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Plume Dispersion Modeling of Chlorine Gas Released Due to Ballistic Attack on Chlorine-Carrying Railway Tanker

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PLUME DISPERSION MODELING OF CHLORINE GAS RELEASED DUE TO BALLISTIC ATTACK ON CHLORINE-CARRYING RAILWAY TANKER

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ABSTRACT

Hazardous dense gases such as chlorine are often transported throughout the United States in their liquid form in pressurized railway tankers. These tankers can hold up to 90 tons of liquid chlorine. A high-powered, ballistic attack on a chlorine-carrying tanker could cause devastating outcomes for the surrounding population and environment. This particular terrorist attack was modeled and analyzed by varying a large number of weather parameters and by varying terrain in order to provide specific concentration data at different distances from the source. Data was compiled to provide first responders with a reliable reference for such an emergency so that evacuations and mitigation could be done effectively. The Hazard Predication and Assessment Capability (HPAC) model provided by the Defense and Threat Reduction Agency (DTRA) and the Areal Locations of Hazardous Atmospheres (ALOHA) model provided by the Environmental Protection Agency (EPA) were verified against actual experiments and plume theories and were used to model the chlorine gas plumes resulting from such an attack. Locations of interest were Chicago, IL due to its urbanized area and skyscrapers and Jackson, MS because of its relatively flat terrain and wooded areas. The varying of the locations provided different terrain factors. This research was not only limited to worst-case scenarios, but it also took into account other, less disastrous scenarios in order to provide useful and practical data for first responders. The goal was to reduce the preliminary work first responders must perform before reacting to a ballistic attack on a chlorine-carrying railway tanker.

DEDICATION

This thesis is dedicated to my mother, Camille Chapman, and my father, William E. Chapman, III, for their constant support and encouragement through the duration of graduate school.

LIST OF ABBREVIATIONS AND SYMBOLS

AEGL	Acute Exposure Guideline Level
ALOHA	Areal Locations of Hazardous Atmospheres
CALPUFF	California Puff Model
CFD	Computational Fluid Dynamics
DHS	Department of Homeland Security
DTRA	Defense and Threat Reduction Agency
EPA	Environmental Protection Agency
HPAC	Hazard Prediction and Assessment Capability
LLNL	Lawrence Livermore National Laboratory
NTS	Department of Energy's Nevada Test Site
PPT	Plume Path Theory
SERRI	Southeast Region Research Initiative
SCIPUFF	Second-order Closure Integrated Puff
TIH	Toxic-by-Inhalation
TSA	Transportation Security Administration
UDM	Urban Dispersion Model
VLSTRACK	Vapor-Liquid-Solid Tracking

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I. INTRODUCTION

The uncontrolled release of hazardous, dense gases – whether accidental or purposeful— is a great concern for industry, transport, and public safety. Pressurized railway tankers are commonly used to transport dense gases, and an attack on these transportation vessels could create a serious threat to surrounding areas. Dense gases are pressurized and stored in their liquid form in these pressurized vessels – allowing for transportation of larger quantities of chemicals. However, when the liquid chemicals come in contact with external temperatures and ambient pressures, they change to their gaseous form. When inhaled, hazardous dense gases can cause pulmonary injuries and possibly death; therefore, they are called Toxic-by-Inhalation (TIH) chemicals. Currently, railway tankers are not invincible to large, high-powered ballistic rounds such as 0.50-caliber bullets – the most powerful round available to American civilians. A ballistic attack on a TIH chemical-carrying pressurized vessel could trigger a release of several tons of hazardous gas, instigating an evacuation, and threatening the lives of those nearby. First responders – typically firefighters – are responsible for such disaster mitigation and for evacuations; however, information about TIH gas emergencies is limited because of their unpredictable behavior. Simulations of accidental hazardous gas releases have been conducted for railway collisions and overturns; however, TIH gas plumes resulting from ballistic attacks on pressurized vessels have not been extensively studied.

Software, such as Areal Locations of Hazardous Atmospheres (ALOHA 5.4.1.2), provided by the Environmental Protection Agency (EPA), and Hazard Predication and Assessment Capability (HPAC 5.0), provided by the Defense Threat Reduction Agency (DTRA),

are used to model and predict the concentrations, population affected, and Acute Exposure Guideline Levels (AEGLs) of gaseous plumes. By varying weather and terrain parameters, different scenarios can be modeled for a better understanding of necessary emergency response in the event of an attack on a railway tanker carrying TIH chemicals.

The study detailed in this thesis is on chlorine, a "greenish-yellow, highly reactive halogen gas that has a pungent, suffocating odor" (National Research Council 2004). Chlorine is known to cause pulmonary and optical irritation. Because of its high toxicity and slow dispersion rate, chlorine gas poses a severe threat to surrounding populations, as displayed by the January 6, 2005 railway collision of a pressurized railcar tanker carrying chlorine gas in Graniteville, South Carolina. The event in Graniteville resulted in 9 deaths, more than 500 injuries, and the evacuation of more than 5,000 people (Buckley et al. 2007). Buckley et al. reported that the pressurized vessel released more than 70 tons of chlorine gas into the atmosphere.

In the aforementioned accident, first responders used ALOHA to quickly predict areas that needed to be evacuated. ALOHA was useful because of the speed at which it produced results, but it ended up over-predicting the plume's speed and concentration downwind. Because ALOHA can only model a one-hour time release, it assumes that the tanker completely empties in one hour. This time assumption is incorrect and dangerous in such emergencies. In reality, the tanker emptied much slower and the plume moved at a slower speed (PEAC Aristatek 2007). A slower moving plume appears to be beneficial to first responders and for emergency mitigation; however, slower plume movement means longer hazardous gas exposure and the possibility of more weather changes affecting the plume size and shape. While ALOHA is helpful for initial emergency evacuations, it does not take into effect weather changes that could

occur, and it often over-predicts necessary evacuations. It is possible that evacuating nearly the whole population of a town is not necessary and could be hazardous for those who are in the most danger of exposure. A better idea of where the plume would go first, so that those in the most critical areas could be evacuated first, was needed in the case of a chlorine-carrying tanker emergency – in this example a ballistic attack.

Railway tankers can carry up to 90 tons of liquid chlorine. The tankers are typically filled to approximately 85 percent with liquid chlorine, and the remaining space in the tanker is filled with chlorine vapor, dry air, and non-reactive gases. Railway tankers carrying liquid chlorine are pressurized based on chlorine's vapor pressure: if the temperature in the tank is very low, the pressure in the tank will also be low, and if the temperature is very high, the pressure will be high. At very low temperatures, such as 0°F, the gauge pressure of the tank would be around 14 psi; however, at very high temperatures, such as 100°F, the gage pressure of the tank would be around 140 psi (Nordin 2006). The temperature that the liquid chlorine is exposed to causes extensive changes in gauge pressure. The flow rate out of a breach in the tanker is directly affected by changes in temperature and pressure. It is apparent that increased pressure in the tank would generate a greater force on the liquid chlorine within, thereby increasing the flow rate of chlorine gas out of a bullet puncture. Therefore, when modeling different weather parameters, it was necessary to change flow rates of chlorine when ambient temperatures were varied.

This plume model research went hand-in-hand with other research at the University of Mississippi on polymers for retrofitting chlorine tankers. The polymer research was done in order to discover if the placement of polymers on current railway tankers would seal bullet holes in the case of such an attack (Al-Ostaz). Sealing a bullet hole completely was ideal; however, it

was more likely that the polymer would seal a puncture to a smaller diameter than a 50-caliber bullet diameter of 1.3 centimeters (0.5 inches), or it would prevent the puncture from becoming larger than the diameter of the bullet. Therefore, plume modeling was necessary to see the effects that chlorine escaping from a smaller puncture would have on the surrounding communities and environment.

The levels of danger posed by chlorine gas are outlined through the use of Acute Exposure Guideline Levels (AEGLs). These AEGLs are defined by the Subcommittee on Acute Exposure Guideline Levels, Committee on Toxicology, a branch of researchers from the National Research Council of the National Academies, in an effort to categorize highest health threats and workplace limitations. AEGL-3 concentrations are associated with the highest likelihood of death or serious injury, AEGL-2 concentration are defined by injury or noticeable discomfort, and AEGL-1 concentrations result in slight discomfort and some remaining danger. AEGLs are typically the minimum gas concentrations that can cause the aforementioned symptoms (i.e. AEGL-3 is the minimum concentration that has been known to cause death or serious injury). The chlorine gas AEGLs were defined after the testing of willing human volunteers who had either healthy pulmonary conditions or pre-existing pulmonary issues such as asthma; however, AEGL-3 determination was done through animal testing because of the increased likelihood of death (National Research Council [16]). For chlorine gas, the AEGLs 1, 2, and 3 for a 1-hour exposure, were 0.5 ppm, 2 ppm, and 20 ppm respectively (National Research Council 2004). AEGL concentrations vary by the amount of time one can be exposed to a chemical before certain health effects take place. Table I-1 displays the official AEGLs for chlorine as determined by the National Research Council's Subcommittee on Acute Exposure Guideline Levels, Committee on Toxicology.

Knowing these chlorine AEGLs, the goal of the research contained in this thesis was to categorize the distances (downwind, upwind, and crosswind) that the different AEGLs would reach for different terrains and weather conditions. Understanding plume distance terms was very important for interpreting data from this research. Figure I-1 displays a plume with the downwind, upwind, and crosswind directions defined. The large black arrow represents the wind direction.

Table I-1. "Summary of AEGLs Values for Chlorine (ppm [mg/m^3])" (National Research Council 2004)

Classification	10 min	30 min	1 h	4 h	8 h	End Point (Reference)
AEGL-1[a] (Nondisabling)	0.5 (1.5)	0.5 (1.5)	0.5 (1.5)	0.5 (1.5)	0.5[b] (1.5)	No to slight changes in pulmonary function parameters in humans (Rotman et al. 1983; D'Alessandro et al. 1996; Shusterman et al. 1998)
AEGL-2 (Disabling)	2.8 (8.1)	2.8 (8.1)	2.0 (5.8)	1.0 (2.9)	0.7 (2.0)	1.0 ppm for 4 h was a NOAEL for an asthma-like attack in human subjects; the other values were time-scaled (Rotman et al. 1983; D'Alessandro et al. 1996)
AEGL-3 (Lethal)	50 (145)	28 (81)	20 (58)	10 (29)	7.1 (21)	Threshold for lethality in the rat (MacEwen and Vernot 1972; Zwart and Woutersen 1988)

The distinctive, pungent odor of chlorine will be noticeable to most individuals at these concentrations.
Because effects were not increased following an interrupted 8-h exposure of an atopic individual to 0.5 ppm, the 8-h AEGL-1 was set equal to 0.5 ppm.
Abbreviations: mg/m^3, milligrams per cubic meter; ppm, parts per million.

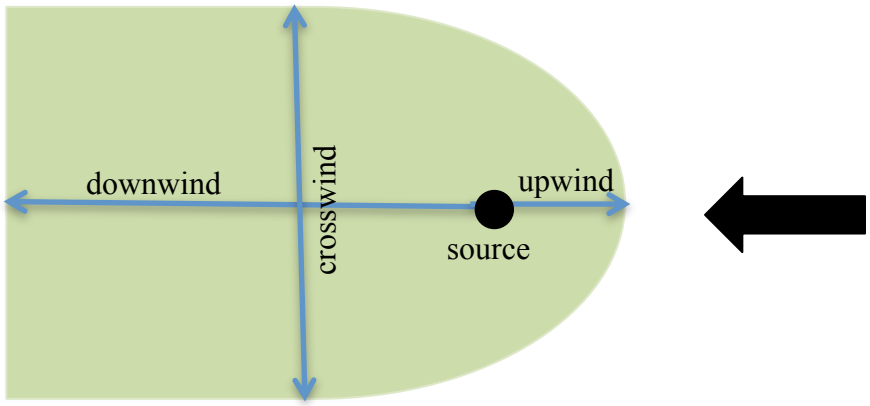

Figure I-1. Gas plume diagram with defined downwind, upwind, and crosswind distances

Research, like that done by Long et al. (2009) has used HPAC 5.0 to predict chlorine plume movement due to an accidental release of the chemical from natatorium chlorine tanks on a college campus. However, modeling of plumes resulting from deliberate ballistic attacks on pressurized railcar tanks has not been readily available. Also, the movement of a chlorine plume based on weather and terrain variations has not been entirely analyzed for such a scenario. Therefore, this research will analyze dense, hazardous, possible high-velocity gas transport – particularly chlorine – from a purposefully punctured railcar with the use of ALOHA and HPAC through three objectives.

The first objective for accomplishing the research goal was to verify HPAC and ALOHA by inputting experimental data provided by the Transportation Security Administration (TSA) and comparing model output to actual measured experimental concentrations. In 1983, dense gas releases were modeled in Nevada in a test series named Desert Tortoise (Goldwire et al. 1985). The Desert Tortoise tests dealt with small, quick releases of ammonia (a dense gas). Although ammonia was used, the ability to model the tests and for the software to output reasonable concentrations that agree with experimental data worked to validate the ability to model dense gas behavior effectively in HPAC and/or in ALOHA. Another process of software

validation was the comparison of HPAC and ALOHA concentration outputs at certain points downwind, crosswind, and above the origin of release to the calculated, expected Gaussian concentration values at the same point(s). The Gaussian dispersion equation is described in greater detail later in this thesis.

After the software was validated, an analysis of the effects that different weather parameter combinations would have on the transport of large-scale chlorine plumes in varying cities became the second objective. The ability to determine whether wind speed, temperature, humidity, or atmospheric stability affected the movement of the plume or the dispersion rate of the chlorine gas was important and mandatory in establishing probable scenarios, including worst-case. The knowledge of what type of weather would cause a worst-case scenario would alert first responders to the possibility of danger.

The third objective of this research was to compile concentration information with related weather and terrain parameters for use by first responders. The information needed to be easily understood and effectively organized. The easier the data was to read, the quicker first responders could react in an emergency or evacuate the necessary population. After two-dimensional modeling was completed in HPAC and ALOHA, the modeling of cross-sections of the worst-case scenario plumes (as determined through previous two-dimensional modeling) was performed in order to display vertical concentration distributions. This was helpful in understanding how tall these plumes could be, and if the presence of tall buildings had an effect on plume height.

HPAC and ALOHA both have their limitations and differences. ALOHA uses both a Gaussian and a heavy gas dispersion model to incorporate different gas densities, and HPAC uses a second-order closure integrated puff (SCIPUFF) model. SCIPUFF "uses a collection of

Gaussian puffs to represent an arbitrary three-dimensional, time-dependent concentration field, and incorporates an efficient scheme for splitting and merging puffs" (Sykes et al. 2006). SCIPUFF enables HPAC to model long range plume travel, but ALOHA is only able to model plume transport for one hour because of its weather parameter limitations. HPAC has historical terrain and weather data programmed into its database, and it has the option of setting various flagpole receptor locations for concentration collection. However, ALOHA simply plots the plume in a straight-downwind path with pre-defined concentration ranges. ALOHA was used initially in this research because of its simplicity in displaying the basic behavior of a chlorine plume. However, ALOHA often over-predicted and was too simplistic for such a scenario. Both software packages were compared with various disparities and agreements occurring.

The hope was that the availability of the information in this thesis to first responders would allow for more effective emergency management and environmental mitigation. The knowledge of where the gas would travel, how quickly it would disperse, and how many people it would likely affect could help in effective evacuations and facilitate in a greater understanding of dealing with such a terrorist threat.

Currently, first responders have vague information on hazardous chemical releases into the atmosphere. There are four categories of hazardous gas releases outlined in the Emergency Response Guidebook: small spills during the daytime, large spills during the daytime, small spills during the nighttime, and large spills during the nighttime. For each condition, an evacuation perimeter is defined. However, because chlorine is a dense gas it does not behave ideally. Changing weather conditions cause increased uncertainties about plume movement, and terrain conditions severely affect chlorine plume movement. First responders have learned to suggest that people seek higher ground in the case of a chlorine-release emergency (PEAC

Aristatek 2007). This suggestion may not be the most effective for certain affected areas. It is important to provide more extensive information about chlorine emergencies – in this case a ballistic attack on a chlorine-carrying tanker – for the improvement of emergency response by first responders.

The contribution that this thesis and this research makes to the engineering, scientific, and defense community is new and unique. The particular simulation of chlorine gas releases from a railway tanker after ballistic impact has not been widely studied. Rather than a collision or an overturn, this research deals with a specific puncture with specific flow rates. Also, plume simulations in HPAC for hazardous gases such as chlorine have mainly been conducted for simple, pre-defined worst-case scenarios. The research contained in this thesis involves large quantities of plume data for as many scenarios as possible. This large amount of data (Appendix A and Appendix B) will be useful for first responders and for chlorine leak scenarios in weather conditions that are not necessarily worst-case conditions.

II. BACKGROUND

a) Health Effects of Chlorine Exposure

The EPA has described chlorine as a "greenish-yellow gas" that has a "suffocating odor." The EPA also explains that one of the sources of exposure of chlorine to the general public can be due to accidental releases from chlorine-carrying vessels. Chlorine has been known to cause nausea, troubled breathing, and vomiting at around 30 parts per million (ppm). Extended periods of exposure to 30 ppm of chlorine gas can cause death; however, higher concentrations are more likely to cause death for shorter periods of time. At lower concentrations between 0.01 ppm and 1 ppm, the presence of chlorine gas for extended periods of time can cause ocular discomfort and pulmonary issues such as a dry throat or shortness of breath (Environmental Protection Agency 2007). From such data, it is concluded that the release of large amounts of chlorine in a town or city for an extended period of time can cause a number of different health problems and possible fatalities.

Although it can be deadly, chlorine is regularly used in every-day life. Chlorine gas is used frequently in industry and is found in cleaning products, polymers, pesticides, and water disinfectant. It is one of the most produced chemicals in the United States. Chlorine is transported in its liquid form so that more of the chemical can be shipped. Although chlorine can cause harm when ingested or touched, the most harmful exposure to chlorine is through inhalation. When chlorine is inhaled and present in the body, it creates acids because of its reaction with water. These acids corrode cells and organs (New York State Department of Health 2011). The inhalation of chlorine gas can cause severe pulmonary issues such as fluid

accumulation in the lungs, rapid breathing, and lung collapse. It can also cause cardiovascular hypotension and collapse because of the suppressed oxygen in the blood stream. At lower concentrations, chlorine can cause a sore throat, irritated eyes, and coughing (Agency for Toxic Substances and Disease Registry 2010).

The odor threshold for chlorine gas is 0.32 ppm – less than the OSHA permissible 1-hour exposure limit. Because the odor threshold is low, the presence of chlorine gas in the atmosphere is easily detectable. At further distances from a source, chlorine exposure can be avoided by moving away from the chlorine odor. However, if one comes in contact with fast-moving, chlorine vapor, it can cause severe chemical burns. This threat of chemical burns is especially dangerous to first responders who would mitigate a chlorine gas emission emergency. Chlorine gas is also a greater risk to children because of their larger lung surface and face to body weight ratio. Being a dense gas, it tends to hug the ground, and because of their short stature, children can be affected significantly by chlorine gas exposure (Agency for Toxic Substances and Disease Registry 2010).

b) Chlorine Release Incidents

In August 2002, a hose transferring liquid chlorine from a railway tanker to a plant near Festus, Missouri burst. The emergency valves and the excessive flow valve neither closed nor prevented the incident. First responders were forced to crawl through large amounts of chlorine gas to shut the valves. This particular railway tanker released 24 tons of chlorine gas into the air and caused a large-scale evacuation of many and the medical treatment of over 60 people in the surrounding area. Another similar chlorine release incident occurred at a Baton Rouge chemical

plant in August 2005. However, the emergency valves served their purpose and prevented the emission of large amounts of chlorine (U.S. Chemical Safety Board 2007).

Chlorine accidents, however, do not only happen because of a hose rupture at chemical plants. Chlorine-carrying railway tankers have encountered many collisions and overturns. On June 28, 2004 around 5 A.M. two trains collided in Macdona, Texas. One of the trains was carrying a 90-ton chlorine tanker. After three days of constant chlorine gas release, it was approximated that 60 tons of the chlorine was released into the air. First responders received calls about the incident from panicked residents; however, the knowledge of what had been released was unknown. First responders eventually discovered the train engineer and sent him to the fire department for decontamination, but the train conductor died of chlorine inhalation before being found. First responders reported feeling disoriented due to chlorine gas inhalation. Residents were informed to stay indoors and to protect themselves; however, information on how to do this was not given in detail. When residents were eventually reached, two had died and twenty-three were sent to the hospital for medical treatment. The plume eventually reached San Antonio – ten miles (6.2 kilometers) away from the incident. The emergency response for this incident was criticized because of disorganization and unknown circumstances. This incident called for a better understanding of chlorine release accidents and for the education and protection of residents in the surrounding area of such an accident.

Robert L. Buckley et al. (2007) summarized and analyzed another train collision disaster involving chlorine. On January 6, 2005 in the early morning hours, a freight train holding a pressurized tanker carrying chlorine gas was involved in a collision in Graniteville, South Carolina. This collision released nearly 70 tons of chlorine gas into the surrounding area. Because of the time of day and the large amount released, there were nine fatalities, over 500

injuries, and over 5,000 evacuations. After this incident, pressure was placed on scientists to explain and predict the spread of chlorine gas. ALOHA was used to model the scenario as it was occurring; however, as was mentioned earlier, ALOHA over-predicted the plume concentration and speed. Because of its effectiveness, HPAC was also used afterward to simulate the chlorine gas plume at initial release when it was acting mainly as a dense gas cloud (Buckley et al. 2007).

c) Plume and Flow Rate Theory

There are multiple plume movement theories in the scientific community. Many have been edited in order to predict dense gas movement. Faisal I. Khan et al. (2000) researched possible Plume Path Theory (PPT) modifications in order to predict heavy gas dispersion. Previous modifications to PPT have been performed; however, each had its limitations. Khan et al. sought to eliminate as many assumptions and errors in PPT as possible for a more accurate, controllable result. Ooms et al. originally proposed PPT, and it was eventually expanded to incorporate calculations for heavy gases. However, Ooms's PPT was based on the assumptions that perpendicular mean flow velocity, molecular transport, and longitudinal turbulent transport were negligible. Although these assumptions made calculations easier, they did not produce realistic results, and weather parameters such as temperature could not be changed to obtain different plume path results. Khan began by creating an equation that could incorporate temperature as a function of plume dimensions and gas properties. Khan modified the existing equation to take into account momentum balance, temperature dependency, and energy balance. An experiment was conducted in Manali, India in which ammonia was released from a pressurized vessel. The experimental data was compared to the output of the modified PPT equation for the specific conditions in Manali on that particular day. The modified PPT was

within an acceptable 40-50% difference range of the experimental data collected. It was found that as a plume continues downwind, width and velocity of the plume increase, and the density, temperature, and gas concentration of the plume decrease. The PPT model was then used to observe the paths of natural gas, liquefied petroleum gas, and chlorine gas. In particular the chlorine gas was found to disperse much slower than the other two gases, and the plume velocity tended to be lower than the other two gaseous plumes. This research by Khan exhibited the danger of a chlorine gas plume if released into a heavily populated area. Because of its slow dispersion rate, a chlorine plume would easily accumulate and cause serious health problems. Altogether, the modified PPT was proven effective for heavy gas plume predictions (Khan 2000). PPT provided an effective way to analyze whether HPAC and ALOHA were outputting accurate, acceptable plume paths, widths, lengths, and concentrations.

Plume modeling software uses several plume transport theories. The two most common plume theories are Gaussian and Lagrangian. The Gaussian gas transport equation models dispersion – a wide-scaled, more uniform transport – while the Lagrangian theory focuses on diffusion – a smaller, almost atomistic gas transport. Typically, plume models based on the Gaussian theory can produce outputs very quickly, but Lagrangian-based models have much slower run-times (Glascoe 2012).

The Gaussian equation can pinpoint a certain point downwind of a gas release and define the concentration at that point. By inputting downwind distance, crosswind distance, height, release height, flow rate, gas properties, and various weather parameters, the Gaussian equation can output a concentration at any point of interest. The Gaussian model makes several assumptions: continuous emission, steady-state conditions, conservation of mass, and standard deviations (Hunjak 2010). Therefore, the Gaussian model simulates a release of a pollutant at a

continuous rate with no changing weather conditions and no mass loss due to chemical reactions occurring in the air. It also assumes that a plume profile will be a normalized "bell" function.

The Lagrangian equation requires the input of diffusivity values for a particular substance in another particular substance. These diffusivities are often based on temperature and various other factors, and they are not easily calculated (Glascoe 2012). HPAC and ALOHA both implement the Gaussian plume transport theory. Lagrangian plume theory presents more difficulties in dealing with very turbulent flow and slow diffusion in a larger-scaled eddy diffusion case (Pumir et al. 2000). This inconsistency could be due to the fact that Lagrangian models are mainly based on small scales, but large eddies – or plumes in this case – stretching several miles present a problem in the tedious calculations done by a Lagrangian solver. The Lagrangian approach, however, does have benefits because of its lack of dependency on a grid scale when modeling plumes. Gaussian standard deviations can be calculated and used in Lagrangian solvers. This allows the Gaussian and the Lagrangian models to work together for plume modeling. SCIPUFF – the solver used in HPAC – incorporates Gaussian dispersed plumes "transported as Lagrangian elements" (Sykes 2010).

Although plume movement theory was important to understand, another factor of concern for the research in this thesis was the calculation of mass flow rates of chlorine from a bullet puncture in a pressurized railcar. Factors such as temperature and pressure were very important because of their effects on release velocity. Fauske and Epstein (1988) defined equations for use in calculating flow rates in such an event. They defined different types of release scenarios; however, the scenario applicable to this research was that of saturated stagnant conditions. The liquid chlorine is typically stored in railway tankers under its own vapor pressure, causing the

system to be self-regulating; therefore, a saturated system seemed to agree best. Fauske and Epstein explained that flow rate could be expressed with the following equation:

$$G = \left[\frac{-1}{(dv/_{dP})}\right]^{\frac{1}{2}} \quad (1)$$

(Fauske and Epstein 1988)

In this particular equation, G is the flow rate, v is the two-phase specific volume, and P is pressure. The two-phase specific volume takes into account the difference in specific volume that occurs when changing from the liquid phase to the gas phase. Temperature was not included in this equation because pressure is temperature-reliant based on vapor pressure graphs (Fauske and Epstein 1988). By inputting changing pressures into this equation, realistic flow rates could be calculated.

d) Plume Dispersion Modeling and Experimenting

Many experiments and models have been performed to validate plume-modeling software. Joseph C. Chang et al. (2003) evaluated and compared HPAC to two other software packages – CALPUFF and VLSTRACK. All three are puff models that can measure plume dispersion of various gases through edited Gaussian dispersion equations. Chang et al. compared actual test data taken from two experimental sites – Department of Energy's Nevada Test Site and Dugway Proving Ground in Utah – to output data from HPAC, CALPUFF, and VLSTRACK in order to determine which software had more accurate results. Exact weather parameters such as temperature, wind speed, humidity, and stability from the actual experimental sites were inputted into HPAC, CALPUFF, and VLSTRACK, and terrain was inputted into each software's respective formula in order to ensure the best results. The first experiment observed was called

the Dipole Pride 26 (DP26) experiment which was conducted by Biltoft and Watson et al., and it was performed in Nevada at the Nevada Test Site (1998) (Chang et al. 2003). The second experiment observed was called the Overland Along-wind Dispersion (OLAD) experiment, and it was conducted by Biltoft et al. (1999) and Watson et al. (2000) at the Dugway Proving Ground in Utah (Chang et al. 2003). Both experiments involved the release of sulfur hexafluoride (SF_6) into the environment during morning hours and evening hours. Chang et al. found that CALPUFF and HPAC produced more accurate results than VLSTRACK. HPAC typically had a 50-60% comparable result to the actual experimental data for the DP26 experiment. The OLAD experiment did not produce such effective results from HPAC, CALPUFF, or VLSTRACK for various possible reasons: the uncertainty of prediction for early morning and evening conditions and/or the mountainous surroundings affecting vertical dispersion. Altogether, this software verification by Chang et al. showed the effectiveness of HPAC in plume dispersion modeling, but it also showed the inconsistencies that can occur in HPAC when atmospheric conditions are very stable (Chang et al. 2003).

Modeling simulations in HPAC to predict hypothetical scenarios of chlorine gas release has also been conducted. Long, et al. (2005) used the computational fluid dynamics (CFD) model AcuSolve™ and HPAC to model a hypothetical release of chlorine gas on a college campus. Natatoriums are often present on college campus, and pressurized tanks of liquid chlorine are stored in these natatoriums. Long, et al. modeled a worst-case scenario of the release of 1,650 kilograms of chlorine into the atmosphere. The assumption was made that all of the chlorine was released within one hour and that the wind direction was constant and in the direction of a football stadium filled with people. This research was meant to compare a CFD model with HPAC for this exact worst-case scenario. It was observed that both AcuSolve™ and

HPAC output similar plumes and concentrations. This allowed Long, et al. to conclude that HPAC was a good software to use for quick response and the modeling of more scenarios. Long, et al.'s research proved useful for the research detailed in this thesis because of the validation of the ability of HPAC to model chlorine gas dispersions. However, Long, et al. had limitations in that they had shorter time periods and only modeled an absolute worst-case scenario. The simulations of railway tanker chlorine gas releases detailed in this thesis were for a number of different scenarios that vary with weather and terrain.

Pullen, et al. (2005) also analyzed and compared HPAC and a CFD model (FAST3D-CT); however, in this instance, the effects that buildings had on plume transport was observed through the models. Dense hazardous gas releases in Chicago and Washington, D.C. were modeled in both HPAC and FAST3D-CT. The hypothetical releases were simulated for different areas of each city and were observed at 15-minute time intervals. The results of concentrations from both software packages for Chicago did not agree very well most likely because of the varying building heights. Chicago has very tall skyscrapers that are located relatively close together, but Washington, D.C. has buildings that are more spread apart and are not nearly as tall as buildings in Chicago. Pullen, et al. concluded that the presence of buildings causes large discrepancies between different models. CFD models do not have systems that are very sophisticated in weather parameter modeling; therefore, HPAC would be a better choice for modeling dispersion based on weather parameters (Pullen et al. 2005). Altogether, the research conducted by Pullen, et al. proved that the presence of large buildings could in fact disrupt the dispersion and transport of dense gas plumes. This reinforced the importance of modeling as many weather scenarios as possible in order to observe which combinations of wind speed, wind

direction, UV radiation, cloud cover, humidity/precipitation, and temperature would increase or decrease the dispersion rate.

In order to incorporate building effects, HPAC uses an Urban Dispersion Model (UDM). Neuman, et al. (2006) analyzed the effectiveness of the UDM versus a CFD model for simulating the effects of an urban environment on dense gas plume movement. UDM has several puff-splitting options. Two of these options are open (less than 5 percent of area taken up by obstacles) and urban (more than 5 percent of area taken up by obstacles). UDM does not have the ability to simulate movement of plumes between buildings and tends to give an averaged depiction of such an event. This simpler terrain model can lead to inconsistencies when compared to CFD models. However, Neuman, et al. concluded that UDM was useful in pinpointing an area of a city or town that would be affected by a dense gas release event. Altogether, it was concluded that UDM does implement reasonable terrain considerations in order to produce generalized plume models and it also can be used as an extra aid in CFD modeling.

From researching HPAC tests by other researchers, it was concluded that it was effective for the modeling scope of this thesis. Its extensive weather incorporation and ability to model accurate plumes made it a reasonable choice for plume modeling. The only problem with HPAC was its lack of accuracy in very stable atmospheric conditions. This factor was kept in mind throughout the simulation process.

III. METHODOLOGY

a) Verification of Software with Experimental Data

Before actual simulations of chlorine plumes could be modeled, ALOHA and HPAC needed to be verified using existing experimental data. Data from the 1983 Desert Tortoise experiments conducted by the Lawrence Livermore National Laboratory (LLNL) at the Department of Energy's Nevada Test Site (NTS) was used as a baseline comparison for HPAC and ALOHA results. Desert Tortoise consisted of four different experiments focusing on the release of ammonia (NH_3) from pressurized tanks over a short period of time (a few minutes). The first experiment included one tanker, the second observed two tankers, and the third and fourth experiments focused on two full tankers but with releases done during the daytime and the nighttime, respectively. All weather parameters, release times, mass flow rates, and spill masses were recorded (Goldwire et al. 1985).

The initial conditions addressed above were essential in providing the software (especially HPAC) with the necessary data to simulate the actual experiments. The latitude and longitude of the NTS Frenchman Flat testing area and the specified times of day of the experiments were input into both HPAC and ALOHA. Weather parameters were specified in both ALOHA and HPAC with fixed wind speeds (as provided in the experimental data). ALOHA required the volume and dimensions of the tanks in order to calculate flow rates, which could be compared to the experimentally observed flow rates. However, HPAC allowed for direct input of the known flow rates, thereby making its experimental simulation setup less tedious.

Concentrations from the experimental data were taken 100 meters and 800 meters downwind of the release. Both downwind distances had three concentration receptors and recorders at varying crosswind distances. The concentrations output by the receptors were graphed and recorded by the experimenters (Goldwire et al. 1985). HPAC and ALOHA typically simulate the highest possible concentrations; therefore, after the software simulations were completed, the highest experimental concentrations at 100 meters and 800 meters downwind were compared to ALOHA and HPAC concentrations.

b) Verification of Software with Gaussian Dispersion Model Equation Comparison

The concentration at certain distances downwind and crosswind of the release are of great importance for disaster mitigation. Knowledge of these measurements would allow for first responders to pinpoint areas of higher threat level in different scenarios. ALOHA and HPAC concentration values were not only compared to experimental data but were also compared to concentration results from a Gaussian dispersion equation. Both of the models are based on Gaussian dispersion; therefore, a theoretical comparison was helpful for further software verification. The Gaussian dispersion theory is a normalized function that can predict the concentration at any three-dimensional point. The Gaussian equation of interest is displayed below:

$$C(x,y,z) = \frac{Q \cdot e^{\left(\frac{-y^2}{2\sigma_y^2}\right)} \cdot e^{\left(\frac{-z^2}{2\sigma_z^2}\right)}}{\pi \cdot \sigma_y \cdot \sigma_z \cdot U} \quad (2)$$

C is the concentration in kg/m^3 at a certain point downwind (x), at a point crosswind (y), and at a certain height (z) – all in meters – based on the origin of release. Q is the mass release rate in kg/s and U is the wind sped in m/s. The sigma values are standard deviations vertically

(σ_z) and horizontally (σ_y) in units of meters. The standard deviations are based on the downwind distance of interest; therefore, they are dependent upon the x-value. Figure III-1 and Figure III-2 are graphs of the sigma values versus downwind distances. In order to define the correct sigma value, the downwind distance is used along with the stability class (explained later in further detail).

The concentration at a point of interest was determined using the above equation (2) by defining distances, height, flow rate, and wind speed. Then the calculated concentration was compared to the concentration output at the same distances and height in ALOHA and HPAC. If the models were relatively similar to the Gaussian equation, then this provided greater verification that both of the models were performing accurately.

An initial hypothetical flow rate (3.5 kg/s) was implemented into ALOHA first. This flow rate was used to calculate concentrations at different points within the plume at two different temperatures – 35°C (95°F) and 1.7°C (35°F) – and with six different stability classes; therefore, there were twelve comparisons performed. When ALOHA was verified, it was possible to use ALOHA's flow rate calculation capability in order to input a more realistic flow rate based on temperature into HPAC. Like previously, twelve comparisons were conducted between HPAC and the Gaussian plume equation; however, the flow rates were changed with temperature, making data more realistic.

c) Bullet Location and Puncture Size Sensitivity Analysis

Another parameter of interest was the puncture diameter in a pressurized tank. ALOHA allowed for the simulation of a bullet hole in a pressurized vessel and the ability to vary the size of the puncture diameter. The ballistic round of main concern was the 0.50-caliber round with a

diameter of 1.3 centimeters (0.5 inches). Another factor resulting from bullet penetration was the location of the puncture with respect to the height. An understanding of the effect the location of the bullet puncture and the diameter of the puncture would have on flow rate of chlorine gas out of the bullet hole allowed for a worst-case scenario assumption. Because of time constraints, this section of research was a very small portion and was mainly done in order to continue realistic simulations. Therefore, results from this section were compiled in the Methodology section because of its importance in the continued methodology plan. The effect of bullet hole size and location, however, could be a topic of importance for future research and future plume simulations.

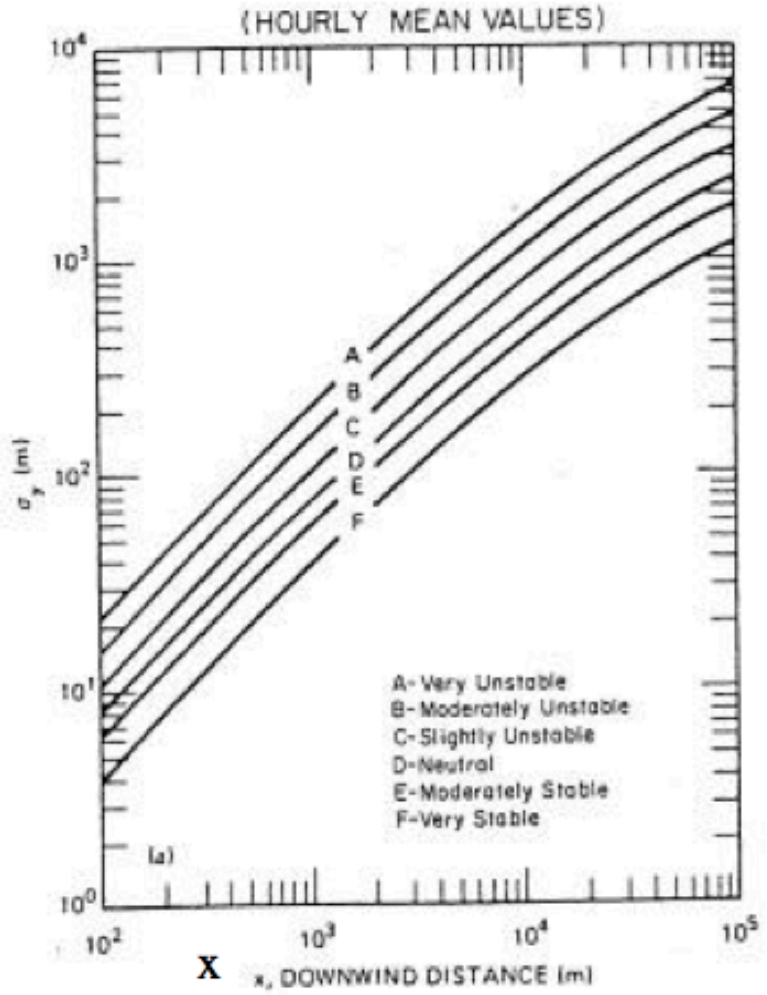

Figure III-1. Sigma-y vs. downwind distance (Turner 1970)

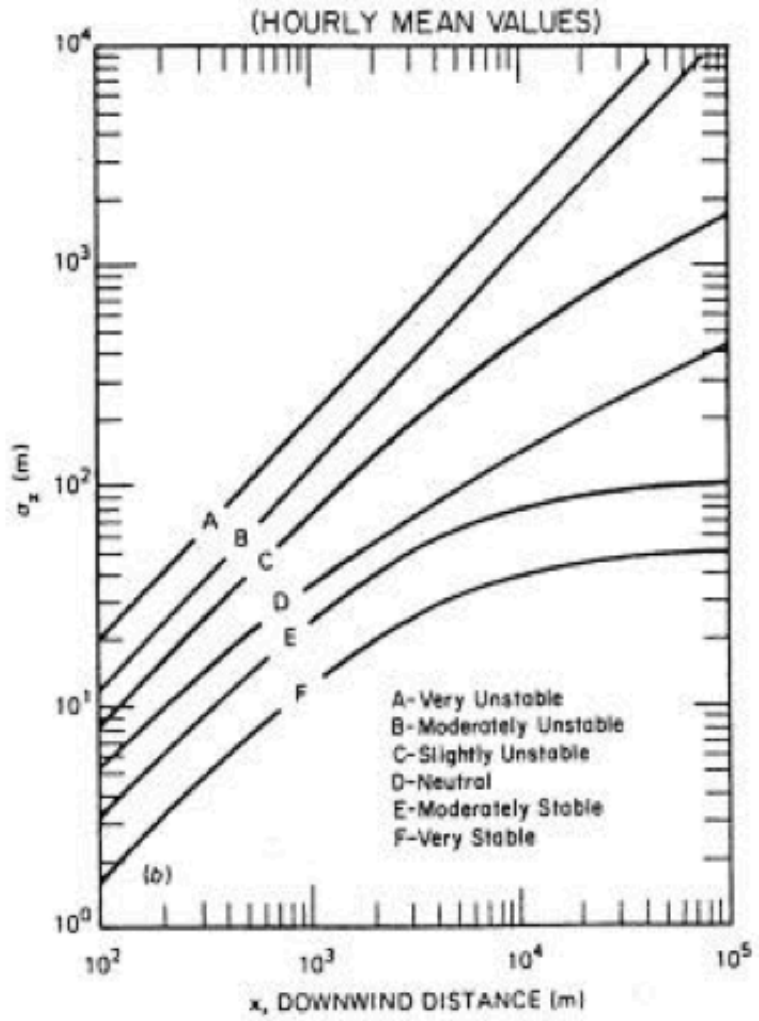

Figure III-2. Sigma-z vs. downwind distance (Turner 1970)

A sensitivity analysis was performed for observation of change in mass flow rate of chlorine gas with the variation of puncture diameter and ballistic penetration location. ALOHA was used in this analysis. The ambient temperature was kept constant for each simulation in order to effectively compare results without discrepancies. First, a puncture diameter of 1.3 centimeters (0.5 inches) –the diameter of the 0.50 caliber bullet – was assumed. Using ALOHA, the 0.5-inch hole was set at various percentages of the tank height: 15%, 25%, 30%, 45%, 50%, 60%, 75%, and 90%. Typically chlorine-carrying tanks are filled to around 85% of the available volume; therefore, one of the possible puncture locations (90%) was above the fill-line. ALOHA

produced the largest mass flow rate as 2.4 kg/s (312 lb/min) when the puncture occurred at 15% of the tanker height. The lowest mass flow rate was when the bullet penetrated at 90% of the tanker's height. If the tanker were penetrated at 90% of its height, it would take a while for the tank to empty– possibly allowing for remediation. Altogether, it was observed that the mass flow rate of the chlorine gas increased as the percentage of tanker height penetration decreased. Figure III-3 graphically illustrates the total amount of release time vs. the location of the puncture, and Figure III-4 illustrates the total amount of release time vs. the location of the puncture at the point below the fill line.

Next, the worst-case scenario of 15% of tanker height bullet penetration location was used to observe the difference in mass flow rate as the puncture diameter varied. Puncture diameters ranged from 0.64 centimeters (0.25 inches) to 2.54 centimeters (1 inch) and increased incrementally by 0.3 centimeters (0.10 inches). At 15% of the tanker height, it was found that a 1-inch puncture diameter caused the greatest mass flow rate. This type of occurrence would be nearly impossible to remediate and would make evacuation of surrounding areas much more rushed. The smallest diameter of 0.64 centimeters (0.25 inches) at 15% of the tank height would take much longer to empty the entire tank. Figure III-5 graphically illustrates the total amount of release time vs. puncture diameter at 15% of the tanker height, and Figure III-6 represents the total amount of release time vs. puncture diameter at 15% of the tanker when the bullet fully penetrates (diameter of puncture is greater than or equal to 1.27 centimeters or 0.5 inches). The setup for this analysis was purely hypothetical and was not the same input and setup for the continued research. This input was strictly for generalized observation of flow rate increases and decreases with puncture size and location.

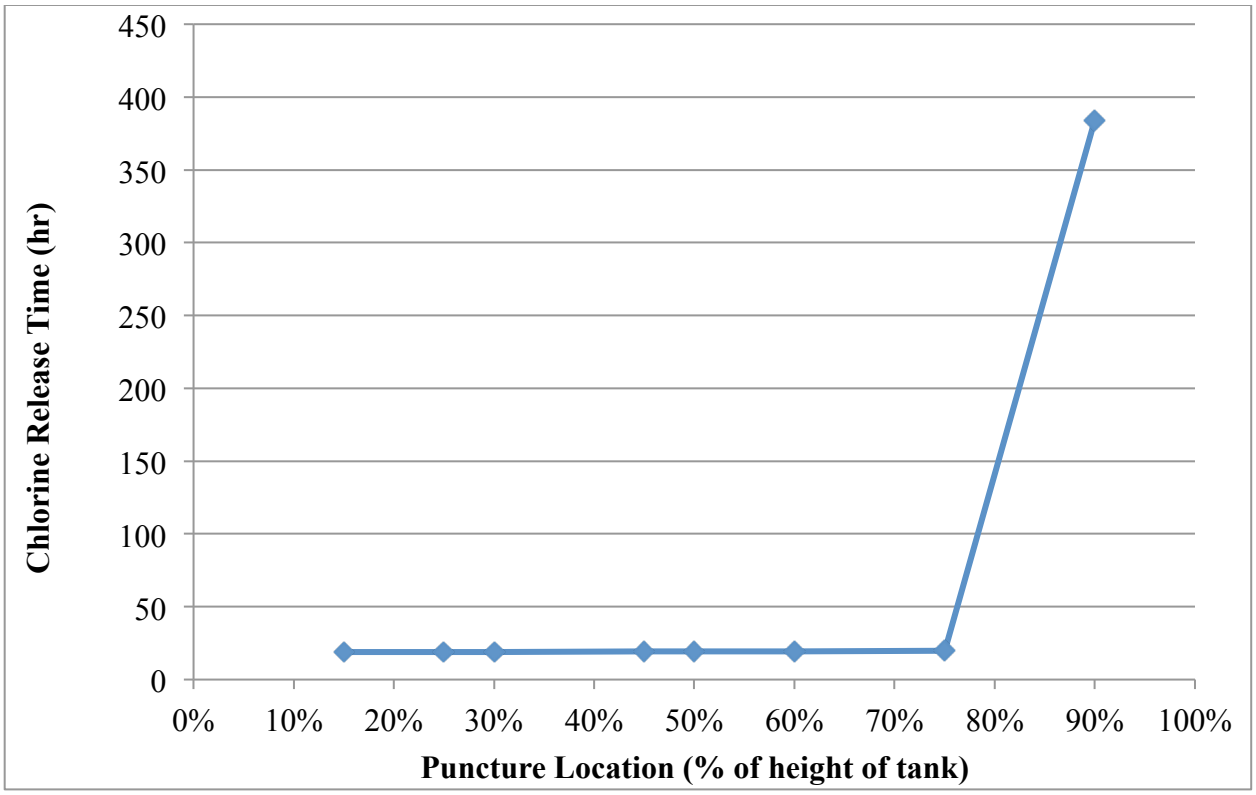

Figure III-3. Chlorine release time vs. puncture location

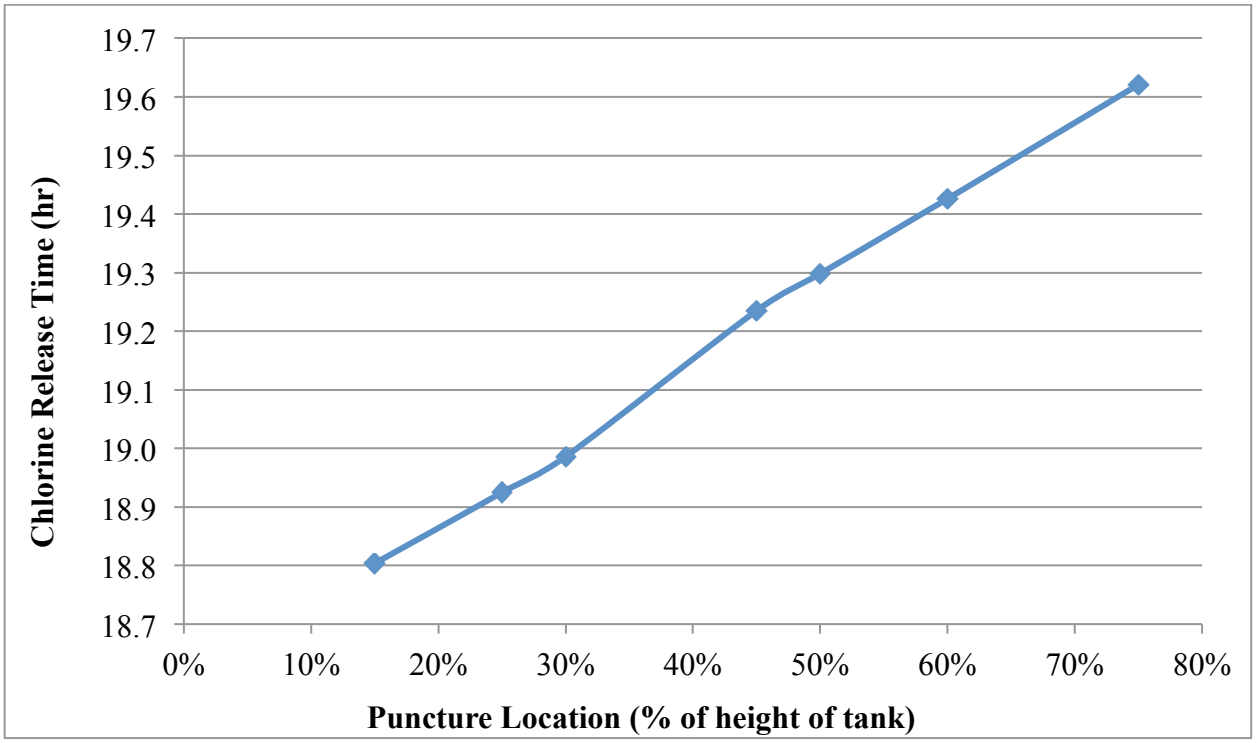

Figure III-4. Chlorine release time vs. puncture location at points below fill-line of 85%

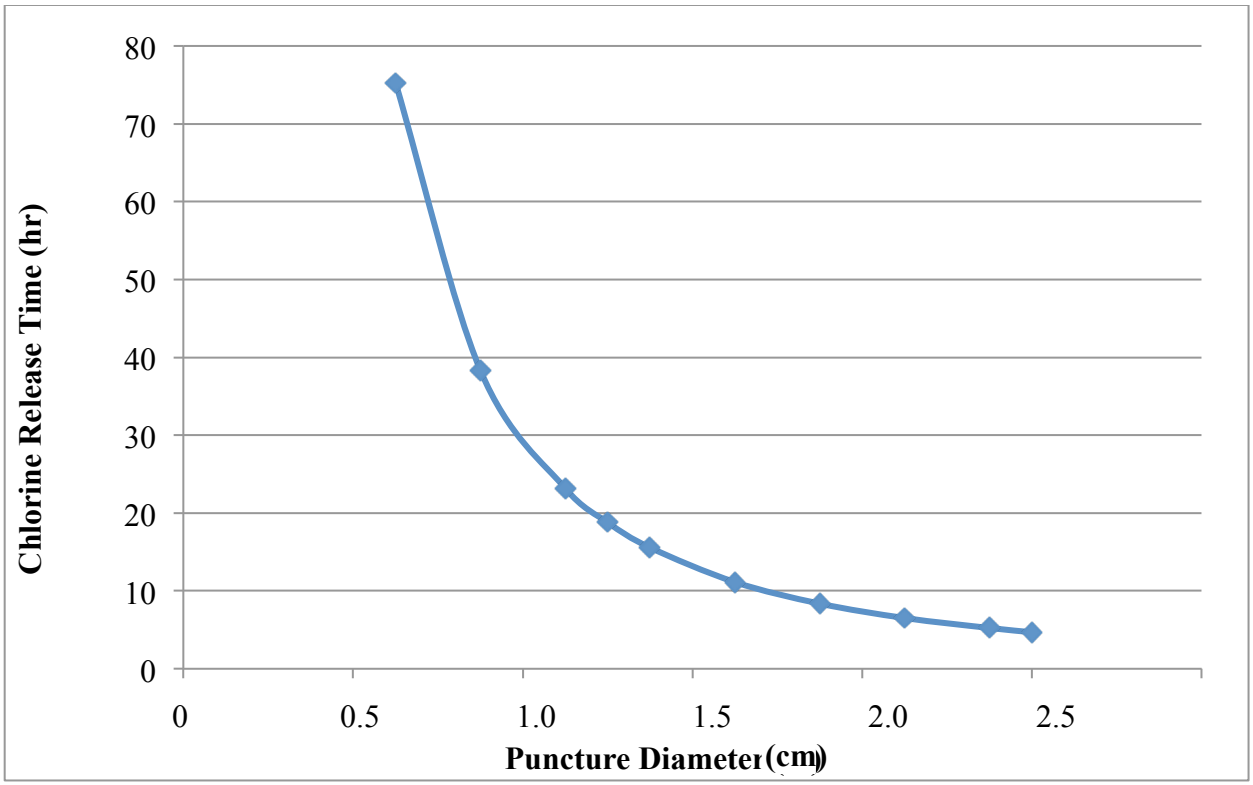

Figure III-5. Chlorine release time vs. diameter of puncture at 15% of tanker height

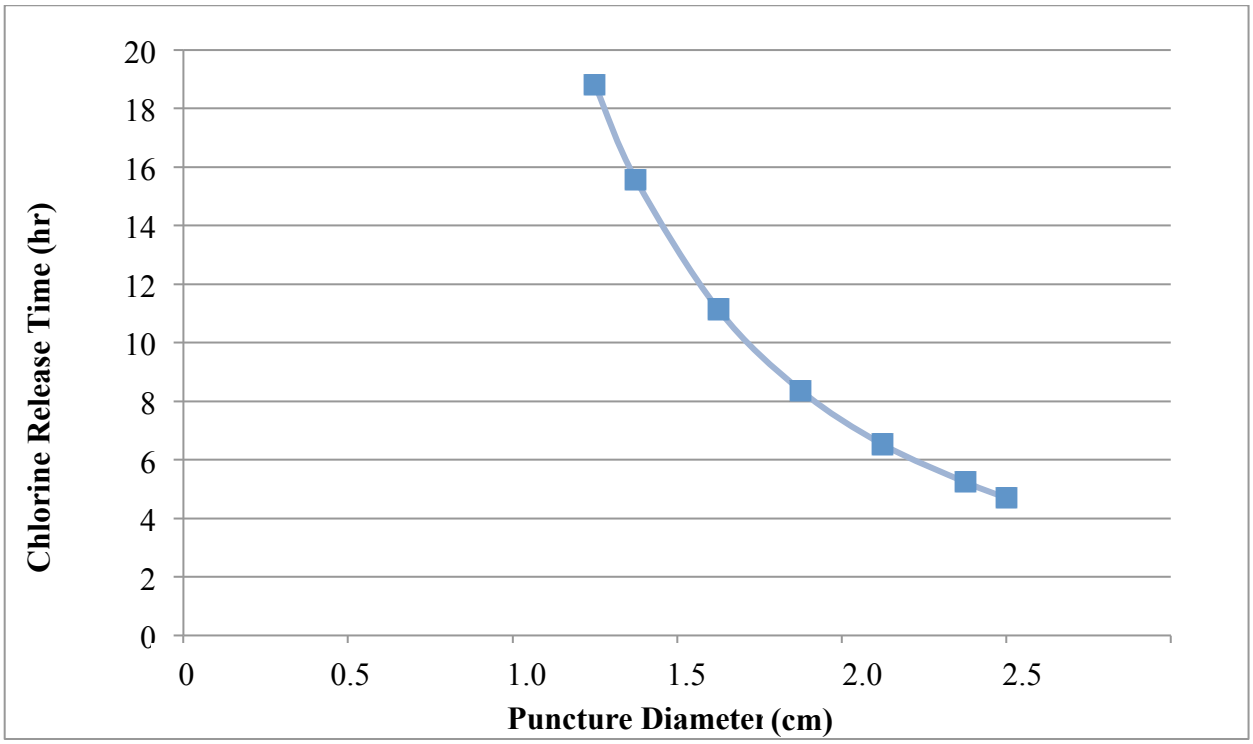

Figure III-6. Chlorine release time vs. diameter of puncture at 15% of tanker height (assuming full bullet penetration)

From the previous graphs, it was observed that the time it takes for the tanker to completely empty was linearly related to the location of the ballistic impact and was related through an exponential decay function to the diameter of the bullet puncture. The 15% location flow rate and the 50% location flow rate varied by 3.6 kg/min (8.0 lb/min). Figure III-7 displays total chlorine release time vs. diameter of puncture for 15% of the tanker height and 50% of the tanker height – for the sake of comparison.

