	3.89	3.89	108.89
1/20/2016	0.00	54.44	46.67	3.89	3.89	120.56
1/21/2016	0.00	42.78	31.11	3.89	7.78	97.22
1/22/2016	0.00	27.22	23.33	0.00	3.89	62.22
1/23/2016	0.00	31.11	42.78	3.89	7.78	97.22
1/24/2016	0.00	38.89	19.44	3.89	3.89	70.00
1/25/2016	0.00	23.33	42.78	7.78	3.89	81.67
1/26/2016	0.00	42.78	50.56	0.00	3.89	108.89
1/27/2016	3.89	54.44	66.11	0.00	3.89	140.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/28/2016	0.00	19.44	42.78	7.78	3.89	81.67
1/29/2016	0.00	38.89	70.00	11.67	7.78	147.78
1/30/2016	3.89	42.78	46.67	11.67	7.78	124.44
1/31/2016	0.00	31.11	120.56	7.78	7.78	175.00
2/1/2016	0.00	38.89	155.56	7.78	7.78	229.45
2/2/2016	3.89	42.78	46.67	3.89	7.78	116.67
2/3/2016	0.00	62.22	81.67	7.78	11.67	178.89
2/4/2016	0.00	31.11	35.00	7.78	3.89	85.56
2/5/2016	0.00	42.78	62.22	7.78	3.89	124.44
2/6/2016	0.00	15.56	42.78	11.67	3.89	85.56
2/7/2016	0.00	58.33	101.11	15.56	7.78	194.45
2/8/2016	0.00	46.67	54.44	15.56	3.89	128.33
2/9/2016	0.00	58.33	81.67	7.78	15.56	182.78
2/10/2016	0.00	46.67	93.33	15.56	7.78	178.89
2/11/2016	0.00	58.33	58.33	7.78	7.78	151.67
2/12/2016	0.00	54.44	50.56	7.78	7.78	128.33
2/13/2016	3.89	66.11	46.67	3.89	11.67	143.89
2/14/2016	3.89	58.33	81.67	15.56	7.78	182.78
2/15/2016	0.00	85.56	97.22	15.56	3.89	221.67
2/16/2016	0.00	66.11	70.00	7.78	7.78	167.22
2/17/2016	0.00	66.11	54.44	3.89	11.67	159.44
2/18/2016	0.00	93.33	120.56	7.78	15.56	256.67
2/19/2016	0.00	112.78	105.00	7.78	3.89	252.78
2/20/2016	0.00	101.11	81.67	15.56	11.67	241.11
2/21/2016	0.00	120.56	97.22	15.56	7.78	260.56
2/22/2016	3.89	108.89	62.22	7.78	3.89	202.22
2/23/2016	0.00	70.00	93.33	15.56	15.56	221.67

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
2/24/2016	3.89	46.67	93.33	7.78	15.56	171.11
2/25/2016	3.89	101.11	70.00	15.56	7.78	217.78
2/26/2016	0.00	108.89	70.00	3.89	11.67	241.11
2/27/2016	0.00	120.56	70.00	7.78	11.67	241.11
2/28/2016	3.89	97.22	58.33	0.00	0.00	178.89
2/29/2016	3.89	85.56	81.67	15.56	7.78	217.78
3/1/2016	0.00	85.56	124.44	7.78	3.89	245.00
3/2/2016	0.00	120.56	101.11	11.67	7.78	268.33
3/3/2016	3.89	85.56	89.44	3.89	7.78	229.45
3/4/2016	3.89	120.56	93.33	7.78	7.78	252.78
3/5/2016	3.89	124.44	101.11	7.78	15.56	268.33
3/6/2016	0.00	101.11	120.56	11.67	7.78	264.45
3/7/2016	3.89	101.11	252.78	7.78	7.78	377.22
3/8/2016	0.00	81.67	202.22	7.78	3.89	311.11
3/9/2016	0.00	108.89	93.33	15.56	27.22	287.78
3/10/2016	7.78	85.56	120.56	7.78	7.78	237.22
3/11/2016	0.00	108.89	159.44	7.78	15.56	315.00
3/12/2016	0.00	147.78	124.44	7.78	11.67	307.22
3/13/2016	0.00	163.33	159.44	15.56	7.78	377.22
3/14/2016	0.00	182.78	116.67	7.78	19.44	365.56
3/15/2016	0.00	120.56	93.33	15.56	19.44	283.89
3/16/2016	0.00	97.22	143.89	7.78	3.89	283.89
3/17/2016	0.00	70.00	101.11	7.78	3.89	198.33
3/18/2016	0.00	186.67	155.56	7.78	3.89	377.22
3/19/2016	0.00	159.44	124.44	7.78	11.67	334.45
3/20/2016	0.00	50.56	93.33	3.89	7.78	167.22
3/21/2016	0.00	108.89	58.33	7.78	3.89	198.33

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
3/22/2016	0.00	124.44	101.11	15.56	7.78	272.22
3/23/2016	3.89	46.67	155.56	3.89	7.78	229.45
3/24/2016	3.89	81.67	147.78	15.56	7.78	287.78
3/25/2016	0.00	73.89	46.67	3.89	3.89	147.78
3/26/2016	0.00	77.78	112.78	19.44	11.67	241.11
3/27/2016	3.89	93.33	159.44	15.56	7.78	303.33
3/28/2016	0.00	198.33	136.11	7.78	15.56	377.22
3/29/2016	3.89	163.33	93.33	15.56	15.56	311.11
3/30/2016	3.89	62.22	194.45	3.89	7.78	295.56
3/31/2016	3.89	81.67	159.44	7.78	3.89	280.00
4/1/2016	0.00	93.33	50.56	19.44	7.78	178.89
4/2/2016	0.00	124.44	81.67	15.56	7.78	256.67
4/3/2016	0.00	42.78	46.67	3.89	7.78	105.00
4/4/2016	0.00	132.22	101.11	7.78	3.89	252.78
4/5/2016	0.00	97.22	58.33	7.78	3.89	178.89
4/6/2016	0.00	50.56	105.00	3.89	7.78	178.89

Table 15: Mold Concentrations (Spores/m^3) for Site C (Daily Counts from April 2015-2016).

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
4/7/2015	0.00	73.89	97.22	19.44	7.78	213.89
4/8/2015	3.89	81.67	89.44	11.67	7.78	210.00
4/9/2015	0.00	124.44	128.33	7.78	3.89	295.56
4/10/2015	0.00	93.33	58.33	7.78	3.89	182.78
4/11/2015	0.00	62.22	46.67	19.44	7.78	147.78
4/12/2015	0.00	210.00	112.78	23.33	7.78	373.33
4/13/2015	3.89	120.56	93.33	3.89	15.56	252.78
4/14/2015	3.89	143.89	159.44	19.44	3.89	353.89
4/15/2015	0.00	151.67	260.56	15.56	11.67	462.78
4/16/2015	11.67	66.11	105.00	11.67	3.89	202.22
4/17/2015	0.00	97.22	93.33	3.89	0.00	210.00
4/18/2015	0.00	85.56	136.11	7.78	3.89	241.11
4/19/2015	3.89	136.11	128.33	3.89	3.89	303.33
4/20/2015	3.89	62.22	108.89	3.89	3.89	186.67
4/21/2015	0.00	89.44	93.33	7.78	11.67	213.89
4/22/2015	7.78	136.11	178.89	3.89	7.78	338.33
4/23/2015	3.89	120.56	159.44	7.78	3.89	311.11
4/24/2015	7.78	155.56	62.22	11.67	7.78	256.67
4/25/2015	7.78	70.00	38.89	3.89	7.78	136.11
4/26/2015	11.67	252.78	89.44	7.78	11.67	385.00
4/27/2015	176.44	38.89	225.56	19.44	11.67	491.44
4/28/2015	0.00	116.67	598.89	11.67	3.89	758.34
4/29/2015	3.89	81.67	318.89	15.56	7.78	447.22
4/30/2015	0.00	210.00	225.56	7.78	15.56	486.11
5/1/2015	11.67	346.11	283.89	7.78	7.78	680.56
5/2/2015	3.89	295.56	213.89	3.89	7.78	548.33

Date	***Alternaria***	***Cladosporium***	**Smuts/Myxomycetes**	**Undifferentiated Ascospores**	**Undifferentiated Basidiospores**	**Total Mold**
5/3/2015	7.78	241.11	159.44	15.56	15.56	474.45
5/4/2015	3.89	280.00	159.44	11.67	3.89	497.78
5/5/2015	0.00	124.44	143.89	19.44	7.78	311.11
5/6/2015	0.00	252.78	147.78	7.78	7.78	435.56
5/7/2015	0.00	159.44	97.22	15.56	7.78	318.89
5/8/2015	3.89	210.00	163.33	15.56	15.56	427.78
5/9/2015	0.00	89.44	70.00	7.78	3.89	190.56
5/10/2015	3.89	62.22	85.56	15.56	7.78	202.22
5/11/2015	3.89	66.11	210.00	11.67	3.89	315.00
5/12/2015	0.00	3.89	108.89	15.56	7.78	252.78
5/13/2015	7.78	237.22	217.78	19.44	3.89	536.67
5/14/2015	3.89	210.00	159.44	15.56	3.89	412.22
5/15/2015	0.00	93.33	124.44	15.56	15.56	280.00
5/16/2015	7.78	225.56	163.33	15.56	15.56	455.00
5/17/2015	0.00	143.89	198.33	7.78	0.00	381.11
5/18/2015	3.89	81.67	171.11	15.56	15.56	303.33
5/19/2015	0.00	50.56	147.78	15.56	3.89	229.45
5/20/2015	0.00	93.33	58.33	7.78	3.89	182.78
5/21/2015	3.89	221.67	93.33	7.78	0.00	346.11
5/22/2015	0.00	132.22	120.56	3.89	7.78	287.78
5/23/2015	3.89	70.00	124.44	19.44	7.78	237.22
5/24/2015	0.00	50.56	132.22	7.78	11.67	210.00
5/25/2015	0.00	120.56	93.33	7.78	3.89	237.22
5/26/2015	3.89	128.33	140.00	7.78	3.89	291.67
5/27/2015	3.89	93.33	159.44	3.89	0.00	272.22
5/28/2015	0.00	217.78	497.78	0.00	7.78	754.45
5/29/2015	0.00	159.44	365.56	3.89	7.78	556.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/30/2015	0.00	116.67	58.33	0.00	3.89	182.78
5/31/2015	0.00	159.44	81.67	3.89	0.00	252.78
6/1/2015	0.00	190.56	93.33	15.56	7.78	307.22
6/2/2015	0.00	147.78	120.56	15.56	7.78	307.22
6/3/2015	3.89	256.67	159.44	7.78	3.89	443.33
6/4/2015	0.00	210.00	132.22	3.89	0.00	369.45
6/5/2015	0.00	101.11	233.33	15.56	11.67	373.33
6/6/2015	0.00	120.56	210.00	11.67	7.78	369.45
6/7/2015	3.89	108.89	213.89	11.67	7.78	353.89
6/8/2015	0.00	58.33	46.67	7.78	7.78	132.22
6/9/2015	0.00	108.89	132.22	7.78	3.89	268.33
6/10/2015	0.00	62.22	81.67	15.56	3.89	175.00
6/11/2015	0.00	73.89	186.67	19.44	3.89	295.56
6/12/2015	0.00	93.33	198.33	15.56	7.78	330.56
6/13/2015	3.89	93.33	159.44	11.67	3.89	291.67
6/14/2015	0.00	225.56	326.67	31.11	7.78	614.45
6/15/2015	3.89	175.00	598.89	15.56	7.78	824.45
6/16/2015	0.00	241.11	412.22	15.56	15.56	700.00
6/17/2015	3.89	217.78	194.45	3.89	11.67	447.22
6/18/2015	0.00	159.44	237.22	15.56	7.78	435.56
6/19/2015	3.89	120.56	326.67	11.67	3.89	474.45
6/20/2015	15.56	283.89	322.78	3.89	0.00	637.78
6/21/2015	7.78	202.22	264.45	7.78	0.00	497.78
6/22/2015	3.89	299.45	225.56	7.78	7.78	552.22
6/23/2015	0.00	248.89	159.44	3.89	7.78	427.78
6/24/2015	0.00	252.78	159.44	7.78	3.89	439.45
6/25/2015	0.00	202.22	182.78	3.89	3.89	420.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
6/26/2015	3.89	175.00	225.56	3.89	7.78	439.45
6/27/2015	3.89	186.67	318.89	7.78	7.78	540.56
6/28/2015	15.56	431.67	206.11	11.67	7.78	696.11
6/29/2015	7.78	330.56	186.67	7.78	7.78	567.78
6/30/2015	0.00	342.22	248.89	11.67	3.89	626.11
7/1/2015	0.00	229.45	307.22	38.89	11.67	610.56
7/2/2015	7.78	264.45	381.11	23.33	7.78	723.34
7/3/2015	3.89	357.78	287.78	15.56	7.78	692.22
7/4/2015	3.89	124.44	136.11	0.00	0.00	264.45
7/5/2015	3.89	186.67	210.00	7.78	3.89	423.89
7/6/2015	3.89	264.45	198.33	7.78	7.78	497.78
7/7/2015	27.22	182.78	291.67	3.89	15.56	548.33
7/8/2015	3.89	365.56	241.11	15.56	7.78	653.34
7/9/2015	3.89	315.00	202.22	7.78	3.89	552.22
7/10/2015	3.89	478.33	186.67	11.67	7.78	735.00
7/11/2015	19.44	186.67	120.56	11.67	7.78	353.89
7/12/2015	7.78	124.44	159.44	15.56	7.78	342.22
7/13/2015	11.67	210.00	171.11	15.56	7.78	443.33
7/14/2015	0.00	105.00	66.11	23.33	3.89	217.78
7/15/2015	3.89	124.44	108.89	7.78	3.89	272.22
7/16/2015	0.00	136.11	163.33	15.56	7.78	342.22
7/17/2015	0.00	171.11	132.22	11.67	19.44	400.56
7/18/2015	7.78	136.11	198.33	3.89	11.67	392.78
7/19/2015	3.89	147.78	225.56	3.89	7.78	423.89
7/20/2015	7.78	108.89	147.78	19.44	7.78	299.45
7/21/2015	3.89	163.33	171.11	7.78	3.89	369.45
7/22/2015	7.78	120.56	108.89	15.56	3.89	280.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
7/23/2015	7.78	190.56	66.11	15.56	19.44	377.22
7/24/2015	7.78	248.89	120.56	11.67	7.78	443.33
7/25/2015	3.89	120.56	416.11	11.67	11.67	587.22
7/26/2015	7.78	186.67	342.22	3.89	11.67	575.56
7/27/2015	3.89	264.45	280.00	11.67	11.67	595.00
7/28/2015	11.67	311.11	326.67	3.89	11.67	692.22
7/29/2015	3.89	303.33	408.33	7.78	7.78	754.45
7/30/2015	3.89	159.44	353.89	19.44	7.78	567.78
7/31/2015	3.89	241.11	427.78	11.67	7.78	719.45
8/1/2015	7.78	112.78	108.89	23.33	15.56	283.89
8/2/2015	3.89	163.33	155.56	15.56	7.78	373.33
8/3/2015	3.89	147.78	159.44	15.56	15.56	361.67
8/4/2015	0.00	136.11	202.22	15.56	7.78	385.00
8/5/2015	7.78	303.33	116.67	27.22	23.33	497.78
8/6/2015	3.89	237.22	159.44	7.78	3.89	439.45
8/7/2015	0.00	73.89	311.11	19.44	3.89	423.89
8/8/2015	11.67	175.00	186.67	11.67	7.78	412.22
8/9/2015	11.67	175.00	50.56	11.67	7.78	268.33
8/10/2015	7.78	198.33	120.56	7.78	7.78	365.56
8/11/2015	27.22	287.78	105.00	15.56	15.56	486.11
8/12/2015	23.33	225.56	186.67	15.56	7.78	505.56
8/13/2015	0.00	143.89	151.67	15.56	31.11	431.67
8/14/2015	0.00	171.11	116.67	15.56	15.56	361.67
8/15/2015	27.22	163.33	116.67	15.56	35.00	416.11
8/16/2015	15.56	147.78	225.56	11.67	15.56	455.00
8/17/2015	11.67	256.67	217.78	11.67	7.78	614.45
8/18/2015	15.56	210.00	256.67	15.56	3.89	560.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
8/19/2015	3.89	287.78	252.78	11.67	35.00	637.78
8/20/2015	3.89	202.22	198.33	15.56	23.33	482.22
8/21/2015	27.22	287.78	105.00	15.56	15.56	486.11
8/22/2015	23.33	225.56	186.67	15.56	7.78	505.56
8/23/2015	11.67	175.00	50.56	11.67	7.78	268.33
8/24/2015	7.78	198.33	120.56	7.78	7.78	365.56
8/25/2015	11.67	175.00	186.67	11.67	7.78	412.22
8/26/2015	3.89	112.78	93.33	7.78	0.00	229.45
8/27/2015	7.78	120.56	186.67	11.67	7.78	373.33
8/28/2015	0.00	101.11	124.44	3.89	19.44	276.11
8/29/2015	3.89	147.78	171.11	7.78	11.67	373.33
8/30/2015	0.00	233.33	182.78	19.44	11.67	462.78
8/31/2015	0.00	159.44	124.44	7.78	3.89	311.11
9/1/2015	3.89	322.78	136.11	19.44	15.56	528.89
9/2/2015	0.00	241.11	163.33	15.56	7.78	466.67
9/3/2015	0.00	268.33	101.11	7.78	15.56	486.11
9/4/2015	3.89	318.89	198.33	15.56	7.78	602.78
9/5/2015	7.78	93.33	85.56	0.00	0.00	202.22
9/6/2015	3.89	147.78	159.44	15.56	7.78	369.45
9/7/2015	0.00	124.44	50.56	7.78	7.78	206.11
9/8/2015	3.89	159.44	108.89	11.67	3.89	303.33
9/9/2015	3.89	210.00	85.56	7.78	7.78	330.56
9/10/2015	3.89	159.44	132.22	7.78	3.89	338.33
9/11/2015	3.89	132.22	143.89	19.44	11.67	338.33
9/12/2015	0.00	159.44	147.78	15.56	7.78	350.00
9/13/2015	3.89	112.78	213.89	11.67	19.44	404.45
9/14/2015	0.00	175.00	186.67	15.56	7.78	412.22

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
9/15/2015	0.00	206.11	120.56	27.22	11.67	381.11
9/16/2015	3.89	171.11	163.33	15.56	11.67	396.67
9/17/2015	0.00	283.89	167.22	7.78	7.78	579.45
9/18/2015	3.89	225.56	198.33	15.56	7.78	493.89
9/19/2015	3.89	221.67	124.44	0.00	7.78	365.56
9/20/2015	3.89	264.45	159.44	7.78	7.78	478.33
9/21/2015	0.00	73.89	136.11	3.89	7.78	225.56
9/22/2015	3.89	132.22	171.11	7.78	3.89	338.33
9/23/2015	3.89	342.22	73.89	15.56	23.33	466.67
9/24/2015	3.89	248.89	101.11	15.56	7.78	404.45
9/25/2015	7.78	182.78	93.33	3.89	11.67	315.00
9/26/2015	3.89	202.22	147.78	7.78	3.89	396.67
9/27/2015	3.89	392.78	198.33	15.56	11.67	672.78
9/28/2015	19.44	315.00	163.33	11.67	7.78	544.45
9/29/2015	3.89	58.33	77.78	0.00	11.67	190.56
9/30/2015	3.89	140.00	159.44	7.78	3.89	338.33
10/1/2015	7.78	334.45	101.11	11.67	0.00	595.00
10/2/2015	3.89	248.89	147.78	15.56	3.89	462.78
10/3/2015	3.89	105.00	128.33	11.67	27.22	287.78
10/4/2015	7.78	186.67	202.22	15.56	15.56	451.11
10/5/2015	0.00	93.33	132.22	7.78	15.56	260.56
10/6/2015	0.00	58.33	108.89	11.67	7.78	210.00
10/7/2015	7.78	42.78	101.11	23.33	15.56	202.22
10/8/2015	3.89	108.89	120.56	15.56	7.78	280.00
10/9/2015	7.78	182.78	175.00	7.78	7.78	431.67
10/10/2015	3.89	124.44	225.56	15.56	7.78	400.56
10/11/2015	19.44	369.45	105.00	19.44	15.56	563.89

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
10/12/2015	3.89	326.67	132.22	15.56	15.56	521.11
10/13/2015	11.67	171.11	260.56	7.78	15.56	513.33
10/14/2015	7.78	120.56	264.45	15.56	7.78	466.67
10/15/2015	19.44	194.45	97.22	7.78	23.33	451.11
10/16/2015	7.78	256.67	147.78	15.56	15.56	501.67
10/17/2015	11.67	77.78	58.33	7.78	7.78	178.89
10/18/2015	3.89	159.44	198.33	15.56	7.78	412.22
10/19/2015	7.78	147.78	178.89	3.89	15.56	408.33
10/20/2015	7.78	171.11	225.56	15.56	7.78	470.56
10/21/2015	3.89	140.00	198.33	3.89	15.56	381.11
10/22/2015	3.89	186.67	198.33	15.56	7.78	443.33
10/23/2015	11.67	202.22	70.00	0.00	11.67	326.67
10/24/2015	3.89	155.56	221.67	11.67	19.44	478.33
10/25/2015	7.78	202.22	202.22	7.78	15.56	470.56
10/26/2015	3.89	217.78	167.22	19.44	23.33	548.33
10/27/2015	3.89	241.11	202.22	15.56	7.78	536.67
10/28/2015	11.67	248.89	140.00	27.22	15.56	540.56
10/29/2015	7.78	198.33	93.33	15.56	7.78	357.78
10/30/2015	7.78	151.67	447.22	31.11	11.67	700.00
10/31/2015	3.89	136.11	315.00	19.44	7.78	521.11
11/1/2015	7.78	120.56	81.67	15.56	11.67	346.11
11/2/2015	3.89	108.89	97.22	15.56	15.56	276.11
11/3/2015	3.89	101.11	58.33	23.33	23.33	245.00
11/4/2015	0.00	93.33	120.56	15.56	19.44	287.78
11/5/2015	0.00	70.00	81.67	23.33	7.78	217.78
11/6/2015	0.00	81.67	108.89	15.56	15.56	241.11
11/7/2015	3.89	93.33	101.11	19.44	7.78	241.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
11/8/2015	0.00	70.00	225.56	7.78	11.67	326.67
11/9/2015	0.00	58.33	159.44	7.78	7.78	252.78
11/10/2015	7.78	93.33	198.33	15.56	15.56	361.67
11/11/2015	3.89	85.56	58.33	15.56	15.56	190.56
11/12/2015	0.00	70.00	81.67	23.33	23.33	213.89
11/13/2015	0.00	101.11	101.11	19.44	15.56	264.45
11/14/2015	0.00	81.67	58.33	15.56	19.44	198.33
11/15/2015	3.89	101.11	116.67	15.56	23.33	283.89
11/16/2015	3.89	81.67	85.56	15.56	15.56	213.89
11/17/2015	3.89	93.33	124.44	23.33	7.78	280.00
11/18/2015	0.00	108.89	124.44	15.56	7.78	272.22
11/19/2015	7.78	120.56	101.11	15.56	19.44	276.11
11/20/2015	3.89	124.44	62.22	3.89	11.67	245.00
11/21/2015	3.89	108.89	81.67	7.78	7.78	237.22
11/22/2015	0.00	93.33	147.78	3.89	7.78	264.45
11/23/2015	0.00	85.56	120.56	7.78	7.78	252.78
11/24/2015	3.89	108.89	101.11	15.56	15.56	276.11
11/25/2015	11.67	143.89	116.67	23.33	15.56	369.45
11/26/2015	7.78	120.56	101.11	15.56	15.56	283.89
11/27/2015	3.89	85.56	93.33	7.78	7.78	210.00
11/28/2015	3.89	112.78	81.67	15.56	15.56	241.11
11/29/2015	0.00	97.22	70.00	7.78	15.56	198.33
11/30/2015	0.00	70.00	81.67	19.44	7.78	190.56
12/1/2015	3.89	97.22	108.89	7.78	7.78	252.78
12/2/2015	3.89	132.22	97.22	19.44	19.44	299.45
12/3/2015	0.00	85.56	93.33	15.56	7.78	217.78
12/4/2015	0.00	85.56	58.33	11.67	11.67	194.45

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
12/5/2015	0.00	42.78	81.67	7.78	3.89	151.67
12/6/2015	0.00	35.00	77.78	7.78	3.89	136.11
12/7/2015	0.00	46.67	81.67	7.78	3.89	151.67
12/8/2015	0.00	58.33	42.78	7.78	15.56	143.89
12/9/2015	0.00	42.78	58.33	15.56	7.78	147.78
12/10/2015	3.89	70.00	70.00	19.44	7.78	206.11
12/11/2015	3.89	58.33	124.44	15.56	7.78	229.45
12/12/2015	3.89	58.33	42.78	7.78	3.89	124.44
12/13/2015	0.00	38.89	31.11	3.89	3.89	81.67
12/14/2015	3.89	46.67	58.33	15.56	7.78	140.00
12/15/2015	0.00	38.89	42.78	15.56	7.78	116.67
12/16/2015	3.89	42.78	85.56	3.89	3.89	151.67
12/17/2015	0.00	38.89	58.33	11.67	7.78	128.33
12/18/2015	0.00	42.78	66.11	7.78	7.78	132.22
12/19/2015	3.89	46.67	85.56	7.78	7.78	163.33
12/20/2015	3.89	46.67	27.22	0.00	3.89	97.22
12/21/2015	3.89	58.33	46.67	7.78	3.89	128.33
12/22/2015	0.00	31.11	42.78	11.67	7.78	101.11
12/23/2015	0.00	46.67	58.33	15.56	15.56	155.56
12/24/2015	3.89	77.78	70.00	3.89	7.78	186.67
12/25/2015	0.00	70.00	58.33	7.78	3.89	155.56
12/26/2015	0.00	46.67	58.33	15.56	7.78	143.89
12/27/2015	0.00	81.67	97.22	7.78	7.78	206.11
12/28/2015	0.00	50.56	58.33	0.00	0.00	112.78
12/29/2015	0.00	42.78	54.44	3.89	3.89	105.00
12/30/2015	0.00	38.89	15.56	3.89	0.00	58.33
12/31/2015	0.00	42.78	46.67	3.89	3.89	105.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/1/2016	0.00	54.44	143.89	3.89	3.89	210.00
1/2/2016	0.00	42.78	46.67	3.89	0.00	101.11
1/3/2016	0.00	38.89	31.11	3.89	3.89	81.67
1/4/2016	0.00	42.78	58.33	3.89	3.89	116.67
1/5/2016	3.89	19.44	77.78	7.78	11.67	128.33
1/6/2016	0.00	23.33	27.22	7.78	7.78	70.00
1/7/2016	0.00	38.89	42.78	3.89	7.78	105.00
1/8/2016	0.00	23.33	31.11	3.89	3.89	70.00
1/9/2016	0.00	19.44	38.89	7.78	3.89	70.00
1/10/2016	0.00	15.56	42.78	7.78	7.78	89.44
1/11/2016	0.00	23.33	42.78	3.89	7.78	85.56
1/12/2016	0.00	42.78	46.67	7.78	3.89	108.89
1/13/2016	0.00	62.22	46.67	15.56	7.78	143.89
1/14/2016	0.00	73.89	50.56	7.78	0.00	147.78
1/15/2016	0.00	42.78	58.33	7.78	3.89	120.56
1/16/2016	0.00	35.00	31.11	11.67	11.67	97.22
1/17/2016	0.00	42.78	46.67	7.78	7.78	108.89
1/18/2016	0.00	23.33	46.67	15.56	15.56	116.67
1/19/2016	0.00	42.78	46.67	3.89	3.89	108.89
1/20/2016	0.00	54.44	46.67	3.89	3.89	120.56
1/21/2016	0.00	42.78	31.11	3.89	7.78	97.22
1/22/2016	0.00	27.22	23.33	0.00	3.89	62.22
1/23/2016	0.00	31.11	42.78	3.89	7.78	97.22
1/24/2016	0.00	38.89	19.44	3.89	3.89	70.00
1/25/2016	0.00	23.33	42.78	7.78	3.89	81.67
1/26/2016	0.00	42.78	50.56	0.00	3.89	108.89
1/27/2016	3.89	54.44	66.11	0.00	3.89	140.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/28/2016	0.00	19.44	42.78	7.78	3.89	81.67
1/29/2016	0.00	38.89	70.00	11.67	7.78	147.78
1/30/2016	3.89	42.78	46.67	11.67	7.78	124.44
1/31/2016	0.00	31.11	120.56	7.78	7.78	175.00
2/1/2016	0.00	38.89	155.56	7.78	7.78	229.45
2/2/2016	3.89	42.78	46.67	3.89	7.78	116.67
2/3/2016	0.00	62.22	81.67	7.78	11.67	178.89
2/4/2016	0.00	31.11	35.00	7.78	3.89	85.56
2/5/2016	0.00	42.78	62.22	7.78	3.89	124.44
2/6/2016	0.00	15.56	42.78	11.67	3.89	85.56
2/7/2016	0.00	58.33	101.11	15.56	7.78	194.45
2/8/2016	0.00	46.67	54.44	15.56	3.89	128.33
2/9/2016	0.00	58.33	81.67	7.78	15.56	182.78
2/10/2016	0.00	46.67	93.33	15.56	7.78	178.89
2/11/2016	0.00	58.33	58.33	7.78	7.78	151.67
2/12/2016	0.00	54.44	50.56	7.78	7.78	128.33
2/13/2016	3.89	66.11	46.67	3.89	11.67	143.89
2/14/2016	3.89	58.33	81.67	15.56	7.78	182.78
2/15/2016	0.00	85.56	97.22	15.56	3.89	221.67
2/16/2016	0.00	66.11	70.00	7.78	7.78	167.22
2/17/2016	0.00	66.11	54.44	3.89	11.67	159.44
2/18/2016	0.00	93.33	120.56	7.78	15.56	256.67
2/19/2016	0.00	112.78	105.00	7.78	3.89	252.78
2/20/2016	0.00	101.11	81.67	15.56	11.67	241.11
2/21/2016	0.00	120.56	97.22	15.56	7.78	260.56
2/22/2016	3.89	108.89	62.22	7.78	3.89	202.22
2/23/2016	0.00	70.00	93.33	15.56	15.56	221.67

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
2/24/2016	3.89	46.67	93.33	7.78	15.56	171.11
2/25/2016	3.89	101.11	70.00	15.56	7.78	217.78
2/26/2016	0.00	108.89	70.00	3.89	11.67	241.11
2/27/2016	0.00	120.56	70.00	7.78	11.67	241.11
2/28/2016	3.89	97.22	58.33	0.00	0.00	178.89
2/29/2016	3.89	85.56	81.67	15.56	7.78	217.78
3/1/2016	0.00	85.56	124.44	7.78	3.89	245.00
3/2/2016	0.00	120.56	101.11	11.67	7.78	268.33
3/3/2016	3.89	85.56	89.44	3.89	7.78	229.45
3/4/2016	3.89	120.56	93.33	7.78	7.78	252.78
3/5/2016	3.89	124.44	101.11	7.78	15.56	268.33
3/6/2016	0.00	101.11	120.56	11.67	7.78	264.45
3/7/2016	3.89	101.11	252.78	7.78	7.78	377.22
3/8/2016	0.00	81.67	202.22	7.78	3.89	311.11
3/9/2016	0.00	108.89	93.33	15.56	27.22	287.78
3/10/2016	7.78	85.56	120.56	7.78	7.78	237.22
3/11/2016	0.00	108.89	159.44	7.78	15.56	315.00
3/12/2016	0.00	147.78	124.44	7.78	11.67	307.22
3/13/2016	0.00	163.33	159.44	15.56	7.78	377.22
3/14/2016	0.00	182.78	116.67	7.78	19.44	365.56
3/15/2016	0.00	120.56	93.33	15.56	19.44	283.89
3/16/2016	0.00	97.22	143.89	7.78	3.89	283.89
3/17/2016	0.00	70.00	101.11	7.78	3.89	198.33
3/18/2016	0.00	186.67	155.56	7.78	3.89	377.22
3/19/2016	0.00	159.44	124.44	7.78	11.67	334.45
3/20/2016	0.00	50.56	93.33	3.89	7.78	167.22
3/21/2016	0.00	108.89	58.33	7.78	3.89	198.33

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
3/22/2016	0.00	124.44	101.11	15.56	7.78	272.22
3/23/2016	3.89	46.67	155.56	3.89	7.78	229.45
3/24/2016	3.89	81.67	147.78	15.56	7.78	287.78
3/25/2016	0.00	73.89	46.67	3.89	3.89	147.78
3/26/2016	0.00	77.78	112.78	19.44	11.67	241.11
3/27/2016	3.89	93.33	159.44	15.56	7.78	303.33
3/28/2016	0.00	198.33	136.11	7.78	15.56	377.22
3/29/2016	3.89	163.33	93.33	15.56	15.56	311.11
3/30/2016	3.89	62.22	194.45	3.89	7.78	295.56
3/31/2016	3.89	81.67	159.44	7.78	3.89	280.00
4/1/2016	0.00	93.33	50.56	19.44	7.78	178.89
4/2/2016	0.00	124.44	81.67	15.56	7.78	256.67
4/3/2016	0.00	42.78	46.67	3.89	7.78	105.00
4/4/2016	0.00	132.22	101.11	7.78	3.89	252.78
4/5/2016	0.00	97.22	58.33	7.78	3.89	178.89
4/6/2016	0.00	50.56	105.00	3.89	7.78	178.89

Table 16: Mold Concentrations (Spores/m^3) for Site D (Daily Counts from April 2015-2016).

