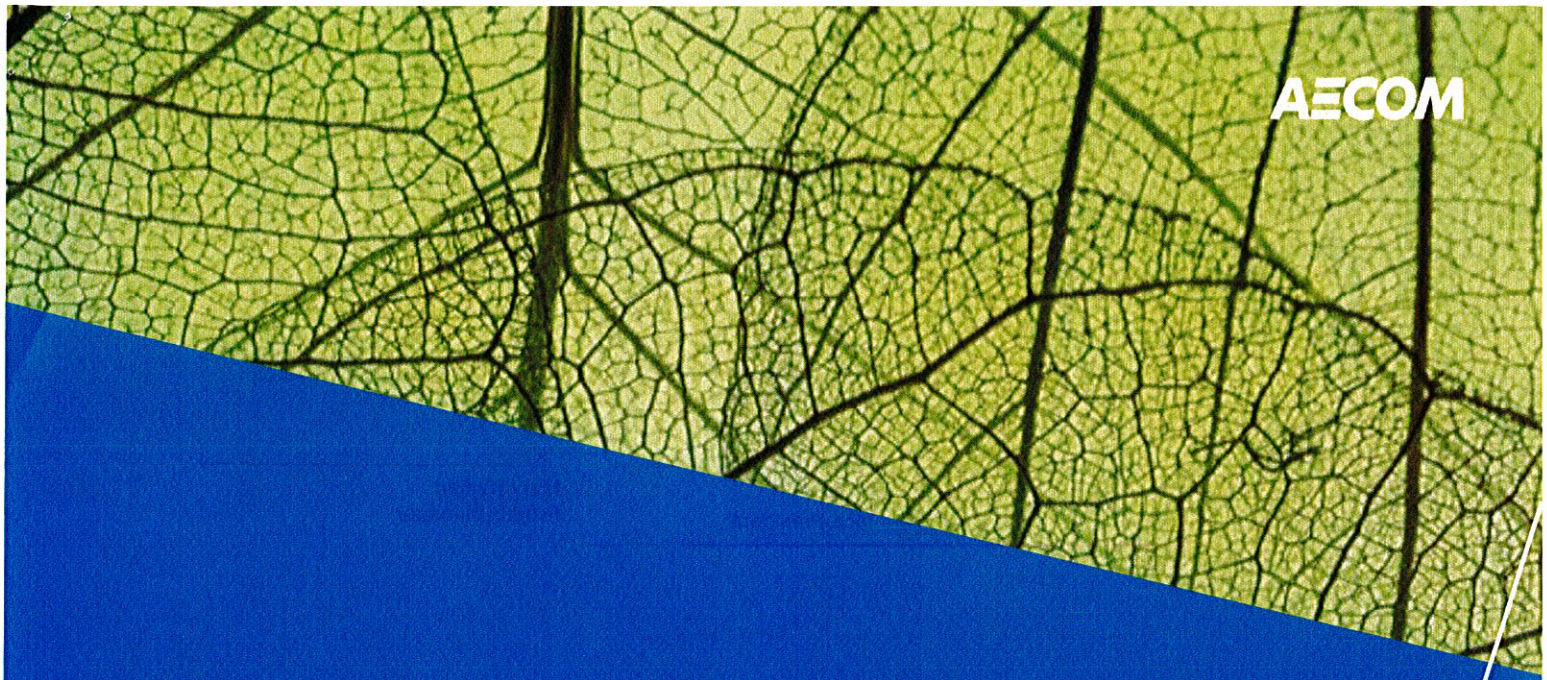

AECOM

Tucson Electric Power Company Irvington (Sundt) Generating Station: PLUVUE II Assessment of Visible Plumes at Saguaro National Park East and West

Revision 1

Tucson Electric Power Company

Project Number: 60530048

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Quality information

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Attachment B: Statistical Summaries for Case 1 at Saguaro NP East and West Units – Revision 1

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1. Introduction

1.1 Project Overview

Tucson Electric Power Company (TEP) is proposing to modify the existing Irvington (Sundt) Generating Station (IGS) located in Tucson, Arizona, approximately 2 miles northeast of Tucson International Airport. The reciprocating internal combustion engine (RICE) project involves adding ten quick-start RICEs for the purpose of load stabilization to accommodate intermittent renewable energy sources (solar and wind) that feed into the system. This project will also allow the retirement of two less efficient, older units (Units 1 & 2) at IGS.

1.2 Purpose of this Supplemental Report

The purpose of this document is to present methods and results of a refined (PLUVUE II) analysis requested by the National Park Service (NPS) to assess the potential for visible plumes to be present within Saguaro National Park due to emissions from project sources. This analysis was conducted in support of the air permit application for the RICE project. The modeling procedures are intentionally conservative in that they do not account for the off-setting effect associated with the removal of sources to be retired at the facility. In addition, the modeling assumes that the RICE units continually operate, either in a start-up mode (Case 1) or at full load (Case 2), and it is assumed that a Park visitor is present at each observation point for all daylight hours. Although it is projected that the utilization of the units will be far less than modeled, this aspect is only qualitatively included in the results discussion. Modeling methods and assumptions, including model selection and options, meteorological data and source parameters, are presented in this report to assist the NPS, U.S. Environmental Protection Agency (EPA), and Pima County Department of Environmental Quality (PDEQ) in their review.

This version of the report (revision 1) includes minor updates to the gas exit temperature and velocity associated with two of the ten RICE units that will now be used (instead of the to-be-retired IGS Units 1 and 2) to provide steam to an adjacent asphalt plant. Details on this can be found in Section 2.3 of this report.

1.3 Contents of the PLUVUE Modeling Report

Section 2 of this document contains a project description, including information regarding the equipment, location and the expected air pollutant emissions. Section 3 presents a detailed description of the modeling approach that was used in evaluating the potential for visible plumes at Saguaro National Park. Section 4 presents the detailed results of the PLUVUE II modeling analysis. Section 5 summarizes the results of the plume visibility assessment.

2. Project Description

2.1 Project Location and Layout

The proposed RICE project will be sited at the existing IGS located in Tucson, Arizona, approximately 2 miles northeast of Tucson International Airport. The coordinates of the IGS are 509,448 meters Easting, 3,557,910 meters Northing in Universal Transverse Mercator (UTM) Zone 12 referenced to NAD 83. An aerial map of the site region is provided in **Figure 2-1**.

The terrain surrounding IGS is generally flat within 10 kilometers before the landscape changes with the addition of rolling hills, rugged canyons and mountain peaks. **Figure 2-2** shows the varying elevations associated with these features near IGS.

2.2 Description of the Proposed Engines

The proposed modification at IGS includes the installation of ten RICEs, in two groups of five engines. Each group of engines has a cluster of five stacks, which for the modeling of CO and $PM_{2.5}$ pollutant concentrations were simulated as merged groups of 2 and 3 stacks in a procedure that has been separately approved by EPA. These engines will only be fired by natural gas and each will be installed with selective catalytic reduction (SCR) control utilizing ammonia and oxidation catalyst for CO and VOC control. The two clusters of five stack sources are separated by a distance of nearly 100 m, aligned at an angle of 130° from true north as shown in **Figure 2-3**. For modeling plume visibility, it is conservatively assumed that the exhausts from the ten engines merge into a single plume, such that the effective emission source is placed at the centroid of the units, located at 509,240 UTM East and 3,557,820 UTM North in Zone 12 as indicated in the figure.