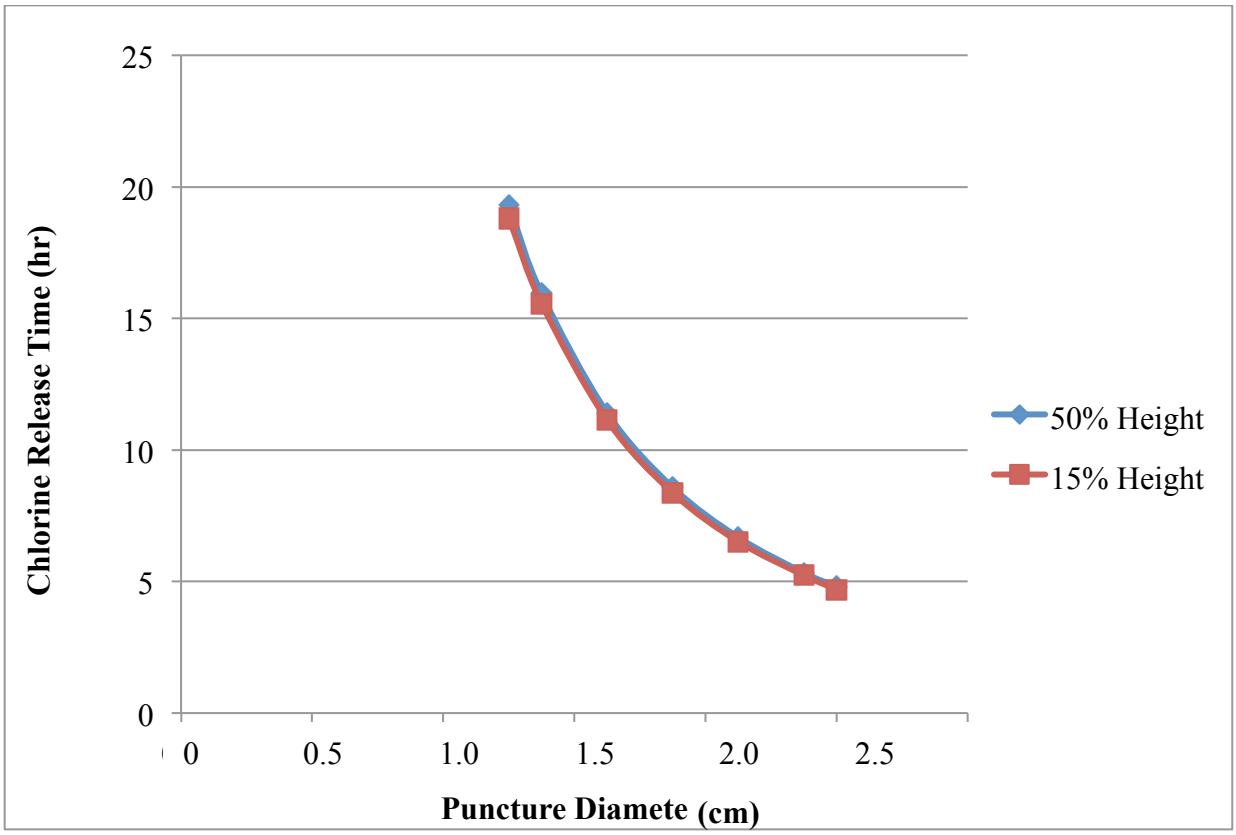

Figure III-7. Chlorine Release Time vs. Puncture Diameter (with full penetration at 15% and 50% of tanker height)

The puncture location and size data was not varied throughout the research because of time constraints and because of the very large number of runs necessary. Therefore, the main purpose of observing bullet size and location effects was to determine the exact scenario to use throughout the modeling process. The worst-case scenario for this hypothetical situation

occurred when the bullet hole was located at 15% of the tanker height; therefore, 15% of the tanker height was chosen for the bullet location. This would mean that the bullet hole would be located around 1.5 to 1.8 meters (5 to 6 feet) from the ground –a probable gunshot height. It was assumed that the puncture diameter would be 1.3 centimeters (0.5 inches) – the diameter of a 0.50-caliber round. Although the worst cases occurred with a larger puncture diameter, this research assumed that the reinforcement of railway tankers with the polymers (Al-Ostaz) briefly referenced in the Introduction worked to seal punctures to at least 1.3 centimeters (0.5 inches). Therefore, the worst case when the tanker was reinforced was assumed to be the diameter of the original 0.50-caliber bullet.

d) Focus Areas and Parameters

Two locations were of interest for this research: a heavily populated area and a moderately populated area. Chicago, Illinois was chosen as the city for the heavily populated analysis because of the presence of a freight railway going through a densely populated area of downtown. Jackson, Mississippi was selected for a moderately populated area. The two cities were also chosen because of their different terrains. Chicago has a relatively high elevation with an urban layout and many skyscrapers. Jackson has a relatively low elevation, numerous buildings consisting of two or more floors, and wooded surrounding areas. Because of the historical terrain data programmed into HPAC 5.0, the different terrains could effectively and easily be modeled; however, some assumptions about roughness coefficients had to be defined in ALOHA in order to obtain reasonable results that could be consistent with HPAC results. It was important to observe whether the presence of tall skyscrapers or wooded areas would aid in chlorine gas transport and dispersion or would cause a larger catastrophe. The terrains were

compared mainly to add another element to a worst-case scenario – the city or town that would be in the most danger in the event of such a terrorist attack.

The movement of chlorine plumes is not only affected by terrain but also by weather parameters. The weather parameters in question were temperature, humidity/precipitation, wind direction, and atmospheric stability. Humidity and precipitation were considered to be one category because of the inconsistencies between ALOHA and HPAC. ALOHA is able to incorporate humidity variations; however, HPAC incorporates precipitation variations. Therefore, it was assumed that 100% humidity was equivalent to heavy rain, 75% humidity was equivalent to moderate rain, 50% humidity was equivalent to light rain, and 5% humidity was equivalent to no rain. Atmospheric stability – also called stability class (Table III-1) – was thought to affect plume dispersion and travel. Atmospheric stability is reliant on both wind speed and solar radiation or cloud cover (Table III-2). Stability class A is the most unstable class while stability class F is the most stable class. Therefore, the atmosphere is most unstable when solar radiation is high and wind speed is low. Stability classes E and F only occur at nighttime and are classified by cloud cover and wind speed rather than solar radiation.

Table III-1. Pasquill atmospheric stability classes (National Oceanographic and Atmospheric Administration 2008)

Definition	Stability Class
Extremely unstable	A
Unstable	B
Slightly unstable	C
Neutral	D
Slightly Stable	E
Stable	F

Table III-2. Conditions affecting atmospheric stability class (National Oceanographic and Atmospheric Administration 2008)

Surface Wind Speed	Daytime Solar Radiation			Night-time Cloud Cover	
(mph)	Strong	Moderate	Slight	> 50%	< 50%
< 5	A	A-B	B	E	F
5-7	A-B	B	C	E	F
7-11	B	B-C	C	D	E
11-13	C	C-D	D	D	D
>13	C	D	D	D	D

e) Weather Sensitivity Analysis

A necessary sensitivity analysis was performed using both HPAC and ALOHA. The sensitivity analysis involved varying one weather parameter at a time in order to observe the worst-case scenario transport and later varying several weather parameters individually in order to observe many different, yet probable scenarios. Weather parameters of concern were temperature, atmospheric stability, wind direction, and humidity/precipitation. It should be noted that wind speed and cloud cover were not included in the above factors because atmospheric stability incorporated both wind speed and cloud cover. The addition of wind speed and cloud cover would cause redundancy and would create an excessive amount of model runs.

i. Worst-case scenario modeling

Figure III-8 shows the schematic of the most basic sensitivity analysis performed using both ALOHA and HPAC. The sensitivity analysis began with hypothesizing a worst-case scenario. The worst cases for each parameter built onto the following parameters. It was initially hypothesized that higher temperatures would create a more catastrophic event because of the tank's tendency to increase pressure with temperature. Higher temperatures would mean faster release; however, it was not known whether higher temperatures would aid

in dispersion or not. It was also hypothesized that as wind speeds increased, the length of the plume would increase but the plume would disperse much faster. The effects of humidity and precipitation were not easily concluded; however, it was hypothesized that the presence of rain may aid in dispersion. Atmospheric stability is defined by wind speed and UV radiation; therefore, stability class A was hypothesized to be a worst-case scenario atmospheric stability because of very low wind speeds that would allow plume accumulation. Although hypotheses were concluded before simulations were completed, the compilation of a worst-case scenario was done based on the data output from HPAC and ALOHA rather than from speculation.

It is important to note that worst-case scenarios vary with location. A terrain parameter was not specified in Figure III-8 because it was assumed that the observation of plumes at different cities and towns in the United States would provide terrain data because the areas of interest vary largely based on terrain. It could possibly be worse for a plume to be small, highly concentrated, and relatively slow moving in Chicago rather than in Jackson, Mississippi because of the different populations between both areas and the presence of buildings that could trap the hazardous gas.

Atmospheric stability levels were varied between classes A to F and the class which caused the most concentrated plume to encompass the largest population was then used for the next evaluation of temperature effects. Next, temperatures were varied from 1.7 degrees Celsius to 35 degrees Celsius (35 degrees Fahrenheit to 95 degrees Fahrenheit). The temperature that caused the

most concentrated area of the plume to encompass the largest population was used for the next evaluation of humidity/precipitation variations. This process continued in the same manner as before by varying humidity/precipitation between heavy rain (75-100%) to no rain (0-25%) and then by varying wind direction. The compilation of the worst cases upon each following parameter allowed for a hypothetical worst-case weather scenario evaluation. The weather scenarios were compiled, and the release duration at which the AEGL-3 reached the most people was concluded and used as a worst-case scenario parameter. The worst-case scenarios for each city were then measured vertically in order to display how high a chlorine plume could reach in each location.

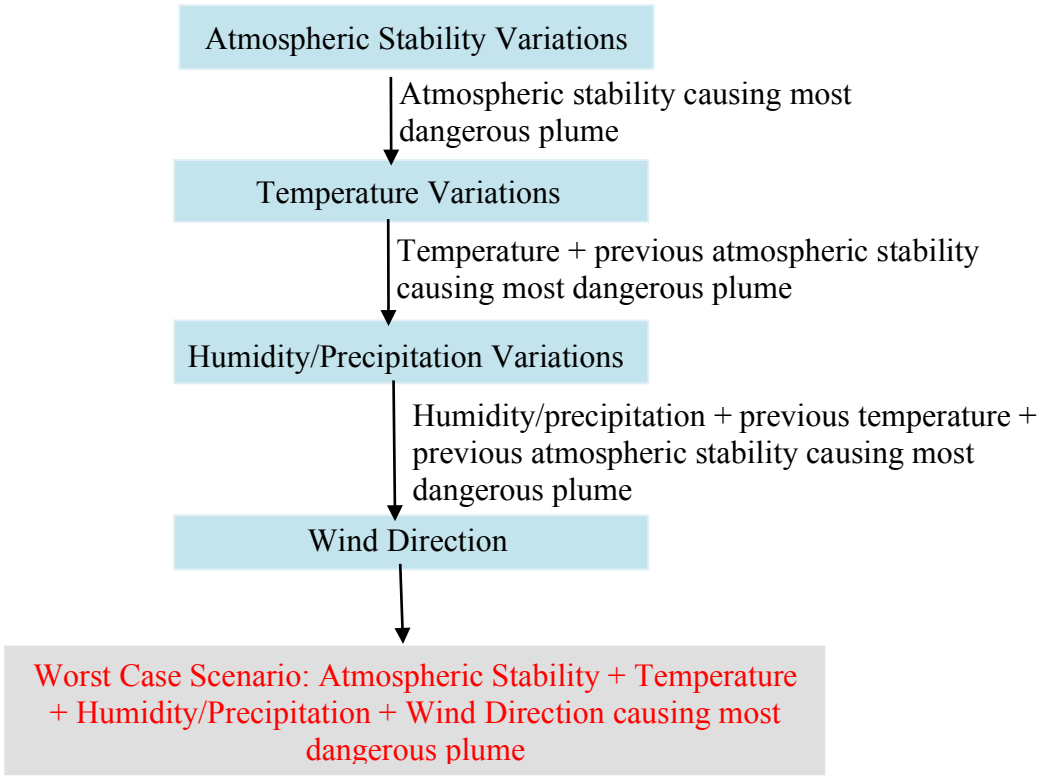

Figure III-8. Schematic of basic sensitivity analysis for worst-case scenario

ii. Additional scenario modeling

Although a worst-case scenario was necessary to understand, it was not the only possible scenario. This thesis differs from other research because of the many parameters and situations modeled and explained for a particular ballistic attack on a large, 90-ton tanker. It was necessary to model as many scenarios as possible for all the areas of interest for realistic mitigation to occur quickly. This modeling required the changing of several weather parameters and the combination of the changes.

To determine the number of runs necessary for each city and town, a full factorial design was needed. Full factorial designs take into account the number of factors and levels in order to determine the amount of experimental runs necessary for all scenarios to be modeled. Factors are the parameters that can be altered to produce different results and levels are the different values each factor holds. In this case, there were five factors: atmospheric stability, temperature, humidity/precipitation, duration, and wind direction. Atmospheric stability had six different levels based on the Pasquill stability classes. Temperature had four different levels – 1.7°C (35°F), 12.8°C (55°F), 23.9°C (75°F), and 35.0°C (95°F)– and humidity/precipitation also had four different levels – 0-25% or no rain, 25-50% or light rain, 50-75% or moderate rain, 75-100% or heavy rain. Release duration was defined as the amount of time from the beginning of the chlorine release. Release duration had four different levels based on AEGL definitions: 30 minutes, 1 hour, 2 hours, and 4 hours. Each plume was modeled at these different durations, and it was observed at which period of time after the release the most

toxic plumes occurred. It should be noted that the first four hours were observed because of existing AEGL data and because of the assumption that four hours into the release would be the most critical reaction time period for first responders. Lastly, wind direction contained eight levels – north, northeast, east, southeast, south, southwest, west, and northwest. The number of runs required was calculated by taking the number of levels and raising that number to the power of the number of factors which have that many levels. The values were then all multiplied together to get the number of runs necessary. Figure III-9 displays the full factorial design calculation:

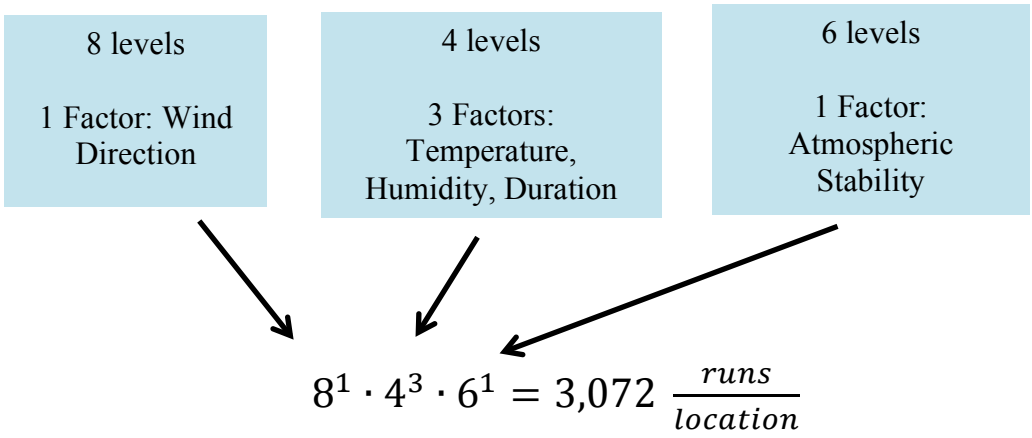

Figure III-9. Schematic of full factorial design runs per location calculation

As shown above, it was calculated that 3,072 runs were necessary for each location. However, from previous models in HPAC and in ALOHA, it was determined that humidity and its counterpart, precipitation, had little to no effect on plume movement. The number of runs per location was reduced from 3,072 to 768. While this number of runs was still very large, due to the quickness of HPAC, it was still feasible.

Six spreadsheets per city were compiled in order to organize data in a meaningful fashion and to ensure that all weather combinations were represented (Appendix A and Appendix B). Each spreadsheet represented a specific stability class; therefore, each spreadsheet was associated with a constant wind speed and cloud cover/UV radiation. Within the spreadsheet there were four temperatures represented as sub-headings. Within each temperature there were eight wind directions represented as sub-headings, and there were four durations per wind direction. Each spreadsheet contained downwind plume distances, upwind plume distances, crosswind plume distances, population affected, and area affected.

Although tedious, modeling wind directions was very important to the research. This particular research focused on incorporating terrain data rather than assuming a uniform Gaussian plume. The different wind directions would push the plume towards different terrains, thereby changing the shape of the plume. The different wind directions also would push the plume to varying populated areas. It was necessary to determine which direction had the largest population affected, and in which direction the plumes covered the most area. The origins of the winds (N, NE, E, SE, S, SW, W, or NW) rather than the wind directions were recorded in the spreadsheets; therefore, a wind from the North would actually blow the plume directly south of the chlorine release.

Because stability classes are defined by their wind speed and cloud cover/UV radiation, consistent wind speed and cloud cover/UV radiation data was inputted into HPAC to model these stability classes. The main effect that temperature had on the modeling was on the flow rate from the tank. As

previously mentioned, when temperature increases, the pressure inside the chlorine tanker increases. Therefore, a puncture in a tanker at higher temperatures would create a large flow rate release due to higher pressures. The tank dimensions, weather conditions, and four internal temperatures – assumed to be at least 0.5°C (5°F) cooler than ambient temperatures – were inputted into ALOHA, and ALOHA output flow rates for each temperature. These flow rates were necessary in order to input information into HPAC. The flow rates in kg/s were 3.767, 3.250, 2.733, and 2.233 for 35°C (95°F), 23.9°C (75°F), 12.8°C (55°F), and 1.7°C (35°F) respectively. HPAC also required that the total duration of release be defined. This total duration varied from the previously defined duration factors because it was defined as the total amount of time required for the tank to completely empty. It was assumed that the flow rates for each temperature remained constant and that the tank completely emptied. The total durations of release in hours were 6.0, 7.0, 8.3, and 10.1 for 35°C (95°F), 23.9°C (75°F), 12.8°C (55°F), and 1.7°C (35°F) respectively.

It was determined that modeling AEGLs was much more beneficial to first responders because of the ease of data interpretation and the availability of AEGL information to first responders. The AEGLs of chlorine, shown in the Introduction, were already programmed into HPAC and could easily be modeled. Distances downwind, upwind, and crosswind of the plumes were obtained by manual measurements with the HPAC measuring tool. Population affected was already programmed into HPAC from LandScan™ data. LandScan™ data utilizes geographic imaging over 24 hours in order to determine populations per

area (Oak Ridge National Laboratory). This allowed for more accurate population measurements rather than mean population calculations. The area affected could also be automatically output in HPAC. Distance, populations, and areas were recorded for each AEGL, at each duration, in each wind direction, at each temperature, and for each stability class.

IV. RESULTS AND DISCUSSION

a) Verification of Software with Experimental Data

The four experiments from Desert Tortoise were modeled in HPAC and ALOHA with their specific weather, time, terrain, and flow rate conditions. The previously published experimental summary of the Desert Tortoise series included graphs of volume percent concentrations for ammonia over a period of time for the release (Goldwire 1985). Although the ultimate goal of this project was to observe the dense gas transport behavior of chlorine, verifying HPAC and ALOHA with experimental data for ammonia would prove that both HPAC and ALOHA were capable of realistic dense gas modeling and that the project's proposed modeling procedure for dense gases was valid. The goal was to obtain similar concentrations from HPAC and ALOHA at specific times. In order to be compared effectively, concentrations in volume percent were converted to ppm by multiplying by 104. Because of time interval specifications and modeling variations, HPAC output concentrations at different times for each of the tests. However, because the Desert Tortoise experiments were graphed as a function of time, the concentrations from the model (particularly HPAC) and the experiments could still be compared (Figure IV-1).

ALOHA output similar data to the Desert Tortoise experimental data, and HPAC occasionally had similar output as well. Comparisons of ALOHA and HPAC with the experimental data is shown in Table IV-1. The four tests were denoted as DT1, DT2, DT3, and DT4. Concentration values were taken at specific, random times. From the data shown, ALOHA tended to be more accurate than HPAC. HPAC occasionally had similar concentration

output (Figure IV-1) but often overestimated; however, ALOHA sometimes underestimated. These inconsistencies were believed to be due to the fact that HPAC specializes in long-term and long-range plume modeling and that ALOHA is limited to one hour. The discrepancies between data could also be due to the fact that ALOHA concentrations and experimental concentrations were observed through the use of graphs; therefore, concentrations were estimated. Altogether, the comparisons of the Desert Tortoise experiments helped to verify ALOHA more than HPAC.

Plume models tend to portray ideal situations. Experimental data incorporates weather changes, wind changes, and very accurate terrain changes. Experimental data, however, portrays only a certain scenario from one specific day rather than averaging all possible scenarios as plume models do. Although model data is validated when it is within 50-60% percent difference, it became clear that more verification was necessary for both software packages, but mostly for HPAC. Because the software was based on theory and equations, verification through plume equations seemed to be a more accurate way to validate that the software would perform the necessary tasks for this research.

Table IV-1. Ammonia concentrations 100 meters downwind at various times

		Ammonia Concentration 100 m downwind (ppm)		
Test	Time (sec)	ALOHA	HPAC	Experimental
DT1	267	36,000	35,000	32,000
DT2	375	< 30,000	35,000	20,000
DT3	286	< 30,000	36,000	35,000
DT4	441	< 30,000	35,000	20,000

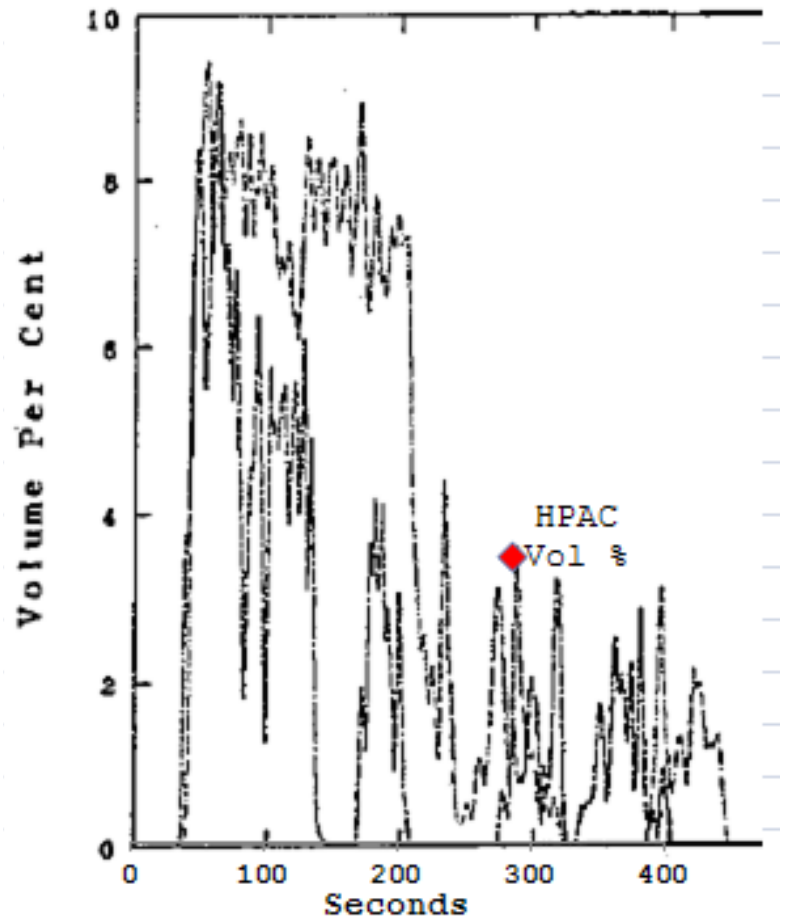

Figure IV-1. Desert Tortoise experiment 3 (DT3) graphical data (Goldwire et al. 1985) with HPAC concentration (red diamond) output at 286 seconds

b) Verification of Software with Gaussian Dispersion Model Equation Comparison

i. ALOHA vs. Gaussian Dispersion Model Equation

Table IV-2 through Table IV-13 compare the concentrations at certain points in ALOHA to the concentrations calculated using the Gaussian dispersion model. The mass flow rate was defined as 3.5 kg/s, and the wind speeds changed based on the defined stability class. There are twelve tables because all six stability classes were implemented in ALOHA and the Gaussian model at a very high temperature (35°C (95°F)) and a relatively low temperature (1.7°C (35°F)). The same coordinates were chosen for each case in order to determine if weather

conditions such as stability class and temperature affected the comparison of ALOHA with the Gaussian model. This allowed for observation of weaknesses in the ALOHA software.

It should be noted that the coordinates are in different units for the ease of software use. The downwind distance (x) and the crosswind distance (y) were in kilometers and the height of the plume (z) was in meters. Because of ALOHA's inability to measure concentrations lower than a height of 2 meters; the only height used was 2.1 meters. The main focus was to observe the concentration at the lowest point possible. Figure IV-2 is an example of the output from ALOHA of concentration levels over time for a certain point downwind, crosswind, and above a release.

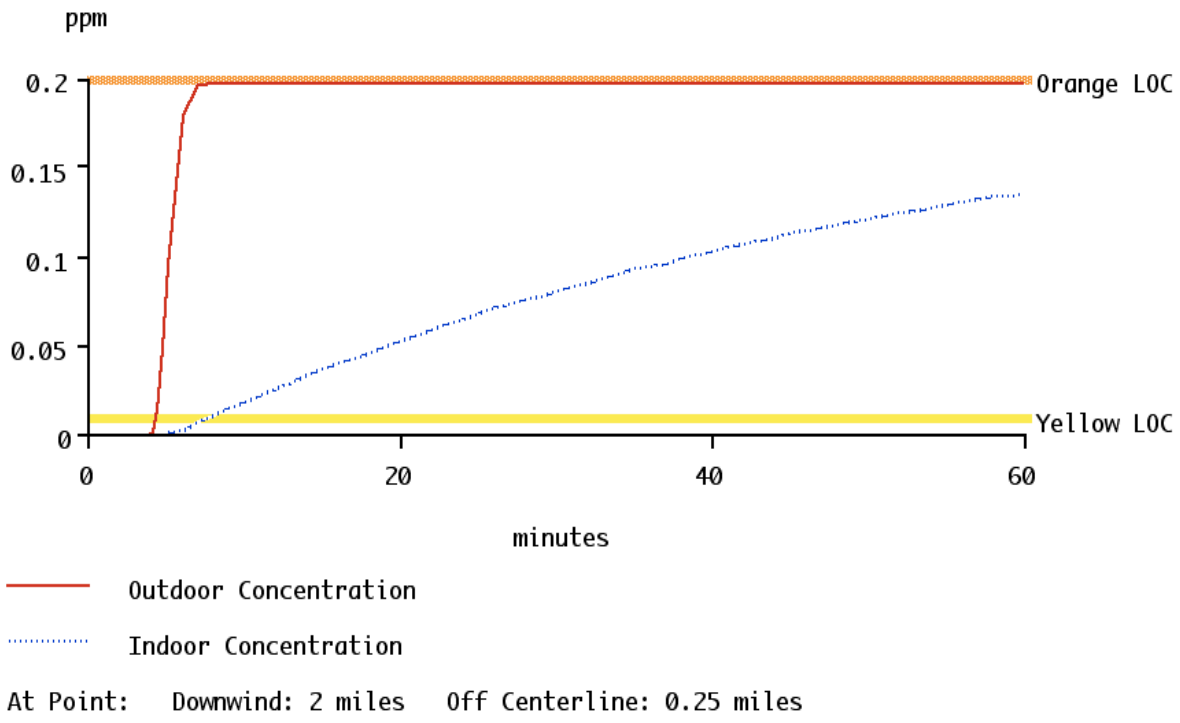

Figure IV-2. ALOHA display of concentrations at 1.2 km (2 miles) downwind, 0.16 km (0.25 miles) crosswind, and 2.1 m (7 foot) height over an hour period for stability class D and temperature of 1.7°C (35°F) (yellow line equals 0.01 ppm and orange line equal 0.2 ppm)

As shown in Figure IV-2, the concentration at that particular point does not reach its maximum until around eight minutes. Based on the Gaussian dispersion model results, however, the specified concentration was 0.09 ppm for the particular case in Figure IV-2. Therefore, the point in time at which the concentration nearly equaled 0.09 ppm was determined to be around five minutes. The duration at which the Gaussian dispersion model concentration and the ALOHA concentration model were nearly equal was recorded, and the duration at which the maximum concentration occurred was also recorded. Therefore, duration columns in each table contain two different times: the time at which the ALOHA values nearly equaled the Gaussian model concentration and the durations at which the maximum value for each scenario (in parentheses) plateaued and remained constant. Because ALOHA models plumes for a 1-hour period, the concentrations are time-dependent. The Gaussian dispersion equation does not directly incorporate duration, but it makes assumptions about a time range during which concentrations are taken. Based on the durations recorded at which concentrations were nearly equal, it was assumed that the Gaussian equation uses release durations of five minutes to thirty minutes.

Table IV-2. Concentration comparisons of ALOHA and Gaussian model with stability class A and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	0.5 (9 max)	0.5	13 (>23)
[3.2, 0.4, 2.1]	0.2 (4.5 max)	0.2	25 (>40)
[3.2, 1.6, 2.1]	0.01 (0.04 max)	0.01	25 (>40)

Table IV-3. Concentration comparisons of ALOHA and Gaussian model with stability class B and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	0.3 (1.75 max)	0.4	5 (>10)
[3.2, 0.4, 2.1]	0.2 (2.2 max)	0.2	10 (>15)
[3.2, 1.6, 2.1]	No significant concentration	2×10^{-3}	n/a

Table IV-4. Concentration comparisons of ALOHA and Gaussian model with stability class C and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	0.1 (0.19 max)	0.1	5 (>7)
[3.2, 0.4, 2.1]	0.2 (1.25)	0.2	8 (>10)
[3.2, 1.6, 2.1]	No significant concentration	1×10^{-14}	n/a

Table IV-5. Concentration comparisons of ALOHA and Gaussian model with stability class D and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	No significant concentration	4×10^{-4}	n/a
[3.2, 0.4, 2.1]	0.1 (0.23)	0.1	5 (>8)
[3.2, 1.6, 2.1]	No significant concentration	4×10^{-25}	n/a

Table IV-6. Concentration comparisons of ALOHA and Gaussian model with stability class E and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	5×10^{-4} (0.002 max)	5×10^{-6}	10 (>12)
[3.2, 0.4, 2.1]	0.01 (0.2 max)	0.01	11 (> 20)
[3.2, 1.6, 2.1]	No significant concentration	2×10^{-55}	n/a

Table IV-7. Concentration comparisons of ALOHA and Gaussian model with stability class F and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	No significant concentration	1×10^{-20}	n/a
[3.2, 0.4, 2.1]	(0.0028 max)	10×10^{-5}	(>10)
[3.2, 1.6, 2.1]	No significant concentration	4×10^{-87}	n/a

Table IV-8. Concentration comparisons of ALOHA and Gaussian model with stability class A and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	0.5 (7.5 max)	0.4	15 (>20)
[3.2, 0.4, 2.1]	0.2 (4 max)	0.2	25 (>40)
[3.2, 1.6, 2.1]	0.02 (0.035)	0.02	30 (>40)

Table IV-9. Concentration comparisons of ALOHA and Gaussian model with stability class B and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	0.3 (1.6 max)	0.3	7 (>10)
[3.2, 0.4, 2.1]	0.2 (1.9 max)	0.2	10 (>15)
[3.2, 1.6, 2.1]	No significant concentration	0.002	n/a

Table IV-10. Concentration comparisons of ALOHA and Gaussian model with stability class C and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	0.1 (0.17 max)	0.1	5 (>8)
[3.2, 0.4, 2.1]	0.2 (1.1 max)	0.2	8 (>12)
[3.2, 1.6, 2.1]	No significant concentration	1×10^{-14}	n/a

Table IV-11. Concentration comparisons of ALOHA and Gaussian model with stability class D and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	No significant concentration	4×10^{-4}	n/a
[3.2, 0.4, 2.1]	0.1 (0.2 max)	0.1	5 (>9)
[3.2, 1.6, 2.1]	No significant concentration	3×10^{-25}	n/a

Table IV-12. Concentration comparisons of ALOHA and Gaussian model with stability class E and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	5×10^{-4} (0.00125 max)	5×10^{-6}	8 (>12)
[3.2, 0.4, 2.1]	0.01 (0.16 max)	0.01	12 (>20)
[3.2, 1.6, 2.1]	No significant concentration	2×10^{-55}	n/a

Table IV-13. Concentration comparisons of ALOHA and Gaussian model with stability class F and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	ALOHA Concentration (ppm)	Gaussian Model Concentration (ppm)	Duration (minutes)
[1.6, 0.4, 2.1]	No significant concentration	1×10^{-20}	n/a
[3.2, 0.4, 2.1]	5 x 10-4 (0.0015 max)	9×10^{-5}	9 (>10)
[3.2, 1.6, 2.1]	No significant concentration	4×10^{-87}	n/a

As seen in Table IV-2 through Table IV-13 there were incredibly low concentrations especially in the more stable atmospheric stability classes. These concentrations were significant because they describe the shape of the chlorine

plume produced. For example, when a concentration at 0.6 kilometers (1 mile) downwind, 0.16 kilometers (0.25 miles) crosswind, and 2.1 meters (7 feet) high is a smaller value than the concentration one more mile downwind, then it should be assumed the plume is not very wide but is far-reaching in the downwind direction.

ALOHA would not produce concentration values for concentrations less than a $1x10^{-4}$ value. The Gaussian dispersion model values meshed well with the ALOHA values. Because the Gaussian dispersion model time frame was not entirely known, the fact that the concentrations output from ALOHA were fairly close to the Gaussian dispersion model values was a positive validation of the software. In this case, ALOHA tended to over-predict rather than under-predict. This was beneficial for conservative concentration values; however, this also validated that first responders encounter over-prediction when using ALOHA rather than under-prediction.

ii. HPAC vs. Gaussian Dispersion Model Equation

From the previous ALOHA vs. Gaussian dispersion model data, it was determined that the effective release time period for comparison was around thirty minutes. This was important to determine before model comparisons in HPAC because HPAC has the capability of modeling plumes for days. AEGL plumes for chlorine were modeled in HPAC for thirty minutes and the distances each AEGL range reached was recorded. The distances were then input into the Gaussian dispersion model to determine if the Gaussian dispersion equation would produce nearly the same AEGL concentration values as expected by HPAC.

The flow rate inputted into the Gaussian Plume Equation during comparison to ALOHA was a realistic flow rate for the ballistic puncture scenario of concern. However, it was not necessarily temperature dependent. As stated previously, the increase in temperature caused an increase in pressure inside the tank. Therefore, variations in temperature caused different flow rates to occur. Because ALOHA was verified against experimental data and against the Gaussian dispersion equation, ALOHA was used to calculate a realistic mass flow rate for input into HPAC in order to compare realistic data from HPAC with realistic data from the Gaussian Plume Equation. Comparing realistic data was essential because HPAC was used as the main plume modeling software for data compilation. The calculation of flow rates in such a scenario is very detailed and mathematically difficult. However, ALOHA can calculate the flow rate based on input weather data, tank dimensions, and internal tank temperatures.

At a temperature of 35°C (95°F) a flow rate of 3.767 kg/s was calculated by ALOHA and at a temperature of 1.7°C (35°F) a flow rate of 2.233 kg/s was outputted by ALOHA. These flow rate values were inserted into the Gaussian dispersion equation. Stability classes were varied for HPAC as they were for ALOHA. This allowed for the ability to observe any inconsistencies in the software. The flow rate and wind speed scenarios were input into HPAC, and HPAC modeled plumes for a thirty-minute duration. The output plumes displayed concentrations based on AEGL data and the distances at which each AEGL began and ended. Because HPAC can display AEGLs at ground level – unlike ALOHA, the height used for calculations was equal to zero for all scenarios. It was assumed

that ground level would have the highest concentrations. The knowledge of these distances and concentrations allowed for the distances to be inserted into the Gaussian dispersion model equation.

AEGLs are the minimum values necessary for death to occur (AEGL-3), injury to occur (AEGL-2), or discomfort to occur (AEGL-1) over the specified exposure duration. Therefore, a larger output from the Gaussian model compared to the specified AEGL value from HPAC would actually verify HPAC output. A concentration greater than or equal to 28 ppm would validate the AEGL-3 location, a concentration between 28 ppm and 2.8 ppm would validate the AEGL-2 location, and a concentration between 2.8 ppm and 0.5 ppm would validate the AEGL-1 location. Table IV-14 through Table IV-25 shows the AEGL concentrations from HPAC compared to concentrations from the Gaussian plume model equation.

Table IV-14. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class A and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥28 (AEGL-3)	95
[1.0, 0, 2.1]	≥2.8 (AEGL-2)	3.6
[2.5, 0.5, 2.1]	≥0.5 (AEGL-1)	0.3

Table IV-15. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class B and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥28 (AEGL-3)	81
[2.0, 0, 2.1]	≥2.8 (AEGL-2)	1.2
[4.0, 0.5, 2.1]	≥0.5 (AEGL-1)	0.2

Table IV-16. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class C and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	95
[2.0, 0, 2.1]	≥2.8 (AEGL-2)	2.0
[5.0, 0.5, 2.1]	≥0.5 (AEGL-1)	0.2

Table IV-17. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class D and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	210
[2.0, 0, 2.1]	≥2.8 (AEGL-2)	5.3
[8, 0.5, 2.1]	≥0.5 (AEGL-1)	0.4

Table IV-18. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class E and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	1900
[0.8, 0.1, 2.1]	≥2.8 (AEGL-2)	17.1
[1.0, 0.2, 2.1]	≥0.5 (AEGL-1)	0.4

Table IV-19. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class F and temperature of 35°C (95°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	2100
[0.8, 0.1, 2.1]	≥2.8 (AEGL-2)	0.8
[1.0, 0.2, 2.1]	≥0.5 (AEGL-1)	0.0005

Table IV-20. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class A and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	61
[1.0, 0, 2.1]	≥2.8 (AEGL-2)	2.8
[2.0, 0.5, 2.1]	≥0.5 (AEGL-1)	0.3

Table IV-21. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class B and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	73
[1.0, 0, 2.1]	≥2.8 (AEGL-2)	3.0
[3.5, 0.5, 2.1]	≥0.5 (AEGL-1)	0.2

Table IV-22. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class C and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	120
[1.0, 0, 2.1]	≥2.8 (AEGL-2)	5.1
[4.5, 0.5, 2.1]	≥0.5 (AEGL-1)	0.2

Table IV-23. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class D and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	180
[2.0, 0, 2.1]	≥2.8 (AEGL-2)	3.0
[6.0, 0.5, 2.1]	≥0.5 (AEGL-1)	0.3

Table IV-24. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class E and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	1700
[0.5, 0.1, 2.1]	≥2.8 (AEGL-2)	1.2
[1.0, 0.2, 2.1]	≥0.5 (AEL-1)	0.3

Table IV-25. AEGL (30 minutes) Concentration Comparisons of HPAC and Gaussian model at specified coordinate: stability class F and temperature of 1.7°C (35°F)

Coordinates [x (km), y (km), z (m)]	HPAC AEGL Concentration (ppm)	Gaussian Model Concentration (ppm)
[0.2, 0, 2.1]	≥2.8 (AEGL-2) – no AEGL-3	2000
[0.5, 0.1, 2.1]	≥2.8 (AEGL-2)	0.001
[1.0, 0.2, 2.1]	≥0.5 (AEGL-1)	0.004

As shown in Table IV-14 to Table IV-25, there were some inconsistencies with HPAC and the Gaussian Plume Model Equation. Many of the scenarios had no AEGL-3 sections of the plume. Although the Gaussian Model concentration was greater than the AEGL-2 concentration (2.8 ppm), it was not less than the AEGL-3 concentration (28 ppm). This Gaussian model output suggested that there was, in fact, an AEGL-3 section of the output plume for many cases. Comparisons were very dissimilar at very stable conditions – as explained in the Background section of this thesis. This was to be expected because of previous research and the unpredictability of dense gases. Another reason for inconsistencies between HPAC and the Gaussian plume equation was the fact that HPAC automatically incorporated terrain conditions. The Gaussian plume equation does not include terrain considerations, and it is also not fully equipped

for dense gas considerations. Concentrations between HPAC and the Gaussian model varied slightly but were typically within a reasonable range for daytime conditions. The disparities could also be due to the fact that HPAC used SCIPUFF as its solver. SCIPUFF combined Gaussian and Lagrangian theories. Because of the similar daytime comparisons and previous work done by researchers, HPAC was determined to be valid for use in this research.

c) Weather Sensitivity Analysis Modeling in HPAC

As mentioned earlier, while beginning the 3,072 runs mentioned in the Methodology section for each location, it was observed that humidity/precipitation had little to no effect on the chlorine plume. Therefore, the number of runs was reduced from 3,072 runs to 768 runs. This was still a large number of runs, but due to the speed of HPAC modeling, it was possible.

i. Worst-Case Scenario Determination

After the total 1,536 runs were completed and all the data was compiled in spreadsheets, as mentioned in Methodology, the information was analyzed. An important thing to remember while analyzing the data was to understand that the term "worst-case scenario" was somewhat relative. A worst-case scenario could refer to the most people affected, the widest plume, or the longest plume. Therefore, a combination of all of these factors was taken into account. For the worst-case scenario situation, only the AEGL-3 distances, populations, and areas were of interest. AEGL-3 is defined as the most deadly concentration; therefore, the danger of a plume was based on the size and location of the AEGL-3 section of the plume. The worst-case scenario for Jackson, MS was determined to be a

chlorine release in very hot weather, 35°C (95°F), with Stability Class A conditions (3 mph wind and no cloud cover) after four hours of chlorine release (Table IV-26 and Figure IV-3). The largest population (1,712 people) affected by the AEGL-3 concentration under these conditions was towards the east of the release; therefore, winds coming from westward directions such as southwest, west, and northwest caused the chlorine plume to affect the largest number of people. Along with the largest population affected, the largest area was also affected (0.624 km^2) towards the east of the release. For all of stability class A, the furthest downwind that the AEGL-3 section of the plume went was 1.1 kilometers (0.7 miles) in four hours, and the widest that the plume got was 1.4 kilometers (0.9 miles) in four hours. These downwind and crosswind distances were not exactly the downwind and crosswind distances represented in Table IV-27, but were the largest values for all of the wind directions in stability class A. An attack on a chlorine tanker in these weather conditions would create catastrophic problems for Jackson, MS.

Table IV-26. Worst-case scenario for Jackson, MS: stability class A, 35°C (95°F), 4-hour duration, wind from the West

35°C (95°F) 4 hours wind from the West	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	1.0	0.3	0.6	0.7	1,712	0.624
AEGL-2	5.0	2.9	3.2	3.6	62,343	46.727
AEGL-1	19.3	4.4	7.1	7.8	174,005	307.042

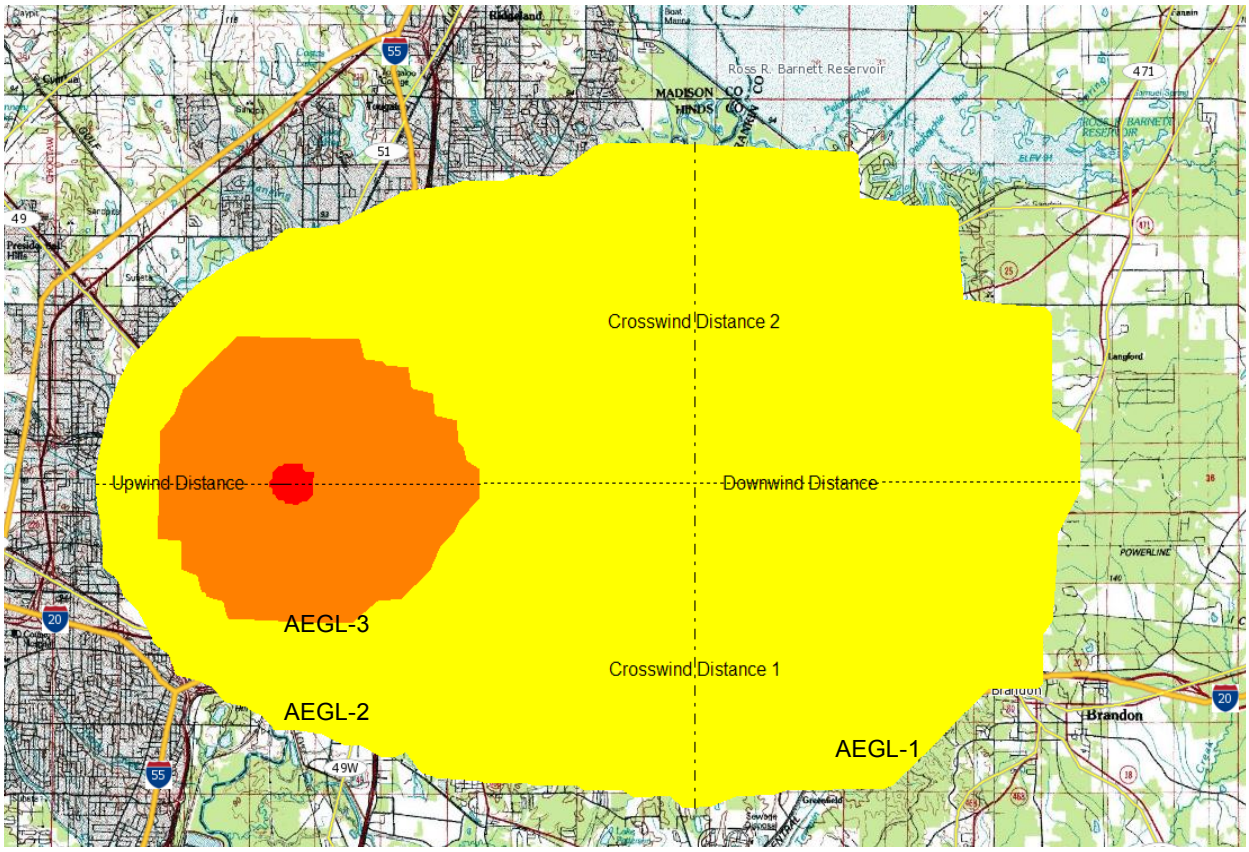

Figure IV-3. Worst-case scenario plume for Jackson, MS: stability class A, 35°C (95°F), 4-hour duration, wind from the West

The worst-case scenario determined in Chicago was 35°C (95°F) with stability class A after four hours of release (Table IV-27 and Figure IV-4). The largest population affected was also located southeast of the release. This scenario is similar to Jackson's worst-case scenario; however, there are some differences. The largest population affected by the AEGL-3 portion of the chlorine plume in Chicago was 258 people. This was a surprising find because of the fact that Chicago is very densely populated. The largest area affected by the AEGL-3 concentration in Chicago (0.025 km^2) was much smaller than the area affected in Jackson. In fact, most of the AEGL-3 data for Chicago was not available because the plume hardly ever reached such a deadly concentration

within those first four hours of release. The furthest downwind that the AEGL-3 ever reached was 0.4 kilometers (0.2 miles), and the widest the plume ever got was 0.3 kilometers (0.2 miles).

The same plumes were modeled in both cities; however, the outputs were very different. The data output made it clear that Jackson would have a much more catastrophic event based on AEGL-3 concentration presence than Chicago in such a case as a ballistic attack on a chlorine railway tanker. This outcome was surprising because it was expected that a larger population would be affected in Chicago rather than in Jackson. The largest population affected in Chicago was located in downtown Chicago, a heavily populated area. Therefore, it was even more surprising that this particular area of Chicago still had much less people affected by such an event than in Jackson. This is believed to be due to the very different terrains these two cities have. It was initially believed that the large buildings in Chicago would cause chlorine plumes to accumulate and to increase in concentration and deadliness. However, Chicago's large skyscrapers and urban layout worked to split the puffs of chlorine gas rather than allowing them to accumulate. Jackson's more open terrain allowed for the plume to continue building on its already large concentration near the release site. The plume did not have to go around barriers to continue moving. These barriers – in this case, buildings—caused the plume to split, and when the plume split, it lessened in concentration.