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
4/7/2015	7.78	155.56	70.00	3.89	23.33	299.45
4/8/2015	7.78	175.00	58.33	7.78	15.56	299.45
4/9/2015	3.89	101.11	42.78	7.78	3.89	178.89
4/10/2015	3.89	108.89	46.67	15.56	11.67	210.00
4/11/2015	0.00	35.00	7.78	15.56	11.67	89.44
4/12/2015	0.00	54.44	11.67	27.22	31.11	159.44
4/13/2015	0.00	46.67	7.78	11.67	35.00	132.22
4/14/2015	3.89	136.11	27.22	19.44	31.11	276.11
4/15/2015	3.89	38.89	23.33	15.56	15.56	124.44
4/16/2015	3.89	58.33	38.89	11.67	15.56	151.67
4/17/2015	0.00	77.78	116.67	42.78	3.89	268.33
4/18/2015	7.78	23.33	11.67	15.56	35.00	167.22
4/19/2015	3.89	35.00	7.78	27.22	19.44	132.22
4/20/2015	7.78	101.11	11.67	19.44	46.67	210.00
4/21/2015	11.67	73.89	11.67	19.44	27.22	213.89
4/22/2015	11.67	54.44	23.33	15.56	7.78	159.44
4/23/2015	3.89	163.33	108.89	35.00	15.56	385.00
4/24/2015	3.89	163.33	58.33	15.56	7.78	283.89
4/25/2015	0.00	221.67	81.67	31.11	58.33	458.89
4/26/2015	3.89	124.44	58.33	27.22	35.00	276.11
4/27/2015	0.00	31.11	50.56	19.44	23.33	147.78
4/28/2015	3.89	198.33	602.78	42.78	35.00	1069.45
4/29/2015	3.89	175.00	334.45	27.22	19.44	595.00
4/30/2015	11.67	357.78	272.22	19.44	19.44	735.00
5/1/2015	3.89	202.22	175.00	7.78	11.67	431.67
5/2/2015	11.67	392.78	66.11	46.67	7.78	668.89

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/3/2015	7.78	408.33	73.89	35.00	15.56	595.00
5/4/2015	11.67	486.11	73.89	27.22	35.00	738.89
5/5/2015	3.89	198.33	159.44	19.44	23.33	490.00
5/6/2015	3.89	373.33	490.00	27.22	7.78	952.78
5/7/2015	7.78	295.56	318.89	15.56	23.33	688.34
5/8/2015	19.44	175.00	353.89	42.78	7.78	657.22
5/9/2015	0.00	27.22	23.33	7.78	3.89	70.00
5/10/2015	3.89	27.22	229.45	7.78	27.22	299.45
5/11/2015	3.89	66.11	116.67	23.33	27.22	268.33
5/12/2015	7.78	124.44	318.89	54.44	19.44	567.78
5/13/2015	11.67	221.67	124.44	46.67	15.56	435.56
5/14/2015	7.78	241.11	175.00	23.33	15.56	497.78
5/15/2015	3.89	101.11	178.89	7.78	7.78	318.89
5/16/2015	0.00	38.89	58.33	7.78	3.89	116.67
5/17/2015	7.78	143.89	101.11	3.89	3.89	276.11
5/18/2015	31.11	528.89	85.56	19.44	38.89	738.89
5/19/2015	3.89	136.11	268.33	19.44	7.78	501.67
5/20/2015	3.89	447.22	252.78	42.78	23.33	828.34
5/21/2015	3.89	641.67	210.00	15.56	19.44	948.89
5/22/2015	15.56	552.22	560.00	38.89	31.11	1252.23
5/23/2015	7.78	595.00	369.45	15.56	15.56	1030.56
5/24/2015	7.78	637.78	400.56	15.56	23.33	1127.78
5/25/2015	0.00	81.67	350.00	11.67	7.78	501.67
5/26/2015	0.00	447.22	322.78	3.89	15.56	871.11
5/27/2015	3.89	490.00	315.00	15.56	7.78	875.00
5/28/2015	3.89	303.33	1127.78	11.67	7.78	1547.78
5/29/2015	7.78	280.00	318.89	23.33	19.44	707.78

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/30/2015	3.89	334.45	210.00	15.56	7.78	591.11
5/31/2015	3.89	303.33	334.45	23.33	15.56	719.45
6/1/2015	3.89	357.78	276.11	11.67	3.89	680.56
6/2/2015	0.00	260.56	443.33	23.33	23.33	808.89
6/3/2015	3.89	400.56	237.22	7.78	15.56	703.89
6/4/2015	0.00	353.89	225.56	3.89	3.89	626.11
6/5/2015	7.78	291.67	252.78	15.56	15.56	606.67
6/6/2015	7.78	260.56	486.11	15.56	11.67	801.11
6/7/2015	3.89	136.11	315.00	7.78	3.89	474.45
6/8/2015	3.89	213.89	318.89	11.67	7.78	571.67
6/9/2015	0.00	167.22	252.78	3.89	11.67	462.78
6/10/2015	7.78	307.22	182.78	3.89	11.67	552.22
6/11/2015	3.89	221.67	773.89	42.78	31.11	1158.89
6/12/2015	0.00	136.11	598.89	23.33	15.56	816.67
6/13/2015	15.56	696.11	614.45	38.89	27.22	1473.89
6/14/2015	3.89	353.89	1438.89	23.33	11.67	1917.23
6/15/2015	0.00	256.67	878.89	42.78	7.78	1225.00
6/16/2015	7.78	490.00	342.22	11.67	15.56	910.00
6/17/2015	3.89	610.56	381.11	15.56	7.78	1065.56
6/18/2015	7.78	350.00	194.45	3.89	3.89	606.67
6/19/2015	3.89	602.78	579.45	7.78	19.44	1267.78
6/20/2015	3.89	369.45	373.33	11.67	19.44	824.45
6/21/2015	15.56	400.56	334.45	23.33	7.78	824.45
6/22/2015	3.89	427.78	318.89	15.56	11.67	816.67
6/23/2015	0.00	213.89	210.00	15.56	15.56	490.00
6/24/2015	3.89	303.33	315.00	23.33	23.33	692.22
6/25/2015	0.00	280.00	303.33	15.56	7.78	630.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
6/26/2015	3.89	357.78	334.45	11.67	3.89	731.11
6/27/2015	7.78	210.00	295.56	23.33	11.67	575.56
6/28/2015	3.89	241.11	315.00	15.56	15.56	606.67
6/29/2015	11.67	322.78	178.89	35.00	11.67	587.22
6/30/2015	15.56	280.00	276.11	23.33	15.56	649.45
7/1/2015	23.33	381.11	532.78	77.78	23.33	1092.78
7/2/2015	3.89	163.33	194.45	11.67	11.67	396.67
7/3/2015	7.78	186.67	237.22	27.22	19.44	486.11
7/4/2015	7.78	140.00	202.22	7.78	15.56	381.11
7/5/2015	3.89	190.56	338.33	15.56	11.67	602.78
7/6/2015	3.89	210.00	198.33	19.44	11.67	470.56
7/7/2015	3.89	70.00	264.45	27.22	7.78	423.89
7/8/2015	0.00	81.67	342.22	19.44	7.78	482.22
7/9/2015	3.89	171.11	241.11	23.33	11.67	470.56
7/10/2015	3.89	116.67	287.78	11.67	3.89	431.67
7/11/2015	7.78	213.89	202.22	7.78	7.78	455.00
7/12/2015	3.89	241.11	213.89	11.67	7.78	497.78
7/13/2015	7.78	136.11	175.00	11.67	3.89	346.11
7/14/2015	3.89	276.11	155.56	23.33	11.67	501.67
7/15/2015	0.00	159.44	198.33	19.44	7.78	396.67
7/16/2015	3.89	132.22	116.67	3.89	3.89	280.00
7/17/2015	7.78	85.56	147.78	7.78	3.89	272.22
7/18/2015	19.44	303.33	276.11	42.78	27.22	750.56
7/19/2015	7.78	175.00	210.00	15.56	15.56	447.22
7/20/2015	3.89	81.67	42.78	15.56	7.78	155.56
7/21/2015	0.00	81.67	58.33	23.33	7.78	194.45
7/22/2015	7.78	178.89	124.44	23.33	23.33	404.45

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
7/23/2015	38.89	501.67	357.78	50.56	19.44	1073.34
7/24/2015	7.78	447.22	167.22	19.44	15.56	703.89
7/25/2015	15.56	696.11	264.45	15.56	7.78	1050.00
7/26/2015	42.78	486.11	237.22	7.78	19.44	824.45
7/27/2015	15.56	470.56	252.78	15.56	7.78	793.34
7/28/2015	27.22	544.45	470.56	31.11	19.44	1131.67
7/29/2015	19.44	221.67	493.89	23.33	7.78	805.00
7/30/2015	3.89	186.67	307.22	7.78	7.78	548.33
7/31/2015	3.89	171.11	291.67	11.67	7.78	505.56
8/1/2015	0.00	108.89	112.78	7.78	7.78	260.56
8/2/2015	0.00	124.44	140.00	23.33	7.78	322.78
8/3/2015	3.89	105.00	132.22	7.78	3.89	272.22
8/4/2015	3.89	248.89	186.67	15.56	11.67	513.33
8/5/2015	11.67	151.67	155.56	15.56	3.89	357.78
8/6/2015	0.00	58.33	93.33	3.89	7.78	171.11
8/7/2015	3.89	101.11	245.00	19.44	11.67	408.33
8/8/2015	19.44	140.00	210.00	35.00	7.78	431.67
8/9/2015	7.78	159.44	202.22	15.56	7.78	408.33
8/10/2015	11.67	167.22	163.33	11.67	3.89	377.22
8/11/2015	19.44	112.78	147.78	7.78	3.89	322.78
8/12/2015	3.89	140.00	303.33	11.67	7.78	497.78
8/13/2015	11.67	128.33	159.44	7.78	19.44	365.56
8/14/2015	nd	nd	nd	nd	nd	nd
8/15/2015	0.00	116.67	81.67	15.56	3.89	248.89
8/16/2015	0.00	159.44	85.56	15.56	15.56	299.45
8/17/2015	0.00	124.44	97.22	7.78	7.78	248.89
8/18/2015	19.44	385.00	268.33	15.56	19.44	781.67

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
8/19/2015	11.67	182.78	120.56	11.67	3.89	365.56
8/20/2015	3.89	175.00	194.45	19.44	19.44	474.45
8/21/2015	23.33	474.45	93.33	15.56	31.11	661.11
8/22/2015	3.89	447.22	163.33	11.67	15.56	680.56
8/23/2015	0.00	365.56	202.22	15.56	23.33	645.56
8/24/2015	11.67	221.67	93.33	19.44	11.67	381.11
8/25/2015	0.00	175.00	116.67	11.67	7.78	357.78
8/26/2015	3.89	194.45	256.67	15.56	7.78	517.22
8/27/2015	3.89	62.22	237.22	31.11	11.67	388.89
8/28/2015	nd	nd	nd	nd	nd	nd
8/29/2015	7.78	213.89	105.00	3.89	3.89	357.78
8/30/2015	0.00	295.56	132.22	19.44	11.67	486.11
8/31/2015	3.89	241.11	124.44	7.78	15.56	416.11
9/1/2015	7.78	303.33	171.11	15.56	11.67	563.89
9/2/2015	19.44	311.11	132.22	23.33	11.67	532.78
9/3/2015	7.78	97.22	66.11	11.67	3.89	217.78
9/4/2015	0.00	89.44	54.44	3.89	3.89	182.78
9/5/2015	3.89	120.56	77.78	3.89	7.78	229.45
9/6/2015	nd	nd	nd	nd	nd	nd
9/7/2015	nd	nd	nd	nd	nd	nd
9/8/2015	nd	nd	nd	nd	nd	nd
9/9/2015	7.78	58.33	70.00	7.78	3.89	159.44
9/10/2015	0.00	124.44	136.11	7.78	7.78	291.67
9/11/2015	3.89	159.44	116.67	3.89	7.78	338.33
9/12/2015	3.89	198.33	124.44	7.78	3.89	357.78
9/13/2015	3.89	210.00	159.44	7.78	7.78	412.22
9/14/2015	3.89	151.67	159.44	19.44	3.89	365.56

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
9/15/2015	11.67	210.00	194.45	27.22	19.44	525.00
9/16/2015	0.00	7.78	50.56	7.78	3.89	77.78
9/17/2015	3.89	178.89	112.78	23.33	11.67	369.45
9/18/2015	3.89	400.56	85.56	11.67	11.67	552.22
9/19/2015	0.00	54.44	112.78	7.78	3.89	182.78
9/20/2015	0.00	93.33	155.56	7.78	11.67	280.00
9/21/2015	0.00	101.11	124.44	7.78	7.78	252.78
9/22/2015	15.56	377.22	287.78	27.22	31.11	781.67
9/23/2015	19.44	377.22	140.00	11.67	11.67	575.56
9/24/2015	11.67	563.89	198.33	11.67	11.67	828.34
9/25/2015	7.78	365.56	225.56	15.56	15.56	661.11
9/26/2015	46.67	178.89	58.33	58.33	27.22	416.11
9/27/2015	101.11	167.22	58.33	19.44	11.67	396.67
9/28/2015	73.89	280.00	81.67	27.22	7.78	540.56
9/29/2015	23.33	198.33	73.89	23.33	7.78	369.45
9/30/2015	11.67	248.89	101.11	23.33	7.78	439.45
10/1/2015	3.89	175.00	58.33	15.56	3.89	260.56
10/2/2015	0.00	175.00	97.22	7.78	11.67	299.45
10/3/2015	0.00	147.78	202.22	15.56	15.56	400.56
10/4/2015	3.89	256.67	392.78	23.33	27.22	738.89
10/5/2015	0.00	202.22	248.89	7.78	7.78	478.33
10/6/2015	7.78	15.56	19.44	3.89	7.78	89.44
10/7/2015	3.89	62.22	66.11	15.56	3.89	198.33
10/8/2015	3.89	70.00	73.89	19.44	11.67	233.33
10/9/2015	3.89	311.11	217.78	15.56	7.78	591.11
10/10/2015	0.00	326.67	105.00	11.67	11.67	497.78
10/11/2015	23.33	241.11	136.11	35.00	15.56	505.56

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
10/12/2015	19.44	136.11	105.00	11.67	11.67	330.56
10/13/2015	15.56	283.89	50.56	19.44	7.78	412.22
10/14/2015	3.89	528.89	101.11	27.22	15.56	711.67
10/15/2015	3.89	225.56	77.78	11.67	3.89	338.33
10/16/2015	19.44	143.89	276.11	23.33	27.22	536.67
10/17/2015	0.00	70.00	38.89	15.56	7.78	171.11
10/18/2015	3.89	108.89	38.89	15.56	3.89	260.56
10/19/2015	0.00	291.67	89.44	7.78	19.44	478.33
10/20/2015	7.78	560.00	93.33	11.67	23.33	719.45
10/21/2015	0.00	132.22	112.78	11.67	3.89	287.78
10/22/2015	7.78	175.00	108.89	15.56	11.67	350.00
10/23/2015	0.00	140.00	54.44	7.78	7.78	233.33
10/24/2015	11.67	105.00	46.67	11.67	3.89	210.00
10/25/2015	7.78	97.22	85.56	11.67	7.78	315.00
10/26/2015	3.89	202.22	58.33	7.78	3.89	315.00
10/27/2015	3.89	101.11	70.00	15.56	7.78	217.78
10/28/2015	7.78	93.33	70.00	11.67	15.56	248.89
10/29/2015	3.89	303.33	77.78	3.89	7.78	427.78
10/30/2015	3.89	143.89	147.78	15.56	7.78	350.00
10/31/2015	3.89	81.67	70.00	7.78	3.89	178.89
11/1/2015	0.00	105.00	112.78	7.78	15.56	280.00
11/2/2015	0.00	81.67	46.67	11.67	11.67	202.22
11/3/2015	3.89	97.22	81.67	7.78	15.56	245.00
11/4/2015	0.00	97.22	42.78	11.67	7.78	186.67
11/5/2015	0.00	38.89	77.78	19.44	11.67	198.33
11/6/2015	0.00	46.67	46.67	7.78	15.56	128.33
11/7/2015	3.89	73.89	58.33	15.56	35.00	206.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
11/8/2015	0.00	62.22	46.67	7.78	11.67	136.11
11/9/2015	3.89	77.78	38.89	7.78	3.89	151.67
11/10/2015	3.89	93.33	70.00	11.67	7.78	210.00
11/11/2015	0.00	73.89	155.56	7.78	3.89	252.78
11/12/2015	3.89	58.33	58.33	11.67	7.78	155.56
11/13/2015	0.00	50.56	151.67	11.67	3.89	233.33
11/14/2015	3.89	66.11	120.56	7.78	3.89	229.45
11/15/2015	3.89	81.67	93.33	15.56	7.78	217.78
11/16/2015	11.67	85.56	303.33	11.67	7.78	443.33
11/17/2015	3.89	112.78	381.11	15.56	15.56	560.00
11/18/2015	7.78	112.78	124.44	19.44	11.67	295.56
11/19/2015	3.89	101.11	140.00	31.11	7.78	303.33
11/20/2015	0.00	58.33	93.33	7.78	3.89	175.00
11/21/2015	3.89	97.22	120.56	31.11	15.56	291.67
11/22/2015	0.00	70.00	58.33	7.78	7.78	155.56
11/23/2015	0.00	42.78	62.22	7.78	7.78	140.00
11/24/2015	0.00	62.22	62.22	3.89	3.89	140.00
11/25/2015	0.00	81.67	70.00	7.78	3.89	178.89
11/26/2015	0.00	89.44	46.67	3.89	7.78	163.33
11/27/2015	0.00	38.89	42.78	3.89	3.89	97.22
11/28/2015	0.00	31.11	42.78	3.89	7.78	93.33
11/29/2015	0.00	58.33	58.33	7.78	7.78	147.78
11/30/2015	0.00	38.89	62.22	3.89	3.89	124.44
12/1/2015	0.00	46.67	38.89	7.78	0.00	108.89
12/2/2015	0.00	58.33	46.67	3.89	3.89	128.33
12/3/2015	0.00	73.89	58.33	7.78	3.89	163.33
12/4/2015	0.00	70.00	112.78	7.78	3.89	221.67

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
12/5/2015	0.00	62.22	81.67	7.78	7.78	167.22
12/6/2015	3.89	101.11	93.33	7.78	7.78	237.22
12/7/2015	3.89	108.89	70.00	7.78	3.89	206.11
12/8/2015	0.00	101.11	62.22	11.67	7.78	198.33
12/9/2015	3.89	62.22	85.56	7.78	7.78	190.56
12/10/2015	0.00	46.67	155.56	15.56	3.89	237.22
12/11/2015	3.89	58.33	120.56	7.78	7.78	221.67
12/12/2015	0.00	27.22	50.56	11.67	7.78	108.89
12/13/2015	3.89	46.67	62.22	7.78	3.89	136.11
12/14/2015	0.00	70.00	58.33	15.56	11.67	171.11
12/15/2015	0.00	66.11	108.89	7.78	7.78	198.33
12/16/2015	0.00	38.89	70.00	15.56	3.89	136.11
12/17/2015	0.00	38.89	62.22	7.78	11.67	136.11
12/18/2015	0.00	58.33	38.89	7.78	3.89	116.67
12/19/2015	0.00	38.89	38.89	11.67	3.89	108.89
12/20/2015	0.00	46.67	42.78	15.56	7.78	124.44
12/21/2015	0.00	35.00	50.56	3.89	3.89	101.11
12/22/2015	3.89	50.56	38.89	3.89	3.89	112.78
12/23/2015	0.00	89.44	101.11	7.78	7.78	213.89
12/24/2015	0.00	66.11	35.00	7.78	7.78	120.56
12/25/2015	0.00	46.67	112.78	7.78	3.89	178.89
12/26/2015	0.00	42.78	58.33	7.78	7.78	124.44
12/27/2015	0.00	62.22	175.00	19.44	7.78	272.22
12/28/2015	0.00	81.67	101.11	7.78	3.89	202.22
12/29/2015	0.00	11.67	50.56	3.89	3.89	73.89
12/30/2015	3.89	31.11	42.78	3.89	7.78	89.44
12/31/2015	0.00	31.11	19.44	3.89	0.00	58.33

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/1/2016	0.00	19.44	23.33	7.78	3.89	62.22
1/2/2016	0.00	23.33	23.33	7.78	3.89	66.11
1/3/2016	0.00	38.89	58.33	15.56	7.78	132.22
1/4/2016	0.00	15.56	38.89	3.89	0.00	62.22
1/5/2016	0.00	58.33	73.89	3.89	7.78	151.67
1/6/2016	0.00	15.56	0.00	7.78	3.89	27.22
1/7/2016	0.00	3.89	0.00	7.78	3.89	23.33
1/8/2016	0.00	27.22	42.78	3.89	3.89	85.56
1/9/2016	nd	nd	nd	nd	nd	nd
1/10/2016	nd	nd	nd	nd	nd	nd
1/11/2016	nd	nd	nd	nd	nd	nd
1/12/2016	0.00	23.33	19.44	3.89	3.89	50.56
1/13/2016	0.00	31.11	42.78	7.78	3.89	105.00
1/14/2016	7.78	27.22	19.44	15.56	7.78	97.22
1/15/2016	3.89	46.67	27.22	15.56	3.89	116.67
1/16/2016	3.89	23.33	15.56	11.67	7.78	66.11
1/17/2016	3.89	46.67	31.11	15.56	3.89	112.78
1/18/2016	0.00	23.33	15.56	7.78	19.44	66.11
1/19/2016	0.00	38.89	31.11	15.56	7.78	105.00
1/20/2016	0.00	31.11	19.44	3.89	0.00	58.33
1/21/2016	0.00	38.89	19.44	7.78	3.89	77.78
1/22/2016	0.00	27.22	58.33	3.89	3.89	101.11
1/23/2016	0.00	42.78	46.67	7.78	3.89	105.00
1/24/2016	0.00	23.33	42.78	7.78	7.78	85.56
1/25/2016	0.00	23.33	38.89	3.89	3.89	77.78
1/26/2016	0.00	19.44	66.11	7.78	3.89	97.22
1/27/2016	0.00	23.33	19.44	3.89	0.00	50.56

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/28/2016	0.00	23.33	38.89	3.89	3.89	73.89
1/29/2016	3.89	70.00	46.67	3.89	3.89	147.78
1/30/2016	0.00	19.44	15.56	3.89	3.89	50.56
1/31/2016	3.89	23.33	38.89	11.67	3.89	97.22
2/1/2016	0.00	15.56	19.44	7.78	3.89	50.56
2/2/2016	0.00	54.44	400.56	15.56	11.67	497.78
2/3/2016	3.89	38.89	42.78	7.78	3.89	105.00
2/4/2016	0.00	23.33	19.44	3.89	0.00	54.44
2/5/2016	0.00	19.44	27.22	3.89	0.00	54.44
2/6/2016	0.00	23.33	46.67	7.78	7.78	93.33
2/7/2016	3.89	31.11	42.78	7.78	3.89	101.11
2/8/2016	0.00	38.89	58.33	7.78	15.56	140.00
2/9/2016	0.00	19.44	31.11	7.78	7.78	73.89
2/10/2016	3.89	23.33	38.89	7.78	7.78	101.11
2/11/2016	0.00	31.11	42.78	15.56	7.78	101.11
2/12/2016	0.00	46.67	46.67	7.78	11.67	132.22
2/13/2016	0.00	38.89	58.33	15.56	7.78	140.00
2/14/2016	3.89	70.00	81.67	15.56	19.44	198.33
2/15/2016	3.89	66.11	50.56	7.78	11.67	151.67
2/16/2016	3.89	58.33	81.67	11.67	7.78	175.00
2/17/2016	0.00	35.00	54.44	7.78	3.89	105.00
2/18/2016	0.00	46.67	58.33	11.67	7.78	136.11
2/19/2016	0.00	54.44	151.67	7.78	7.78	225.56
2/20/2016	3.89	58.33	81.67	7.78	15.56	186.67
2/21/2016	0.00	70.00	97.22	7.78	3.89	202.22
2/22/2016	0.00	70.00	58.33	3.89	7.78	151.67
2/23/2016	3.89	15.56	58.33	7.78	3.89	97.22

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
2/24/2016	0.00	124.44	89.44	7.78	7.78	241.11
2/25/2016	0.00	97.22	42.78	7.78	7.78	175.00
2/26/2016	3.89	101.11	93.33	7.78	15.56	233.33
2/27/2016	3.89	27.22	66.11	7.78	11.67	128.33
2/28/2016	3.89	58.33	93.33	15.56	7.78	198.33
2/29/2016	7.78	62.22	81.67	7.78	15.56	194.45
3/1/2016	0.00	81.67	85.56	15.56	7.78	210.00
3/2/2016	3.89	120.56	89.44	15.56	19.44	276.11
3/3/2016	7.78	120.56	81.67	15.56	35.00	295.56
3/4/2016	3.89	112.78	93.33	15.56	19.44	264.45
3/5/2016	3.89	132.22	81.67	19.44	15.56	287.78
3/6/2016	0.00	85.56	62.22	11.67	7.78	178.89
3/7/2016	3.89	108.89	54.44	15.56	15.56	210.00
3/8/2016	0.00	42.78	58.33	3.89	7.78	120.56
3/9/2016	0.00	62.22	81.67	15.56	7.78	182.78
3/10/2016	3.89	120.56	132.22	15.56	15.56	311.11
3/11/2016	0.00	77.78	54.44	3.89	7.78	151.67
3/12/2016	0.00	101.11	58.33	7.78	15.56	198.33
3/13/2016	0.00	132.22	120.56	15.56	7.78	291.67
3/14/2016	0.00	159.44	167.22	11.67	11.67	369.45
3/15/2016	0.00	46.67	58.33	3.89	7.78	128.33
3/16/2016	nd	nd	nd	nd	nd	nd
3/17/2016	3.89	93.33	120.56	15.56	15.56	260.56
3/18/2016	0.00	62.22	77.78	7.78	3.89	167.22
3/19/2016	0.00	54.44	120.56	7.78	3.89	213.89
3/20/2016	0.00	108.89	190.56	15.56	7.78	334.45
3/21/2016	0.00	81.67	97.22	7.78	3.89	202.22

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
3/22/2016	15.56	641.67	307.22	15.56	31.11	1057.78
3/23/2016	0.00	140.00	365.56	7.78	19.44	548.33
3/24/2016	3.89	470.56	241.11	15.56	7.78	770.00
3/25/2016	0.00	108.89	93.33	15.56	27.22	287.78
3/26/2016	0.00	105.00	140.00	7.78	3.89	280.00
3/27/2016	0.00	81.67	108.89	7.78	3.89	248.89
3/28/2016	3.89	198.33	237.22	7.78	15.56	497.78
3/29/2016	3.89	451.11	303.33	11.67	11.67	808.89
3/30/2016	0.00	178.89	190.56	19.44	11.67	420.00
3/31/2016	0.00	101.11	132.22	15.56	7.78	287.78
4/1/2016	0.00	66.11	210.00	15.56	11.67	338.33
4/2/2016	0.00	132.22	186.67	11.67	15.56	396.67
4/3/2016	0.00	108.89	198.33	15.56	11.67	361.67
4/4/2016	3.89	101.11	124.44	7.78	15.56	276.11
4/5/2016	0.00	132.22	147.78	7.78	15.56	334.45
4/6/2016	3.89	136.11	229.45	11.67	23.33	427.78

Missing Data = nd (not determined)

Table 17: Mold Concentrations (Spores/m^3) for Site E (Daily Counts from April 2015-2016).

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
4/7/2015	3.89	140.00	23.33	19.44	31.11	283.89
4/8/2015	7.78	105.00	11.67	27.22	19.44	210.00
4/9/2015	7.78	85.56	35.00	27.22	31.11	217.78
4/10/2015	0.00	27.22	19.44	7.78	11.67	93.33
4/11/2015	3.89	27.22	11.67	15.56	11.67	116.67
4/12/2015	3.89	140.00	15.56	7.78	15.56	233.33
4/13/2015	0.00	38.89	3.89	15.56	3.89	77.78
4/14/2015	0.00	217.78	23.33	27.22	50.56	365.56
4/15/2015	11.67	291.67	151.67	42.78	46.67	637.78
4/16/2015	3.89	23.33	73.89	11.67	7.78	140.00
4/17/2015	0.00	23.33	11.67	23.33	3.89	108.89
4/18/2015	0.00	54.44	194.45	3.89	0.00	252.78
4/19/2015	3.89	85.56	120.56	3.89	3.89	225.56
4/20/2015	0.00	229.45	357.78	3.89	7.78	614.45
4/21/2015	7.78	163.33	315.00	3.89	0.00	513.33
4/22/2015	3.89	272.22	933.34	19.44	27.22	1287.23
4/23/2015	7.78	237.22	427.78	15.56	15.56	735.00
4/24/2015	7.78	330.56	455.00	15.56	3.89	843.89
4/25/2015	7.78	280.00	369.45	11.67	7.78	715.56
4/26/2015	15.56	175.00	816.67	15.56	0.00	1053.89
4/27/2015	7.78	241.11	369.45	15.56	15.56	688.34
4/28/2015	0.00	62.22	404.45	3.89	0.00	474.45
4/29/2015	7.78	140.00	435.56	3.89	0.00	610.56
4/30/2015	11.67	330.56	5969.46	23.33	23.33	6393.35
5/1/2015	7.78	447.22	3830.57	15.56	7.78	4340.01
5/2/2015	7.78	486.11	746.67	7.78	19.44	1287.23

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/3/2015	7.78	381.11	832.22	15.56	7.78	1279.45
5/4/2015	11.67	245.00	276.11	7.78	7.78	579.45
5/5/2015	7.78	315.00	847.78	7.78	15.56	1228.89
5/6/2015	0.00	93.33	451.11	0.00	3.89	560.00
5/7/2015	7.78	175.00	482.22	3.89	0.00	703.89
5/8/2015	19.44	159.44	933.34	23.33	11.67	1174.45
5/9/2015	7.78	241.11	847.78	15.56	7.78	1155.00
5/10/2015	7.78	213.89	272.22	3.89	15.56	528.89
5/11/2015	11.67	237.22	458.89	3.89	7.78	758.34
5/12/2015	3.89	186.67	1711.12	7.78	38.89	2026.12
5/13/2015	7.78	217.78	1481.67	7.78	7.78	1773.34
5/14/2015	7.78	206.11	684.45	3.89	15.56	960.56
5/15/2015	11.67	264.45	1092.78	7.78	3.89	1427.23
5/16/2015	7.78	143.89	746.67	0.00	19.44	925.56
5/17/2015	3.89	186.67	1120.00	7.78	3.89	1361.12
5/18/2015	0.00	213.89	913.89	0.00	15.56	1155.00
5/19/2015	7.78	241.11	1209.45	3.89	0.00	1477.78
5/20/2015	7.78	633.89	820.56	15.56	27.22	1536.12
5/21/2015	7.78	381.11	1123.89	15.56	15.56	1582.78
5/22/2015	0.00	350.00	416.11	3.89	0.00	797.22
5/23/2015	7.78	315.00	832.22	15.56	7.78	1217.23
5/24/2015	27.22	536.67	377.22	19.44	11.67	1069.45
5/25/2015	7.78	447.22	816.67	15.56	7.78	1345.56
5/26/2015	11.67	245.00	937.22	3.89	35.00	1263.89
5/27/2015	7.78	369.45	1228.89	7.78	15.56	1664.45
5/28/2015	11.67	190.56	381.11	0.00	7.78	606.67
5/29/2015	11.67	202.22	836.11	15.56	7.78	1112.23

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
5/30/2015	0.00	81.67	155.56	0.00	0.00	248.89
5/31/2015	7.78	225.56	315.00	7.78	3.89	571.67
6/1/2015	3.89	252.78	229.45	7.78	7.78	513.33
6/2/2015	7.78	276.11	447.22	7.78	3.89	773.89
6/3/2015	7.78	241.11	560.00	15.56	11.67	847.78
6/4/2015	7.78	315.00	1015.00	11.67	7.78	1388.34
6/5/2015	11.67	182.78	2026.12	11.67	11.67	2282.78
6/6/2015	15.56	198.33	1598.34	7.78	3.89	1855.01
6/7/2015	0.00	427.78	575.56	15.56	15.56	1046.11
6/8/2015	7.78	470.56	847.78	7.78	15.56	1384.45
6/9/2015	0.00	105.00	307.22	11.67	0.00	427.78
6/10/2015	0.00	151.67	396.67	23.33	3.89	595.00
6/11/2015	3.89	202.22	820.56	7.78	3.89	1081.11
6/12/2015	0.00	73.89	598.89	11.67	7.78	723.34
6/13/2015	7.78	147.78	820.56	7.78	15.56	1038.34
6/14/2015	0.00	159.44	1858.89	19.44	27.22	2123.34
6/15/2015	7.78	194.45	1508.89	7.78	15.56	1773.34
6/16/2015	0.00	252.78	610.56	11.67	3.89	878.89
6/17/2015	3.89	202.22	1120.00	15.56	7.78	1365.00
6/18/2015	0.00	291.67	525.00	11.67	7.78	843.89
6/19/2015	3.89	237.22	1120.00	15.56	7.78	1415.56
6/20/2015	0.00	182.78	151.67	0.00	7.78	346.11
6/21/2015	3.89	202.22	470.56	3.89	7.78	719.45
6/22/2015	3.89	147.78	408.33	7.78	15.56	595.00
6/23/2015	3.89	198.33	832.22	15.56	7.78	1100.56
6/24/2015	0.00	206.11	182.78	3.89	0.00	400.56
6/25/2015	0.00	264.45	447.22	7.78	3.89	746.67

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
6/26/2015	0.00	155.56	128.33	7.78	7.78	303.33
6/27/2015	3.89	225.56	217.78	3.89	7.78	478.33
6/28/2015	0.00	186.67	579.45	15.56	11.67	812.78
6/29/2015	3.89	198.33	847.78	15.56	7.78	1112.23
6/30/2015	11.67	283.89	260.56	19.44	11.67	598.89
7/1/2015	7.78	315.00	237.22	3.89	7.78	587.22
7/2/2015	0.00	190.56	544.45	35.00	7.78	820.56
7/3/2015	7.78	210.00	816.67	19.44	3.89	1104.45
7/4/2015	7.78	105.00	2259.45	7.78	3.89	2395.56
7/5/2015	7.78	120.56	252.78	15.56	7.78	427.78
7/6/2015	0.00	147.78	738.89	15.56	19.44	952.78
7/7/2015	0.00	175.00	486.11	3.89	15.56	707.78
7/8/2015	0.00	58.33	470.56	0.00	0.00	579.45
7/9/2015	7.78	81.67	653.34	3.89	7.78	801.11
7/10/2015	3.89	147.78	167.22	7.78	7.78	353.89
7/11/2015	3.89	175.00	381.11	7.78	3.89	610.56
7/12/2015	11.67	136.11	163.33	3.89	3.89	326.67
7/13/2015	7.78	186.67	217.78	3.89	7.78	439.45
7/14/2015	7.78	85.56	81.67	3.89	3.89	190.56
7/15/2015	3.89	116.67	175.00	3.89	0.00	318.89
7/16/2015	0.00	93.33	264.45	3.89	0.00	377.22
7/17/2015	7.78	159.44	280.00	3.89	0.00	478.33
7/18/2015	7.78	108.89	136.11	3.89	7.78	272.22
7/19/2015	3.89	163.33	198.33	3.89	0.00	396.67
7/20/2015	0.00	54.44	167.22	0.00	0.00	241.11
7/21/2015	0.00	101.11	237.22	3.89	7.78	369.45
7/22/2015	3.89	120.56	155.56	7.78	3.89	315.00

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
7/23/2015	3.89	132.22	202.22	3.89	0.00	369.45
7/24/2015	19.44	703.89	213.89	11.67	15.56	1003.34
7/25/2015	7.78	315.00	237.22	15.56	3.89	610.56
7/26/2015	3.89	700.00	105.00	0.00	7.78	836.11
7/27/2015	7.78	369.45	175.00	3.89	0.00	571.67
7/28/2015	7.78	692.22	668.89	0.00	11.67	1403.89
7/29/2015	3.89	470.56	509.45	3.89	0.00	1015.00
7/30/2015	27.22	396.67	509.45	0.00	11.67	952.78
7/31/2015	15.56	373.33	435.56	3.89	0.00	859.45
8/1/2015	35.00	513.33	641.67	19.44	19.44	1275.56
8/2/2015	15.56	396.67	447.22	15.56	7.78	925.56
8/3/2015	3.89	140.00	147.78	0.00	0.00	299.45
8/4/2015	7.78	315.00	427.78	3.89	0.00	770.00
8/5/2015	15.56	287.78	245.00	7.78	15.56	595.00
8/6/2015	7.78	225.56	151.67	3.89	3.89	416.11
8/7/2015	19.44	38.89	163.33	23.33	11.67	291.67
8/8/2015	7.78	81.67	264.45	3.89	7.78	388.89
8/9/2015	0.00	89.44	202.22	11.67	11.67	322.78
8/10/2015	0.00	54.44	108.89	3.89	11.67	190.56
8/11/2015	3.89	120.56	163.33	3.89	0.00	315.00
8/12/2015	3.89	1092.78	400.56	19.44	3.89	1563.34
8/13/2015	7.78	120.56	353.89	7.78	3.89	540.56
8/14/2015	0.00	85.56	132.22	11.67	15.56	260.56
8/15/2015	0.00	159.44	381.11	3.89	0.00	560.00
8/16/2015	3.89	66.11	58.33	15.56	11.67	163.33
8/17/2015	7.78	120.56	159.44	3.89	3.89	311.11
8/18/2015	7.78	400.56	159.44	11.67	11.67	661.11

Date	***Alternaria***	***Cladosporium***	**Smuts/Myxomycetes**	**Undifferentiated Ascospores**	**Undifferentiated Basidiospores**	**Total Mold**
8/19/2015	3.89	318.89	175.00	3.89	7.78	544.45
8/20/2015	7.78	346.11	256.67	3.89	0.00	641.67
8/21/2015	7.78	427.78	291.67	3.89	3.89	781.67
8/22/2015	3.89	342.22	217.78	3.89	3.89	598.89
8/23/2015	7.78	280.00	264.45	3.89	0.00	606.67
8/24/2015	0.00	85.56	108.89	3.89	3.89	213.89
8/25/2015	7.78	136.11	163.33	7.78	3.89	350.00
8/26/2015	3.89	97.22	350.00	11.67	11.67	497.78
8/27/2015	7.78	147.78	315.00	7.78	7.78	509.45
8/28/2015	11.67	54.44	202.22	7.78	3.89	307.22
8/29/2015	7.78	108.89	175.00	7.78	7.78	346.11
8/30/2015	0.00	167.22	128.33	0.00	7.78	330.56
8/31/2015	3.89	198.33	171.11	3.89	0.00	412.22
9/1/2015	3.89	229.45	105.00	3.89	7.78	560.00
9/2/2015	15.56	171.11	120.56	7.78	7.78	451.11
9/3/2015	15.56	155.56	73.89	7.78	3.89	283.89
9/4/2015	7.78	136.11	159.44	3.89	0.00	350.00
9/5/2015	3.89	140.00	213.89	11.67	19.44	435.56
9/6/2015	7.78	175.00	159.44	3.89	15.56	420.00
9/7/2015	0.00	151.67	89.44	7.78	11.67	276.11
9/8/2015	7.78	97.22	147.78	3.89	0.00	295.56
9/9/2015	3.89	147.78	70.00	0.00	3.89	237.22
9/10/2015	7.78	124.44	147.78	3.89	0.00	311.11
9/11/2015	11.67	315.00	132.22	11.67	7.78	540.56
9/12/2015	3.89	241.11	175.00	7.78	3.89	486.11
9/13/2015	7.78	206.11	171.11	3.89	3.89	427.78
9/14/2015	3.89	159.44	217.78	3.89	7.78	427.78