2.3 Emissions and Source Characterization

For the refined PLUVUE II plume visibility assessment, natural gas-fired RICE emissions of three optically active pollutants were considered: sulfur dioxide (SO_2), nitrogen oxides (NO_x) and particulate matter (PM). When released to the atmosphere, a fraction of the nitric oxide (NO) in the NO_x is transformed to NO_2, which preferentially absorbs shorter wavelength portions of visible light spectrum. The primary optical effect of non-carbonaceous particulate matter is to scatter visible light. Both types of optical effects are simulated in PLUVUE II, the refined plume visibility model recommended by the NPS.

Figure 2-1 Aerial Image of the Irvington Generating Station

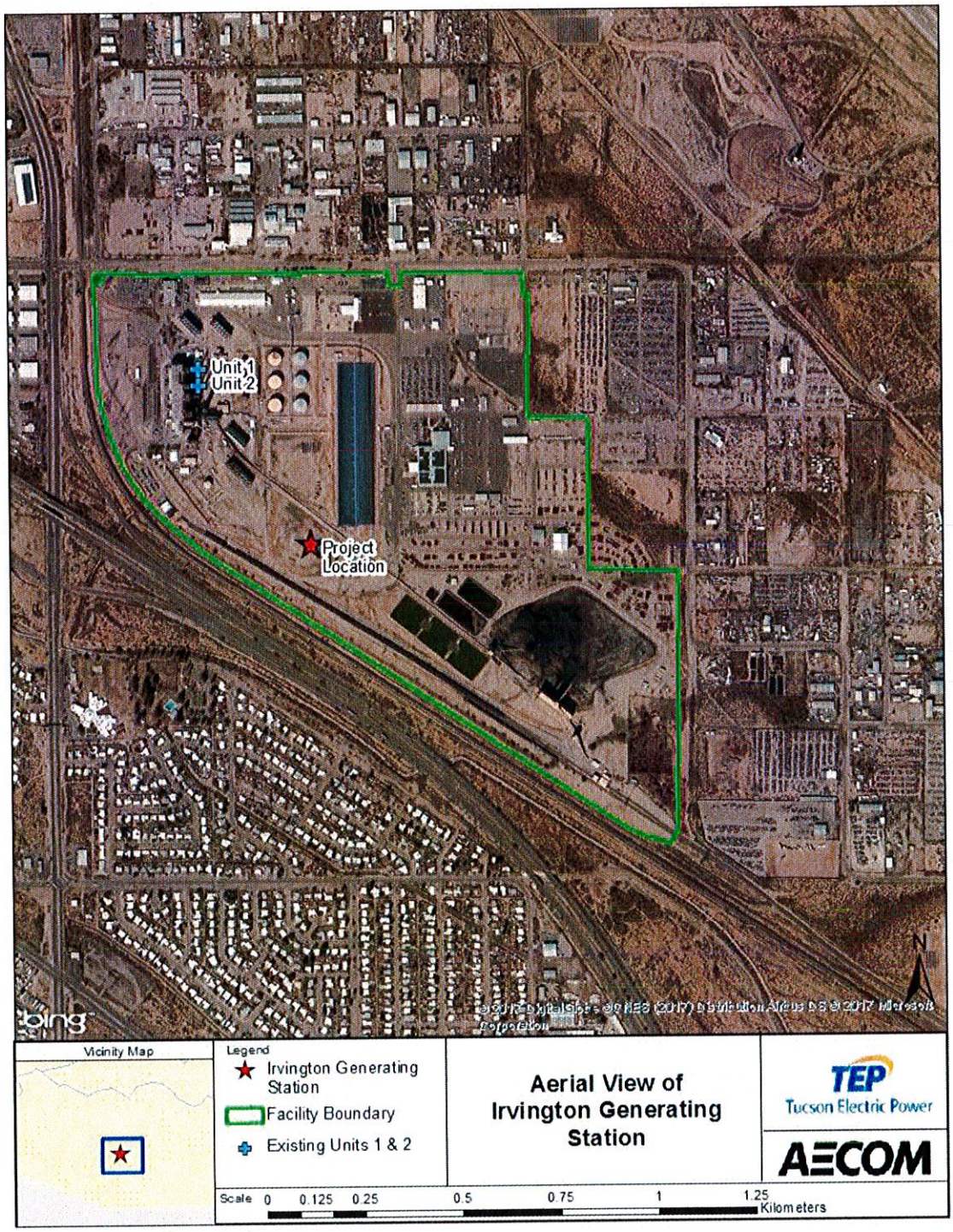


Figure 2-2 Topographic Map Showing Terrain Features Surrounding the Irvington Generating Station