Table IV-27. Worst-case scenario for Chicago, IL: stability class A, 35°C (95°F), 4-hour duration, wind from the Northwest

35°C (95°F) 4 hours wind from the Northwest	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.1	0.2	258	0.025
AEGL-2	4.5	2.8	3.2	3.6	189,299	36.491
AEGL-1	16.3	4.2	7.3	8.3	1,250,108	256.91

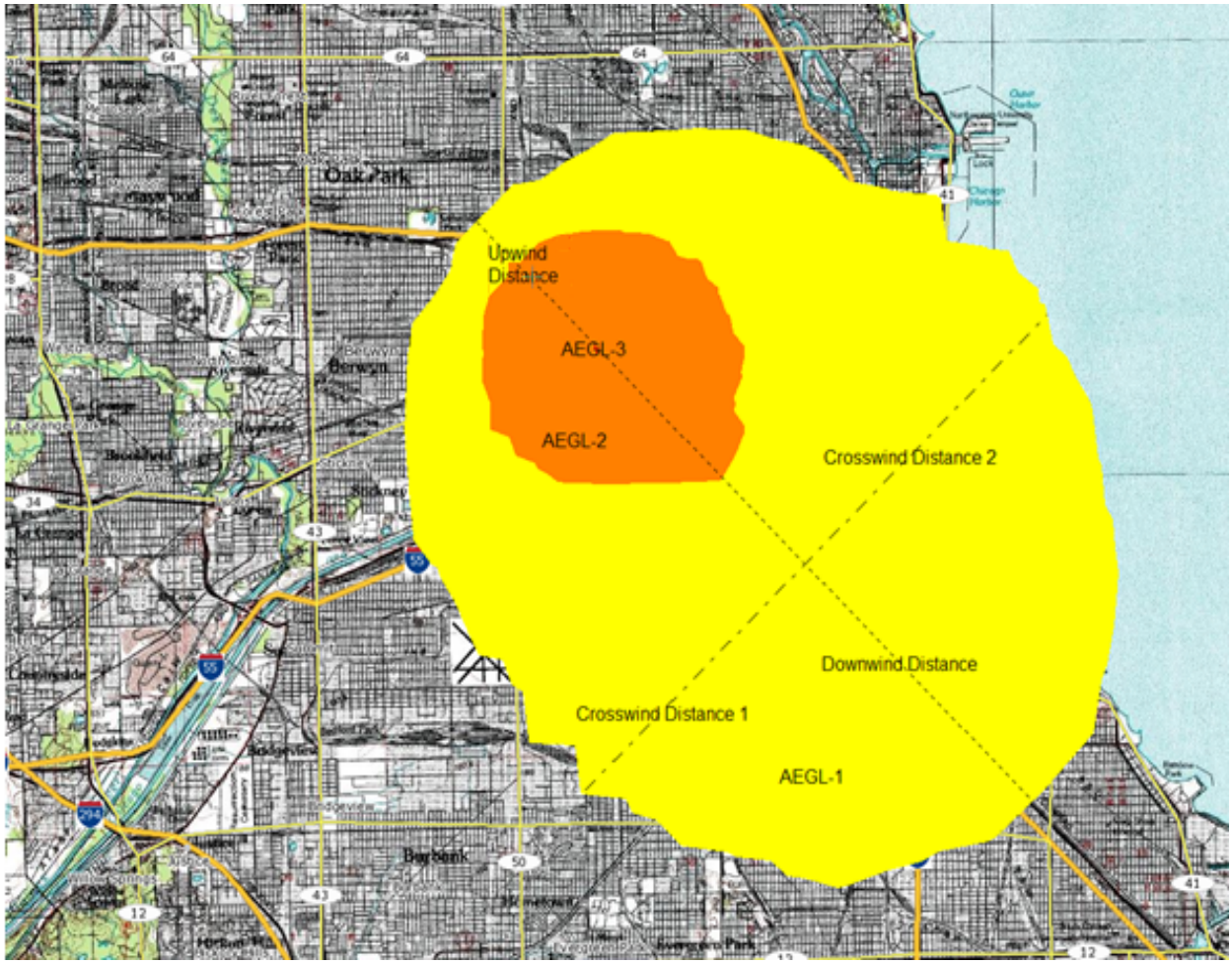

Figure IV-4. Worst-case scenario plume for Chicago, IL: stability class A, 35°C (95°F), 4-hour duration, wind from the Northwest

These particular worst-case scenarios for both Chicago and Jackson were measured vertically in order to observe how high these plumes could reach and whether or not this varied by location (Figure IV-5 and Figure IV-6). Vertical plumes were taken down the length of the plume (the dotted line on the worst-case scenario plumes). It was shown that the plume reached a height of around 0.86 kilometers (2,800 feet) in Jackson and around 0.90 kilometers (2,900 feet) in Chicago. The plume height stayed fairly uniform as distance increased for the 4-hour duration plumes. This led to the conclusion that the presence of many tall buildings causes the plume to reach higher, but not by a significant amount. The vertical concentration data also validated that higher concentrations stayed nearer to the ground and the source. The deadliest concentrations reached to about 0.3 kilometers (980 feet) in Jackson and to about 0.5 kilometers (1,600 feet) in Chicago. This proved that deadlier concentrations would reach higher when surrounded by many large buildings.

The Willis Tower (Sears Tower) in Chicago – the tallest building in Chicago – reaches to 443 meters – nearly 1,500 feet (Janberg 2012). This proves that simply moving to higher ground may not benefit residents who are in danger. The deadliest concentration of the plume in Chicago reached above the height of one of the tallest buildings in the world. Therefore, it was determined that the best disaster mitigation would be to evacuate people rather than only informing them to move to higher ground. The indoor concentrations for chlorine, however, tend to be much lower; therefore, the best emergency response if evacuation were

impossible would be to stay indoors, close all windows and doors, and move to a higher floor.

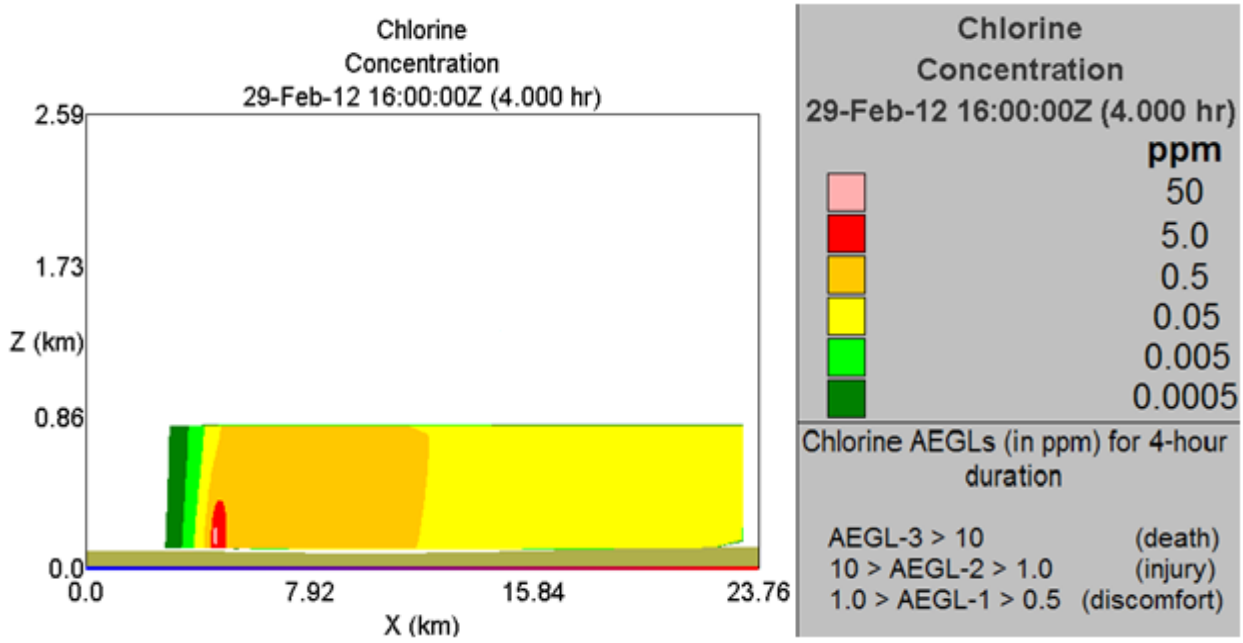

Figure IV-5. HPAC vertical plume concentration display for Jackson, MS: stability class A, 35°C (95°F), 4-hour duration, wind from the West

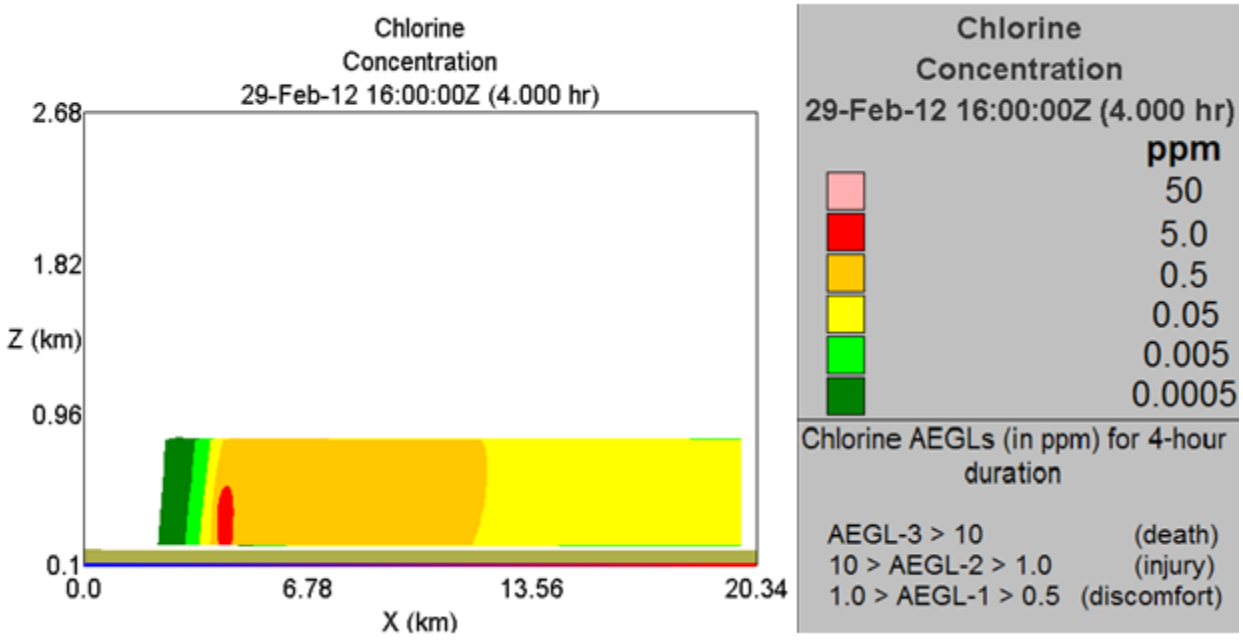

Figure IV-6. HPAC vertical plume concentration display for Chicago, IL: stability class A, 35°C (95°F), 4-hour duration, wind from the Northwest

ii. Additional Scenario Modeling

The worst-case scenarios were successfully defined for both cities; however, it was necessary to model every other possible scenario as well. Simply defining one case per city would not aid first responders because it would limit information. Therefore, every scenario mentioned in Methodology was modeled. The data was not as definitive and black-and-white as the worst-case scenario; however, the data did provide very good information about weather, direction, and duration effects. The data also held valuable information for first responders because it had specific measurements affected by each AEGL. Knowing how far a chlorine plume could go under certain weather conditions and in a certain direction would allow for an easier and more effective emergency plan. The detailed spreadsheet data for each city can be found in Appendix A for Jackson and Appendix B for Chicago.

It was shown that stability class A was the worst-case scenario for both cities; however, it was interesting to observe the reasons why. Stability class A's AEGL-3 section covered a larger area and population because of the fact that the lower wind speeds and higher UV radiation inhibited the plume from dispersing. The plume never reached very far downwind, but it stayed in a central location and covered a near-circular area. The temperature changes for stability class A strongly affected the population data and the plume size. As temperatures decreased, the danger of the plume severely decreased. In Chicago and in some scenarios in Jackson, the population affected by the AEGL-3 actually became zero. AEGL-2, the next level after AEGL-3, had a very large jump in distances,

population, and area. Although AEGL-3's longest distances and highest populations were affected after four hours of release, it was determined that AEGL-2's longest distances and highest populations were actually affected after two hours of release. The AEGL-2 values decreased between the 2-hour duration and the 4-hour duration (Table IV-28), but the AEGL-3 and AEGL-1 values actually increased after four hours of release. This inconsistency between the three AEGLs could be due to the fact that the stronger AEGL concentrations simply became stronger while the lower concentrations became more dispersed. This left a median concentration, which took up less area and affected less people.

Table IV-28. AEGL-2 distances, populations, and areas for Chicago, IL over various durations: 35°C (95°F), wind from the West

AEGL-2 35°C (95°F) Wind from the West						
Duration (hr)	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
0.5	2.7	0.8	1.3	1.6	74,108	8.759
1.0	4.4	1.4	2.7	3.1	175,379	29.272
2.0	5.2	2.0	3.3	3.7	254,909	46.059
4.0	4.8	2.0	2.9	3.1	190,422	34.837

AEGL-1, the furthest reaching AEGL, went to 19.3 kilometers (12.0 miles) downwind in Jackson and 17.8 kilometers (11.1 miles) in Chicago. The crosswind distances were relatively large for AEGL-1 and resulted in the widest distance of 15.6 kilometers (9.7 miles) in Jackson and 17.9 kilometers (11.1 miles) in Chicago. It was expected that the AEGL-1 distances would be much

larger because AEGL-1 is defined as the lowest threat level and initially only causes slight discomfort.

Emergency response during stability class A conditions would require a greater, immediate evacuation of those in the AEGL-3 affected area. Because the AEGL-3 area in warmer weather tends to be much larger in stability class A conditions, the AEGL-2 affected citizens may not receive the immediate attention needed. This could lead to injury and illness for those citizens; however, it was beneficial to know that after two hours, AEGL-2 tends to disperse and affect less people and less area. Although AEGL-1 would be very far-reaching, the presence of the smell could be a simple alert for citizens to call for information or to move away from the chlorine odor.

Stability class B went much further downwind than stability class A; however, the crosswind distances were not nearly as large. The largest population (898 people for AEGL-3) affected for stability class B also occurred at 35°C (95°F) in the southeast direction for Jackson, MS (Table IV-29 and Figure IV-7) and in the northeast direction for Chicago, IL. The largest population affected in Chicago (183,022 people for AEGL-2) occurred when the wind blew the chlorine plume towards the Northeast (Table IV-30 and Figure IV-8) rather than towards the Southeast (as it did in stability class A). The stability class A plume which was being blown towards the East was very centralized and concentrated over the downtown area of Chicago. This meant that it covered more of the city rather than being blown straight through the city. The increased wind speed in stability class B caused the plume to be narrower and to be more direct in movement

(Figure IV-7). The largest population affected in Chicago occurred at a 2-hour duration rather than a 4-hour duration. This was an interesting result because it reinforced that the plume was dispersing rather than accumulating.

Table IV-29. Worst-case scenario for stability class B in Jackson, MS: 35°C (95°F), 4-hour duration, wind from the Northwest

35°C (95°F) 4 hours wind from the Northwest	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.5	898	0.275
AEGL-2	7.1	1.8	3.0	3.6	49,154	42.307
AEGL-1	26.7	2.9	5.6	7.0	99,151	267.699

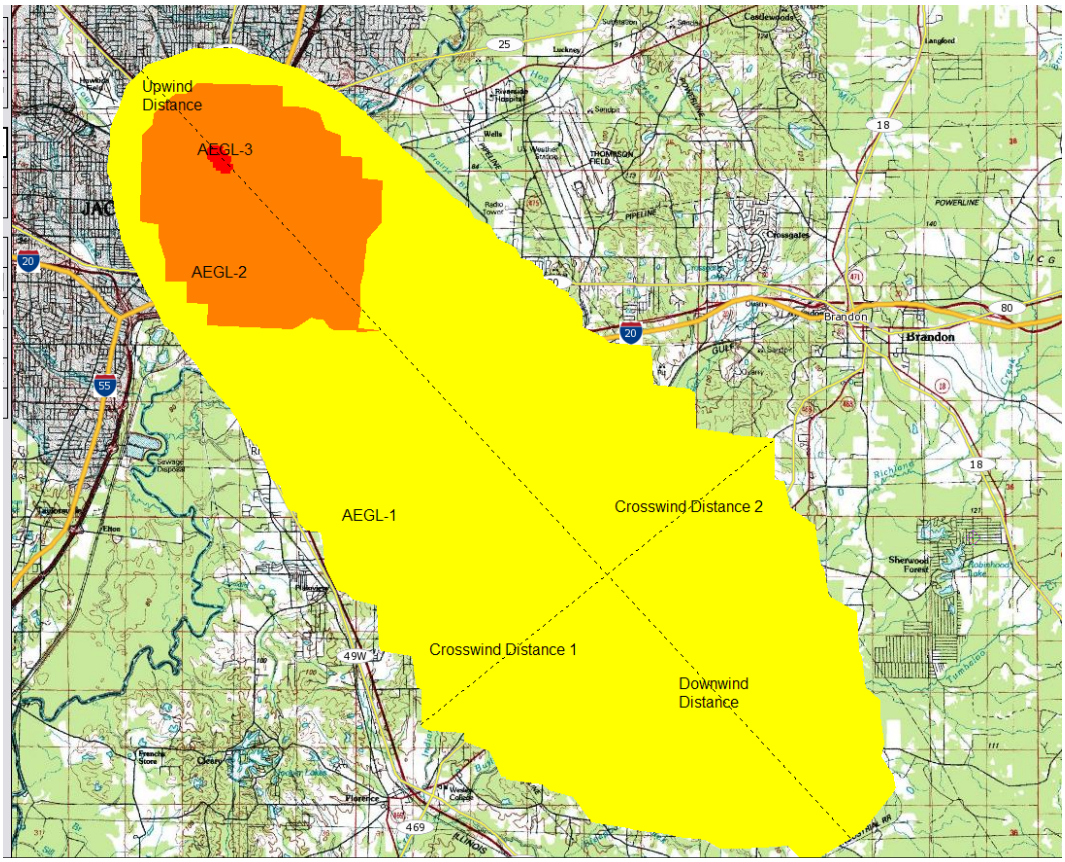

Figure IV-7. Worst-case scenario plume for stability class B in Jackson, MS: 35°C (95°F), 4-hour duration, wind from the Northwest

Table IV-30. Worst-case scenario for stability class B in Chicago, IL: 35°C (95°F), 2-hour duration, wind from the Southwest

35°C (95°F) 4 hours wind from the Southwest	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.1	0.4	2.8	3.0	183,022	28.524
AEGL-1	21.7	1.0	5.5	6.6	956,625	208.156

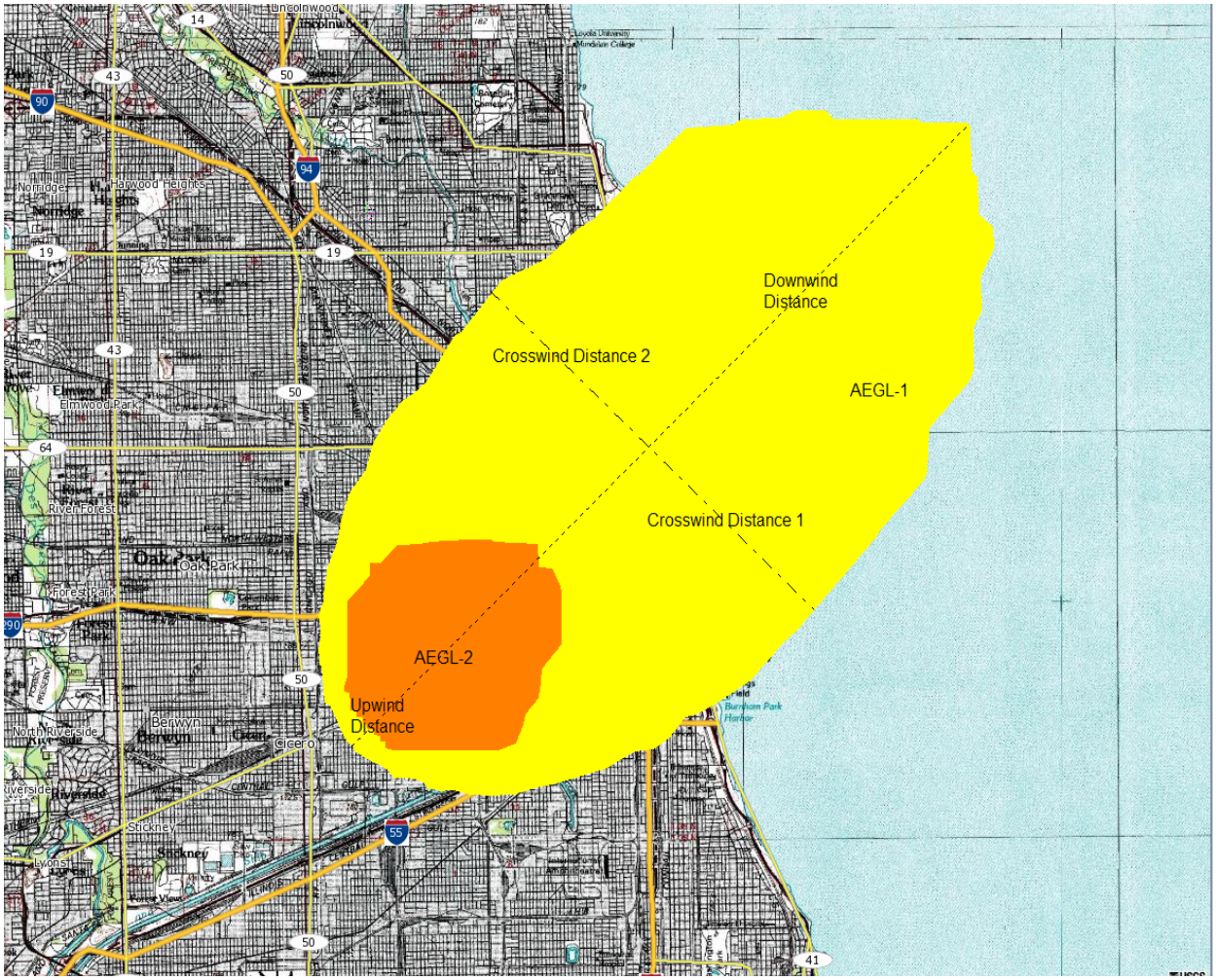

Figure IV-8. Worst-case scenario plume for stability class B in Chicago, IL: 35°C (95°F), 2-hour duration, wind from the Southwest

Another interesting result from the stability class B simulations was that there were never any AEGL-3 concentrations in Chicago for any temperature, wind direction, or time duration. This emphasized the importance of puff splitting for emergency situations. The people of Chicago would be able to reach safer areas in the first four hours before the plume became any more concentrated. AEGL-3 concentrations in Jackson, however, were available in all of the 35°C (95°F) scenarios, nearly all of the 23.9°C (75°F) and 12.8°C (55°F) scenarios, and half of the 1.7°C (35°F) scenarios. This is another case in which the people of Jackson, MS would be at a greater risk for death and injury than in Chicago.

The AEGL-2 concentration downwind and crosswind distances remained fairly constant after thirty minutes for stability class B. The expansion of AEGL-2 is not necessarily an issue within the first four hours for both Chicago and Jackson. AEGL-1 concentration downwind and crosswind distances greatly increased for time durations. AEGL-1 concentrations reached up to 27.6 kilometers (17.2 miles) downwind and over a 10-kilometer (6-mile) average width in Jackson, and reached up to 23.6 kilometers (14.7 miles) and over a 10-kilometer (6-mile) average width in Chicago. AEGL-1 reached much further for stability class B than for stability class A.

For stability class C, the chlorine plume in Jackson, MS had the most effect at 35°C (95°F) towards the southeast and east of the chlorine release source. The largest population affected by AEGL-3 concentrations was 556 people after four hours in Jackson, MS. Jackson had no AEGL-3 data at any temperature for the 30-minute duration. This implies that the weather conditions

initially work to disperse the chemical, but the chemical eventually accumulates too much after a 1-hour duration. Chicago had no AEGL-3 data; however, the largest population affected by AEGL-2 was 135,396 people after a 2-hour duration towards the southeast of the chlorine release. For Chicago, the AEGL-2 maximum population affected occurred at the 2-hour duration rather than the 4-hour duration. This was consistent with the results and data from the previous stability classes. The plume which went the furthest downwind under stability class C reached 23.6 kilometers (14.7 miles) in Chicago (Table IV-32 and Figure IV-10) and 32 kilometers (20 miles) in Jackson (Table IV-31 and Figure IV-9). Stability class C resulted in plumes that went the furthest downwind in Jackson, MS than any of the other stability classes. The crosswind distances were smaller than the previous stability classes. This implies that as the atmosphere becomes more stable during the day, the chlorine plume does not spread as much.

Table IV-31. Data for the plume that reached the furthest downwind in Jackson, MS for stability class C: 35°C (95°F), 4-hour duration, wind from the Southwest

35°C (95°F) 4 hours wind from the Southwest	Downwind Distance (km)	Upwind Distance (km)	Crosswind 1 Distance (km)	Crosswind 2 Distance (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.5	424	0.16
AEGL-2	8.0	0.8	1.5	2.0	35,913	28.141
AEGL-1	32.0	1.6	2.3	5.8	94,828	224.412

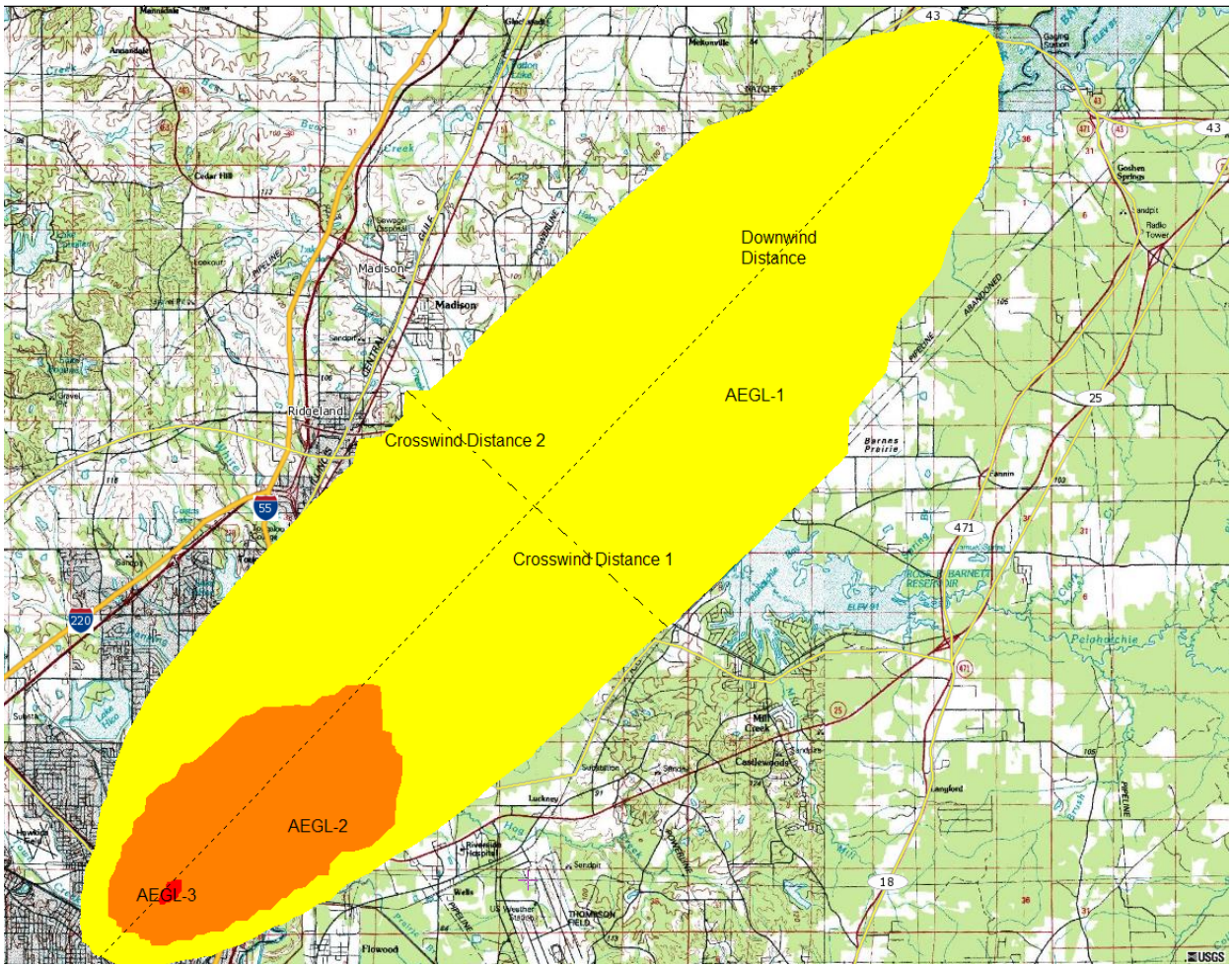

Figure IV-9. Plume that reached the furthest downwind in Jackson, MS for stability class C: 35°C (95°F), 4-hour duration, wind from the Southwest

Table IV-32. Data for the plume that reached the furthest downwind in Chicago, IL for stability class C: 35°C (95°F), 4-hour duration, wind from the Northeast

35°C (95°F) 4 hours wind from the Northeast	Downwind Distance (km)	Upwind Distance (km)	Crosswind 1 Distance (km)	Crosswind 2 Distance (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.0	2.7	2.2	76,577	21.027
AEGL-1	23.6	0.5	5.5	5.3	303,530	180.919

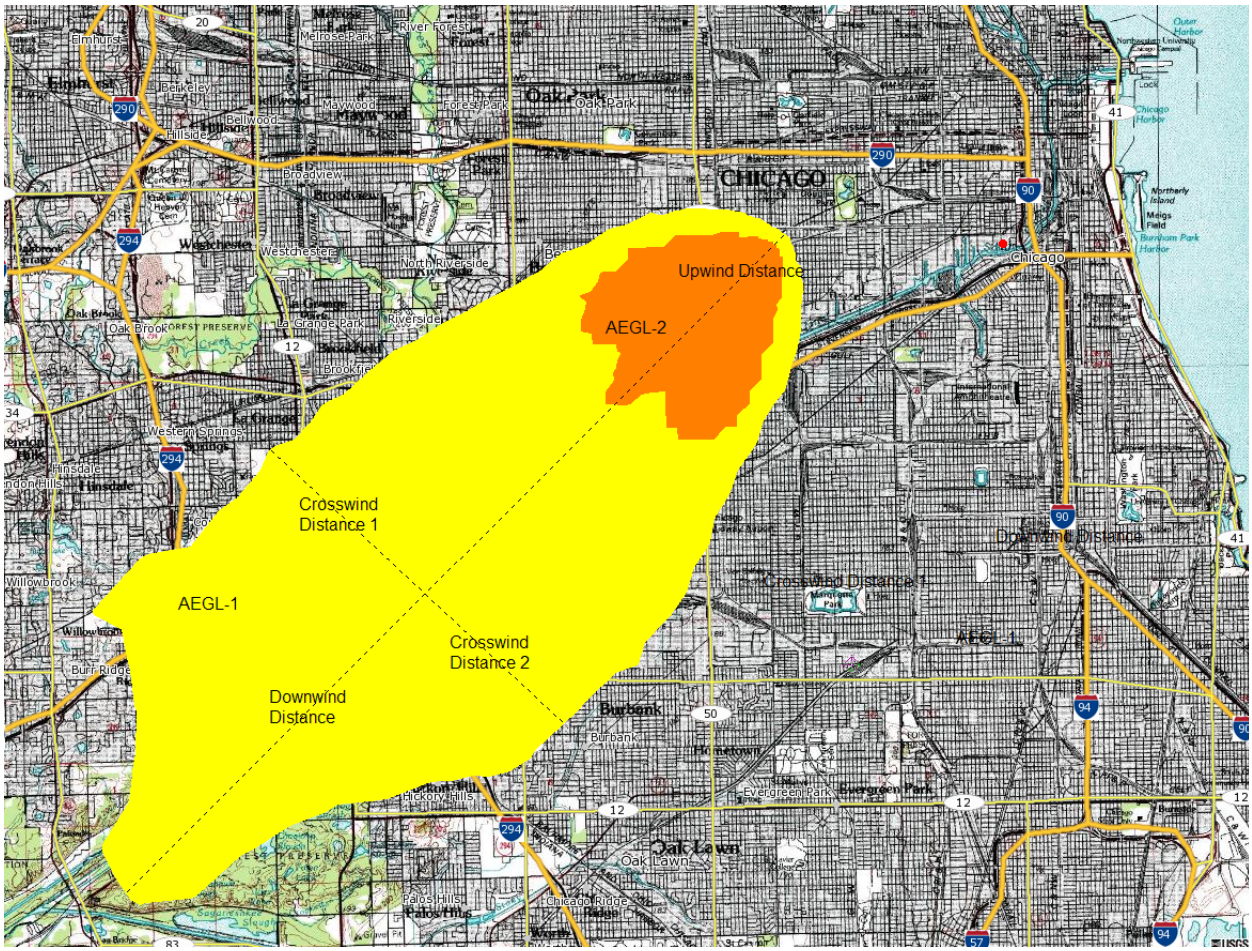

Figure IV-10. Plume that reached the furthest downwind in Chicago, IL for Stability Class C: 35°C (95°F), 4-hour duration, wind from the Northeast

Stability class D data displayed similar results as stability class C; however, downwind distances and populations affected were smaller for the most part. As the temperatures decreased, AEGL-3 data became unavailable in Jackson for stability class D. AEGL-3 data was never available for Chicago for stability class D. The largest population in Jackson affected by AEGL-3 concentrations was 234 people towards the east of the chlorine tanker. AEGL-2 remained fairly constant for both cities and for all temperatures. The largest population affected by AEGL-2 (the largest present concentration) in Chicago was 90,558 people. Lastly, the AEGL-1 section of the chlorine plume reached up

to 30.4 kilometers (18.9 miles) downwind in Jackson (Table IV-33 and Figure IV-11) and up to 33.6 kilometers (20.9 miles) downwind in Chicago (Table IV-34 and Figure IV-12).

Table IV-33. Data for the plume that reached the furthest downwind in Jackson, MS for stability class D: 35°C (95°F), 4-hour duration, wind from the Southwest

35°C (95°F) 4 hours wind from the Southwest	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	1.0	0.2	0.1	0.1	200	.071
AEGL-2	7.9	0.4	0.7	1.3	20,606	12.506
AEGL-1	30.4	0.7	1.5	3.3	51,268	90.516

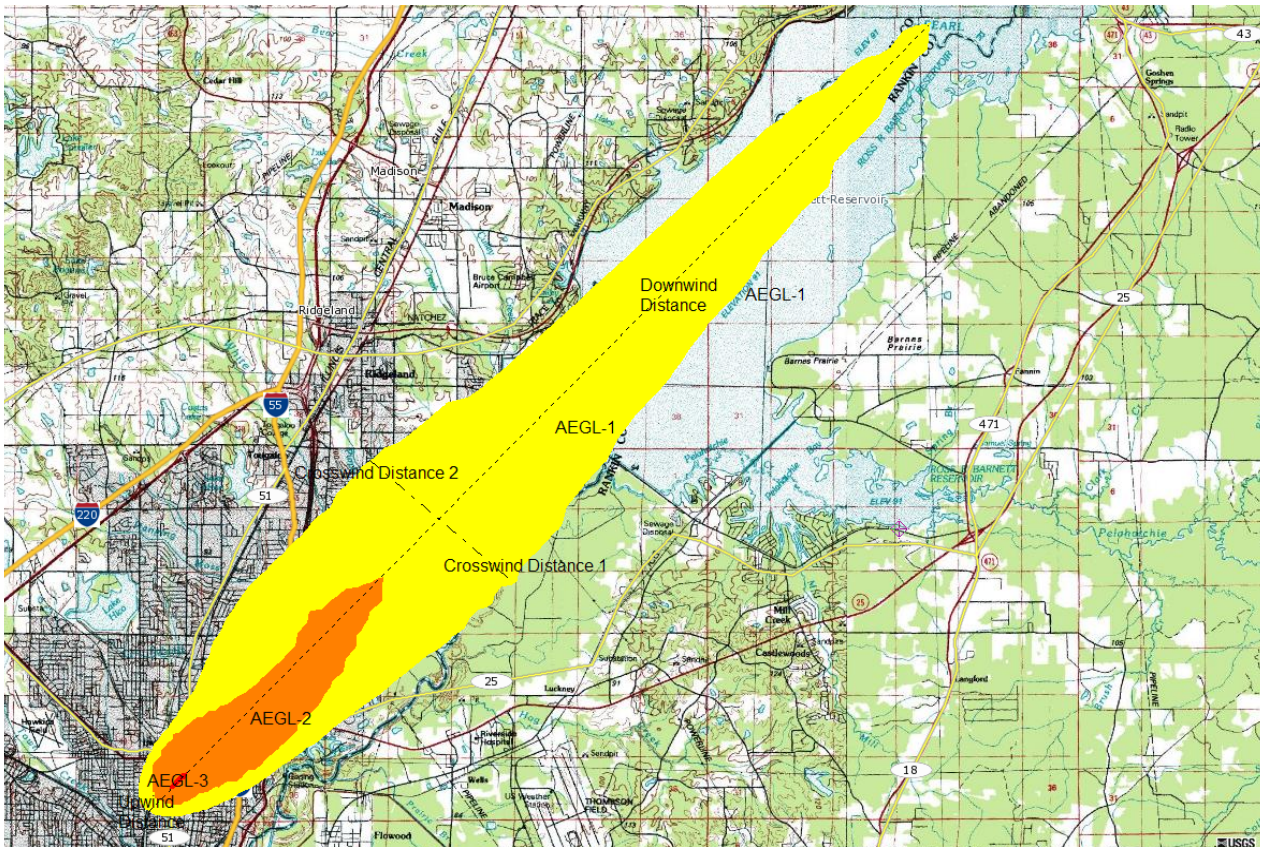

Figure IV-11. Plume that reached the furthest downwind in Jackson, MS for stability class D: 35°C (95°F), 4-hour duration, wind from the Southwest

Table IV-34. Data for the plume that reached the furthest downwind in Chicago, IL for stability class D: 35°C (95°F), 2-hour duration, wind from the West

35°C (95°F) 4 hours wind from the West	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.3	1.2	1.9	73,629	11.558
AEGL-1	33.6	0.2	2.9	4.8	402,801	233.683

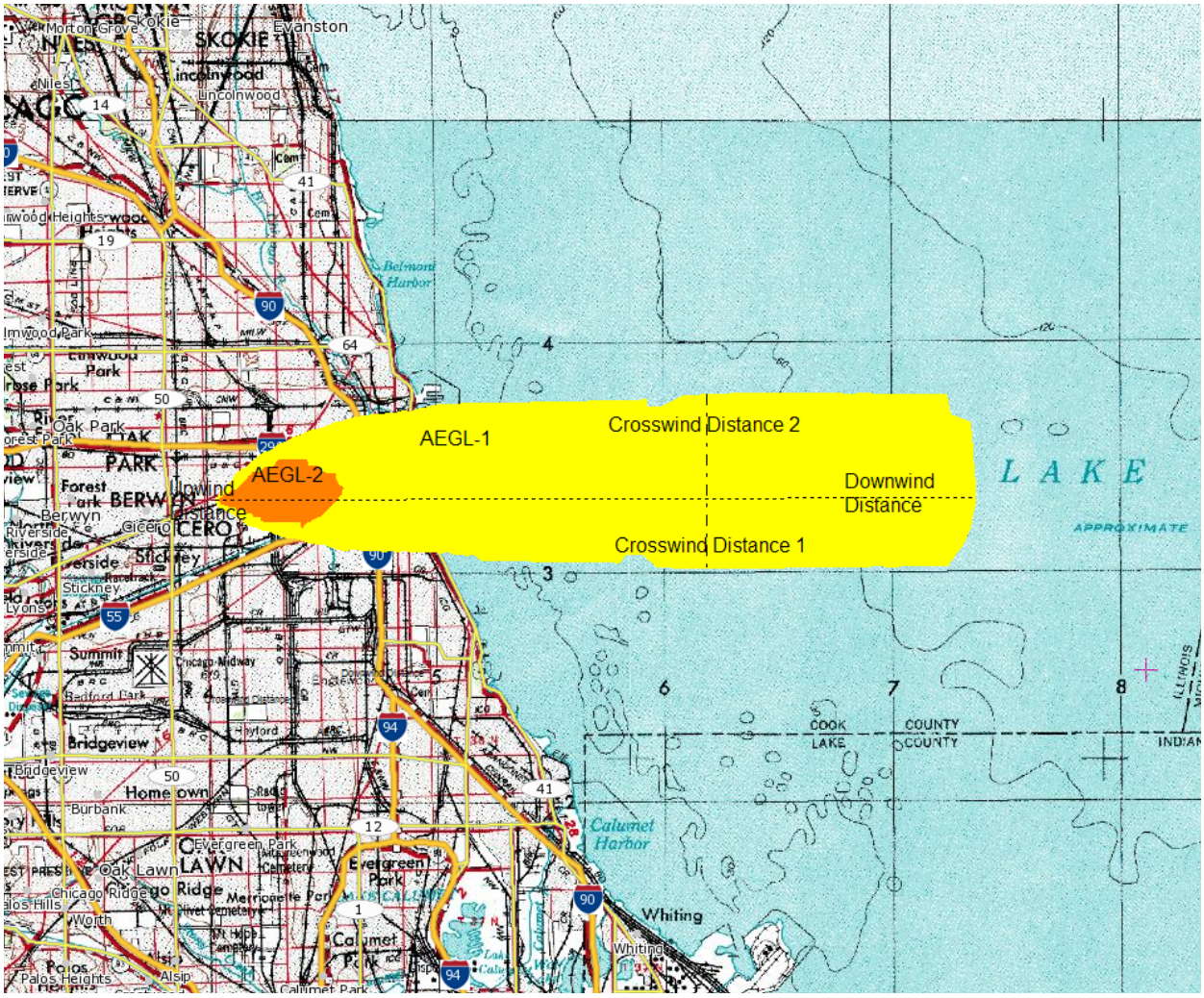

Figure IV-12. Plume that reached the furthest downwind in Chicago, IL for stability class D: 35°C (95°F), 2-hour duration, wind from the West

For stability class D, crosswind distances ranged from 1 kilometer to 3 kilometers in Chicago and from 0.1 kilometers to 2 kilometers in Jackson. Therefore, the total width of plumes under stability class D conditions could reach up to 6 kilometers (3.7 miles) in Chicago and up to 4 kilometers (2.5 miles). Although stability class D plumes were far-reaching (nearly as far-reaching as Stability Class C plumes), they were not the most deadly or harmful. For Chicago, the furthest reaching plume in stability class D actually had the majority of its area over Lake Michigan rather than the city or neighborhoods. This was an encouraging result because stability class D is the most common atmospheric stability. It is known as the neutral stability class. Therefore, the likelihood of such a terrorist attack on a chlorine tanker occurring during stability class D daytime conditions is higher than the other atmospheric stabilities.

Stability classes E and F are the most stable stability classes, and they only occur at nighttime. Therefore, time constraints were changed in HPAC and stability was varied greatly from the previous stability classes. There were disparities present for classes E and F during HPAC verification and in previous research conducted by Chang, et al. (2003). Classes E and F never reached very far downwind. These downwind distances tended to range from 7 kilometers (4.3 miles) to 4 kilometers (2.5 miles). Altogether, stability classes E and F did not reach very large populations and did not reach very far downwind or crosswind. The largest populations affected by the AEGL-3 section of the plume in Jackson, MS in stability classes E and F conditions were 771 people towards the Southeast (Table IV-35 and Figure IV-13) and 1,475 people towards the East (Table IV-36

and Figure IV-14) respectively. The largest populations affected by the AEGL-2 section of the plume in Chicago, IL in stability class E was 50,350 people towards the East. AEGL-3 data was available for Chicago in stability class F conditions after four hours of chlorine release for 35°C (95°F) weather. The largest population affected by AEGL-3 in Chicago under these conditions was 3,334 people towards the Southeast (Table IV-37 and Figure IV-15). The fact that AEGL-3 data significantly and suddenly increases after four hours raised the danger level. The main hazard with stability classes E and F is that they occur at nighttime when people are asleep and unaware of what is happening around them. Concentrating on the first four hours of release was necessary for first responder emergency mitigation; however, these first four hours can pass quickly at nighttime with very little detection. The plume increased in concentration with an increase in release duration. Citizens being asleep and unaware of such a situation could cause many more deaths and injuries. A situation like this occurred in Graniteville, SC and resulted in deaths and injuries (Buckley 2007) – as mentioned in the Background section of this thesis. The one beneficial fact in this scenario was that 35°C (95°F) weather does not occur often at night. This scenario, therefore, was removed as a likely worst-case scenario possibility.

Table IV-35. Worst-case scenario for stability class E in Jackson, MS: 35°C (95°F), 4-hour duration, wind from the Northwest

35°C (95°F) 4 hours wind from Northwest	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	1.2	0.0	0.3	0.3	771	0.208
AEGL-2	4.3	0.4	0.6	0.7	8,408	4.968
AEGL-1	6.8	1.0	2.0	1.8	30,620	22.657

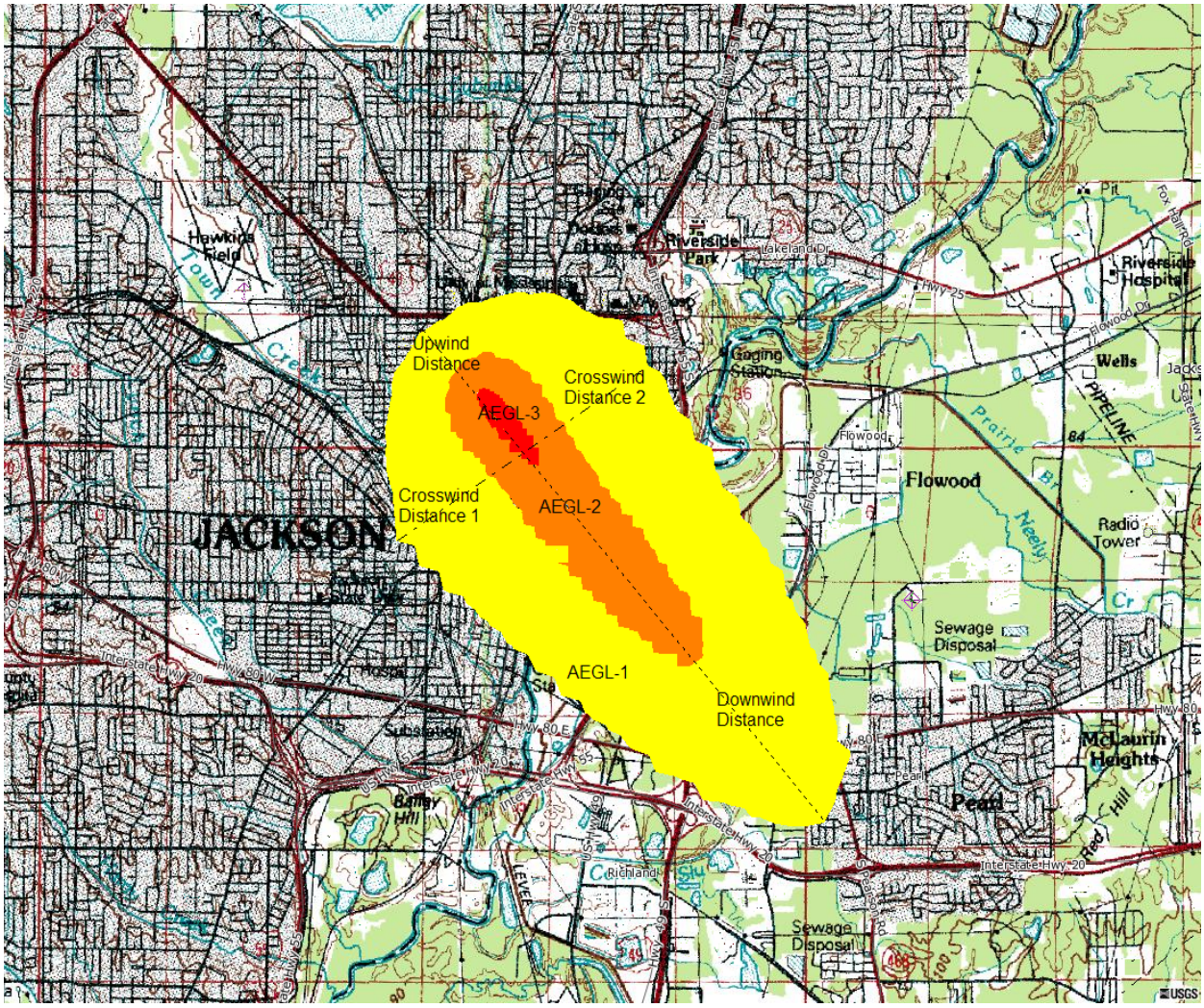

Figure IV-13. Worst-case scenario plume for stability class E in Jackson, MS: 35°C (95°F), 4-hour duration, wind from the Northwest

Table IV-36. Worst-case scenario for stability class F in Jackson, MS: 35°C (95°F), 4-hour duration, wind from the West

35°C (95°F) 4 hours wind from the West	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.5	898	0.275
AEGL-2	7.1	1.8	3.0	3.6	49,154	42.307
AEGL-1	26.7	2.9	5.6	7.0	99,151	267.699

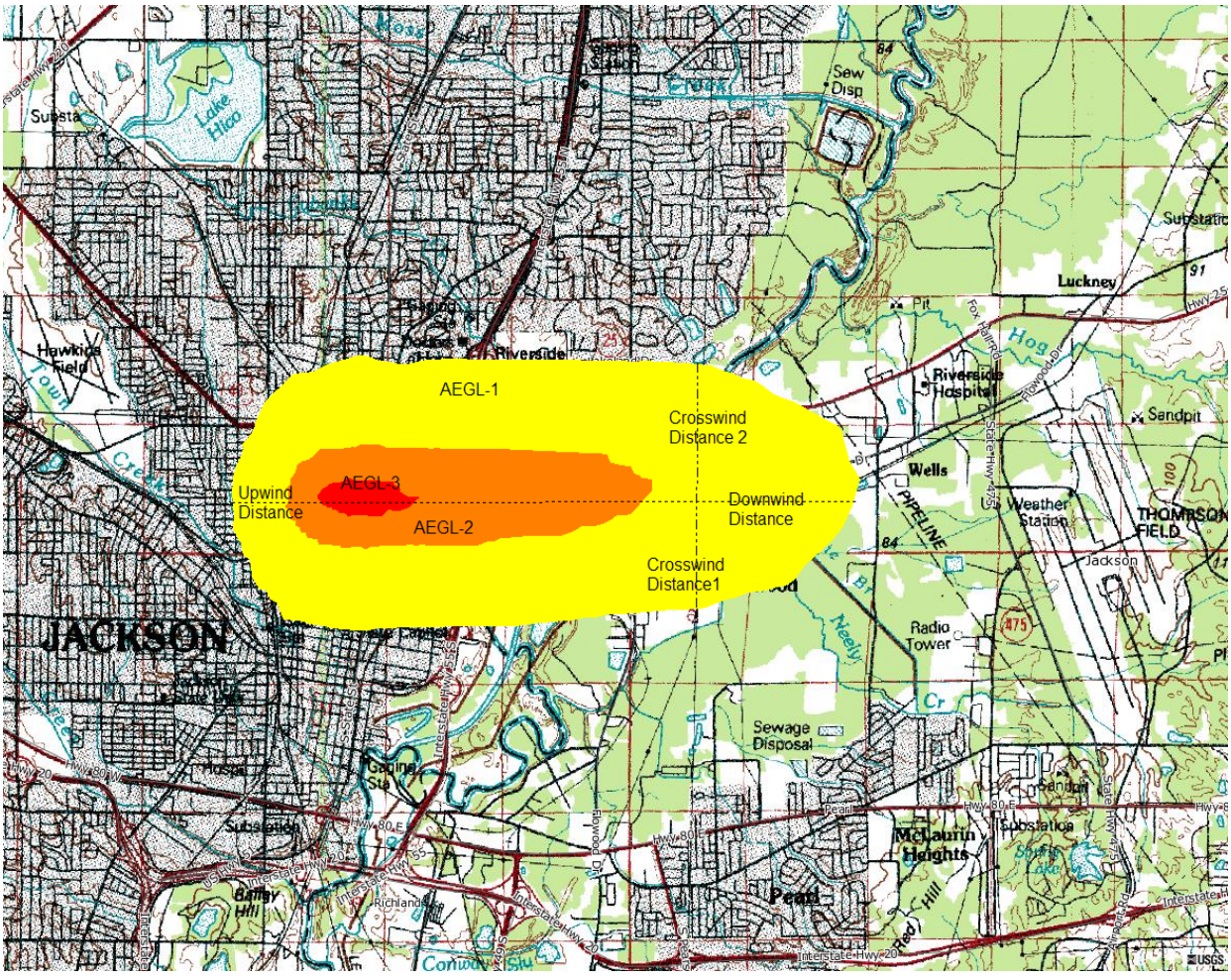

Figure IV-14. Worst-case scenario plume for stability class F in Jackson, MS: 35°C (95°F), 4-hour duration, wind from the West

Table IV-37. Worst-case scenario for stability class F in Chicago, IL: 35°C (95°F), 4-hour duration, wind from the Northwest

35°C (95°F) 4 hours wind from the Northwest	Downwind Distance (km)	Upwind Distance (km)	Crosswind1 Distance (km)	Crosswind2 Distance (km)	Population	Area (km^2)
AEGL-3	1.1	0.0	0.2	0.4	3,334	0.255
AEGL-2	2.8	0.7	0.9	1.3	58,412	6.443
AEGL-1	4.8	1.7	2.1	2.5	141,209	24.063

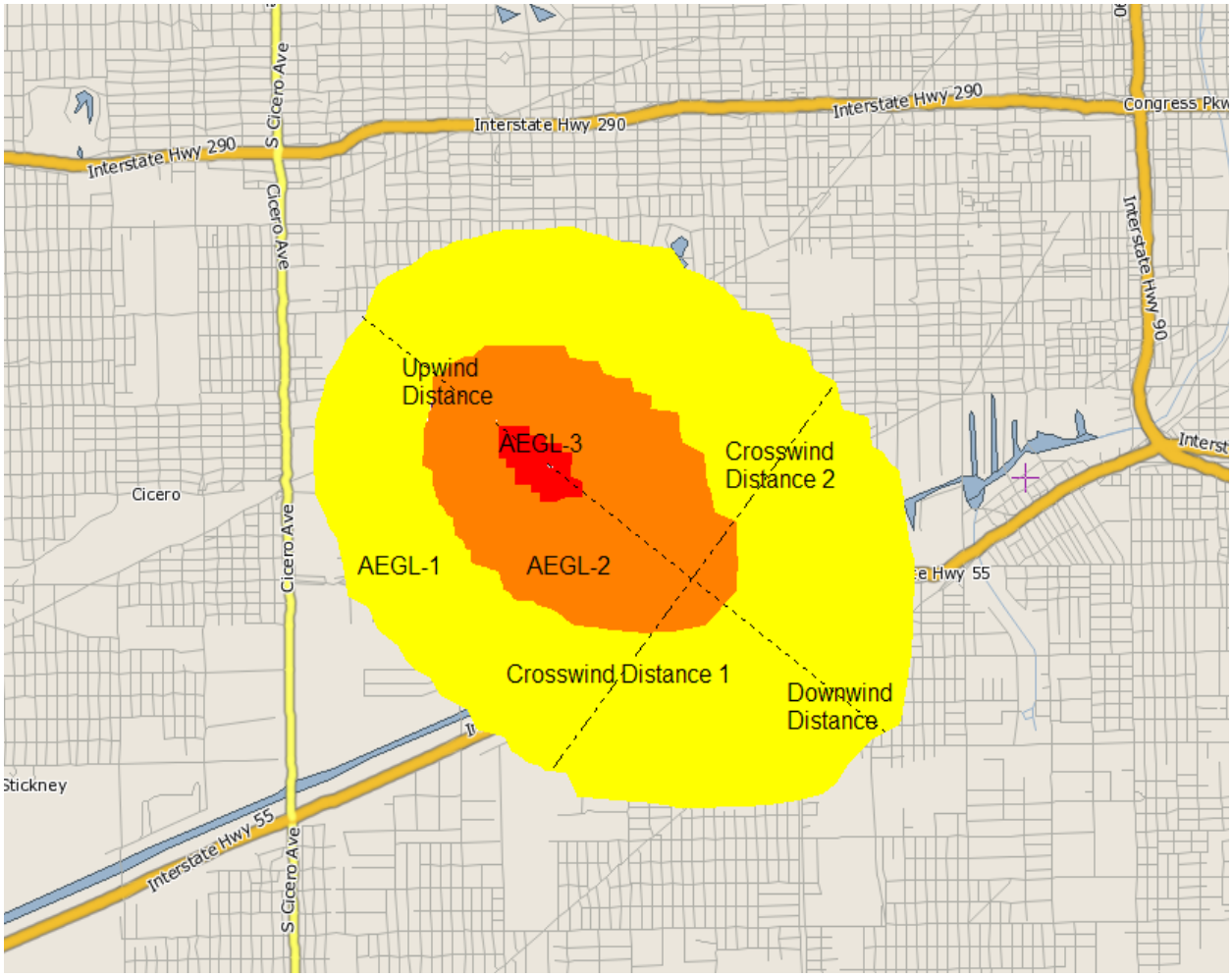

Figure IV-15. Worst-case scenario plume for stability class F in Chicago, IL: 35°C (95°F), 4-hour duration, wind from the Northwest

V. CONCLUSIONS

Through experimental verification and theoretical verifications, ALOHA and HPAC were both validated in their ability to simulate hazardous, dense gas plumes. ALOHA was used mainly for simple modeling and for flow rate calculations because of its 1-hour time constraint. HPAC was implemented for the modeling of over 1,500 hypothetical plumes for Jackson, MS and Chicago, IL. Weather conditions were varied in these simulations, and output was analyzed for conclusions to be made about chlorine plumes resulting from a ballistic attack on a chlorine-carrying railway tanker.