Date	***Alternaria***	***Cladosporium***	**Smuts/Myxomycetes**	**Undifferentiated Ascospores**	**Undifferentiated Basidiospores**	**Total Mold**
9/15/2015	15.56	264.45	381.11	3.89	7.78	715.56
9/16/2015	7.78	342.22	175.00	3.89	0.00	556.11
9/17/2015	3.89	73.89	167.22	0.00	11.67	287.78
9/18/2015	3.89	108.89	124.44	3.89	0.00	272.22
9/19/2015	3.89	112.78	27.22	23.33	7.78	202.22
9/20/2015	3.89	124.44	73.89	7.78	27.22	280.00
9/21/2015	0.00	105.00	81.67	11.67	3.89	213.89
9/22/2015	19.44	151.67	73.89	23.33	23.33	350.00
9/23/2015	23.33	217.78	105.00	50.56	23.33	474.45
9/24/2015	23.33	186.67	105.00	38.89	7.78	412.22
9/25/2015	11.67	256.67	81.67	27.22	19.44	435.56
9/26/2015	101.11	455.00	81.67	54.44	27.22	801.11
9/27/2015	81.67	373.33	73.89	38.89	15.56	676.67
9/28/2015	73.89	280.00	81.67	23.33	11.67	544.45
9/29/2015	46.67	268.33	46.67	27.22	15.56	470.56
9/30/2015	46.67	229.45	58.33	15.56	35.00	451.11
10/1/2015	31.11	248.89	73.89	46.67	50.56	532.78
10/2/2015	7.78	178.89	54.44	46.67	23.33	392.78
10/3/2015	11.67	198.33	101.11	23.33	15.56	385.00
10/4/2015	3.89	245.00	128.33	31.11	7.78	443.33
10/5/2015	7.78	194.45	143.89	15.56	27.22	408.33
10/6/2015	0.00	58.33	54.44	27.22	11.67	159.44
10/7/2015	3.89	46.67	35.00	27.22	7.78	136.11
10/8/2015	3.89	140.00	54.44	15.56	7.78	233.33
10/9/2015	7.78	73.89	62.22	15.56	11.67	198.33
10/10/2015	11.67	237.22	85.56	15.56	7.78	478.33
10/11/2015	23.33	276.11	97.22	54.44	35.00	579.45

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
10/12/2015	15.56	248.89	120.56	35.00	46.67	567.78
10/13/2015	15.56	202.22	105.00	19.44	27.22	470.56
10/14/2015	19.44	143.89	46.67	15.56	35.00	303.33
10/15/2015	19.44	217.78	105.00	38.89	31.11	513.33
10/16/2015	15.56	186.67	73.89	27.22	19.44	423.89
10/17/2015	11.67	245.00	112.78	35.00	19.44	482.22
10/18/2015	7.78	210.00	81.67	19.44	11.67	369.45
10/19/2015	7.78	151.67	85.56	7.78	46.67	326.67
10/20/2015	15.56	182.78	93.33	19.44	15.56	365.56
10/21/2015	7.78	116.67	54.44	23.33	15.56	229.45
10/22/2015	0.00	105.00	73.89	15.56	7.78	256.67
10/23/2015	11.67	143.89	97.22	15.56	27.22	315.00
10/24/2015	7.78	241.11	136.11	11.67	35.00	501.67
10/25/2015	11.67	217.78	97.22	7.78	7.78	385.00
10/26/2015	3.89	151.67	120.56	15.56	23.33	357.78
10/27/2015	23.33	171.11	112.78	11.67	3.89	377.22
10/28/2015	23.33	163.33	140.00	7.78	0.00	357.78
10/29/2015	11.67	229.45	112.78	15.56	35.00	458.89
10/30/2015	11.67	171.11	105.00	15.56	19.44	346.11
10/31/2015	3.89	120.56	73.89	19.44	7.78	237.22
11/1/2015	0.00	93.33	62.22	11.67	15.56	190.56
11/2/2015	3.89	97.22	66.11	7.78	3.89	182.78
11/3/2015	19.44	178.89	105.00	27.22	62.22	427.78
11/4/2015	7.78	140.00	81.67	15.56	35.00	303.33
11/5/2015	3.89	97.22	62.22	11.67	7.78	190.56
11/6/2015	0.00	81.67	38.89	15.56	19.44	167.22
11/7/2015	3.89	124.44	58.33	7.78	11.67	233.33

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
11/8/2015	7.78	167.22	81.67	19.44	7.78	315.00
11/9/2015	3.89	143.89	97.22	11.67	3.89	295.56
11/10/2015	0.00	120.56	89.44	7.78	0.00	233.33
11/11/2015	7.78	112.78	73.89	15.56	7.78	229.45
11/12/2015	0.00	136.11	62.22	11.67	0.00	221.67
11/13/2015	0.00	97.22	62.22	15.56	3.89	190.56
11/14/2015	3.89	93.33	73.89	19.44	7.78	217.78
11/15/2015	15.56	105.00	62.22	11.67	19.44	233.33
11/16/2015	0.00	124.44	54.44	7.78	15.56	225.56
11/17/2015	11.67	140.00	81.67	15.56	23.33	303.33
11/18/2015	0.00	105.00	62.22	11.67	7.78	198.33
11/19/2015	7.78	85.56	73.89	15.56	46.67	252.78
11/20/2015	7.78	120.56	81.67	11.67	19.44	276.11
11/21/2015	nd	nd	nd	nd	nd	nd
11/22/2015	nd	nd	nd	nd	nd	nd
11/23/2015	nd	nd	nd	nd	nd	nd
11/24/2015	nd	nd	nd	nd	nd	nd
11/25/2015	nd	nd	nd	nd	nd	nd
11/26/2015	nd	nd	nd	nd	nd	nd
11/27/2015	nd	nd	nd	nd	nd	nd
11/28/2015	nd	nd	nd	nd	nd	nd
11/29/2015	nd	nd	nd	nd	nd	nd
11/30/2015	0.00	73.89	38.89	3.89	11.67	143.89
12/1/2015	0.00	54.44	35.00	0.00	7.78	108.89
12/2/2015	0.00	38.89	54.44	0.00	11.67	128.33
12/3/2015	3.89	54.44	38.89	7.78	11.67	147.78
12/4/2015	0.00	46.67	35.00	15.56	7.78	124.44

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
12/5/2015	0.00	58.33	46.67	7.78	7.78	136.11
12/6/2015	0.00	19.44	50.56	11.67	7.78	97.22
12/7/2015	0.00	38.89	58.33	11.67	3.89	124.44
12/8/2015	0.00	46.67	38.89	7.78	7.78	124.44
12/9/2015	0.00	58.33	38.89	7.78	3.89	128.33
12/10/2015	0.00	50.56	58.33	7.78	11.67	159.44
12/11/2015	0.00	81.67	97.22	15.56	7.78	221.67
12/12/2015	0.00	54.44	93.33	15.56	7.78	182.78
12/13/2015	0.00	46.67	108.89	15.56	7.78	194.45
12/14/2015	0.00	66.11	112.78	11.67	7.78	206.11
12/15/2015	0.00	38.89	81.67	15.56	7.78	151.67
12/16/2015	0.00	23.33	38.89	3.89	3.89	73.89
12/17/2015	0.00	27.22	31.11	11.67	7.78	89.44
12/18/2015	0.00	42.78	35.00	7.78	3.89	97.22
12/19/2015	0.00	35.00	58.33	7.78	7.78	120.56
12/20/2015	0.00	46.67	58.33	15.56	7.78	140.00
12/21/2015	0.00	54.44	70.00	3.89	3.89	143.89
12/22/2015	0.00	58.33	42.78	7.78	3.89	132.22
12/23/2015	0.00	42.78	42.78	3.89	7.78	108.89
12/24/2015	0.00	46.67	42.78	7.78	3.89	108.89
12/25/2015	0.00	46.67	46.67	15.56	11.67	136.11
12/26/2015	0.00	11.67	23.33	3.89	3.89	50.56
12/27/2015	0.00	27.22	108.89	3.89	3.89	151.67
12/28/2015	0.00	42.78	58.33	3.89	7.78	120.56
12/29/2015	0.00	23.33	38.89	3.89	0.00	70.00
12/30/2015	0.00	27.22	101.11	3.89	11.67	143.89
12/31/2015	0.00	31.11	85.56	3.89	7.78	136.11

Date	***Alternaria***	***Cladosporium***	**Smuts/Myxomycetes**	**Undifferentiated Ascospores**	**Undifferentiated Basidiospores**	**Total Mold**
1/1/2016	0.00	23.33	54.44	0.00	3.89	89.44
1/2/2016	0.00	31.11	81.67	3.89	7.78	132.22
1/3/2016	0.00	3.89	23.33	3.89	7.78	38.89
1/4/2016	0.00	2.00	4.00	1.00	0.00	8.00
1/5/2016	0.00	7.78	15.56	3.89	0.00	31.11
1/6/2016	0.00	15.56	23.33	15.56	3.89	70.00
1/7/2016	0.00	19.44	11.67	15.56	3.89	62.22
1/8/2016	3.89	46.67	7.78	19.44	3.89	93.33
1/9/2016	0.00	35.00	19.44	23.33	7.78	105.00
1/10/2016	0.00	15.56	11.67	7.78	7.78	58.33
1/11/2016	0.00	23.33	11.67	11.67	3.89	62.22
1/12/2016	3.89	27.22	19.44	11.67	46.67	132.22
1/13/2016	0.00	19.44	23.33	15.56	7.78	97.22
1/14/2016	3.89	42.78	27.22	7.78	19.44	108.89
1/15/2016	3.89	54.44	27.22	19.44	11.67	140.00
1/16/2016	3.89	42.78	27.22	7.78	23.33	124.44
1/17/2016	0.00	46.67	42.78	15.56	46.67	159.44
1/18/2016	3.89	27.22	15.56	23.33	7.78	93.33
1/19/2016	0.00	23.33	11.67	15.56	3.89	70.00
1/20/2016	0.00	35.00	19.44	15.56	3.89	73.89
1/21/2016	3.89	23.33	7.78	15.56	3.89	62.22
1/22/2016	0.00	46.67	15.56	15.56	23.33	112.78
1/23/2016	0.00	27.22	23.33	7.78	19.44	93.33
1/24/2016	nd	nd	nd	nd	nd	nd
1/25/2016	0.00	62.22	23.33	38.89	15.56	163.33
1/26/2016	3.89	46.67	15.56	27.22	7.78	120.56
1/27/2016	0.00	38.89	15.56	15.56	7.78	93.33

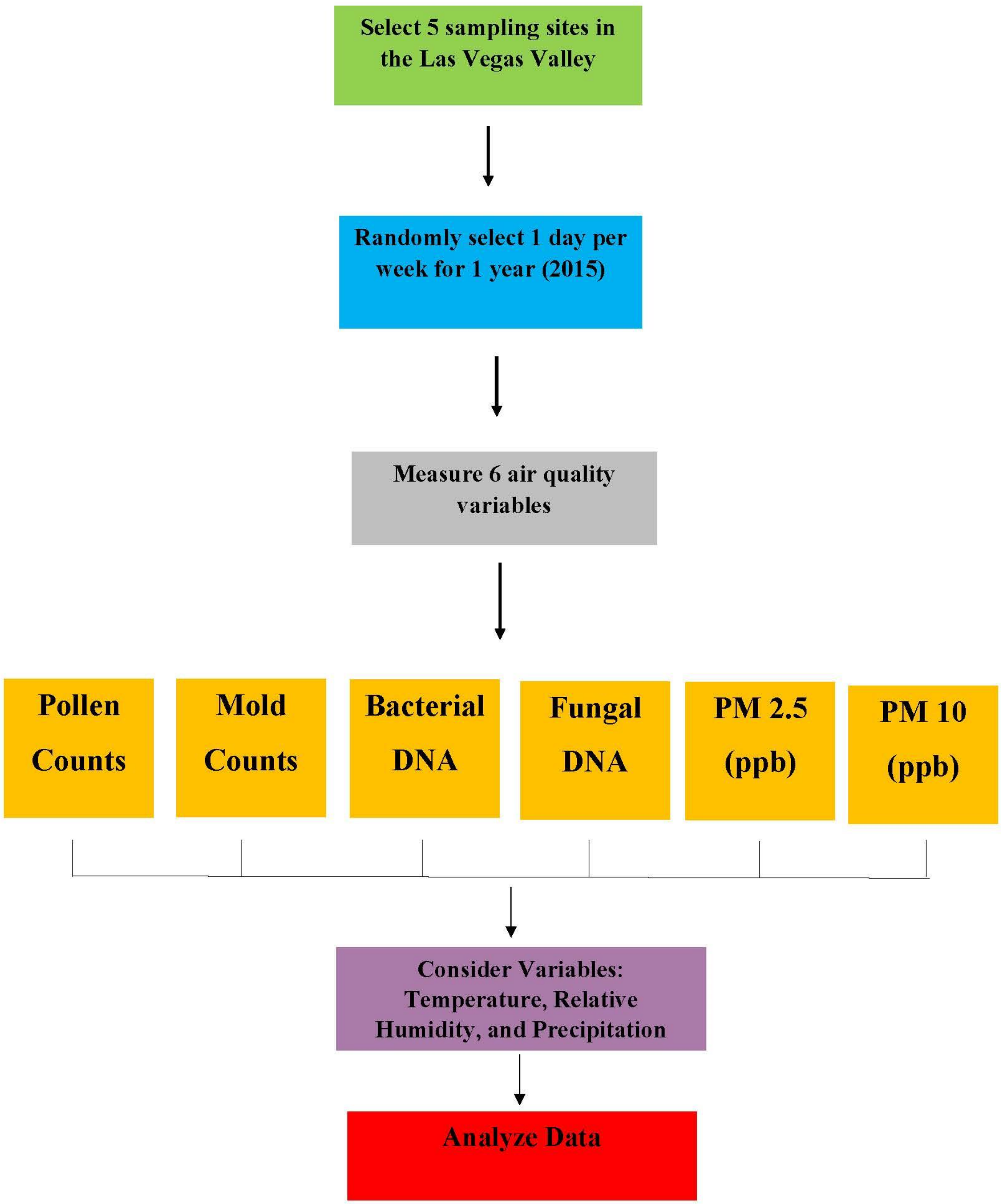
Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
1/28/2016	3.89	54.44	19.44	23.33	0.00	116.67
1/29/2016	0.00	46.67	27.22	23.33	46.67	163.33
1/30/2016	0.00	35.00	15.56	19.44	7.78	93.33
1/31/2016	nd	nd	nd	nd	nd	nd
2/1/2016	3.89	50.56	27.22	23.33	19.44	140.00
2/2/2016	0.00	73.89	50.56	35.00	19.44	206.11
2/3/2016	7.78	50.56	42.78	23.33	7.78	155.56
2/4/2016	0.00	62.22	50.56	27.22	7.78	186.67
2/5/2016	0.00	58.33	35.00	27.22	27.22	182.78
2/6/2016	0.00	23.33	15.56	19.44	7.78	73.89
2/7/2016	3.89	62.22	73.89	23.33	15.56	213.89
2/8/2016	3.89	101.11	62.22	35.00	15.56	237.22
2/9/2016	3.89	73.89	58.33	15.56	42.78	217.78
2/10/2016	7.78	81.67	46.67	27.22	23.33	217.78
2/11/2016	7.78	120.56	73.89	38.89	23.33	303.33
2/12/2016	3.89	101.11	93.33	23.33	11.67	264.45
2/13/2016	3.89	81.67	97.22	35.00	46.67	303.33
2/14/2016	3.89	62.22	46.67	11.67	15.56	151.67
2/15/2016	0.00	54.44	35.00	27.22	15.56	155.56
2/16/2016	7.78	58.33	38.89	23.33	19.44	163.33
2/17/2016	7.78	66.11	46.67	19.44	23.33	194.45
2/18/2016	0.00	58.33	50.56	19.44	27.22	175.00
2/19/2016	0.00	46.67	38.89	15.56	11.67	128.33
2/20/2016	7.78	50.56	35.00	15.56	27.22	163.33
2/21/2016	0.00	93.33	54.44	19.44	27.22	210.00
2/22/2016	0.00	105.00	62.22	15.56	19.44	237.22
2/23/2016	3.89	120.56	73.89	23.33	11.67	276.11

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
2/24/2016	7.78	140.00	77.78	35.00	23.33	330.56
2/25/2016	3.89	120.56	81.67	19.44	27.22	295.56
2/26/2016	3.89	112.78	66.11	11.67	19.44	237.22
2/27/2016	0.00	101.11	97.22	23.33	15.56	287.78
2/28/2016	7.78	167.22	101.11	19.44	27.22	381.11
2/29/2016	11.67	198.33	124.44	15.56	35.00	458.89
3/1/2016	1.00	39.00	34.00	9.00	5.00	102.00
3/2/2016	3.89	151.67	132.22	35.00	19.44	396.67
3/3/2016	0.00	143.89	112.78	15.56	46.67	369.45
3/4/2016	3.89	140.00	73.89	23.33	15.56	299.45
3/5/2016	0.00	163.33	120.56	38.89	31.11	420.00
3/6/2016	11.67	202.22	132.22	23.33	54.44	513.33
3/7/2016	11.67	159.44	112.78	38.89	19.44	396.67
3/8/2016	15.56	198.33	120.56	35.00	46.67	474.45
3/9/2016	7.78	167.22	112.78	46.67	62.22	435.56
3/10/2016	3.89	151.67	89.44	23.33	19.44	307.22
3/11/2016	0.00	97.22	46.67	15.56	11.67	198.33
3/12/2016	3.89	97.22	58.33	15.56	11.67	210.00
3/13/2016	7.78	140.00	73.89	35.00	19.44	311.11
3/14/2016	11.67	163.33	93.33	27.22	38.89	392.78
3/15/2016	3.89	198.33	62.22	19.44	31.11	365.56
3/16/2016	7.78	140.00	97.22	15.56	7.78	311.11
3/17/2016	7.78	175.00	81.67	23.33	11.67	334.45
3/18/2016	0.00	143.89	73.89	23.33	11.67	283.89
3/19/2016	0.00	143.89	89.44	27.22	19.44	318.89
3/20/2016	7.78	112.78	73.89	7.78	19.44	241.11
3/21/2016	3.89	85.56	54.44	23.33	11.67	213.89

Date	*Alternaria*	*Cladosporium*	Smuts/Myxomycetes	Undifferentiated Ascospores	Undifferentiated Basidiospores	Total Mold
3/22/2016	7.78	105.00	73.89	15.56	11.67	237.22
3/23/2016	0.00	101.11	81.67	15.56	11.67	264.45
3/24/2016	11.67	159.44	120.56	35.00	23.33	423.89
3/25/2016	3.89	140.00	77.78	27.22	19.44	299.45
3/26/2016	0.00	73.89	50.56	15.56	11.67	175.00
3/27/2016	3.89	46.67	35.00	15.56	7.78	128.33
3/28/2016	0.00	46.67	42.78	11.67	3.89	116.67
3/29/2016	0.00	54.44	42.78	11.67	0.00	120.56
3/30/2016	7.78	54.44	38.89	23.33	7.78	167.22
3/31/2016	3.89	58.33	35.00	7.78	0.00	116.67
4/1/2016	0.00	54.44	62.22	15.56	3.89	163.33
4/2/2016	0.00	38.89	23.33	7.78	3.89	85.56
4/3/2016	0.00	23.33	15.56	7.78	11.67	66.11
4/4/2016	0.00	62.22	35.00	7.78	15.56	140.00
4/5/2016	3.89	58.33	27.22	11.67	7.78	128.33
4/6/2016	0.00	54.44	38.89	19.44	7.78	143.89

Missing Data = nd (not determined)

Appendix D: Flow Chart of Sample Selection



Appendix E: Amicon DNA Extraction Procedure

Amicon DNA extraction:

Materials:

Amicon filter	Microcentrifuge
4 clean collection tubes/sample	Mini bead beater
1.5 ml microcentrifuge tube	Forceps
$NaPO_4$	Propane and flint igniter
TE buffer	Bead Beater Tubes
PCR H_2O	Timer
Ice	Small Biohazard Bag
1000 µl pipette	Boiling Cap
1000 µl ART tips	Plastic Ice Bowl
100 µl pipette	10% Bleach solution
100 µl ART tips	

1) Turn on water bath to 65°C and wipe down biological safety cabinet (BSC). Irradiate with UV light for 20 mins.
2) In a BSC, place ¼ filter in a bead beater tube.
3) Add 500 µl of $NaPO_4$ to the bead beater tube.
   Note: The samples cannot sit in buffer for more than 25 minutes.
4) Agitate the bead tube in the mini-bead beater (MBB) at a speed of 5000 rpm for 180 seconds (3 min).
5) After 3 minutes in the MBB is complete, put the sample on ice for 2 minutes.
6) Repeat steps 2 through 4 until all samples have been in the MMB and put on ice for 2 minutes.
7) Bleach the outside of the tubes, and transfer to a clean rack for DNA extraction.
8) Quick spin the bead beater tubes in the centrifuge (once the centrifuge reaches 5200 x g stop the centrifuge).
9) Transfer the supernatant (~400 µl) from the bead beater tubes (avoiding the glass beads) to the Amicon filter (placed in a collection/microcentrifuge tube). Centrifuge at 5200 x g for 3 minutes.
10) **WASH 1**: using sterile forceps move the Amicon filter to a new collection tube. **Add 400 µl of TE buffer**. Centrifuge at 5200 x g for 3 minutes.
11) **WASH 2**: using sterile forceps move the Amicon filter to a new collection tube. **Add 400 µl of TE buffer**. Centrifuge at 5200 x g for 3 minutes.

12) **WASH 3**: using sterile forceps move the Amicon filter to a new collection tube. **Add 400 µl of TE buffer**. Centrifuge at 5200 x g for 3 minutes.
13) **WASH 4**: using sterile forceps move the Amicon filter to a new collection tube. **Add 400 µl of PCR H_2O**. Centrifuge at 5200 x g for 1 minute. **Check the volume of sample and centrifuge in increments of 30 seconds to achieve a final volume of 100 µl**. **If the sample extract is below 100 µl, add nuclease-free H_2O to achieve a final volume of 100 µl.**
14) Retrieve remaining sample extract from Amicon filter and transfer to a sterile labeled 1.5 ml microcentrifuge tube (be careful not to puncture filter with pipette tip).
15) Repeat steps 6 through 10 until all samples have been extracted.
16) Heat inactivate nucleases in the samples in a water bath set to 65°C for 10 minutes.
17) Place on ice for 2 minutes, then quick spin.
18) Store sample extract at -20°C until PCR assay.

Appendix F: List of Bacteria Tested with Universal Primers and Probes

Organism (Genus and species)	PCR Amplification (+/-)	Organism (Genus and species)	PCR Amplification (+/-)
Aeropyrum pernix (Archaea)	+	*Geovibrio thiophilus*	+
Arthrobacter crystallopoietes	+	*Gordonia rubripertincta*	+
Aspergillus fumigatus	-	Human DNA	-
Bacillus cereus	+	*Hydrogenophaga pseudoflava*	+
Bacillus halodurans Nielsen et al.	+	*Hydrogenothermus marinus*	-
Bacillus subtilis	+	*Ilyobacter insuetus*	+
Bacteroides fragilis	+	*Methanococcus maripaludis (Archaea)*	-
Borrelia burgdorferi	+	*Methylobacterium extorquens*	+
Cellulomonas fimi	+	*Microbacterium flavescens*	+
Chlorobium tepidum	+	*Micrococcus luteus*	+
Chloroflexus aurantiacus	+	*Nostoc sp.*	-
Chrysiogenes arsenatis	+	*Parachlamydia acanthamoebae*	+
Clostridium difficile	+	*Planctomyces maris*	+
Clostridium perfringens	+	*Rhodococcus erythropolis*	+
Deinococcus radiodurans	+	*Shewanella oneidensis*	+
Desulfosporosinus meridiei	-	*Stachybotrys chartarum*	-
Desulfovibrio vulgaris subsp. vulgaris	+	*Thermodesulfobacterium commune*	+
Dictyoglomus thermophilum	+	*Thermodesulfovibrio yellowstonii*	+
Fibrobacter intestinalis	+	*Thermomicrobium roseum*	-
Geobacter sulfurreducens	+	*Thermotoga maritima*	+
Geothrix fermentans	+	*Verrucomicrobium spinosum*	+

*(Buttner et al., 2008)

Appendix G: List of Fungal Tested with Universal Primers and Probes

Organism (Genus and species)	PCR Amplification (+/-)	Organism (Genus and species)	PCR Amplification (+/-)
Alternaria alternata	+	*Emericella nidulans*	+
Acremonium strictum	+	*Engyodontium album*	-
Aspergillus caespitosus	+	*Eupenicillium hirayamae*	+
Aspergillus candidus	+	*Eurotium herbariorum*	+
Aspergillus carneus	+	*Exserohilum* sp.	+
Aspergillus clavatus	+	*Fusarium oxysporum*	+
Aspergillus flavipes	+	*Geotrichum candidum*	+
Aspergillus flavus	+	*Gliocladium* sp.	+
Aspergillus fumigatus	+	Human DNA	-
Aspergillus japonicus	+	*Nigrospora* sp.	+
Aspergillus niger	+	*Neosartorya fischeri*	+
Aspergillus ochraceus	+	*Neosartorya quadricincta*	+
Aspergillus oryzae	+	*Paecilomyces variotii*	+
Aspergillus parasiticus	+	*Penicillium brevicompactum*	+
Aspergillus restrictus	+	*Penicillium chrysogenum*	+
Aspergillus sydowii	+	*Penicillium commune*	+
Aspergillus tamari	+	*Penicillium crustosum*	+
Aspergillus terreus	+	*Penicillium expansum*	+
Aspergillus unguis	+	*Penicillium purpurogenum*	+
Aspergillus ustus	+	*Penicillium simplicissimum*	+
Aspergillus versicolor	+	*Phoma*sp.	+
Aspergillus wentii	+	*Pithomyces* sp.	+
Aureobasidium pullulans	+	*Scopulariopsis* sp.	+
Bacillus cereus	-	*Sporobolomyces salmonicolor*	-
Bacillus subtilis	-	*Stemphylium* sp.	+
Beauveria sp.	+	*Talaromyces flavus*	+
Bipolaris sp.	+	*Trichoderma* sp.	+
Chaetomium sp.	+	*Trichothecium* sp.	+
Chrysospporium sp.	+	*Trichophyton mentagrophytes*	+
Cladosporium herbarum	+	*Ustilago* sp.	+
Curvularia sp.	+	*Verticillium* sp.	+

*(Cruz, 2006; Cruz, 2010)

Appendix H: Comparison among months of Bioaerosols and PM.

Table 18: Comparison of Total Bacterial DNA Concentrations by Month.

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1 vs. (5.168 ± 0.093)	2	-0.612*	0.118	123.278	<0.001	-0.846	-0.378
	3	-0.867*	0.116	110.126	<0.001	-1.098	-0.637
	4	-0.386*	0.116	110.875	0.001	-0.616	-0.155
	5	-0.001	0.11	108.89	0.996	-0.219	0.218
	6	-0.370*	0.11	108.891	0.001	-0.588	-0.152
	7	-0.523*	0.116	110.835	<0.001	-0.753	-0.292
	8	-0.566*	0.116	110.835	<0.001	-0.797	-0.336
	9	-0.924*	0.11	108.949	<0.001	-1.142	-0.706
	10	-0.453*	0.116	110.75	<0.001	-0.684	-0.223
	11	-0.980*	0.11	108.951	<0.001	-1.198	-0.762
	12	-1.278*	0.116	112.819	<0.001	-1.509	-1.047
2 vs. (5.780± 0.093)	1	0.612*	0.118	123.278	<0.001	0.378	0.846
	3	-0.256*	0.118	120.995	0.032	-0.489	-0.022
	4	0.226	0.116	108.108	0.054	-0.004	0.457
	5	0.611*	0.11	106.781	<0.001	0.393	0.829
	6	0.242*	0.11	106.747	0.03	0.024	0.46
	7	0.089	0.116	108.883	0.444	-0.141	0.32
	8	0.046	0.116	108.883	0.696	-0.185	0.276
	9	-0.312*	0.11	106.805	0.005	-0.53	-0.095
	10	0.159	0.116	108.799	0.174	-0.071	0.389
	11	-0.368*	0.11	106.807	0.001	-0.586	-0.15
	12	-0.666*	0.116	110.838	<0.001	-0.897	-0.436
3 vs. (6.036 ± 0.093)	1	0.867*	0.116	110.126	<0.001	0.637	1.098
	2	0.256*	0.118	120.995	0.032	0.022	0.489
	4	0.482*	0.118	120.892	<0.001	0.248	0.716
	5	0.867*	0.11	106.078	<0.001	0.649	1.085
	6	0.497*	0.11	106.77	<0.001	0.279	0.715
	7	0.345*	0.116	108.877	0.004	0.115	0.575
	8	0.301*	0.116	108.879	0.011	0.071	0.531
	9	-0.057	0.11	106.8	0.606	-0.275	0.161

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	10	0.414*	0.116	108.795	0.001	0.184	0.645
	11	-0.112	0.11	106.803	0.309	-0.33	0.106
	12	-0.411*	0.116	110.833	0.001	-0.641	-0.18
4 vs. (5.554± 0.093)	1	0.386*	0.116	110.875	0.001	0.155	0.616
	2	-0.226	0.116	108.108	0.054	-0.457	0.004
	3	-0.482*	0.118	120.892	<0.001	-0.716	-0.248
	5	0.385*	0.111	116.91	0.001	0.164	0.606
	6	0.015	0.11	106.13	0.889	-0.202	0.233
	7	-0.137	0.116	108.818	0.241	-0.367	0.093
	8	-0.181	0.116	108.794	0.122	-0.411	0.049
	9	-0.539*	0.11	106.708	<0.001	-0.757	-0.321
	10	-0.068	0.116	108.711	0.562	-0.298	0.163
	11	-0.594*	0.11	106.711	<0.001	-0.812	-0.376
	12	-0.892*	0.116	110.748	<0.001	-1.123	-0.662
5 vs. (5.169 ± 0.085)	1	0.001	0.11	108.89	0.996	-0.218	0.219
	2	-0.611*	0.11	106.781	<0.001	-0.829	-0.393
	3	-0.867*	0.11	106.078	<0.001	-1.085	-0.649
	4	-0.385*	0.111	116.91	0.001	-0.606	-0.164
	6	-0.370*	0.105	112.861	0.001	-0.577	-0.162
	7	-0.522*	0.11	106.13	<0.001	-0.74	-0.304
	8	-0.566*	0.11	106.678	<0.001	-0.784	-0.348
	9	-0.924*	0.103	104.065	<0.001	-1.128	-0.719
	10	-0.452*	0.11	106.56	<0.001	-0.67	-0.235
	11	-0.979*	0.103	104.069	<0.001	-1.184	-0.774
	12	-1.277*	0.11	108.796	<0.001	-1.496	-1.059
6 vs. (5.539 ± 0.085)	1	0.370*	0.11	108.891	0.001	0.152	0.588
	2	-0.242*	0.11	106.747	0.03	-0.46	-0.024
	3	-0.497*	0.11	106.77	<0.001	-0.715	-0.279
	4	-0.015	0.11	106.13	0.889	-0.233	0.202
	5	0.370*	0.105	112.861	0.001	0.162	0.577
	7	-0.152	0.111	116.91	0.174	-0.373	0.068
	8	-0.196	0.11	105.987	0.077	-0.414	0.022
	9	-0.554*	0.103	104.095	<0.001	-0.759	-0.349
	10	-0.083	0.11	106.559	0.452	-0.301	0.135

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	11	-0.610*	0.103	104.069	<0.001	-0.814	-0.405
	12	-0.908*	0.11	108.796	<0.001	-1.126	-0.69
7 vs. (5.691 ± 0.093)	1	0.523*	0.116	110.835	<0.001	0.292	0.753
	2	-0.089	0.116	108.883	0.444	-0.32	0.141
	3	-0.345*	0.116	108.877	0.004	-0.575	-0.115
	4	0.137	0.116	108.818	0.241	-0.093	0.367
	5	0.522*	0.11	106.13	<0.001	0.304	0.74
	6	0.152	0.111	116.91	0.174	-0.068	0.373
	8	-0.044	0.118	120.793	0.711	-0.278	0.19
	9	-0.402*	0.11	106.042	<0.001	-0.62	-0.184
	10	0.07	0.116	108.741	0.551	-0.161	0.3
	11	-0.457*	0.11	106.71	<0.001	-0.675	-0.239
	12	-0.755*	0.116	110.748	<0.001	-0.986	-0.525
8 vs. (5.735 ± 0.093)	1	0.566*	0.116	110.835	<0.001	0.336	0.797
	2	-0.046	0.116	108.883	0.696	-0.276	0.185
	3	-0.301*	0.116	108.879	0.011	-0.531	-0.071
	4	0.181	0.116	108.794	0.122	-0.049	0.411
	5	0.566*	0.11	106.678	<0.001	0.348	0.784
	6	0.196	0.11	105.987	0.077	-0.022	0.414
	7	0.044	0.118	120.793	0.711	-0.19	0.278
	9	-0.358*	0.112	116.976	0.002	-0.579	-0.137
	10	0.113	0.116	108.105	0.331	-0.117	0.344
	11	-0.413*	0.11	106.737	<0.001	-0.631	-0.195
	12	-0.712*	0.116	110.747	<0.001	-0.942	-0.481
9 vs. (6.093 ± 0.085)	1	0.924*	0.11	108.949	<0.001	0.706	1.142
	2	0.312*	0.11	106.805	0.005	0.095	0.53
	3	0.057	0.11	106.8	0.606	-0.161	0.275
	4	0.539*	0.11	106.708	<0.001	0.321	0.757
	5	0.924*	0.103	104.065	<0.001	0.719	1.128
	6	0.554*	0.103	104.095	<0.001	0.349	0.759
	7	0.402*	0.11	106.042	<0.001	0.184	0.62
	8	0.358*	0.112	116.976	0.002	0.137	0.579
	10	0.471*	0.111	116.871	<0.001	0.25	0.692
	11	-0.055	0.103	103.554	0.592	-0.26	0.149

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	12	-0.354*	0.11	108.88	0.002	-0.572	-0.136
10 vs. (5.622 ± 0.093)	1	0.453*	0.116	110.75	<0.001	0.223	0.684
	2	-0.159	0.116	108.799	0.174	-0.389	0.071
	3	-0.414*	0.116	108.795	0.001	-0.645	-0.184
	4	0.068	0.116	108.711	0.562	-0.163	0.298
	5	0.452*	0.11	106.56	<0.001	0.235	0.67
	6	0.083	0.11	106.559	0.452	-0.135	0.301
	7	-0.07	0.116	108.741	0.551	-0.3	0.161
	8	-0.113	0.116	108.105	0.331	-0.344	0.117
	9	-0.471*	0.111	116.871	<0.001	-0.692	-0.25
	11	-0.527*	0.111	116.874	<0.001	-0.748	-0.306
	12	-0.825*	0.116	110.042	<0.001	-1.055	-0.594
11 vs. (6.148 ± 0.085)	1	0.980*	0.11	108.951	<0.001	0.762	1.198
	2	0.368*	0.11	106.807	0.001	0.15	0.586
	3	0.112	0.11	106.803	0.309	-0.106	0.33
	4	0.594*	0.11	106.711	<0.001	0.376	0.812
	5	0.979*	0.103	104.069	<0.001	0.774	1.184
	6	0.610*	0.103	104.069	<0.001	0.405	0.814
	7	0.457*	0.11	106.71	<0.001	0.239	0.675
	8	0.413*	0.11	106.737	<0.001	0.195	0.631
	9	0.055	0.103	103.554	0.592	-0.149	0.26
	10	0.527*	0.111	116.874	<0.001	0.306	0.748
	12	-0.298*	0.112	119.42	0.009	-0.519	-0.077
12 vs. (6.446 ± 0.093)	1	1.278*	0.116	112.819	<0.001	1.047	1.509
	2	0.666*	0.116	110.838	<0.001	0.436	0.897
	3	0.411*	0.116	110.833	0.001	0.18	0.641
	4	0.892*	0.116	110.748	<0.001	0.662	1.123
	5	1.277*	0.11	108.796	<0.001	1.059	1.496
	6	0.908*	0.11	108.796	<0.001	0.69	1.126
	7	0.755*	0.116	110.748	<0.001	0.525	0.986
	8	0.712*	0.116	110.747	<0.001	0.481	0.942
	9	0.354*	0.11	108.88	0.002	0.136	0.572
	10	0.825*	0.116	110.042	<0.001	0.594	1.055

Months (Log Mean ± SE)		**Mean Difference**	**Std. Error**	**df**	**P-Value[a]**	**95% Confidence Interval for Difference[b]**	
						Lower Bound	**Upper Bound**
	11	0.298*	0.112	119.42	0.009	0.077	0.519

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a. Dependent Variable: logBac.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 19: Comparison of Total Fungal DNA Concentrations by Month.