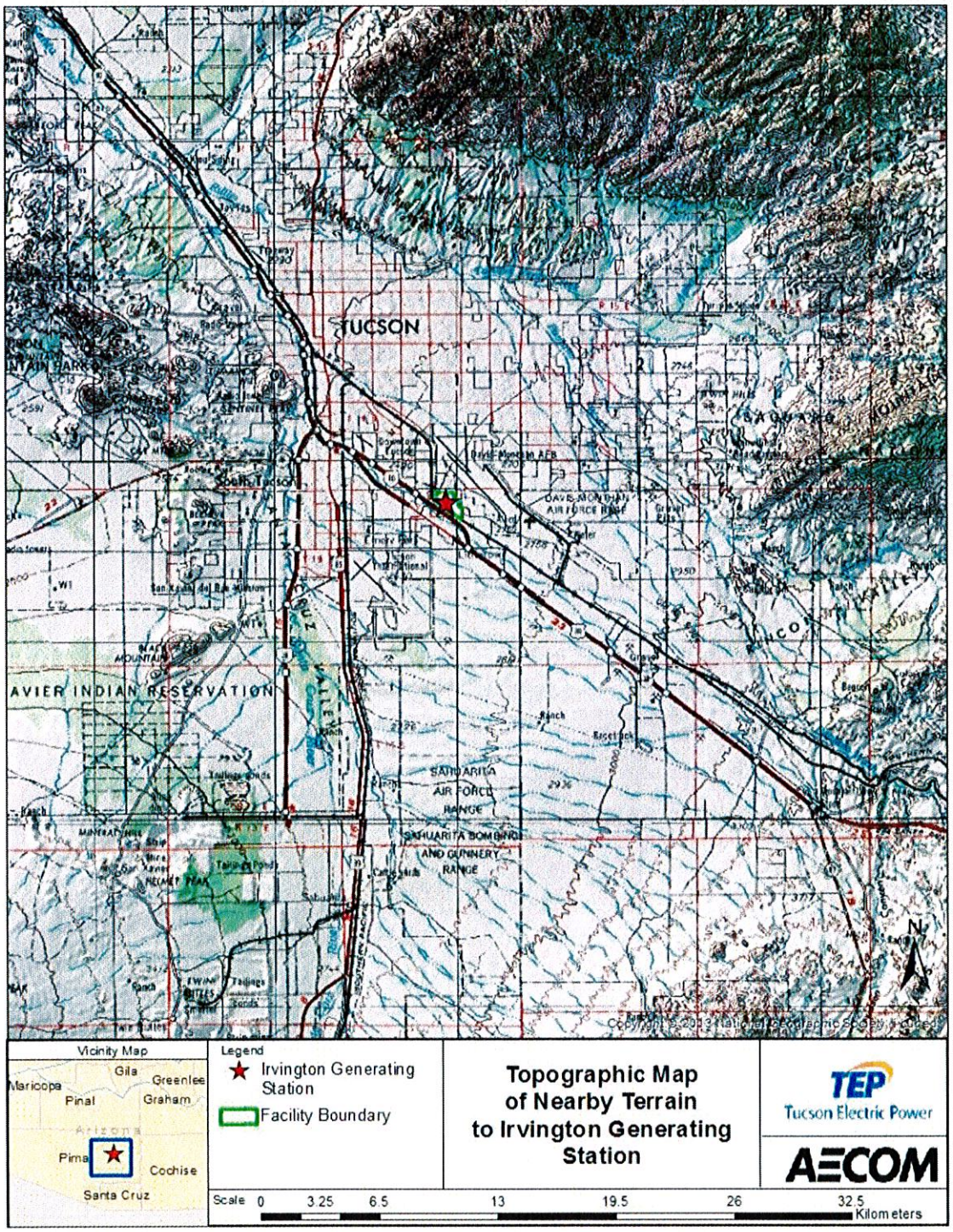
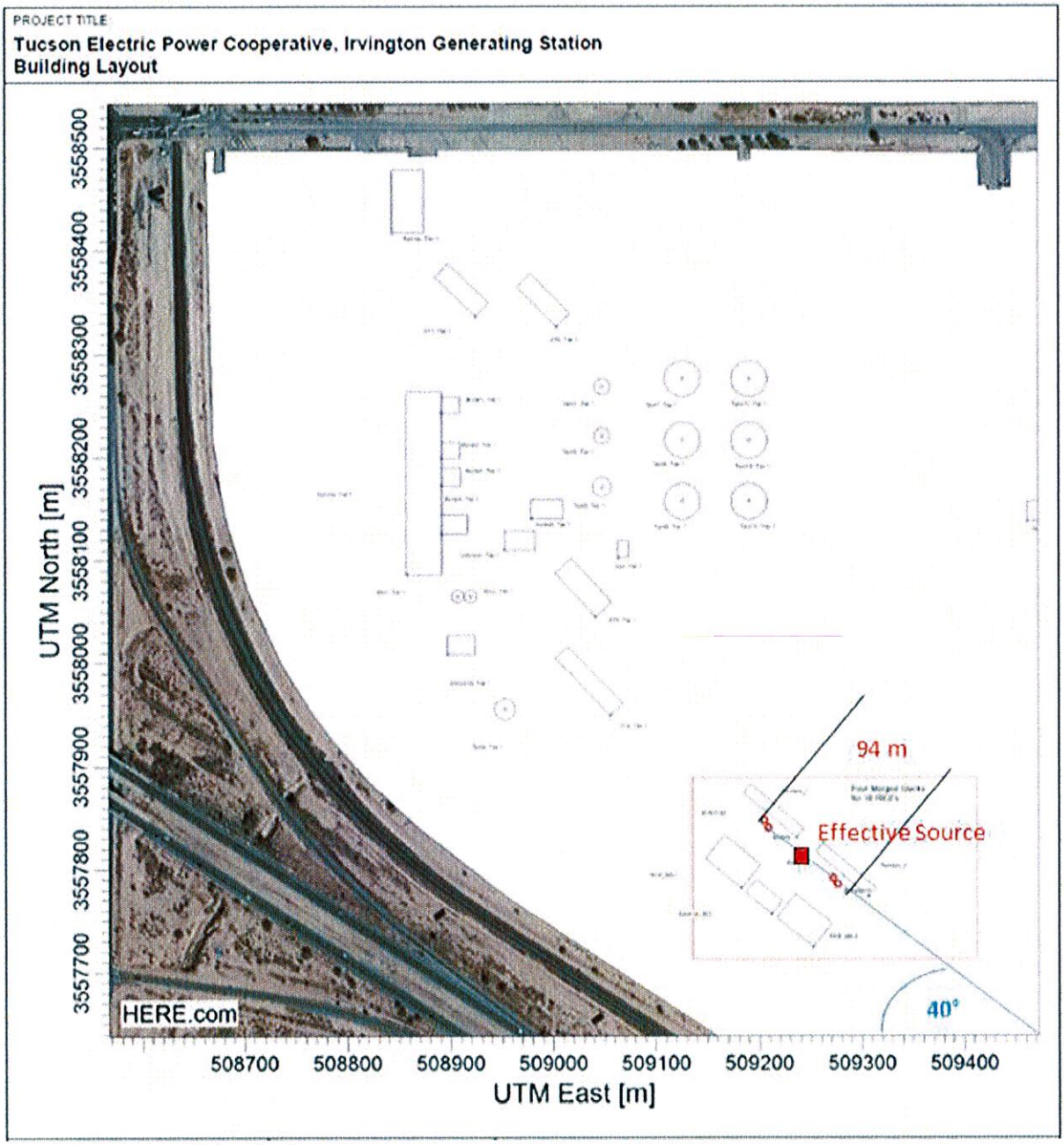


Figure 2-3 Location of RICE Units and Effective Source for the Plume Visibility Assessment



Two emission cases were considered for the plume visibility assessment:

- Case 1: maximum 1-hour average emissions accounting for the rare simultaneous start-up of all 10 RICE units within 30 minutes, plus 30 minutes running at 100% load in the same hour (this is a conservative case since one RICE unit is typically operating at a minimum of 50% load and the simultaneous start of all other engines is not typical); and
- Case 2: emissions from all 10 RICE units at 100% load (this case is more likely, especially in summer, but is still not expected to occur more than about 10% of the time on an annual basis).

While it is understood that that the Case 1 start-up emissions are of primary interest because they are higher, the more likely event is Case 2. The emission rates for the two emission cases that were modeled in the plume visibility assessment are provided in **Table 2-1.**

Table 2-1 Emissions Summary for All Ten RICE Units (pounds per hour)

Pollutant	Case 1	Case 2
SO_2	0.33	0.33
PM	29.85	23.7
NOx	110.5	15

For purposes of modeling with PLUVUE, which simulates dispersion from a single location, the emissions of all 10 units are combined. Note that because PLUVUE is limited to simulate dispersion from a single stack, the source characterization necessarily differs from the approach approved by EPA for criteria pollutant modeling, in which four effective stacks were modeled, two stacks for each RICE cluster of 5 units[1,2]. For PLUVUE, the effective stack parameters for the proposed project used the actual release height and a weighted average of the exhaust temperature and exit velocity for each RICE unit. This is a slight change from the previous modeling because now there are 2 RICE units with lower exhaust temperature and exit velocity compared to the other 8. **Table 2-2** lists the exhaust temperature, flow rate and velocity for each unit. In order to simulate plume rise that approximates the criteria pollutant modeling that used 4 stacks, 1/4th of the total exhaust flow rate from all 10 RICE units combined was used for the single PLUVUE stack. The stack parameters for the effective source used in the visibility assessment are provided in **Table 2-3.**

[1] E-mail from Cleveland Holladay, EPA Region 9, to Rupesh Patel, Pima County, Arizona, dated October 19, 2017.
[2] EPA approved the merging of groups of stacks that are within one diameter of each other. This has resulted in a division of the cluster of 5 stacks at each RICE group into sets of 2 and 3 stacks being modeled as if the stacks were in a single merged stack.