It was found that stability class A at higher temperatures resulted in the worst-case scenario for both cities. This implies that an attack on a railway tanker in bright, hot conditions with little wind speed could lead to catastrophic events. Populations affected by AEGL-3 sections of the chlorine plume tended to lessen in number as the stability classes became more stable. However, the most stable stability class, F, held many dangers for the surrounding citizens. Concentrations increased suddenly in stability class F after four hours of chlorine release. Because stability class F only occurs at night, this sudden increase is incredibly dangerous to those who are sleeping or unaware of the emergency at hand. However, the temperature required for this catastrophe would need to be unrealistically high for the nighttime.

For each stability class's particular worst-case scenarios, the highest temperature of 35°C (95°F) was always involved. This displayed the increased risk of disaster from terrorist attacks on railcar tanker during summer months. Lower temperatures created much more manageable

plumes and easier scenario for evacuation. The response to AEGL-3 affected areas under such a circumstance in very hot weather would require immediate, quick attention.

It was observed that plumes in Chicago dispersed much faster than plumes in Jackson. This could be due to the presence of many tall buildings and a much larger amount of urban infrastructure than in Jackson. However, plumes in Chicago reached much higher than plumes in Jackson. Although the tall buildings worked to split plumes and to disperse plumes, they also encourage accumulation of concentrations in certain areas. The population affected in Chicago by the deadliest section of the plumes was much lower than in Jackson. It was concluded that in Chicago the AEGL-3 sections stay in a pinpointed area but they move upwards. That knowledge was important to understand because being able to pinpoint a building that is being affected by AEGL-3 concentrations would allow for evacuation of that building first rather than the entire city. This would reduce hysteria and would create organization in a time of emergency.

Plumes reached higher levels than buildings in Jackson; however, this was not a surprising find. Jackson does not have very many tall buildings, and none of the buildings compare to the heights that skyscrapers reach in Chicago. Evacuation of a large portion of the Jackson area would be much more plausible than evacuation of Chicago. Therefore, it was determined that the best disaster information for Jackson would be for first responders to inform citizens to move away from the railroad tracks and to move away from the smell of chlorine. Moving to higher ground or simply staying inside one's house would not provide the necessary safety for Jackson citizens.

The main goal of this research was to provide data to first responders about where a chlorine plume would go under many different weather conditions. Although worst-case scenarios for each stability class were only discussed in this thesis, Appendix A and Appendix B

hold valuable information for all weather scenarios in both cities. Plumes were modeled under every weather condition combination that was believed to be important. The measurements of the plumes, areas of the plumes, and populations affected by the plumes were recorded in spreadsheet format for easy reference (Appendix A and Appendix B). This reference will allow first responders and other emergency personnel to make quick decisions in the case of such a terrorist attack.

Appendix A and Appendix B are specific to the Jackson, Mississippi and the Chicago, Illinois area. Currently, first responders have very vague information regarding chlorine incidents. In the *Hazardous Materials Guide for First Responders* published by the Federal Emergency Management Agency's United States Fire Administration (2010), the general dangers of chlorine are outlined; however, the evacuation area is not clearly defined. Wandering into a contaminated area without a specific knowledge of the worst affected areas, could cause severe consequences for first responders. The handbook states that first responders should "determine the extent of the problem" when a chlorine incident occurs (FEMA United States Fire Administration 2010). This thesis research provided a quick and easy way for first responders to "determine the extent of the problem" based on known weather conditions. Expected chlorine plume dimensions for a ballistic attack on a chlorine-carrying railway tanker have never been detailed for Jackson or Chicago. Therefore, the data in Appendix A and Appendix B provided more detail for first responders to build upon their current instructions in Jackson and Chicago. Further compilation of specific plume measurements and data under every weather scenario for different cities would provide valuable, life-saving information to first responders in those particular cities. It is concluded that such an action would help further emergency evacuation scenarios and would increase public safety measurements.

Further research implementing wind changes and weather changes during the first four hours would allow for greater, more realistic knowledge of what a chlorine plume would actually do in such a scenario. HPAC has the ability to model historic weather data with wind changes; however, this data was already programmed into HPAC. In order to input weather parameters of concern for this thesis, constant weather parameters had to be modeled for the 4-hour duration. This was not an entirely realistic scenario. Incorporating wind speed and direction changes over the 4-hour period would allow for a better understanding of the effect that wind changes have on chlorine gas dispersion and chlorine plume movement.

Also, while modeling many of these plumes, it was observed that they very often crossed bodies of water. These surface waters (Lake Michigan and Ross Barnett Reservoir) are actually used to provide drinking water to citizens of Chicago and Jackson. The study of the effects of chlorine gas on surface waters and the partitioning of the chlorine gas with the surface water would be interesting and helpful information for engineers and citizens. The necessary water treatment in this event would also be a helpful subject for research.

Altogether, the worst-case scenarios were pinpointed for this particular research, and many other scenarios were modeled. There are many more research opportunities that could build upon this basic plume modeling and sensitivity analysis. However, observing chlorine plume movement in two very different cities and recording distances, areas, and populations affected by each AEGL concentration section of the chlorine plume was a step in the right direction. It was determined that weather parameters play a large part and that terrain plays a large – if not larger – part in chlorine dispersion, and these effects should be studied for improvements in emergency preparedness.

LIST OF REFERENCES

Agency for Toxic Substances and Disease Registry (2010). "Chlorine (Cl_2)." < http://www.atsdr.cdc.gov/MHMI/mmg172.pdf> (January 15, 2012).

Al-Ostaz, Ahmed. "Nano-Enhanced and Bio-Inspired Composite Materials for Mitigation and Protection of TIH Railcars and Stationary Tanks against High Power Impact" (unpublished). University of Mississippi. Funded by Department of Homeland Security Southeast Region Research Initiative.

Buckley, Robert L. et al. (2007). "Modeling dispersion from toxic gas released after a train collision in Graniteville, SC." *Journal of the Air & Waste Management Association*, 57, 268-278.

Chang, Joseph C. et al. (2003). "Evaluations of CALPUFF, HPAC, and VLSTRACK with two mesoscale field datasets." *American Meteorological Society Journal*, 42(4), 453-466.

Defense and Threat Reduction Agency (2001). *The HPAC user's manual*.

Environmental Protection Agency (2007). "Chlorine." Technology Transfer Network Air Toxics Website, <http://www.epa.gov/ttnatw01/hlthef/chlorine.html> (Dec. 1, 2011).

Fauske and Epstein (1988). "Source term considerations in connection with chemical accidents and vapour cloud modeling." *Journal of Loss Prevention in the Process Industries*, 1(2), 75-83.

FEMA United States Fire Administration (2010). *Hazardous Materials Guide for First Responders.*<http://www.mcfd.org/data/2010/11/27/8d9d9001260cd7f0d85d3133703c61a4/HAZGUIDE.PDF> (Apr. 13, 2011).

Glascoe, Lee (2012). Lawrence Livermore National Laboratory. Telephone Interview (Jan. 27, 2012).

Goldwire, H.C., Jr. et al. (1985). *Desert Tortoise Series Data Report: 1983 Pressurized Ammonia Spills*, U.S. Government Printing Office, Washington D.C.

Hunjak, Tamara (2010). "Comparison of Gaussian and Lagrangian dispersion model". Powerpoint presentation <http://fizika.pmfst.hr/SSWAP/files/tamarap.pdf> (Feb. 4, 2012).

Janberg, Nicolas (2012). "Willis Tower (Sears Tower)." Structurae: International Database and Gallery of Structures.

Khan, Faisal I. (2000). "Modelling and simulation of heavy gas dispersion on the basis of modification in plume path theory." *Journal of Hazardous Materials*, 80(1-3), 15-30.

Long, Kerrie J. et al. (2009). "Modeling a hypothetical chlorine release on a college campus." *Journal of Computers*, 4(9), 881-890

National Oceanographic and Atmospheric Administration (2004) *ALOHA (Areal Locations of Hazardous Atmospheres) user's manual*. NOAA Hazardous Materials Response Division.

National Oceanographic and Atmospheric Administration (2008). "Pasquill Stability Classes." Air Resources Laboratory, <http://www.arl.noaa.gov/READYpgclass.php> (Aug. 20, 2011).

National Research Council (2004). *Acute Exposure Guideline Levels for Selected Airborne Chemicals*, Vol. 4, The National Academies Press, Washington D.C.

Neuman, Stephanie et al. (2006). "Event reconstruction with the urban dispersion model." American Meteorological Society Annual Meeting, Atlanta, 2006. Lawrence Livermore National Laboratory, Livermore, CA.

New York State Department of Health (2011). "The Facts about Chlorine." <http://www.health.ny.gov/environmental/emergency/chemical_terrorism/chlorine_general.htm> (Jan. 20, 2012).

Nordin, John (2006). "Chlorine Spills." *PEAC AristaTek Newsletter*, 9(9).

Nordin, John (2007). "Modeling a Chemical Release." *PEAC Aristatek Newsletter,* 11(2).

Oak Ridge National Laboratory. "LandScan™." < http://www.ornl.gov/sci/landscan/> (Mar. 7, 2012).

Pullen, Julie et al. (2005). "A comparison of contaminant plume statistics from a Gaussian puff and urban CFD model for two large cities." *Atmospheric Environment*, 39(6), 1049-1068.

Pumir, Alain et al. (2000). "Geometry of Lagrangian Dispersion in Turbulence." *Physical Review Letter*, 85(25), 5324-5327.

Sykes, R. Ian et al. (2006). "SCIPUFF Version 2.2.: Technical Documentation." A.R.A.P. Report No. 729.

Sykes, R. Ian (2010). "SCIPUFF capabilities and application in hazard assessment." Sage Management Enterprise, Princeton, NJ.

Turner, D. B. 1970. *Workbook of Atmospheric Dispersion Estimates*. Office of Air Programs Publication No. AP-26 (NTIS PB 191 482). U.S. Environmental Protection Agency, Research Triangle Park, NC. 84 pp.

U.S. Chemical Safety Board (2007). "CSB Issues Safety Bulletin on Dangers of a Major Chlorine Release During Railcar Unloading; Agency Calls on U.S. Department of Transportation to Expand Regulatory Coverage to Require Emergency Shutdown Systems." <http://www.csb.gov/newsroom/detail.aspx?nid=260> (January 19, 2012).

LIST OF APPENDICES

APPENDIX: A

- Distance, population, and area tables for Jackson, MS.
    - Six different stability classes, eight wind directions per stability class, four temperatures per wind direction, and four time durations per temperature
    - Diagrams of plume measurement locations for each wind direction located in Appendix C. Maximum distances taken for each measurement.
    - Wind directions are denoted as the wind origin (i.e. "North" means wind is coming from the North and blowing towards the South).
    - Some populations are available, but measurements are not. This was due to the very small, immeasurable section of the plume output.
    - Upwind distances that are negative imply that the particular AEGL section of the plume moved downwind and had no measurements upwind (diagram explanation in Appendix C).

Stability Class A – JACKSON,MS

ORIGIN:	32.31888	N
	90.18555	W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.1	0.2	110	0.078
AEGL-2	2.5	1.1	1.6	1.4	22,868	9.521
AEGL-1	2.9	1.5	2.0	1.9	34,011	15.085

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.2	0.4	0.3	532	0.273
AEGL-2	4.5	1.8	2.6	2.6	51,998	30.194
AEGL-1	5.7	2.7	3.5	3.3	63,283	47.01

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.3	0.5	0.5	1,161	0.527
AEGL-2	6.2	2.9	3.6	3.7	70,811	57.269
AEGL-1	11.4	4.3	5.2	5.0	111,161	131.79

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.3	0.5	0.6	1,272	0.556
AEGL-2	5.1	3.0	3.6	3.2	65,410	45.94
AEGL-1	17.9	4.6	8.7	6.9	148,405	281.521

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.1	0.2	0.2	115	0.087
AEGL-2	2.1	1.2	1.6	1.5	21,326	9.551
AEGL-1	2.8	1.5	2.1	2.1	30,932	14.621

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.3	0.4	0.4	399	0.269
AEGL-2	3.9	1.8	2.9	2.7	54,467	29.54
AEGL-1	5.1	2.4	3.8	3.5	69,198	44.608

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.4	0.7	0.7	921	0.565
AEGL-2	5.1	2.7	4.2	4.6	74,165	52.033
AEGL-1	8.9	3.7	5.5	5.7	117,889	118.376

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.5	0.6	0.7	963	0.589
AEGL-2	4.4	3.0	3.5	3.8	66,997	42.848
AEGL-1	16.8	3.8	8.7	6.8	148,371	268.76

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.1	0.3	0.1	103	0.084

	AEGL-2	2.2	1.3	1.6	1.5	17,921	9.275
	AEGL-1	2.6	1.6	2.2	1.9	27,988	14.437

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.2	0.5	0.3	404	0.305
AEGL-2	3.8	1.8	3.1	2.7	51,325	28.522
AEGL-1	4.8	2.5	3.7	3.3	72,076	44.053

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.4	0.6	0.5	824	0.58
AEGL-2	4.8	2.6	4.2	3.8	78,493	50.669
AEGL-1	8.5	3.4	5.9	5.4	117,975	116.934

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.4	0.7	0.5	875	0.616
AEGL-2	4.3	2.6	3.6	3.2	66,929	41.278
AEGL-1	18.0	3.5	7.1	7.1	164,351	274.133

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.1	0.2	0.2	113	0.093
AEGL-2	2.4	1.2	1.6	1.5	17,455	9.61
AEGL-1	2.9	1.5	2.0	2.0	28,840	14.715

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.2	0.4	0.4	368	0.285
AEGL-2	4.6	1.7	3.0	2.7	46,203	28.723
AEGL-1	5.5	2.3	3.6	3.4	61,655	43.22

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.3	0.6	0.5	810	0.571
AEGL-2	6.0	2.8	4.4	3.9	76,974	55.748
AEGL-1	11.6	4.1	5.9	5.7	120,434	144.314

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.4	0.6	0.6	837	0.592
AEGL-2	5.5	2.9	3.5	3.2	67,080	44.458
AEGL-1	18.5	4.4	7.0	7.1	147,251	284.627

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.2	0.2	103	0.084
AEGL-2	2.4	1.0	1.5	1.6	19,534	9.397
AEGL-1	2.8	1.4	2.0	2.0	28,937	14.53

95 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.2	0.4	0.3	430	0.269
AEGL-2	4.1	1.6	2.7	3.0	44,497	27.851
AEGL-1	4.9	2.4	3.5	3.6	60,416	43.22

95 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.4	0.6	0.5	874	0.523
AEGL-2	4.8	2.2	3.9	3.7	64,401	48.03
AEGL-1	9.2	3.5	5.7	6.0	114,214	116.983

95 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.3	0.5	0.5	934	0.562

AEGL-2	4.8	2.3	3.7	3.6	57,190	39.778
AEGL-1	18.0	3.4	6.8	6.4	164,936	267.328

95 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.2	0.2	144	0.084
AEGL-2	2.4	1.1	1.6	1.5	21,380	9.289
AEGL-1	2.9	1.5	2.0	2.0	29,850	14.422

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.4	0.4	605	0.283
AEGL-2	4.3	1.7	2.9	2.9	44,367	29.287
AEGL-1	5.5	2.5	3.4	3.7	59,295	44.422

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.2	0.5	0.7	1,221	0.555
AEGL-2	5.7	2.6	3.6	4.4	69,976	55.659
AEGL-1	11.5	4.9	4.7	5.5	124,808	130.421

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.2	0.6	0.7	1,302	0.581
AEGL-2	5.1	2.6	3.9	3.9	59,101	43.98
AEGL-1	18.8	5.1	5.6	6.9	176,266	276.5

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.2	0.3	167	0.089
AEGL-2	2.4	1.1	1.5	1.6	23,326	9.533
AEGL-1	2.9	1.5	2.1	2.1	31,510	14.807

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.1	0.4	0.4	743	0.297
AEGL-2	4.3	1.9	2.7	2.9	44,199	30.183
AEGL-1	5.3	2.6	3.3	3.6	58,373	46.644

95 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.3	0.5	0.6	1,618	0.592
AEGL-2	5.4	3.0	3.8	4.1	67,614	57.665
AEGL-1	10.5	4.3	5.4	5.8	114,542	131.788

95 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.3	0.6	0.7	1,712	0.624
AEGL-2	5.0	2.9	3.2	3.6	62,343	46.727
AEGL-1	19.3	4.4	7.1	7.8	174,005	307.042

95 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.1	0.3	151	0.084
AEGL-2	2.3	1.3	1.6	1.7	23,661	9.815
AEGL-1	2.7	1.6	2.1	2.2	32,690	14.493

95 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.2	0.3	0.4	699	0.282
AEGL-2	4.1	2.0	3.0	3.1	47,727	30.516
AEGL-1	5.1	2.8	3.8	4.0	60,346	47.663

95 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.3	0.5	0.6	1,508	0.552
AEGL-2	5.3	3.0	4.5	4.6	71,008	61.902
AEGL-1	10.3	4.4	5.8	5.8	116,444	136.23

							4
95 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.0	0.3	0.5	0.6	1,585	0.572
	AEGL-2	4.6	3.0	3.8	4.0	63,779	46.809
	AEGL-1	18.4	4.7	6.1	6.4	151,889	284.029

75 deg, 30 min, North							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.3	0.0	0.1	0.2	74	0.055
	AEGL-2	2.2	1.2	1.6	1.5	22,049	9.175
	AEGL-1	2.9	1.5	2.0	2.0	32,973	14.623
75 deg, 1 hour, North							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.6	0.1	0.3	0.3	340	0.185
	AEGL-2	4.4	1.8	2.6	2.5	51,165	29.069
	AEGL-1	5.7	2.6	3.4	3.1	61,999	44.701
75 deg, 2 hours, North							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.7	0.2	0.4	0.4	801	0.383
	AEGL-2	5.7	2.9	3.7	3.6	67,120	50.727
	AEGL-1	11.4	4.1	5.4	4.9	108,247	128.828
75 deg, 4 hours, North							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	0.3	0.4	0.4	835	0.401
	AEGL-2	4.6	2.9	3.1	3.1	62,212	41.006
	AEGL-1	16.5	4.2	8.5	6.0	140,294	243.962

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.3	0.2	58	0.046
AEGL-2	2.2	1.1	1.6	1.5	20,995	9.381
AEGL-1	2.8	1.5	2.0	2.0	30,756	14.481

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.2	0.4	0.3	292	0.203
AEGL-2	4.0	1.9	2.6	2.7	52,706	28.049
AEGL-1	5.1	2.6	3.5	3.4	68,714	43.917

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.2	0.5	0.5	659	0.415
AEGL-2	4.9	2.8	4.0	3.4	68,861	44.986
AEGL-1	9.0	3.8	5.5	5.3	117,290	116.984

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.4	0.6	0.4	732	0.453
AEGL-2	4.1	2.8	3.4	3.3	61,445	36.484
AEGL-1	17.8	3.8	6.2	6.3	144,702	260.018

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.2	0.1	64	0.052
AEGL-2	2272.0	1.0	1.5	1.5	17,656	9.207
AEGL-1	2.7	1.5	2.2	2.0	27,168	14.022

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.1	0.4	0.3	258	0.202
AEGL-2	3.6	1.7	2.9	2.7	47,891	26.894
AEGL-1	4.9	2.3	3.7	3.5	70,766	42,480

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.3	0.6	0.5	594	0.434
AEGL-2	4.8	2.5	3.6	3.8	72,377	44.881
AEGL-1	8.5	3.3	5.9	5.5	117,456	115.873

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.3	0.6	0.5	626	0.453
AEGL-2	4.2	2.5	3.6	3.2	62,466	36.839
AEGL-1	16.8	3.4	7.0	7.3	160,051	243.782

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.3	0.1	60	0.049
AEGL-2	2.4	1.1	1.6	1.6	16,216	9.17
AEGL-1	2.9	1.5	2.0	2.1	27,700	14.241

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.2	0.5	0.3	248	0.202
AEGL-2	4.4	1.7	2.5	2.5	44,098	27.125
AEGL-1	5.5	2.5	3.4	3.5	61,813	43.313

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.3	0.5	0.5	551	0.414
AEGL-2	5.3	2.8	3.8	3.6	67,364	45.814
AEGL-1	11.2	4.1	5.5	5.6	119,290	140.23

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.3	0.6	0.5	573	0.424
AEGL-2	5.1	2.5	3.5	3.1	57,978	36.524
AEGL-1	16.9	4.3	6.4	6.2	141,445	259.979

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.1	0.2	65	0.053
AEGL-2	2.4	1.0	1.5	1.6	18,821	9.031
AEGL-1	2.8	1.3	2.0	2.0	28,528	14,344

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.1	0.3	0.3	289	0.191
AEGL-2	4.2	1.6	2.6	2.7	43,606	26.947
AEGL-1	5.1	2.2	3.3	3.6	58,973	42.202

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.3	0.6	0.5	630	0.384
AEGL-2	4.8	2.3	3.7	3.7	60,075	43.389
AEGL-1	8.9	3.1	5.4	5.9	112,218	113.281

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.2	0.5	0.5	689	0.416
AEGL-2	4.2	2.2	3.2	3.0	52,826	34.967
AEGL-1	17.1	3.3	6.5	6.8	151,646	231.164

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	0.4	0.0	0.1	0.2	81	0.052
AEGL-2	2.4	1.0	1.5	1.6	21,412	3.248
AEGL-1	2.8	1.5	2.0	2.1	29,948	14.437

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.1	0.3	0.4	391	0.191
AEGL-2	4.3	1.8	2.4	2.9	42,857	28.295
AEGL-1	5.4	2.5	3.3	3.7	58,006	43.128

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	231.0	0.4	0.6	876	0.402
AEGL-2	5.6	2.6	3.5	4.2	64,501	49.449
AEGL-1	11.4	5.1	4.4	5.3	119,788	124.339

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.3	0.5	0.5	949	0.427
AEGL-2	4.7	2.5	3.4	3.4	54,669	38.213
AEGL-1	17.9	5.4	4.8	6.5	172,310	248.714

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.1	0.2	67	0.041
AEGL-2	2.2	1.1	1.5	1.6	21,882	8.895
AEGL-1	2.8	1.5	2.0	2.2	30,522	14.344

75 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.1	0.3	0.4	445	0.191
AEGL-2	4.5	1.9	2.5	2.7	42,468	28.177
AEGL-1	5.4	2.7	3.3	3.4	56,739	44.721

75 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.3	0.5	0.6	1,120	0.422
AEGL-2	5.2	3.0	3.5	3.6	63,015	49.872
AEGL-1	9.9	4.2	5.3	5.4	110,402	127.2

75 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.3	0.5	0.5	1,206	0.454
AEGL-2	4.4	3.0	3.3	3.4	56,155	39.032
AEGL-1	16.8	4.4	6.6	7.6	152,475	253.506

75 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.1	0.2	69	0.046
AEGL-2	2.1	1.2	1.6	1.7	22,500	9.237
AEGL-1	2.8	1.5	2.0	2.2	32,552	14.434

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.2	0.3	0.3	471	0.197
AEGL-2	4.1	2.1	2.9	3.0	46,144	29.014
AEGL-1	5.1	2.8	3.8	3.9	58,729	45.349

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.3	0.5	0.6	1,103	0.416
AEGL-2	5.0	2.9	4.2	4.3	67,071	54.412
AEGL-1	10.1	4.5	5.6	5.7	114,922	134.752

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.3	0.6	0.7	1,230	0.451
AEGL-2	4.5	2.8	3.5	3.7	57,882	39.696
AEGL-1	17.3	4.8	6.6	6.3	147,460	252.78

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.0	0.1	0.0	15	0.012
AEGL-2	2.2	1.0	1.4	1.5	21,162	8.621
AEGL-1	2.9	1.5	1.9	1.8	31,249	13.882

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.1	0.3	0.2	159	0.108
AEGL-2	4.4	1.9	2.5	2.3	48,419	27.037
AEGL-1	5.7	2.6	3.1	3.1	61,666	44.07

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.3	0.4	0.4	515	0.262
AEGL-2	5.0	2.9	3.0	3.1	60,628	39.945
AEGL-1	10.8	4.1	5.0	4.9	104,902	125.867

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.2	0.4	0.4	531	0.273
AEGL-2	4.3	2.6	3.0	2.8	54,205	30.734
AEGL-1	15.1	4.2	6.7	5.9	135,057	209.175

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.0	0.1	0.1	18	0.014

AEGL-2	2.2	1.2	1.5	1.6	20,051	8.946
AEGL-1	2.8	1.5	2.0	2.0	30,210	14.159

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.2	0.3	0.3	160	0.116
AEGL-2	3.9	1.7	2.7	2.8	49,645	25.718
AEGL-1	5.0	2.5	3.5	3.6	67,331	42.202

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.3	0.4	0.4	404	0.271
AEGL-2	4.4	2.6	3.4	3.7	64,301	39.48
AEGL-1	9.1	3.5	5.4	5.4	116,007	113.652

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.3	0.5	0.5	429	0.288
AEGL-2	4.0	2.7	3.2	3.2	56,401	31.358
AEGL-1	15.1	3.5	5.9	6.9	138,285	204.409

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	0.0	0.1	0.1	25	0.02
AEGL-2	2.1	1.3	1.2	2.0	16,634	8.705
AEGL-1	2.6	1.6	1.6	2.5	25,720	13.419

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.1	0.3	0.3	150	0.121
AEGL-2	3.6	1.8	2.5	2.5	45,310	25.434
AEGL-1	4.9	2.3	3.5	3.4	69,770	41.739

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	0.7	0.2	0.5	0.5	390	0.295
AEGL-2	4.1	2.2	3.5	3.4	65,230	38.378
AEGL-1	8.6	3.3	5.7	5.4	114,042	111.43

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.2	0.6	0.4	409	0.308
AEGL-2	3.7	2.5	3.0	3.0	54,039	30.224
AEGL-1	14.9	3.4	6.7	6.4	149,594	197.632

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	-0.1	0.2	0.1	18	0.014
AEGL-2	2.3	1.0	1.5	1.5	14,388	8.426
AEGL-1	2.9	1.4	1.9	2.0	25,355	13.604

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.1	0.4	0.2	142	0.116
AEGL-2	4.2	1.7	2.4	2.4	41,561	25.746
AEGL-1	5.4	2.4	3.3	3.3	60,476	41.554

55 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.2	0.6	0.4	322	0.262
AEGL-2	5.1	2.5	3.4	3.1	60,645	39.533
AEGL-1	11.0	3.8	5.5	5.0	115,375	130.28

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.3	0.6	0.4	357	0.29
AEGL-2	4.3	2.4	3.2	2.9	51,339	30.718
AEGL-1	15.7	4.1	6.2	6.1	137,052	222.46

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	-0.1	0.1	0.1	14	0.012
AEGL-2	2.2	1.0	1.5	1.6	17,357	8.398
AEGL-1	2.8	1.3	2.0	1.9	27,007	13.234

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.3	0.2	135	0.104
AEGL-2	4.1	1.5	2.6	2.4	41,758	25.526
AEGL-1	5.1	2.2	3.3	3.6	58,406	41.552

55 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.1	0.4	0.5	409	0.262
AEGL-2	4.2	2.2	3.2	3.0	54,586	36.562
AEGL-1	8.8	2.9	5.5	6.0	109,026	108.839

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.1	0.4	0.4	433	0.277
AEGL-2	3.8	2.2	3.2	3.1	48,190	29.781
AEGL-1	15.7	3.2	6.5	6.7	141,442	201.12

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	-0.1	0.1	0.2	17	0.014
AEGL-2	2.3	1.0	1.5	1.6	20,495	8.758
AEGL-1	2.9	1.4	2.0	2.0	27,925	13.746

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.1	0.2	0.4	205	0.11
AEGL-2	4.3	1.6	2.6	2.9	40,599	26.886
AEGL-1	5.4	2.3	3.3	3.7	57,125	41.832

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.1	0.4	0.5	576	0.27
AEGL-2	4.8	2.3	3.2	3.9	55,437	40.147
AEGL-1	11.5	5.2	4.3	5.5	120,625	124.387

55 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.1	0.4	0.5	635	0.294
AEGL-2	4.3	2.2	3.0	3.2	46,236	30.131
AEGL-1	16.5	5.3	4.5	6.7	165,546	215.399

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	-0.1	0.1	0.9	21	0.017
AEGL-2	2.1	1.1	1.5	1.6	21,659	8.789
AEGL-1	2.8	1.4	1.9	2.2	30,158	13.974

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.1	0.3	0.3	240	0.114
AEGL-2	4.4	1.9	2.5	2.5	40,960	26.498
AEGL-1	5.3	2.6	3.3	3.4	55,941	44.146

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.2	0.4	0.4	729	0.289
AEGL-2	4.5	2.6	3.2	3.5	55,999	40.791
AEGL-1	10.3	4.1	5.2	5.3	107,142	123.502

55 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.2	0.5	0.5	791	0.306

AEGL-2	3.9	2.6	2.8	3.0	49,637	31.982
AEGL-1	15.1	4.2	6.6	6.8	140,235	215.429

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	-0.1	0.1	0.1	17	0.014
AEGL-2	2.1	1.1	1.5	1.6	21,172	8.583
AEGL-1	2.8	1.4	2.0	2.0	32,194	14.252

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.3	0.3	229	0.112
AEGL-2	4.1	1.8	2.5	2.8	44,014	26.435
AEGL-1	4.9	2.6	3.3	3.6	57,798	43.867

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.1	0.5	0.5	710	0.281
AEGL-2	4.6	2.8	3.5	3.3	56,891	40.849
AEGL-1	10.2	4.2	5.6	5.4	110,112	129.46

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.3	0.4	0.4	796	0.308
AEGL-2	3.8	2.4	3.1	3.1	51,324	31.316
AEGL-1	15.6	4.6	5.9	5.7	135,004	215.902

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.2	1.0	1.4	1.5	20,266	8.174
AEGL-1	2.8	1.4	2.0	1.8	30,130	13.142

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.2	0.1	76	0.055
AEGL-2	4.4	1.6	2.5	2.3	46,298	25.354
AEGL-1	5.6	2.5	3.2	3.0	60,978	42.27

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	259	0.153
AEGL-2	4.5	2.5	2.8	2.7	53,551	30.732
AEGL-1	10.8	3.8	4.8	4.7	102,214	121.075

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.3	0.4	292	0.168
AEGL-2	3.8	2.5	2.6	2.8	48,408	25.283
AEGL-1	13.3	3.8	6.4	5.4	122,508	197.989

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.2	1.0	1.4	1.5	17,975	7.835
AEGL-1	2.7	1.4	2.0	1.8	27,421	12.95

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	0.0	0.2	0.2	63	0.049
AEGL-2	4.0	1.7	2.5	2.5	46,992	23.858
AEGL-1	5.1	2.4	3.4	3.5	65,726	40.207

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.4	0.4	232	0.162
AEGL-2	4.0	2.4	3.0	3.0	56,629	31.006
AEGL-1	8.8	3.3	4.8	4.8	112,263	105.507

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.2	0.4	0.5	244	0.17
AEGL-2	3.3	2.3	3.0	2.9	49,439	25.282
AEGL-1	13.1	3.4	5.7	5.9	130,473	160.055

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.9	1.1	1.6	1.5	15,034	7.953
AEGL-1	2.6	1.5	2.1	1.9	24,237	12.679

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.2	0.1	71	0.058
AEGL-2	3.6	1.6	2.8	2.5	40,998	23.169
AEGL-1	4.8	2.3	3.6	3.4	66,007	38.759

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.4	0.3	190	0.154
AEGL-2	3.6	2.3	3.1	2.9	55,896	30.966
AEGL-1	8.3	3.4	5.6	5.2	109,778	102.915

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.2	0.4	0.4	231	0.183

	AEGL-2	3.2	2.3	2.8	2.8	46,574	24.519
	AEGL-1	13.1	3.5	6.9	6.0	131,153	154.312

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.2	1.0	1.5	1.4	13,343	7.88
AEGL-1	2.8	1.5	2.0	1.8	23,778	12.718

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.3	0.2	60	0.049
AEGL-2	4.5	1.5	2.6	2.3	39,884	24.712
AEGL-1	5.4	2.2	3.4	3.1	60,077	41.282

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.4	0.3	188	0.154
AEGL-2	4.2	2.3	3.3	2.8	50,821	31.041
AEGL-1	10.8	3.7	5.7	5.0	113,917	128.459

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.1	0.4	0.3	201	0.164
AEGL-2	3.8	2.1	2.8	2.6	43,573	24.119
AEGL-1	14.0	4.0	6.2	5.5	130,967	188.676

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.1	0.8	1.6	1.4	15,901	7.724
AEGL-1	2.8	1.3	2.0	1.9	25,006	12.679

35 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.2	0.2	71	0.058
AEGL-2	4.1	1.3	2.8	2.4	38,679	23.447
AEGL-1	5.0	2.2	3.5	3.6	53,048	39.44

35 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.4	0.3	212	0.151
AEGL-2	3.7	2.2	3.2	2.9	47,531	28.957
AEGL-1	8.6	2.9	5.5	5.5	107,174	103.965

35 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.3	0.3	235	0.167
AEGL-2	3.4	2.1	2.7	2.5	43,398	24.266
AEGL-1	13.1	2.9	5.7	6.1	125,791	155.251

35 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.4	0.9	1.7	1.4	18,928	7.814
AEGL-1	2.9	1.4	2.1	1.8	26,974	12.956

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.2	0.2	78	0.049
AEGL-2	4.3	1.6	2.7	2.4	38,413	24.801
AEGL-1	5.3	2.2	3.6	3.1	56,924	41.369

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.4	0.4	316	0.158
AEGL-2	4.3	2.1	3.2	3.1	46,639	31.224
AEGL-1	11.3	4.8	5.2	4.2	116,588	118.462

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.4	0.5	358	0.174
AEGL-2	3.8	2.0	2.9	2.9	41,051	24.083
AEGL-1	13.3	4.9	6.6	4.5	144,080	169.044

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.1	0.9	1.5	1.6	19,652	8.086
AEGL-1	2.8	1.4	1.9	2.0	29,767	13.469

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.2	0.2	99	0.054
AEGL-2	3.9	1.6	2.4	2.7	39,627	24.669
AEGL-1	5.3	2.6	3.2	3.7	53,008	42.017

35 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.4	0.4	385	0.166
AEGL-2	4.3	2.5	2.9	3.0	48,056	32.066
AEGL-1	10.3	3.8	5.2	5.5	104,324	118.093

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.2	0.5	0.4	421	0.178

	AEGL-2	3.5	2.2	2.7	2.8	43,817	24.675
	AEGL-1	13.7	4.0	5.7	6.2	126,528	176.611
35 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	2.1	1.1	1.5	1.5	19,609	7.877
	AEGL-1	2.7	1.4	1.9	2.0	30,206	13.233
35 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.3	0.0	0.2	0.2	74	0.049
	AEGL-2	3.8	1.8	2.7	2.6	42,706	24.59
	AEGL-1	5.0	2.4	3.5	3.4	55,278	41.925
35 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.6	0.0	0.4	0.4	349	0.154
	AEGL-2	4.0	2.5	3.0	3.1	50,945	32.913
	AEGL-1	10.0	4.3	5.6	5.4	108,050	125.151
35 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.7	0.2	0.4	0.5	404	0.174
	AEGL-2	3.5	2.4	2.8	3.0	46,210	25.16
	AEGL-1	13.7	4.3	5.9	5.9	124,378	179.539

Stability Class B –
JACKSON, MS

ORIGIN: 32.31888 N
90.18555 W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	-0.1	0.1	0.1	22	0.015
AEGL-2	3.7	0.6	1.4	1.4	25,092	10.46
AEGL-1	4.3	1.0	2.1	1.8	32,409	16.441

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.3	0.3	207	0.122
AEGL-2	6.8	0.9	2.5	2.3	40,254	30.028
AEGL-1	9.7	1.4	3.6	2.9	53,868	56.621

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.4	0.4	496	0.246
AEGL-2	8.7	1.3	3.8	3.1	49,986	50.446
AEGL-1	15.2	1.9	6.2	5.5	85,160	149.282

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.4	573	0.28

AEGL-2	7.5	1.3	3.7	2.7	48,458	42.627
AEGL-1	22.7	1.8	7.6	6.2	89,414	224.907

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	-0.1	0.1	0.1	37	0.026
AEGL-2	3.0	0.6	1.4	1.5	21,632	9.696
AEGL-1	3.7	1.0	2.0	2.1	33,549	14.991

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.3	0.3	179	0.116
AEGL-2	5.2	1.0	2.4	2.4	47,625	26.657
AEGL-1	7.0	1.4	3.1	3.6	65,780	45.655

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.5	0.4	391	0.258
AEGL-2	5.7	1.2	3.0	3.2	53,876	33.384
AEGL-1	14.8	1.8	4.6	4.4	108,762	145.303

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.4	0.4	404	0.268
AEGL-2	5.8	1.2	3.1	2.7	51,583	30.851
AEGL-1	26.0	1.8	5.3	5.0	117,709	258.027

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.2	0.0	42	0.035
AEGL-2	2.8	0.7	1.6	1.4	13,054	9.48
AEGL-1	3.5	1.0	2.3	1.9	21,677	14.594

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.3	0.2	162	0.13
AEGL-2	4.8	0.9	2.9	2.4	36,398	25.572
AEGL-1	6.6	1.3	3.9	3.3	63,006	45.256

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.4	0.3	338	0.259
AEGL-2	5.4	1.2	3.3	3.1	52,093	33.632
AEGL-1	16.8	2.1	5.5	4.6	122,156	149.191

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.4	0.3	352	0.27
AEGL-2	5.5	1.2	3.1	2.7	49,377	31.142
AEGL-1	24.2	2.2	7.0	7.0	133,103	273.104

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	0.4	0.2	0.2	0.1	39	0.032
AEGL-2	3.3	0.5	1.5	1.2	13,009	9.64
AEGL-1	4.0	0.9	1.9	1.9	20,407	15.178

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.1	0.3	0.2	150	0.123
AEGL-2	7.1	0.9	2.6	2.2	34,193	33.696
AEGL-1	9.9	1.6	3.3	3.0	58,853	62.888

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.4	0.3	299	0.246
AEGL-2	8.9	1.4	3.3	3.0	54,659	53.524
AEGL-1	18.6	2.4	5.1	5.5	85,936	175.474

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.5	0.3	320	0.263
AEGL-2	8.0	1.4	3.4	3.2	53,359	47.339
AEGL-1	27.1	2.4	7.3	8.1	87,344	288.153

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	0.4	-0.2	0.1	0.1	29	0.023
	AEGL-2	3.1	0.5	1.6	1.4	16,552	9.3
	AEGL-1	3.7	0.7	2.1	2.0	25,451	14.418

95 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.1	0.3	0.2	143	0.115
AEGL-2	5.4	0.7	2.7	2.3	38,604	27.66
AEGL-1	6.9	1.2	3.4	3.5	57,752	46.09

95 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.4	0.4	328	0.239
AEGL-2	5.8	1.1	3.1	3.0	46,492	33.892
AEGL-1	17.3	2.1	4.6	4.8	103,496	151.39

95 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.4	0.4	368	0.262
AEGL-2	6.0	1.0	3.1	3.0	44,562	31.812
AEGL-1	26.2	2.2	7.5	5.6	128,314	283.251

95 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.2	0.1	0.2	53	0.029
AEGL-2	3.4	0.5	1.3	1.7	20,371	10.156

AEGL-1	4.1	0.9	1.8	2.3	26,153	15.663

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.1	0.2	0.3	277	0.116
AEGL-2	7.7	1.2	2.2	2.4	40,976	31.955
AEGL-1	9.7	2.1	2.7	3.1	59,001	51.642

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	-0.1	0.4	0.6	595	0.234
AEGL-2	8.1	1.7	2.5	3.1	51,255	42.519
AEGL-1	18.9	2.7	6.2	4.1	111,145	152.244

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.5	627	0.25
AEGL-2	7.3	1.7	2.2	3.1	46,745	36.955
AEGL-1	27.6	2.8	4.3	6.3	128,726	254.996

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.1	0.1	0.2	82	0.033
AEGL-2	3.3	0.7	1.3	1.6	20,029	9.823
AEGL-1	4.0	0.9	1.9	2.0	25,888	15.378

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	0.7	-0.1	0.2	0.3	372	0.13
AEGL-2	6.8	0.9	2.1	2.6	32,971	31.165
AEGL-1	8.5	1.5	3.1	3.5	49,135	52.747

95 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.4	769	0.257
AEGL-2	8.0	1.3	3.3	3.5	45,998	47.446
AEGL-1	16.5	2.0	4.9	5.8	89,865	160.908

95 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.4	832	0.278
AEGL-2	7.4	1.4	3.2	3.2	43,071	41.427
AEGL-1	25.1	2.0	7.3	7.1	118,411	280.716

95 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.1	0.0	0.2	58	0.029
AEGL-2	3.1	0.7	1.4	1.6	22,976	10.125
AEGL-1	3.8	1.0	2.0	2.1	29,914	16.034

95 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	358	0.121
AEGL-2	6.3	1.1	2.5	2.6	38,233	32.051
AEGL-1	8.1	1.9	3.1	3.5	53,821	52.176

95 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.5	835	0.254
AEGL-2	7.9	1.8	2.9	3.4	51,892	48.439
AEGL-1	19.5	2.9	4.2	4.4	90,055	161.406

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.5	898	0.275
AEGL-2	7.1	1.8	3.0	3.6	49,154	42.307
AEGL-1	26.7	2.9	5.6	7.0	99,151	267.699

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.6	0.6	1.3	1.4	24,182	9.829
AEGL-1	4.3	0.9	2.0	1.7	31,377	15.664

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.1	0.1	101	0.061
AEGL-2	8.0	0.9	2.4	2.3	39,919	33.956
AEGL-1	9.4	1.4	3.4	3.2	53,447	55.53

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.3	0.3	318	0.171
AEGL-2	7.5	1.2	3.0	2.8	47,391	42.246
AEGL-1	15.2	1.8	6.4	5.1	84,874	149.787

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.3	0.4	366	0.193
AEGL-2	6.8	1.3	3.1	2.7	46,250	36.506
AEGL-1	21.3	1.9	7.2	6.4	87,846	200.047

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.0	4	0.003
AEGL-2	3.0	0.6	1.4	1.5	20,500	9.207
AEGL-1	3.6	1.0	1.8	2.0	32,131	14.437

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.1	0.2	0.2	122	0.079
AEGL-2	4.7	0.9	2.4	2.2	44,909	24.31
AEGL-1	6.8	1.4	3.0	3.0	64,204	43.406

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	0.7	0.0	0.4	0.4	286	0.182
AEGL-2	5.2	1.1	3.0	2.7	51,360	30.66
AEGL-1	14.8	1.7	4.6	4.3	107,608	141.848

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.4	0.3	314	0.202
AEGL-2	5.2	1.2	2.9	2.7	48,930	27.973
AEGL-1	23.6	1.8	4.9	5.5	116,149	226.18

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.0	4	0.003
AEGL-2	2.8	0.6	1.6	1.4	11,897	8.721
AEGL-1	4.0	0.9	2.1	2.0	20,462	13.882

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.3	0.2	96	0.078
AEGL-2	4.8	0.9	3.0	2.2	33,160	23.744
AEGL-1	6.5	1.3	4.0	3.3	61,700	43.775

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.4	0.2	231	0.181
AEGL-2	5.0	1.3	3.2	2.7	47,606	29.908
AEGL-1	16.3	2.2	5.4	4.5	122,966	147.882

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.4	0.2	249	0.196
AEGL-2	5.0	1.3	3.1	2.7	44,393	27.55
AEGL-1	22.2	2.4	6.2	5.0	130,521	223.809

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.0	4	0.003
AEGL-2	3.4	0.5	1.3	1.4	12,654	9.416
AEGL-1	4.1	0.8	2.1	1.9	20,205	15.169

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.1	0.2	0.1	85	0.069
AEGL-2	7.1	0.9	2.4	2.3	33,350	32.675
AEGL-1	9.8	1.6	3.1	3.1	58,752	61.958

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.3	0.2	204	0.166
AEGL-2	8.0	1.4	3.0	3.2	52,438	47.771
AEGL-1	19.2	2.4	4.3	4.4	85,299	171.263

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.4	0.2	223	0.183
AEGL-2	7.1	1.4	3.1	3.2	51,236	42.424
AEGL-1	25.8	2.5	6.3	6.0	86,566	256.184

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.1	0.4	1.4	1.5	16,278	9.175
AEGL-1	3.8	0.7	2.0	2.0	25,398	14

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.2	0.2	0.2	71	0.058
AEGL-2	4.8	0.6	2.5	2.6	34,576	23.307
AEGL-1	7.0	1.1	3.4	3.4	56,288	44.977

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.2	0.3	225	0.169
AEGL-2	5.4	1.0	3.2	3.0	41,538	28.962
AEGL-1	17.1	1.9	4.8	4.8	102,034	151.411

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	0.8	0.0	0.2	0.4	250	0.184
AEGL-2	5.5	1.0	3.0	2.9	39,755	26.978
AEGL-1	23.9	2.0	5.5	5.1	119,526	231.882

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.0	4	0.003
AEGL-2	3.4	0.5	1.4	1.7	19,683	9.508
AEGL-1	3.9	0.8	1.9	2.4	24,965	14.831

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.2	0.2	0.2	150	0.065
AEGL-2	7.3	1.0	2.2	2.3	38,412	29.275
AEGL-1	9.5	1.9	3.2	3.2	58,696	50.585

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.5	460	0.18
AEGL-2	7.4	1.5	2.8	3.3	48,352	38.518
AEGL-1	17.2	2.6	3.8	6.0	110,316	145.117

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.5	477	0.188
AEGL-2	6.8	1.5	2.3	3.0	43,819	34.179
AEGL-1	25.1	2.6	4.6	6.3	127,484	225.916

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	-0.2	0.0	0.0	13	0.006
AEGL-2	3.3	0.6	1.3	1.5	19,584	9.451
AEGL-1	4.0	0.9	1.8	1.9	25,065	14.914

75 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	242	0.09
AEGL-2	6.2	0.9	2.2	2.5	31,719	28.555
AEGL-1	8.4	1.4	3.0	3.5	48,025	51.177

75 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.3	556	0.192
AEGL-2	7.4	1.2	2.6	3.4	41,024	40.966
AEGL-1	16.4	1.9	4.8	5.8	86,566	152.429

75 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.2	0.4	607	0.211
AEGL-2	6.3	1.2	2.8	3.3	39,268	35.082
AEGL-1	24.2	1.9	6.3	6.8	110,881	247.692

75 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.0	4	0.003

AEGL-2	3.2	0.6	1.5	1.7	22,518	9.779
AEGL-1	3.7	1.0	2.1	2.1	29,190	15.142

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.1	0.2	211	0.075
AEGL-2	5.8	1.0	2.6	2.5	37,419	29.629
AEGL-1	7.9	1.9	3.2	3.4	53,444	51.828

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.5	636	0.196
AEGL-2	6.7	1.8	3.0	3.2	47,116	40.861
AEGL-1	19.7	2.6	4.3	5.1	87,676	155.854

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.4	667	0.208
AEGL-2	6.2	1.8	2.9	3.3	46,415	37.127
AEGL-1	23.2	2.7	5.1	5.8	94,476	219.782

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55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.6	0.5	1.3	1.4	23,449	9.353

	AEGL-1	4.3	0.9	2.0	1.8	30,763	15.317

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.2	0.1	0.1	42	0.024
AEGL-2	5.7	0.9	2.5	2.0	36,479	24.002
AEGL-1	9.4	1.3	3.3	2.7	52,053	53.856

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.1	0.2	158	0.094
AEGL-2	6.4	1.0	2.6	2.5	42,050	31.374
AEGL-1	14.4	1.6	5.8	5.0	80,775	135.397

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.2	187	0.112
AEGL-2	5.7	1.0	2.5	2.4	41,317	26.955
AEGL-1	16.9	1.6	6.5	4.7	80,245	145.35

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	0.6	1.4	1.4	19,168	8.717
AEGL-1	3.6	1.0	1.9	2.0	31,563	14.046

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	-0.1	0.1	0.2	45	0.032
AEGL-2	4.4	0.8	2.3	2.5	39,859	19.678
AEGL-1	6.8	1.3	3.3	3.1	62,692	41.833

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.2	0.3	161	0.103
AEGL-2	4.7	1.1	2.7	2.6	45,190	23.896
AEGL-1	13.0	1.8	4.7	4.2	100,908	115.595

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	176	0.114
AEGL-2	4.5	1.1	2.7	2.6	43,329	22.2
AEGL-1	20.1	1.7	4.9	5.0	105,489	152.355