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1 vs. (1.957 ± 0.116)	2	-0.845*	0.145	118.803	<0.001	-1.132	-0.558
	3	-1.324*	0.144	101.483	<0.001	-1.61	-1.039
	4	-0.286*	0.144	101.892	0.05	-0.571	0.000
	5	-0.516*	0.136	99.187	<0.001	-0.786	-0.245
	6	-0.610*	0.136	99.187	<0.001	-0.881	-0.339
	7	-0.975*	0.144	101.882	<0.001	-1.261	-0.69
	8	-0.759*	0.144	101.882	<0.001	-1.045	-0.474
	9	-1.088*	0.136	99.218	<0.001	-1.359	-0.818
	10	-0.926*	0.144	101.836	<0.001	-1.211	-0.64
	11	-1.098*	0.136	99.219	<0.001	-1.369	-0.827
	12	-1.073*	0.144	102.692	<0.001	-1.359	-0.788
2 vs. (2.802 ± 0.116)	1	0.845*	0.145	118.803	<0.001	0.558	1.132
	3	-0.479*	0.145	117.834	0.001	-0.766	-0.192
	4	0.559*	0.144	100.638	<0.001	0.274	0.845
	5	0.329*	0.136	98.327	0.018	0.059	0.6
	6	0.235	0.136	98.319	0.088	-0.036	0.506
	7	-0.13	0.144	101.079	0.368	-0.416	0.155
	8	0.086	0.144	101.079	0.554	-0.2	0.371
	9	-0.243	0.136	98.35	0.077	-0.514	0.027
	10	-0.081	0.144	101.033	0.576	-0.366	0.205
	11	-0.253	0.136	98.35	0.066	-0.524	0.018
	12	-0.228	0.144	101.882	0.116	-0.514	0.057
3 vs. (3.281 ± 0.116)	1	1.324*	0.144	101.483	<0.001	1.039	1.61
	2	0.479*	0.145	117.834	0.001	0.192	0.766
	4	1.038*	0.145	117.778	<0.001	0.751	1.325
	5	0.809*	0.136	97.94	<0.001	0.538	1.079
	6	0.714*	0.136	98.325	<0.001	0.444	0.985
	7	0.349*	0.144	101.078	0.017	0.064	0.635
	8	0.565*	0.144	101.079	<0.001	0.279	0.85
	9	0.236	0.136	98.35	0.087	-0.035	0.506
	10	0.399*	0.144	101.033	0.007	0.113	0.684
	11	0.226	0.136	98.35	0.1	-0.044	0.497

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	12	0.251	0.144	101.882	0.084	-0.034	0.537
4 vs. (2.243 ± 0.116)	1	0.286*	0.144	101.892	0.05	0	0.571
	2	-0.559*	0.144	100.638	<0.001	-0.845	-0.274
	3	-1.038*	0.145	117.778	<0.001	-1.325	-0.751
	5	-0.23	0.137	112.444	0.097	-0.502	0.042
	6	-0.324*	0.136	97.969	0.019	-0.595	-0.054
	7	-0.689*	0.144	101.039	<0.001	-0.975	-0.404
	8	-0.474*	0.144	101.033	0.001	-0.759	-0.188
	9	-0.803*	0.136	98.3	<0.001	-1.073	-0.532
	10	-0.640*	0.144	100.987	<0.001	-0.925	-0.354
	11	-0.812*	0.136	98.3	<0.001	-1.083	-0.542
	12	-0.787*	0.144	101.836	<0.001	-1.073	-0.502
5 vs. (2.473 ± 0.106)	1	0.516*	0.136	99.187	<0.001	0.245	0.786
	2	-0.329*	0.136	98.327	0.018	-0.6	-0.059
	3	-0.809*	0.136	97.94	<0.001	-1.079	-0.538
	4	0.23	0.137	112.444	0.097	-0.042	0.502
	6	-0.094	0.129	107.037	0.467	-0.35	0.162
	7	-0.459*	0.136	97.969	0.001	-0.73	-0.189
	8	-0.244	0.136	98.276	0.077	-0.514	0.027
	9	-0.573*	0.128	94.952	<0.001	-0.827	-0.318
	10	-0.410*	0.136	98.22	0.003	-0.68	-0.139
	11	-0.582*	0.128	94.952	<0.001	-0.837	-0.327
	12	-0.557*	0.136	99.137	<0.001	-0.828	-0.287
6 vs. (2.567 ± 0.106)	1	0.610*	0.136	99.187	<0.001	0.339	0.881
	2	-0.235	0.136	98.319	0.088	-0.506	0.036
	3	-0.714*	0.136	98.325	<0.001	-0.985	-0.444
	4	0.324*	0.136	97.969	0.019	0.054	0.595
	5	0.094	0.129	107.037	0.467	-0.162	0.35
	7	-0.365*	0.137	112.444	0.009	-0.637	-0.093
	8	-0.149	0.136	97.891	0.276	-0.42	0.121
	9	-0.478*	0.128	94.959	<0.001	-0.733	-0.224
	10	-0.316*	0.136	98.22	0.023	-0.586	-0.045
	11	-0.488*	0.128	94.952	<0.001	-0.743	-0.233

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	12	-0.463*	0.136	99.137	0.001	-0.734	-0.193
7 vs. (2.932 ± 0.116)	1	0.975*	0.144	101.882	0	0.69	1.261
	2	0.13	0.144	101.079	0.368	-0.155	0.416
	3	-0.349*	0.144	101.078	0.017	-0.635	-0.064
	4	0.689*	0.144	101.039	<0.001	0.404	0.975
	5	0.459*	0.136	97.969	0.001	0.189	0.73
	6	0.365*	0.137	112.444	0.009	0.093	0.637
	8	0.216	0.145	117.723	0.14	-0.071	0.503
	9	-0.113	0.136	97.922	0.407	-0.384	0.157
	10	0.049	0.144	100.995	0.732	-0.236	0.335
	11	-0.123	0.136	98.3	0.369	-0.394	0.148
	12	-0.098	0.144	101.836	0.496	-0.384	0.187
8 vs. (2.716 ± 0.116)	1	0.759*	0.144	101.882	<0.001	0.474	1.045
	2	-0.086	0.144	101.079	0.554	-0.371	0.2
	3	-0.565*	0.144	101.079	<0.001	-0.85	-0.279
	4	0.474*	0.144	101.033	0.001	0.188	0.759
	5	0.244	0.136	98.276	0.077	-0.027	0.514
	6	0.149	0.136	97.891	0.276	-0.121	0.42
	7	-0.216	0.145	117.723	0.14	-0.503	0.071
	9	-0.329*	0.137	112.481	0.018	-0.601	-0.057
	10	-0.166	0.144	100.637	0.251	-0.452	0.119
	11	-0.339*	0.136	98.307	0.015	-0.609	-0.068
	12	-0.314*	0.144	101.836	0.032	-0.599	-0.028
9 vs. (3.045 ± 0.106)	1	1.088*	0.136	99.218	<0.001	0.818	1.359
	2	0.243	0.136	98.35	0.077	-0.027	0.514
	3	-0.236	0.136	98.35	0.087	-0.506	0.035
	4	0.803*	0.136	98.3	<0.001	0.532	1.073
	5	0.573*	0.128	94.952	<0.001	0.318	0.827
	6	0.478*	0.128	94.959	<0.001	0.224	0.733
	7	0.113	0.136	97.922	0.407	-0.157	0.384
	8	0.329*	0.137	112.481	0.018	0.057	0.601
	10	0.163	0.137	112.423	0.238	-0.109	0.435
	11	-0.01	0.128	94.66	0.941	-0.264	0.245
	12	0.015	0.136	99.175	0.912	-0.255	0.286

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
10 vs. (2.883 ± 0.116)	1	0.926*	0.144	101.836	<0.001	0.64	1.211
	2	0.081	0.144	101.033	0.576	-0.205	0.366
	3	-0.399*	0.144	101.033	0.007	-0.684	-0.113
	4	0.640*	0.144	100.987	<0.001	0.354	0.925
	5	0.410*	0.136	98.22	0.003	0.139	0.68
	6	0.316*	0.136	98.22	0.023	0.045	0.586
	7	-0.049	0.144	100.995	0.732	-0.335	0.236
	8	0.166	0.144	100.637	0.251	-0.119	0.452
	9	-0.163	0.137	112.423	0.238	-0.435	0.109
	11	-0.172	0.137	112.423	0.212	-0.444	0.1
	12	-0.148	0.144	101.437	0.308	-0.433	0.138
11 vs. (3.055 ± 0.106)	1	1.098*	0.136	99.219	<0.001	0.827	1.369
	2	0.253	0.136	98.35	0.066	-0.018	0.524
	3	-0.226	0.136	98.35	0.1	-0.497	0.044
	4	0.812*	0.136	98.3	<0.001	0.542	1.083
	5	0.582*	0.128	94.952	<0.001	0.327	0.837
	6	0.488*	0.128	94.952	<0.001	0.233	0.743
	7	0.123	0.136	98.3	0.369	-0.148	0.394
	8	0.339*	0.136	98.307	0.015	0.068	0.609
	9	0.01	0.128	94.66	0.941	-0.245	0.264
	10	0.172	0.137	112.423	0.212	-0.1	0.444
	12	0.025	0.137	113.506	0.857	-0.247	0.297
12 vs. (3.030 ± 0.116)	1	1.073*	0.144	102.692	<0.001	0.788	1.359
	2	0.228	0.144	101.882	0.116	-0.057	0.514
	3	-0.251	0.144	101.882	0.084	-0.537	0.034
	4	0.787*	0.144	101.836	<0.001	0.502	1.073
	5	0.557*	0.136	99.137	<0.001	0.287	0.828
	6	0.463*	0.136	99.137	0.001	0.193	0.734
	7	0.098	0.144	101.836	0.496	-0.187	0.384
	8	0.314*	0.144	101.836	0.032	0.028	0.599
	9	-0.015	0.136	99.175	0.912	-0.286	0.255
	10	0.148	0.144	101.437	0.308	-0.138	0.433
	11	-0.025	0.137	113.506	0.857	-0.297	0.247
Based on estimated marginal means							

Months (Log Mean ± SE)	**Mean Difference**	**Std. Error**	**df**	**P-Value[a]**	**95% Confidence Interval for Difference[b]**	
					Lower Bound	**Upper Bound**
* The mean difference is significant at the .05 level.						
a. Dependent Variable: logFung.						
b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						

Table 20: Comparison of Total Pollen Concentration Concentrations by Month.

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1 vs. (0.343 ± 0.323)	2	-1.165*	0.361	110.656	0.002	-1.882	-0.449
	3	-2.272*	0.341	54.852	<0.001	-2.955	-1.589
	4	-1.645*	0.329	45.925	<0.001	-2.306	-0.983
	5	-0.977*	0.324	43.527	0.004	-1.631	-0.323
	6	-0.977*	0.324	43.244	0.004	-1.631	-0.323
	7	-0.582	0.328	44.53	0.083	-1.243	0.08
	8	-0.716*	0.328	44.263	0.034	-1.377	-0.055
	9	-0.893*	0.325	43.029	0.009	-1.548	-0.239
	10	-0.513	0.328	44.343	0.124	-1.174	0.147
	11	-0.35	0.326	43.327	0.288	-1.007	0.307
	12	0.156	0.329	42.947	0.638	-0.508	0.82
2 vs. (1.508 ± 0.310)	1	1.165*	0.361	110.656	0.002	0.449	1.882
	3	-1.107*	0.317	90.713	0.001	-1.735	-0.478
	4	-0.479	0.315	66.355	0.133	-1.109	0.15
	5	0.188	0.313	59.491	0.549	-0.437	0.814
	6	0.188	0.313	58.103	0.55	-0.438	0.815
	7	0.584	0.317	59.495	0.07	-0.05	1.218
	8	0.449	0.317	59.039	0.162	-0.185	1.083
	9	0.272	0.313	57.481	0.389	-0.355	0.899
	10	0.652*	0.317	59.153	0.044	0.018	1.286
	11	0.815*	0.315	57.783	0.012	0.185	1.445
	12	1.321*	0.318	56.833	<0.001	0.684	1.958
3 vs. (2.615 ± 0.196)	1	2.272*	0.341	54.852	<0.001	1.589	2.955
	2	1.107*	0.317	90.713	0.001	0.478	1.735
	4	0.627*	0.194	150.42	0.001	0.245	1.01
	5	1.295*	0.205	84.113	<0.001	0.886	1.704
	6	1.295*	0.209	69.928	<0.001	0.879	1.711
	7	1.690*	0.215	71.119	<0.001	1.262	2.119
	8	1.556*	0.215	69.126	<0.001	1.127	1.984
	9	1.379*	0.21	65.321	<0.001	0.96	1.797

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	10	1.759*	0.215	69.218	<0.001	1.33	2.187
	11	1.922*	0.212	66.369	<0.001	1.499	2.345
	12	2.428*	0.217	63.23	<0.001	1.995	2.861
4 vs. (1.987 ± 0.161)	1	1.645*	0.329	45.925	<0.001	0.983	2.306
	2	0.479	0.315	66.355	0.133	-0.15	1.109
	3	-0.627*	0.194	150.42	0.001	-1.01	-0.245
	5	0.668*	0.16	103.583	<0.001	0.351	0.984
	6	0.667*	0.174	60.401	<0.001	0.32	1.015
	7	1.063*	0.183	57.662	<0.001	0.697	1.429
	8	0.928*	0.183	54.193	<0.001	0.562	1.295
	9	0.751*	0.177	49.161	<0.001	0.396	1.107
	10	1.131*	0.183	53.847	<0.001	0.765	1.498
	11	1.294*	0.18	50.77	<0.001	0.933	1.655
	12	1.800*	0.185	48.262	<0.001	1.428	2.173
5 vs. (1.320 ± 0.150)	1	0.977*	0.324	43.527	0.004	0.323	1.631
	2	-0.188	0.313	59.491	0.549	-0.814	0.437
	3	-1.295*	0.205	84.113	<0.001	-1.704	-0.886
	4	-0.668*	0.16	103.583	<0.001	-0.984	-0.351
	6	-2.82E-05	0.151	87.004	1	-0.3	0.3
	7	0.396*	0.17	61.456	0.023	0.056	0.735
	8	0.261	0.172	52.062	0.134	-0.083	0.605
	9	0.084	0.165	45.133	0.615	-0.249	0.417
	10	0.464*	0.172	49.897	0.009	0.118	0.809
	11	0.627*	0.169	46.472	0.001	0.288	0.966
	12	1.133*	0.174	44.277	<0.001	0.781	1.484
6 vs. (1.320 ± 0.150)	1	0.977*	0.324	43.244	0.004	0.323	1.631
	2	-0.188	0.313	58.103	0.55	-0.815	0.438
	3	-1.295*	0.209	69.928	<0.001	-1.711	-0.879
	4	-0.667*	0.174	60.401	<0.001	-1.015	-0.32
	5	2.82E-05	0.151	87.004	1	-0.3	0.3
	7	0.396*	0.156	104.168	0.013	0.086	0.705

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	8	0.261	0.169	61.843	0.128	-0.077	0.599
	9	0.084	0.165	47.475	0.613	-0.248	0.415
	10	0.464*	0.172	50.861	0.009	0.119	0.808
	11	0.627*	0.168	46.991	0.001	0.288	0.966
	12	1.133*	0.174	44.659	<0.001	0.782	1.484
7 vs. (0.924 ± 0.158)	1	0.582	0.328	44.53	0.083	-0.08	1.243
	2	-0.584	0.317	59.495	0.07	-1.218	0.05
	3	-1.690*	0.215	71.119	<0.001	-2.119	-1.262
	4	-1.063*	0.183	57.662	<0.001	-1.429	-0.697
	5	-0.396*	0.17	61.456	0.023	-0.735	-0.056
	6	-0.396*	0.156	104.168	0.013	-0.705	-0.086
	8	-0.135	0.161	118.459	0.404	-0.453	0.184
	9	-0.312	0.17	62.9	0.071	-0.651	0.027
	10	0.068	0.178	59.04	0.703	-0.288	0.425
	11	0.231	0.176	53.152	0.193	-0.121	0.583
	12	0.737*	0.181	49.812	<0.001	0.373	1.101
8 vs. (1.059 ± 0.157)	1	0.716*	0.328	44.263	0.034	0.055	1.377
	2	-0.449	0.317	59.039	0.162	-1.083	0.185
	3	-1.556*	0.215	69.126	<0.001	-1.984	-1.127
	4	-0.928*	0.183	54.193	<0.001	-1.295	-0.562
	5	-0.261	0.172	52.062	0.134	-0.605	0.083
	6	-0.261	0.169	61.843	0.128	-0.599	0.077
	7	0.135	0.161	118.459	0.404	-0.184	0.453
	9	-0.177	0.156	100.694	0.259	-0.487	0.133
	10	0.203	0.175	67.147	0.252	-0.147	0.553
	11	0.366*	0.175	53.987	0.041	0.016	0.716
	12	0.872*	0.181	49.122	<0.001	0.509	1.235
9 vs. (1.236 ± 0.150)	1	0.893*	0.325	43.029	0.009	0.239	1.548
	2	-0.272	0.313	57.481	0.389	-0.899	0.355
	3	-1.379*	0.21	65.321	<0.001	-1.797	-0.96
	4	-0.751*	0.177	49.161	<0.001	-1.107	-0.396
	5	-0.084	0.165	45.133	0.615	-0.417	0.249

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	6	-0.084	0.165	47.475	0.613	-0.415	0.248
	7	0.312	0.17	62.9	0.071	-0.027	0.651
	8	0.177	0.156	100.694	0.259	-0.133	0.487
	10	0.380*	0.156	101.183	0.017	0.071	0.689
	11	0.543*	0.166	56.913	0.002	0.211	0.875
	12	1.049*	0.174	46.328	<0.001	0.699	1.399
10 vs. (0.856 ± 0.157)	1	0.513	0.328	44.343	0.124	-0.147	1.174
	2	-0.652*	0.317	59.153	0.044	-1.286	-0.018
	3	-1.759*	0.215	69.218	<0.001	-2.187	-1.33
	4	-1.131*	0.183	53.847	<0.001	-1.498	-0.765
	5	-0.464*	0.172	49.897	0.009	-0.809	-0.118
	6	-0.464*	0.172	50.861	0.009	-0.808	-0.119
	7	-0.068	0.178	59.04	0.703	-0.425	0.288
	8	-0.203	0.175	67.147	0.252	-0.553	0.147
	9	-0.380*	0.156	101.183	0.017	-0.689	-0.071
	11	0.163	0.158	107.39	0.304	-0.15	0.476
	12	0.669*	0.178	59.041	<0.001	0.313	1.025
11 vs. (0.693 ± 0.153)	1	0.35	0.326	43.327	0.288	-0.307	1.007
	2	-0.815*	0.315	57.783	0.012	-1.445	-0.185
	3	-1.922*	0.212	66.369	<0.001	-2.345	-1.499
	4	-1.294*	0.18	50.77	<0.001	-1.655	-0.933
	5	-0.627*	0.169	46.472	0.001	-0.966	-0.288
	6	-0.627*	0.168	46.991	0.001	-0.966	-0.288
	7	-0.231	0.176	53.152	0.193	-0.583	0.121
	8	-0.366*	0.175	53.987	0.041	-0.716	-0.016
	9	-0.543*	0.166	56.913	0.002	-0.875	-0.211
	10	-0.163	0.158	107.39	0.304	-0.476	0.15
	12	0.506*	0.163	87.134	0.003	0.182	0.83
12 vs. (0.187 ± 0.160)	1	-0.156	0.329	42.947	0.638	-0.82	0.508
	2	-1.321*	0.318	56.833	<0.001	-1.958	-0.684
	3	-2.428*	0.217	63.23	<0.001	-2.861	-1.995
	4	-1.800*	0.185	48.262	<0.001	-2.173	-1.428

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	5	-1.133*	0.174	44.277	<0.001	-1.484	-0.781
	6	-1.133*	0.174	44.659	<0.001	-1.484	-0.782
	7	-0.737*	0.181	49.812	<0.001	-1.101	-0.373
	8	-0.872*	0.181	49.122	<0.001	-1.235	-0.509
	9	-1.049*	0.174	46.328	<0.001	-1.399	-0.699
	10	-0.669*	0.178	59.041	<0.001	-1.025	-0.313
	11	-0.506*	0.163	87.134	0.003	-0.83	-0.182

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a. Dependent Variable: logPollen.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 21: Comparison of Total Mold Concentration Concentrations by Month.

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1 vs. (1.718 ± 0.157)	2	-0.292	0.187	111.199	0.121	-0.662	0.078
	3	-0.631*	0.17	71.57	<0.001	-0.969	-0.293
	4	-0.800*	0.162	62.638	<0.001	-1.123	-0.477
	5	-0.911*	0.159	60.301	<0.001	-1.229	-0.593
	6	-0.937*	0.159	60.145	<0.001	-1.255	-0.619
	7	-0.910*	0.161	61.874	<0.001	-1.232	-0.587
	8	-0.790*	0.161	61.401	<0.001	-1.112	-0.468
	9	-0.869*	0.159	60.023	<0.001	-1.187	-0.55
	10	-0.771*	0.161	61.508	<0.001	-1.093	-0.449
	11	-0.685*	0.16	60.546	<0.001	-1.005	-0.365
	12	-0.385*	0.162	60.113	0.02	-0.708	-0.062
2 vs. (2.010 ± 0.154)	1	0.292	0.187	111.199	0.121	-0.078	0.662
	3	-0.339*	0.162	100.882	0.039	-0.661	-0.018
	4	-0.508*	0.158	78.061	0.002	-0.824	-0.193
	5	-0.619*	0.156	72.854	<0.001	-0.93	-0.308
	6	-0.645*	0.156	72.211	<0.001	-0.957	-0.334
	7	-0.618*	0.158	74.016	<0.001	-0.934	-0.303
	8	-0.499*	0.158	73.422	0.002	-0.814	-0.183
	9	-0.577*	0.156	71.977	<0.001	-0.889	-0.266
	10	-0.480*	0.158	73.556	0.003	-0.795	-0.164
	11	-0.393*	0.157	72.495	0.014	-0.706	-0.08
	12	-0.093	0.159	71.706	0.559	-0.409	0.223
3 vs. (2.350 ± 0.098)	1	0.631*	0.17	71.57	<0.001	0.293	0.969
	2	0.339*	0.162	100.882	0.039	0.018	0.661
	4	-0.169	0.102	147.558	0.1	-0.371	0.033
	5	-0.280*	0.105	95.809	0.009	-0.488	-0.072
	6	-0.306*	0.105	87.36	0.005	-0.515	-0.096
	7	-0.279*	0.109	90.535	0.012	-0.495	-0.063
	8	-0.159	0.109	88.521	0.146	-0.375	0.057

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	9	-0.238*	0.106	85.516	0.027	-0.448	-0.028
	10	-0.14	0.109	88.773	0.2	-0.356	0.076
	11	-0.054	0.107	87.069	0.617	-0.266	0.159
	12	0.247*	0.109	84.025	0.026	0.03	0.463
4 vs. (2.519 ± 0.079)	1	0.800*	0.162	62.638	<0.001	0.477	1.123
	2	0.508*	0.158	78.061	0.002	0.193	0.824
	3	0.169	0.102	147.558	0.1	-0.033	0.371
	5	-0.111	0.082	106.993	0.18	-0.274	0.052
	6	-0.137	0.087	72.958	0.12	-0.31	0.036
	7	-0.11	0.091	74.296	0.233	-0.292	0.072
	8	0.01	0.091	71.267	0.914	-0.172	0.191
	9	-0.069	0.087	66.599	0.434	-0.243	0.106
	10	0.029	0.091	71.399	0.753	-0.153	0.21
	11	0.115	0.089	69.261	0.201	-0.063	0.293
	12	0.415*	0.092	66.459	<0.001	0.233	0.598
5 vs. (2.629 ± 0.072)	1	0.911*	0.159	60.301	<0.001	0.593	1.229
	2	0.619*	0.156	72.854	<0.001	0.308	0.93
	3	0.280*	0.105	95.809	0.009	0.072	0.488
	4	0.111	0.082	106.993	0.18	-0.052	0.274
	6	-0.026	0.077	92.939	0.735	-0.179	0.127
	7	0.001	0.085	74.363	0.992	-0.168	0.17
	8	0.121	0.085	67.193	0.161	-0.049	0.29
	9	0.042	0.081	61.163	0.608	-0.121	0.204
	10	0.14	0.085	66.521	0.106	-0.03	0.309
	11	0.226*	0.083	63.903	0.008	0.06	0.392
	12	0.526*	0.086	61.446	<0.001	0.355	0.698
6 vs. (2.655 ± 0.072)	1	0.937*	0.159	60.145	<0.001	0.619	1.255
	2	0.645*	0.156	72.211	<0.001	0.334	0.957
	3	0.306*	0.105	87.36	0.005	0.096	0.515
	4	0.137	0.087	72.958	0.12	-0.036	0.31
	5	0.026	0.077	92.939	0.735	-0.127	0.179
	7	0.027	0.08	107.944	0.738	-0.133	0.186
	8	0.147	0.084	73.198	0.087	-0.022	0.315

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	9	0.068	0.081	62.249	0.405	-0.094	0.23
	10	0.166	0.085	66.907	0.056	-0.004	0.335
	11	0.252*	0.083	64.161	0.003	0.086	0.418
	12	0.552*	0.086	61.662	<0.001	0.381	0.724
7 vs. (2.628 ± 0.077)	1	0.910*	0.161	61.874	<0.001	0.587	1.232
	2	0.618*	0.158	74.016	<0.001	0.303	0.934
	3	0.279*	0.109	90.535	0.012	0.063	0.495
	4	0.11	0.091	74.296	0.233	-0.072	0.292
	5	-0.001	0.085	74.363	0.992	-0.17	0.168
	6	-0.027	0.08	107.944	0.738	-0.186	0.133
	8	0.12	0.083	119.095	0.154	-0.045	0.285
	9	0.041	0.085	75.262	0.63	-0.128	0.21
	10	0.139	0.089	74.544	0.124	-0.039	0.316
	11	0.225*	0.087	71.184	0.012	0.051	0.399
	12	0.525*	0.09	68.024	<0.001	0.346	0.704
8 vs. (2.509 ± 0.077)	1	0.790*	0.161	61.401	<0.001	0.468	1.112
	2	0.499*	0.158	73.422	0.002	0.183	0.814
	3	0.159	0.109	88.521	0.146	-0.057	0.375
	4	-0.01	0.091	71.267	0.914	-0.191	0.172
	5	-0.121	0.085	67.193	0.161	-0.29	0.049
	6	-0.147	0.084	73.198	0.087	-0.315	0.022
	7	-0.12	0.083	119.095	0.154	-0.285	0.045
	9	-0.079	0.08	103.81	0.329	-0.238	0.08
	10	0.019	0.088	77.915	0.831	-0.157	0.194
	11	0.105	0.087	69.833	0.229	-0.068	0.278
	12	0.406*	0.089	66.142	<0.001	0.227	0.584
9 vs. (2.587 ± 0.072)	1	0.869*	0.159	60.023	<0.001	0.55	1.187
	2	0.577*	0.156	71.977	<0.001	0.266	0.889
	3	0.238*	0.106	85.516	0.027	0.028	0.448
	4	0.069	0.087	66.599	0.434	-0.106	0.243
	5	-0.042	0.081	61.163	0.608	-0.204	0.121
	6	-0.068	0.081	62.249	0.405	-0.23	0.094
	7	-0.041	0.085	75.262	0.63	-0.21	0.128

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	8	0.079	0.08	103.81	0.329	-0.08	0.238
	10	0.098	0.08	104.226	0.226	-0.061	0.257
	11	0.184*	0.083	69.914	0.029	0.019	0.349
	12	0.484*	0.086	62.159	<0.001	0.313	0.656
10 vs. (2.490 ± 0.076)	1	0.771*	0.161	61.508	<0.001	0.449	1.093
	2	0.480*	0.158	73.556	0.003	0.164	0.795
	3	0.14	0.109	88.773	0.2	-0.076	0.356
	4	-0.029	0.091	71.399	0.753	-0.21	0.153
	5	-0.14	0.085	66.521	0.106	-0.309	0.03
	6	-0.166	0.085	66.907	0.056	-0.335	0.004
	7	-0.139	0.089	74.544	0.124	-0.316	0.039
	8	-0.019	0.088	77.915	0.831	-0.194	0.157
	9	-0.098	0.08	104.226	0.226	-0.257	0.061
	11	0.086	0.082	110.37	0.292	-0.075	0.248
	12	0.387*	0.089	71.92	<0.001	0.21	0.564
11 vs. (2.403 ± 0.074)	1	0.685*	0.16	60.546	<0.001	0.365	1.005
	2	0.393*	0.157	72.495	0.014	0.08	0.706
	3	0.054	0.107	87.069	0.617	-0.159	0.266
	4	-0.115	0.089	69.261	0.201	-0.293	0.063
	5	-0.226*	0.083	63.903	0.008	-0.392	-0.06
	6	-0.252*	0.083	64.161	0.003	-0.418	-0.086
	7	-0.225*	0.087	71.184	0.012	-0.399	-0.051
	8	-0.105	0.087	69.833	0.229	-0.278	0.068
	9	-0.184*	0.083	69.914	0.029	-0.349	-0.019
	10	-0.086	0.082	110.37	0.292	-0.248	0.075
	12	0.300*	0.083	95.053	<0.001	0.135	0.465
12 vs. (2.103 ± 0.077)	1	0.385*	0.162	60.113	0.02	0.062	0.708
	2	0.093	0.159	71.706	0.559	-0.223	0.409
	3	-0.247*	0.109	84.025	0.026	-0.463	-0.03
	4	-0.415*	0.092	66.459	<0.001	-0.598	-0.233
	5	-0.526*	0.086	61.446	<0.001	-0.698	-0.355
	6	-0.552*	0.086	61.662	<0.001	-0.724	-0.381

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	7	-0.525*	0.09	68.024	<0.001	-0.704	-0.346
	8	-0.406*	0.089	66.142	<0.001	-0.584	-0.227
	9	-0.484*	0.086	62.159	<0.001	-0.656	-0.313
	10	-0.387*	0.089	71.92	<0.001	-0.564	-0.21
	11	-0.300*	0.083	95.053	<0.001	-0.465	-0.135

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a. Dependent Variable: logMold.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 22: Comparison of Total $PM_{2.5}$ Concentration Concentrations by Month.

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1 vs. (0.939 ± 0.064)	2	-0.15	0.087	53.856	0.092	-0.325	0.025
	3	-0.126	0.087	37.537	0.156	-0.302	0.05
	4	-0.045	0.087	37.365	0.609	-0.221	0.131
	5	0.051	0.083	35.478	0.538	-0.116	0.219
	6	-0.079	0.081	36.893	0.337	-0.243	0.085
	7	-0.057	0.082	37.167	0.491	-0.222	0.108
	8	-0.057	0.081	38.4	0.488	-0.221	0.108
	9	-0.109	0.078	35.181	0.17	-0.267	0.049
	10	0.106	0.082	37.579	0.205	-0.06	0.272
	11	-0.08	0.078	35.118	0.313	-0.239	0.079
	12	-0.12	0.081	35.544	0.145	-0.284	0.043
2 vs. (1.089 ± 0.067)	1	0.15	0.087	53.856	0.092	-0.025	0.325
	3	0.024	0.088	48.037	0.786	-0.153	0.202
	4	0.105	0.089	40.249	0.247	-0.076	0.286
	5	0.201*	0.086	37.901	0.024	0.028	0.375
	6	0.071	0.084	39.41	0.401	-0.098	0.24
	7	0.093	0.084	39.646	0.277	-0.078	0.264
	8	0.093	0.084	40.911	0.275	-0.077	0.263
	9	0.041	0.081	37.882	0.615	-0.122	0.204
	10	0.256*	0.085	40.102	0.005	0.084	0.427
	11	0.07	0.081	37.764	0.397	-0.095	0.234
	12	0.029	0.084	38.046	0.728	-0.14	0.199
3 vs. (1.065 ± 0.064)	1	0.126	0.087	37.537	0.156	-0.05	0.302
	2	-0.024	0.088	48.037	0.786	-0.202	0.153
	4	0.081	0.085	52.178	0.343	-0.089	0.251
	5	0.177*	0.083	37.103	0.039	0.01	0.345
	6	0.047	0.081	37.701	0.563	-0.116	0.211
	7	0.069	0.081	37.918	0.402	-0.096	0.234
	8	0.069	0.081	39.188	0.401	-0.095	0.233
	9	0.017	0.078	35.943	0.83	-0.141	0.174
	10	0.232*	0.082	38.343	0.007	0.066	0.398

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	11	0.046	0.078	35.871	0.563	-0.113	0.204
	12	0.005	0.081	36.262	0.948	-0.158	0.169
4 vs. (0.984 ± 0.064)	1	0.045	0.087	37.365	0.609	-0.131	0.221
	2	-0.105	0.089	40.249	0.247	-0.286	0.076
	3	-0.081	0.085	52.178	0.343	-0.251	0.089
	5	0.096	0.081	48.738	0.239	-0.066	0.259
	6	-0.034	0.081	39.032	0.676	-0.197	0.129
	7	-0.012	0.081	38.579	0.883	-0.177	0.153
	8	-0.012	0.081	39.845	0.882	-0.176	0.152
	9	-0.064	0.078	36.585	0.413	-0.221	0.093
	10	0.151	0.082	38.96	0.074	-0.015	0.316
	11	-0.035	0.078	36.495	0.654	-0.194	0.123
	12	-0.076	0.081	36.86	0.354	-0.239	0.088
5 vs. (0.888 ± 0.058)	1	-0.051	0.083	35.478	0.538	-0.219	0.116
	2	-0.201*	0.086	37.901	0.024	-0.375	-0.028
	3	-0.177*	0.083	37.103	0.039	-0.345	-0.01
	4	-0.096	0.081	48.738	0.239	-0.259	0.066
	6	-0.13	0.075	45.965	0.089	-0.281	0.02
	7	-0.108	0.077	37.326	0.168	-0.264	0.048
	8	-0.108	0.077	38.123	0.166	-0.263	0.047
	9	-0.160*	0.073	34.471	0.035	-0.309	-0.012
	10	0.054	0.078	37.214	0.487	-0.103	0.212
	11	-0.132	0.074	34.394	0.082	-0.281	0.018
	12	-0.172*	0.076	34.941	0.03	-0.327	-0.017
6 vs. (1.018 ± 0.055)	1	0.079	0.081	36.893	0.337	-0.085	0.243
	2	-0.071	0.084	39.41	0.401	-0.24	0.098
	3	-0.047	0.081	37.701	0.563	-0.211	0.116
	4	0.034	0.081	39.032	0.676	-0.129	0.197
	5	0.13	0.075	45.965	0.089	-0.02	0.281
	7	0.022	0.073	51.203	0.764	-0.124	0.168
	8	0.022	0.074	42.692	0.768	-0.127	0.17
	9	-0.03	0.07	37.533	0.667	-0.171	0.111
	10	0.185*	0.074	40.369	0.017	0.034	0.335

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	11	-0.001	0.07	37.426	0.984	-0.144	0.141
	12	-0.042	0.073	37.917	0.571	-0.19	0.106
7 vs. (0.996 ± 0.056)	1	0.057	0.082	37.167	0.491	-0.108	0.222
	2	-0.093	0.084	39.646	0.277	-0.264	0.078
	3	-0.069	0.081	37.918	0.402	-0.234	0.096
	4	0.012	0.081	38.579	0.883	-0.153	0.177
	5	0.108	0.077	37.326	0.168	-0.048	0.264
	6	-0.022	0.073	51.203	0.764	-0.168	0.124
	8	-6.29E-05	0.071	58.718	0.999	-0.143	0.143
	9	-0.052	0.069	38.107	0.454	-0.192	0.088
	10	0.163*	0.074	39.896	0.033	0.013	0.312
	11	-0.023	0.07	37.41	0.741	-0.165	0.118
	12	-0.064	0.072	37.69	0.385	-0.21	0.083
8 vs. (0.996 ± 0.056)	1	0.057	0.081	38.4	0.488	-0.108	0.221
	2	-0.093	0.084	40.911	0.275	-0.263	0.077
	3	-0.069	0.081	39.188	0.401	-0.233	0.095
	4	0.012	0.081	39.845	0.882	-0.152	0.176
	5	0.108	0.077	38.123	0.166	-0.047	0.263
	6	-0.022	0.074	42.692	0.768	-0.17	0.127
	7	6.29E-05	0.071	58.718	0.999	-0.143	0.143
	9	-0.052	0.067	53.005	0.44	-0.186	0.082
	10	0.163*	0.073	43.126	0.032	0.015	0.31
	11	-0.023	0.07	39.894	0.739	-0.164	0.117
	12	-0.064	0.072	40.061	0.382	-0.209	0.082
9 vs. (1.048 ± 0.051)	1	0.109	0.078	35.181	0.17	-0.049	0.267
	2	-0.041	0.081	37.882	0.615	-0.204	0.122
	3	-0.017	0.078	35.943	0.83	-0.174	0.141
	4	0.064	0.078	36.585	0.413	-0.093	0.221
	5	0.160*	0.073	34.471	0.035	0.012	0.309
	6	0.03	0.07	37.533	0.667	-0.111	0.171
	7	0.052	0.069	38.107	0.454	-0.088	0.192
	8	0.052	0.067	53.005	0.44	-0.082	0.186
	10	0.215*	0.068	46.399	0.003	0.078	0.351

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	11	0.029	0.065	35.25	0.66	-0.103	0.161
	12	-0.012	0.068	35.051	0.865	-0.149	0.126
10 vs. (0.834 ± 0.058)	1	-0.106	0.082	37.579	0.205	-0.272	0.06
	2	-0.256*	0.085	40.102	0.005	-0.427	-0.084
	3	-0.232*	0.082	38.343	0.007	-0.398	-0.066
	4	-0.151	0.082	38.96	0.074	-0.316	0.015
	5	-0.054	0.078	37.214	0.487	-0.212	0.103
	6	-0.185*	0.074	40.369	0.017	-0.335	-0.034
	7	-0.163*	0.074	39.896	0.033	-0.312	-0.013
	8	-0.163*	0.073	43.126	0.032	-0.31	-0.015
	9	-0.215*	0.068	46.399	0.003	-0.351	-0.078
	11	-0.186*	0.068	51.371	0.009	-0.323	-0.049
	12	-0.226*	0.072	38.717	0.003	-0.373	-0.08
11 vs. (1.020 ± 0.052)	1	0.08	0.078	35.118	0.313	-0.079	0.239
	2	-0.07	0.081	37.764	0.397	-0.234	0.095
	3	-0.046	0.078	35.871	0.563	-0.204	0.113
	4	0.035	0.078	36.495	0.654	-0.123	0.194
	5	0.132	0.074	34.394	0.082	-0.018	0.281
	6	0.001	0.07	37.426	0.984	-0.141	0.144
	7	0.023	0.07	37.41	0.741	-0.118	0.165
	8	0.023	0.07	39.894	0.739	-0.117	0.164
	9	-0.029	0.065	35.25	0.66	-0.161	0.103
	10	0.186*	0.068	51.371	0.009	0.049	0.323
	12	-0.04	0.067	44.203	0.553	-0.176	0.096
12 vs. (1.060 ± 0.055)	1	0.12	0.081	35.544	0.145	-0.043	0.284
	2	-0.029	0.084	38.046	0.728	-0.199	0.14
	3	-0.005	0.081	36.262	0.948	-0.169	0.158
	4	0.076	0.081	36.86	0.354	-0.088	0.239
	5	0.172*	0.076	34.941	0.03	0.017	0.327
	6	0.042	0.073	37.917	0.571	-0.106	0.19
	7	0.064	0.072	37.69	0.385	-0.083	0.21
	8	0.064	0.072	40.061	0.382	-0.082	0.209

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	9	0.012	0.068	35.051	0.865	-0.126	0.149
	10	0.226*	0.072	38.717	0.003	0.08	0.373
	11	0.04	0.067	44.203	0.553	-0.096	0.176

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a. Dependent Variable: logPM2.5.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 23: Comparison of Total PM_{10} Concentration Concentrations by Month.