Table 2-2 Stack Parameters for Each RICE Unit

Description	Source ID	Temperature (F)	Stack Gas Flow Actual m^3/s	Exit Velocity (m/s)
Engine 1	ENG01	672	58.28	28.98
Engine 2	ENG02	672	58.28	28.98
Engine 3	ENG03	672	58.28	28.98
Engine 4	ENG04	672	58.28	28.98
Engine 5	ENG05	298.4	39.04	16.50
Engine 6	ENG06	298.4	39.04	16.50
Engine 7	ENG07	672	58.28	28.98
Engine 8	ENG08	672	58.28	28.98
Engine 9	ENG09	672	58.28	28.98
Engine 10	ENG10	672	58.28	28.98

Table 2-3 Stack Parameters Applied in the PLUVUE II Visibility Assessment

Description	Stack Height (ft)	Temperature (K)	Volumetric Flow Rate (acfm)	Exit Velocity (m/s)
Engines 1-10	160	599	288,331	29.19

To accommodate spatial separation of emission sources in PLUVUE, the separation between the two groups of stacks (to the outermost stacks, about 94 meters) was accounted for by an initial plume width, represented by the dispersion coefficient sigma-y. Because the RICE units are in two clusters, the effective horizontal spread is dependent on wind direction. When the wind direction is either 130° or 310°, the plumes from both clusters align and there is no additional horizontal dispersion due to the separation of the stack groups. When the wind direction is perpendicular to the stack lineup (40° or 220°), $\delta y_o = 94/4.3$, or about 22 m (following the EPA guidance for volume sources[3]). For other wind directions, the initial horizontal dispersion is in between these values. As such, the value of the initial sigma-y applied in the PLUVUE II simulations was based on the wind direction for the selected hour of meteorology.

[3] Table 3-2. Summary of Suggested Procedures for Estimating Initial Lateral Dimensions σyo and Initial Vertical Dimensions σzo for Volume and Line Sources , User's Guide for the AMS/EPA Regulatory Model (AERMOD) EPA-454/B-16-011, December, 2016

3. PLUME Visibility Assessment Procedures

The plume visibility assessment followed guidance provided by the National Park Service in consultation with staff at Saguaro National Park and applying AECOM's experience in conducting refined plume visibility assessments. Modeling protocols for this analysis were submitted in original form on November 17, 2017, and in revised form (responding to National Park Service comments) on December 7, 2017. Minor technical issues were also noted in subsequent e-mail communications between David Heinold of AECOM and John Notar of the National Park Service[4]. This report documents the final procedures used and presents the results of the modeling approach. This version (revision 1) of the report includes minor changes to the exhaust temperature and velocity of the effective source based on proposed changes by TEP to use 2 of the 10 RICE units to supply steam to an adjacent asphalt plant. No other changes (i.e., location of source, release height, meteorology data, etc.) have occurred. Therefore, no revisions were required in the meteorological or observer sections for this revised report.

3.1 Model Selection

Two EPA plume visibility models were applied in this assessment, VISCREEN and PLUVUE II. VISCREEN was applied first to determine under what atmospheric stability conditions the visible plume impacts are certain to be insignificant. This information was then used to determine the remaining hours that are appropriate for a refined assessment using PLUVUE II. VISCREEN is appropriate as a screening model for this type of application because it incorporates an observer's line-of-site through a plume and sun angle that maximizes the absolute value of the modeled plume perceptibility parameters. A prior VISCREEN analysis has been documented in a modeling package submitted to the reviewing agencies on October 26, 2017. PLUVUE II is appropriate for the refined assessment because it incorporates specified observer points and lines of sight for various hours of the day, times of year and corresponding weather conditions.

Meteorological data required for AERMOD includes hourly values of wind speed, wind direction, and ambient temperature, but it computes dispersion differently than VISCREEN and PLUVUE II, which use discrete stability classes. Stability classes vary from Stability A, representing highly unstable midday conditions, to Stability F, representing stable nighttime conditions. As noted below, PLUVUE II also requires the derivation of other meteorological parameters not used in AERMOD.

3.1.1 Available Meteorological Data for PLUVUE II

The Arizona Department of Environmental Quality (ADEQ) has pre-processed meteorological data[5] for 2012-2016 for the Tucson International Airport (surface and upper air), using AERMET version 16216 along with AERMINUTE version 15272 and AERSURFACE version 13016. The airport is located approximately 5 kilometers to the southwest of IGS and is the only ASOS

[4] E-mails from David Heinold of AECOM to John Notar of NPS 1) "TEP Protocol" 12/4/17; 2)"TEP Plume Assessment" 12/14/17
[5] Arizona Department of Environmental Quality (ADEQ) AERMOD-ready meteorological data files are available at http://www.azdeq.gov/node/2127.

station in the Tucson area. This data set was used for the air quality impact analysis. A wind rose using the five-year period from 2012 to 2016 is provided as **Figure 3-1**.

PLUVUE II requires the following additional meteorological parameters not provided by AERMET:

- atmospheric stability category
- temperature lapse rate near the surface and
- Holzworth mixing depth[6].

Stability and mixing height for input to PLUVUE were determined using the PCRAMMET[7] program that was in use for the ISC model (prior to AERMOD). The temperature lapse rate for each hour was computed from the potential temperature lapse rates for stability categories as specified in the Industrial Source Complex Model User's Guide: Stability F: 0.035 K/m, Stability E: 0.02 K/m. For neutral and unstable conditions, the potential temperature lapse rate was set to zero.

3.2 Class I Areas for the Visible Plume Analysis

FLAG Guidance indicates that proposed sources within 50 km of a PSD Class I area need to perform a modeling evaluation of visible plumes as an Air Quality Related Value. As shown in **Figure 3-2**, Saguaro National Park East and West Units are the only Class I areas within 50 km of the RICE units.

3.3 Background Data for PLUVUE II Modeling

PLUVUE requires the input of background concentrations of ozone, NO_x and NO_2 as well as background visual range. Hourly background pollutant concentrations were taken from a local ADEQ monitor located in Tucson at 22nd and Craycroft (yellow star in **Figure 3-3**).

The background visual range is a measure of the amount of ground-level light extinction in the background atmosphere through which the plume is viewed. For the VISCREEN assessment, the background visual range was set to the natural background of 252 km specified by the NPS, which corresponds to the highest monthly value.