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.9	0.5	1.6	1.2	11,376	8.494
AEGL-	3.5	0.8	2.1	1.9	20,011	13.768

	1						
55 deg, 1 hour, east							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.4	-0.1	0.2	0.0	50	0.041
	AEGL-2	4.2	0.8	2.5	2.3	28,086	19.875
	AEGL-1	6.4	1.2	3.7	3.2	58,899	42.078
55 deg, 2 hours, east							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.7	0.0	0.3	0.3	130	0.105
	AEGL-2	4.4	1.1	2.7	2.5	36,118	23.104
	AEGL-1	14.6	2.0	5.0	4.6	118,675	134.567
55 deg, 4 hours, east							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.7	0.0	0.3	0.3	155	0.125
	AEGL-2	4.4	1.1	2.6	2.5	33,282	20.906
	AEGL-1	19.1	2.0	5.3	5.0	121,835	165.112
55 deg, 30 min, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.3	0.5	1.3	1.3	12,053	9.058
	AEGL-1	4.0	0.8	1.8	1.7	19,311	14.457
55 deg, 1 hour, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	0.4	-0.2	0.2	0.2	36	0.029
AEGL-2	5.9	0.8	2.2	1.9	28,089	23.374
AEGL-1	9.7	1.4	3.0	3.1	56,414	60.15

55 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.2	0.2	117	0.095
AEGL-2	6.7	1.2	3.0	2.4	42,436	34.763
AEGL-1	18.9	2.3	5.0	5.2	80,725	164.879

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.2	142	0.116
AEGL-2	6.1	1.3	3.1	2.6	40,753	30.262
AEGL-1	22.0	2.3	5.5	4.0	81,492	199.439

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	0.5	1.5	1.4	15,265	8.69
AEGL-1	3.7	0.7	1.9	2.0	24,356	13.975

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.2	0.1	0.1	29	0.023
AEGL-2	4.4	0.6	2.3	2.5	30,430	19.12
AEGL-1	6.7	1.1	3.3	3.6	54,280	42.48

55 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.1	0.2	0.2	118	0.095
AEGL-2	4.5	1.0	2.7	2.5	34,593	21.665
AEGL-1	17.2	2.0	4.7	4.9	99,741	146.595

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	141	0.113
AEGL-2	4.6	1.0	2.4	2.5	32,646	19.858
AEGL-1	20.3	2.0	5.0	5.0	103,610	166.052

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	0.5	1.3	1.7	19,287	9.163
AEGL-1	4.0	0.8	1.8	2.2	24,941	14.83

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.1	0.1	0.2	69	0.032
AEGL-2	5.9	1.0	2.0	2.5	32,477	23.114
AEGL-1	9.4	1.9	2.7	3.1	58,056	49.804

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	0.5	0.0	0.2	0.2	237	0.099

3						
AEGL-2	6.4	1.6	2.4	2.9	40,331	30.094
AEGL-1	16.0	2.6	4.2	6.3	104,073	131.687

55 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.3	0.4	262	0.111
AEGL-2	5.9	1.6	2.2	2.7	36,740	26.569
AEGL-1	21.8	2.5	4.7	6.4	109,850	170.769

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	0.6	1.3	1.5	18,877	9.232
AEGL-1	4.0	0.9	1.8	2.0	24,677	14.877

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.1	0.1	0.1	103	0.038
AEGL-2	5.6	0.9	2.1	2.4	29,803	23.897
AEGL-1	8.5	1.5	2.8	3.4	46,805	49.883

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.2	293	0.107
AEGL-2	6.2	1.1	2.5	2.8	37,346	31.621
AEGL-1	15.3	1.9	4.7	5.0	77,949	135.068

55 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.3	0.3	345	0.126
AEGL-2	5.4	1.1	2.6	2.8	36,390	27.447
AEGL-1	19.8	2.0	4.8	5.3	91,554	177.594

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	0.7	1.4	1.4	21,812	9.283
AEGL-1	3.7	0.9	1.9	2.1	28,574	15.108

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.2	0.1	0.2	96	0.038
AEGL-2	5.4	1.1	2.2	2.6	35,514	25.666
AEGL-1	7.7	1.8	3.0	3.3	51,206	48.967

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.1	0.4	329	0.11
AEGL-2	5.5	1.6	2.9	3.1	43,675	32.06
AEGL-1	18.9	2.5	4.5	4.5	85,549	155.04

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	362	0.123

	AEGL-2	5.2	1.6	2.9	2.9	42,733	29.161
	AEGL-1	20.2	2.5	4.8	5.3	90,411	181.158

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.4	0.4	1.3	1.2	22,599	8.75
AEGL-1	4.4	0.9	1.7	1.7	30,275	14.6

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	0.7	2.1	2.1	33,976	19.717
AEGL-1	9.4	1.2	2.7	2.7	50,848	51.277

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.2	0.2	55	0.033
AEGL-2	5.6	0.9	2.5	2.4	38,960	24.709
AEGL-1	14.3	1.6	6.1	5.3	80,610	135.766

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.2	0.2	79	0.05
AEGL-2	4.7	0.9	2.4	2.5	37,944	21.172
AEGL-1	14.5	1.6	6.4	5.1	77,315	124.599

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.9	0.5	1.1	1.1	17,646	8.117
AEGL-1	3.6	0.8	1.8	1.6	29,837	13.312

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	0.8	1.7	2.2	36,212	16.831
AEGL-1	6.6	1.3	2.6	2.9	60,629	39.958

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	1.3	0.2	74	0.049
AEGL-2	4.1	1.1	2.1	2.5	39,962	19.144
AEGL-1	13.3	1.6	3.5	4.1	99,841	115.047

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.1	0.2	94	0.063
AEGL-2	3.8	1.1	2.1	2.6	37,245	17.355
AEGL-1	16.6	1.6	3.9	3.9	100,042	119.075

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.9	0.5	1.5	1.3	10,096	7.515
AEGL-1	3.5	0.8	2.0	2.0	17,693	12.377

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	0.8	2.2	2.1	22,970	16.206
AEGL-1	6.3	1.3	3.7	3.3	56,902	40.764

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.3	0.2	58	0.047
AEGL-2	3.9	1.1	2.2	2.4	28,354	18.194
AEGL-1	13.8	1.9	5.0	4.6	111,482	121.343

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.3	0.3	80	0.065
AEGL-2	3.7	1.2	2.1	2.2	26,356	16.411
AEGL-1	15.6	2.0	4.9	4.6	116,450	130.214

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	0.6	1.2	0.9	10,834	8.153
AEGL-1	4.0	0.9	1.7	1.6	18,326	13.783

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.9	2.2	1.7	24,276	18.726
AEGL-1	9.2	1.7	2.8	2.8	55,632	56.824

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.1	0.2	57	0.047
AEGL-2	5.5	1.3	2.3	2.0	34,272	24.894
AEGL-1	18.5	2.5	3.5	3.4	81,461	156.653

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.2	0.1	73	0.059
AEGL-2	5.0	1.4	2.3	2.1	32,021	21.64
AEGL-1	19.1	2.4	3.6	3.7	81,806	155.022

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.0	0.5	1.6	1.4	13,013	7.623
	AEGL-1	3.4	0.8	2.1	1.9	22,477	12.494

35 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.6	1.0	2.4	2.1	25,763	15.2
AEGL-1	6.4	1.5	3.5	3.4	51,104	39.958

35 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.3	0.2	41	0.033
AEGL-2	4.0	0.9	2.1	2.2	29,402	17.109
AEGL-1	16.4	1.9	4.1	4.7	96,677	135.305

35 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.3	0.2	62	0.051
AEGL-2	4.0	1.0	2.2	2.0	27,513	15.431
AEGL-1	16.4	2.0	4.0	4.7	95,203	133.209

35 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	0.4	1.3	1.4	18,921	8.199

AEGL-1	3.9	0.8	1.8	1.9	23,851	13.489

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.8	1.8	2.1	29,363	19.95
AEGL-1	10.0	1.9	2.4	2.8	53,844	47.826

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.3	0.2	97	0.043
AEGL-2	5.7	1.4	2.3	2.6	33,982	23.53
AEGL-1	17.8	2.6	3.3	5.2	98,075	118.144

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.4	0.2	119	0.057
AEGL-2	5.1	1.5	2.2	2.5	31,855	20.875
AEGL-1	17.7	2.4	3.0	6.2	97,265	126.694

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.1	0.5	1.3	1.3	17,058	8.105
AEGL-1	4.0	0.8	1.6	1.9	23,982	13.74

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.6	0.7	2.0	2.3	26,978	19.065
	AEGL-1	8.3	1.4	2.8	3.0	45,091	47.721

35 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.1	0.2	139	0.051
AEGL-2	5.2	1.0	2.3	2.8	33,733	24.629
AEGL-1	16.0	1.7	4.2	4.8	77,649	138.385

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.2	0.2	164	0.064
AEGL-2	4.8	0.9	2.4	2.6	32,738	21.579
AEGL-1	16.5	1.6	4.4	5.5	76,735	137.176

35 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	0.5	1.4	1.3	20,247	8.424
AEGL-1	3.8	0.8	1.9	1.6	28,052	14.044

35 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.9	2.2	2.2	32,842	20.211
AEGL-1	7.7	1.7	2.8	2.8	50,583	47.385

35 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.1	0.2	122	0.047
AEGL-2	4.8	1.1	2.4	2.5	38,113	24.143
AEGL-1	18.8	2.4	3.5	3.4	83,178	142.287

35 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	141	0.059
AEGL-2	4.6	1.1	2.5	2.7	37,804	21.958
AEGL-1	18.7	2.4	3.8	3.5	85,636	142.46

Stability Class C – JACKSON, MS

ORIGIN: 32.31888 N 90.18555 W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.4	1.1	1.2	23,842	11.225
AEGL-1	5.8	0.6	1.4	1.5	29,034	17.307

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.2	0.1	0.2	108	0.06
AEGL-2	9.4	0.5	2.0	1.9	31,920	34.124
AEGL-1	12.0	0.8	3.3	2.2	44,925	62.772

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.1	0.3	216	0.122
AEGL-2	8.8	0.6	3.0	2.1	35,938	38.068
AEGL-1	16.4	1.0	6.3	4.4	61,729	122.037

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.2	0.3	252	0.145
AEGL-2	8.2	0.6	2.6	2.3	35,138	32.053

	AEGL-1	22.0	1.0	6.5	4.3	63,480	152.408

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	0.4	1.1	1.2	21,963	9.768
AEGL-1	4.5	0.7	1.7	1.5	32,571	15.317

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.1	0.1	0.3	99	0.06
AEGL-2	6.0	0.6	1.6	1.8	40,006	22.574
AEGL-1	8.6	0.9	2.5	2.2	65,752	44.177

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.2	0.3	215	0.133
AEGL-2	6.0	0.6	1.8	2.2	43,934	24.907
AEGL-1	16.8	1.1	2.7	3.9	95,748	135.447

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.2	0.2	236	0.148
AEGL-2	6.0	0.7	2.0	2.3	42,523	23.133
AEGL-1	29.4	1.1	3.0	4.0	100,189	207.518

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.4	0.4	1.5	1.2	10,690	9.392
AEGL-1	4.1	0.7	2.0	1.7	17,638	14.275

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.1	0.2	0.2	83	0.066
AEGL-2	5.4	0.6	2.6	2.1	26,026	21.369
AEGL-1	9.2	0.9	3.5	2.9	54,317	50.994

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.2	0.3	172	0.134
AEGL-2	5.8	0.9	2.9	2.2	34,936	27.086
AEGL-1	20.4	2.2	4.2	3.7	110,768	159.737

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.5	0.3	192	0.15
AEGL-2	5.9	0.8	3.0	2.1	33,267	25.265
AEGL-1	27.7	2.2	4.5	4.8	116,022	231.888

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	4.3	0.4	1.1	0.9	13,450	10.792

2						
AEGL-1	5.3	0.7	1.4	1.4	20,372	17.051

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.2	0.2	0.2	81	0.067
AEGL-2	11.0	0.7	1.5	1.4	27,659	41.773
AEGL-1	12.7	1.2	2.2	2.0	41,483	68.179

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.3	0.3	169	0.138
AEGL-2	9.7	0.8	2.0	1.6	32,387	44.723
AEGL-1	27.0	1.6	2.9	2.5	53,859	180.34

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.3	194	0.159
AEGL-2	8.7	0.9	2.0	1.6	30,583	37.305
AEGL-1	30.4	1.7	3.2	2.8	54,742	240.658

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.7	0.3	1.4	1.3	14,588	9.652

	2 AEGL-1	4.4	0.5	1.9	1.9	23,799	15.062
95 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.7	-0.3	0.2	0.2	71	0.058
	AEGL-2	5.4	0.3	2.4	2.4	29,473	22.067
	AEGL-1	10.2	0.7	3.4	3.1	55,392	53.332
95 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	0.0	0.2	0.3	157	0.134
	AEGL-2	6.2	0.6	2.7	2.5	35,450	26.054
	AEGL-1	21.7	2.0	4.1	3.7	98,101	173.16
95 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.0	0.0	0.5	0.4	179	0.154
	AEGL-2	6.2	0.8	2.6	2.5	34,205	24.159
	AEGL-1	28.9	2.0	4.9	3.8	102,158	237.441
95 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.6	0.3	0.9	1.8	19,413	10.681
	AEGL-1	5.4	0.7	1.3	2.2	25,298	16.358

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	-0.2	0.1	0.2	203	0.075
AEGL-2	8.3	0.6	1.3	1.7	35,802	27.539
AEGL-1	10.4	1.3	2.1	4.6	53,700	53.122

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.2	0.5	373	0.137
AEGL-2	8.0	0.9	1.3	2.3	39,193	31.598
AEGL-1	20.5	1.6	2.0	5.2	89,080	138.123

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.5	424	0.16
AEGL-2	8.0	0.8	1.5	2.0	35,913	28.141
AEGL-1	32.0	1.6	2.3	5.8	94,828	224.412

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.3	0.0	0.0	28	0.009
AEGL-2	4.3	0.4	1.3	1.4	16,312	10.315
AEGL-1	4.9	0.7	1.7	1.7	22,579	16.253

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	-0.2	0.3	0.3	252	0.084
AEGL-	8.1	0.5	2.0	2.2	28,015	29.995

	2 AEGL-1	11.4	1.1	2.6	2.9	39,372	56.917
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.9	0.0	0.3	0.3	433	0.143
	AEGL-2	8.7	0.7	2.2	2.5	31,566	37.113
	AEGL-1	21.5	1.3	3.7	4.6	67,855	156.593
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.9	0.0	0.3	0.4	507	0.171
	AEGL-2	8.1	0.6	2.2	2.6	28,799	31.628
	AEGL-1	25.3	1.2	4.6	5.2	78,404	216.636
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	0.4	1.4	1.3	20,194	10.471
	AEGL-1	4.8	0.7	1.9	1.6	26,280	16.445
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.6	-0.2	0.2	0.3	223	0.067
	AEGL-2	8.8	0.7	1.9	1.8	34,109	32.4
	AEGL-1	11.9	1.3	2.5	2.3	50,399	57.566
95 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	1.0	0.0	0.3	0.4	483	0.136
	AEGL-2	8.9	0.9	1.9	1.7	37,507	37.351
	AEGL-1	24.2	1.5	2.5	2.9	69,672	178.065

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.4	556	0.161
AEGL-2	7.5	1.1	2.2	2.0	33,842	31.111
AEGL-1	27.4	1.6	3.3	3.4	72,507	208.319

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.4	1.3	1.2	23,472	10.838
AEGL-1	5.7	0.7	1.7	1.6	28,999	17.191

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.3	0.2	0.2	42	0.023
AEGL-2	8.2	0.6	1.8	1.8	32,353	27.923
AEGL-1	11.9	0.9	3.8	2.4	44,437	60.62

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.3	0.2	139	0.079
AEGL-2	8.0	0.6	2.5	1.8	33,198	30.551
AEGL-1	16.9	1.0	5.8	5.0	61,229	126.44

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.3	0.2	176	0.102
AEGL-2	7.0	0.6	2.7	1.8	32,831	25.477
AEGL-1	18.9	1.1	6.3	4.9	61,584	130.351

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.4	1.2	1.2	20,991	9.371
AEGL-1	4.5	0.6	1.6	1.4	31,211	14.761

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.2	0.2	0.1	60	0.036
AEGL-2	5.2	0.6	1.8	1.4	34,773	17.781
AEGL-1	8.5	0.9	2.4	2.2	64,617	43.359

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.3	0.3	152	0.092
AEGL-	5.4	0.7	2.2	2.1	39,308	20.292

	2 AEGL-1	17.7	1.1	3.7	3.0	96,247	140.728

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.3	0.2	175	0.109
AEGL-2	5.1	0.6	2.1	1.8	37,698	18.59
AEGL-1	25.2	1.1	3.0	3.4	97,205	168.213

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.5	0.4	1.6	1.2	10,433	9.092
AEGL-1	4.2	0.6	2.0	1.6	17,226	13.997

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.3	0.3	0.1	46	0.038
AEGL-2	4.8	0.5	2.5	1.9	21,700	18.033
AEGL-1	9.2	0.9	4.0	2.7	53,918	51

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.5	0.2	123	0.098
AEGL-2	5.1	0.7	2.6	1.9	27,096	20.702
AEGL-1	18.4	1.8	4.3	4.2	106,137	136.806

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.5	0.4	143	0.113
AEGL-2	5.3	0.8	2.6	2.0	25,459	19.279
AEGL-1	24.5	1.8	5.0	4.1	110,230	180.705

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.3	1.1	0.9	13,417	10.79
AEGL-1	5.6	0.6	1.6	1.4	20,060	17.093

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.3	0.2	0.2	42	0.035
AEGL-2	9.4	0.5	1.8	1.6	25,548	32.831
AEGL-1	12.9	1.3	2.3	2.1	45,405	69.505

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.3	109	0.089
AEGL-2	8.5	0.6	2.0	1.8	28,875	35.037
AEGL-1	25.5	1.5	2.9	2.7	52,883	161.167

75 deg, 4 hours, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	0.0	0.5	0.3	134	0.11
	AEGL-2	7.5	0.8	2.2	1.5	27,791	29.307
	AEGL-1	27.3	1.5	3.2	2.9	53,332	196.391

75 deg, 30 min, south

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.7	0.2	1.2	1.3	14,135	9.437
	AEGL-1	4.5	0.4	1.7	1.9	23,265	15

75 deg, 1 hour, south

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.6	-0.4	0.1	0.1	28	0.023
	AEGL-2	5.4	0.3	1.8	2.1	26,290	18.395
	AEGL-1	9.8	0.6	2.7	3.2	55,283	52.844

75 deg, 2 hours, south

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	0.0	0.3	0.3	103	0.084
	AEGL-2	5.3	0.6	2.4	2.3	29,874	20.313
	AEGL-1	20.4	1.7	3.4	3.6	88,398	147.426

75 deg, 4 hours, south

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.9	0.0	0.3	0.2	122	0.101
	AEGL-	5.7	0.6	2.3	2.2	28,948	19.015

	2 AEGL-1	25.3	1.8	3.8	4.1	91,531	168.545

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.2	0.9	1.5	18,826	10.276
AEGL-1	5.5	0.6	1.3	2.2	25,110	16.283

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.3	0.1	0.2	95	0.035
AEGL-2	8.3	0.7	1.4	2.2	35,250	27.304
AEGL-1	10.4	1.4	2.0	5.2	54,151	52.661

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.3	0.4	236	0.087
AEGL-2	7.6	1.0	1.5	2.4	35,741	27.08
AEGL-1	25.0	1.8	2.3	4.8	88,537	156.403

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.4	282	0.107
AEGL-2	7.2	0.9	1.6	2.3	31,640	23.424
AEGL-1	27.8	1.7	2.3	5.2	90,219	176.813

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	0.4	1.1	1.5	15,731	10.082
AEGL-1	5.1	0.7	1.5	2.0	21,959	15.918

75 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.3	0.2	0.3	139	0.045
AEGL-2	7.4	0.6	1.9	2.3	24,884	25.044
AEGL-1	11.3	1.0	2.5	3.3	38,546	56.846

75 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.3	0.4	293	0.098
AEGL-2	7.7	0.7	1.9	2.5	28,684	30.415
AEGL-1	19.7	1.3	3.3	4.7	63,865	139.454

75 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.3	0.4	337	0.116
AEGL-2	6.9	0.8	2.2	2.4	26,778	25.668
AEGL-1	23.9	1.3	4.4	4.7	69,265	170.262

75 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	4.0	0.4	1.2	1.4	19,620	10.357

	2 AEGL-1	4.7	0.7	1.6	1.8	26,031	16.289

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.2	0.1	0.2	133	0.038
AEGL-2	6.3	0.7	1.6	1.8	28,673	23.534
AEGL-1	11.8	1.2	2.1	2.4	49,668	57.506

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.2	0.2	328	0.095
AEGL-2	7.3	0.8	2.0	2.0	33,097	29.794
AEGL-1	23.2	1.5	2.7	2.7	66,618	155.773

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.2	0.4	402	0.119
AEGL-2	6.4	0.9	2.0	2.2	31,655	25.75
AEGL-1	23.6	1.5	3.4	3.5	67,912	176.285

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55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.4	1.1	1.3	22,951	10.45
AEGL-	5.5	0.6	1.4	1.7	28,259	16.427

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55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.9	0.6	1.8	1.6	28,894	21.483
AEGL-1	11.8	0.9	3.7	2.2	43,492	59.056

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.1	0.1	59	0.033
AEGL-2	6.8	0.5	2.3	1.9	31,453	23.845
AEGL-1	14.9	1.0	5.9	4.4	58,472	106.118

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.2	90	0.054
AEGL-2	5.9	0.6	2.3	2.0	31,205	19.821
AEGL-1	16.5	1.0	6.3	4.4	59,208	109.098

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	0.4	1.2	1.3	20,224	9.064
AEGL-1	4.4	0.6	1.5	1.7	30,186	14.251

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.6	1.7	1.7	30,836	14.734
AEGL-1	8.5	0.8	2.5	2.4	64,322	43.148

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.1	0.1	0.1	64	0.039
AEGL-2	4.6	0.7	1.9	1.9	34,417	16.369
AEGL-1	14.4	1.0	3.8	3.0	91,685	106.371

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	0.0	0.2	0.2	92	0.059
AEGL-2	4.4	0.5	1.9	1.9	33,267	15.358
AEGL-1	20.0	1.0	3.6	3.3	92,689	124.044

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.5	0.4	1.6	1.2	9,619	8.363
AEGL-1	4.0	0.6	1.9	1.8	15,944	13.072

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.5	2.2	1.6	18,796	15.911
AEGL-1	7.9	0.9	3.6	2.7	48,724	43.328

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.1	57	0.046
AEGL-2	4.4	0.7	2.2	1.8	21,263	16.564
AEGL-1	16.7	1.9	4.2	3.8	104,206	124.735

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.3	0.2	78	0.063
AEGL-2	4.4	0.7	2.3	1.8	19,729	15.139
AEGL-1	19.5	1.9	4.5	4.2	107,689	143.757

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.4	1.3	0.9	12,779	10.334
AEGL-1	5.4	0.6	1.9	1.4	19,624	16.701

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	6.8	0.5	1.9	1.6	22,316	23.149
	AEGL-1	12.4	1.2	2.7	2.1	40,909	66.612
55 deg, 2 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.6	0.0	0.2	0.2	50	0.04
	AEGL-2	6.8	0.6	2.1	1.5	24,821	25.761
	AEGL-1	23.8	1.3	2.7	2.5	49,377	156.104
55 deg, 4 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.7	0.0	0.2	0.2	76	0.062
	AEGL-2	6.1	0.7	2.2	1.7	23,735	21.509
	AEGL-1	23.7	1.4	4.2	2.4	49,507	147.739
55 deg, 30 min, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.7	0.2	1.3	1.2	13,109	8.948
	AEGL-1	4.4	0.5	1.9	1.8	22,560	14.484
55 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.6	0.3	2.1	1.8	23,236	15.403
	AEGL-1	9.9	0.6	3.0	2.9	53,256	51.424
55 deg, 2 hours,							

south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.3	0.2	0.2	42	0.034
AEGL-2	4.6	0.4	2.0	1.9	24,982	15.606
AEGL-1	16.9	1.7	4.4	3.7	81,733	116.511

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.3	0.2	68	0.056
AEGL-2	4.7	0.5	1.9	1.9	23,763	14.451
AEGL-1	21.0	1.7	3.6	3.5	83,366	130.661

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.3	1.0	1.7	18,385	9.851
AEGL-1	5.5	0.6	1.3	2.0	24,495	15.779

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.3	0.6	1.4	1.9	29,754	21.392
AEGL-1	10.3	1.3	2.4	4.9	53,433	50.693

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.3	0.2	0.2	116	0.043
AEGL-	6.9	0.8	1.4	2.1	30,676	22.376

	2 AEGL-1	17.3	1.6	2.1	5.0	81,100	110.829

55 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.1	0.1	145	0.059
AEGL-2	6.3	0.9	1.4	2.2	27,516	19.64
AEGL-1	24.0	1.6	2.3	5.7	80,570	130.61

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.4	1.1	1.4	15,028	9.005
AEGL-1	4.9	0.5	1.6	1.9	21,380	15.223

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.4	0.0	0.0	19	0.006
AEGL-2	6.8	0.5	1.6	2.2	23,364	22.241
AEGL-1	11.0	0.9	2.5	2.8	37,437	52.867

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.2	0.2	0.3	154	0.051
AEGL-2	7.0	0.5	2.0	2.4	25,795	25.31
AEGL-1	20.0	1.1	4.0	4.6	62,368	140.384

55 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.0	0.2	0.2	202	0.071
AEGL-2	6.1	0.6	2.0	2.5	24,633	20.902
AEGL-1	20.7	1.1	3.8	5.0	61,310	138.35

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.4	1.2	1.4	19,174	9.78
AEGL-1	4.7	0.7	1.7	1.8	25,290	15.689

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.2	0.7	1.6	1.7	27,442	20.578
AEGL-1	11.5	1.1	2.4	2.4	48,234	55.22

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.2	161	0.047
AEGL-2	6.2	0.7	2.0	2.0	30,133	23.691
AEGL-1	21.4	1.4	2.7	2.8	65,192	156.083

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	0.0	0.2	0.3	195	0.064
AEGL-	5.5	0.8	2.0	1.9	29,180	20.474

	2 AEGL-1	21.8	1.4	3.2	3.3	65,196	142.447

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.2	1.4	1.3	21,811	9.22
AEGL-1	5.4	0.5	1.7	1.6	27,747	15.687

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.3	0.4	1.9	1.6	27,647	18.008
AEGL-1	11.8	0.7	3.5	2.1	42,597	57.734

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.5	2.1	1.9	29,909	19.053
AEGL-1	14.8	0.9	5.6	4.2	57,078	103.452

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.1	0.0	0.1	11	0.008
AEGL-2	4.9	0.5	1.9	1.9	29,131	15.687
AEGL-1	14.8	0.9	5.7	4.2	55,831	93.777

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	0.4	1.1	1.0	18,789	8.592
AEGL-1	4.4	0.7	1.6	1.6	29,969	14.113

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.5	1.5	1.6	27,706	12.475
AEGL-1	8.3	0.8	2.5	2.5	62,238	41.37

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	0.6	1.8	1.7	29,798	13.322
AEGL-1	13.2	0.9	3.2	3.2	86,568	91.026

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.1	0.1	0.1	27	0.02
AEGL-2	3.8	0.7	1.9	1.6	28,071	12.294
AEGL-1	16.6	1.0	3.5	3.0	86,525	94.969

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.4	0.3	1.4	1.2	9,100	7.923
AEGL-1	4.1	0.6	2.2	1.7	16,021	13.313

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	0.5	2.0	1.7	14,767	12.641
AEGL-1	8.6	0.7	3.3	2.7	48,776	44.998

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	0.6	2.1	1.6	15,804	12.752
AEGL-1	15.6	1.7	4.4	3.8	98,567	112.455

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.2	0.1	29	0.024
AEGL-2	3.7	0.6	1.9	1.6	14,861	11.772
AEGL-1	16.4	1.6	4.2	3.8	98,945	113.125

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	4.4	0.3	1.3	0.8	12,004	9.785
AEGL-1	5.3	0.5	1.6	1.3	18,647	15.829

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.9	0.5	1.8	1.2	19,206	17.236
AEGL-1	12.4	1.2	2.5	2.0	37,918	63.688

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.6	1.9	1.5	21,151	18.874
AEGL-1	22.0	1.2	2.7	2.1	45,504	139.472

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.0	0.2	0.1	22	0.018
AEGL-2	4.9	0.6	1.9	1.3	19,101	15.984
AEGL-1	22.0	1.3	2.7	2.2	46,203	125.028

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3						
	AEGL-2	3.7	0.1	1.2	1.2	12,019	8.359
	AEGL-1	4.4	0.4	1.7	1.8	21,354	13.692
35 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.3	0.2	1.8	1.7	20,152	12.812
	AEGL-1	10.2	0.6	2.8	3.0	52,399	50.232
35 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	0.4	1.8	1.6	20,971	12.571
	AEGL-1	16.0	1.3	3.6	3.6	76,521	107.801
35 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.5	-0.2	0.1	0.1	14	0.012
	AEGL-2	4.0	0.5	1.8	1.6	19,957	11.646
	AEGL-1	17.5	1.5	3.9	3.6	77,477	108.538
35 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	0.2	0.8	1.5	16,764	8.252
	AEGL-1	5.4	0.6	1.3	2.0	23,606	15.266

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.5	1.3	1.9	24,165	16.233
AEGL-1	10.1	1.0	2.1	3.7	51,037	49.045

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.6	1.5	1.9	25,467	17.148
AEGL-1	16.0	1.4	2.0	4.5	71,924	96.425

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.2	0.1	0.1	30	0.016
AEGL-2	5.1	0.7	1.3	1.8	23,552	14.662
AEGL-1	18.1	1.3	1.7	4.4	70,944	98.275

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.3	1.1	1.3	14,647	8.426
AEGL-1	4.9	0.5	1.6	1.9	21,108	15.083

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	5.2	0.4	1.6	1.7	20,684	15.046
	AEGL-1	11.2	0.9	2.4	2.6	36,665	54.117

35 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	-0.3	0.0	0.0	6	0.002
AEGL-2	5.7	0.5	1.8	2.2	23,372	18.651
AEGL-1	18.1	1.1	3.3	4.5	52,411	113.511

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.2	0.1	0.1	69	0.027
AEGL-2	4.9	0.5	1.9	2.2	22,519	15.597
AEGL-1	18.1	1.1	4.0	4.7	52,014	113.652

35 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.3	1.3	1.3	18,668	9.307
AEGL-1	4.6	0.6	1.7	1.8	25,176	15.386

35 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.6	2.0	1.9	25,329	15.229
AEGL-1	11.4	1.0	2.4	2.5	47,244	53.709

35 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.7	1.8	1.9	27,025	17.371
AEGL-1	18.9	1.3	2.7	2.6	63,199	122.921

35 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.1	0.1	0.1	30	0.017
AEGL-2	4.3	0.7	1.9	2.2	29,939	15.544
AEGL-1	18.8	1.3	3.0	2.5	63,553	118.587

Stability Class D – JACKSON, MS

ORIGIN:	32.31888	N
	90.18555	W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.3	0.0	1.0	0.8	17,501	12.104
AEGL-1	8.6	0.3	1.5	1.0	21,162	18.459

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	8.8	0.1	1.3	1.0	19,813	17.686
AEGL-1	13.7	0.5	3.5	2.0	25,189	49.589

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.3	0.1	0.1	40	0.022
AEGL-2	8.6	0.2	1.5	1.0	20,730	18.105
AEGL-1	19.2	0.5	4.5	3.0	30,756	91.168

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.1	0.1	0.1	83	0.047
AEGL-2	8.3	0.3	1.0	1.0	21,019	14.106
AEGL-1	19.3	0.6	5.0	3.0	33,762	78.702

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.0	0.9	0.9	16,953	8.783
AEGL-1	5.7	0.2	1.1	1.2	23,841	13.171

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.1	0.0	0.9	0.9	25,383	15.383
AEGL-1	14.4	0.3	1.8	1.8	56,110	58.261

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.3	0.1	0.1	43	0.025
AEGL-2	6.5	0.3	0.9	1.0	25,479	15.02
AEGL-1	23.2	0.5	2.3	2.0	67,895	117.669

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.1	0.1	0.1	87	0.053
AEGL-2	6.2	0.4	0.9	1.0	24,525	13.118

	AEGL-1	23.3	0.6	1.9	2.0	69,285	102.173

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.0	1.6	0.8	10,131	9.441
AEGL-1	5.6	0.3	2.1	1.3	15,446	14.414

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.0	0.2	1.9	1.3	16,470	16.96
AEGL-1	16.2	0.5	2.7	2.2	46,622	67.719

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.3	0.2	0.2	48	0.037
AEGL-2	7.0	0.4	2.2	1.2	18,530	19.017
AEGL-1	20.0	0.7	4.1	3.2	57,954	113.48

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.2	0.2	0.2	85	0.067
AEGL-2	6.5	0.4	2.0	1.3	16,947	16.427
AEGL-1	20.0	0.9	4.2	3.4	59,884	108.295

95 deg, 30 min, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	7.4	0.0	0.6	0.6	10,767	11.401
	AEGL-1	8.9	0.2	1.0	0.8	14,208	18.767

95 deg, 1 hour, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	8.4	0.0	1.0	0.8	13,405	16.871
	AEGL-1	19.4	0.5	1.3	1.1	20,618	60.324

95 deg, 2 hours, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	-0.3	0.1	0.0	31	0.025
	AEGL-2	8.3	0.2	1.0	0.6	14,611	17.774
	AEGL-1	26.7	0.7	1.8	1.5	23,246	111.338

95 deg, 4 hours, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	-0.2	0.1	0.0	57	0.047
	AEGL-2	8.3	0.5	1.3	0.9	14,517	14.798
	AEGL-1	26.6	0.9	1.9	1.3	25,370	99.956

95 deg, 30 min, south

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.2	0.0	1.1	1.1	10,763	9.167

	AEGL-1	6.0	0.0	1.4	1.5	16,860	14.713
95 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	6.6	0.0	1.4	1.5	16,760	15.221
	AEGL-1	17.0	0.2	1.9	2.1	36,883	63.583
95 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	-0.4	0.2	0.1	32	0.028
	AEGL-2	6.2	0.1	1.4	1.8	17,960	15.404
	AEGL-1	21.2	0.4	3.8	2.4	46,670	100.887
95 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.9	-0.2	0.2	0.1	64	0.057
	AEGL-2	6.4	0.2	1.4	1.5	17,225	13.781
	AEGL-1	22.5	0.7	3.7	2.4	47,409	98.984
95 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	7.1	0.0	0.5	1.1	16,730	9.687
	AEGL-1	8.0	0.1	0.8	1.5	22,526	14.417
95 deg, 1 hour, southwest							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	8.4	0.0	0.8	1.8	25,324	16.958
AEGL-1	19.8	0.5	1.2	2.8	42,416	59.388

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	-0.3	0.1	0.2	117	0.037
AEGL-2	8.4	0.2	0.7	2.1	25,752	17.258
AEGL-1	30.2	0.6	1.3	3.7	50,485	118.293

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	-0.2	0.1	0.1	200	0.071
AEGL-2	7.9	0.4	0.7	1.3	20,606	12.506
AEGL-1	30.4	0.7	1.5	3.3	51,268	90.516

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.7	0.0	0.7	0.9	8,737	10.141
AEGL-1	7.9	0.3	0.9	1.1	13,075	14.677

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	8.9	0.0	1.0	1.6	12,573	16.221

	AEGL-1	15.6	0.5	1.2	2.0	22,029	48.656
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.0	-0.2	0.1	0.1	176	0.055
	AEGL-2	8.8	0.3	0.9	1.3	13,358	16.818
	AEGL-1	22.2	0.5	2.1	3.0	32,620	93.528
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.9	-0.1	0.1	0.2	234	0.077
	AEGL-2	8.7	0.4	0.8	1.1	11,971	12.551
	AEGL-1	22.2	0.7	2.2	2.7	33,807	88.313
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	6.0	0.0	0.7	0.9	12,406.00	10.709
	AEGL-1	7.1	0.2	1.0	1.1	17,857.00	15.914
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	8.7	0.1	0.9	1.2	18,510.00	18.637
	AEGL-1	18.9	0.4	1.6	1.2	33,708.00	62.179
95 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-	0.8	-0.3	0.1	0.2	187.00	0.043

	3						
	AEGL-2	8.7	0.2	1.0	1.0	19,709.00	20.007
	AEGL-1	22.0	0.5	3.6	4.1	41,274.00	112.014

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	-0.2	0.1	0.2	223.00	0.061
AEGL-2	7.7	0.4	0.9	1.2	19,158.00	15.889
AEGL-1	20.8	0.7	3.0	3.9	43,532.00	106.75

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.3	0.1	1.2	0.7	16,758.00	10.579
AEGL-1	8.5	0.1	1.6	1.0	20,618.00	17.723

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	8.2	0.0	1.5	1.0	19,095.00	14.743
AEGL-1	13.3	0.3	3.4	1.8	24,554.00	48.241

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	7.6	-0.1	1.3	0.9	20,225.00	14.922
	AEGL-1	17.2	0.4	4.8	3.4	29,519.00	75.218

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	-0.2	0.0	0.0	11.00	0.007
AEGL-2	7.2	0.2	1.2	0.9	19,372.00	11.027
AEGL-1	15.4	0.5	4.2	2.9	32,153.00	67.781

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.0	0.8	0.8	15,889.00	8.054
AEGL-1	5.9	0.1	1.1	1.4	23,744.00	13.594

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.9	0.0	1.1	1.3	21,562.00	12.121
AEGL-1	13.7	0.3	2.2	2.6	54,527.00	55.066

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.0	1.1	1.4	22,166.00	11.882
AEGL-1	21.4	0.4	2.8	2.4	66,893.00	103.947

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.1	0.1	0.1	29.00	0.019
AEGL-2	5.5	0.3	0.9	1.1	21,092.00	10.527
AEGL-1	19.4	0.7	2.9	2.2	68,554.00	85.883

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	0.1	1.2	1.1	8,826.00	8.359
AEGL-1	5.1	0.3	1.6	1.5	14,306.00	13.147

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.4	1.5	1.7	13,948.00	13.235
AEGL-1	15.5	0.7	2.3	2.5	45,115.00	65

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	0.4	1.6	1.7	14,767.00	13.786
AEGL-1	18.7	0.9	3.0	3.9	56,310.00	102.727

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	-0.1	0.1	0.3	31.00	0.025

AEGL-2	5.2	6.0	1.5	1.7	12,992.00	12.033
AEGL-1	18.0	1.0	3.3	4.0	56,876.00	92.86

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.0	0.0	0.9	0.7	10,558.00	10.494
AEGL-1	8.7	0.2	1.0	0.9	14,599.00	18.794

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.6	0.0	1.1	0.9	12,746.00	14.487
AEGL-1	19.4	0.4	1.7	1.8	20,088.00	58.493

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.3	0.1	1.0	0.9	13,325.00	14.831
AEGL-1	23.5	0.5	2.2	2.8	21,786.00	89.97

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.1	0.0	0.0	17.00	0.014
AEGL-2	7.1	0.3	1.0	0.7	11,952.00	11.298
AEGL-1	21.9	0.7	2.2	1.8	23,607.00	76.053

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.1	1.2	0.9	9,604.00	8.139
AEGL-1	5.7	0.3	1.7	1.4	16,205.00	14

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.1	1.4	1.4	13,899.00	11.882
AEGL-1	14.2	0.2	2.3	2.2	35,536.00	61.506

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	0.1	1.5	1.6	14,716.00	12.217
AEGL-1	20.0	0.1	3.4	2.2	42,391.00	88.232

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.2	0.1	14.00	0.011
AEGL-2	5.7	0.1	1.4	1.4	13,551.00	10.539
AEGL-1	18.8	0.6	3.5	2.2	43,149.00	81.836

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.8	-0.1	0.5	1.2	16,565.00	9.374
AEGL-1	7.8	0.3	0.9	2.1	23,114.00	14.685

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.9	0.0	0.8	1.6	22,960.00	14.783
AEGL-1	18.6	0.6	1.7	3.2	43,957.00	57.636

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.5	0.0	0.9	1.7	22,910.00	14.536
AEGL-1	26.6	0.7	1.6	3.3	51,119.00	101.925

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.5	-0.1	0.1	0.1	46.00	0.02
AEGL-2	7.3	0.4	0.7	1.1	17,736.00	9.993
AEGL-1	22.9	0.8	1.5	3.2	50,890.00	74.175

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	6.3	0.0	0.8	0.9	8,098.00	8.763

	2						
	AEGL-1	7.6	0.2	1.0	1.2	12,298.00	14.295
75 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	8.2	0.2	1.0	1.2	11,170.00	13.79
	AEGL-1	15.5	0.5	1.7	2.2	21,225.00	47.528
75 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.5	0.5	0.1	0.0	26.00	0.008
	AEGL-2	7.8	0.2	1.1	1.2	11,837.00	13.838
	AEGL-1	20.9	0.5	2.5	3.2	30,849.00	85.73
75 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.6	-0.1	0.1	0.1	85.00	0.028
	AEGL-2	7.6	0.3	1.0	1.0	10,475.00	10.284
	AEGL-1	19.8	0.7	2.7	2.7	30,127.00	75.949

75 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.7	0.0	1.0	0.9	11,486.00	9.813
	AEGL-1	6.7	0.2	1.4	1.2	16,729.00	14.64
75 deg, 1 hour, Northwest							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.8	0.0	1.2	1.2	16,947.00	16.242
AEGL-1	17.5	0.6	1.6	2.3	35,522.00	60.686

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.6	0.3	1.2	1.2	17,719.00	16.436
AEGL-1	20.7	0.7	2.4	3.0	40,228.00	93.911

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.6	-0.2	0.1	0.1	77.00	0.023
AEGL-2	6.6	0.5	1.2	1.0	16,982.00	12.828
AEGL-1	19.3	0.8	2.6	2.7	42,404.00	88.676

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55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	-0.1	1.1	0.7	16,150.00	7.656
AEGL-1	8.3	0.1	1.6	1.0	20,028.00	16.863

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	7.0	-0.5	1.2	0.8	18,423.00	11.865
	AEGL-1	13.0	0.2	3.2	1.8	23,331.00	45.51

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.0	0.0	1.3	1.0	19,200.00	11.412
AEGL-1	16.0	1.0	4.0	2.8	28,035.00	68.28

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.4	-0.2	0.6	1.1	16,688.00	7.886
AEGL-1	15.0	0.1	3.4	2.6	28,729.00	56.784

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.0	0.7	0.8	14,727.00	7.313
AEGL-1	5.7	0.2	1.1	1.3	22,915.00	12.754

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	5.2	0.0	0.8	1.2	18,934.00	9.66
	AEGL-1	13.9	0.2	2.0	2.0	52,728.00	52.768

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.1	0.9	1.1	18,536.00	9.13
AEGL-1	18.0	0.3	1.9	2.5	63,986.00	84.363

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.0	1.00	0.001
AEGL-2	4.6	0.2	0.9	0.9	15,781.00	7.311
AEGL-1	14.7	0.5	2.4	2.3	65,219.00	69.964

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.1	1.2	1.1	7,351.00	7.023
AEGL-1	5.0	0.3	1.5	1.5	13,394.00	12.274

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	4.7	0.3	1.2	1.5	10,341.00	9.655

	2 AEGL-1	15.5	0.7	2.3	2.5	43,826.00	63.445
55 deg, 2 hours, east							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	0.5	1.3	1.6	10,075.00	9.488
	AEGL-1	17.0	0.8	2.9	3.5	54,468.00	88.282
55 deg, 4 hours, east							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.1	-0.1	0.0	0.1	4.00	0.003
	AEGL-2	4.4	0.5	1.0	1.4	8,338.00	7.876
	AEGL-1	15.7	1.0	2.9	1.1	54,976.00	78.188
55 deg, 30 min, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.0	-0.1	0.6	0.6	7,867.00	6.467
	AEGL-1	8.6	1.0	1.1	1.2	13,558.00	17.773
55 deg, 1 hour, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	6.7	0.0	0.9	0.8	11,535.00	11.361
	AEGL-1	17.5	0.3	1.9	1.3	18,891.00	50.237
55 deg, 2 hours, southeast							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.3	0.0	1.1	0.9	11,828.00	10.99
AEGL-1	22.2	0.4	1.7	2.5	20,584.00	79.839

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.0	1.00	0.001
AEGL-2	6.1	0.3	0.9	0.7	8,714.00	7.558
AEGL-1	20.1	0.6	1.9	1.5	22,832.00	64.35

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	-0.1	1.1	0.9	7,446.00	6.346
AEGL-1	5.7	0.2	1.6	1.3	15,321.00	13.321

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.1	1.3	1.3	10,778.00	8.908
AEGL-1	16.3	0.3	2.2	2.3	35,010.00	59.738

55 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

3 AEGL-2	4.6	0.1	1.2	1.3	10,981.00	8.804
AEGL-1	17.6	0.7	3.5	2.2	40,211.00	75.975

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.0	1.2	1.1	9,768.00	7.667
AEGL-1	16.5	0.5	3.0	2.2	40,634.00	66.653

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	-0.2	0.7	1.2	14,067	7.249
AEGL-1	7.6	0.0	1.0	1.2	21,156	13.31

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.0	-0.1	0.7	1.1	18,767	11.265
AEGL-1	19.8	0.4	1.4	2.9	39,920	55.374

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	6.6	0.1	0.8	1.4	18,300	10.839
	AEGL-1	22.6	0.5	1.4	3.6	46,988	76.512

55 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.5	0.2	0.6	0.9	14,570	7.489
AEGL-1	18.9	0.7	2.1	3.0	49,189	58.133

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.0	0.8	0.9	7,993	7.911
AEGL-1	7.6	0.3	1.0	1.2	12,349	14.171

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	7.0	0.1	1.0	1.1	10,340	11.197
AEGL-1	15.3	0.5	1.7	2.1	21,610	47.591

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3						
	AEGL-2	6.6	0.2	1.1	1.3	11,022	11.039
	AEGL-1	19.6	0.6	2.5	2.8	27,053	71.896
55 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.0	0.0	0.0	0.0	1	0.001
	AEGL-2	6.5	0.3	0.8	0.9	9,181	8.153
	AEGL-1	18.4	0.7	1.9	2.3	27,038	61.396
55 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.7	-0.1	0.9	0.8	10,891	8.599
	AEGL-1	6.9	0.2	1.2	1.1	16,548	14.571
55 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	6.6	0.0	1.1	1.2	14,760	12.559
	AEGL-1	17.6	0.5	2.4	2.2	33,999	58.173
55 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	6.0	0.0	1.2	1.2	14,896	12.332
	AEGL-1	19.1	0.6	2.3	1.9	38,842	81.063

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.2	1.2	0.9	13,723	8.966
AEGL-1	17.9	0.7	2.3	2.8	41,323	75.767

[redacted]

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	-0.2	0.8	0.7	15,419	6.605
AEGL-1	8.3	0.0	1.3	0.9	19,444	16.271

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.0	1.1	0.9	17,592	8.994
AEGL-1	12.7	0.2	2.8	1.7	22,236	39.695

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	0.0	1.2	1.0	18,123	8.442
AEGL-1	14.4	0.3	3.8	2.5	24,628	51.161

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	0.2	0.6	0.5	14,035	5.354
AEGL-1	12.8	0.5	3.0	1.6	26,486	42.891

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.2	0.7	0.8	9,904	4.773
AEGL-1	5.7	0.0	1.0	1.2	21,623	12.108

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.0	0.7	1.0	14,503	6.731
AEGL-1	13.9	0.2	1.1	2.2	50,845	50.735

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	0.0	0.7	0.9	14,102	6.368
AEGL-1	15.3	0.3	2.0	2.2	56,885	61.288

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	4.2	0.2	0.6	0.7	9,837	4.689
	AEGL-1	12.1	0.4	1.6	2.2	57,573	51.516

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	-0.2	1.0	0.9	5,112	4.463
AEGL-1	5.3	0.1	1.7	1.2	13,396	12.319

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	0.1	1.2	0.9	6,853	6.439
AEGL-1	15.6	0.2	2.5	1.9	40,687	57.498

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	0.1	1.2	0.9	6,749	6.243
AEGL-1	15.8	0.4	3.2	2.8	51,525	73.044

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	0.1	1.0	0.7	5,412	4.999
AEGL-1	14.0	0.6	3.2	2.7	48,590	63.163

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	0.1	0.7	0.5	5,777	4.742
AEGL-1	8.6	0.0	1.0	0.7	13,350	17.024

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	0.0	1.0	0.8	9,239	7.739
AEGL-1	16.7	0.3	1.9	1.9	18,666	45.097

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.0	1.0	1.0	9,096	7.519
AEGL-1	19.9	0.4	2.2	2.5	20,296	60.845

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.1	0.7	0.5	6,347	5.125
AEGL-1	16.8	0.5	1.9	2.5	21,933	48.077

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	3.6	0.2	0.9	0.9	5,769	4.999
	AEGL-1	5.8	0.0	1.3	1.5	14,748	12.992
35 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.7	0.3	1.5	0.7	8,071	6.711
	AEGL-1	16.0	0.5	2.5	1.8	33,529	59.201
35 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.6	0.3	1.5	0.8	8,210	6.524
	AEGL-1	15.4	0.7	3.1	1.9	37,739	62.23
35 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.7	0.4	1.1	0.5	5,947	5.039
	AEGL-1	13.6	0.9	3.1	2.0	38,032	53.207

35 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	4.7	-0.2	0.5	0.9	12,271	5.128
AEGL-1	7.7	0.0	0.8	1.1	21,020	13.278

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.9	0.0	0.8	1.1	15,018	7.908
AEGL-1	18.5	0.4	1.8	2.4	39,488	52.121

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.0	0.7	1.3	14,769	7.367
AEGL-1	19.2	0.5	1.7	2.5	43,046	59.339

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	0.0	0.5	1.0	11,782	4.96
AEGL-1	15.4	0.6	1.3	3.5	41,442	45.775

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	-0.1	0.8	1.0	7,112	6.033
AEGL-1	7.6	0.1	1.0	1.2	11,746.	14.153

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.1	1.1	1.0	9,003	8.328
AEGL-1	15.0	0.4	1.6	2.1	20,092	43.764

35 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	0.1	1.0	1.6	9,934	8.154
AEGL-1	18.3	0.4	1.9	2.6	23,402	60.495

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	0.2	0.7	0.8	6,971	5.565
AEGL-1	16.5	0.5	1.5	2.2	24,632	48.206

35 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-0.1	0.8	0.8	9,787	5.772
AEGL-1	7.0	0.2	1.2	1.0	16,274	14.831

35 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	5.2	0.0	1.1	1.2	12,541	8.688

	2 AEGL-1	17.1	0.4	1.8	2.3	33,107	55.604
35 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.8	0.0	1.3	1.1	13,327	8.443
	AEGL-1	17.9	0.5	2.4	3.5	37,477	73.354
35 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.5	0.0	1.1	0.9	9,902	5.821
	AEGL-1	16.1	0.6	2.4	3.3	37,292	63.562

Stability Class E –
JACKSON, MS

ORIGIN:	32.31888	N
	90.18555	W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.6	0.6	2,271	1.067
AEGL-1	2.5	0.6	1.5	1.4	17,619	6.315

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.5	0.6	2,380	1.115
AEGL-1	2.8	0.8	1.5	1.5	20,730	7.898

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.1	0.0	0.0	2	0.001
AEGL-2	0.9	0.4	0.6	0.6	2,580	1.202
AEGL-1	2.9	0.9	1.7	1.6	23,873	9.347

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	0.0	0.2	0.2	404	0.213
AEGL-2	5.0	0.4	0.6	0.7	14,089	5.297
AEGL-1	6.8	1.0	1.8	1.8	32,195	21.388

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.6	0.6	1,919	1.103
AEGL-1	2.5	0.7	1.3	1.4	14,666	6.6

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.6	0.6	1,992	1.142
AEGL-1	2.6	0.8	1.5	1.5	17,796	7.935

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.1	0.0	0.0	3	0.002
AEGL-2	0.9	0.4	0.6	0.6	2,073	1.189
AEGL-1	2.8	1.0	1.6	1.7	20,238	9.131

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.3	0.0	0.2	0.2	311	0.217
AEGL-2	3.8	0.4	0.6	0.7	8,471	4.411

	AEGL-1	5.5	1.0	1.8	1.7	39,323	19.347

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.6	0.5	1,801	1.128
AEGL-1	2.3	0.7	1.4	1.4	10,235	6.338

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.5	0.5	1,854	1.159
AEGL-1	2.4	0.8	1.5	1.6	13,057	7.687

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.1	0.0	0.0	2	0.001
AEGL-2	0.9	0.4	0.6	0.6	1,967	1.233
AEGL-1	2.6	1.0	1.5	1.6	16,896	9.367