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1 vs. (1.056 ± 0.046)	2	-0.265*	0.06	96.474	<0.001	-0.384	-0.146
	3	-0.271*	0.058	84.119	<0.001	-0.388	-0.155
	4	-0.266*	0.058	84.153	<0.001	-0.383	-0.15
	5	-0.167*	0.056	82.076	0.003	-0.278	-0.057
	6	-0.316*	0.055	83.825	<0.001	-0.425	-0.206
	7	-0.380*	0.056	84.452	<0.001	-0.491	-0.268
	8	-0.325*	0.056	84.04	<0.001	-0.436	-0.213
	9	-0.331*	0.054	85.173	<0.001	-0.439	-0.223
	10	-0.145*	0.058	86.057	0.014	-0.259	-0.031
	11	-0.167*	0.054	82.342	0.002	-0.274	-0.061
	12	-0.302*	0.057	85.982	<0.001	-0.415	-0.188
2 vs. (1.321 ± 0.046)	1	0.265*	0.06	96.474	<0.001	0.146	0.384
	3	-0.006	0.059	93.987	0.915	-0.123	0.11
	4	-0.001	0.058	83.19	0.986	-0.117	0.115
	5	0.098	0.056	81.361	0.082	-0.013	0.208
	6	-0.051	0.055	83.074	0.36	-0.16	0.059
	7	-0.114*	0.056	83.725	0.044	-0.226	-0.003
	8	-0.059	0.056	83.316	0.293	-0.171	0.052
	9	-0.066	0.054	84.408	0.228	-0.173	0.042
	10	0.120*	0.058	85.398	0.04	0.006	0.235
	11	0.098	0.054	81.57	0.071	-0.009	0.205
	12	-0.037	0.057	85.265	0.522	-0.15	0.077
3 vs. (1.328 ± 0.045)	1	0.271*	0.058	84.119	<0.001	0.155	0.388
	2	0.006	0.059	93.987	0.915	-0.11	0.123
	4	0.005	0.058	96.37	0.928	-0.11	0.12
	5	0.104	0.054	79.693	0.059	-0.004	0.212
	6	-0.044	0.054	81.753	0.413	-0.152	0.063
	7	-0.108	0.055	82.451	0.053	-0.218	0.001
	8	-0.053	0.055	82.04	0.337	-0.162	0.056
	9	-0.059	0.053	82.973	0.265	-0.165	0.046

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	10	0.126*	0.056	84.112	0.028	0.014	0.239
	11	0.104	0.052	80.117	0.05	0	0.209
	12	-0.03	0.056	84.074	0.588	-0.142	0.081
4 vs. (1.322 ± 0.045)	1	0.266*	0.058	84.153	<0.001	0.15	0.383
	2	0.001	0.058	83.19	0.986	-0.115	0.117
	3	-0.005	0.058	96.37	0.928	-0.12	0.11
	5	0.099	0.055	91.691	0.074	-0.01	0.208
	6	-0.05	0.054	81.285	0.36	-0.157	0.058
	7	-0.113*	0.055	82.257	0.042	-0.223	-0.004
	8	-0.058	0.055	81.841	0.292	-0.168	0.051
	9	-0.065	0.053	82.738	0.226	-0.17	0.041
	10	0.121*	0.056	83.882	0.035	0.009	0.234
	11	0.099	0.052	79.903	0.063	-0.005	0.203
	12	-0.036	0.056	83.879	0.526	-0.147	0.076
5 vs. (1.223 ± 0.041)	1	0.167*	0.056	82.076	0.003	0.057	0.278
	2	-0.098	0.056	81.361	0.082	-0.208	0.013
	3	-0.104	0.054	79.693	0.059	-0.212	0.004
	4	-0.099	0.055	91.691	0.074	-0.208	0.01
	6	-0.149*	0.051	89.02	0.005	-0.25	-0.047
	7	-0.212*	0.052	79.517	<0.001	-0.315	-0.109
	8	-0.157*	0.052	79.348	0.003	-0.26	-0.054
	9	-0.164*	0.05	80.117	0.001	-0.263	-0.065
	10	0.022	0.053	81.706	0.677	-0.084	0.129
	11	9.92E-05	0.049	76.952	0.998	-0.098	0.098
	12	-0.135*	0.053	81.615	0.013	-0.24	-0.029
6 vs. (1.372 ± 0.041)	1	0.316*	0.055	83.825	<0.001	0.206	0.425
	2	0.051	0.055	83.074	0.36	-0.059	0.16
	3	0.044	0.054	81.753	0.413	-0.063	0.152
	4	0.05	0.054	81.285	0.36	-0.058	0.157
	5	0.149*	0.051	89.02	0.005	0.047	0.25
	7	-0.064	0.051	95.971	0.218	-0.166	0.038
	8	-0.009	0.051	81.717	0.866	-0.11	0.093
	9	-0.015	0.049	83.135	0.759	-0.112	0.082

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	10	0.171*	0.053	84.45	0.002	0.066	0.276
	11	0.149*	0.048	79.846	0.003	0.052	0.245
	12	0.014	0.052	84.202	0.79	-0.09	0.118
7 vs. (1.436 ± 0.042)	1	0.380*	0.056	84.452	<0.001	0.268	0.491
	2	0.114*	0.056	83.725	0.044	0.003	0.226
	3	0.108	0.055	82.451	0.053	-0.001	0.218
	4	0.113*	0.055	82.257	0.042	0.004	0.223
	5	0.212*	0.052	79.517	<0.001	0.109	0.315
	6	0.064	0.051	95.971	0.218	-0.038	0.166
	8	0.055	0.052	96.205	0.29	-0.048	0.158
	9	0.049	0.049	82.495	0.326	-0.049	0.147
	10	0.235*	0.053	84.092	<0.001	0.129	0.34
	11	0.212*	0.049	80.064	<0.001	0.115	0.309
	12	0.078	0.053	85.36	0.146	-0.028	0.183
8 vs. (1.381 ± 0.042)	1	0.325*	0.056	84.04	<0.001	0.213	0.436
	2	0.059	0.056	83.316	0.293	-0.052	0.171
	3	0.053	0.055	82.04	0.337	-0.056	0.162
	4	0.058	0.055	81.841	0.292	-0.051	0.168
	5	0.157*	0.052	79.348	0.003	0.054	0.26
	6	0.009	0.051	81.717	0.866	-0.093	0.11
	7	-0.055	0.052	96.205	0.29	-0.158	0.048
	9	-0.006	0.05	95.648	0.897	-0.105	0.092
	10	0.180*	0.053	83.858	0.001	0.074	0.285
	11	0.157*	0.049	80.036	0.002	0.06	0.254
	12	0.023	0.053	85.115	0.671	-0.083	0.128
9 vs. (1.387 ± 0.040)	1	0.331*	0.054	85.173	<0.001	0.223	0.439
	2	0.066	0.054	84.408	0.228	-0.042	0.173
	3	0.059	0.053	82.973	0.265	-0.046	0.165
	4	0.065	0.053	82.738	0.226	-0.041	0.17
	5	0.164*	0.05	80.117	0.001	0.065	0.263
	6	0.015	0.049	83.135	0.759	-0.082	0.112
	7	-0.049	0.049	82.495	0.326	-0.147	0.049

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	8	0.006	0.05	95.648	0.897	-0.092	0.105
	10	0.186*	0.051	95.274	<0.001	0.085	0.287
	11	0.164*	0.046	80.333	0.001	0.071	0.256
	12	0.029	0.051	86.284	0.57	-0.072	0.13
10 vs. (1.201 ± 0.044)	1	0.145*	0.058	86.057	0.014	0.031	0.259
	2	-0.120*	0.058	85.398	0.04	-0.235	-0.006
	3	-0.126*	0.056	84.112	0.028	-0.239	-0.014
	4	-0.121*	0.056	83.882	0.035	-0.234	-0.009
	5	-0.022	0.053	81.706	0.677	-0.129	0.084
	6	-0.171*	0.053	84.45	0.002	-0.276	-0.066
	7	-0.235*	0.053	84.092	<0.001	-0.34	-0.129
	8	-0.180*	0.053	83.858	0.001	-0.285	-0.074
	9	-0.186*	0.051	95.274	<0.001	-0.287	-0.085
	11	-0.022	0.051	92.097	0.661	-0.123	0.078
	12	-0.157*	0.054	86.939	0.005	-0.265	-0.049
11 vs. (1.223 ± 0.039)	1	0.167*	0.054	82.342	0.002	0.061	0.274
	2	-0.098	0.054	81.57	0.071	-0.205	0.009
	3	-0.104	0.052	80.117	0.05	-0.209	0
	4	-0.099	0.052	79.903	0.063	-0.203	0.005
	5	-9.92E-05	0.049	76.952	0.998	-0.098	0.098
	6	-0.149*	0.048	79.846	0.003	-0.245	-0.052
	7	-0.212*	0.049	80.064	<0.001	-0.309	-0.115
	8	-0.157*	0.049	80.036	0.002	-0.254	-0.06
	9	-0.164*	0.046	80.333	0.001	-0.256	-0.071
	10	0.022	0.051	92.097	0.661	-0.078	0.123
	12	-0.135*	0.051	93.664	0.009	-0.235	-0.034
12 vs. (1.358 ± 0.043)	1	0.302*	0.057	85.982	<0.001	0.188	0.415
	2	0.037	0.057	85.265	0.522	-0.077	0.15
	3	0.03	0.056	84.074	0.588	-0.081	0.142
	4	0.036	0.056	83.879	0.526	-0.076	0.147
	5	0.135*	0.053	81.615	0.013	0.029	0.24
	6	-0.014	0.052	84.202	0.79	-0.118	0.09

Months (Log Mean ± SE)		Mean Difference	Std. Error	df	P-Value[a]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	7	-0.078	0.053	85.36	0.146	-0.183	0.028
	8	-0.023	0.053	85.115	0.671	-0.128	0.083
	9	-0.029	0.051	86.284	0.57	-0.13	0.072
	10	0.157*	0.054	86.939	0.005	0.049	0.265
	11	0.135*	0.051	93.664	0.009	0.034	0.235

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a. Dependent Variable: logPM10.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix I: Bioaerosols and PM Data for Five Sites in 2015.

Table 24: Bioaerosols and PM Data for Total Concentrations for Site A.

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM $_{2.5}$ (µg/m^3)	PM $_{10}$ (µg/m^3)
1/7	4.97E+05	159.62	nd	nd	nd	17
1/13	6.38E+04	46.45	nd	nd	nd	4
1/21	1.87E+05	219.49	nd	nd	nd	19
1/25	1.53E+06	492.04	nd	nd	nd	9
2/4	1.45E+05	177.46	nd	nd	nd	19
2/13	8.74E+05	808.02	nd	nd	nd	15
2/21	6.51E+06	3.16E+03	nd	nd	nd	19
2/28	9.68E+05	331.36	nd	nd	nd	13
3/6	3.45E+05	2.59E+03	nd	nd	nd	15
3/10	6.76E+05	2.58E+03	nd	nd	nd	19
3/20	1.37E+06	1.20E+03	343	171	nd	22
3/27	1.53E+06	2.28E+03	80	210	nd	22
4/3	5.16E+05	297.91	66	167	nd	18
4/6	5.98E+05	1.78E+03	190	373	nd	19
4/17	4.39E+05	116.64	31	202	nd	48
4/23	1.27E+05	97.16	52	241	nd	22
5/2	3.58E+05	452.15	30	319	nd	25
5/4	1.32E+05	218.09	17	369	nd	24
5/15	5.29E+03	16.04	13	183	nd	9
5/22	1.15E+05	297.32	17	498	nd	29
5/28	1.05E+05	398.96	14	467	nd	21
6/2	4.72E+05	344.41	36	544	nd	27
6/9	4.53E+05	222.91	30	490	nd	24
6/18	4.37E+05	659.94	20	327	nd	25
6/25	3.47E+05	664.33	20	381	nd	25
6/30	1.17E+05	404.01	39	381	nd	34
7/9	3.25E+05	299.89	14	397	nd	30
7/18	1.25E+05	390.07	5	443	nd	38
7/25	6.82E+05	1.34E+03	16	646	nd	18
7/29	8.24E+05	902.10	6	467	nd	34
8/8	5.94E+05	262.87	9	296	nd	74
8/12	4.37E+05	402.94	24	319	nd	13
8/18	1.03E+06	1.08E+03	13	315	nd	29
8/23	2.27E+05	149.92	9	307	nd	23
9/3	2.18E+06	526.19	9	288	nd	18
9/10	2.19E+06	774.65	13	389	nd	nd

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM $_{2.5}$ (µg/m^3)	PM $_{10}$ (µg/m^3)
9/18	1.07E+06	299.70	9	412	nd	17
9/25	8.79E+05	1.27E+03	20	727	nd	25
9/30	9.15E+05	885.53	6	436	nd	25
10/7	5.03E+04	210.57	8	327	nd	6
10/13	1.49E+06	2.53E+03	42	657	nd	21
10/19	2.32E+05	278.82	2	296	nd	11
10/29	9.18E+05	3.52E+03	8	568	nd	nd
11/7	2.00E+06	1.19E+03	8	222	nd	8
11/8	1.85E+06	1.24E+03	5	261	nd	16
11/18	2.80E+06	3.48E+03	3	319	nd	25
11/26	1.06E+06	688.37	nd	nd	nd	7
11/29	3.62E+06	4.04E+03	6	253	nd	12
12/8	5.94E+06	4.33E+03	2	222	nd	43
12/13	2.31E+06	793.17	0	121	nd	9
12/23	2.29E+06	878.33	0	109	nd	18
12/30	9.70E+05	375.79	2	159	nd	12

Missing data = nd (not determined)

Table 25: Bioaerosols and PM Data for Total Concentrations for Site B.

Date	Bacterial (DNA Templates/m³)	Fungal (DNA Templates/m³)	Pollen (Grains/m³)	Mold (Spores/m³)	PM 2.5 (µg/m³)	PM 10 (µg/m³)
1/7	7.43E+04	144.33	nd	nd	12	33
1/13	1.31E+04	1.83	nd	nd	5	2
1/21	7.67E+04	71.39	nd	nd	7	7
1/25	1.25E+05	27.51	nd	nd	10	11
2/4	6.93E+04	123.69	nd	nd	14	27
2/13	6.04E+05	1.27E+03	nd	nd	11	24
2/21	5.36E+05	336.00	nd	nd	10	23
2/28	2.58E+05	243.22	nd	nd	6	14
3/6	3.81E+04	158.46	nd	nd	9	18
3/10	3.97E+05	1.28E+03	nd	nd	11	25
3/20	1.23E+06	1.01E+03	1.27E+03	264	10	22
3/27	5.67E+05	500.92	594	354	9	20
4/3	2.90E+05	287.07	502	253	8	17
4/6	1.21E+05	137.55	682	525	8	16
4/17	9.51E+04	33.79	89	447	7	16
4/23	5.61E+04	137.09	63	296	11	20
5/2	4.60E+04	74.55	22	70	7	16
5/4	3.03E+04	51.38	14	35	9	21
5/15	2.29E+04	58.58	17	521	5	5
5/22	5.14E+04	87.79	8	393	9	21
5/28	7.96E+04	36.60	25	681	6	12
6/2	8.51E+04	89.38	31	564	8	15
6/9	5.02E+05	180.22	16	443	10	22
6/18	1.27E+05	211.68	41	428	7	21
6/25	2.51E+05	394.23	11	354	10	28
6/30	1.01E+05	252.12	16	334	13	33
7/9	2.08E+05	853.29	16	241	9	29
7/18	1.96E+05	149.62	nd	nd	16	55
7/25	2.14E+05	1.15E+03	8	350	6	17
7/29	4.25E+05	304.90	8	521	8	25
8/8	1.36E+05	127.72	5	280	6	18
8/12	2.40E+05	172.06	8	474	5	25
8/18	1.45E+05	656.02	6	369	12	37
8/23	1.90E+04	12.51	3	241	12	22
9/3	5.58E+05	625.06	34	447	8	26
9/10	5.78E+05	1.11E+03	31	521	10	34
9/18	2.55E+05	844.85	8	264	9	23
9/25	5.25E+05	261.48	31	614	13	33

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM $_{2.5}$ (µg/m^3)	PM $_{10}$ (µg/m^3)
9/30	4.12E+05	1.43E+03	28	937	10	31
10/7	5.13E+04	184.44	5	467	nd	nd
10/13	2.38E+05	1.46E+03	22	467	10	30
10/19	7.08E+04	255.82	8	373	5	17
10/29	6.13E+05	1.74E+03	3	323	3	11
11/7	3.01E+05	483.64	5	389	9	17
11/8	6.60E+05	977.80	3	303	13	26
11/18	1.10E+06	1.22E+03	0	331	15	40
11/26	2.99E+05	134.10	3	229	6	12
11/29	3.52E+05	981.04	8	163	12	23
12/8	1.14E+06	1.07E+03	0	191	18	56
12/13	1.31E+06	431.29	0	89	7	24
12/23	1.95E+06	1162.29	2	245	9	25
12/30	4.99E+05	213.75	0	191	11	21

Missing data = nd (not determined)

Table 26: Bioaerosols and PM Data for Total Concentrations for Site C.

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM 2.5 (μg/m^3)	PM 10 (μg/m^3)
1/7	6.03E+04	4.43	nd	nd	16	52
1/13	4.56E+04	20.29	nd	nd	4	10
1/21	6.81E+04	100.40	nd	nd	4	12
1/25	3.30E+05	114.40	nd	nd	8	19
2/4	6.74E+03	47.98	nd	nd	22	57
2/13	4.96E+05	312.60	nd	nd	11	40
2/21	1.26E+06	735.01	nd	nd	9	31
2/28	1.09E+06	524.34	nd	nd	nd	nd
3/6	2.18E+05	292.96	nd	nd	11	32
3/10	2.83E+06	4.54E+03	nd	nd	12	38
3/20	3.32E+06	2.56E+03	nd	nd	11	26
3/27	5.28E+05	1.00E+03	nd	nd	10	30
4/3	3.95E+05	150.61	nd	nd	9	29
4/6	3.05E+05	58.38	nd	nd	8	24
4/17	1.77E+05	141.62	22	210	8	23
4/23	3.68E+05	150.41	64	311	10	21
5/2	1.56E+05	1.33E+03	28	548	7	22
5/4	3.97E+04	349.70	31	498	6	20
5/15	1.95E+05	206.83	3	280	3	7
5/22	4.63E+04	101.83	6	288	10	20
5/28	5.40E+04	2.01E+03	13	754	7	17
6/2	2.31E+05	2.11E+03	22	307	9	19
6/9	1.10E+04	37.96	27	268	8	26
6/18	2.87E+05	514.48	16	436	8	21
6/25	1.33E+05	349.23	19	420	9	27
6/30	1.79E+05	167.22	14	626	12	36
7/9	8.53E+04	316.84	8	552	7	32
7/18	2.19E+05	1.02E+03	13	393	12	53
7/25	5.46E+05	1.90E+03	3	587	5	17
7/29	5.88E+05	862.95	8	754	8	23
8/8	8.14E+04	26.94	6	412	7	24
8/12	2.16E+06	1.75E+03	5	506	6	14
8/18	2.69E+05	3.92E+03	9	560	12	43
8/23	2.48E+05	2.08E+03	24	268	9	22
9/3	1.64E+06	1.38E+03	11	486	4	19
9/10	1.34E+06	479.60	5	338	11	38
9/18	1.02E+06	1.35E+03	5	494	7	24
9/25	3.32E+05	555.56	17	315	11	32

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM 2.5 (µg/m^3)	PM 10 (µg/m^3)
9/30	6.97E+05	2.32E+03	6	338	7	35
10/7	3.44E+04	160.92	6	202	5	24
10/13	4.96E+05	908.09	22	513	12	37
10/19	8.48E+04	526.89	19	408	7	16
10/29	5.70E+05	1.52E+03	6	358	2	10
11/7	2.57E+05	164.23	5	241	10	22
11/8	5.19E+05	1.25E+03	8	327	16	31
11/18	1.21E+06	2.60E+03	3	272	14	37
11/26	4.67E+05	442.58	3	284	7	13
11/29	1.92E+06	2.03E+03	2	198	16	29
12/8	1.75E+06	1.54E+03	0	144	29	65
12/13	7.20E+05	432.44	0	82	9	20
12/23	2.60E+06	1.35E+03	3	156	8	30
12/30	9.39E+05	513.01	5	58	11	25

Missing Data = nd (not determined)

Table 27: Bioaerosols and PM Data for Total Concentrations for Site D.

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM 2.5 (µg/m^3)	PM 10 (µg/m^3)
1/7	2.61E+04	76	0	23	nd	nd
1/13	5.64E+03	1	0	105	nd	nd
1/21	1.14E+04	57	2	78	nd	nd
1/25	2.27E+05	670	0	78	nd	nd
2/4	3.34E+04	79	0	54	nd	nd
2/13	3.53E+05	1.78E+03	3	140	nd	nd
2/21	1.33E+05	335	306	202	nd	nd
2/28	4.10E+05	919	3425	198	nd	nd
3/6	1.59E+04	119	7.33E+03	179	nd	nd
3/10	3.87E+05	1.12E+04	2354	311	nd	nd
3/20	5.78E+05	1.63E+04	2703	334	nd	nd
3/27	3.29E+05	434	1789	249	nd	nd
4/3	6.36E+04	68	416	362	nd	nd
4/6	2.23E+05	113	703	428	nd	nd
4/17	3.56E+04	8	53	3473	nd	nd
4/23	5.18E+04	61	103	1384	nd	nd
5/2	3.63E+04	141	13	840	nd	nd
5/4	7.16E+04	72	17	1754	nd	nd
5/15	3.28E+04	66	82	1147	nd	nd
5/22	2.68E+04	92	38	972	nd	nd
5/28	3.29E+04	430	24	607	nd	nd
6/2	3.89E+05	85	53	1124	nd	nd
6/9	9.14E+04	111	8	564	nd	nd
6/18	4.65E+04	139	11	253	nd	nd
6/25	6.21E+04	226	22	957	nd	nd
6/30	1.07E+05	543	2	723	6	7
7/9	1.02E+05	163	6	280	nd	18
7/18	1.72E+05	220	5	276	12	41
7/25	1.01E+05	1.03E+03	3	412	6	9
7/29	1.12E+05	325	0	416	8	13
8/8	5.24E+04	276	9	268	7	12
8/12	3.91E+05	663	5	136	6	10
8/18	2.96E+05	491	3	327	nd	20
8/23	4.28E+04	77	19	253	13	13
9/3	2.94E+05	486	13	319	9	12

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM 2.5 (µg/m^3)	PM 10 (µg/m^3)
9/10	1.15E+06	2.46E+03	50	124	12	17
9/18	6.44E+04	363	55	533	10	10
9/25	2.18E+05	306	36	731	20	18
9/30	2.90E+05	548	146	521	13	17
10/7	3.71E+04	100	14	323	5	9
10/13	3.99E+05	649	2	467	9	17
10/19	1.11E+05	1.12E+03	0	148	6	11
10/29	1.12E+06	226	2	342	3	7
11/7	1.34E+05	1.41E+03	0	420	3	9
11/8	4.85E+05	1.57E+03	0	268	6	12
11/18	2.61E+05	697	3	393	7	13
11/26	2.14E+05	552	2	350	4	6
11/29	8.45E+05	557	22	649		6
12/8	4.05E+05	1.81E+03	0	89	14	nd
12/13	5.36E+05	310	0	249	4	nd
12/23	1.52E+06	991	0	113	4	21
12/30	4.06E+05	430	6	163	7	13

Missing Data = nd (not determined)

Table 28: Bioaerosols and PM Data for Total Concentrations for Site E.

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM 2.5 (µg/m^3)	PM 10 (µg/m^3)
1/7	3.83E+04	44	nd	nd	nd	10
1/13	8.03E+03	17	nd	nd	nd	5
1/21	1.01E+04	28	nd	nd	nd	5
1/25	3.03E+04	102	nd	nd	nd	nd
2/4	1.21E+04	207	nd	nd	nd	13
2/13	1.06E+05	219	nd	nd	nd	11
2/21	1.13E+04	177	nd	nd	nd	16
2/28	8.27E+04	101	nd	nd	nd	14
3/6	3.82E+04	229	nd	nd	nd	12
3/10	1.71E+05	666	nd	nd	nd	16
3/20	1.88E+05	719	nd	nd	nd	16
3/27	1.07E+05	184	209	210	nd	12
4/3	4.73E+04	88	151	226	nd	13
4/6	7.28E+04	26	133	342	nd	19
4/17	2.17E+04	44	39	109	nd	15
4/23	1.18E+04	37	64	735	nd	20
5/2	2.75E+04	284	130	1287	nd	16
5/4	1.34E+05	16	144	579	nd	18
5/15	5.13E+04	599	22	1427	nd	7
5/22	2.13E+04	199	25	797	nd	19
5/28	2.76E+04	484	9	607	nd	16
6/2	5.64E+04	78	53	774	nd	19
6/9	2.79E+04	28	27	428	nd	21
6/18	4.12E+04	126	22	844	nd	17
6/25	6.77E+04	142	5	747	nd	22
6/30	3.68E+04	43	25	599	nd	19
7/9	5.31E+04	148	6	801	nd	20
7/18	1.30E+05	868	8	272	nd	33
7/25	2.50E+04	290	11	611	nd	11
7/29	4.78E+04	140	6	1015	nd	18
8/8	7.09E+04	555	9	389	nd	15
8/12	5.28E+05	293	45	1563	nd	15

Date	Bacterial (DNA Templates/m^3)	Fungal (DNA Templates/m^3)	Pollen (Grains/m^3)	Mold (Spores/m^3)	PM 2.5 (µg/m^3)	PM 10 (µg/m^3)
8/18	5.53E+04	356	16	661	nd	31
8/23	2.58E+04	13	16	607	nd	18
9/3	2.37E+05	207	17	284	nd	15
9/10	6.40E+05	1000	9	311	nd	25
9/18	8.17E+04	325	2	272	nd	17
9/25	4.09E+04	88	45	436	nd	14
9/30	1.57E+05	458	19	451	nd	20
10/7	9.61E+04	105	2	136	nd	9
10/13	5.54E+04	540	102	471	nd	16
10/19	4.46E+03	114	11	327	nd	11
10/29	1.27E+05	28	6	459	nd	6
11/7	4.05E+04	2	3	233	nd	8
11/8	5.28E+04	289	6	315	nd	10
11/18	1.03E+06	408	3	198	nd	12
11/26	3.32E+04	114	nd	nd	nd	7
11/29	2.70E+05	465	nd	nd	nd	10
12/8	3.49E+05	148	0	124	nd	23
12/13	1.29E+05	146	3	194	nd	8
12/23	1.39E+06	991	5	109	nd	16
12/30	2.87E+05	52	0	144	nd	13

Missing Data = nd (not determined)

Appendix J: GIS Maps per Season for Five Sites in 2015.

The Geographical Information System (GIS) was used to map the air quality variables by seasons using the inverse distance weight (IDW) interpolation method. IDW assumes that each measured location has a local influence that diminishes with distance. The maps indicated graphically the variation in the concentrations observed in this study.

A Clark County map of Southern Nevada was uploaded from the Clark County Nevada GIS website. Once the data were uploaded on the ArcGIS software system, the IDW analysis was run to produce the various maps.

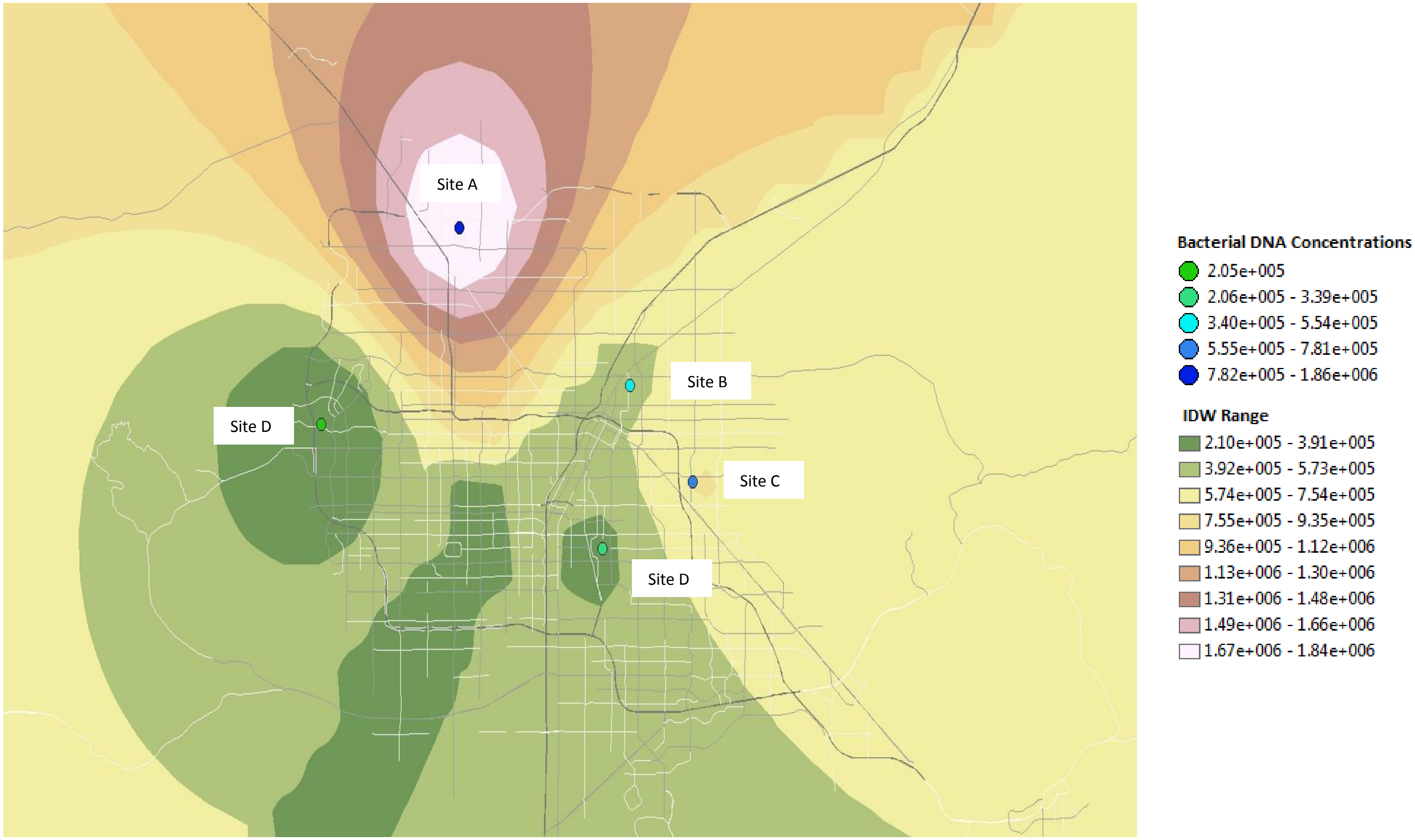


Figure 11: GIS Bacterial DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Winter (templates/m^3); IDW= Inverse Distance Weighted.

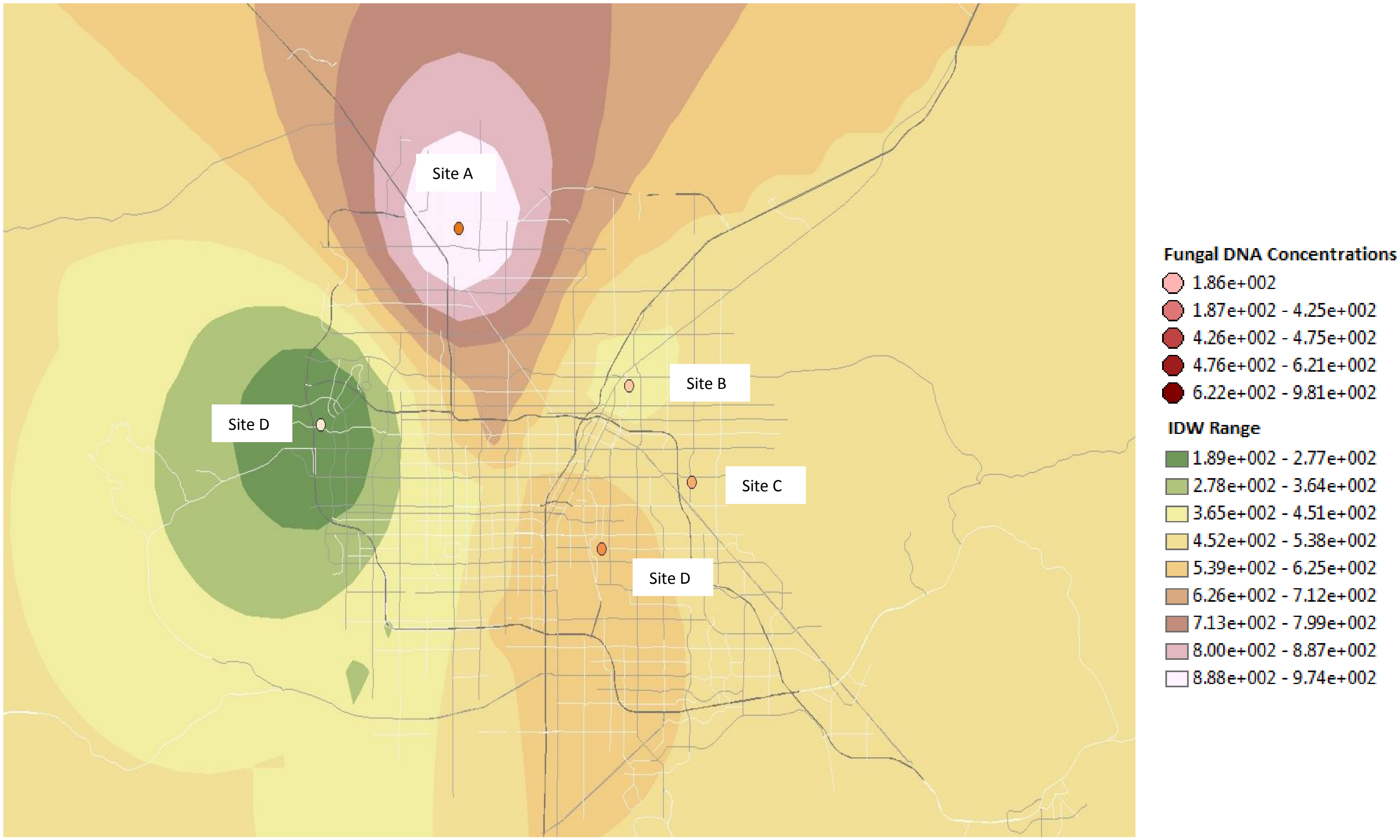


Figure 12: GIS Fungal DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Winter (templates/m^3); IDW= Inverse Distance Weighted.