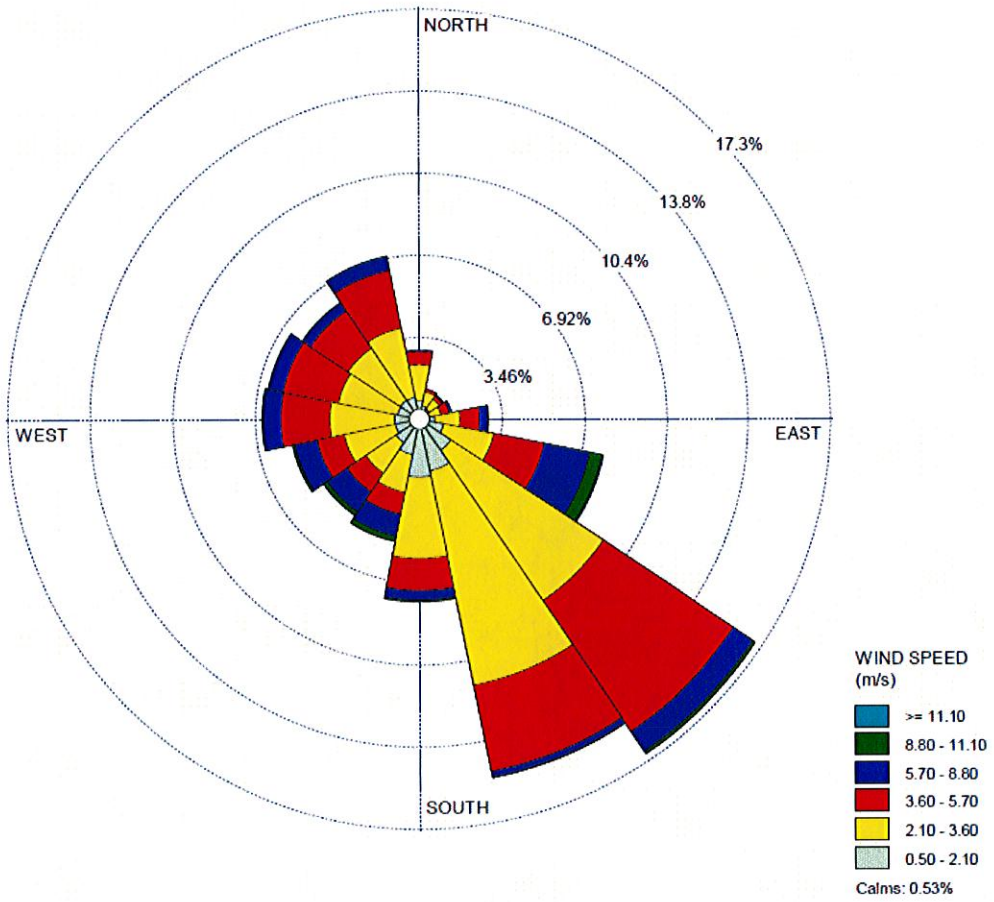
PLUVUE II uses the background visual range to calculate the concentration of fine particulate in the atmosphere. For hours where the specified background concentrations of NO_2 result in a greater degree of extinction than accounted for by the background visual range, the model will not run because the concentration of fine particulate would have to be negative to match the very low level of assumed (naturally clean) background extinction. This was an issue that occasionally prevented model from running to completion. A sensitivity analysis determined that the modeled parameters were not sensitive to the NO_2 specification and thus, rather than excluding these hours, the background NO_2 concentration for these hours was set to zero, allowing the model to run.

[6] Holzworth, 1972, Mixing Heights, "Wind Speed and Potential for Urban Air Pollution Throughout the Contiguous United States", AP-101, Appendix B, page 110
[7] Available at https://www.epa.gov/scram/meteorological-processors-and-accessory-programs#pcrammet.

Figure 3-1 Wind Rose from Tucson International Airport 2012-2016

WIND ROSE PLOT:
Tucson International Airport
2012-2016

DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 1/1/2012 - 00:00 End Date: 12/31/2016 - 23:59	AECOM	AECOM
	CALM WINDS: 0.53%	TOTAL COUNT: 43696 hrs.	
	AVG. WIND SPEED: 3.53 m/s	DATE: 6/8/2017	PROJECT NO.:

Figure 3-2 Class I Areas within 50 km of IGS

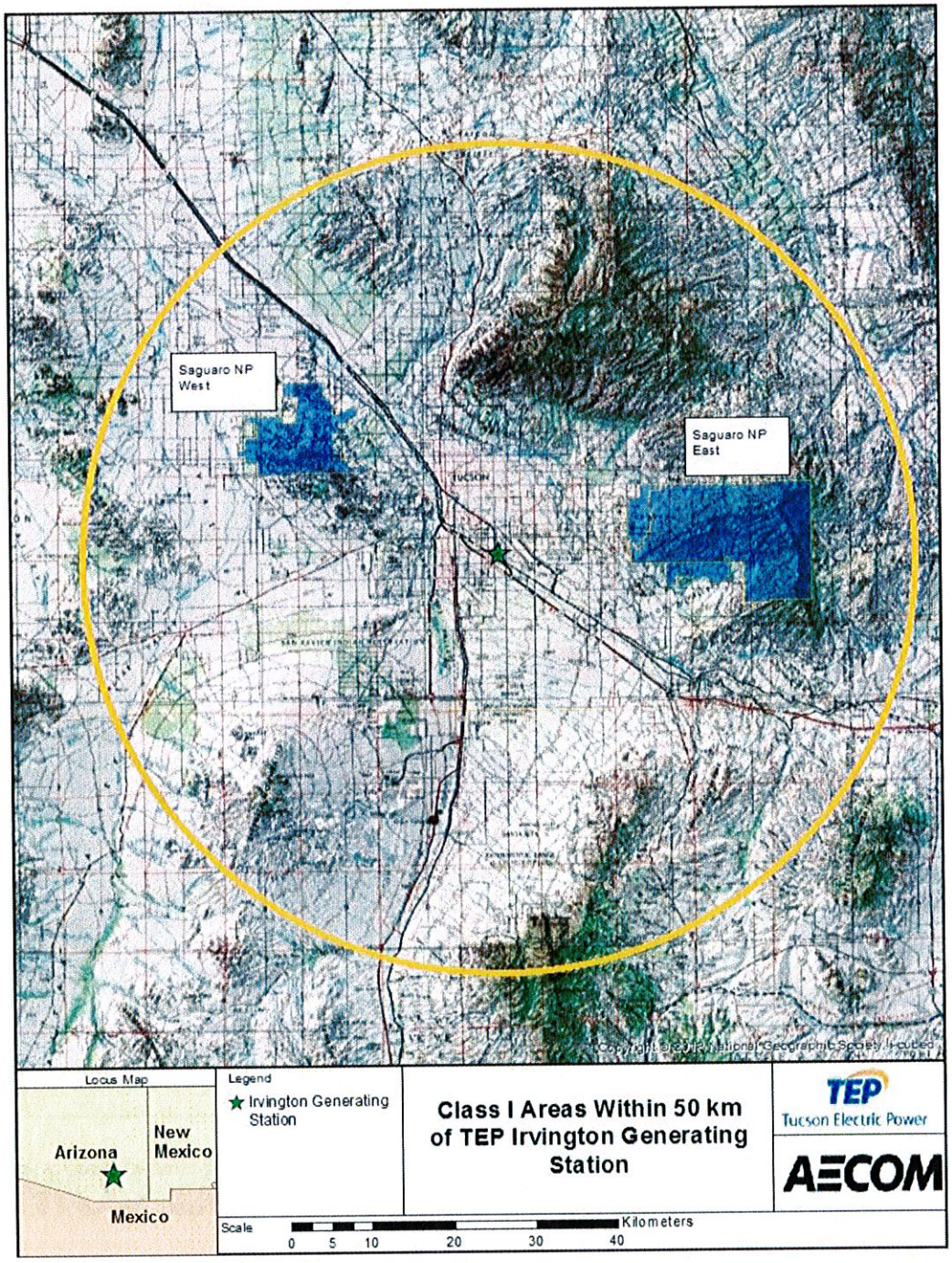
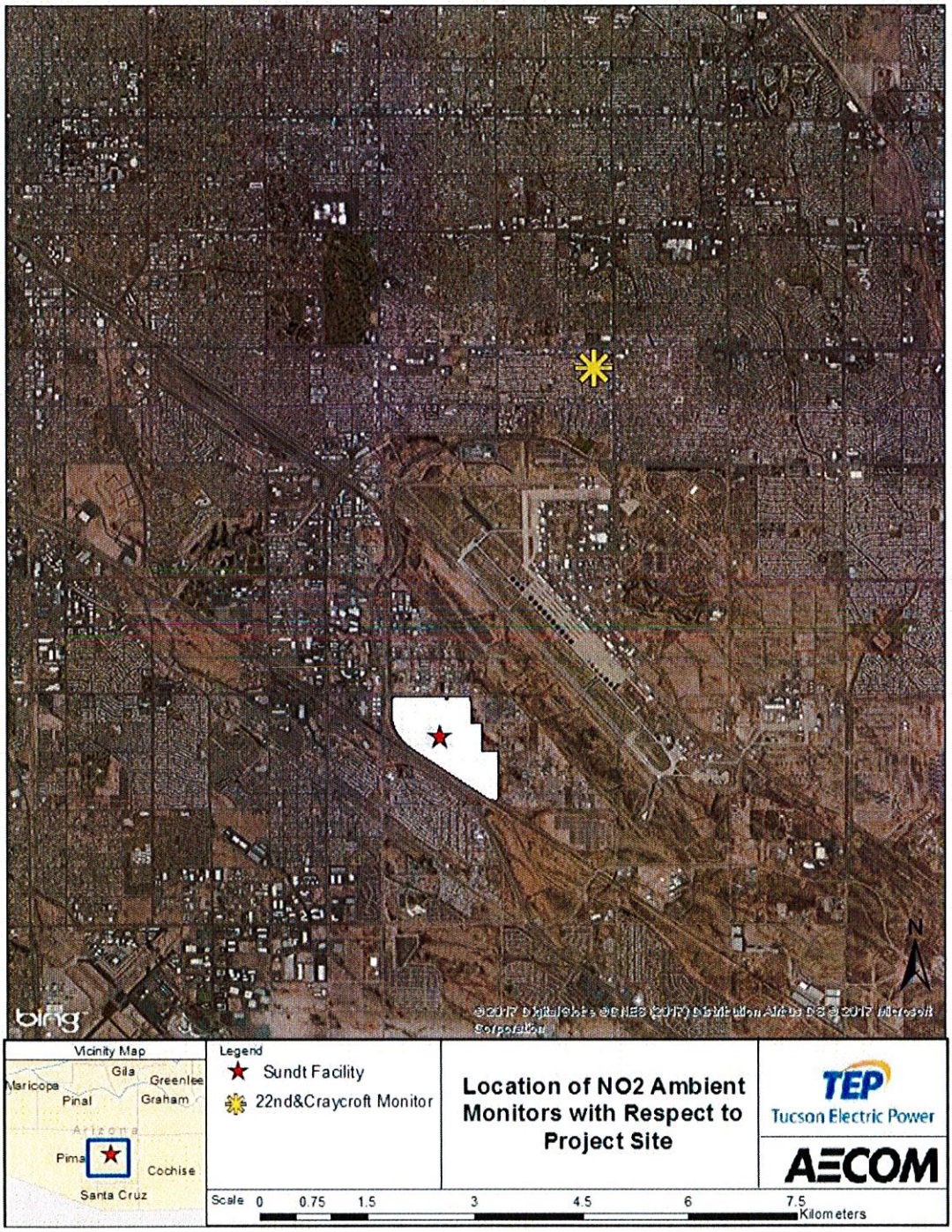


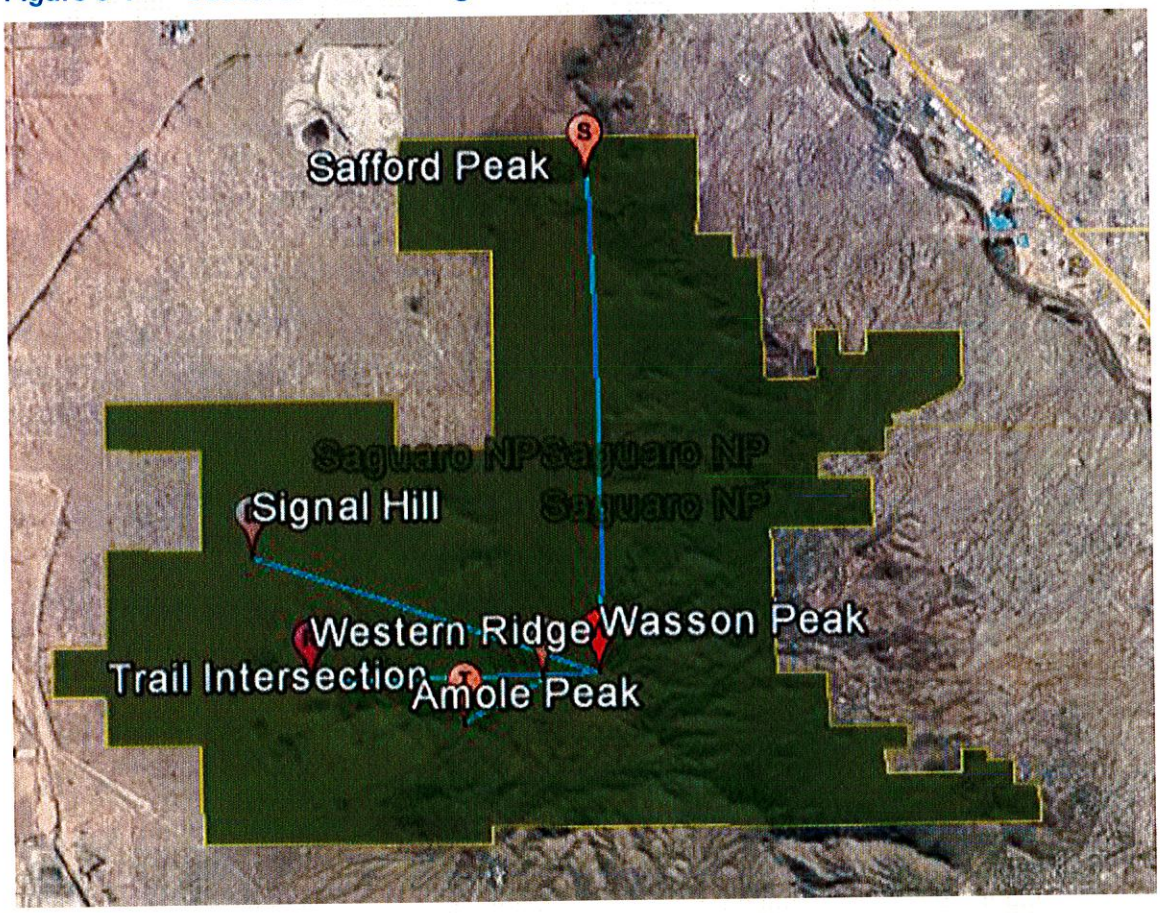
Figure 3-3 Locations of Nearby Ambient Monitor for Ozone and NO_2