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.0	0.2	0.2	302	0.231
AEGL-2	3.5	0.4	0.7	0.6	5,636	4.635
AEGL-1	5.0	1.1	1.6	1.9	28,153	19.363

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.4	0.6	0.5	1,707	1.082
	AEGL-1	2.4	0.7	1.5	1.4	9,597	6.422
95 deg, 1 hour, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.4	0.6	0.6	1,769	1.119
	AEGL-1	2.5	0.8	1.6	1.6	11,889	7.625
95 deg, 2 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.0	0.0	0.0	0.0	1	0.001
	AEGL-2	0.9	0.4	0.6	0.6	1,877	1.191
	AEGL-1	2.7	1.0	1.7	1.7	15,906	9.304
95 deg, 4 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.3	0.0	0.3	0.2	255	0.21
	AEGL-2	4.7	0.5	0.7	0.6	6,670	4.885
	AEGL-1	7.2	1.1	1.9	1.9	28,157	23.136
95 deg, 30 min, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.4	0.6	0.5	1,909	1.077
	AEGL-1	2.4	0.6	1.4	1.4	11,570	6.173
95 deg, 1 hour, south							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.5	0.6	1,971	1.115
AEGL-1	2.5	0.7	1.5	1.6	14,931	7.655

95 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.1	0.0	0.0	2	0.001
AEGL-2	0.9	0.4	0.6	0.6	2,087	1.172
AEGL-1	2.7	0.9	1.6	1.6	17,283	8.769

95 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	0.1	0.2	0.3	225	0.204
AEGL-2	3.7	0.3	0.6	0.6	5,670	4.498
AEGL-1	5.9	1.0	1.8	1.9	33,373	21.795

95 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.6	0.7	2,339	1.075
AEGL-1	2.4	0.7	1.3	1.5	16,446	6.398

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.9	0.4	0.6	0.7	2,458	1.127

	2 AEGL-1	2.6	0.8	1.6	1.7	18,900	7.843
95 deg, 2 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.1	0.1	0.0	0.0	2	0.001
	AEGL-2	0.9	0.4	0.6	0.7	2,552	1.168
	AEGL-1	2.8	1.0	1.7	1.7	21,168	9.301
95 deg, 4 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.3	0.0	0.4	0.2	501	0.202
	AEGL-2	5.0	0.4	0.8	0.6	11,771	4.931
	AEGL-1	7.2	1.2	2.0	1.9	35,361	23.317
95 deg, 30 min, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.6	2,727	1.105
	AEGL-1	2.3	0.7	1.4	1.4	16,055	6.497
95 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.6	0.6	2,826	1.139
	AEGL-1	2.5	0.9	1.6	1.5	18,820	7.972
95 deg, 2 hours, west							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.1	0.0	0.0	4	0.003
AEGL-2	0.9	0.4	0.6	0.6	3,064	1.217
AEGL-1	2.7	1.0	1.6	1.6	22,418	9.702

95 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.2	0.3	639	0.215
AEGL-2	4.3	0.4	0.6	0.6	7,251	5.069
AEGL-1	6.5	1.1	1.9	1.8	28,907	23.99

95 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.6	0.6	2,700	1.085
AEGL-1	2.4	0.7	1.4	1.4	16,771	6.428

95 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.6	0.6	2,817	1.122
AEGL-1	2.6	0.8	1.7	1.5	19,578	8.006

95 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.1	0.0	0.0	3	0.002
AEGL-2	0.9	0.3	0.6	0.6	3,165	1.216
AEGL-	2.8	1.0	1.7	1.7	22,999	9.616

	1						
95 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.2	0.0	0.3	0.3	771	0.208
	AEGL-2	4.3	0.4	0.6	0.7	8,408	4.968
	AEGL-1	6.8	1.0	2.0	1.8	30,620	22.657

[redacted]

75 deg, 30 min, North							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.2	0.5	0.6	1,930	0.927
	AEGL-1	2.3	0.5	1.2	1.3	15,369	5.431
75 deg, 1 hour, North							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.2	0.5	0.6	2,029	0.966
	AEGL-1	2.6	0.6	1.3	1.6	18,410	6.771
75 deg, 2 hours, North							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.2	0.5	0.6	2,121	1

AEGL-1	2.7	0.8	1.4	1.6	21,005	8.065

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.3	0.2	0.0	0.4	296	0.169
AEGL-2	5.1	0.2	0.4	0.8	13,199	4.89
AEGL-1	6.8	0.7	1.5	1.8	30,258	18.447

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.5	0.5	1,571	0.918
AEGL-1	2.2	0.7	1.4	1.4	12,613	5.76

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.6	0.6	1,635	0.959
AEGL-1	2.4	0.8	1.4	1.4	15,347	6.726

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.6	0.6	1,747	1.016
AEGL-1	2.5	0.9	1.5	1.5	17,495	7.832

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.0	0.3	0.3	253	0.173
AEGL-2	3.8	0.4	0.6	0.6	8,141	4.248
AEGL-1	5.1	1.0	1.7	1.7	34,782	16.295

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.5	0.6	1,450	0.94
AEGL-1	2.0	0.7	1.4	1.4	8,922	5.524

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.6	1,520	0.982
AEGL-1	2.1	0.8	1.3	1.5	11,650	6.636

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.6	1,616	1.048
AEGL-1	2.2	1.0	1.4	1.5	14,161	7.703

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.1	0.1	0.3	222	0.171
AEGL-	3.4	0.4	0.6	0.6	5,126	4.371

	2 AEGL-1	4.7	1.1	1.8	1.7	25,359	17.025

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.3	0.5	0.5	1,436	0.943
AEGL-1	2.2	0.7	1.4	1.3	8,579	5.62

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.5	0.5	1,490	0.976
AEGL-1	2.3	0.8	1.5	1.5	10,452	6.66

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.4	0.6	0.5	1,555	1.019
AEGL-1	2.5	1.0	1.6	1.5	13,756	8.142

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	0.0	0.2	0.2	196	0.16
AEGL-2	4.7	0.4	0.6	0.6	6,202	4.608

	AEGL-1	7.0	1.0	1.7	1.7	25,456	20.153

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.6	0.4	1,626	0.93
AEGL-1	2.1	0.7	1.4	1.2	10,110	5.5930

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.6	0.4	1,675	0.962
AEGL-1	2.2	0.8	1.5	1.3	12,158	6.376

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.6	0.4	1,734	0.999
AEGL-1	2.4	1.0	1.5	1.3	15,754	7.933

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.2	0.4	0.0	175	0.155
AEGL-2	3.5	0.5	0.8	0.4	4,886	4.011
AEGL-1	5.3	1.1	2.0	1.5	29,357	18.725

75 deg, 30 min, southwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.6	1,991	0.933
	AEGL-1	2.2	0.7	1.5	1.6	15,159	5.806

75 deg, 1 hour, southwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.6	2,059	0.963
	AEGL-1	2.4	0.8	1.4	1.5	17,496	6.837

75 deg, 2 hours, southwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.4	0.6	0.6	2,165	1.001
	AEGL-1	2.5	1.0	1.5	1.6	19,394	7.866

75 deg, 4 hours, southwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.2	0.0	0.2	0.2	406	0.162
	AEGL-2	4.9	0.4	0.6	0.7	10,648	4.31
	AEGL-1	6.9	1.1	1.7	2.0	32,301	20.604

75 deg, 30 min, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.4	0.5	0.5	2,214	0.922
	AEGL-	2.1	0.7	1.4	1.3	13,858	5.624

	1						
75 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.5	2,342	0.968
	AEGL-1	2.3	0.8	1.4	1.4	16,284	6.828
75 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.5	2,574	1.043
	AEGL-1	2.4	1.0	1.5	1.5	18,621	7.951
75 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.0	0.0	0.2	0.2	485	0.164
	AEGL-2	4.1	0.4	0.6	0.6	6,526	4.259
	AEGL-1	6.5	1.1	1.7	1.7	26,450	20.079
75 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.5	2,260	0.926
	AEGL-1	2.2	0.7	1.3	1.4	15,069	5.84
75 deg, 1 hour, Northwest							

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.5	2,359	0.963
	AEGL-1	2.4	0.8	1.5	1.5	17,919	7.034

75 deg, 2 hours, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.4	0.5	0.5	2,575	1.024
	AEGL-1	2.6	0.9	1.5	1.5	19,812	8.192

75 deg, 4 hours, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.2	0.0	0.2	0.2	649	0.175
	AEGL-2	4.2	0.4	0.5	0.6	7,653	4.398
	AEGL-1	6.5	1.0	1.8	1.7	28,225	19.83

[redacted]

55 deg, 30 min, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.3	0.5	0.5	1,490	0.744
	AEGL-1	2.0	0.6	1.2	1.2	13,375	4.598

55 deg, 1 hour, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.3	0.5	0.5	1,558	0.774
	AEGL-1	2.2	0.7	1.3	1.2	16,021	5.683

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.2	0.4	0.6	1,646	0.808
AEGL-1	2.4	0.7	1.2	1.4	17,492	6.408

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.2	0.0	0.4	194	0.111
AEGL-2	4.8	0.4	0.4	0.6	11,793	4.328
AEGL-1	6.6	0.7	1.2	1.7	27,388	15.412

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,259	0.757
AEGL-1	2.0	0.6	1.2	1.3	10,138	4.656

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.7	0.3	0.5	0.5	1,300	0.778

	2 AEGL-1	2.1	0.8	1.3	1.3	12,690	5.728

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.3	0.5	0.5	1,356	0.812
AEGL-1	2.2	0.9	1.4	1.4	14,142	6.49

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.2	0.2	195	0.125
AEGL-2	3.7	0.3	0.6	0.6	6,864	3.771
AEGL-1	4.9	1.0	1.6	1.4	30,473	13.948

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,170	0.787
AEGL-1	2.0	0.6	1.3	1.2	7,629	4.752

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.7	0.3	0.5	0.4	1,233	0.822
	AEGL-1	2.0	0.8	15.8	1.3	9,873	5.679

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,258	0.842
AEGL-1	2.1	0.9	1.3	1.4	12,268	6.518

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.2	0.2	170	0.132
AEGL-2	3.4	0.3	0.7	0.5	4,683	3.962
AEGL-1	1.5	1.0	1.5	1.5	20,127	13.909

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.5	1,151	0.775
AEGL-1	2.0	0.6	1.4	1.2	7,281	4.733

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.5	1,183	0.796
AEGL-1	2.0	0.8	1.4	1.3	9,257	5.71

55 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.5	0.5	1,225	0.823
AEGL-1	2.2	0.9	1.4	1.3	11,331	6.812

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.2	0.1	139	0.114
AEGL-2	4.7	0.3	0.5	0.5	5,802	4.395
AEGL-1	6.7	1.0	1.6	1.6	21,818	16.593

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.6	0.4	1,305	0.766
AEGL-1	1.8	0.7	1.3	1.1	7,943	4.5

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.6	0.3	1,351	0.792
AEGL-1	2.0	0.8	1.3	1.2	10,225	5.563

55 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.6	0.4	0.6	0.4	1,406	0.819
	AEGL-1	2.1	0.9	1.4	1.2	12,012	6.431

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.2	0.4	0.0	126	0.111
AEGL-2	3.4	0.5	0.7	0.3	4,278	3.577
AEGL-1	5.0	1.1	1.7	1.3	24,798	15.014

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.5	1,568	0.756
AEGL-1	1.9	0.7	1.2	1.3	12,135	4.635

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,661	0.791
AEGL-1	2.1	0.8	1.3	1.5	14,615	5.529

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.7	0.3	0.5	0.6	1,759	0.826
	AEGL-1	2.3	0.9	1.3	1.5	17,160	6.686

55 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.1	0.3	292	0.109
AEGL-2	4.7	0.3	0.5	0.6	9,879	3.754
AEGL-1	6.6	1.0	1.5	1.7	29,237	17.425

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.6	0.4	1,793	0.773
AEGL-1	2.0	0.5	1.3	1.2	12,259	4.719

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.6	0.4	1,888	0.805
AEGL-1	2.1	0.7	1.5	1.2	13,998	5.679

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.8	0.2	0.6	0.4	2,031	0.847
	AEGL-1	2.2	0.8	1.5	1.2	15,694	6.644

55 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.2	0.2	346	0.118
AEGL-2	4.1	0.3	0.5	0.5	5,910	3.838
AEGL-1	6.3	1.0	1.6	1.5	23,533	17.784

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,749	0.748
AEGL-1	1.9	0.6	1.3	1.3	13,014	4.829

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,866	0.783
AEGL-1	2.1	0.8	1.4	1.3	14,451	5.597

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.4	0.5	1,991	0.818
AEGL-1	2.2	0.9	1.4	1.3	16,201	6.731

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.1	0.2	439	0.122
AEGL-2	4.0	0.3	0.5	0.5	6,939	3.916
AEGL-1	5.9	1.0	1.5	1.5	24,857	16.038

[redacted]

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.3	0.4	1,144	0.6
AEGL-1	1.3	0.6	1.1	1.1	10,773	3.821

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	1,189	0.617
AEGL-1	1.9	0.7	1.1	1.2	13,138	4.653

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	1,228	0.637
AEGL-1	2.0	0.8	1.1	1.2	14,703	5.244

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	0.1	0.1	0.1	121	0.07
AEGL-2	4.2	0.3	0.5	0.4	10,269	3.367
AEGL-1	6.1	0.8	1.3	1.2	25,460	13.094

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	962	0.608
AEGL-1	1.7	0.6	1.1	1.2	8,349	3.979

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,001	0.63
AEGL-1	1.8	0.7	1.2	1.3	9,795	4.558

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	1,038	0.652
AEGL-1	1.9	0.8	1.2	1.2	11,355	5.178

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	0.8	0.0	0.2	0.2	124	0.075
	AEGL-2	3.4	0.3	0.5	0.6	5,207	3.17
	AEGL-1	4.7	0.9	1.3	1.3	25,477	11.449

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	861	0.614
AEGL-1	1.7	0.6	1.1	1.1	6,126	3.86

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	905	0.638
AEGL-1	1.7	0.8	1.1	1.2	7,702	4.488

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	916	0.649
AEGL-1	1.8	0.9	1.2	1.2	9,532	5.138

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	0.8	0.1	0.2	0.1	106	0.083

3						
AEGL-2	3.2	0.3	0.7	0.5	4,180	3.431
AEGL-1	4.4	0.9	1.3	1.3	16,840	11.929

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.4	907	0.634
AEGL-1	1.7	0.6	1.2	1.1	5,872	3.872

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.4	949	0.655
AEGL-1	1.8	0.8	1.2	1.2	7,533	4.556

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.4	980	0.677
AEGL-1	1.9	0.9	1.2	1.2	9,035	5.248

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.2	0.1	92	0.075
AEGL-2	4.2	0.3	0.5	0.5	4,770	3.641
AEGL-1	6.3	1.0	1.4	1.3	19,030	14.092

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	1,003	0.605
AEGL-1	1.7	0.5	1.1	1.1	6,539	3.793

35 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.2	0.4	0.4	1,037	0.623
AEGL-1	1.8	0.6	1.1	1.1	8,260	4.58

35 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.2	0.4	0.4	1,073	0.642
AEGL-1	1.9	0.8	1.2	1.1	9,507	5.134

35 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.1	0.1	0.1	76	0.064
AEGL-2	3.3	0.2	0.4	0.5	3,366	2.855
AEGL-1	5.1	0.9	1.3	1.3	20,172	12.917

35 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.6	0.3	0.4	0.5	1,185	0.602

	2 AEGL-1	1.8	0.6	1.1	1.2	9,418	3.845

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	1,251	0.627
AEGL-1	1.9	0.7	1.2	1.2	11,677	4.639

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.4	0.5	1,289	0.64
AEGL-1	1.9	0.9	1.2	1.4	13,585	5.275

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.1	0.2	194	0.073
AEGL-2	4.5	0.3	0.5	0.5	8,744	3.135
AEGL-1	6.4	1.0	1.3	1.6	24,561	13.512

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	1,350	0.608
AEGL-1	1.7	0.5	1.1	1.1	10,254	3.955

35 deg, 1 hour, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.4	0.4	0.4	1,439	0.637
	AEGL-1	1.8	0.7	1.2	1.1	11,384	4.566
35 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.3	0.4	0.4	1,518	0.66
	AEGL-1	1.8	0.9	1.2	1.2	12,983	5.39
35 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.8	0.1	0.1	0.1	209	0.072
	AEGL-2	4.1	0.3	0.5	0.5	5,030	3.283
	AEGL-1	5.8	1.0	1.4	1.3	19,210	14.229

35 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.3	0.4	0.4	1,318	0.595
	AEGL-1	1.7	0.6	1.1	1.1	10,633	3.929
35 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.3	0.4	0.4	1,384	0.618

	AEGL-1	1.8	0.7	1.2	1.2	12,143	4.706
35 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.3	0.5	0.5	1,472	0.642
	AEGL-1	1.9	0.9	1.2	1.2	13,596	5.436
35 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.9	0.0	0.2	0.2	294	0.083
	AEGL-2	3.7	0.3	0.5	0.5	6,262	3.16
	AEGL-1	5.6	0.9	1.4	1.4	20,401	12.972

Stability Class F –
JACKSON, MS

ORIGIN:	32.31888	N
	90.18555	W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.5	0.5	0.7	2,955	1.376
AEGL-1	2.0	1.0	1.4	1.6	17,594	7.188

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.5	0.5	0.7	3,035	1.408
AEGL-1	2.0	1.2	1.4	1.6	19,522	8.076

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.0	0.0	0.1	5	0.004
AEGL-2	0.9	0.4	0.5	0.7	3,127	1.439
AEGL-1	2.1	1.3	1.4	2.1	20,680	8.583

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.1	0.5	0.4	1,064	0.481
AEGL-2	1.9	0.6	1.0	0.9	11,747	3.998
AEGL-1	4.5	1.7	2.1	2.1	40,760	21.377

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.6	0.7	0.7	2,656	1.36
AEGL-1	1.9	1.2	1.5	1.5	15,724	7.078

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.7	0.7	2,695	1.379
AEGL-1	2.0	1.4	1.5	1.6	17,532	8.029

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.0	0.1	0.0	8	0.007
AEGL-2	0.8	0.6	0.6	0.7	2,773	1.419
AEGL-1	2.0	1.4	1.6	1.6	19,134	8.513

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.2	0.3	0.4	532	0.375
AEGL-2	1.8	0.7	0.8	0.9	6,850	3.595
AEGL-1	4.0	1.8	2.2	2.2	44,022	20.755

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.7	0.6	0.7	2,623	1.392
AEGL-1	1.7	1.2	1.4	1.6	14,063	7.078

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.7	0.6	0.7	2,660	1.41
AEGL-1	1.8	1.5	1.4	1.6	15,880	7.761

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.1	0.0	0.1	5	0.004
AEGL-2	0.7	0.7	0.6	0.7	2,805	1.502
AEGL-1	1.9	1.5	1.4	1.7	19,036	8.862

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.2	0.4	0.5	540	0.408
AEGL-2	1.6	0.8	0.9	1.0	6,292	3.78
AEGL-1	3.6	1.7	2.3	2.3	35,426	20.453

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	0.8	0.6	0.7	0.7	2,642	1.4
AEGL-1	1.8	1.2	1.6	1.5	13,355	6.987

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.6	0.7	0.7	2,656	1.405
AEGL-1	1.9	1.4	1.6	1.6	15,770	7.724

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.0	0.1	0.0	4	0.003
AEGL-2	0.8	0.6	0.8	0.7	2,732	1.449
AEGL-1	2.0	1.4	1.6	1.6	17,137	8.514

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.1	0.3	0.3	415	0.341
AEGL-2	1.9	0.7	0.8	0.9	5,443	3.404
AEGL-1	4.4	1.8	2.2	2.1	36,663	21.47

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.6	0.6	0.7	2,700	1.361
	AEGL-1	1.7	1.2	1.4	1.6	14,518	7.123

95 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.6	0.5	0.7	2,710	1.365
AEGL-1	1.8	1.4	1.4	1.6	16,976	7.932

95 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.0	0.0	0.0	0.1	5	0.004
AEGL-2	0.7	0.6	0.6	0.7	2,770	1.393
AEGL-1	1.8	1.5	1.4	1.6	18,013	8.373

95 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.1	0.4	0.5	648	0.46
AEGL-2	1.6	0.6	0.9	1.0	5,981	3.52
AEGL-1	3.8	1.6	2.1	2.2	35,773	19.42

95 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.6	0.7	0.7	2,837	1.347
AEGL-1	1.9	1.1	1.5	1.6	16,332	6.834

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.6	0.7	0.8	2,874	1.36
AEGL-1	1.9	1.4	1.5	1.6	18,630	7.797

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.0	0.0	0.1	4	0.004
AEGL-2	0.8	0.6	0.7	0.7	3,084	1.43
AEGL-1	2.0	1.4	1.5	1.7	20,598	8.739

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.2	0.3	0.4	792	0.352
AEGL-2	1.9	0.7	0.8	1.0	9,469	3.514
AEGL-1	4.3	1.9	2.0	2.6	35,948	21.007

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.7	0.6	3,090	1.377
AEGL-1	1.9	1.0	1.6	1.4	17,182	7.236

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3						
	AEGL-2	0.8	0.4	0.7	0.6	3,186	1.411
	AEGL-1	1.9	1.3	1.7	1.4	18,497	8.205
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.1	0.0	0.0	0.0	5	0.004
	AEGL-2	0.7	0.5	0.7	0.6	3,320	1.466
	AEGL-1	1.9	1.4	1.7	1.4	20,810	8.787
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.0	0.0	0.6	0.5	1,475	0.486
	AEGL-2	1.9	0.5	1.1	1.0	10,588	4.016
	AEGL-1	4.2	1.7	2.3	2.0	34,399	21.006
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.6	0.7	0.7	3,054	1.365
	AEGL-1	1.9	1.2	1.5	1.6	17,023	6.87
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.6	0.7	0.7	3,099	1.381
	AEGL-1	1.9	1.4	1.5	1.6	18,966	8.217
95 deg, 2 hours, Northwest							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.1	0.0	0.1	0.0	5	0.004
AEGL-2	0.8	0.6	0.7	0.7	3,197	1.42
AEGL-1	2.0	1.4	1.6	1.6	19,125	8.362

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.2	0.3	0.3	1,276	0.411
AEGL-2	1.8	0.8	0.9	0.9	9,993	3.886
AEGL-1	4.0	1.8	2.3	2.2	38,597	22.195

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.5	0.7	2,386	1.152
AEGL-1	1.8	1.0	1.3	1.5	14,963	6.209

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.5	0.7	2,407	1.159
AEGL-1	1.8	1.2	1.3	1.5	15,695	6.778

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.5	0.7	2,599	1.247
AEGL-1	1.9	1.2	1.3	1.5	16,457	7.124

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	0.1	0.2	0.6	896	0.413
AEGL-2	1.9	0.4	0.8	1.1	10,281	3.544
AEGL-1	4.4	1.4	1.8	2.0	37,717	18.464

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.7	0.6	2,212	1.155
AEGL-1	1.7	1.1	1.5	1.4	14,084	6.106

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.6	0.6	2,216	1.157
AEGL-1	1.8	1.3	1.4	1.4	15,147	6.701

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	0.7	0.6	0.6	0.6	2,283	1.197
AEGL-1	1.9	1.4	1.5	1.5	16,041	7.311

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.1	0.3	0.3	475	0.332
AEGL-2	1.8	0.6	0.7	0.8	5,764	3.195
AEGL-1	3.7	1.5	1.9	1.9	38,433	17.768

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.6	0.6	2,268	1.24
AEGL-1	1.7	1.0	1.4	1.4	13,024	6.409

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,275	1.242
AEGL-1	1.7	1.3	1.4	1.4	14,311	7

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.6	0.6	2,337	1.279
AEGL-1	1.7	1.3	1.5	1.4	14,472	6.988

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.1	0.5	0.4	461	0.351
AEGL-2	1.4	0.6	1.0	0.9	4,872	3.038
AEGL-1	3.5	1.5	2.1	2.0	29,446	16.663

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.7	0.6	2,243	1.22
AEGL-1	1.8	1.1	1.5	1.5	11,993	6.227

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.6	0.6	2,270	1.235
AEGL-1	1.8	1.4	1.5	1.5	13,673	6.755

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.6	0.7	0.6	2,363	1.287
AEGL-1	1.8	1.3	1.6	1.5	14,751	7.237

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	0.1	0.3	0.3	343	0.283
AEGL-2	1.9	0.6	0.8	0.8	4,844	3.105
AEGL-1	4.0	1.7	2.1	1.9	31,540	17.824

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.7	0.6	2,274	1.176
AEGL-1	1.7	1.2	1.4	1.4	11,974	6

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,305	1.189
AEGL-1	1.7	1.2	1.4	1.4	13,652	6.61

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,421	1.249
AEGL-1	1.7	1.4	1.4	1.4	15,012	7.131

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	1.0	0.0	0.3	0.4	467	0.339

3						
AEGL-2	1.6	0.5	0.9	0.9	5,280	3.155
AEGL-1	3.6	1.5	2.0	1.9	31,948	17.07

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.5	0.6	0.7	2,478	1.201
AEGL-1	1.7	1.1	1.4	1.6	14,539	6.256

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.5	0.6	0.6	2,497	1.211
AEGL-1	1.8	1.3	1.4	1.6	15,566	6.809

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.5	0.6	0.6	2,606	1.249
AEGL-1	1.9	1.3	1.4	1.5	16,482	6.981

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.1	0.2	0.4	717	0.309
AEGL-2	1.7	0.6	0.8	0.8	8,763	3.169
AEGL-1	4.3	1.7	1.8	2.0	32,237	18.694

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,744	1.238
AEGL-1	1.7	1.1	1.4	1.4	14,227	6.015

75 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,777	1.251
AEGL-1	1.7	1.3	1.4	1.4	14,752	6.455

75 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,845	1.276
AEGL-1	1.8	1.3	1.4	1.4	16,971	7.078

75 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.1	0.4	0.5	1,221	0.407
AEGL-2	1.5	0.6	0.9	1.0	8,737	3.267
AEGL-1	3.8	1.7	2.0	2.0	31,753	18.088

75 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

3						
AEGL-2	0.7	0.6	0.6	0.7	2,638	1.188
AEGL-1	1.7	1.1	1.5	1.5	15,574	6.339

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.6	0.7	0.7	2,649	1.194
AEGL-1	1.8	1.4	1.5	1.5	16,395	6.917

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.6	0.7	0.7	2,747	1.226
AEGL-1	1.8	1.3	1.5	1.5	16,737	7.074

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.2	0.3	0.3	1,179	0.361
AEGL-2	1.8	0.6	0.8	0.8	9,054	3.451
AEGL-1	3.7	1.7	2.0	2.0	35,888	19.642

[redacted]

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.5	0.5	1,952	0.979
AEGL-	1.6	1.0	1.3	1.2	12,529	5.218

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55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.5	0.6	1,970	0.986
AEGL-1	1.6	1.1	1.3	1.2	13,223	5.694

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.5	0.6	2,075	1.024
AEGL-1	1.7	1.2	1.3	1.2	14,534	5.992

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.4	0.3	740	0.35
AEGL-2	1.7	0.5	0.9	0.9	9,026	3.08
AEGL-1	3.9	1.4	1.7	1.6	32,341	14.969

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	1,870	0.999
AEGL-1	1.6	1.0	1.4	1.4	11,568	5.248

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	1,901	1.014
AEGL-1	1.6	1.3	1.4	1.4	12,642	5.846

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	1,954	1.039
AEGL-1	1.7	1.3	1.4	1.4	13,865	6.109

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.1	0.3	0.3	424	0.292
AEGL-2	1.8	0.6	0.7	0.7	4,913	2.76
AEGL-1	3.4	1.4	1.8	1.8	29,941	13.602

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.6	0.6	0.5	1,846	1.033
AEGL-1	1.5	1.0	1.3	1.4	10,764	5.406

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.7	0.5	0.5	0.5	1,875	1.045
	AEGL-1	1.6	1.2	1.3	1.3	11,889	5.775

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.5	0.6	1,948	1.08
AEGL-1	1.6	1.2	1.3	1.4	12,447	5.97

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.1	0.4	0.3	424	0.325
AEGL-2	1.4	0.5	1.0	0.9	4,307	2.84
AEGL-1	3.2	1.3	1.8	1.7	23,647	13.761

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.5	1,792	1.008
AEGL-1	1.6	1.0	1.4	1.3	10,151	5.439

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	1,831	1.026
AEGL-1	1.6	1.2	1.4	1.3	11,607	5.856

55 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	1,889	1.056
AEGL-1	1.7	1.2	1.4	1.3	12,005	6.047

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	0.0	0.3	0.2	315	0.26
AEGL-2	1.8	0.6	0.7	0.7	4,106	2.711
AEGL-1	3.6	1.4	1.8	1.7	24,399	14.226

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.6	0.5	1,844	0.987
AEGL-1	1.6	1.0	1.2	1.3	10,447	5.203

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.5	0.6	1,883	1.005
AEGL-1	1.6	1.1	1.3	1.3	11,352	5.625

55 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.5	0.6	0.5	1,970	1.049
	AEGL-1	1.6	1.2	1.3	1.3	11,985	5.893

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.4	0.4	391	0.298
AEGL-2	1.4	0.5	0.9	0.9	4,534	2.752
AEGL-1	3.3	1.4	1.8	1.8	26,023	13.359

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,066	1.007
AEGL-1	1.6	1.0	1.3	1.4	11,998	5.483

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,085	1.013
AEGL-1	1.6	1.2	1.3	1.5	12,879	5.903

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3						
	AEGL-2	0.7	0.5	0.6	0.3	2,222	1.063
	AEGL-1	1.6	1.2	1.3	1.5	13,831	6.088

55 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.0	0.2	0.4	631	0.262
AEGL-2	1.9	0.5	0.7	0.8	7,401	2.786
AEGL-1	3.7	1.4	1.6	1.9	27,601	14.57

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.6	0.5	2,208	1.021
AEGL-1	1.5	1.0	1.4	1.3	12,773	5.523

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.5	0.5	2,228	1.031
AEGL-1	1.6	1.2	1.4	1.3	13,213	5.873

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.5	0.5	2,345	1.066
AEGL-1	1.6	1.2	1.4	1.3	13,958	6.153

55 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.1	0.3	0.4	968	0.323
AEGL-2	1.4	0.5	1.4	1.0	7,916	2.943
AEGL-1	3.6	1.4	1.8	1.8	27,138	14.401

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,130	0.991
AEGL-1	1.6	1.1	1.4	1.4	12,768	5.358

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,149	0.999
AEGL-1	1.6	1.3	1.4	1.4	13,089	5.639

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.5	0.6	0.6	2,278	1.039
AEGL-1	1.6	1.3	1.4	1.4	13,608	5.912

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.1	0.3	0.3	935	0.279

	AEGL-2	1.8	0.6	0.7	0.7	7,872	2.958
	AEGL-1	3.5	1.4	1.8	2.0	29,735	14.437

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.4	0.5	0.5	1,539	0.792
AEGL-1	1.4	1.0	1.2	1.1	10,682	4.419

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.4	0.5	0.5	1,563	0.802
AEGL-1	1.4	1.0	1.1	1.1	10,949	4.646

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,633	0.833
AEGL-1	1.5	1.0	1.1	1.2	11,240	4.766

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.3	517	0.253
AEGL-2	1.6	0.4	0.8	0.8	7,754	2.702
AEGL-1	3.4	1.2	1.5	1.4	27,171	11.503

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.5	0.5	1,433	0.803
AEGL-1	1.4	1.0	1.2	1.2	9,778	4.489

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,448	0.812
AEGL-1	1.5	1.1	1.2	1.2	10,388	4.707

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.5	0.5	0.5	1,489	0.83
AEGL-1	1.5	1.2	1.3	1.3	11,199	5.018

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.2	0.3	337	0.226
AEGL-2	1.7	0.5	0.7	0.7	4,363	2.55
AEGL-1	3.0	1.3	1.6	1.6	23,830	10.711

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,415	0.828
AEGL-1	1.4	0.9	1.2	1.2	9,474	4.716

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,440	0.838
AEGL-1	1.4	1.0	1.2	1.2	9,680	4.799

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,503	0.876
AEGL-1	1.4	1.0	1.2	1.2	10,220	5.03

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	0.0	0.3	0.3	302	0.234
AEGL-2	1.3	0.4	0.9	0.8	3,518	2.396
AEGL-1	2.9	1.2	1.6	1.6	18,861	11.084

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.5	0.5	0.5	1,381	0.816
	AEGL-1	1.5	1.0	1.2	1.2	8,761	4.579

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,405	0.829
AEGL-1	1.5	1.1	1.2	1.2	9,207	4.713

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,436	0.846
AEGL-1	1.5	1.1	1.3	1.3	9,670	4.966

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.0	0.3	0.3	252	0.209
AEGL-2	1.8	0.5	0.7	0.6	3,636	2.485
AEGL-1	3.3	1.3	1.6	1.5	18,910	11.151

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.4	0.5	0.5	1,433	0.792
	AEGL-1	1.4	0.9	1.2	1.2	8,995	4.534

35 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	1.4	0.5	0.5	1,453	0.8
AEGL-1	1.4	1.0	1.2	1.1	9,311	4.693

35 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,514	0.831
AEGL-1	1.5	1.0	1.2	1.2	9,829	4.896

35 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.4	0.3	326	0.257
AEGL-2	1.4	0.4	0.8	0.8	3,899	2.444
AEGL-1	3.0	1.2	1.6	1.5	20,285	10.231

35 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,579	0.802
AEGL-	1.4	1.0	1.2	1.3	9,922	4.535

1

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,609	0.814
AEGL-1	1.5	1.1	1.2	1.4	10,261	4.733

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,709	0.85
AEGL-1	1.5	1.1	1.2	1.4	10,571	4.858

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.0	0.2	0.5	621	0.25
AEGL-2	1.8	0.5	0.6	0.8	6,739	2.591
AEGL-1	3.4	1.3	1.5	1.7	24,477	11.866

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.4	1,707	0.814
AEGL-1	1.4	1.0	1.2	1.2	10,538	4.604

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,729	0.822
AEGL-1	1.4	1.1	1.2	1.2	10,899	4.824

35 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,813	0.85
AEGL-1	1.5	1.1	1.2	1.2	11,372	4.998

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	0.0	0.3	0.4	882	0.287
AEGL-2	1.4	0.4	0.9	0.8	7,155	2.602
AEGL-1	3.3	1.2	1.7	1.6	24,331	12.13

35 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,653	0.796
AEGL-1	1.5	1.0	1.2	1.2	10,594	4.484

35 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	1,678	0.805
AEGL-1	1.5	1.1	1.2	1.2	11,099	4.75

35 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.6	0.5	1,743	0.828
AEGL-1	1.5	1.2	1.3	1.2	11,617	4.901

35 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.0	0.3	0.3	844	0.238
AEGL-2	1.7	0.5	0.7	0.7	7,220	2.638
AEGL-1	3.1	1.3	1.5	1.6	24,464	11.175

APPENDIX: B

- Distance, population, and area tables for Chicago, IL.
    - Six different stability classes, eight wind directions per stability class, four temperatures per wind direction, and four time durations per temperature
    - Diagrams of plume measurement locations for each wind direction located in Appendix C. Maximum distances taken for each measurement.
    - Wind directions are denoted as the wind origin (i.e. "North" means wind is coming from the North and blowing towards the South).
    - Some populations are available, but measurements are not. This was due to the very small, immeasurable section of the plume output.
    - Upwind distances that are negative imply that the particular AEGL section of the plume moved downwind and had no measurements upwind (diagram explanation in Appendix C).

Stability Class A – CHICAGO, IL

ORIGIN: 41.84963 N 87.72055 W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.4	0.9	1.7	1.5	58,250	8.765
AEGL-1	3.2	1.4	2.4	2.0	87,228	15.758

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	1.6	3.1	3.1	150,705	30.498
AEGL-1	5.8	2.5	4.2	3.4	237,645	49.757

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	2.6	4.3	3.3	243,038	50.634
AEGL-1	10.5	3.9	6.6	5.9	630,265	148.336

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.2	0.0	0.8	251	0.024
AEGL-2	4.5	2.5	3.7	2.8	185,193	37.981
AEGL-1	16.1	4.0	9.1	7.4	955,470	267.666

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.6	0.7	1.8	1.4	54,358	8.82
AEGL-1	3.4	1.2	2.3	1.9	82,322	15.374

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	1.4	2.9	2.7	135,452	30.845
AEGL-1	6.3	2.3	4.0	3.5	228,485	51.023

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	2.3	4.0	3.5	222,896	48.312
AEGL-1	12.3	3.3	6.5	5.5	539,187	152.587

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	2.5	3.4	3.2	179,861	37.436
AEGL-1	17.8	3.5	7.3	6.3	746,241	259.414

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.3	0.9	1.0	1.8	52,713	8.476
AEGL-1	3.1	1.5	1.7	2.5	91,317	15.47

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	1.8	2.3	3.2	146,873	28.603
AEGL-1	5.6	2.4	3.4	4.3	232,800	48.806

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	2.4	3.3	4.2	218,914	44.703
AEGL-1	110.7	3.4	5.6	7.2	534,731	144.13

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	0.1	0.1	0.1	63	0.006
AEGL-	4.7	2.4	2.7	3.6	185,284	36.035

2 AEGL-1	16.2	3.5	6.8	8.9	751,089	240.295

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.4	0.9	1.6	1.5	51,699	8.436
AEGL-1	3.1	1.5	2.1	2.2	96,102	15.374

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	1.7	2.8	2.9	164,773	28.921
AEGL-1	5.7	2.5	3.7	3.8	258,232	49.003

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	2.8	3.6	4.0	249,300	48.002
AEGL-1	10.5	3.8	6.0	6.6	674,739	148.361

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.4	0.1	0.1	0.1	120	0.02
AEGL-2	4.8	2.7	3.4	3.3	205,484	38.144
AEGL-1	16.0	4.1	8.6	9.3	1,090,072	259.361

95 deg, 30 min,

south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.5	0.9	1.5	1.4	55,868	8.375
AEGL-1	3.1	1.4	2.2	2.0	96,894	15.012

95 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	1.5	3.0	2.7	167,472	28.786
AEGL-1	5.6	2.4	3.9	3.6	269,847	48.198

95 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	2.7	3.8	3.7	275,885	50.846
AEGL-1	10.4	3.7	6.7	6.1	840,258	146.053

95 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.2	0.0	0.2	0.0	125	0.023
AEGL-2	4.6	2.7	3.2	3.1	207,521	38.378
AEGL-1	16.0	4.0	8.5	7.8	1,739,251	255.027

95 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	2.7	0.7	1.5	1.5	65,404	8.512

	2 AEGL-1	3.4	1.2	2.2	2.4	103,933	14.99

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	1.4	2.8	3.0	179,173	28.45
AEGL-1	6.1	2.1	3.8	4.3	274,543	47.547

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	2.1	3.7	3.8	259,057	45.736
AEGL-1	11.4	3.1	6.5	6.9	1,079,067	147.207

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	2.1	3.3	3.2	210	36.522
AEGL-1	16.0	3.2	7.9	8.3	1,319,807	227.33

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.7	0.8	1.3	1.6	74,108	8.759
AEGL-1	3.3	1.2	1.9	2.3	112,563	15.854

95 deg, 1 hour, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	1.4	2.7	3.1	175,379	29.272
	AEGL-1	5.9	2.1	3.5	4.1	276,658	49.103

95 deg, 2 hours, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.2	2.0	3.3	3.7	254,909	46.059
	AEGL-1	11.2	3.2	5.8	6.9	969,067	147.182

95 deg, 4 hours, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.0	0.0	0.0	0.0	36	0.005
	AEGL-2	4.8	2.0	2.9	3.1	190,422	34.837
	AEGL-1	15.9	3.3	7.1	8.4	1,186,959	234.411

95 deg, 30 min, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	2.4	1.0	1.4	1.7	72,303	8.429
	AEGL-1	3.0	1.5	2.0	2.3	103,513	15.137

95 deg, 1 hour, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	1.8	2.7	3.0	154,701	28.404

AEGL-1	5.5	2.7	3.5	4.0	245,422	48.91

95 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	2.8	3.7	4.0	244,732	48.725
AEGL-1	10.3	4.0	5.8	6.5	730,097	145.286

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.3	0.0	0.1	0.2	258	0.025
AEGL-2	4.5	2.8	3.2	3.6	189,299	36.491
AEGL-1	16.3	4.2	7.3	8.3	1,250,108	256.91

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.2	0.7	1.7	1.2	52,962	7.774
AEGL-1	3.1	1.3	2.3	1.9	81,045	14.124

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	1.6	3.1	2.5	142,448	28.654
AEGL-1	5.7	2.4	4.0	3.3	230,271	48.124

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	2.6	3.7	3.2	218,088	44.762
AEGL-1	10.6	3.7	6.8	5.7	615,922	144.9

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	2.6	3.1	2.7	165,603	32.559
AEGL-1	14.5	3.8	8.5	7.2	836,672	224.27

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.7	0.7	1.7	1.4	51,733	8.398
AEGL-1	3.4	1.2	2.2	1.9	80,862	15.161

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	1.4	3.0	2.4	130,776	29.544
AEGL-1	6.3	2.2	4.0	3.4	225,153	50.29

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	2.2	3.5	3.6	191,696	40.518
AEGL-1	12.0	3.3	6.4	5.6	524,049	148.743

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	2.2	3.3	3.2	155,370	31.158
AEGL-1	15.6	3.3	7.7	7.0	643,046	206.793

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.6	0.5	1.3	1.5	49,820	8.093
AEGL-1	3.3	1.1	2.0	2.3	89,465	15.278

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	1.2	2.5	2.8	140,602	27.368
AEGL-1	5.7	2.1	3.6	4.0	223,488	47.083

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	2.0	3.0	3.3	188,596	38.06
AEGL-1	11.4	3.0	5.8	6.9	530,819	144.899

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	2.1	3.0	3.2	161,372	29.887
AEGL-1	15.1	3.2	7.0	8.1	685,548	205.653

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.3	0.8	1.5	1.6	49,866	8.098
AEGL-1	3.0	1.4	2.0	2.2	92,478	14.797

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	1.8	2.8	2.9	156,138	27.173
AEGL-1	5.4	2.5	3.6	3.8	250,193	46.597

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	2.7	3.5	3.6	218,292	40.257
AEGL-1	9.9	3.8	6.4	6.2	637,775	137.215

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	2.6	3.0	3.1	163,214	28.505
	AEGL-1	14.9	3.9	7.8	8.9	984,067	225.458

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.2	0.6	1.4	1.4	52,138	7.716
AEGL-1	2.9	1.3	2.2	2.0	91,831	14.3170

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	1.5	2.7	2.6	158,512	27.126
AEGL-1	5.5	2.3	3.8	3.5	262,971	47.18

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	2.2	3.8	3.2	228,665	41.836
AEGL-1	10.2	3.5	6.6	6.0	823,125	141.823

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	2.2	3.2	2.7	175,678	30.486
AEGL-1	14.7	3.8	8.2	7.2	1,481,952	221.27

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.6	0.6	1.5	1.6	59,056	7.707
AEGL-1	3.3	1.1	2.0	2.3	100,638	14.413

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	1.2	2.7	2.7	169,755	26.624
AEGL-1	5.9	2.1	4.0	3.9	269,908	46.796

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	2.0	3.2	3.3	215,038	37.021
AEGL-1	11.2	3.0	6.2	7.1	1,072,448	143.734

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	2.2	3.1	3.2	169,801	28.531

	AEGL-1	15.4	3.2	7.8	8.3	1,232,978	205.979

75 deg, 30 min, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	2.4	0.7	1.3	1.6	69,311	8.011
	AEGL-1	3.2	1.2	1.9	2.3	106,590	14.812

75 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	1.4	2.6	3.1	167,925	27.504
	AEGL-1	5.8	2.1	3.4	4.0	270,759	47.878

75 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.6	2.0	3.3	3.6	207,206	37.477
	AEGL-1	11.0	3.0	5.6	6.6	956,304	142.95

75 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	2.0	2.8	3.2	168,390	29.585
	AEGL-1	14.9	3.2	6.8	7.8	1,104,611	203.603

75 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.3	0.8	1.5	1.6	68,011	7.812
AEGL-1	3.0	1.4	2.0	2.2	101,544	14.5

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	1.7	2.7	3.1	147,529	26.815
AEGL-1	5.5	2.6	3.6	4.1	236,797	46.756

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	2.7	3.3	3.6	207,098	40.284
AEGL-1	10.1	3.8	5.6	6.3	688,567	137.599

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	2.6	2.9	3.1	159,301	29.814
AEGL-1	14.3	4.1	7.4	8.5	1,185,795	230.581

[redacted]

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	2.1	0.6	1.4	1.1	50,831	7.224

	2						
	AEGL-1	3.0	1.3	2.2	1.9	80,450	13.932

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	1.3	3.1	2.4	122,965	25.013
AEGL-1	5.6	2.3	3.9	3.3	219,292	45.422

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	2.2	3.1	2.7	170,988	34.371
AEGL-1	10.5	3.6	6.6	5.5	597,619	140.091

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	2.2	3.1	2.3	136,850	25.151
AEGL-1	13.0	3.8	7.9	6.6	723,824	177.913

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.5	0.5	1.6	1.2	43,120	6.861

	AEGL-1	3.4	1.1	2.3	1.9	74,612	13.81

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	1.3	2.8	2.5	114,279	25.506
AEGL-1	6.3	2.1	4.1	3.5	210,955	47.466

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	2.0	3.1	3.0	151,413	31.256
AEGL-1	12.1	3.2	6.4	5.5	515,087	145.284

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	1.9	2.9	2.9	122,827	23.716
AEGL-1	14.0	3.2	7.2	6.4	590,327	173.303

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.1	0.8	1.1	1.8	40,918	6.789
AEGL-1	2.9	1.3	1.7	2.5	80,137	13.511

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	1.4	2.3	3.1	132,699	25.559
AEGL-1	5.5	2.2	3.2	4.2	218,030	45.449

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	2.0	2.7	3.5	160,292	31.081
AEGL-1	10.4	3.1	5.3	7.1	484,688	131.858

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	2.2	2.2	3.0	133,922	24.059
AEGL-1	12.7	3.3	6.2	7.6	590,004	169.821

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.3	0.9	1.4	1.4	45,103	7.468
AEGL-1	3.1	1.4	2.2	2.2	89,464	14.413

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	1.5	2.6	2.9	146,190	25.353
AEGL-1	5.4	2.4	3.6	3.8	238,461	44.163

55 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	2.5	3.1	3.3	192,108	34.58
AEGL-1	10.0	3.8	6.3	6.0	633,453	135.663

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	2.4	3.0	2.8	145,460	24.74
AEGL-1	13.2	3.8	7.8	7.7	848,867	189.861

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.0	0.9	1.8	1.2	47,696	7.045
AEGL-1	2.7	1.5	2.4	1.7	87,488	13.644

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3						
	AEGL-2	4.0	1.5	3.0	2.2	144,298	24.51
	AEGL-1	5.3	2.5	4.1	3.2	247,705	44.489
55 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	2.4	3.5	2.6	32	184741
	AEGL-1	9.6	3.7	6.5	5.5	137	798877
55 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.6	2.4	3.0	2.4	148,542	24.236
	AEGL-1	12.1	3.8	7.6	6.4	1,191,382	177.565
55 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	2.4	0.6	1.3	1.3	50,255	6.539
	AEGL-1	3.2	1.0	2.1	2.1	93,397	13.164
55 deg, 1 hour, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.8	1.2	2.6	3.1	157,880	24.717
	AEGL-1	5.9	1.9	3.7	4.1	263,148	45.258

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	1.9	3.0	3.3	181,316	30.075
AEGL-1	11.0	2.9	6.4	7.0	1,036,430	136.061

55 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	1.9	2.9	2.9	141,581	22.835
AEGL-1	13.7	3.1	7.5	8.2	1,165,118	169.357

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.3	0.5	1.4	1.2	59,776	6.755
AEGL-1	3.1	1.1	2.0	2.0	99,071	13.073

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	1.1	2.4	2.9	149,734	24.23
AEGL-1	5.7	2.0	3.3	3.9	258,813	45.353

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	2.0	2.8	3.2	172,693	30.632

	AEGL-1	11.0	2.9	5.5	6.4	939,144	138.017
55 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	2.0	2.5	2.9	145,111	23.993
	AEGL-1	12.7	3.2	6.6	7.4	1,042,140	170.233
55 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	2.2	0.8	1.4	1.5	62,256	7.169
	AEGL-1	2.9	1.4	2.1	2.3	97,988	13.74
55 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.1	1.7	2.5	2.8	143,551	25.512
	AEGL-1	5.3	2.5	3.5	3.8	223,581	43.241
55 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	2.5	3.1	3.3	176,899	33.078
	AEGL-1	10.1	3.7	6.0	6.1	685,387	136.83
55 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	2.5	2.9	2.9	136,422	24.009
AEGL-1	12.7	4.1	6.9	7.6	1,030,690	186.508

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.1	0.3	1.4	1.1	43,486	5.616
AEGL-1	2.8	1.0	2.0	1.8	69,335	12.203

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	1.2	2.6	2.1	110,173	21.88
AEGL-1	5.4	2.2	3.7	3.2	203,679	42.497

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	1.9	2.8	2.4	133,944	25.502
AEGL-1	10.0	3.4	6.4	5.3	548,999	127.957

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.1	1.9	2.6	2.1	110,441	18.918
AEGL-1	11.2	3.6	6.9	6.1	624,108	146.053

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.3	0.4	1.3	1.1	36,536	5.621
AEGL-1	3.2	1.0	2.0	1.8	67,041	12.01

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	1.2	2.7	2.4	98,496	21.136
AEGL-1	6.1	1.9	3.7	3.3	189,005	43.336

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	1.8	2.9	2.6	118,557	23.979
AEGL-1	11.3	2.9	6.3	5.5	492,015	135.674

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.5	1.7	2.5	2.4	98,255	17.798
AEGL-1	12.5	3.2	7.2	6.5	531,716	147.188

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	2.1	0.3	1.0	1.3	30,783	5.235
	AEGL-1	3.0	0.9	1.8	2.0	73,833	12.107

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	0.8	2.2	2.8	105,890	19.969
AEGL-1	5.6	1.8	3.2	3.8	204,763	42.086

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	1.8	2.6	2.8	129,605	23.484
AEGL-1	10.4	2.7	5.4	6.4	470,594	128.378

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	1.5	2.2	2.5	102,005	17.214
AEGL-1	11.5	2.8	5.9	6.9	511,869	137.2

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.2	0.7	1.1	1.1	30,687	5.242
AEGL-1	2.9	1.2	1.8	2.0	74,985	11.968

35 deg, 1 hour, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	1.4	2.4	2.5	126,335	21.594
	AEGL-1	5.3	2.3	3.5	3.6	228,174	41.415

35 deg, 2 hours, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	2.2	3.0	3.0	149,717	25.535
	AEGL-1	9.9	3.4	5.8	5.9	597,451	126.432

35 deg, 4 hours, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.3	1.9	2.4	2.6	112,925	17.859
	AEGL-1	11.1	3.7	7.3	6.8	659,666	146.029

35 deg, 30 min, south

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	2.0	0.3	1.2	1.1	36,188	5.332
	AEGL-1	2.9	1.0	2.0	1.7	77,216	12.05

35 deg, 1 hour, south

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	1.3	2.7	2.4	132,065	22.143

	AEGL-1	5.3	2.2	3.7	3.2	226,267	40.906
35 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.6	1.9	2.7	2.7	153,484	25.136
	AEGL-1	9.7	3.3	6.4	5.6	758,169	129.911
35 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.1	1.8	2.4	2.3	117,294	17.678
	AEGL-1	10.9	3.4	6.8	6.4	801,398	137.555
35 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	2.2	0.3	1.1	1.4	39,842	5.229
	AEGL-1	3.1	0.9	1.9	2.1	85,886	11.819
35 deg, 1 hour, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	1.0	2.4	2.5	130,886	20.073
	AEGL-1	5.8	1.8	3.7	3.8	249,907	42.497
35 deg, 2 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	1.7	2.8	2.9	140,393	22.331
	AEGL-1	11.1	2.7	6.4	6.9	1,019,408	130.303

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	1.6	2.5	2.6	115,033	16.812
AEGL-1	11.4	2.9	6.7	7.2	1,034,495	132.986

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.1	0.2	0.9	1.3	48,807	5.259
AEGL-1	3.0	0.9	1.7	2.0	92,446	11.996

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	1.1	2.2	2.5	129,598	20.135
AEGL-1	5.7	1.9	3.3	3.8	238,262	41.51

35 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	1.8	2.5	2.5	145,191	24.109
AEGL-1	10.7	2.7	5.3	6.3	907,905	127.213

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	1.7	2.1	2.6	117,116	17.2
AEGL-1	11.2	2.9	5.8	7.1	902,794	133.81

35 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.9	0.6	1.1	1.3	50,028	5.501
AEGL-1	2.9	1.2	1.8	2.0	91,028	11.647

35 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	1.5	2.4	2.8	126,262	21.308
AEGL-1	5.1	2.3	3.2	3.7	211,377	41.223