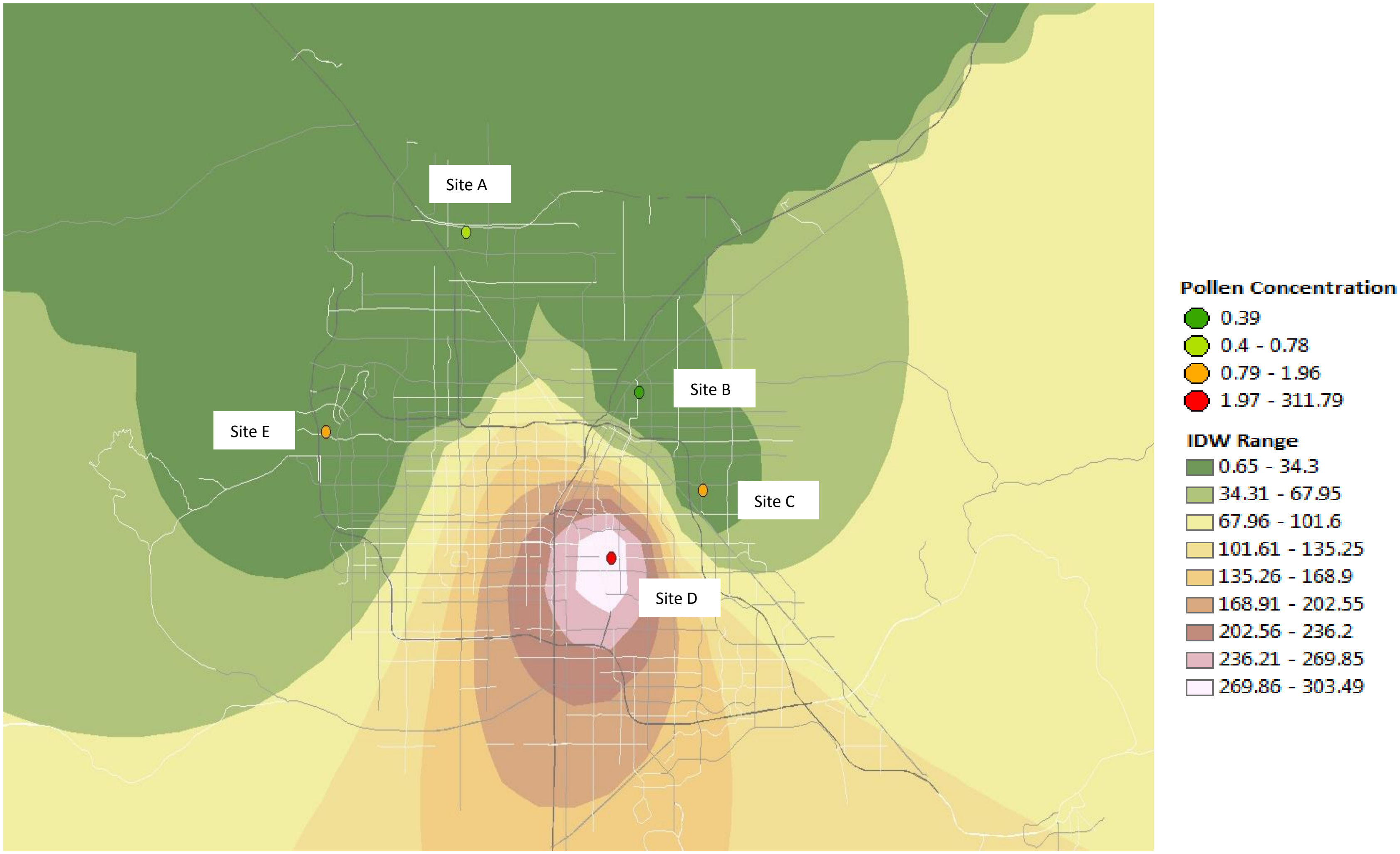


Figure 13: GIS Pollen Concentration Averages for Five Sites in the Las Vegas Valley in Winter (grains/m^3); IDW= Inverse Distance Weighted.

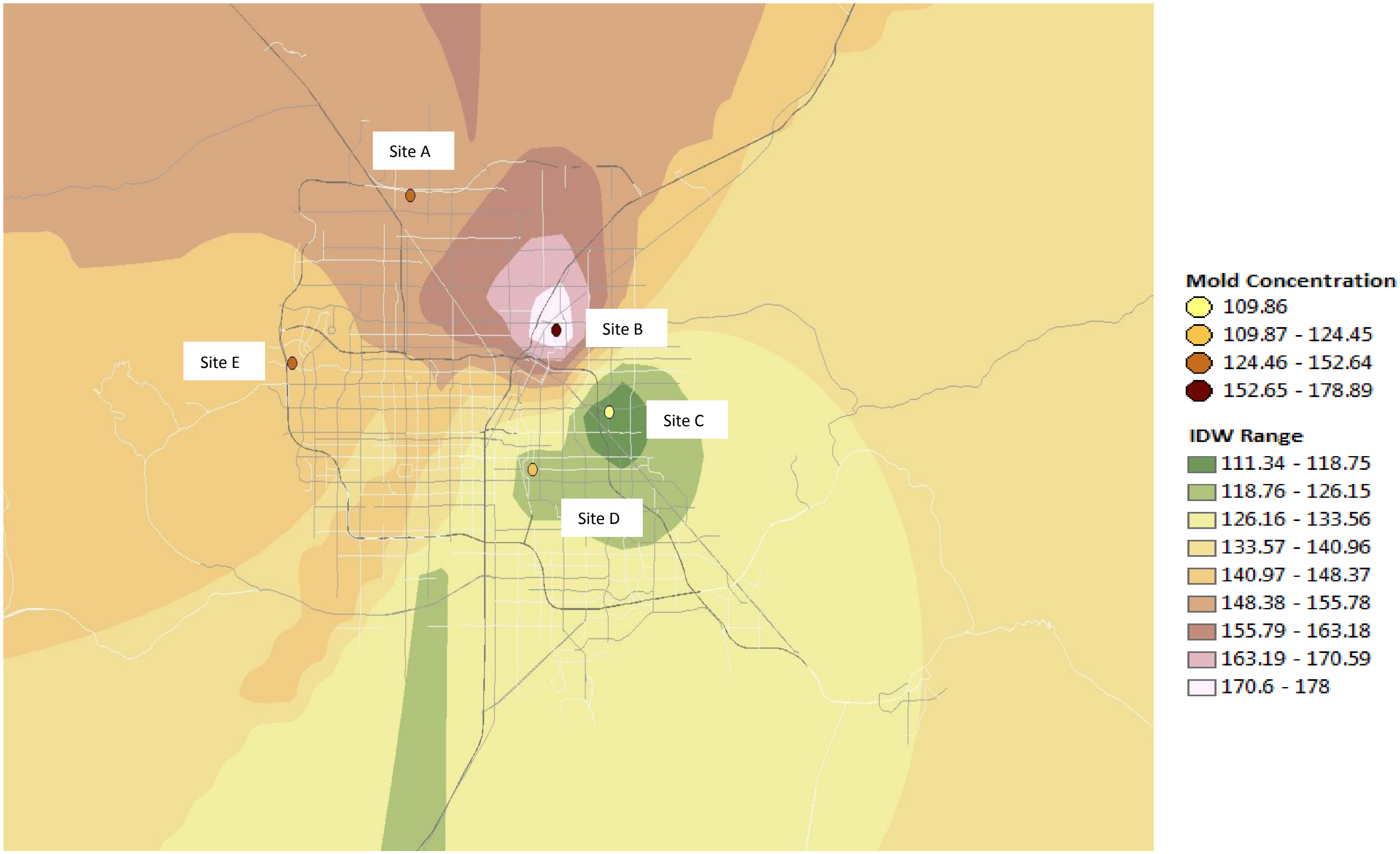


Figure 14: GIS Mold Concentration Averages for Five Sites in the Las Vegas Valley in Winter (spores/m^3); IDW= Inverse Distance Weighted.

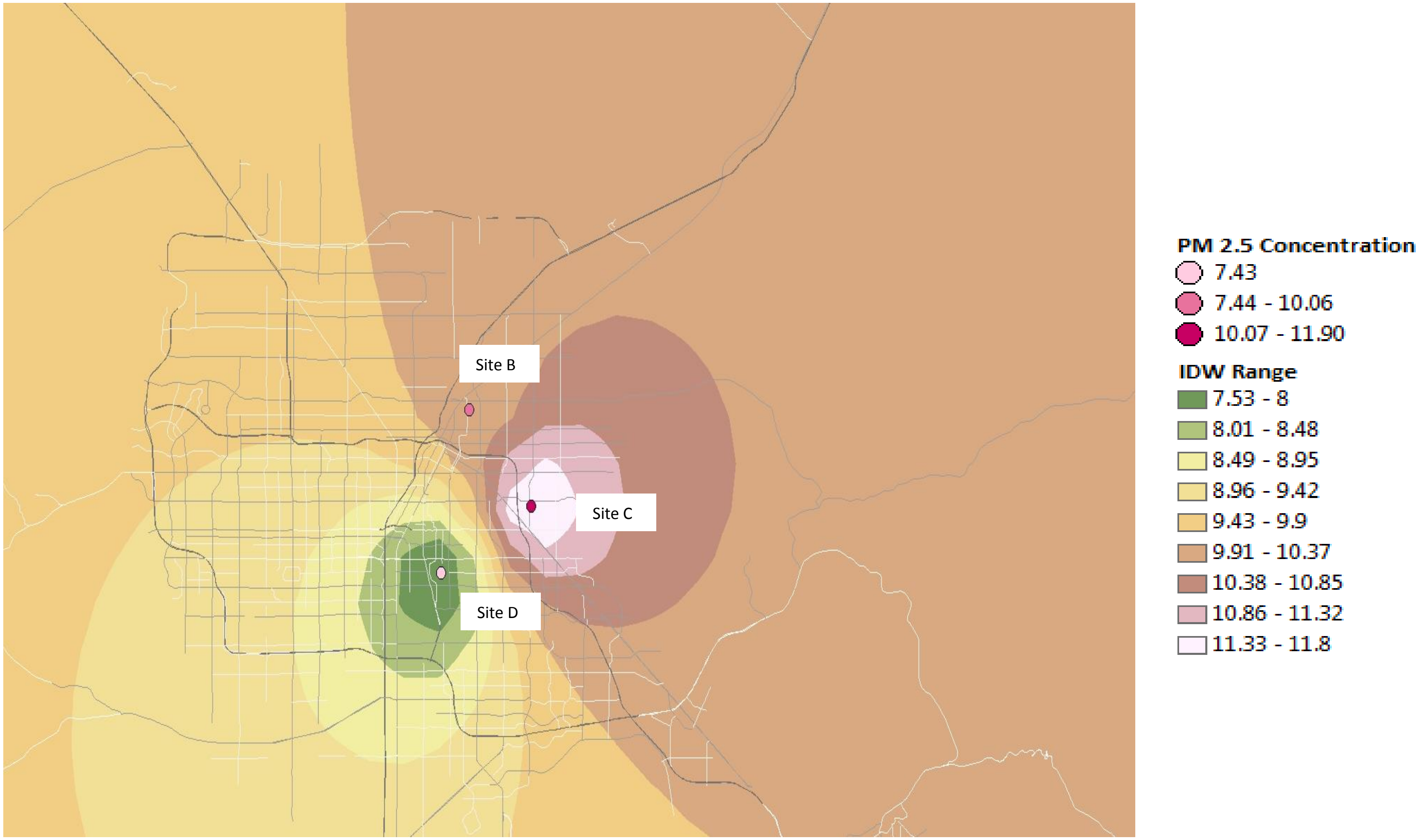


Figure 15: GIS $PM_{2.5}$ Concentration Averages for Three Sites in the Las Vegas Valley in Winter (µg /m^3); IDW= Inverse Distance Weighted.

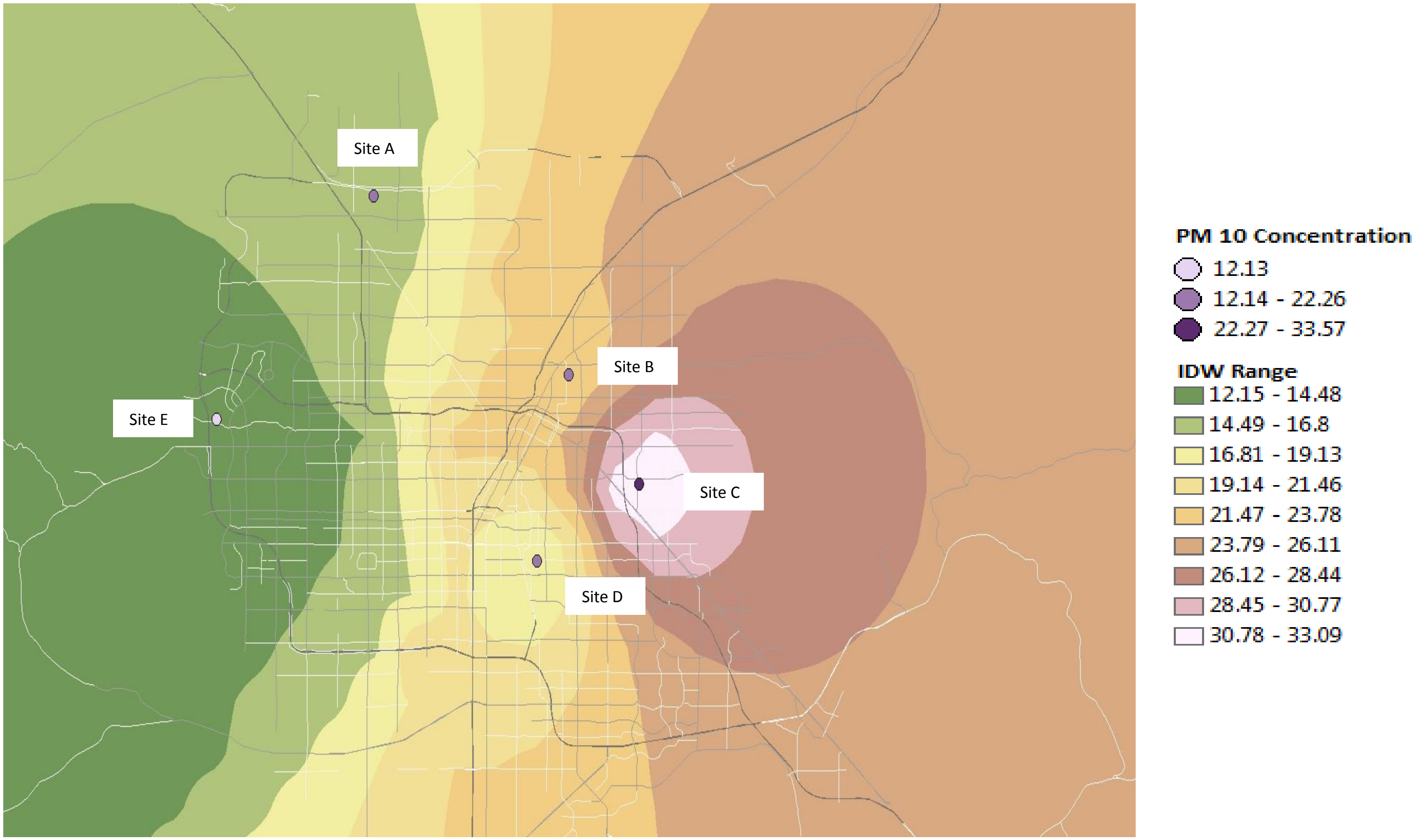


Figure 16: GIS PM_{10} Concentration Averages for Five Sites in the Las Vegas Valley in Winter ($\mu g/m^3$); IDW= Inverse Distance Weighted.

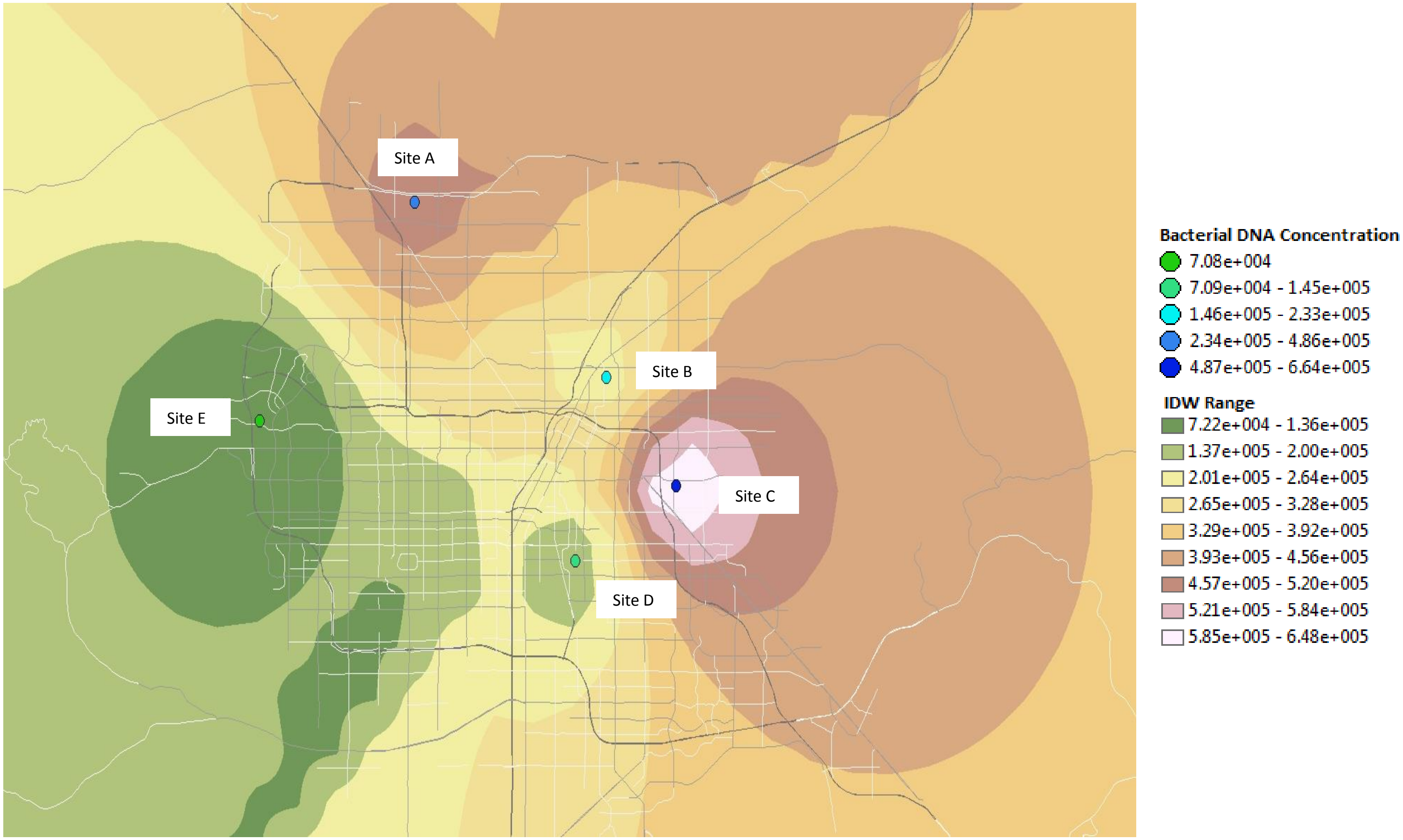


Figure 17: GIS Bacterial DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Spring (templates/m^3); IDW= Inverse Distance Weighted.

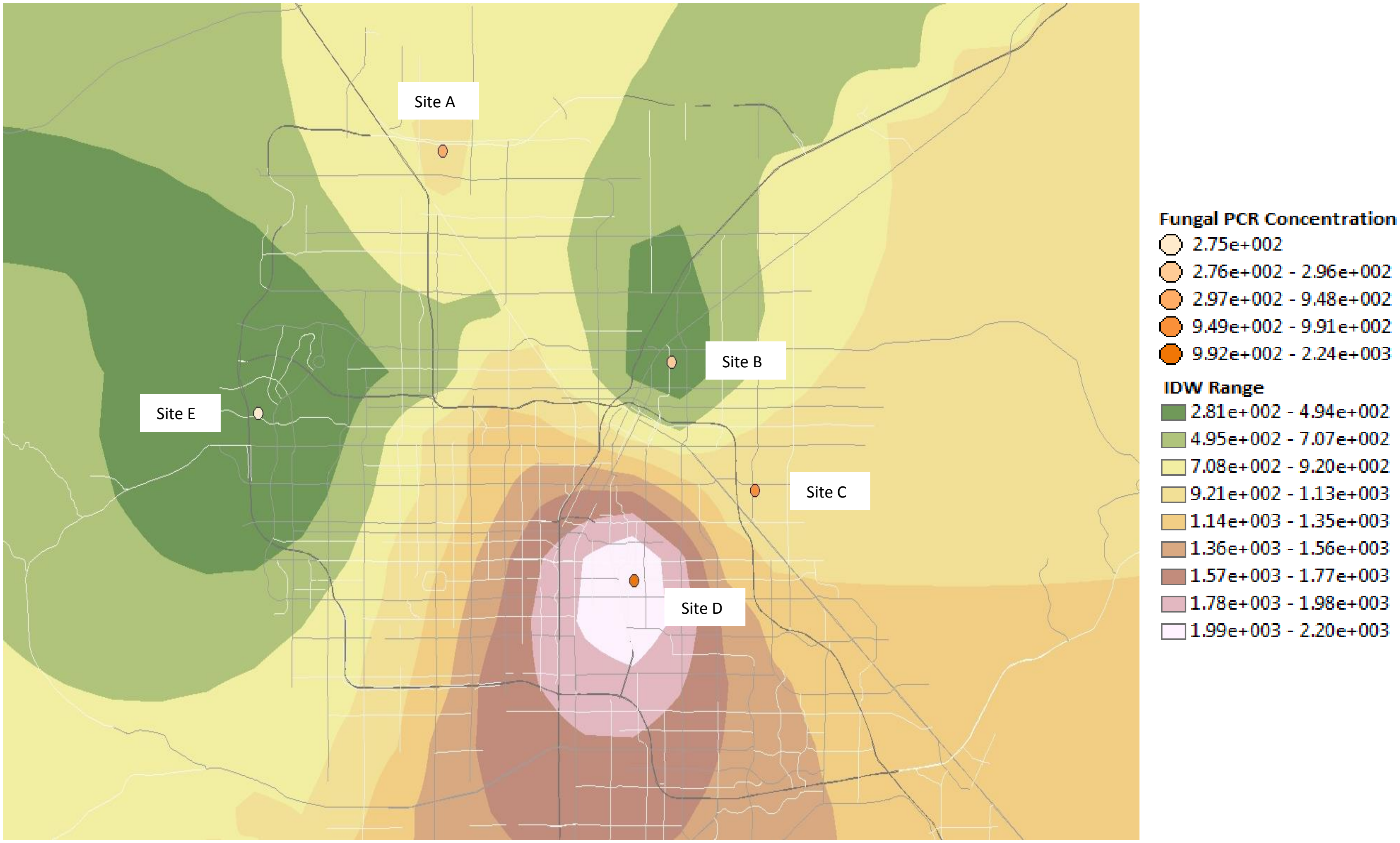


Figure 18: GIS Fungal DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Spring (templates/m^3); IDW= Inverse Distance Weighted.

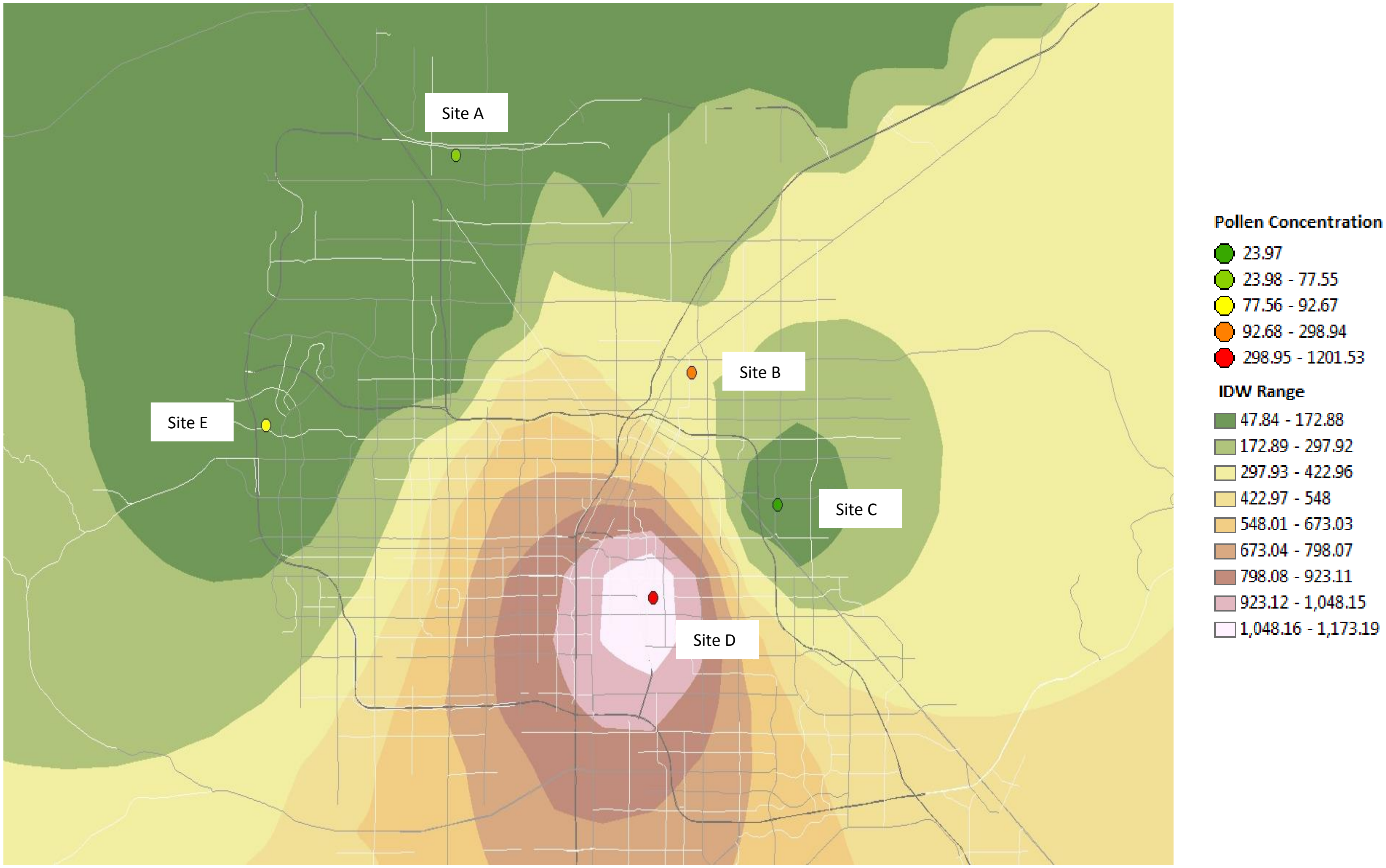


Figure 19: GIS Pollen Concentration Averages for Five Sites in the Las Vegas Valley in Spring (grains/m^3): IDW= Inverse Distance Weighted.

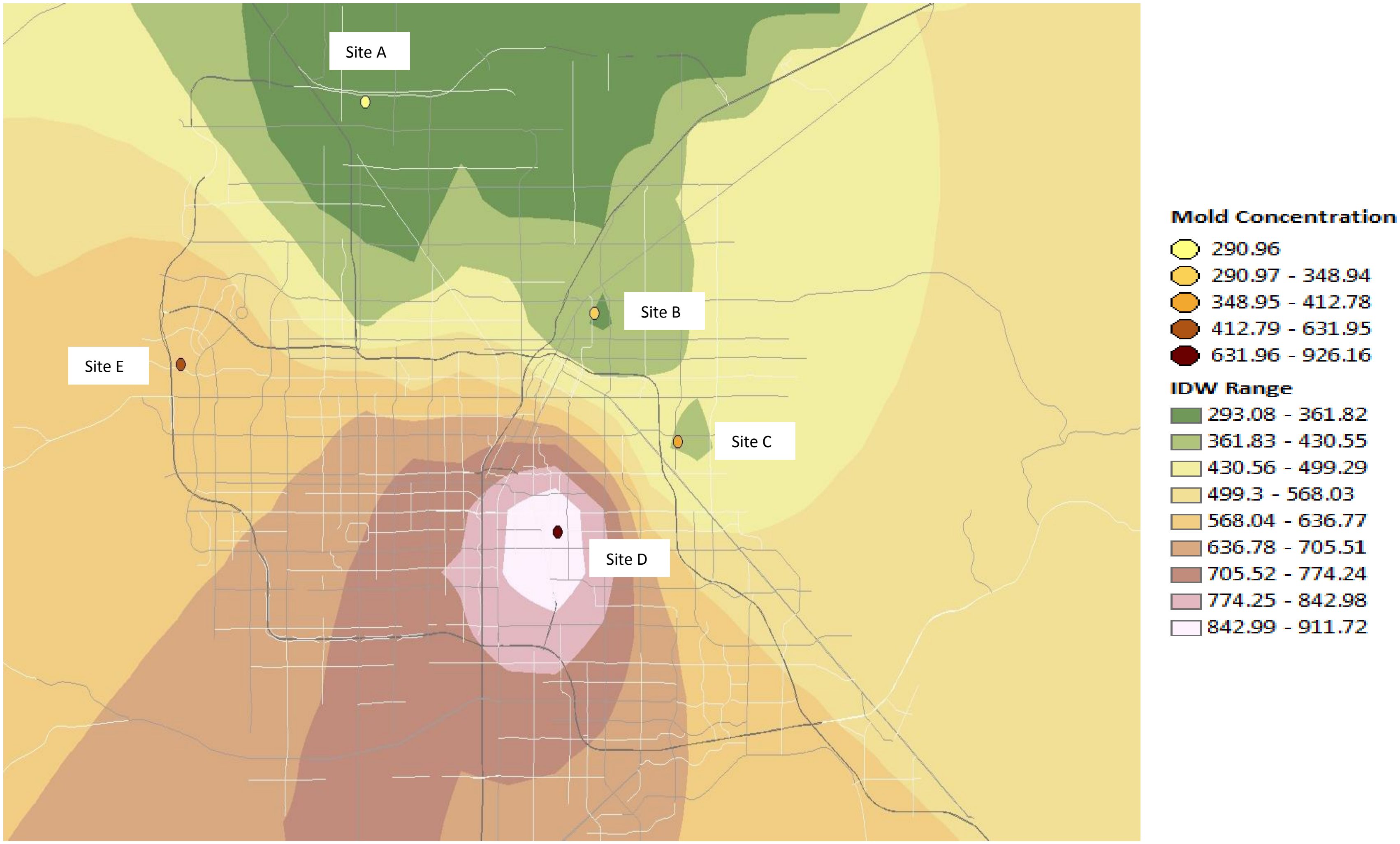


Figure 20: GIS Mold Concentration Averages for Five Sites in the Las Vegas Valley in Spring (spores/m^3); IDW= Inverse Distance Weighted.

.

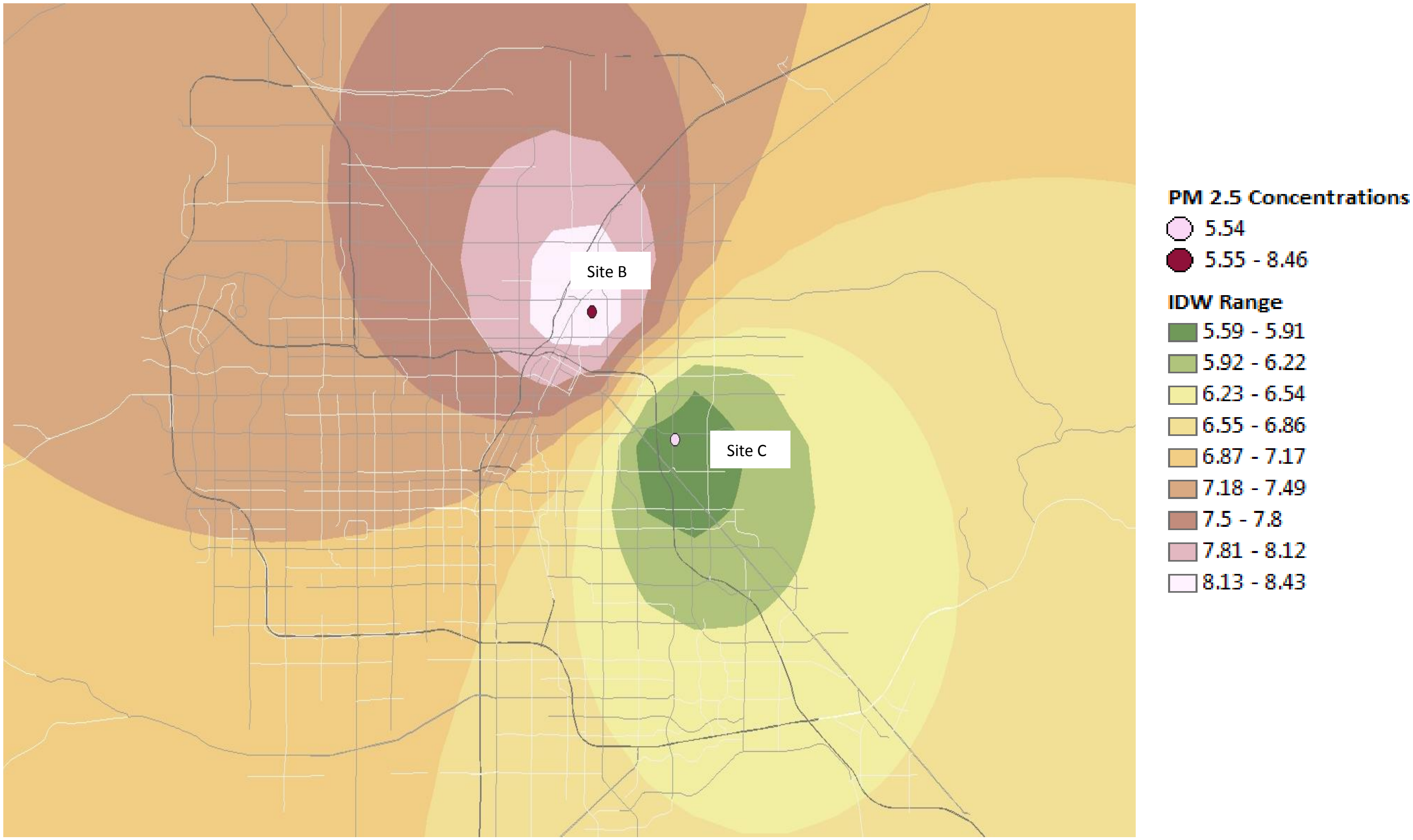


Figure 21: GIS $PM_{2.5}$ Concentration Averages for Two Sites in the Las Vegas Valley in Spring ($\mu g/m^3$): IDW= Inverse Distance Weighted.

.