3.4 Selection of Observer Locations for PLUVUE Modeling

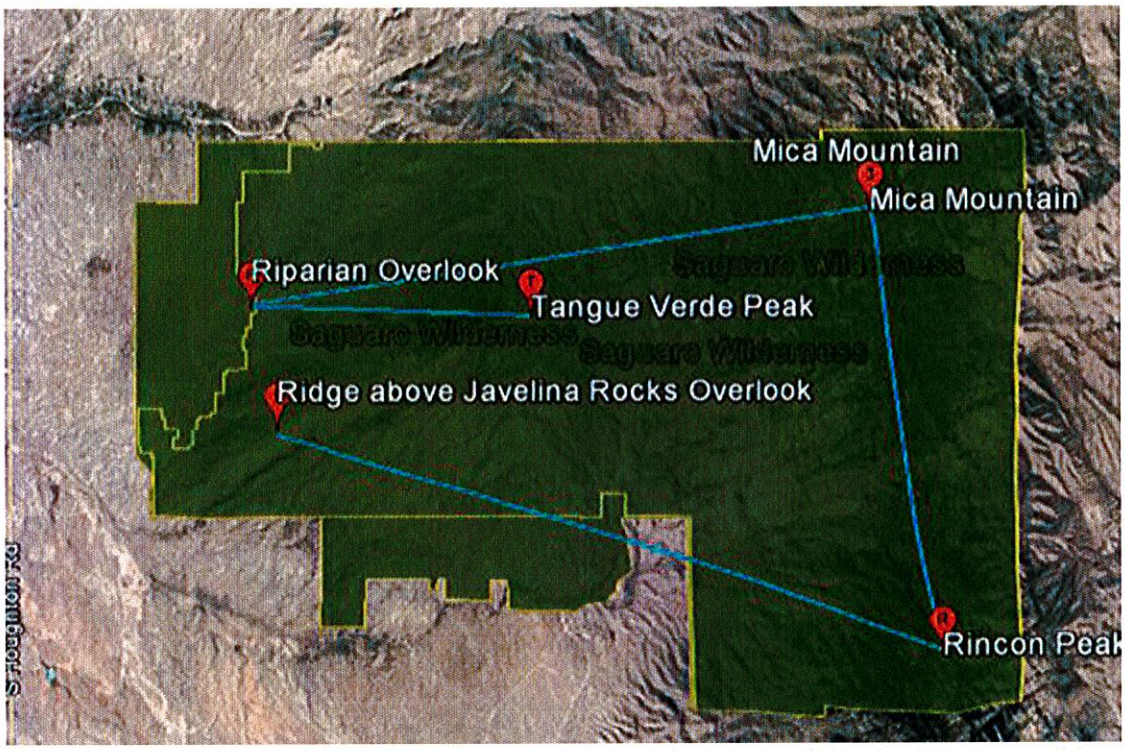
As specified by the National Park Service[8], the visible plume assessment addressed 16 combinations of observer locations and terrain features. These locations are shown in **Figures 3-4** and **3-5** for West and East units, respectfully. An observer was placed on each end of the primary line-of-sight indicated by the light blue lines, looking toward the terrain on which the corresponding observer was assumed to be standing. Details of the geometry for each observer-terrain pair are provided in **Table 3-1**. Hours with wind directions which cause the centerline of the plume to cross the line-of-sight and which also meet criteria discussed below were assessed with PLUVUE II.

Figure 3-4 Observer-Terrain Target Combinations at SNPW



[8] 8 observer locations in each unit of Saguaro National Park were finalized by the National Park Service on November 29, 2017 after several e-mail and conference call informational exchanges.

Figure 3-5 Observer-Terrain Target Combinations at SNPE



In addition to the primary line-of-sight, other lines of sight through which the plume could potentially be observed within the Class I area from each observer location were simulated, ensuring the simulation of observer-plume-sun geometries that maximize the modeled plume visibility parameters. To accomplish this, PLUVUE was applied in an observer-based mode with lines of sight passing through the plume at 16 downwind distances (the maximum number allowed in PLUVUE II). These distances included the four prescribed in the User's Guide (1, 2.5, 5 and 10 km) that are required for the model to run properly. Note that these first four distances were not analyzed for plume visibility since they reside outside the Class I areas. The distances that were evaluated for the plume visibility assessment included the NPS-recommended primary line-of-sight plus another eleven distances, evenly spaced between the closest and furthest point in the Class I area for a plume path that bisects the observer and the terrain target. The model requires as input the terrain elevation (feet above mean sea level) to be specified for each of these downwind distances along this path.

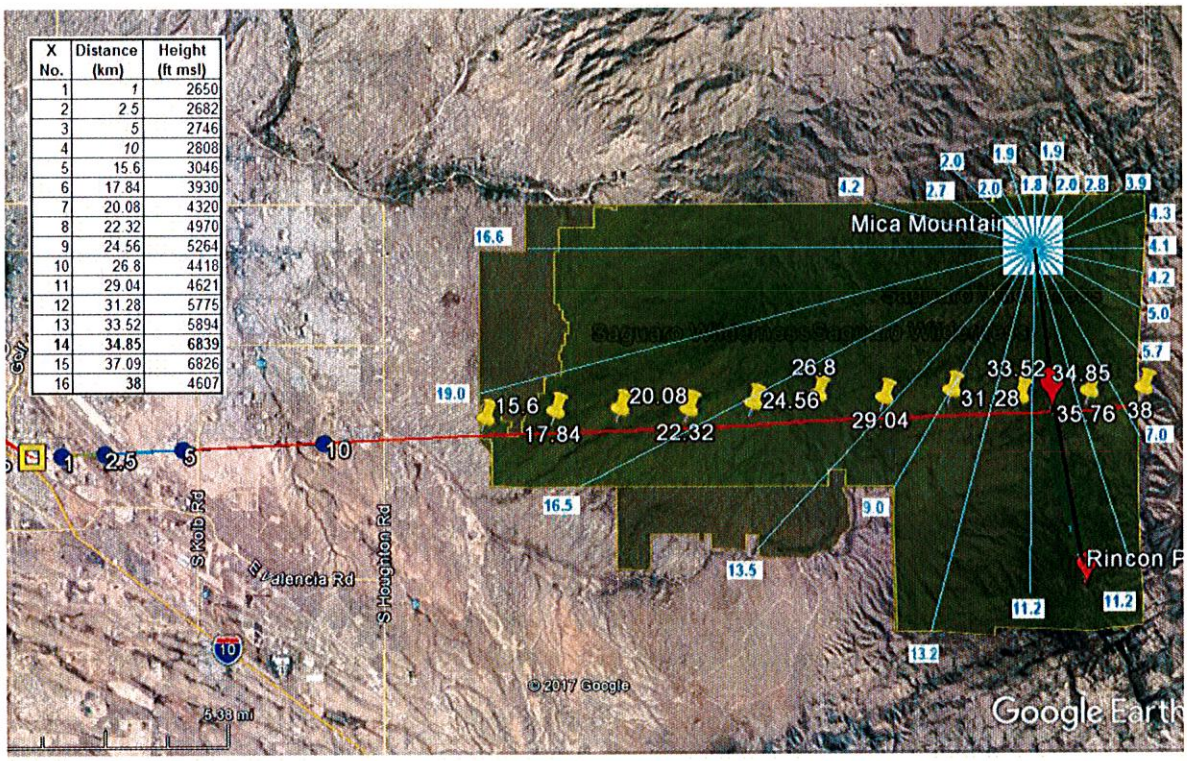
Another parameter that was specified is the straight-line distance (km) from the observer to the terrain of interest. This was specified in 15° intervals around the compass. For the 15° intervals that bracket the primary line-of-sight, the terrain distance was specified as the distance between the observer and the terrain target specified by the NPS. For other directions, the terrain distance was set to the distance to the nearest Class I area boundary.