35 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.7	2.1	2.8	3.0	142,035	25.584
AEGL-1	10.0	3.5	5.5	6.9	655,644	128.758

35 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.0	2.0	2.5	2.8	115,145	17.898

	2 AEGL-1	11.0	4.0	7.2	6.9	724,276	146.056

Stability Class B –
CHICAGO, IL

ORIGIN:	41.84963	N
	87.72055	W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.2	1.4	1.5	41,397	8.911
AEGL-1	4.6	0.2	2.1	2.1	65,227	15.472

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.1	-0.1	2.7	2.4	120,565	28.203
AEGL-1	8.3	0.8	4.1	3.5	229,823	51.295

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.5	0.3	3.1	3.4	153,780	33.717
AEGL-1	17.0	1.0	6.4	6.0	609,519	175.547

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.3	0.2	3.2	3.4	137,333	29.436
AEGL-1	21.1	1.1	7.2	6.8	661,352	201.942

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	-0.2	1.3	1.3	36,575	9.028
AEGL-1	4.8	0.4	1.9	1.9	68,604	16.719

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.1	0.0	2.4	2.0	91,931	25.33
AEGL-1	8.9	0.8	3.3	2.9	186,978	53.809

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.2	0.6	2.7	2.5	118,079	31.295
AEGL-1	20.0	1.3	4.2	4.8	411,992	197.674

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.6	3.0	2.5	110,343	27.438
AEGL-1	22.5	1.3	4.5	5.2	424,352	212.995

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.6	0.2	1.3	1.6	45,533	8.41
AEGL-1	4.5	0.3	1.7	2.3	81,403	15.338

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.2	2.3	2.8	116,966	23.88
AEGL-1	8.3	0.7	3.2	4.1	210,056	53.233

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.5	2.5	2.9	134,481	28.018
AEGL-1	19.2	1.2	5.0	6.2	498,314	192.058

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.4	2.6	2.9	121,532	24.922
AEGL-1	21.5	1.4	5.8	6.9	533,501	207.842

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.2	0.0	1.2	1.3	42,662	8.436

	2					
	AEGL-1	4.2	0.7	1.8	2.0	82,267	15.336

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.6	2.5	2.5	146,786	27.09
AEGL-1	7.5	1.4	3.4	3.5	277,469	51.793

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	1.1	2.9	3.0	177,414	32.057
AEGL-1	15.1	1.8	5.4	5.7	715,511	168.335

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	1.0	3.0	3.0	158,138	28.251
AEGL-1	20.3	1.9	6.0	7.2	802,473	212.426

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.0	0.1	1.7	1.0	46,348	8.181

	2 AEGL-1	3.9	0.8	2.4	1.6	81,757	14.99
95 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.5	0.5	3.1	2.4	132,097	25.968
	AEGL-1	7.6	1.1	4.0	3.3	305,525	51.311
95 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.6	1.0	3.2	2.7	167,358	30.761
	AEGL-1	15.8	1.7	6.6	5.4	1,081,996	171.122
95 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.4	1.0	3.1	2.8	151,123	27.061
	AEGL-1	20.0	1.7	7.3	5.5	1,276,696	207.545

95 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	-0.5	1.4	1.5	48,241	8.432
	AEGL-1	4.6	0.0	2.0	2.0	101,965	15.47

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.9	0.0	2.4	2.7	155,632	23.974
AEGL-1	8.8	0.6	3.4	3.7	399,241	52.04

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.1	0.4	2.8	3.0	183,022	28.524
AEGL-1	21.7	1.0	5.5	6.6	965,625	208.156

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.4	2.8	3.0	156,298	24.142
AEGL-1	19.0	1.0	5.8	7.7	1,014,288	188.294

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.6	0.2	1.2	1.6	67,333	8.683
AEGL-1	4.5	0.4	1.8	2.3	104,725	15.662

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	5.7	0.2	2.2	3.0	149,330	23.529

	2 AEGL-1	8.7	0.8	3.0	4.2	390,630	53.039
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.7	0.5	2.6	3.2	173,001	27.984
	AEGL-1	20.6	1.2	4.8	7.3	825,274	217.225
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.7	0.6	2.4	3.3	151,612	24.102
	AEGL-1	18.0	1.2	5.5	7.3	882,240	203.461
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.2	0.0	1.0	1.6	66,148	8.252
	AEGL-1	4.0	0.7	1.6	2.1	100,200	15.278
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.5	0.7	2.0	2.8	156,100	27.053
	AEGL-1	7.4	1.4	3.0	3.8	268,062	51.643
95 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.4	1.2	2.6	3.2	169,780	31.473
	AEGL-1	15.3	2.0	5.0	6.3	800,176	171.709

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	1.3	2.6	3.2	152,250	27.746
AEGL-1	19.5	2.0	5.0	7.5	903,548	212.543

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	0.1	1.7	1.1	37,260	7.589
AEGL-1	4.1	0.5	2.3	1.6	61,578	14.509

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	0.3	3.0	2.2	110,859	25.978
AEGL-1	7.7	1.1	4.1	3.0	221,750	49.237

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	0.7	3.1	2.7	129,889	28.133
AEGL-1	16.6	16.0	6.6	5.1	617,743	178.711

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.8	3.1	2.4	113,345	24.1
AEGL-1	17.9	1.6	7.8	5.2	606,207	174.834

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.2	1.2	1.0	33,314	8.231
AEGL-1	4.8	0.2	2.0	1.5	61,309	15.586

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	0.0	2.3	1.6	82,012	21.924
AEGL-1	9.1	0.6	3.2	2.6	178,095	52.079

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	5.5	0.5	2.6	2.3	100,446	25.779

	2 AEGL-1	19.2	1.2	4.9	4.8	391,657	182.648

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	0.5	2.7	2.4	88,640	21.619
AEGL-1	20.1	1.2	5.5	5.6	400,155	186.122

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.6	-0.4	1.0	1.6	39,960	7.575
AEGL-1	4.5	0.2	1.7	2.2	77,326	14.605

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.0	1.9	2.8	96,737	19.642
AEGL-1	8.3	0.6	3.1	4.0	204,976	51.068

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.4	2.5	2.9	115,154	23.261
AEGL-1	19.0	1.3	4.9	6.0	478,196	180.93

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	0.5	2.5	2.8	102,627	20.171
AEGL-1	19.0	1.3	5.0	6.5	463,176	170.565

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	0.0	1.2	1.0	36,546	7.305
AEGL-1	4.1	0.6	1.8	1.9	75,708	14.413

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	0.7	2.1	2.2	123	22.847
AEGL-1	7.4	1.4	2.9	3.1	257,711	48.14

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	1.1	2.6	2.9	143,437	25.814
AEGL-1	15.1	1.8	4.7	6.4	683,860	161.235

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	1.0	2.7	3.0	126,042	22.632
AEGL-1	17.6	1.9	5.3	6.7	726,498	175.971

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.1	0.1	1.5	1.1	41,761	7.519
AEGL-1	4.0	0.4	2.2	1.8	78,559	14.4130

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.3	2.7	2.4	110,189	21.702
AEGL-1	7.5	1.1	3.9	3.2	296,008	49.87

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.9	2.7	2.6	139,665	25.49
AEGL-1	14.6	1.7	6.3	5.1	1,000,919	156.445

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	4.8	0.9	2.7	2.6	126,351	22.147
AEGL-1	17.1	1.6	7.3	5.4	1,074,359	168.673

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.5	1.2	1.5	41,864	7.458
AEGL-1	4.7	0.0	1.8	2.2	94,581	14.606

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	0.0	2.5	2.7	115,985	18.137
AEGL-1	8.6	0.5	3.5	3.7	385,860	49.485

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	0.2	2.5	3.0	150,206	22.618
AEGL-1	19.9	0.9	5.1	5.7	951,585	194.938

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.4	2.5	3.0	123,805	19.283
AEGL-1	17.4	0.9	6.0	6.6	975,289	161.619

75 deg, 30 min, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.6	-0.4	0.9	1.6	58,773	7.385
	AEGL-1	4.5	0.3	1.6	2.3	97,922	14.605

75 deg, 1 hour, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.1	-0.1	2.1	2.6	121,640	18.995
	AEGL-1	8.3	0.7	2.9	4.0	339,839	50.349

75 deg, 2 hours, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.1	0.3	2.5	3.2	145,408	23.467
	AEGL-1	20.9	1.1	4.6	7.2	815,748	212.426

75 deg, 4 hours, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.9	0.4	2.4	2.9	127,474	19.975
	AEGL-1	16.2	1.0	5.5	7.3	847,059	169.937

75 deg, 30 min, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-	3.1	0.0	0.9	1.4	60,831	7.234

	2 AEGL-1	3.9	0.7	1.5	2.1	96,572	14.605

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.7	1.9	2.6	132,405	22.047
AEGL-1	7.3	1.4	2.8	3.7	258,626	49.196

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	1.1	2.6	2.9	142,651	25.321
AEGL-1	15.2	2.0	4.4	6.4	756,508	163.061

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	1.1	2.5	2.9	132,537	23.265
AEGL-1	17.3	2.0	5.5	6.5	818,619	175.83

[redacted]

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.1	0.2	1.6	0.9	31,400	6.533
AEGL-1	4.1	0.5	2.3	1.6	58,020	13.645

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	0.4	2.7	2.1	78,150	19.167
AEGL-1	7.7	0.9	4.0	2.9	209,627	46.891

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.8	3.3	2.1	101,065	22.371
AEGL-1	14.8	1.4	6.6	5.1	548,825	151.627

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.7	3.2	2.1	90,976	18.982
AEGL-1	15.5	1.4	6.7	5.2	536,103	144.858

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.7	1.2	0.9	25,209	6.534
AEGL-1	4.7	0.0	2.0	1.3	56,534	14.028

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.0	2.3	1.8	64,150	16.888
AEGL-1	9.0	0.5	3.3	2.5	170,415	50.343

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.4	2.5	2.2	79,367	19.957
AEGL-1	19.7	1.0	5.0	3.4	380,628	184.181

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	0.5	2.6	2.1	70,435	16.851
AEGL-1	17.3	1.0	6.1	4.1	355,281	152.545

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	-0.3	1.0	1.6	32,453	6.243
AEGL-1	4.3	0.1	1.7	2.2	71,613	13.573

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	-0.1	1.9	2.4	79,317	15.626
AEGL-1	8.1	0.6	3.0	1.0	194,455	47.477

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.3	2.1	2.5	90,137	17.137
AEGL-1	16.6	1.1	4.8	5.9	430,701	156.953

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	0.3	1.9	2.2	77,971	14.521
AEGL-1	16.5	1.0	5.0	6.1	404,842	139.109

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	-0.2	0.9	1.1	29,828	6.055
AEGL-1	4.0	0.5	1.7	1.7	68,036	13.257

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	4.4	0.4	2.4	2.1	97,080	18.571
	AEGL-1	7.4	1.2	3.7	3.0	249,013	46.506
55 deg, 2 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	0.8	2.5	2.7	113,351	20.834
	AEGL-1	14.1	1.6	4.9	5.9	652,300	148.733
55 deg, 4 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.1	0.9	2.3	2.5	97,677	17.549
	AEGL-1	15.1	1.7	5.7	6.4	626,193	144.654
55 deg, 30 min, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.1	0.3	1.4	1.1	33,787	6.045
	AEGL-1	3.9	0.3	2.1	1.7	70,882	13.14
55 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.3	0.3	2.7	2.1	86,603	16.727
	AEGL-1	7.5	1.0	3.8	3.3	279,879	47.563
55 deg, 2 hours, south							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.6	2.6	2.4	107,919	19.211
AEGL-1	14.0	1.5	5.9	4.8	923,342	143.208

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	0.7	2.4	2.0	95,572	16.404
AEGL-1	15.0	1.5	6.1	5.4	861,780	138.47

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	-0.7	0.9	1.2	35,709	6.458
AEGL-1	4.6	0.0	1.8	1.9	84,266	13.453

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	-0.3	1.9	2.3	91,974	14.967
AEGL-1	8.4	0.4	3.3	3.7	377,620	48.236

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.2	2.3	2.6	111,876	17.165
AEGL-	17.2	0.8	5.0	5.5	925,637	156.12

	1						6
55 deg, 4 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	0.3	2.3	2.3	91,508	13.756
	AEGL-1	15.4	0.9	6.6	6.2	911,972	132.316
55 deg, 30 min, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.5	-0.9	0.8	1.2	38,945	4.781
	AEGL-1	4.5	0.3	1.7	1.9	82,893	11.902
55 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	-0.2	1.6	2.3	80,287	11.624
	AEGL-1	8.2	0.3	2.8	3.8	316,129	46.314
55 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	0.2	1.8	2.3	92,935	13.352
	AEGL-1	14.0	0.8	4.5	6.3	777,026	128.522
55 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	0.3	1.8	2.3	77,927	10.295
AEGL-1	12.2	0.9	4.6	6.5	769,315	106.611

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	0.0	0.8	1.3	54,070	6.117
AEGL-1	3.9	0.6	1.5	1.9	87,194	12.962

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	0.5	1.9	2.4	108,529	17.401
AEGL-1	7.3	1.2	2.7	3.7	245,333	46.085

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	1.0	2.2	2.7	124,505	20.502
AEGL-1	13.5	1.7	4.5	6.2	706,730	146.096

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	1.0	2.2	2.7	108,623	17.229
AEGL-1	15.1	1.8	4.8	7.4	700,389	139.596

[redacted]

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	-0.7	1.2	1.0	23,787	5.118
AEGL-1	4.2	0.1	2.0	1.6	51,905	12.78

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	-0.1	3.1	1.8	57,435	14.198
AEGL-1	7.7	0.8	3.8	2.8	200,464	45.353

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	0.7	2.7	1.8	75,209	16.557
AEGL-1	14.3	1.4	6.5	4.7	511,042	140.491

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	0.5	2.6	1.8	69,365	13.391
AEGL-1	13.2	1.3	6.7	5.1	442,723	111.651

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.5	1.4	0.8	25,209	6.534
AEGL-1	4.6	0.0	1.8	1.4	56,534	14.028

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.0	1.9	1.7	64,150	16.888
AEGL-1	9.0	0.5	3.1	2.5	170,415	50.343

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.5	2.5	2.1	79,367	19.957
AEGL-1	19.8	1.0	5.1	4.2	380,628	184.181

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.5	2.5	2.3	70,435	16.851
AEGL-1	17.5	1.1	5.4	4.3	355,281	152.545

35 deg, 30 min, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.2	-0.7	0.7	1.2	23,750	4.774
	AEGL-1	4.3	0.1	1.5	2.2	64,868	12.1

35 deg, 1 hour, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	-0.4	1.6	2.1	56,755	11.214
	AEGL-1	8.1	0.4	2.8	3.8	183,026	44.969

35 deg, 2 hours, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	0.3	1.7	1.9	67,022	12.176
	AEGL-1	14.2	0.9	4.6	5.7	374,843	126.833

35 deg, 4 hours, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.1	0.3	2.0	2.2	77,971	14.521
	AEGL-1	16.5	1.1	5.0	6.0	404,842	139.109

35 deg, 30 min, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-	3.0	-0.2	1.0	1.0	29,828	6.055

	2						
	AEGL-1	3.9	0.4	1.7	1.5	68,036	13.257

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.5	2.2	2.1	97,080	18.571
AEGL-1	7.4	1.1	3.3	3.0	249,013	46.506

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.8	2.5	2.5	113,351	20.834
AEGL-1	14.1	1.6	5.1	5.5	652,300	148.733

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	0.9	2.6	2.5	97,677	17.549
AEGL-1	15.0	1.6	6.0	6.1	626,193	144.654

35 deg, 30 min, south

	DW1	DW2	CWL	CWR	Pop	Area
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.9	-0.5	1.1	0.8	26,100	4.642

	AEGL-1	3.8	0.2	2.1	1.6	62,252	11.811
35 deg, 1 hour, south							
		DW1	DW2	CWL	CWR	Pop	Area
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	0.0	2.3	1.9	66,017	12.76
	AEGL-1	7.4	0.7	3.8	3.0	246,566	43.528
35 deg, 2 hours, south							
		DW1	DW2	CWL	CWR	Pop	Area
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	0.5	2.1	1.8	80,869	14.236
	AEGL-1	13.1	1.4	6.0	4.8	792,755	125.474
35 deg, 4 hours, south							
		DW1	DW2	CWL	CWR	Pop	Area
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.2	0.6	2.1	1.7	68,219	11.536
	AEGL-1	12.5	1.3	5.9	5.2	682,344	109.24

35 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.7	-0.7	1.1	1.3	35,709	6.458
	AEGL-1	4.5	0.0	1.9	2.2	84,266	13.453
35 deg, 1 hour, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	4.6	-0.2	2.1	2.5	91,974	14.967
	AEGL-1	8.5	0.4	3.3	4.1	377,620	48.236

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.4	2.3	2.4	111,876	17.165
AEGL-1	17.1	0.8	6.0	5.6	925,637	156.126

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	0.4	2.1	2.4	91,508	13.756
AEGL-1	15.4	0.9	5.6	7.4	911,972	132.316

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	-0.5	0.8	1.4	51,427	6.373
AEGL-1	4.3	0.1	1.6	2.1	90,289	13.163

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.2	1.8	2.6	97,319	14.982

	AEGL-1	8.3	0.6	2.8	3.9	333,738	49.293
35 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.5	0.3	2.2	2.6	113,571	17.884
	AEGL-1	19.8	0.8	4.6	7.2	797,398	199.712
35 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	0.3	2.1	2.6	99,204	14.601
	AEGL-1	15.0	0.9	5.4	7.2	810,803	149.865
35 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.0	0.0	0.8	1.4	54,070	6.117
	AEGL-1	3.9	0.7	1.5	1.9	87,194	12.962
35 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	0.5	1.7	2.4	108,529	17.401
	AEGL-1	7.3	1.2	2.7	3.8	245,333	46.085
35 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3						
	AEGL-2	4.3	0.9	2.2	2.6	124,505	20.502
	AEGL-1	13.5	1.7	4.3	5.7	706,730	146.096
35 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	0.9	2.1	2.4	108,623	17.229
	AEGL-1	15.1	1.8	4.3	6.6	700,389	135.596

Stability Class C –
CHICAGO, IL

ORIGIN:	41.84963	N
	87.72055	W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	-0.5	1.8	0.9	29,922	8.6
AEGL-1	5.0	-0.2	2.5	1.5	60,945	16.047

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.4	-0.2	3.1	2.0	92,602	24.539
AEGL-1	9.3	0.4	4.2	2.9	226,518	52.656

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.9	0.3	3.1	2.4	102,569	25.341
AEGL-1	17.6	0.7	6.5	4.3	522,045	159.626

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.4	3.1	2.4	92,740	22.509
AEGL-1	21.8	0.7	6.7	4.7	543,300	173.534

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	-0.7	1.6	1.1	31,297	9.33
AEGL-1	5.7	-0.3	2.5	1.6	55,858	16.49

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.3	-0.4	2.3	1.8	65,185	20.662
AEGL-1	13.6	0.0	3.4	2.7	171,021	68.305

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.6	0.0	2.8	2.2	79,982	24.268
AEGL-1	24.3	0.5	5.2	5.3	322,091	207.179

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.0	2.7	2.2	76,577	21.027
AEGL-1	23.6	0.5	5.5	5.3	303,530	180.919

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	-0.7	1.0	1.6	46,875	8.78
AEGL-1	5.4	-0.3	1.6	2.4	80,917	16.039

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	-0.5	1.9	2.8	92,890	18.916
AEGL-1	11.2	0.0	2.9	4.0	196,565	59.767

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	0.2	2.2	2.5	98,222	19.829
AEGL-1	20.4	0.4	4.0	6.1	403,059	175.761

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	0.0	2.2	2.5	89,512	17.664
AEGL-1	22.7	0.4	4.6	5.9	401,581	172.803

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.9	-0.4	1.3	1.4	38,619	8.362

2						
AEGL-1	4.8	0.4	1.9	1.9	77,296	15.374

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	0.0	1.8	2.2	108,739	21.123
AEGL-1	9.0	0.6	3.1	3.3	268,447	53.809

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	0.4	2.5	2.7	126,183	24.012
AEGL-1	17.5	0.9	5.0	5.6	636,601	159.882

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.5	2.5	2.9	114,059	21.701
AEGL-1	21.1	1.0	5.8	6.2	634,441	170.638

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.8	-0.5	1.5	1.1	42,237	7.982

	2 AEGL-1	4.9	-0.1	2.3	1.7	73,924	14.888
95 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.5	-0.3	2.7	1.8	100,537	21.101
	AEGL-1	9.3	0.4	4.0	3.0	325,932	54.56
95 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.6	0.1	2.8	2.4	110,178	22.59
	AEGL-1	17.1	0.7	6.2	4.6	978,697	156.624
95 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.6	0.2	2.7	2.4	101,568	20.511
	AEGL-1	20.7	0.8	6.5	4.7	984,882	163.323

95 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.7	-0.8	1.2	1.2	44,606	8.427
	AEGL-1	5.7	-0.4	2.1	2.2	98,039	15.759

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.2	-0.7	2.2	2.3	112,246	18.454
AEGL-1	10.7	0.0	3.4	3.6	642,136	57.076

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	-0.3	2.7	2.7	123,264	19.82
AEGL-1	26.8	0.3	5.7	6.0	850,144	247.401

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	0.0	2.3	2.8	103,114	16.886
AEGL-1	21.2	0.4	5.1	6.5	867,636	186.312

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	-0.8	1.0	1.6	59,998	8.425
AEGL-1	5.4	-0.3	1.5	2.3	97,065	15.086

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	6.2	-0.4	1.8	2.6	122,483	19.374

	2 AEGL-1	11.3	0.0	2.6	4.3	490,490	61.046
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.9	0.2	1.9	2.9	131,234	20.641
	AEGL-1	29.7	0.4	4.0	6.2	694,297	286.175
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.5	0.0	1.8	3.0	117,945	17.779
	AEGL-1	23.3	0.4	4.5	7.4	703,756	230.556
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	-0.3	1.2	1.5	57,370	8.062
	AEGL-1	4.6	0.4	1.8	2.1	100,847	15.95
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.5	0.0	1.9	2.5	123,404	20.999
	AEGL-1	8.9	0.9	3.0	3.8	278,274	53.998
95 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.6	0.5	2.2	2.8	135,396	23.504
	AEGL-1	17.0	1.1	5.3	5.7	717,160	164.404

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	0.6	2.2	2.8	123,074	21.21
AEGL-1	23.0	1.2	4.3	7.1	756,188	184.386

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	-0.5	1.7	0.9	27,698	8.133
AEGL-1	4.9	0.2	2.3	1.5	54,699	14.963

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	-0.2	2.6	1.8	68,172	18.515
AEGL-1	9.3	0.4	4.0	2.9	220,260	51.599

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	0.2	3.1	2.2	81,517	20.637
AEGL-1	16.1	0.7	6.6	4.2	485,433	145.573

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.2	3.1	2.1	70,233	17.794
AEGL-1	18.4	0.6	6.6	4.5	476,759	141.635

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	-0.9	1.6	1.2	25,648	8.142
AEGL-1	5.8	-0.5	2.1	1.7	52,960	16.335

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	-0.5	2.2	1.6	54,597	17.18
AEGL-1	13.8	0.0	3.4	2.6	161,170	65.724

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	5.8	-0.2	2.4	2.0	67,195	19.448

	2 AEGL-1	23.4	0.4	4.9	4.6	309,574	193.42

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.0	2.1	1.9	61,887	16.344
AEGL-1	21.2	0.5	5.6	4.8	292,745	165.112

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	-1.0	1.0	1.6	37,751	7.19
AEGL-1	5.1	-0.4	1.5	2.3	76,057	14.989

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	-0.5	1.6	2.5	74,336	15.147
AEGL-1	11.3	0.0	2.7	4.0	188,366	57.365

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	-0.2	1.9	2.2	81,413	16.167
AEGL-1	20.2	0.3	3.8	5.9	369,236	157.344

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.1	1.9	2.2	71,913	13.977
AEGL-1	20.2	0.3	4.3	5.9	357,552	146.365

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	-0.5	1.0	1.3	33,972	7.467
AEGL-1	4.7	0.0	1.8	2.0	71,032	14.51

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.0	2.1	2.3	84,163	16.632
AEGL-1	8.9	0.5	3.3	3.8	258,405	51.923

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.4	2.2	2.4	100,979	19.537
AEGL-1	15.2	0.9	4.8	6.3	571,680	136.637

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.4	2.2	2.3	88,589	17.253
AEGL-1	18.3	0.9	5.2	5.2	578,795	142.611

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	-0.6	1.5	1.1	40,025	7.543
AEGL-1	4.9	0.0	2.1	1.7	76,477	15.4670

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	-0.3	2.7	2.1	81,147	17.005
AEGL-1	9.2	0.4	3.9	2.8	323,437	54.194

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	0.1	2.7	2.3	90,477	18.75
AEGL-1	15.3	0.8	6.1	4.5	841,023	133.341

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	4.7	0.2	2.7	2.1	82,441	16.402
AEGL-1	17.5	0.7	6.0	4.5	832,253	133.491

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	-1.1	1.1	1.4	38,611	7.387
AEGL-1	5.5	-0.5	1.7	2.1	92,374	14.701

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	-0.7	2.2	2.4	90,722	14.68
AEGL-1	10.6	-0.2	3.5	3.4	613,196	54.002

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-0.3	2.2	2.6	99,593	15.969
AEGL-1	20.0	0.2	4.8	5.4	839,657	169.418

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.0	2.0	2.5	76,039	13.09
AEGL-1	17.7	0.4	5.0	5.7	860,474	147.763

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	-0.8	0.9	1.7	52,319	7.229
AEGL-1	5.4	-0.4	1.5	2.3	93,780	14.413

75 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	-0.4	1.6	2.6	93,703	14.939
AEGL-1	10.7	-0.1	2.6	4.1	450,917	55.155

75 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	-0.2	1.8	2.6	100,530	15.759
AEGL-1	29.0	0.3	4.2	6.2	671,972	277.139

75 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	0.0	1.8	2.6	89,824	13.285
AEGL-1	20.4	0.3	4.2	7.3	707,099	179.878

75 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.8	-0.2	1.0	1.5	53,350	7.325

	2 AEGL-1	4.6	0.2	1.6	2.1	96,866	15.342

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.0	1.7	2.8	106,348	17.572
AEGL-1	8.8	0.7	2.9	3.9	273,975	53.183

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.5	2.0	2.7	116,551	19.479
AEGL-1	15.3	1.1	4.2	6.5	649,233	142.401

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.6	2.0	2.8	104,247	17.211
AEGL-1	19.4	1.0	4.2	6.3	703,409	150.767

[redacted]

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.8	1.4	0.8	19,367	6.117
AEGL-1	4.8	0.2	2.3	1.4	46,852	13.165

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	-0.3	2.7	1.8	52,841	15.579
AEGL-1	9.0	0.2	3.9	2.8	209,744	50.136

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	-0.1	2.6	1.8	61,482	16.434
AEGL-1	16.1	0.5	6.5	4.1	462,570	136.016

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	0.2	2.6	1.8	55,214	14.039
AEGL-1	15.9	0.6	6.4	4.1	420,217	117.439

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	-1.1	1.2	1.0	22,113	7.179
AEGL-1	5.6	-0.5	1.9	1.5	45,185	14.317

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	-0.7	1.8	1.6	44,254	13.831
AEGL-1	13.3	-0.2	3.1	2.8	154,031	62.265

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	-0.2	2.1	1.6	50,869	14.364
AEGL-1	20.9	0.3	4.1	4.3	292,920	170.087

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.0	2.2	1.7	41,582	11.539
AEGL-1	18.5	0.5	5.6	4.4	275,798	143.357

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	-1.0	0.7	1.6	32,934	6.175
AEGL-1	5.1	-0.4	1.4	2.2	65,471	12.822

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	-0.7	1.6	2.2	61,479	12.22
AEGL-1	11.1	-0.2	2.5	4.1	183,898	54.77

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	-0.1	1.9	1.8	64,789	12.265
AEGL-1	18.9	0.3	3.8	5.5	345,172	141.808

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	0.1	1.7	1.9	50,773	9.693
AEGL-1	17.5	0.4	3.7	5.8	322,690	124.715

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	-0.6	1.1	1.1	27,202	6.078
AEGL-1	4.8	0.0	1.8	1.7	69,372	14.083

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	4.4	-0.4	1.8	1.8	62,202	12.867

	2						
	AEGL-1	9.0	0.5	3.0	3.0	247,483	49.955
55 deg, 2 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.3	0.0	1.8	2.2	73,076	14.724
	AEGL-1	14.8	0.8	4.3	5.2	500,994	118.41
55 deg, 4 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	-0.4	2.0	2.2	64,592	12.751
	AEGL-1	15.4	-0.8	5.3	5.0	478,044	112.604
55 deg, 30 min, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	-0.9	1.5	0.8	31,755	5.952
	AEGL-1	4.7	0.2	2.1	1.5	64,599	13.29
55 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	-0.3	2.3	1.8	62,007	12.667
	AEGL-1	9.0	0.2	3.8	2.7	286,019	49.005
55 deg, 2 hours, south							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	0.0	2.4	2.0	69,314	13.914
AEGL-1	13.4	0.6	6.0	4.5	719,558	113.638

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.1	2.4	2.0	61,830	12.089
AEGL-1	14.9	0.6	5.9	4.5	692,018	110.384

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	-1.3	1.0	1.0	27,389	5.564
AEGL-1	5.4	-0.6	1.6	1.8	84,295	13.741

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	-0.8	1.9	1.8	58,621	10.599
AEGL-1	10.7	-0.3	3.0	3.1	611,301	53.067

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	-0.4	1.7	1.8	62,575	11.231
AEGL-	19.2	0.0	4.3	4.5	815,835	148.99

	1						6
55 deg, 4 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	0.0	1.7	1.9	47,653	8.391
	AEGL-1	15.6	0.3	4.9	5.2	821,544	118.896
55 deg, 30 min, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.3	-1.0	0.6	1.4	42,100	5.686
	AEGL-1	5.2	-0.4	1.3	2.2	87,096	13.644
55 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.8	-0.7	1.6	2.2	73,254	11.468
	AEGL-1	10.7	-0.2	2.5	4.0	443,291	53.97
55 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.6	-0.2	1.5	2.3	81,044	12.2
	AEGL-1	28.4	0.2	4.2	6.0	658,876	232.008
55 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	-0.1	1.5	2.1	64,198	9.193
AEGL-1	18.3	0.3	4.0	6.0	667,652	142.149

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	-0.6	0.9	1.7	42,687	6.046
AEGL-1	4.6	0.0	1.4	2.2	88,747	14.029

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-0.1	1.6	2.4	83,821	13.191
AEGL-1	8.7	0.5	2.4	3.5	260,251	50.192

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	0.4	1.6	2.2	91,091	14.295
AEGL-1	13.7	0.9	3.5	6.2	573,352	115.184

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.4	1.6	2.3	82,753	12.306
AEGL-1	15.5	0.9	4.0	6.5	568,066	112.63

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	-1.3	1.0	0.9	13,426	4.66
AEGL-1	5.1	-0.7	1.8	1.6	40,604	12.3

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	-0.8	2.0	1.8	35,510	11.16
AEGL-1	9.4	-0.1	3.5	3.0	198,592	48.03

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	-0.4	2.1	1.9	43,330	11.738
AEGL-1	14.5	-0.2	6.3	4.4	401,500	111.724

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	0.4	2.0	1.8	35,041	8.663
AEGL-1	13.4	0.2	5.9	4.4	368,988	97.637

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	-1.3	1.5	1.0	11,931	4.244
AEGL-1	5.7	-0.7	1.9	1.5	42,678	13.453

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	-0.9	1.5	1.6	28,694	8.921
AEGL-1	13.3	-0.3	2.7	2.5	142,190	58.518

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	-0.2	2.0	1.4	35,019	9.734
AEGL-1	19.1	0.0	3.4	3.7	250,768	136.434

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.4	0.0	2.0	1.5	21,844	5.724
AEGL-1	16.0	0.3	4.0	3.8	235,473	113.993

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	-1.4	0.7	1.2	25,104	4.749
AEGL-1	5.1	-0.7	1.3	2.0	62,706	12.255

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-1.0	1.3	1.8	42,283	8.307
AEGL-1	10.9	-0.3	2.6	3.7	176,980	52.369

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	-0.3	1.3	1.5	43,598	8.348
AEGL-1	16.1	-0.1	3.7	5.4	305,735	117.046

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	0.0	1.3	1.5	24,941	4.827
AEGL-1	14.1	0.3	3.8	5.5	282,958	100.686

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	3.4	-1.0	0.9	1.0	19,242	4.412
AEGL-1	4.5	-0.3	1.2	1.8	55,502	11.819

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	-0.5	1.8	1.7	45,751	9.798
AEGL-1	8.8	0.3	2.6	2.9	229,089	46.189

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	0.0	1.5	1.8	50,630	10.441
AEGL-1	12.5	0.6	4.5	4.4	416,160	95.436

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.1	0.0	1.7	1.6	38,131	7.691
AEGL-1	12.7	0.8	4.1	4.1	398,981	91.162

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.5	-0.9	1.2	0.8	23,998	4.45

	2 AEGL-1	4.6	-0.3	2.1	1.5	60,073	12.3
35 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	-0.5	2.1	1.4	46,928	9.224
	AEGL-1	8.9	-0.1	3.8	2.7	280,751	48.185
35 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.6	-0.2	2.1	1.4	50,710	9.753
	AEGL-1	12.6	0.4	5.9	4.5	606,964	99.284
35 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.2	0.0	1.8	1.4	33,892	6.564
	AEGL-1	12.4	0.6	5.5	4.5	539,382	87.88
35 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	-1.5	1.0	1.4	18,874	4.13
	AEGL-1	5.4	-0.8	1.6	1.9	72,958	12.295

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-1.1	1.8	1.7	41,051	8.051
AEGL-1	10.4	-0.3	2.9	2.9	574,631	50.158

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-0.4	1.4	1.8	44,880	8.321
AEGL-1	17.2	0.0	4.2	4.5	785,351	121.464

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.9	0.0	1.6	1.9	21,809	3.586
AEGL-1	13.3	0.3	3.8	4.9	765,919	93.171

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	-1.4	0.6	1.3	31,672	4.297
AEGL-1	5.2	-0.7	1.4	2.1	81,726	12.779

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	4.2	-0.7	1.2	1.9	58,911	8.769

	2 AEGL-1	10.5	-0.2	2.4	3.9	431,612	50.825
35 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.7	-0.2	1.2	1.9	63,501	8.781
	AEGL-1	19.9	-0.1	3.8	6.0	639,524	161.253
35 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.1	0.0	1.3	2.0	30,589	4.326
	AEGL-1	14.3	0.3	3.9	6.0	668,678	102.787
35 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.5	-1.0	0.8	1.2	30,146	4.06
	AEGL-1	4.4	-0.4	1.2	1.7	74,448	11.431
35 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	-0.3	1.1	1.8	64,277	9.605
	AEGL-1	8.6	0.4	2.3	2.9	234,658	44.489
35 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.4	0.0	1.3	2.0	71,731	10.146
	AEGL-1	12.5	0.7	3.3	5.6	512,632	101.716
35 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.2	0.0	1.4	1.9	7	58649
	AEGL-1	12.1	0.8	3.1	6.4	90	457766

Stability Class D – CHICAGO IL

ORIGIN: 41.84963 N 87.72055 W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	-1.2	1.7	0.6	25,595	9.062
AEGL-1	6.8	0.7	2.3	1.3	57,215	17.2

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.4	-0.9	2.6	1.4	53,507	16.471
AEGL-1	14.0	0.5	4.3	2.2	226,940	67.359

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.5	-0.3	2.6	1.5	62,767	18.218
AEGL-1	20.6	0.2	5.6	3.0	392,139	135.338

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	-0.1	2.7	1.4	50,700	15.002
AEGL-	20.0	0.2	5.7	3.3	369,958	119.94

1	3

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	-1.3	1.7	1.5	19,633	7.196
AEGL-1	9.1	-1.0	2.3	1.7	44,116	19.217

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.4	-1.3	1.5	1.6	26,940	10.843
AEGL-1	18.6	-0.8	2.6	3.6	106,511	72.599

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	0.0	1.9	1.5	36,273	12.309
AEGL-1	22.0	0.0	4.4	3.9	140,479	96.476

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	0.0	1.7	1.4	29,696	9.309
AEGL-1	18.9	0.0	3.6	3.0	139,991	83.838

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.4	-1.4	0.7	1.6	46,333	8.87
AEGL-1	7.5	0.9	1.2	2.3	81,987	17.776

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.9	-1.3	1.0	1.9	63,690	12.732
AEGL-1	18.5	0.9	2.1	3.8	198,065	82.44

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.1	-0.3	1.3	1.9	66,891	13.067
AEGL-1	23.8	0.2	2.9	5.4	304,936	142.905

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	0.0	1.2	1.8	48,539	8.901
AEGL-1	20.7	0.1	2.9	5.4	278,548	121.926

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	5.2	1.2	0.9	1.1	39,024	8.263

2						
AEGL-1	6.2	0.7	1.6	1.7	81,698	16.24

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	-0.7	1.8	1.6	75,281	14.959
AEGL-1	12.7	-0.4	3.1	3.7	259,685	62.266

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	-0.3	2.0	1.8	80,558	16.079
AEGL-1	19.3	0.0	4.9	4.2	480,142	138.083

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	0.0	1.8	1.7	66,020	13.484
AEGL-1	18.0	0.4	4.3	5.2	461,066	122.453

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	5.4	-1.3	1.5	0.8	42,365	8.412

	2 AEGL-1	6.6	0.7	2.3	1.5	83,372	16.623
95 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	6.1	-0.9	2.3	1.5	77,166	15.567
	AEGL-1	12.9	0.3	3.9	2.3	376,720	62.219
95 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.9	-0.5	2.3	1.7	76,738	15.934
	AEGL-1	19.5	0.0	5.9	3.7	860,284	145.179
95 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.0	0.0	2.4	1.7	60,375	12.847
	AEGL-1	17.3	0.3	6.2	3.9	750,552	121.755
95 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.5	-1.5	1.1	1.6	40,237	6.758
	AEGL-1	8.1	-1.2	1.9	2.1	117,486	18.744
95 deg, 1 hour, southwest							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.2	-1.5	1.5	2.0	60,766	10.181
AEGL-1	23.5	-0.9	2.8	4.2	550,076	97.633

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.9	0.0	1.4	1.5	67,701	11.294
AEGL-1	29.3	0.0	4.3	5.0	633,035	188.825

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	0.2	1.5	1.7	35,307	7.029
AEGL-1	22.4	0.0	3.6	5.7	651,591	121.044

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	-1.4	0.6	1.6	43,963	6.823
AEGL-1	7.9	1.0	1.1	2.3	110,718	18.822

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	6.1	-1.4	0.9	2.0	64,474	10.666

	2 AEGL-1	21.9	0.7	1.7	3.9	302,628	92.378
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.8	-0.3	1.2	1.9	73,629	11.558
	AEGL-1	33.6	0.2	2.9	4.8	402,801	233.683
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.8	-0.1	0.9	2.0	48,023	7.429
	AEGL-1	26.9	0.1	3.2	5.1	412,449	153.404
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.1	-1.2	0.5	1.3	42,358	8.037
	AEGL-1	6.3	-0.6	1.1	2.0	88,329	16.143
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.9	-0.7	1.3	2.3	78,950	14.408
	AEGL-1	12.3	-0.3	1.9	3.5	302,962	61.112
95 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.5	-0.3	1.6	2.2	90,558	15.562
	AEGL-1	21.0	0.0	4.9	5.8	583,198	141.866

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.0	1.4	2.3	78,055	13.055
AEGL-1	18.3	0.5	4.4	6.4	552,975	121.742

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	-1.5	1.8	0.6	19,879	7.684
AEGL-1	6.6	0.8	2.3	1.2	53,605	16.624

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	6.0	-1.1	2.4	1.2	40,654	13.333
AEGL-1	13.9	0.6	4.3	2.1	212,187	63.322

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.7	-0.4	2.6	1.5	48,481	14.491
AEGL-1	20.5	0.1	5.6	3.3	385,621	133.339

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	0.0	2.4	1.5	31,260	10.854
AEGL-1	17.6	0.2	5.6	3.3	352,586	112.451

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	-1.5	1.6	1.2	16,167	5.812
AEGL-1	9.6	-1.1	2.5	1.7	43,064	19.314

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	-1.3	1.6	1.0	23,937	9.076
AEGL-1	18.8	-0.9	3.3	3.0	105,583	72.739

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	5.5	-0.3	1.8	1.4	31,187	9.945

	2 AEGL-1	20.5	-0.2	3.6	3.6	137,020	91.234

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.0	2.1	1.6	17,961	5.425
AEGL-1	17.7	0.0	3.9	3.4	134,737	78.577

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	-1.7	0.7	1.6	31,610	5.544
AEGL-1	7.5	1.2	1.1	2.3	81,523	17.744

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.8	-1.3	0.9	1.6	48,022	9.079
AEGL-1	18.1	0.9	2.0	3.8	193,021	79.270

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	-0.3	1.2	1.6	50,650	9.496
AEGL-1	21.8	0.1	2.5	5.1	276,945	125.875

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-0.1	1.1	1.6	25,152	4.45
AEGL-1	18.2	0.1	2.4	5.0	251,916	103.809

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	-1.4	1.0	1.3	34,823	7.472
AEGL-1	6.5	-0.8	1.4	2.2	76,941	15.279

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	-1.0	1.3	1.7	60,120	12.346
AEGL-1	12.6	-0.5	2.6	3.1	250,209	59.863

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	-0.3	1.9	1.6	63,888	13.054
AEGL-1	18.5	0.0	4.7	5.0	471,449	135.254

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	0.0	1.9	1.7	46,064	9.799
AEGL-1	16.0	0.4	4.8	4.8	431,784	110.554

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.4	-1.5	1.5	0.8	35,326	7.075
AEGL-1	6.6	0.8	2.2	1.3	80,101	15.8540

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.6	-1.3	2.1	1.2	55,236	11.246
AEGL-1	12.6	0.5	3.8	2.3	359,463	59.089

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	-0.4	2.1	1.5	60,096	12.346
AEGL-1	17.4	0.2	5.5	3.3	678,114	113.61

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

AEGL-2	4.3	0.0	2.1	1.5	43,420	8.781
AEGL-1	15.2	0.2	5.6	3.4	620,810	99.197

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	-1.8	1.3	1.7	29,326	5.29
AEGL-1	8.0	-1.2	2.1	2.4	106,635	17.104

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	-1.5	1.5	1.8	45,873	7.951
AEGL-1	22.3	-1.0	2.7	3.6	541,389	87.947

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	-0.4	1.3	2.2	48,704	8.611
AEGL-1	26.1	-0.2	4.2	5.9	628,803	155.387

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	-0.2	0.3	0.5	10,276	1.865
AEGL-1	18.5	0.0	3.5	5.2	642,908	95.279

75 deg, 30 min, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.6	-1.7	0.5	1.3	32,521	4.739
	AEGL-1	7.7	1.0	1.1	2.3	99,894	17.295

75 deg, 1 hour, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.4	-1.3	0.9	1.7	51,824	8.332
	AEGL-1	21.6	0.9	1.6	3.8	300,767	92.088

75 deg, 2 hours, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.0	-0.3	0.9	1.7	57,988	8.807
	AEGL-1	27.5	0.2	2.8	4.8	410,683	167.537

75 deg, 4 hours, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.9	-0.1	0.8	1.5	17,354	2.413
	AEGL-1	19.3	0.1	2.6	4.4	419,421	100.896

75 deg, 30 min, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-	5.1	-1.3	0.6	1.2	37,070	7.201

	2 AEGL-1	6.4	-0.7	1.4	1.9	81,040	15.183

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	-1.0	1.3	2.2	64,792	11.514
AEGL-1	12.2	-0.5	2.2	3.7	298,622	60.247

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	-0.3	1.4	2.4	77,833	12.827
AEGL-1	17.8	0.0	4.3	6.7	548,511	130.228

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.0	1.2	2.2	58,160	9.621
AEGL-1	16.6	0.4	3.9	6.0	478,598	108.232

[redacted]

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	-1.5	1.4	0.6	13,727	6.004
AEGL-1	6.6	0.9	2.3	1.2	43,063	14.291

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.3	-1.2	2.0	1.2	23,967	9.409
AEGL-1	13.7	0.6	4.0	2.1	203,191	59.959

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	-0.3	2.1	1.2	29,309	10.068
AEGL-1	18.4	0.1	5.5	2.7	348,922	113.788

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	0.0	2.0	1.2	13,760	5.052
AEGL-1	15.2	0.2	5.5	2.8	308,734	93.515

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	-1.7	1.5	1.3	10,495	4.174
AEGL-1	8.9	-1.2	2.1	1.6	36,779	17.392

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	-1.5	1.4	1.3	18,985	6.788
AEGL-1	17.2	-1.0	3.0	3.0	95,259	61.438

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	-0.3	1.4	1.2	21,708	7.027
AEGL-1	18.6	-0.2	3.3	2.8	125,731	78.376

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.5	0.0	0.5	0.3	6,218	1.177
AEGL-1	15.5	0.0	2.6	2.6	123,722	65.48

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	-1.7	0.3	1.2	21,413	3.631
AEGL-1	7.5	1.2	1.1	2.3	78,470	16.905

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	-1.4	0.9	1.6	33,931	5.987
AEGL-1	18.2	0.9	1.9	3.7	190,154	78.117

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	-0.3	1.0	1.4	32,449	5.875
AEGL-1	20.6	0.2	2.5	4.6	261,372	113.603

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	-0.1	1.1	0.4	5,654	1.002
AEGL-1	16.8	0.1	2.4	4.7	237,301	92.295

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-1.5	0.9	1.1	19,763	4.644
AEGL-1	6.2	-0.9	1.4	1.8	71,935	14.414

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	4.8	-1.2	1.2	1.7	39,202	8.589

	2 AEGL-1	12.2	-0.6	2.7	3.6	231,904	55.534
55 deg, 2 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	-0.4	1.9	1.8	41,716	9.169
	AEGL-1	15.8	-0.2	4.9	4.9	388,177	100.003
55 deg, 4 hours, southeast							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.6	0.0	1.7	1.5	22,664	4.623
	AEGL-1	13.5	0.3	5.4	4.4	351,145	84.84
55 deg, 30 min, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.4	-1.6	1.4	0.5	23,435	4.75
	AEGL-1	6.3	0.9	2.1	1.2	74,391	14.793
55 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.7	-1.2	1.7	1.1	40,708	8.162
	AEGL-1	13.0	0.7	3.8	2.1	369,600	60.246
55 deg, 2 hours, south							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-0.4	1.7	1.4	45,127	8.86
AEGL-1	16.1	0.2	5.1	3.3	605,914	99.949

55 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	0.0	1.8	1.2	18,574	3.536
AEGL-1	13.2	0.2	5.5	3.3	516,657	84.688

55 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	-2.0	0.8	1.1	12,691	2.918
AEGL-1	7.7	-1.4	1.9	1.8	94,635	15.542

55 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.9	-1.6	1.1	1.7	27,905	5.656
AEGL-1	22.5	-1.1	3.1	3.0	532,931	86.433

55 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-0.4	1.2	1.7	26,644	5.495
AEGL-	22.0	-0.2	3.6	6.3	621,372	119.11

	1						
55 deg, 4 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	1.6	-0.2	0.4	0.4	3,756	0.583
	AEGL-1	16.1	0.0	2.8	5.0	634,279	79.161
55 deg, 30 min, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	-1.7	0.3	1.3	23,810	3.439
	AEGL-1	7.6	1.3	1.0	2.2	91,234	16.238
55 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.8	-1.5	0.9	1.4	38,476	5.627
	AEGL-1	18.5	1.0	1.6	3.8	300,739	81.349
55 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	-0.4	0.9	1.4	40,579	5.706
	AEGL-1	22.8	0.1	2.6	4.4	405,944	132.675
55 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.6	0.0	0.3	0.3	5,628	0.626
AEGL-1	16.8	0.0	2.6	4.4	415,582	81.755

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-1.4	0.8	1.4	19,831	3.986
AEGL-1	6.2	-1.0	1.7	2.3	75,738	14.414

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	-1.2	1.2	2.1	47,052	8.445
AEGL-1	12.0	-0.5	2.7	3.8	281,568	57.542

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-0.3	1.4	2.1	58,617	9.371
AEGL-1	16.0	0.0	4.5	5.6	479,133	104.13

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.5	0.0	1.4	1.9	29,533	4.478
AEGL-1	12.9	0.4	4.3	5.2	411,974	84.212

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35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-1.8	1.4	0.2	2,594	2.569
AEGL-1	6.5	1.1	2.1	1.0	38,825	13.547

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	-1.4	1.8	0.8	11,546	6.207
AEGL-1	13.7	0.9	3.9	2.0	191,443	58.133

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	-0.4	2.0	0.9	15,189	6.279
AEGL-1	16.4	0.0	5.5	2.7	300,512	93.38

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	-0.1	1.8	1.0	6,520	1.4
AEGL-1	13.9	0.2	5.5	2.7	264,781	76.19

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-1.8	0.7	0.8	5,603	2.268
AEGL-1	8.5	-1.3	1.6	1.7	34,071	16.335

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	-1.6	1.1	1.6	10,937	4.175
AEGL-1	15.0	-1.1	2.5	3.1	78,764	46.699

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.7	-0.3	0.9	1.0	9,046	2.879
AEGL-1	16.2	-0.3	3.0	3.3	108,917	62.67

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.4	-0.1	0.3	0.3	3,941	0.457
AEGL-1	13.7	0.0	1.8	2.2	103,265	50.633

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	-2.0	0.3	0.9	8,713	1.559
AEGL-1	7.3	1.4	1.0	2.1	70,025	14.413

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	-1.7	0.7	1.2	20,613	3.675
AEGL-1	18.0	1.2	1.9	3.5	179,507	73.409

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.4	-0.4	0.7	1.3	11,533	1.992
AEGL-1	18.7	0.3	2.3	4.6	231,596	97.697

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.4	-0.1	0.3	0.4	3,131	0.468
AEGL-1	14.7	0.1	2.3	4.7	216,562	78.326

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	3.6	1.8	0.8	1.0	9,886	2.264

2						
AEGL-1	6.1	1.2	1.7	1.7	66,708	13.3

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	-1.4	1.4	1.4	21,632	5.146
AEGL-1	12.0	-0.8	2.6	3.2	223,303	53.52

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.6	-0.3	1.6	1.5	24,263	5.342
AEGL-1	14.9	-0.2	4.6	4.6	340,610	85.947

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.6	0.0	0.3	0.2	4,028	0.697
AEGL-1	11.3	0.2	4.3	3.7	292,822	68.751

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.3	-1.9	1.1	0.5	8,549	1.709

	AEGL-1	6.3	1.1	2.1	1.2	69,593	13.839
35 deg, 1 hour, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	-1.6	1.4	0.8	23,429	4.522
	AEGL-1	12.5	0.8	3.7	2.1	340,433	55.685
35 deg, 2 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.4	-0.3	1.5	0.9	4	20357
	AEGL-1	14.4	0.1	5.0	3.2	82	510986
35 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	1.5	0.0	0.3	0.2	2,978	0.513
	AEGL-1	11.5	0.1	4.9	3.3	410,168	67.848

35 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.8	-2.2	0.6	1.3	7,709	1.919
	AEGL-1	7.6	-1.5	1.5	1.7	86,204	14.125
35 deg, 1 hour, southwest							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	-1.8	1.0	1.4	15,484	3.438
AEGL-1	20.6	-1.3	3.2	2.6	518,221	74.55

35 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.2	-0.4	0.9	1.2	6,558	1.402
AEGL-1	19.3	-0.3	4.0	4.6	610,179	99.764

35 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.3	-0.2	0.2	0.3	2,480	0.387
AEGL-1	14.3	0.0	3.4	5.5	601,017	62.391

35 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.4	-1.9	0.3	1.0	10,321	1.585
AEGL-1	7.6	1.4	1.0	2.1	85,582	15.373

35 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	-1.7	0.6	1.3	25,796	3.579

	AEGL-1	17.4	1.1	1.6	3.7	270,777	68.715
35 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.2	-0.3	0.7	1.3	10,171	1.325
	AEGL-1	18.5	0.2	2.0	4.0	401,048	89.949
35 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	1.2	0.0	0.3	0.3	3,954	0.434
	AEGL-1	13.5	0.1	2.1	4.0	412,068	59.397
35 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.3	1.8	0.6	1.3	9,885	1.584
	AEGL-1	6.1	0.9	1.3	2.4	70,323	13.448
35 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	-1.2	0.9	1.8	30,116	5.497
	AEGL-1	11.6	-0.7	2.3	3.8	243,497	50.83
35 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3						
	AEGL-2	3.5	-0.3	1.0	1.6	33,742	4.945
	AEGL-1	14.7	0.0	3.9	5.2	434,800	88.229
35 deg, 4 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	1.6	0.0	0.2	0.4	7,201	0.61
	AEGL-1	11.6	0.3	3.0	5.0	353,303	72.703