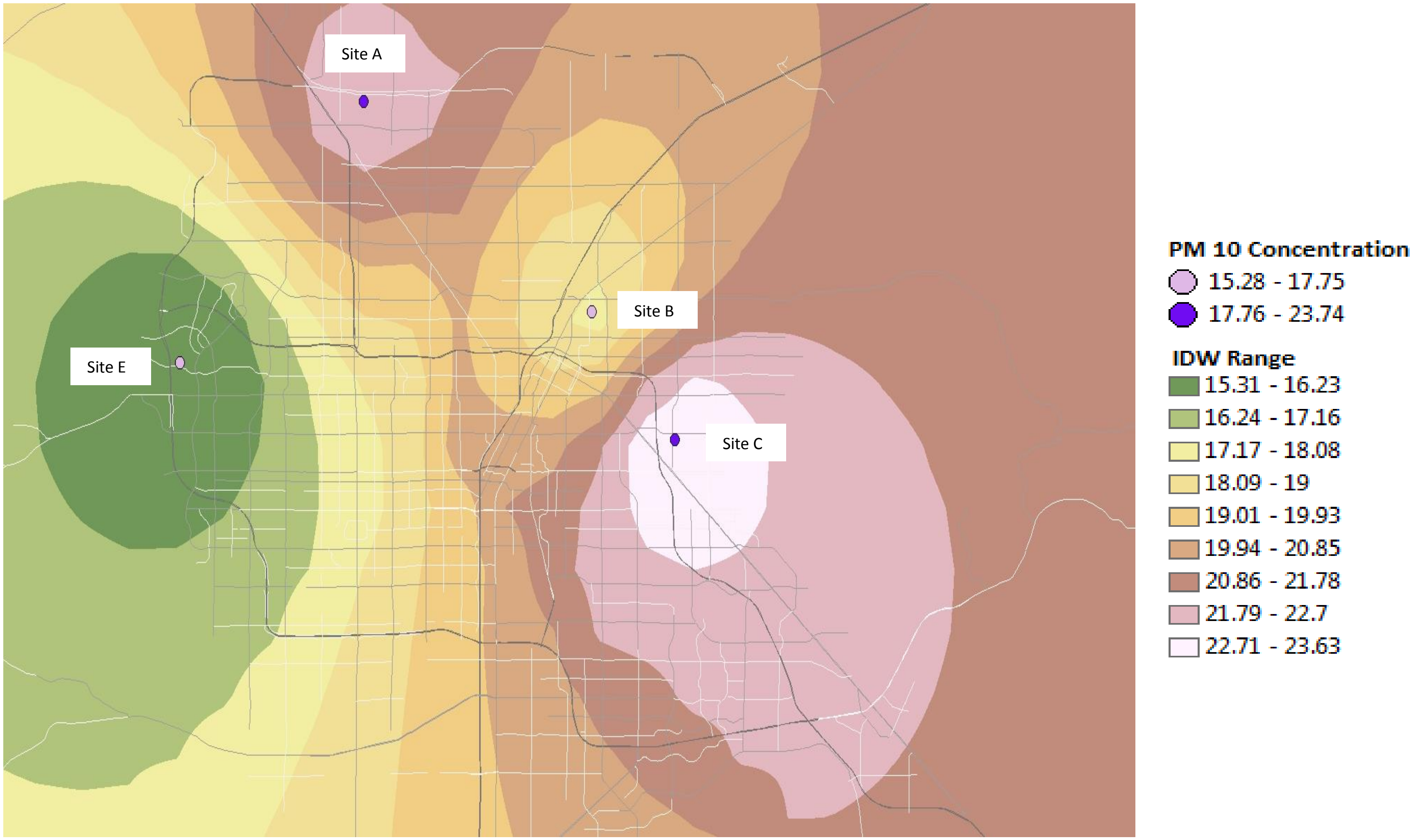


Figure 22: GIS PM_{10} Concentration Averages for Four Sites in the Las Vegas Valley in Spring ($\mu g/m^3$); IDW= Inverse Distance Weighted.

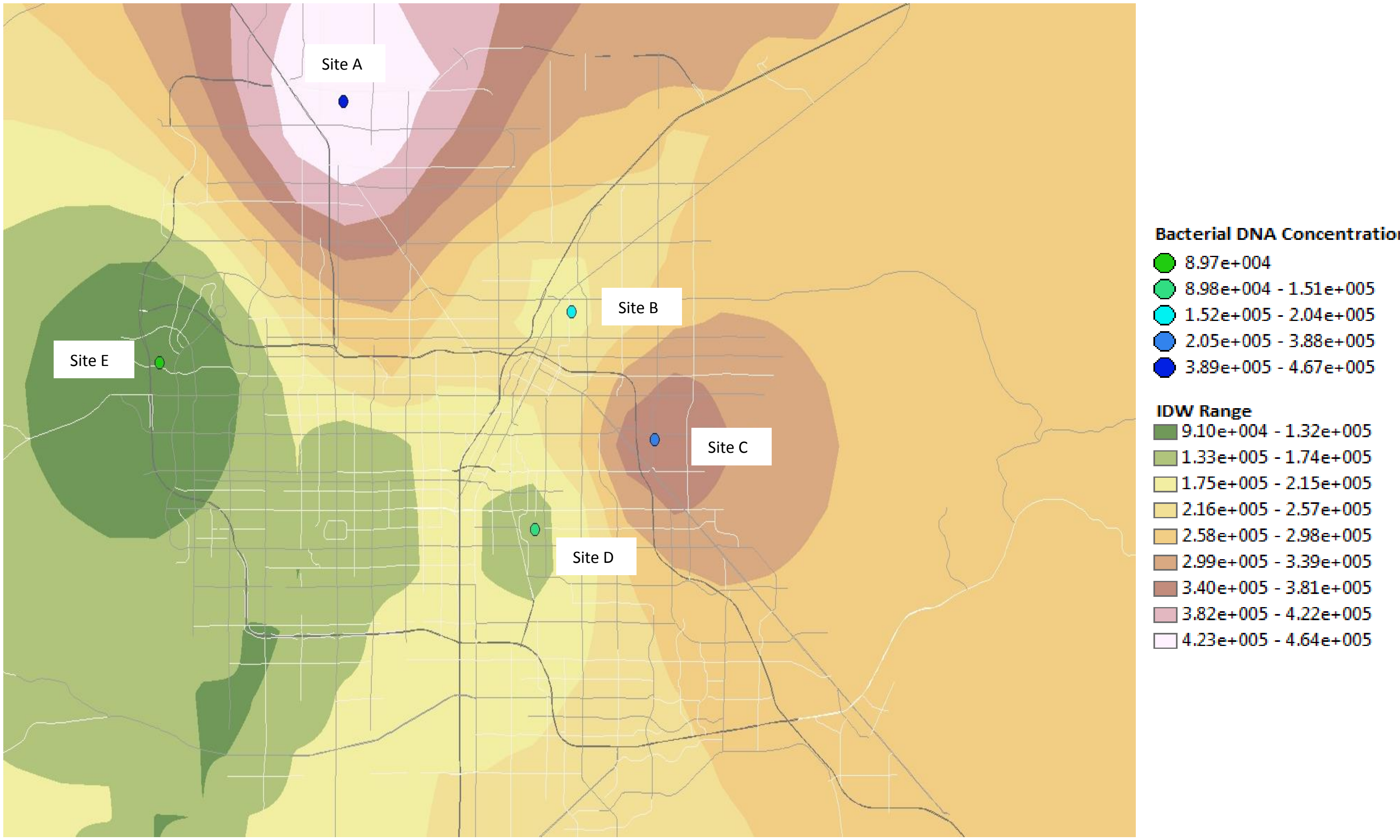


Figure 23: GIS Bacterial DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Summer (templates/m^3); IDW= Inverse Distance Weighted.

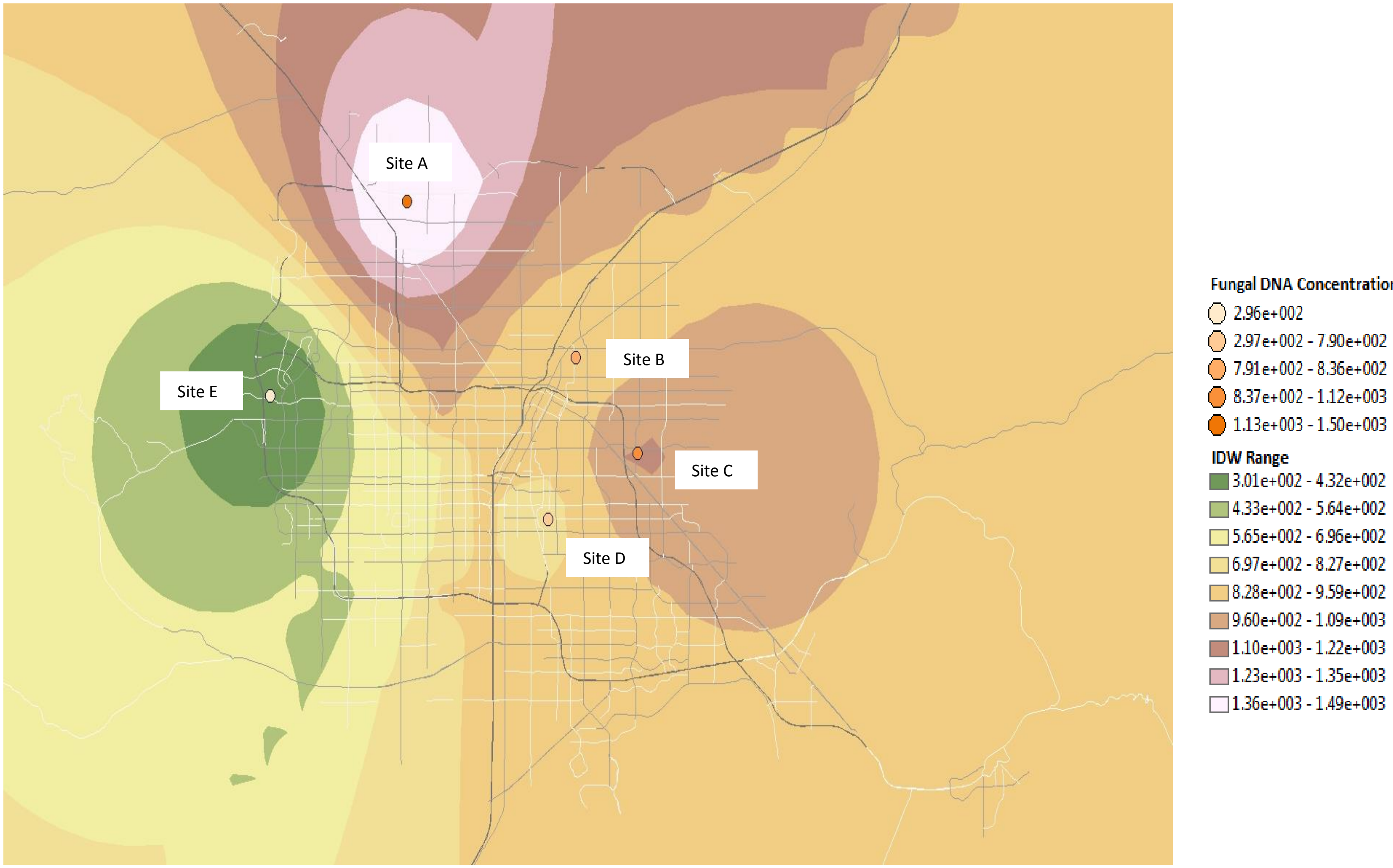


Figure 24: GIS Fungal DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Summer (templates/m^3): IDW= Inverse Distance Weighted.

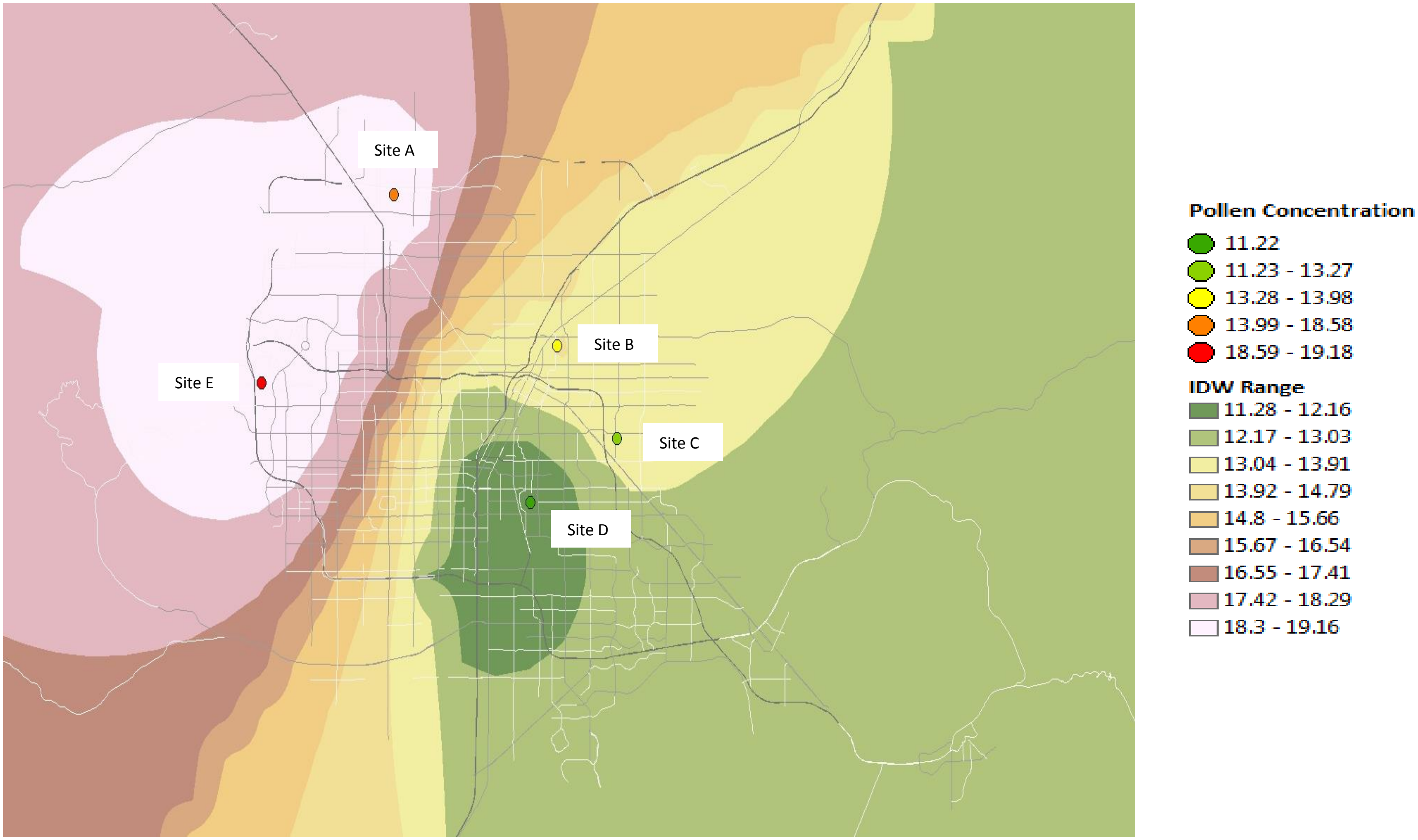


Figure 25: GIS Pollen Concentration Averages for Five Sites in the Las Vegas Valley in Summer (grains/m^3): IDW= Inverse Distance Weighted.

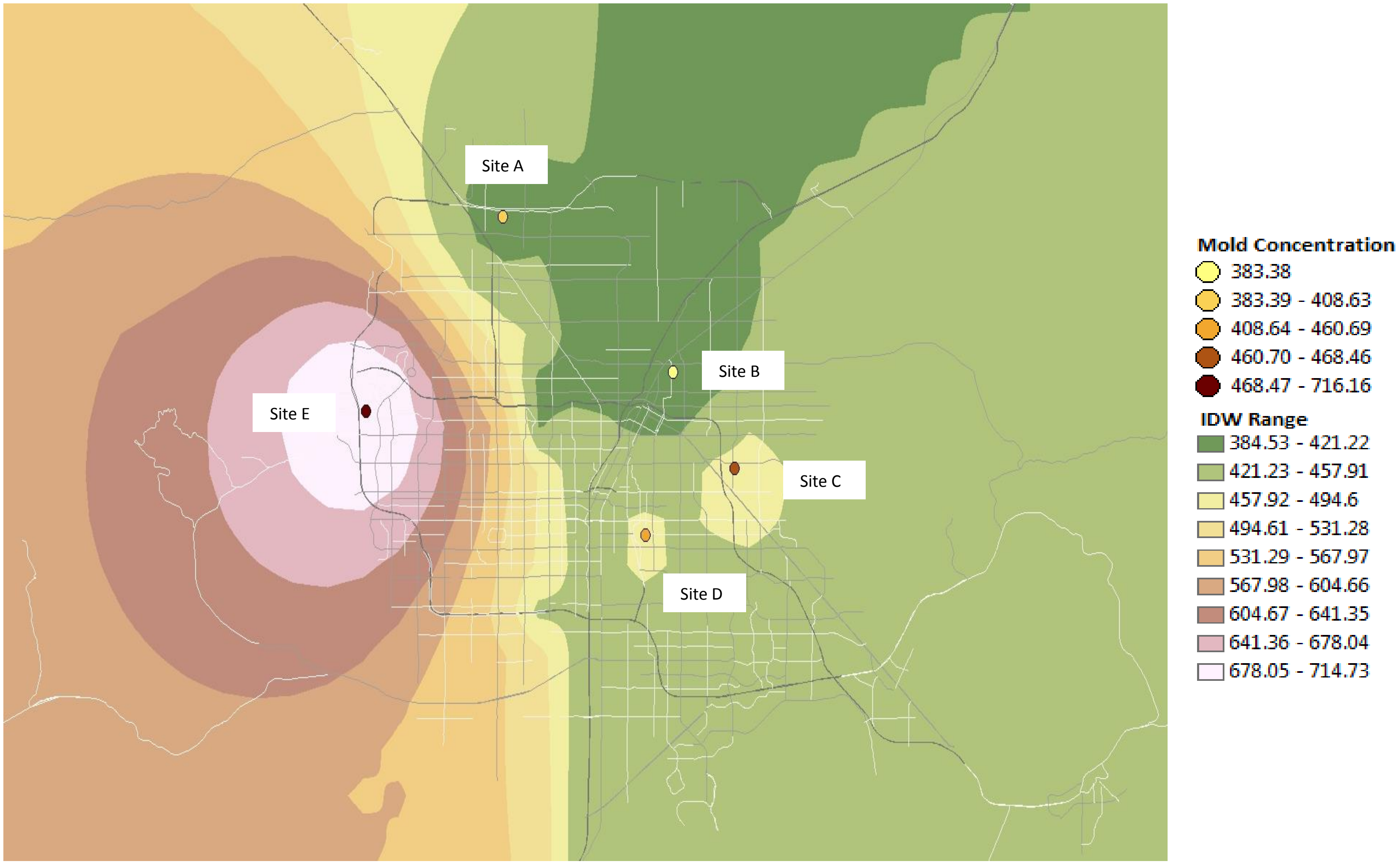


Figure 26: GIS Mold Concentration Averages for Five Sites in the Las Vegas Valley in Summer (spores/m^3); IDW= Inverse Distance Weighted.

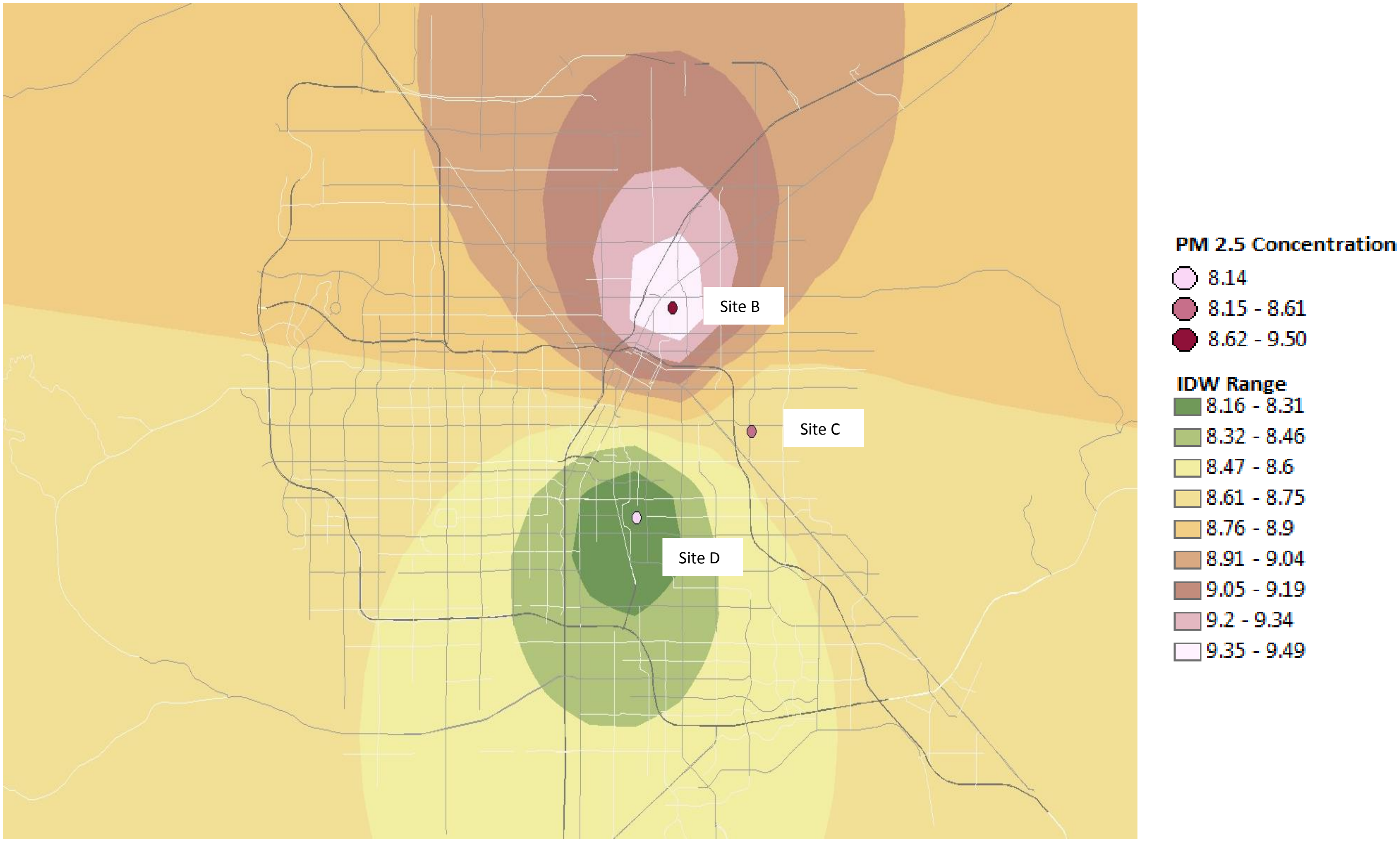


Figure 27: GIS $PM_{2.5}$ Concentration Averages for Three Sites in the Las Vegas Valley in Summer (µg/m^3); IDW= Inverse Distance Weighted.

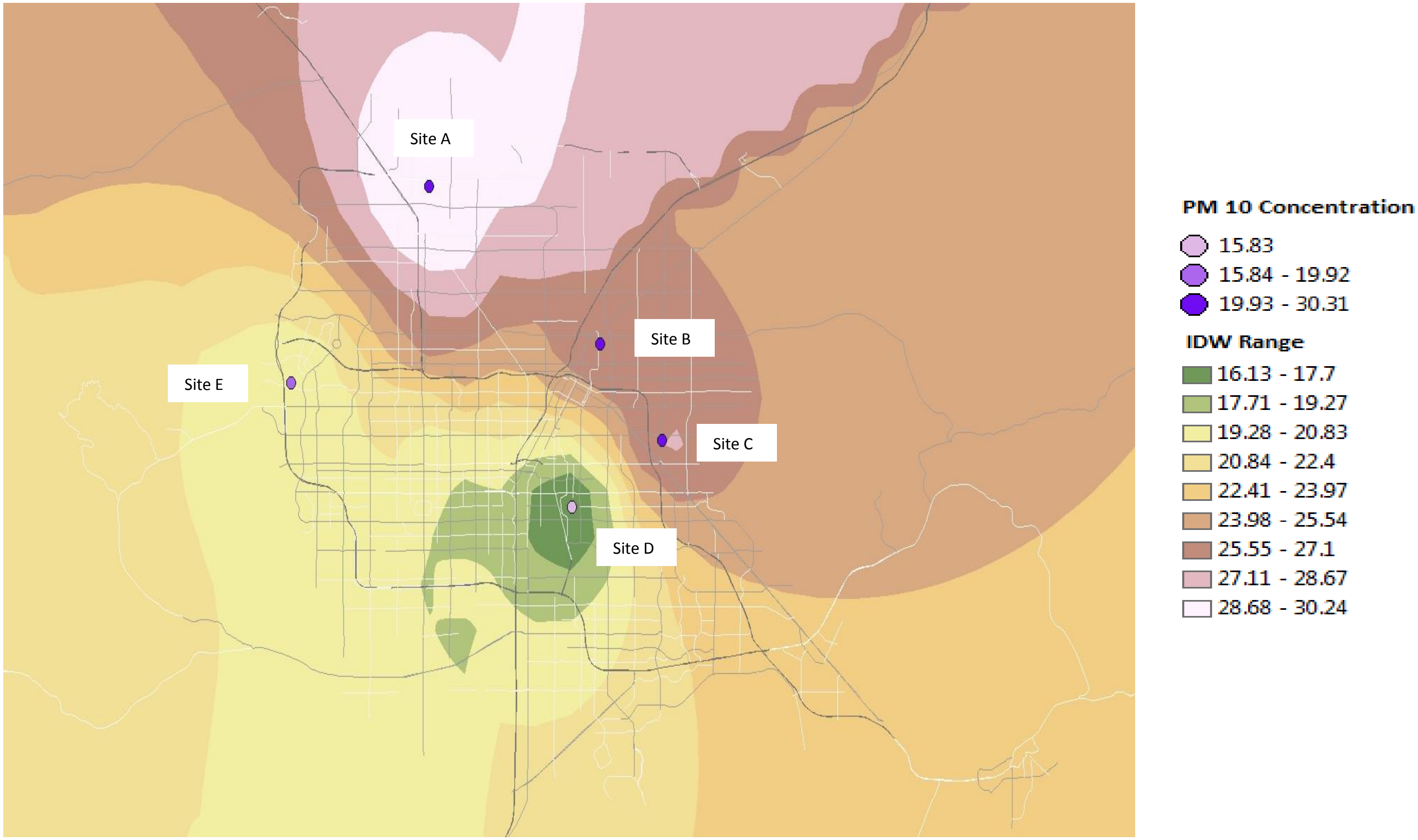


Figure 28: GIS PM_{10} Concentration Averages for Five Sites in the Las Vegas Valley in Summer (µg/m^3); IDW= Inverse Distance Weighted.

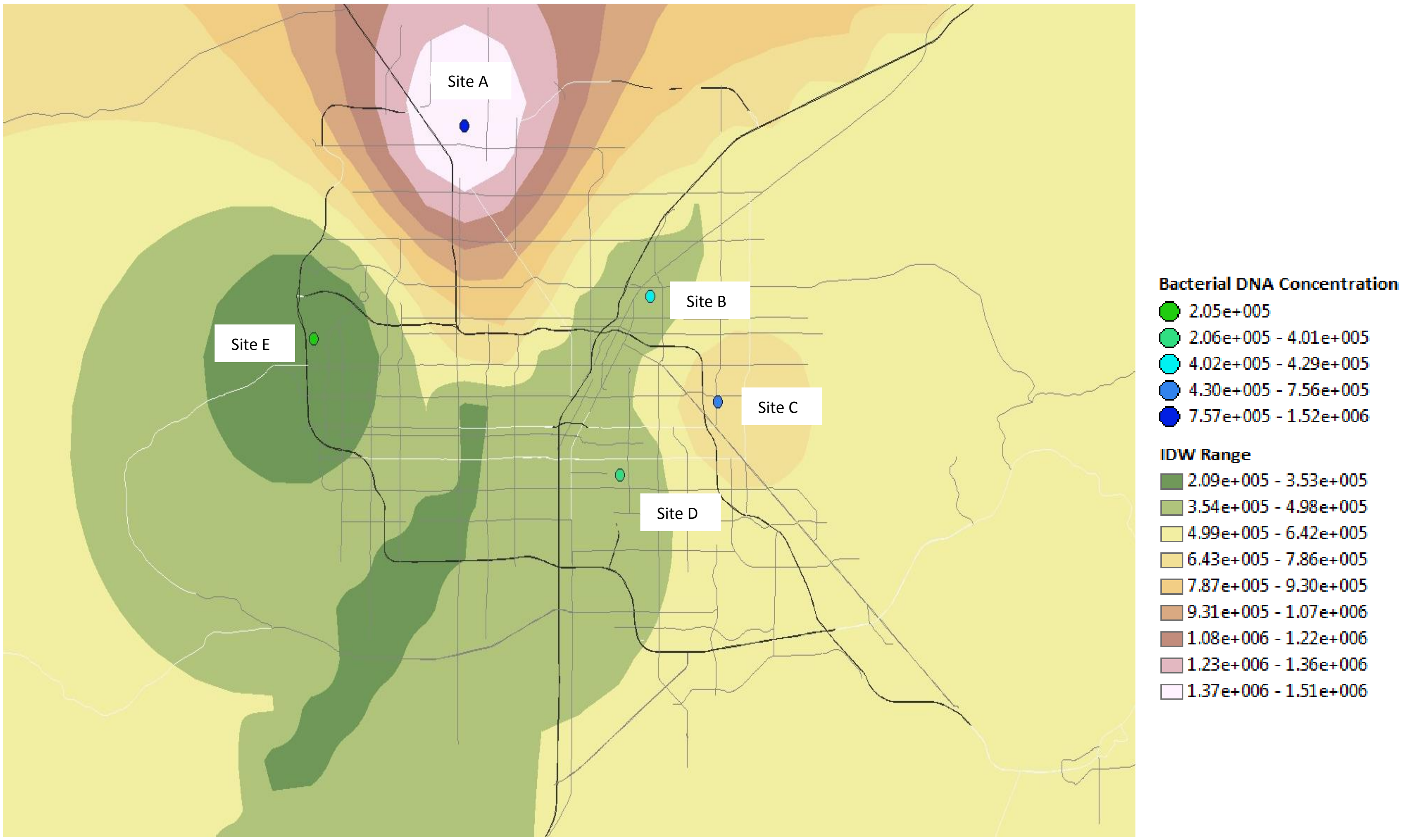


Figure 29: GIS Bacterial DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Fall (templates/m^3); IDW= Inverse Distance Weighted.

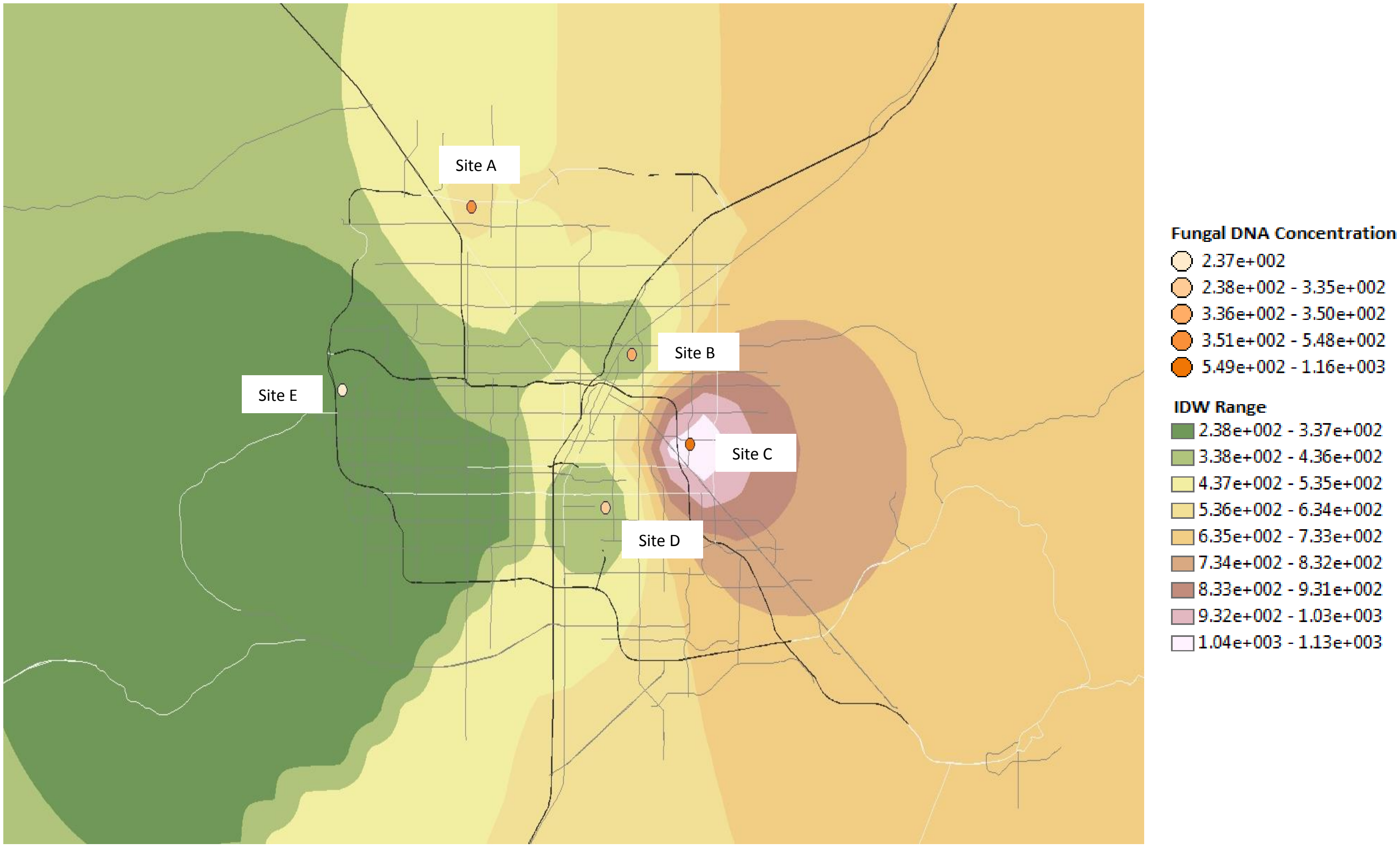


Figure 30: GIS Fungal DNA PCR Concentration Averages for Five Sites in the Las Vegas Valley in Fall (templates/m^3); IDW= Inverse Distance Weighted.

.

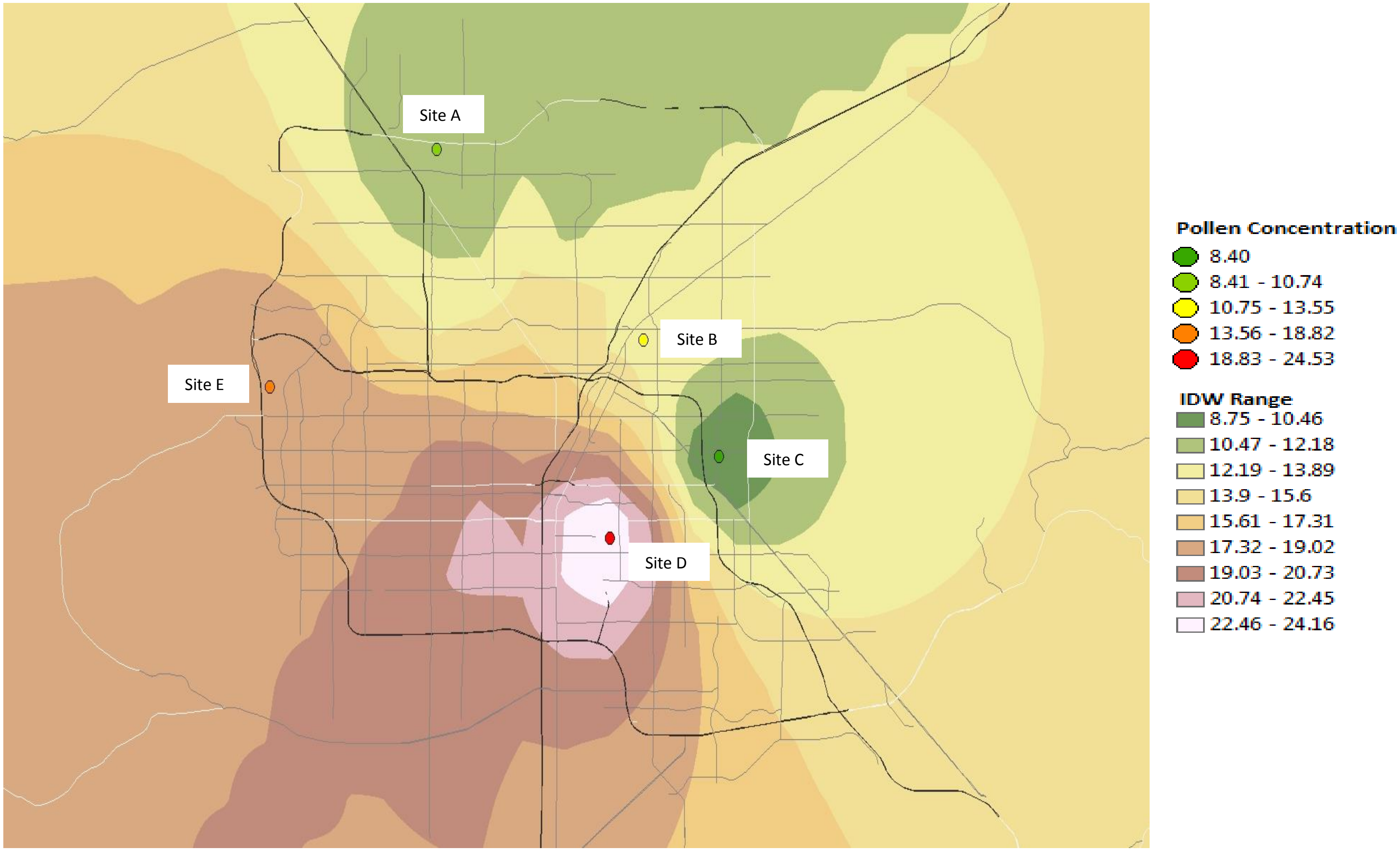


Figure 31: GIS Pollen Concentration Averages for Five Sites in the Las Vegas Valley in Fall (grains/m^3); IDW= Inverse Distance Weighted.

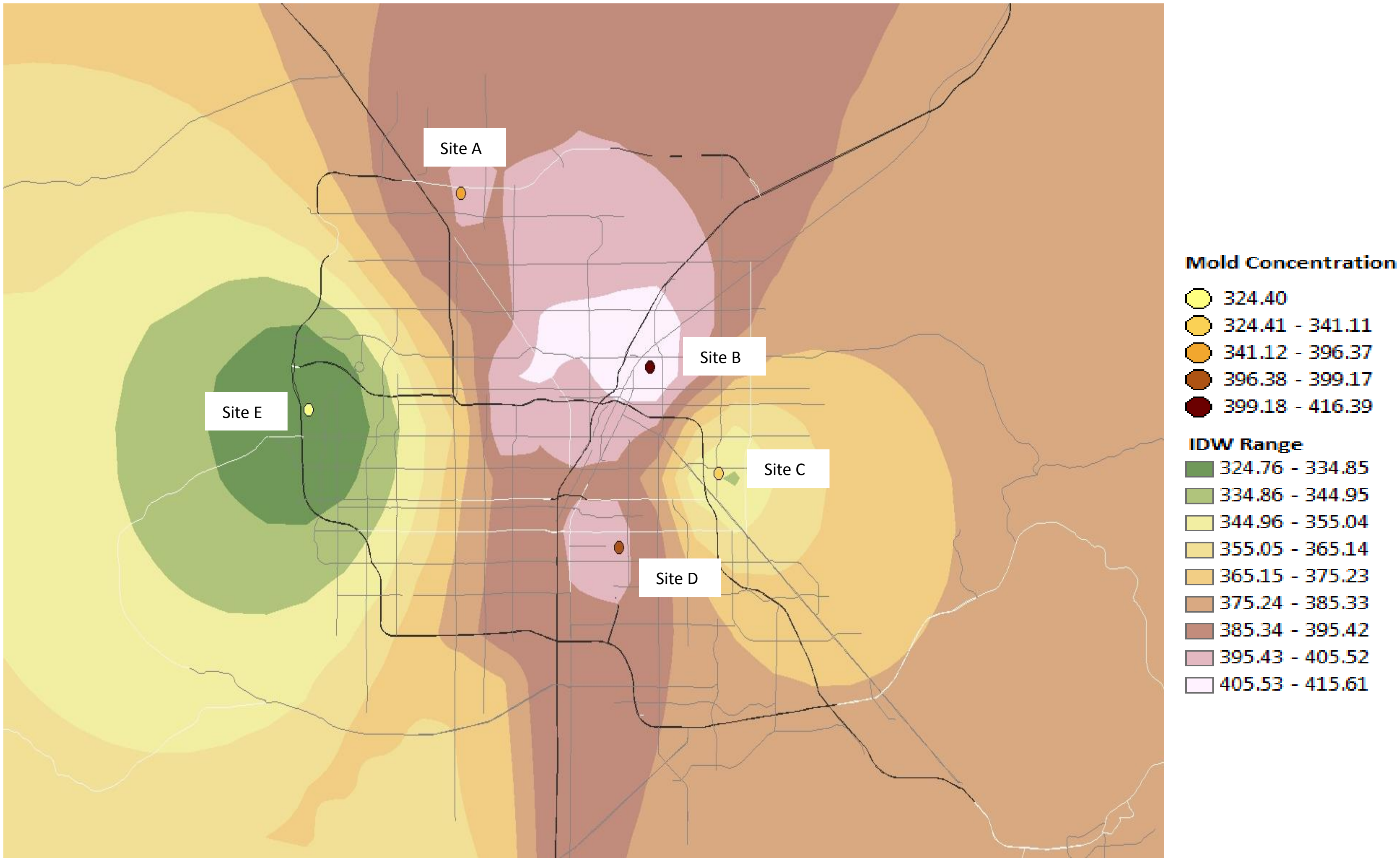


Figure 32: GIS Mold Concentration Averages for Five Sites in the Las Vegas Valley in Fall (spores/m^3); IDW= Inverse Distance Weighted.

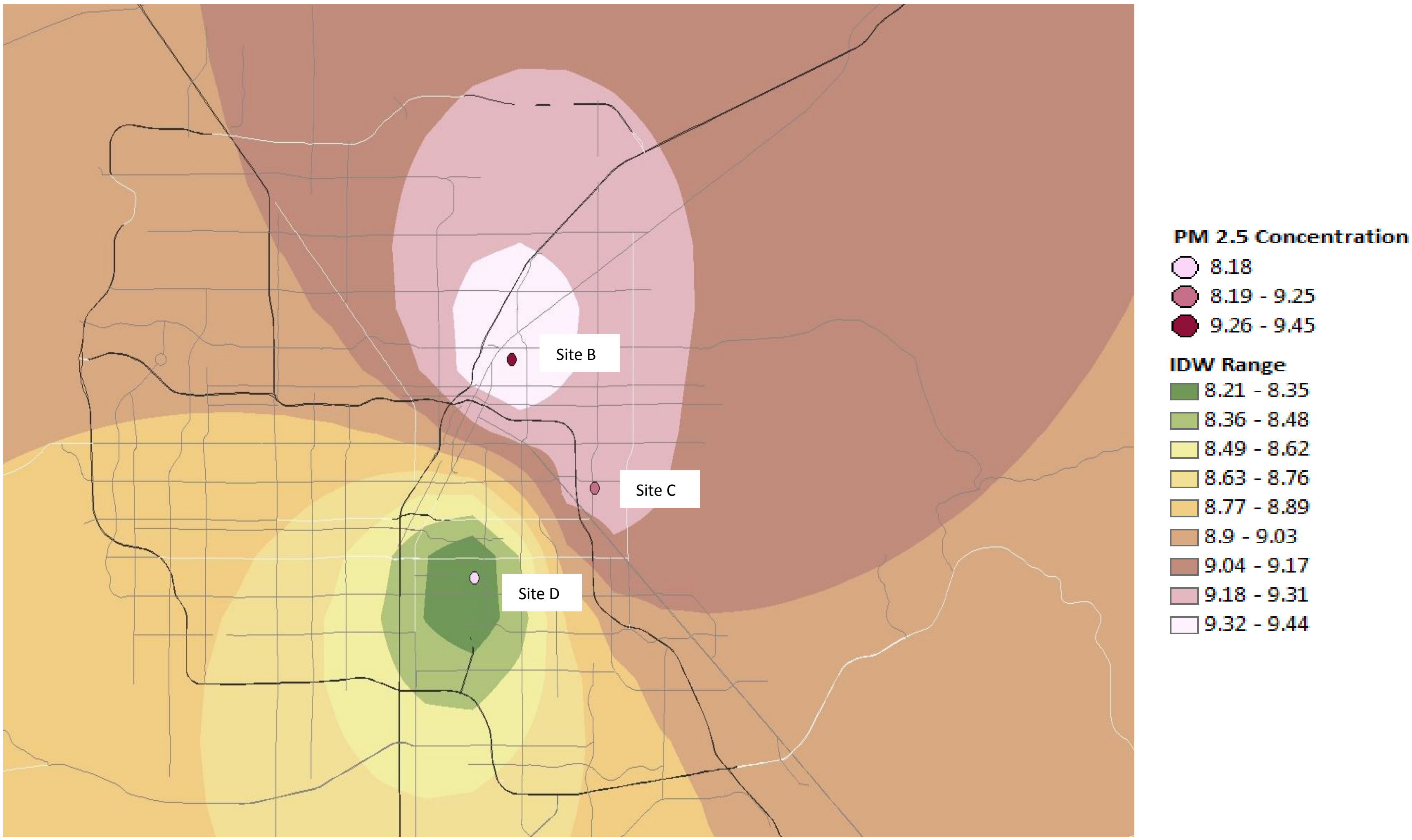


Figure 33: GIS $PM_{2.5}$ Concentration Averages for Three Sites in the Las Vegas Valley in Fall ($\mu g/m^3$); IDW= Inverse Distance Weighted.

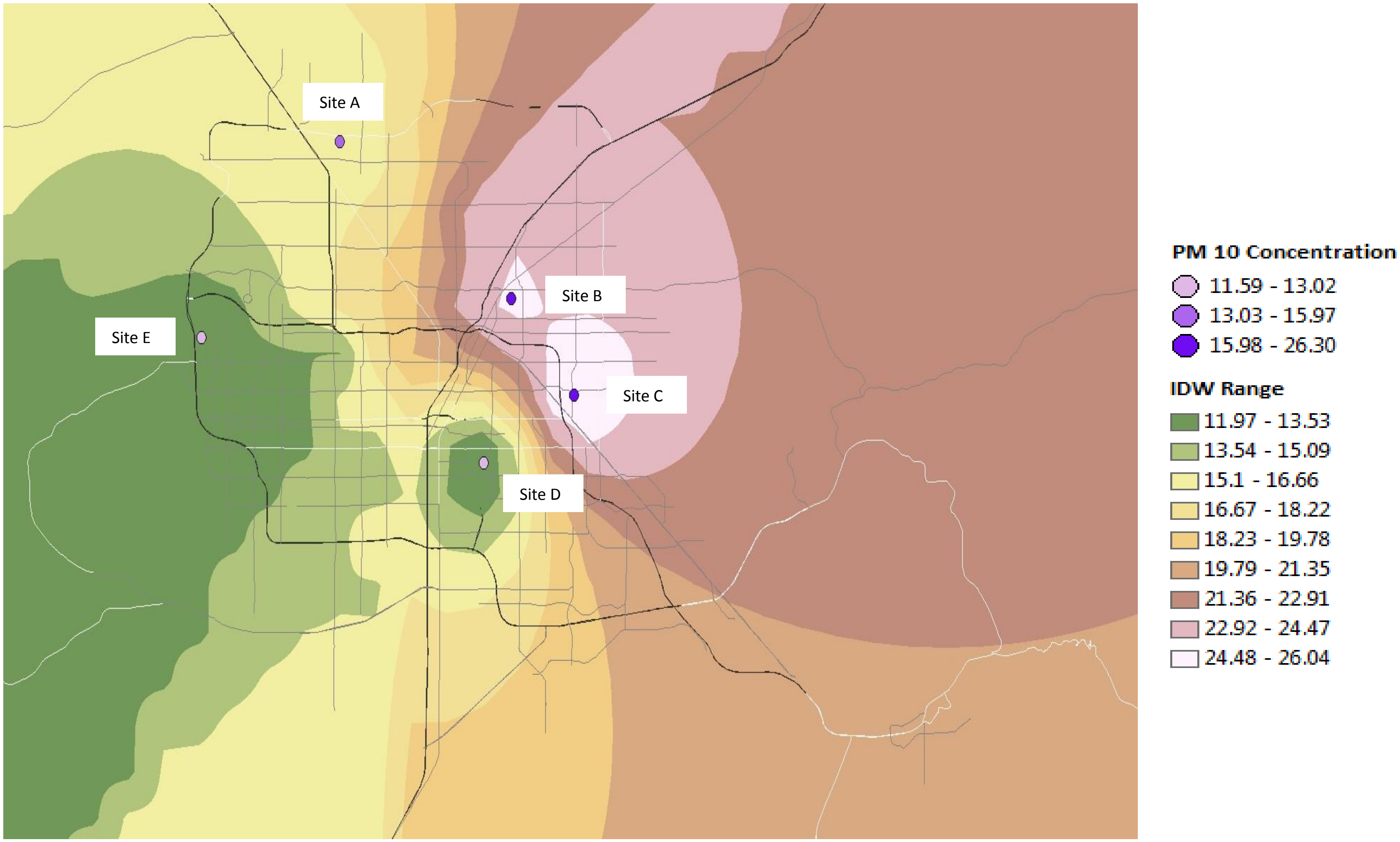


Figure 34: GIS PM_{10} Concentration Averages for Five Sites in the Las Vegas Valley in Fall ($\mu g/m^3$); IDW= Inverse Distance Weighted.

References

Acevedo W, Gaydos L, Tilly J, et al. Urban Land Use Change in the Las Vegas Valley. Retrieved from U.S. Geological Survey (2016, December 9): https://geochange.er.usgs.gov/sw/changes/anthropogenic/population/las_vegas/.

Average Weather for Las Vegas Nevada, USA. (2016). Retrieved from WeatherSpark: https://weatherspark.com/y/2228/Average-Weather-in-Las-Vegas-Nevada-United-States.

Bari, M. A., Baumbach, G., Sarachage-Ruiz, L., & Kleanthous, S. (2009). Identification of PM10 Sources in a Mediterranean Island. Water, Air, & Soil Pollution: Focus, 9(1), 39-53. doi:10.1007/s11267-008-9194-6

Bastl, K., Kmenta, M., Geller-Bernstein, C., Berger, U., & Jager, S. (2015). Can we improve pollen season definitions by using the symptom load index in addition to pollen counts? Environ Pollut, 204, 109-116. doi:10.1016/j.envpol.2015.04.016

Bowers, R. M., Clements, N., Emerson, J. B., Wiedinmyer, C., Hannigan, M. P., & Fierer, N. (2013). Seasonal Variability in Bacterial and Fungal Diversity of the Near-Surface Atmosphere. Environmental Science & Technology, 47(21), 12097-12106. doi:10.1021/es402970s

Bowers, R. M., Sullivan, A. P., Costello, E. K., Collett, J. L., Knight, R., & Fierer, N. (2011) Sources of Bacteria in Outdoor Air across Cities in the Midwestern United States. Applied and Environmental Microbiology, 77(18), 6350-6356. doi:10.1128/AEM.05498-11

Brodie, E. L., DeSantis, T. Z., Parker, J. P. M., Zubietta, I. X., Piceno, Y. M., & Andersen, G. L. (2007). Urban aerosols harbor diverse and dynamic bacterial populations. Proceedings of the National Academy of Sciences, 104(1), 299-304. doi:10.1073/pnas.0608255104.

Buttner, M. P., Cruz, P., Stetzenbach, K. J., & Smiecinski, A. J. "Characterization of microbial populations in the subsurface." (2006). Technical Report. Cooperative agreement between the UNLV Research Foundation and the U.S. Department of Energy (#DE-FC28-04RW12237) titled "Yucca Mountain Groundwater Characterization".

Buttner, M. P., Cruz, P., Stetzenbach, L. D., Klima-Comba, A. K., Stevens, V. L., & Cronin, T. D. (2004). Determination of the Efficacy of Two Building Decontamination Strategies by Surface Sampling with Culture and Quantitative PCR Analysis. Applied and Environmental Microbiology, 70(8), 4740–4747. http://doi.org/10.1128/AEM.70.8.4740-4747.2004

Cheung, K., Daher, N., Kam, W., Shafer, M., Ning, Z., Schauer, J. J., & Sioutes, C. (2011). Spatial and temporal variation of chemical composition and mass closure of ambient coarse particulate matter (PM10–2.5) in the Los Angeles area. Atomspheric Environment, 2651-2662.

Cheung, K., Shafer, M. M., Schauer, J. J., & Sioutas, C. (2012). Diurnal Trends in Oxidative Potential of Coarse Particulate Matter in the Los Angeles Basin and Their Relation to Sources and Chemical Composition. Environmental Science & Technology, 46(7), 3779-3787. doi:10.1021/es204211v

Chow, J. C., Yang, X., Wang, X., Kohl, S. D., Hurbain, P. R., Chen, L. A., & Watson, J. G. (2015). Characterization of ambient PM10 bioaerosols in a California agricultural town. *Aerosol Air Qual. Res, 15*, 1433-1447.

Cruz, P. (2006). "Refinement of protocols and analysis of fungal samples for the surface, water, and air biocharacterization (SWAB) flight experiment". Technical Report. Sub-grants from the National Aeronautics and Space Administration (NASA) and a University of Nevada, Las Vegas Applied Research Initiative.

Cruz, P. (2010). "Development of a comprehensive polymerase chain reaction (PCR) methodology for the detection of fungal contaminants in spacecraft environments". Technical Report. Grant from the Nevada NASA's Experimental Program to Stimulate Competitive Research (EPSCoR).

Cruz, P., & Buttner, M. P. (2008). Development and Evaluation of a Real-Time Quantitative PCR Assay for *Aspergillus flavus*. Mycologia, 100(5), 683-690.

Davies, J. M., Beggs, P. J., Medek, D. E., Newnham, R. M., Erbas, B., Thibaudon, M., . . . Huete, A. R. (2015). Trans-disciplinary research in synthesis of grass pollen aerobiology and its importance for respiratory health in Australasia. Sci Total Environ, 534, 85-96. doi:10.1016/j.scitotenv.2015.04.001

Douwes, J., Thorne, P., Pearce, N., & Heederik, D. (2003). Bioaerosol Health Effects and Exposure Assessment: Progress and Prospects. The Annals of Occupational Hygiene, 47(3), 187-200. doi:10.1093/annhyg/meg032

Dueker, M. E., O'Mullan, G. D., Juhl, A. R., Weathers, K. C., & Uriarte, M. (2012). Local environmental pollution strongly influences culturable bacterial aerosols at an urban aquatic superfund site. Environmental Science and Technology, 46(20), 10926-10933. doi:10.1021/es301870t

Duke, J. C., & Keech, B. M. (2015). Duke's Anesthesia Secrets. (5th ed., pp. 225). Philadelphia: Elsevier Health Sciences.

Ekhaise, F. O., & Ogboghodo, B. I. (2011). Microbiological Indoor and Outdoor Air Quality of Two Major Hospitals in Benin City, Nigeria. Sierra Leone Journal of Biomedical Research, 3(3), 169-174.

Fernández-Rodríguez, S., Tormo-Molina, R., Maya-Manzano, J. M., Silva-Palacios, I., & Gonzalo-Garijo, Á. (2014). Outdoor airborne fungi captured by viable and non-viable methods. Fungal Ecology, 7, 16-26. doi:10.1016/j.funeco.2013.11.004

Frenz DA, Palmer MA, Hokanson JM, Scamehorn RT. Seasonal characteristics of ragweed pollen dispersal in the United States. Ann Allergy Asthma Immunol. 1995 Nov; 75(5) 417-422. PMID: 7583863.

Genitsaris, S., Stefanidou, N., Katsiapi, M., Kormas, K. A., Sommer, U., & Moustaka-Gouni, M. (2017). Variability of airborne bacteria in an urban Mediterranean area (Thessaloniki, Greece). Atmospheric Environment, 157, 101-110. doi:http://doi.org/10.1016/j.atmosenv.2017.03.018

Griffin, D. W. (2007). Atmospheric movement of microorganisms in clouds of desert dust and implications for human health. Clinical microbiology reviews, 20(3), 459-477.

Haas, D., Habib, J., Luxner, J., Galler, H., Zarfel, G., Schlacher, R., . . . Reinthaler, F. F. (2014). Comparison of background levels of culturable fungal spore concentrations in indoor and outdoor air in southeastern Austria. Atmospheric Environment, 98, 640-647. doi:10.1016/j.atmosenv.2014.09.039

Harrison, R. M., & Yin, J. (2000). Particulate matter in the atmosphere: which particle properties are important for its effects on health? Science of The Total Environment, 249(1–3), 85-101. doi:http://dx.doi.org/10.1016/S0048-9697(99)00513-6

Holmgren CA, Betancourt JL, Rylander KA. A long-term vegetation history of the Mojave–Colorado desert ecotone at Joshua Tree National Park. Journal of Quaternary Science. 2010;222-236.

Ianovici, N. (2017). Summer airborne mycoflora of Timişoara (Romania) and relationship to meteorological parameters. Grana, 1-12. doi:10.1080/00173134.2016.1271823
Jalava, P. I., Happo, M. S., Huttunen, K., Sillanpää, M., Hillamo, R., Salonen, R. O., &

Hirvonen, M. R. (2016). Chemical and microbial components of urban air PM cause seasonal variation of toxicological activity. Environmental Toxicology and Pharmacology, 40(2), 375-387. doi:10.1016/j.etap.2015.06.023

Kappos, A. D., Bruckmann, P., Eikmann, T., Englert, N., Heinrich, U., Höppe, P., . . . Wichmann, H. E. (2004). Health effects of particles in ambient air. International Journal of Hygiene and Environmental Health, 207(4), 399-407. doi:http://dx.doi.org/10.1078/1438-4639-00306

Kenward, A., Adams-Smith, D., & Raja, U. (2013). Wildfires and Air Pollution. Cilmate Central. Retrieved from http://assets.climatecentral.org/pdfs/WildfiresAndAirPollution.pdf

Khattab, A., & Levetin, E. (2008). Effect of sampling height on the concentration of airborne fungal spores. Annals of Allergy, Asthma & Immunology, 101(5), 529-534. doi:http://dx.doi.org/10.1016/S1081-1206(10)60293-1

Kim, K. H., Jahan, S. A., & Kabir, E. (2013). A review on human health perspective of air pollution with respect to allergies and asthma. Environ Int, 59, 41-52. doi:10.1016/j.envint.2013.05.007

Laden, F., Neas, L. M., Dockery, D. W., & Schwartz, J. (2000). Association of fine particulate matter from different sources with daily mortality in six U.S. cities. Environmental Health Perspectives, 108(10), 941-947.

Lee, J. H., Hwang, G. B., Jung, J. H., Lee, D. H., & Lee, B. U. (2010). Generation characteristics of fungal spore and fragment bioaerosols by airflow control over fungal cultures. Journal of Aerosol Science, 41(3), 319-325. doi:http://dx.doi.org/10.1016/j.jaerosci.2009.11.002

Lewis, W. H., Vinay, P., & Zenger, V. E. (1983). Airborne and allergenic pollen of North America. Baltimore: Johns Hopkins University Press.

Lignell, U., Meklin, T., Rintala, H., Hyvärinen, A., Vepsäläinen, A., Pekkanen, J., & Nevalainen, A. (2008). Evaluation of quantitative PCR and culture methods for detection of house dust fungi and Streptomycetes in relation to moisture damage of the house. Letters in Applied Microbiology, 47(4), 303-308. doi:10.1111/j.1472-765X.2008.02431.x
McLauchlan KK, Barnes CS, Craine JM. Interannual variability of pollen productivity and transport in mid-North America from 1997 to 2009. Aerobiologia. 2011;181-189.

Nadkarni, M. A., Martin, F. E., Jacques, N. A., & Hunter, N. (2002). Determination of bacterial load by real-time PCR using a broad-range (universal) probe and primers set. Microbiology-Sgm, 148, 257-266.

O'Gorman, C. M., & Fuller, H. T. (2008). Prevalence of culturable airborne spores of selected allergenic and pathogenic fungi in outdoor air. Atmospheric Environment, 42(18), 4355-4368. doi:10.1016/j.atmosenv.2008.01.009

Ørby, P. V., Peel, R. G., Skjøth, C., Schlünssen, V., Bønløkke, J. H., Ellermann, T., . . . Hertel, O. (2015). An assessment of the potential for co-exposure to allergenic pollen and air pollution in Copenhagen, Denmark. Urban Climate, 14, 457-474. doi:10.1016/j.uclim.2014.12.002

Pakpour, S., Li, D.-W., & Klironomos, J. (2015). Relationships of fungal spore concentrations in the air and meteorological factors. Fungal Ecology, 13, 130-134. doi:http://doi.org/10.1016/j.funeco.2014.09.008

Pearson, C., Littlewood, E., Douglas, P., Robertson, S., Gant, T. W., & Hansell, A. L. (2015). Exposures and Health Outcomes in Relation to Bioaerosol Emissions from Composting Facilities: A Systematic Review of Occupational and Community Studies. Journal of Toxicology and Environmental Health. Part B, Critical Reviews, 18(1), 43-69. doi:10.1080/10937404.2015.1009961.

Phalen, R. F., & Phalen, R. N. (2013). Introduction to Air Pollution Science: A Public Health Perspective Burlington: Jones & Bartlett Learning.

Ponce-Caballero, C., Gamboa-Marrufo, M., López-Pacheco, M., Cerón-Palma, I., Quintal-Franco, C., Giácoman-Vallejos, G., & Loría-Arcila, J. H. (2013). Seasonal variation of airborne fungal propagules indoor and outdoor of domestic environments in Mérida, Mexico. Atmósfera, 26(3), 369-377. doi:10.1016/s0187-6236(13)71083-x

Rajput, P., Anjum, M. H., & Gupta, T. (2017). One year record of bioaerosols and particles concentration in Indo-Gangetic Plain: Implications of biomass burning emissions to high-level of endotoxin exposure. Environmental Pollution, 224, 98-106. doi:http://doi.org/10.1016/j.envpol.2017.01.045

Reading the Charts. (2016). Retrieved from American Academy of Allergy Asthma & Immunology: http://pollen.aaaai.org/nab/index.cfm?p=reading_charts3&statid=223

Rogers, C. A., & Hall, S. A. (2000). Comparison of pollen sampling with a Burkard Spore Trap and a Tauber Trap in a warm temperate climate. Grana, 39(6), 9p. doi:10.1080/00173130052504333

Roopashree, S., Somashekar, R. K., & Kumar, C. N. P. (2014). Study on airborne pollen in the atmosphere of Bangalore city. International Journal of Advanced Research, 2(4), 83-89.
Sears, M., Burrows, B., Flannery, E., Herbison, G., Hewitt, C., & Holdaway, M. (1991). Relation between airway responsiveness and serum IgE in children with asthma and in apparently normal children. New England Journal of Medicine, 325(15), 1067-1071.

Seaton, A., Godden, D., MacNee, W., & Donaldson, K. (1995). Particulate air pollution and acute health effects. The Lancet, 345(8943), 176-178. doi:http://dx.doi.org/10.1016/S0140-6736(95)90173-6

Shin, S.-K., Kim, J., Ha, S.-m., Oh, H.-S., Chun, J., Sohn, J., & Yi, H. (2015). Metagenomic Insights into the Bioaerosols in the Indoor and Outdoor Environments of Childcare Facilities. PLoS ONE, 10(5), e0126960. doi:10.1371/journal.pone.0126960

Singh, N., Singh, U., Singh, D., Daya, M., & Singh, V. (2017). Correlation of pollen counts and number of hospital visits of asthmatic and allergic rhinitis patients. Lung India, 34(2), 127-131. doi:10.4103/0970-2113.201313

Sofiev, M., Belmonte, J., Gehrig, R., Izquierdo, R., Smith, M., Dahl, Å., & Siljamo, P. (2013). Airborne Pollen Transport. In M. Sofiev & K.-C. Bergmann (Eds.), Allergenic Pollen: A Review of the Production, Release, Distribution and Health Impacts (pp. 127-159). Dordrecht: Springer Netherlands.

Stickley, A., Sheng Ng, C. F., Konishi, S., Koyanagi, A., & Watanabe, C. (2017). Airborne pollen and suicide mortality in Tokyo, 2001–2011. Environmental Research, 155, 134-140. doi:http://doi.org/10.1016/j.envres.2017.02.008.

Sultan, B., Labadi, K., Guégan, J.-F., & Janicot, S. (2005). Climate Drives the Meningitis Epidemics Onset in West Africa. PLoS Med, 2(1), e6. doi:10.1371/journal.pmed.0020006

Targonski, P. V., Persky, V. W., & Ramekrishnan, V. (1995). Effect of environmental molds on risk of death from asthma during the pollen season. Journal of Allergy and Clinical Immunology, 95(5), 955-961. doi:http://dx.doi.org/10.1016/S0091-6749(95)70095-1

Weber, S. A., Insaf, T. Z., Hall, E. S., Talbot, T. O., & Huff, A. K. (2016). Assessing the impact of fine particulate matter (PM2.5) on respiratory-cardiovascular chronic diseases in the New York City Metropolitan area using Hierarchical Bayesian Model estimates. Environmental Research 399-409.

Yadav, J., Kumar, A., Mahor, P., Goel, A. K., Chaudhary, H. S., Yadava, P. K., Kumar, P. (2015). Distribution of airborne microbes and antibiotic susceptibility pattern of bacteria during Gwalior trade fair, Central India. J Formos Med Assoc, 114(7), 639-646. doi:10.1016/j.jfma.2013.04.006

Yamamoto, N., Kimura, M., Matsuki, H., & Yanagisawa, Y. (2010). Optimization of a real-time PCR assay to quantitate airborne fungi collected on a gelatin filter. Journal of Bioscience and Bioengineering, 109(1), 83-88. doi:http://dx.doi.org/10.1016/j.jbiosc.2009.06.015

Zhang, Y., Bielory, L., Cai, T., Mi, Z., & Georgopoulos, P. (2015). Predicting Onset and Duration of Airborne Allergenic Pollen Season in the United States. Atmos Environ (1994), 103, 297-306. doi:10.1016/j.atmosenv.2014.12.019

Curriculum Vitae

Tanviben Y. Patel

<u>Education:</u>

- Doctorate of Philosophy in Public Health (University of Nevada, Las Vegas) – 2017

- Master of Public Health (University of Nevada, Las Vegas) - 2013

- Bachelor of Science (University of Nevada, Las Vegas) - 2010
    - Major: Biology
    - Minor: History

<u>Employment:</u>

- University of Nevada, Las Vegas, Department of Environmental and Occupational Health (EOH)
  Pollen Monitoring program Supervisor
  Certified National Allergy Bureau Pollen and Mold Counter – August 2014 – Present
  Oschsner Aeroallergen Pollen/Mold Counter Course – New Orleans, LA– June 2014

- Walgreens Pharmacy - Henderson, NV
  Senior Certified Pharmacy Technician from January 2008 – Present

- University of Nevada Las Vegas, EOH Department
  Graduate Research Assistant Spring 2012 – December 2013

- University of Nevada Las Vegas, EOH Department
  Research Assistant January 2013 – May 2013

- Cardiac Arrest Registry to Enhance Survival (CARES) Coordinator with Las Vegas Fire and Rescue
  January 2013 – Present

- Save –A –Life Coordinator with Las Vegas Fire and Rescue August 2009 – Present

<u>Teaching Experience:</u>

- PBH 165 - Personal Health Through a Lifespan
  Spring 2015- Summer 2016

- Las Vegas Science and Technology Festival – Clark County School District
  Spring 2014 – Present.

- UNLV Rebel STEM Academy
  April 2015

Professional Research and Investigational Studies:

- Psychology Research
  University of Nevada Las Vegas - January 2007

- Molecular Genetics Research
  Dr. Shen at UNLV – Spring 2008- Summer 2008

- University Medical Center – Emergency Medicine Research
  Active: August 2008 – May 2012
  Chief Research Assistant 2010 – May 2012

- Quagga Muscle Lab
  UNLV Summer 2011 – Spring 2011

Presentations:

- Slattery, D. E., Sasson, C., Myers, M., Hudema, A., Forred, W., **Patel, T**., Cox, D. (2011). Save a Life Campaign: Are We Reaching Our Citizens? A City-wide Hands-only CPR Training Campaign Reaches People Across Diverse Ethnic, Socioeconomic , and Education Groups. *Academic Emergency Medicine*, S112. Doi: 10.1111/j.1553-2712.2011.01073.x
  Presented at Society for Academic Emergency Medicine (SAEM) June 2011

- Diercks, D. B., Owen, K., **Patel, T. Y**., Reed, B., & Slattery, D. (2011).
  181 Cocaine and Methamphetamine Cardiomyopathy: Do Similar Drugs Produce Similar Damage. *Annals of Emergency Medicine*, 58(4), S238.
  Presented at American College of Emergency Physicians October 2011.

- Jin, H., **Patel, T**., Buttner, M., Bazylinski, D., & Seggev, J. S. Mulberry - a Chronic Pollen Offender in Las Vegas. *Journal of Allergy and Clinical Immunology, 135*(2), AB107. doi:10.1016/j.jaci.2014.12.1282
  Presented at the American Acadamy of Allergy, Asthma, & Immunology Annual Meeting March 2015

- **Tanviben Patel** · Hongbin Jin · Mark Buttner · Dennis Bazylinski · Joram Seggev
  Mulberry and Olive Pollen in Las Vegas. *Annals of allergy, asthma & immunology*, 137(2, Supplement)c:AB12.
  Presented at the American College of Allergy, Asthma, & Immunology Annual Meeting November 2015

- Jin, H., **Patel, T**., Buttner, M., Bazylinski, D., & Seggev, J. S. Seasonal Tree, Weed and Grass Pollen Patterns in the Las Vegas Valley. *Journal of Allergy and Clinical Immunology, 137*(2), AB123. doi:10.1016/j.jaci.2015.12.532

Presented at the American Academy of Allergy, Asthma, & Immunology Annual Meeting March 2016

Publications:

- **Patel, T**., Buttner, M., Rivas, D., Cross,C., Bazylinski, D., & Seggev, J. Comparison of Airborne Pollen Concentrations in Five Monitoring Locations in Las Vegas, Nevada. *Journal of Aerobiologia*. Submitted June 2017 **(Under Review)**

- **Patel, T**., Buttner, M., Rivas, D., Cross,C., Bazylinski, D., & Seggev, J. Comparison of Airborne Mold Concentrations in Five Monitoring Locations in Las Vegas, Nevada. *Journal of Aerobiologia*. Submitted July 2017 **(Under Review)**

Book Chapter:

- Ianniello, R. S., & **Patel, T. Y.** (2015). Chapter 7. Potential Impacts of Invasive Quagga Mussels on Diet and Feeding Habitats of Young of the Year Striped Bass in Lake Mohave, Nevada, USA. In *Biology and Management of Invasive Quagga and Zebra Mussels in the Western United States* (pp. 95-99). Boca Raton, FL: CRC Press. doi:10.1201/b18447-10

Honors and Awards:

- Center for Disease Control and Emory University, CARES Excellence Award, 2017
- Outstanding Service to the School and The Public Health Student Association, 2017
- UNLV 3 Minute Thesis Competition Finalist, 2016
- Mary Guinan and Shawn Gerstenberger Public Health Scholarship, 2016
- Outstanding Service to the School and The Public Health Student Association, 2016
- Graduate Student Leadership Award, School of Community Health Sciences, 2015
- Graduate Student Leadership Award, School of Community Health Sciences, 2014

Professional Memberships:

- American Public Health Association (APHA) (student member): 2015-present
- Nevada Public Health Association (student member): 2016-present
-

Student Associations:

- Indian Sub-Continental Association
  Position: Activities Coordinator from Fall 2005 – Spring 2006

- Association of Pre–Health Professionals/Minority Science Student Program
  Position: Activities Director from August 2005- May 2006

- Consolidated Student of University of Nevada Las Vegas
  Position: Student Body Vice President Pro- Tempore from May 2008- May 2009

- Public Health Student Assoication
  Position: Founding President Spring 2014 to Fall 2016
- University of Nevada Las Vegas Graduate Student Ambassador.
  Fall 2015 – May 2017
- University of Nevada Las Vegas Alumni Association – SCHS Chapter
  Position: Founding Secretary Fall 2016 – Present

Skills:

- Microsoft Excel, PowerPoint, and Word
- SPSS Statistical Software
- IBM SAS (Limited)
- Extensive Microscopy
- Extensive Quantitative Real-Time PCR
- Microbiology Lab Techniques and Procedures
- Large Data Management
- Field Work Experience