Stability Class E –
CHICAGO, IL

ORIGIN: 41.84963 N, 87.72055 W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.4	6,555	0.657
AEGL-1	2.5	0.5	1.3	1.1	39,644	5.409

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.5	0.4	6,907	0.691
AEGL-1	2.9	0.6	1.4	1.3	45,359	6.974

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.0	0.2	0.4	0.4	8,478	0.847
AEGL-1	3.5	0.7	1.4	1.3	49,528	8.499

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.7	0.2	0.9	0.5	25,114	5.681
AEGL-1	7.2	0.8	2.6	1.3	90,669	22.017

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.4	0.4	5,843	0.657
AEGL-1	3.2	0.4	1.2	1.1	33,248	5.829

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.3	0.5	0.4	6,258	0.711
AEGL-1	3.8	0.4	1.3	1.2	40,031	7.835

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.2	0.3	0.5	0.4	7,620	0.883
AEGL-1	4.7	0.5	1.4	1.3	45,991	9.546

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	0.2	0.8	0.6	22,911	5.841
AEGL-1	10.5	0.5	1.5	1.3	75,080	25.732

95 deg, 30 min, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.2	0.4	0.4	5,063	0.636
	AEGL-1	3.0	0.4	1.1	1.2	32,002	5.639

95 deg, 1 hour, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.2	0.4	0.4	5,554	0.702
	AEGL-1	3.8	0.4	1.3	1.3	43,727	7.548

95 deg, 2 hours, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	1.1	0.2	0.5	0.4	6,757	0.906
	AEGL-1	5.0	0.5	1.3	1.4	61,617	10.191

95 deg, 4 hours, east

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.0	0.2	0.5	0.8	32,710	5.577
	AEGL-1	8.0	0.6	1.4	2.1	109,678	22.393

95 deg, 30 min, southeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-	0.7	0.3	0.5	0.4	4,936	0.69

	2 AEGL-1	2.4	0.5	1.2	1.3	29,379	5.383

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.3	0.5	0.4	5,122	0.717
AEGL-1	2.6	0.6	1.3	1.4	35,962	6.336

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.3	0.5	0.4	5,644	0.799
AEGL-1	2.8	0.8	1.3	1.4	43,602	7.37

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.3	0.8	0.7	31,547	6.504
AEGL-1	6.9	0.9	1.8	1.8	126,620	23.25

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.8	0.2	0.5	0.4	4,679	0.689

	2 AEGL-1	2.3	0.5	1.2	1.1	34,347	5.056

95 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.5	0.4	4,894	0.724
AEGL-1	2.4	0.6	1.4	1.2	41,376	6.003

95 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.2	0.5	0.4	5,273	0.787
AEGL-1	2.6	0.7	1.4	1.3	48,153	7.009

95 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.2	0.8	0.6	34,051	6.292
AEGL-1	7.1	0.8	1.9	1.4	131,385	22.95

95 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.5	0.5	4,884	0.649
AEGL-1	2.4	0.4	1.2	1.3	35,858	4.756

95 deg, 1 hour, southwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.2	0.5	0.5	5,096	0.671
	AEGL-1	2.5	0.5	1.2	1.3	42,969	5.689

95 deg, 2 hours, southwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	1.0	0.2	0.5	0.5	5,614	0.744
	AEGL-1	2.9	0.6	1.3	1.3	49,712	6.691

95 deg, 4 hours, southwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.6	0.2	0.6	0.8	38,451	6.203
	AEGL-1	8.4	0.6	1.4	1.6	146,098	21.448

95 deg, 30 min, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.2	0.4	0.5	6,041	0.665
	AEGL-1	2.3	0.4	1.0	1.3	44,287	4.711

95 deg, 1 hour, west

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.2	0.4	0.5	6,399	0.703

	AEGL-1	2.5	0.5	1.2	1.4	51,440	5.597
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.9	0.2	0.4	0.5	6,886	0.752
	AEGL-1	2.7	0.6	1.2	1.4	59,444	6.686
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.6	0.2	0.5	0.8	50,350	6.103
	AEGL-1	8.4	0.6	1.3	1.9	138,231	21.089
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.3	0.4	0.5	7,177	0.691
	AEGL-1	2.2	0.6	1.1	1.2	46,261	5.056
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.3	0.4	0.5	7,331	0.706
	AEGL-1	2.4	0.7	1.1	1.5	53,349	6.079
95 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

3						
AEGL-2	0.8	0.3	0.4	0.6	8,405	0.786
AEGL-1	2.7	0.8	1.2	1.6	63,329	7.253

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.3	0.6	1.0	49,586	6.549
AEGL-1	7.0	0.9	1.6	2.0	139,513	24.611

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.4	5,616	0.565
AEGL-1	2.2	0.4	1.2	1.1	37,102	4.69

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.4	5,847	0.587
AEGL-1	2.5	0.5	1.3	1.1	42,113	5.664

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.2	0.4	0.4	6,709	0.668
AEGL-1	2.9	0.6	1.3	1.2	45,691	6.918

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.4	0.2	0.9	0.5	22,925	4.236
AEGL-1	6.9	0.7	2.1	1.2	79,308	18.917

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.3	4,848	0.538
AEGL-1	2.9	0.3	1.0	0.9	29,049	4.787

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.3	5,143	0.571
AEGL-1	3.3	0.4	1.2	1.0	34,279	5.906

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.0	0.2	0.4	0.3	6,230	0.707
AEGL-1	3.8	0.5	1.2	1.2	40,701	7.637

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.1	0.1	0.7	0.6	20,482	5.087
AEGL-1	9.8	0.5	1.4	1.1	66,001	21.578

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.1	0.3	0.4	4,144	0.518
AEGL-1	2.6	0.3	1.0	1.1	26,812	4.653

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.1	0.4	0.4	4,520	0.564
AEGL-1	3.2	0.4	1.1	1.2	35,728	6.155

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	1.0	0.1	0.4	0.4	5,602	0.712
AEGL-1	3.8	0.5	1.1	1.4	43,914	7.426

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.8	0.1	0.4	0.7	28,506	4.836
	AEGL-1	7.5	0.5	1.2	1.8	96,095	18.694

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.3	4,100	0.572
AEGL-1	2.1	0.5	1.1	1.1	24,985	4.521

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.4	4,230	0.591
AEGL-1	2.3	0.6	1.2	1.2	30,031	5.233

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.4	0.4	4,612	0.651
AEGL-1	2.5	0.7	1.3	1.3	36,668	6.197

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	0.3	0.7	0.7	27,664	5.783
	AEGL-1	6.7	0.9	1.6	1.6	115,141	21.091

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.1	0.4	0.3	3,923	0.581
AEGL-1	2.0	0.5	1.3	1.0	30,065	4.3390

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.4	4,045	0.6
AEGL-1	2.2	0.6	1.3	1.1	35,285	4.969

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.2	0.4	0.4	4,226	0.636
AEGL-1	2.3	0.7	1.3	1.2	42,187	5.957

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.5	0.2	0.9	0.5	31,521	5.776
AEGL-1	7.0	0.7	2.1	1.3	119,626	20.946

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.1	0.3	0.4	4,123	0.547
AEGL-1	2.2	0.3	1.1	1.1	31,202	4.099

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.1	0.4	0.5	4,321	0.573
AEGL-1	2.3	0.4	1.1	1.2	37,090	4.83

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.1	0.4	0.5	4,541	0.612
AEGL-1	2.5	0.6	1.2	1.2	41,903	5.511

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.5	0.1	0.5	0.7	35,263	5.673
AEGL-1	8.1	0.5	1.2	1.3	130,252	19.223

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.7	0.1	0.3	0.4	5,019	0.554

	2 AEGL-1	2.1	0.4	1.0	1.2	38,430	4.091
75 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.1	0.3	0.5	5,242	0.577
	AEGL-1	2.2	0.5	1.0	1.2	44,320	4.69
75 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.1	0.3	0.4	5,569	0.608
	AEGL-1	2.4	0.6	1.1	1.3	50,576	5.502
75 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	5.2	0.1	0.3	0.9	45,834	5.469
	AEGL-1	8.1	0.6	1.2	1.9	123,641	18.793
75 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.2	0.4	0.5	6,057	0.585
	AEGL-1	2.1	0.6	1.0	1.2	39,979	4.4
75 deg, 1 hour, Northwest							

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.3	0.4	0.5	6,240	0.6
	AEGL-1	2.2	0.7	1.0	1.2	46,535	5.233

75 deg, 2 hours, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.8	0.2	0.4	0.5	6,843	0.641
	AEGL-1	2.4	0.8	1.1	1.3	51,919	5.924

75 deg, 4 hours, Northwest

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.2	0.3	0.6	0.8	45,283	5.926
	AEGL-1	6.6	0.9	1.4	1.9	122,608	21.175

[redacted]

55 deg, 30 min, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.2	0.4	0.3	4,622	0.46
	AEGL-1	2.0	0.4	1.0	1.0	33,987	3.77

55 deg, 1 hour, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.6	0.2	0.4	0.4	4,783	0.476
	AEGL-1	2.2	0.5	1.1	1.0	37,867	4.597

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.4	5,433	0.538
AEGL-1	2.5	0.7	1.1	1.0	40,459	5.388

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.2	0.8	0.4	20,646	4.591
AEGL-1	6.5	0.7	1.6	1.1	70,243	16.16

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	4,016	0.436
AEGL-1	2.3	0.3	0.9	0.9	24,908	3.705

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.7	0.1	0.3	0.3	4,228	0.461

	2 AEGL-1	2.7	0.4	1.0	1.0	29,230	4.595

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.1	0.3	0.3	5,050	0.564
AEGL-1	3.2	0.4	1.1	1.0	34,250	5.809

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.2	0.5	0.5	17,288	4.252
AEGL-1	8.4	0.5	1.2	1.0	55,499	17.209

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	3,588	0.444
AEGL-1	2.4	0.3	0.9	1.0	21,630	3.726

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.6	0.1	0.4	0.3	3,786	0.471
	AEGL-1	2.6	0.4	1.0	1.0	27,994	4.768

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.1	0.4	0.3	4,299	0.539
AEGL-1	3.0	0.4	1.1	1.2	34,296	8.523

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.3	0.1	0.4	0.7	22,493	3.818
AEGL-1	7.0	0.4	1.1	1.8	86,032	16.456

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.2	0.3	0.3	3,286	0.46
AEGL-1	1.9	0.5	1.0	1.0	21,944	3.734

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.3	0.3	3,380	0.475
AEGL-1	2.0	0.6	1.0	1.0	25,815	4.268

55 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.4	0.3	3,543	0.502
AEGL-1	2.1	0.7	1.1	1.1	30,106	4.968

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	0.2	0.7	0.7	24,843	5.16
AEGL-1	6.3	0.8	1.3	1.4	96,421	17.838

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.4	0.3	3,229	0.482
AEGL-1	1.9	0.4	1.0	1.0	25,269	3.591

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.4	0.3	3,327	0.496
AEGL-1	2.0	0.6	1.1	1.0	29,957	4.113

55 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.7	0.1	0.4	0.3	3,405	0.518
	AEGL-1	2.1	0.7	1.2	1.0	34,637	4.752
55 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.5	0.1	0.9	0.5	28,433	5.231
	AEGL-1	6.7	0.7	2.0	1.1	101,106	17.601
55 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.1	0.3	0.3	3,364	0.454
	AEGL-1	2.0	0.3	0.9	1.0	26,031	3.404
55 deg, 1 hour, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.1	0.3	0.3	3,490	0.471
	AEGL-1	2.1	0.4	1.0	1.0	29,826	3.862
55 deg, 2 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.1	0.3	0.4	3,641	0.495
	AEGL-1	2.2	0.5	1.0	1.1	33,738	4.322
55 deg, 4 hours, southwest							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.0	0.0	0.5	0.7	29,471	5.017
AEGL-1	8.0	0.5	1.1	1.1	116,533	17.145

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.4	4,093	0.451
AEGL-1	1.9	0.3	0.8	1.0	32,477	3.468

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.4	4,205	0.464
AEGL-1	1.9	0.4	0.8	1.0	36,020	3.872

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.1	0.3	0.4	4,425	0.493
AEGL-1	2.1	0.5	0.9	1.1	42,526	4.497

55 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	5.2	0.1	0.3	0.9	43,241	5.026

AEGL-1	7.5	0.5	1.0	1.9	106,042	15.702

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.2	0.3	0.4	4,637	0.454
AEGL-1	1.8	0.5	0.9	1.1	34,322	3.652

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.2	0.3	0.4	4,759	0.465
AEGL-1	1.9	0.6	0.9	1.1	38,006	4.228

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.2	0.3	0.4	5,186	0.497
AEGL-1	2.1	0.7	1.0	1.1	41,935	4.775

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.0	0.2	0.5	0.8	43,171	5.39
AEGL-1	6.4	0.8	1.1	1.5	109,800	18.476

35 deg, 30 min, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.1	0.3	0.2	3,570	0.352
	AEGL-1	1.8	0.4	1.0	0.8	28,320	2.956

35 deg, 1 hour, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.1	0.3	0.3	3,691	0.363
	AEGL-1	1.9	0.5	1.0	0.9	32,678	3.581

35 deg, 2 hours, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.1	0.3	0.3	4,022	0.395
	AEGL-1	2.2	0.5	1.0	0.8	35,008	4.105

35 deg, 4 hours, North

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.0	0.1	0.7	0.4	17,333	3.678
	AEGL-1	6.4	0.6	1.6	0.9	59,712	13.675

35 deg, 30 min, Northeast

		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-	0.6	0.1	0.3	0.3	3,144	0.334

2						
AEGL-1	2.0	0.2	0.9	0.8	21,178	3.01

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	3,406	0.366
AEGL-1	2.2	0.3	0.9	0.9	24,575	3.582

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.0	0.3	0.3	3,793	0.414
AEGL-1	2.6	0.4	1.0	0.9	29,139	4.398

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.6	0.0	0.5	0.4	14,391	3.558
AEGL-1	7.5	0.4	1.1	0.9	48,036	13.703

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.2	0.3	2,691	0.325

	AEGL-1	2.0	0.2	0.8	0.9	17,131	2.911

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.4	2,873	0.348
AEGL-1	2.2	0.3	0.8	0.9	20,142	3.381

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.1	0.3	0.3	3,321	0.409
AEGL-1	2.6	0.4	0.9	1.0	24,641	4.151

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.1	0.1	0.4	0.7	19,203	3.32
AEGL-1	6.7	0.4	1.0	1.8	71,912	13.517

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.1	0.3	0.3	2,688	0.375
AEGL-1	1.7	0.4	0.8	0.9	18,068	2.858

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.1	0.3	0.3	2,731	0.381
AEGL-1	1.8	0.6	0.9	0.9	22,046	3.493

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	2,801	0.393
AEGL-1	1.9	0.6	0.9	1.0	24,493	3.812

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.8	0.2	0.6	0.6	22,346	4.662
AEGL-1	6.1	0.7	1.3	1.6	88,296	16.502

35 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.1	0.3	0.3	2,472	0.375
AEGL-1	1.5	0.4	0.9	0.8	20,132	2.827

35 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.1	0.3	0.3	2,509	0.381
AEGL-1	1.7	0.5	0.9	0.8	23,712	3.253

35 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	2,511	0.382
AEGL-1	1.8	0.6	1.0	0.9	26,781	3.62

35 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.2	0.1	0.7	0.5	25,011	4.596
AEGL-1	6.3	0.7	1.5	1.0	85,800	15.043

35 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	2,562	0.353
AEGL-1	1.7	0.3	0.9	0.9	21,097	2.723

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.6	0.1	0.3	0.4	2,653	0.66

	2 AEGL-1	1.8	0.4	0.9	0.9	24,672	3.136
35 deg, 2 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.1	0.3	0.4	2,631	0.363
	AEGL-1	1.9	0.5	0.9	0.9	26,954	3.465
35 deg, 4 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	4.7	0.1	0.5	0.6	21,828	3.973
	AEGL-1	7.5	0.5	0.9	1.5	100,221	15.034
35 deg, 30 min, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.1	0.2	0.3	3,256	0.362
	AEGL-1	1.6	0.3	0.8	0.9	25,110	2.731
35 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.1	0.3	0.3	3,311	0.367
	AEGL-1	1.7	0.4	0.8	0.9	28,648	3.112
35 deg, 2 hours, west							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	3,364	0.374
AEGL-1	1.8	0.5	0.8	1.0	32,616	3.519

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	4.8	0.1	0.4	0.7	36,258	4.071
AEGL-1	7.7	0.5	0.9	1.5	101,909	15.256

35 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.1	0.3	0.3	3,649	0.356
AEGL-1	1.6	0.5	0.8	0.9	28,310	2.899

35 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.3	0.3	3,745	0.364
AEGL-1	1.7	0.6	0.8	1.0	31,509	3.343

35 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.1	0.3	0.3	3,977	0.382
AEGL-	1.8	0.7	0.9	1.0	33,994	3.691

1						
35 deg, 4 hours, Northwest						
	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.9	0.2	0.4	0.6	38,651	4.681
AEGL-1	6.0	0.7	1.1	1.4	95,461	15.751

Stability Class F –
CHICAGO, IL

ORIGIN:	41.84963	N
	87.72055	W

95 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	7,689	0.838
AEGL-1	1.8	0.9	1.4	1.3	47,096	5.619

95 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	7,790	0.848
AEGL-1	1.9	1.1	1.4	1.3	51,218	6.389

95 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.6	0.5	8,488	0.917
AEGL-1	2.2	1.2	1.5	1.3	54,944	7.278

95 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	0.0	0.4	0.2	2,541	0.247
AEGL-2	3.2	0.5	1.3	0.9	40,304	7.051
AEGL-1	5.3	1.4	2.6	2.0	112,620	25.078

95 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	6,673	0.773
AEGL-1	2.1	0.7	1.3	1.2	41,229	5.765

95 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	6,813	0.791
AEGL-1	2.5	1.0	1.5	1.4	50,497	7.402

95 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.3	0.5	0.5	7,999	0.931
AEGL-1	3.0	1.1	1.6	1.5	57,866	9.127

95 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	-0.2	0.3	0.2	1,267	0.153
AEGL-2	3.7	0.3	0.8	0.8	31,286	6.476
AEGL-1	5.8	1.1	1.9	1.8	97,472	22.773

95 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	6,334	0.783
AEGL-1	2.0	0.7	1.2	1.3	37,280	5.737

95 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	6,540	0.813
AEGL-1	2.5	0.9	1.4	1.4	48,811	7.323

95 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.9	0.3	0.5	0.5	7,657	0.962
AEGL-1	3.2	1.1	1.4	1.6	62,474	9.647

95 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	-0.2	0.2	0.3	1,451	0.204
AEGL-2	3.2	0.3	0.8	1.1	34,937	6.182
AEGL-1	5.6	1.1	1.9	2.6	128,112	23.439

95 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.7	0.4	0.5	0.5	6,622	0.855

2						
AEGL-1	1.9	0.9	1.3	1.4	38,840	5.658

95 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.5	6,732	0.871
AEGL-1	2.0	1.1	1.3	1.5	45,428	6.619

95 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.4	0.6	0.5	7,255	0.948
AEGL-1	2.2	1.2	1.5	1.5	48,983	7.26

95 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	-0.1	0.2	0.3	1,597	0.252
AEGL-2	2.8	0.6	1.0	1.1	36,521	6.406
AEGL-1	4.8	1.5	2.0	2.2	137,185	23.304

95 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.6	0.4	0.5	0.5	6,624	0.857

	2 AEGL-1	1.7	0.9	1.4	1.3	42,142	5.477

95 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	6,615	0.858
AEGL-1	1.8	1.0	1.4	1.3	44,920	5.783

95 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.6	0.5	6,991	0.916
AEGL-1	1.9	1.2	1.4	1.3	50,874	6.714

95 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	-0.2	0.4	0.2	1,239	0.219
AEGL-2	2.9	0.6	1.4	1.0	42,823	6.753
AEGL-1	4.7	1.5	2.7	2.0	128,428	22.078

95 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	6,409	0.793
AEGL-1	1.9	0.9	1.3	1.3	43,895	5.372

95 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.5	0.5	6,467	0.802
AEGL-1	1.9	1.0	1.3	1.4	47,798	5.897

95 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.6	7,025	0.87
AEGL-1	2.0	1.0	1.4	1.5	51,718	6.409

95 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.2	-0.2	0.2	0.3	951	0.147
AEGL-2	3.5	0.4	0.8	1.0	41,810	6.628
AEGL-1	5.7	1.4	2.2	2.7	172,677	25.84

95 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.5	7,269	0.819
AEGL-1	1.8	0.9	1.2	1.4	47,163	5.382

95 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.5	7,209	0.812

	AEGL-1	1.8	1.0	1.3	1.4	50,684	5.835
95 deg, 2 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.3	0.5	0.6	7,799	0.873
	AEGL-1	2.0	1.0	1.4	1.4	56,338	6.512
95 deg, 4 hours, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	1.1	-0.2	0.1	0.3	1,413	0.156
	AEGL-2	3.4	0.4	0.9	1.3	56,494	6.732
	AEGL-1	5.6	1.3	1.9	2.7	152,099	23.268
95 deg, 30 min, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.4	0.5	0.5	8,214	0.879
	AEGL-1	1.8	1.0	1.3	1.4	49,152	5.662
95 deg, 1 hour, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.7	0.4	0.5	0.5	8,227	0.877
	AEGL-1	1.8	1.1	1.3	1.4	51,909	6.129
95 deg, 2 hours, Northwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-	n/a	n/a	n/a	n/a	n/a	n/a

	3					
	AEGL-2	0.7	0.4	0.5	0.6	8,935	0.946
	AEGL-1	1.9	1.2	1.4	1.5	55,977	6.739

95 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.1	0.0	0.2	0.4	3,334	0.255
AEGL-2	2.8	0.7	0.9	1.3	58,412	6.443
AEGL-1	4.8	1.7	2.1	2.5	141,209	24.063

[redacted]

75 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.4	6,511	0.711
AEGL-1	1.6	0.9	1.2	1.1	41,536	4.78

75 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.4	6,546	0.714
AEGL-1	1.7	1.0	1.3	1.2	45,236	5.33

75 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.5	7,196	0.776
AEGL-1	2.0	1.1	1.3	1.3	48,737	5.97

75 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	-0.2	0.3	0.1	1,500	0.144
AEGL-2	2.4	0.5	1.3	0.9	37,538	6.268
AEGL-1	4.9	1.4	2.3	1.8	92,000	20.563

75 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	5,626	0.649
AEGL-1	1.9	0.7	1.2	1.1	36,573	4.819

75 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	5,784	0.665
AEGL-1	2.2	0.9	1.3	1.2	42,682	5.861

75 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.3	0.5	0.4	6,552	0.758
AEGL-1	2.6	1.1	1.5	1.2	50,236	7.358

75 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	-0.5	0.2	0.2	404	0.051
AEGL-2	3.5	0.3	1.0	0.7	29,611	5.899
AEGL-1	5.6	1.1	1.9	1.5	90,213	20.494

75 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	5,299	0.652
AEGL-1	1.8	0.7	1.2	1.2	32,374	4.852

75 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	5,414	0.672
AEGL-1	2.2	0.9	1.3	1.4	41,460	6.125

75 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.8	0.3	0.5	0.5	6,265	0.785
AEGL-1	2.7	1.0	1.3	1.4	49,990	7.519

75 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

	AEGL-3	1.0	-0.4	0.1	0.2	852	0.111
	AEGL-2	3.2	0.3	0.8	1.1	32,392	5.827
	AEGL-1	5.1	1.1	1.7	2.4	113,172	20.014

75 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	5,620	0.73
AEGL-1	1.7	0.9	1.2	1.2	35,118	5.033

75 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.4	5,557	0.724
AEGL-1	1.8	1.0	1.2	1.2	37,740	5.304

75 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.4	0.5	0.5	5,787	0.759
AEGL-1	1.9	1.1	1.3	1.4	42,150	6.146

75 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-	0.9	-0.1	0.2	0.1	904	0.147

	3						
	AEGL-2	2.8	0.5	1.0	1.0	32,138	5.832
	AEGL-1	4.6	1.5	2.0	2.3	121,972	20.795

75 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.5	5,654	0.733
AEGL-1	1.6	0.9	1.2	1.2	37,518	4.7880

75 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.5	5,597	0.728
AEGL-1	1.7	1.0	1.2	1.2	38,959	4.995

75 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	5,913	0.774
AEGL-1	1.7	1.0	1.3	1.2	42,851	5.514

75 deg, 4 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	-0.2	0.3	0.2	683	0.124
AEGL-2	2.9	0.5	1.2	0.9	37,890	6.011
AEGL-1	4.6	1.5	2.7	2.0	127,297	21.87

75 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	5,555	0.688
AEGL-1	1.7	0.8	1.2	1.4	38,668	4.678

75 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	5,590	0.694
AEGL-1	1.7	0.9	1.2	1.4	40,872	4.954

75 deg, 2 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.5	0.5	5,845	0.725
AEGL-1	1.9	1.0	1.3	1.4	44,307	5.381

75 deg, 4 hours, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	0.3	0.1	0.1	353	0.054
AEGL-2	3.5	0.4	0.8	0.9	36,678	5.828
AEGL-1	5.4	1.3	2.1	2.4	150,416	21.778

75 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.6	0.3	0.4	0.5	6,165	0.704

	2						
	AEGL-1	1.6	0.8	1.1	1.3	41,112	4.706

75 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	6,189	0.705
AEGL-1	1.7	0.9	1.2	1.3	41,627	4.782

75 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	6,671	0.753
AEGL-1	1.8	0.9	1.2	1.3	47,857	5.419

75 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	-0.5	0.0	0.2	207	0.028
AEGL-2	3.3	0.4	0.7	1.3	52,590	6.146
AEGL-1	5.2	1.2	1.8	2.5	145,925	21.853

75 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.5	0.5	7,028	0.756
AEGL-1	1.6	0.9	1.2	1.3	42,910	4.895

75 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.4	0.5	7,055	0.757
AEGL-1	1.7	1.1	1.2	1.3	45,914	5.278

75 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.4	0.4	0.5	7,491	0.798
AEGL-1	1.8	1.1	1.3	1.3	48,556	5.623

75 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	1.0	-0.1	0.2	0.3	2,124	0.162
AEGL-2	2.7	0.6	1.0	1.3	51,973	5.682
AEGL-1	4.4	1.6	2.0	2.4	131,045	21.52

[redacted]

55 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	5,501	0.598
AEGL-1	1.5	0.8	1.1	1.1	35,451	3.979

55 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)

AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	5,527	0.597
AEGL-1	1.5	0.9	1.1	1.1	37,246	4.235

55 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	5,781	0.621
AEGL-1	1.7	0.9	1.2	1.1	41,967	4.861

55 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.4	0.2	0.1	409	0.039
AEGL-2	2.8	0.4	1.1	0.7	33,027	5.155
AEGL-1	4.7	1.2	2.2	1.6	78,057	18.185

55 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.4	0.4	4,675	0.535
AEGL-1	1.7	0.7	1.1	1.0	31,209	4.009

55 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.6	0.3	0.4	0.4	4,756	0.545

	2 AEGL-1	1.9	0.8	1.1	1.1	35,396	4.671

55 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	5,293	0.61
AEGL-1	2.2	0.9	1.2	1.2	40,323	5.537

55 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.9	-0.5	0.0	0.1	213	0.027
AEGL-2	3.1	0.3	0.8	0.6	24,463	4.543
AEGL-1	5.2	1.0	1.8	1.6	77,551	17.525

55 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.4	0.4	4,569	0.559
AEGL-1	1.7	0.6	1.1	1.2	28,121	4.084

55 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.6	0.3	0.4	0.4	4,633	0.566
	AEGL-1	1.9	0.8	1.1	1.2	33,856	4.92

55 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.7	0.3	0.4	0.4	5,080	0.627
AEGL-1	2.2	0.9	1.2	1.2	38,267	5.779

55 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.8	-0.6	0.1	0.1	120	0.016
AEGL-2	2.9	0.3	0.6	1.1	25,722	4.646
AEGL-1	4.7	1.0	1.5	2.2	94,749	16.426

55 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,579	0.592
AEGL-1	1.5	0.8	1.1	1.1	30,121	4.079

55 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,628	0.599
AEGL-1	1.6	0.9	1.1	1.2	32,382	4.435

55 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.4	4,912	0.641
AEGL-1	1.7	0.9	1.1	1.2	34,572	4.876

55 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.2	0.1	0.2	255	0.042
AEGL-2	2.8	0.4	0.8	0.9	26,925	5.076
AEGL-1	4.4	1.4	2.0	2.2	106,012	18.399

55 deg, 30 min, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,653	0.611
AEGL-1	1.4	0.8	1.1	1.0	32,362	4.048

55 deg, 1 hour, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,600	0.605
AEGL-1	1.5	0.9	1.1	1.0	32,862	4.136

55 deg, 2 hours, south

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a

	AEGL-2	0.5	0.3	0.4	0.4	4,746	0.626
	AEGL-1	1.5	0.9	1.2	1.1	35,741	4.529
55 deg, 4 hours, south							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	0.7	-0.4	0.1	0.1	203	0.037
	AEGL-2	2.6	0.4	1.1	0.8	32,233	5.108
	AEGL-1	4.5	1.4	2.4	1.8	118,876	20.593
55 deg, 30 min, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.3	0.4	0.4	4,481	0.558
	AEGL-1	1.5	0.8	1.1	1.1	32,609	3.909
55 deg, 1 hour, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.2	0.4	0.5	4,455	0.556
	AEGL-1	1.5	0.9	1.1	1.1	33,882	4.081
55 deg, 2 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.6	0.3	0.4	0.5	4,629	0.583
	AEGL-1	1.6	0.9	1.2	1.3	36,130	4.389
55 deg, 4 hours, southwest							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.5	0.3	0.7	0.8	32,813	5.35
AEGL-1	5.1	1.1	1.8	2.0	134,167	19.503

55 deg, 30 min, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.5	4,973	0.566
AEGL-1	1.5	0.8	1.1	1.1	34,485	3.908

55 deg, 1 hour, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.5	5,000	0.569
AEGL-1	1.5	0.8	1.0	1.1	36,196	4.118

55 deg, 2 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.2	0.4	0.5	5,266	0.601
AEGL-1	1.6	0.8	1.1	1.2	38,903	4.422

55 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.1	0.3	0.7	1.2	45,919	5.284

AEGL-1	5.0	1.2	1.6	2.3	137,209	20.478

55 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.5	5,743	0.619
AEGL-1	1.4	0.9	1.1	1.2	36,139	4.059

55 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.5	0.5	5,719	0.616
AEGL-1	1.5	0.9	1.1	1.2	36,630	4.12

55 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.3	0.4	0.5	5,992	0.641
AEGL-1	1.6	0.9	1.2	1.2	40,098	4.512

55 deg, 4 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	0.7	-0.3	0.1	0.1	508	0.039
AEGL-2	2.5	0.5	0.8	1.1	48,055	5.103
AEGL-1	4.3	1.5	1.8	2.3	117,177	18.6

35 deg, 30 min, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.3	4,390	0.477
AEGL-1	1.3	0.7	1.0	1.0	30,226	3.373

35 deg, 1 hour, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.4	0.4	4,408	0.477
AEGL-1	1.3	0.8	1.0	1.0	31,056	3.459

35 deg, 2 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,617	0.498
AEGL-1	1.5	0.8	1.1	0.9	33,379	3.723

35 deg, 4 hours, North

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.7	0.3	1.1	0.6	30,408	4.374
AEGL-1	4.4	1.2	2.1	1.5	71,801	16.077

35 deg, 30 min, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.5	0.2	0.4	0.4	3,773	0.421

	2 AEGL-1	1.5	0.7	1.0	1.0	26,730	3.284

35 deg, 1 hour, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.3	0.4	3,829	0.427
AEGL-1	1.6	0.8	1.0	0.9	29,568	3.701

35 deg, 2 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.6	0.2	0.4	0.4	4,142	0.464
AEGL-1	1.8	0.8	1.0	1.1	32,209	4.235

35 deg, 4 hours, Northeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	0.2	0.7	0.6	22,080	4.012
AEGL-1	4.9	0.8	1.9	1.3	66,570	15.01

35 deg, 30 min, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.3	0.3	3,570	0.432

	AEGL-1	1.5	0.6	0.9	1.0	24,843	3.401

35 deg, 1 hour, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.3	0.4	3,508	0.426
AEGL-1	1.6	0.8	0.9	1.0	26,521	3.708

35 deg, 2 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.3	0.4	3,769	0.461
AEGL-1	1.8	0.8	1.0	1.1	28,989	4.23

35 deg, 4 hours, east

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.6	0.2	0.5	0.9	20,713	3.82
AEGL-1	4.5	0.8	1.3	1.9	82,693	14.113

35 deg, 30 min, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	3,643	0.475
AEGL-1	1.3	0.8	1.0	1.0	25,210	3.266

35 deg, 1 hour, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	3,631	0.475
AEGL-1	1.4	0.8	1.0	1.0	25,670	3.363

35 deg, 2 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	3,707	0.488
AEGL-1	1.5	0.8	1.1	1.1	27,824	3.791

35 deg, 4 hours, southeast

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.5	0.4	0.8	1.0	22,088	4.174
AEGL-1	4.1	1.3	1.8	2.2	98,362	16.901

35 deg, 30 min, South

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	3,664	0.486
AEGL-1	1.3	0.8	1.0	1.0	25,486	3.193

35 deg, 1 hour, South

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.4	0.4	3,676	0.488
AEGL-1	1.3	0.8	1.0	0.9	25,486	3.193

35 deg, 2 hours, South

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.4	0.4	3,710	0.496
AEGL-1	1.4	0.8	1.1	1.0	28,555	3.609

35 deg, 4 hours, South

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.6	0.3	1.0	0.7	28,199	4.485
AEGL-1	4.1	1.3	2.0	1.7	102,940	16.887

35 deg, 30 min, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.3	0.4	3,574	0.454
AEGL-1	1.3	0.7	0.9	1.0	25,174	3.02

35 deg, 1 hour, southwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-	0.5	0.2	0.3	0.4	3,603	0.458

	2 AEGL-1	1.3	0.8	1.0	1.1	25,474	3.052
35 deg, 2 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.2	0.4	0.4	3,761	0.476
	AEGL-1	1.4	0.8	1.0	1.1	28,491	3.435
35 deg, 4 hours, southwest							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	3.0	0.3	0.8	0.9	27,058	4.315
	AEGL-1	4.9	0.9	1.8	1.8	112,535	16.503
35 deg, 30 min, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.3	0.3	0.4	3,952	0.455
	AEGL-1	1.3	0.7	0.9	1.0	27,815	3.111
35 deg, 1 hour, west							
		Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
	AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
	AEGL-2	0.5	0.3	0.4	0.4	4,067	0.467
	AEGL-1	1.3	0.9	0.9	1.0	28,054	3.147
35 deg, 2 hours, west							

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.2	0.4	0.4	4,214	0.484
AEGL-1	1.4	0.7	0.9	1.1	31,590	3.547

35 deg, 4 hours, west

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	3.0	0.3	0.5	1.2	39,041	4.355
AEGL-1	4.8	1.0	1.6	2.1	114,892	16.814

35 deg, 30 min, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,597	0.497
AEGL-1	1.3	0.8	1.0	1.1	29,910	3.288

35 deg, 1 hour, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,615	0.499
AEGL-1	1.3	0.8	1.0	1.1	29,740	3.265

35 deg, 2 hours, Northwest

	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	0.5	0.3	0.4	0.4	4,846	0.517
AEGL-	1.4	0.8	1.0	1.1	33,264	3.666

1						
35 deg, 4 hours, Northwest						
	Downwind (km)	Upwind (km)	Crosswind 1 (km)	Crosswind 2 (km)	Population	Area (km^2)
AEGL-3	n/a	n/a	n/a	n/a	n/a	n/a
AEGL-2	2.6	0.4	0.7	0.9	40,804	4.237
AEGL-1	4.1	1.4	1.7	2.1	110,745	17.142

APPENDIX: C

- Diagrams of plume measurements based on wind directions
    - Data for downwind, upwind, and crosswind distances are detailed in Appendix A for Jackson, MS and Appendix B for Chicago, IL.
    - Analytical symbol (tool symbol) mark the origin of release.

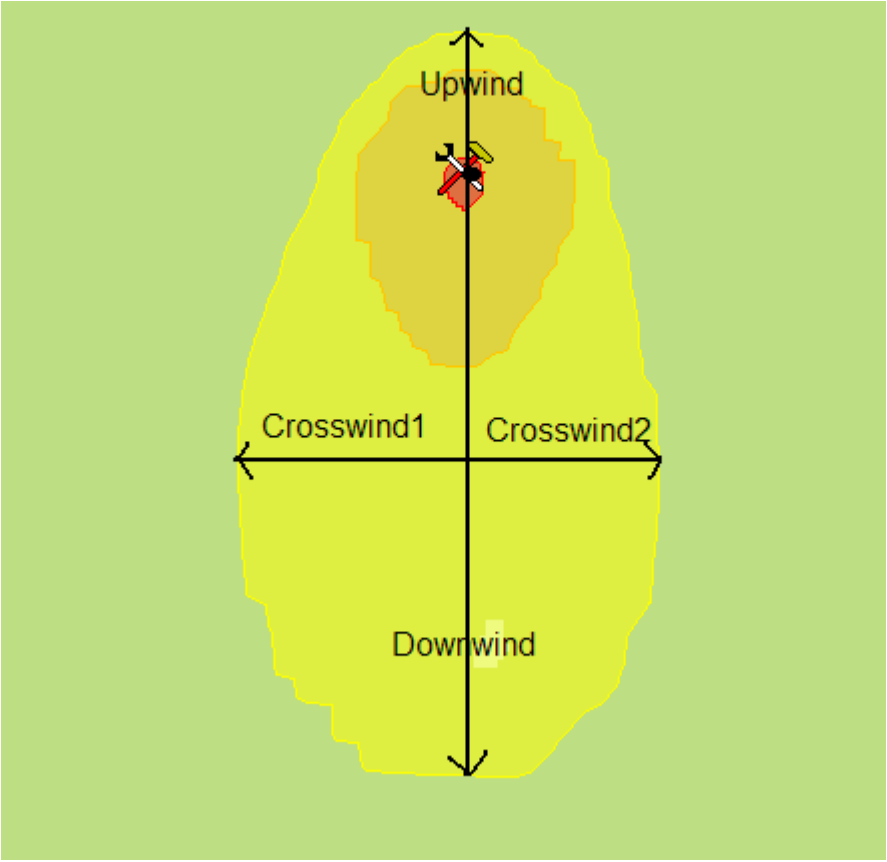

Figure C-1: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the North

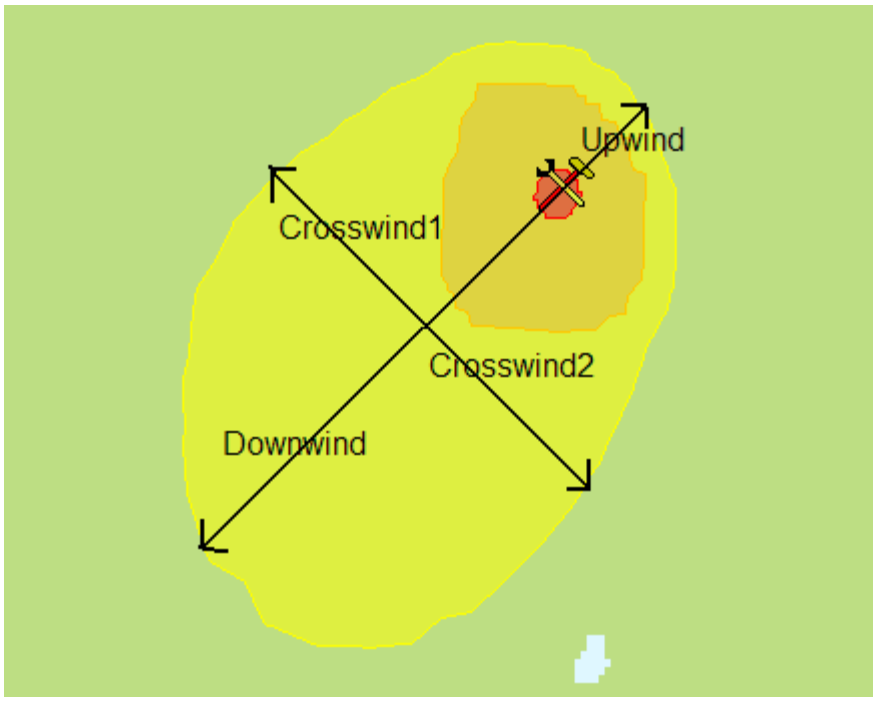

Figure C-2: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the Northeast

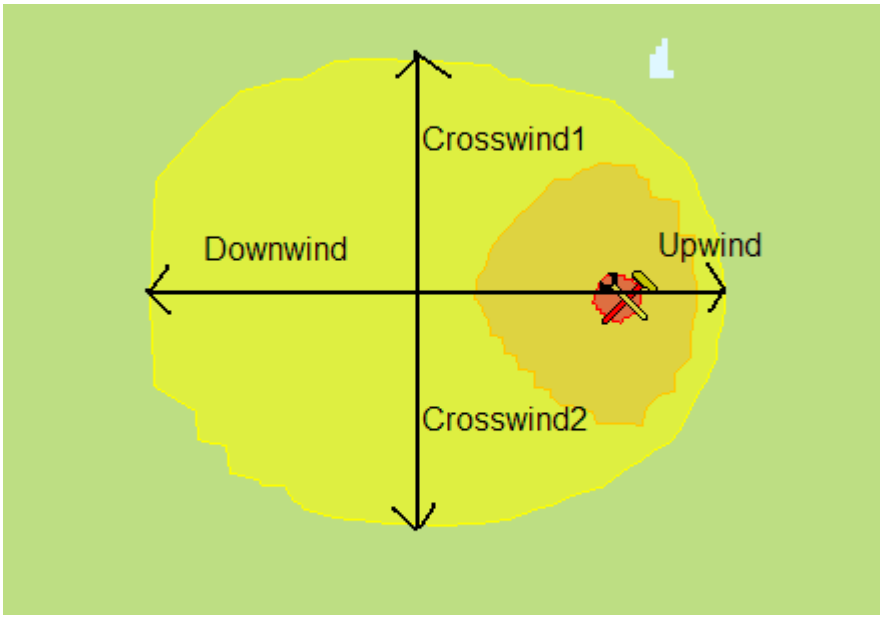

Figure C-3: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the East

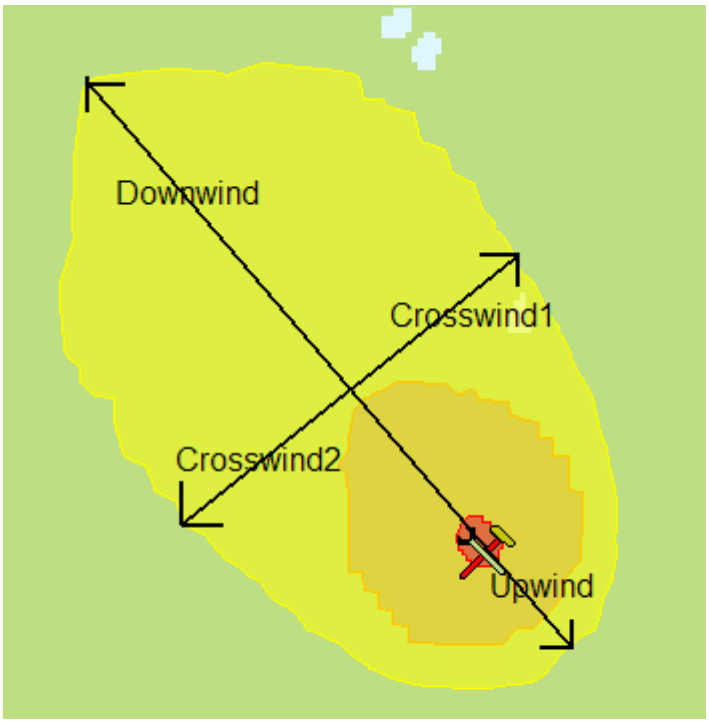

Figure C-4: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the Southeast

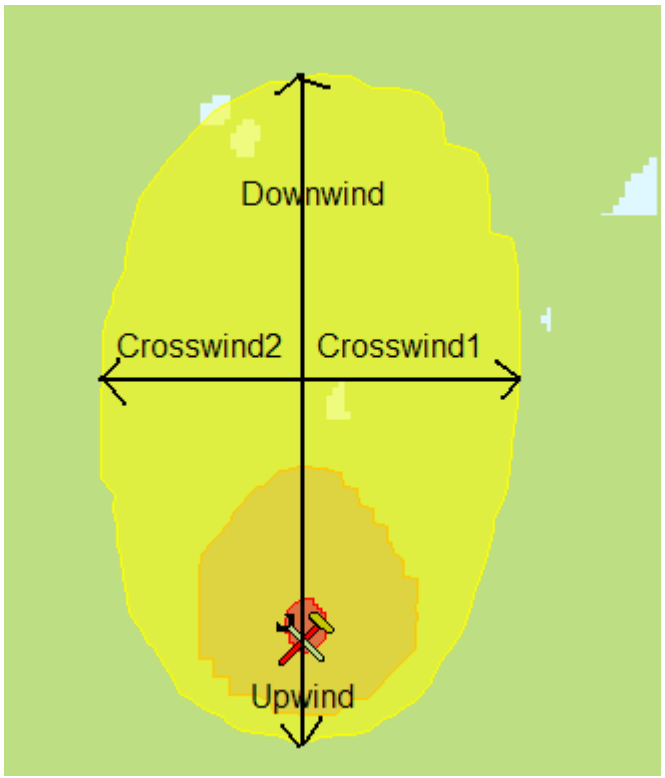

Figure C-5: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the South

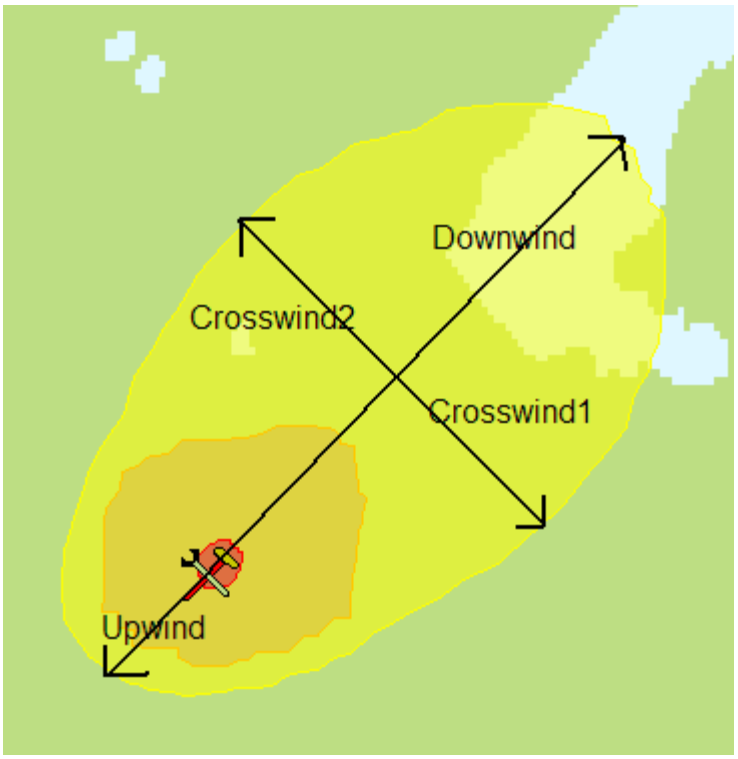

Figure C-6: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the Southwest

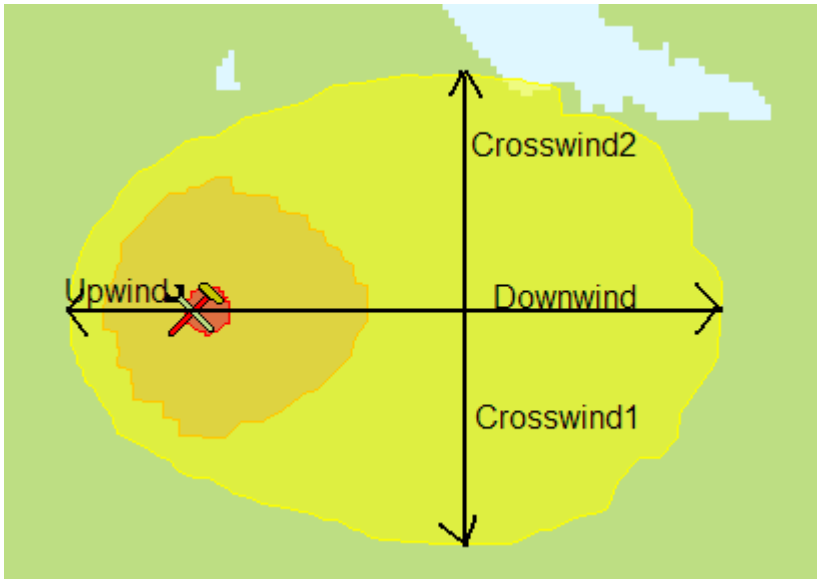

Figure C-7: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the West

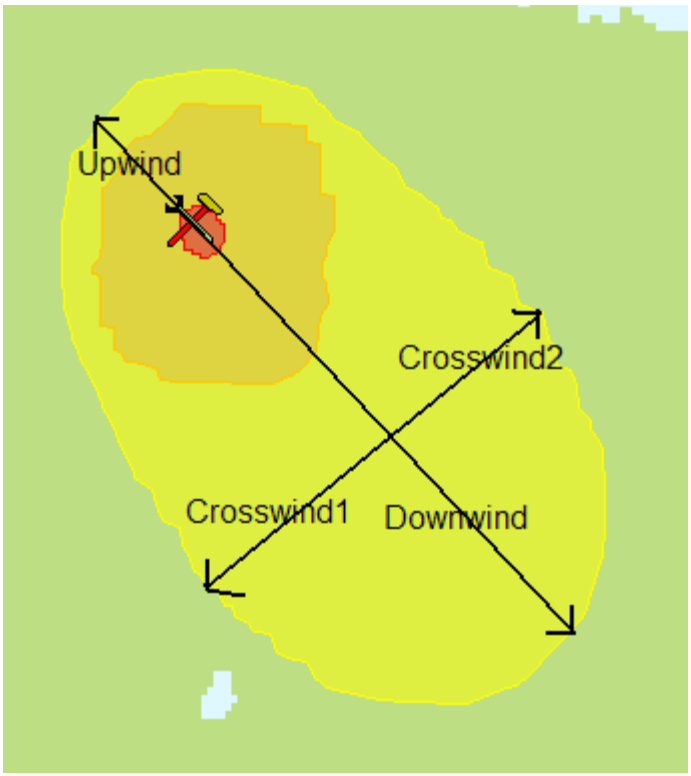

Figure C-8: Plume with downwind distance, upwind distance, and crosswind distances 1 and 2 labeled: wind from the Northwest

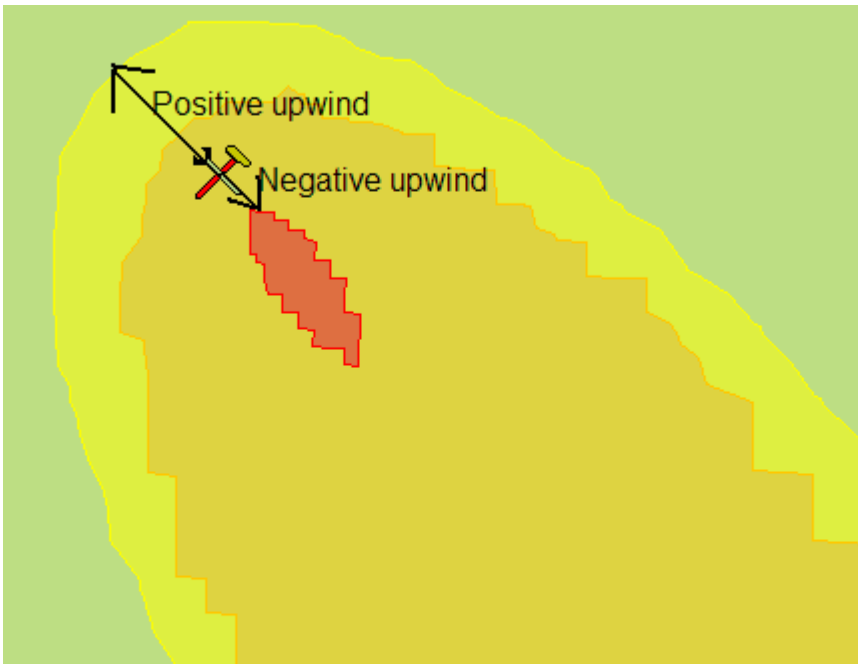

Figure C-9: Example of scenario when upwind distance is negative (plume zoomed in to origin)

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