An illustration of how the various parameters were specified for a selected observer is provided in **Figure 3-6**, which depicts an observer at Mica Mountain at Saguaro National Park East with a primary line-of-sight toward Rincon Peak at a distance of 11.2 km. Depictions of each observer-terrain pair with selected downwind distances and terrain elevation, are provided in **Attachment A**.

Table 3-1 Details for Recommended Lines-of-Site

Class I Area	Line-of-Sight ID	Observer	Viewing Target	Observer		Viewing Target		Observer-Target Distance (km)	WD to Observer (deg)	WD to Target (deg)	Size of WD Window (deg)	LOS-Plume Angle (deg)
				UTME (m)	UTMN (m)	UTME (m)	UTMN (m)					
SNPW	W1	Trail Intersection	Amole Peak	483884	3569878	485214	3570618	1.5	115.4	118.0	2.6	87.6
SNPW	W2	Amole Peak	Trail Intersection	485214	3570618	483884	3569878	1.5	118.0	115.4	2.6	87.6
SNPW	W3	Wasson Peak	Western Ridge	486161	3570726	481258	3570571	4.9	119.2	114.5	4.7	115.0
SNPW	W4	Western Ridge	Wasson Peak	481258	3570571	486161	3570726	4.9	114.5	119.2	4.7	115.0
SNPW	W5	Wasson Peak	Signal Hill	486161	3570726	480321	3572622	6.1	119.2	117.1	2.1	100.1
SNPW	W6	Signal Hill	Wasson Peak	480321	3572622	486161	3570726	6.1	117.1	119.2	2.1	100.1
SNPW	W7	Wasson Peak	Safford Peak	486161	3570726	485884	3578731	8.0	119.2	131.8	12.6	37.5
SNPW	W8	Safford Peak	Wasson Peak	485884	3578731	486161	3570726	8.0	131.8	119.2	12.6	37.5
SNPE	E1	Rincon Peak	Ridge above Javelina Rocks Overlook	544996	3553814	528384	3559211	17.5	276.4	265.9	10.5	16.8
SNPE	E2	Ridge above Javelina Rocks Overlook	Rincon Peak	528384	3559211	544996	3553814	17.5	265.9	276.4	10.5	16.8
SNPE	E3	Rincon Peak	Mica Mountain	544996	3553814	543063	3564890	11.2	276.4	258.2	18.2	82.8
SNPE	E4	Mica Mountain	Rincon Peak	543063	3564890	544996	3553814	11.2	258.2	276.4	18.2	82.8
SNPE	E5	Mica Mountain	Riparian Overlook	543063	3564890	527712	3562246	15.6	258.2	256.6	1.6	22.4
SNPE	E6	Riparian Overlook	Mica Mountain	527712	3562246	543063	3564890	15.6	256.6	258.2	1.6	22.4
SNPE	E7	Riparian Overlook	Tangue Verde Peak	527712	3562246	534751	3562179	7.0	256.6	260.4	3.8	12.1
SNPE	E8	Tangue Verde Peak	Riparian Overlook	534751	3562179	527712	3562246	7.0	260.4	256.6	3.8	12.1

Figure 3-6 Illustration of Plume Trajectory, Observation Points, Plume Path Elevation and Radial Terrain Distances for an Observer at Mica Mountain and Target at Rincon Peak



3.5 Selection of Hours Simulated with PLUVUE II

VISCREEN was applied using Case 1 emission rates for an observer at Saguaro NP East, which is closer to the project sources than Saguaro NP West, with the specifications provided in **Table 3-1**. All other Level 1 screening mode parameters were applied to evaluate the plume visibility parameters C_p and ΔE within the Class I area for the six unstable turbulence categories, A, B, C, D, E and F. The maximum values of C_p and ΔE for each stability class indicates modeled visibility parameters are less than the screening-level thresholds of 2.0 for ΔE and +/- 0.05 for C_p for stabilities A, B and C for Saguaro West and stabilities A and B for Saguaro East, respectively. Thus, in analyzing the five years of hourly meteorological data for PLUVUE II, these stability categories were excluded.

Table 3-2 VISCREEN Modeling Parameters

Parameter	SNPW	SNPE
Background Ozone (ppm)	0.03	0.03
Background Visual Range (km)	252	252
Source-Observer Distance (km)	19.10	15.49
Min. Source-Class I Distance (km)	19.10	15.49
Max. Source-Class I Distance (km)	35.96	39.06
Wind Speed (m/s)	1.00	1.00

Table 3-3 VISCREEN Level 1 Results by Stability Category

Stability	SNPW		SNPE	
	Cp	ΔE	Cp	ΔE
A	0	0	0	0
B	0.004	0.515	0.005	0.747
C	0.011	1.519	0.019	2.197
D	-0.067	6.424	0.102	11.06
E	10.732	0.131	0.188	18.564
F	16.849	0.235	0.333	27.083

Note: Shaded values indicate insignificant impacts

The hourly meteorological data were parsed according to the following criteria:

1. Emission hours were considered between the hour prior to sunrise through the hour prior to sunset.

2. For SNPW, hours were considered with stability classes of D, E, or F and for SNPE, and hours with stability classes of C, D, E, or F.

3. For both park units, the selected hours were required to be free of precipitation and have an observed relative humidity less than 90%, to eliminate cases of natural obscuration.

4. The full range of wind directions corresponding to each portion of the Class I area is illustrated in **Figure 3-7**:

   - For SNPE: 243° to 281° (west-southwest to west) and
   - For SNPW: 109° to 136° (east-southeast to southeast).

   The selected simulated hours have wind directions within these windows that represent plume transport directions that cross between the observer and the target terrain listed **Table 3-1**. For instance, the wind direction window is 119.17° and 131.80° for observer W7.

If the wind direction varies during the time it would take for the plume to reach the line-of-sight, then a plume may meander and pass outside of the line-of-sight. Thus, an additional criterion was imposed based on wind persistence. If after one hour of transport the plume would not reach the Class I area, the wind speed and direction for the following hour is checked to determine if the wind direction is within the line-of-sight window and the wind speed is sufficient to reach the Class I area in two hours. This step is repeated until there is a sufficient number of hours of a persistent wind direction is achieved for the plume to reach the specified line-of-sight within the Class I area.

PLUVUE requires a solar elevation angle of at least 2° for considering the hour to be simulated. Accounting for travel time in setting the observation hour in PLUVUE allowed for the inclusion of stable pre-dawn emission hours as suggested by the NPS.

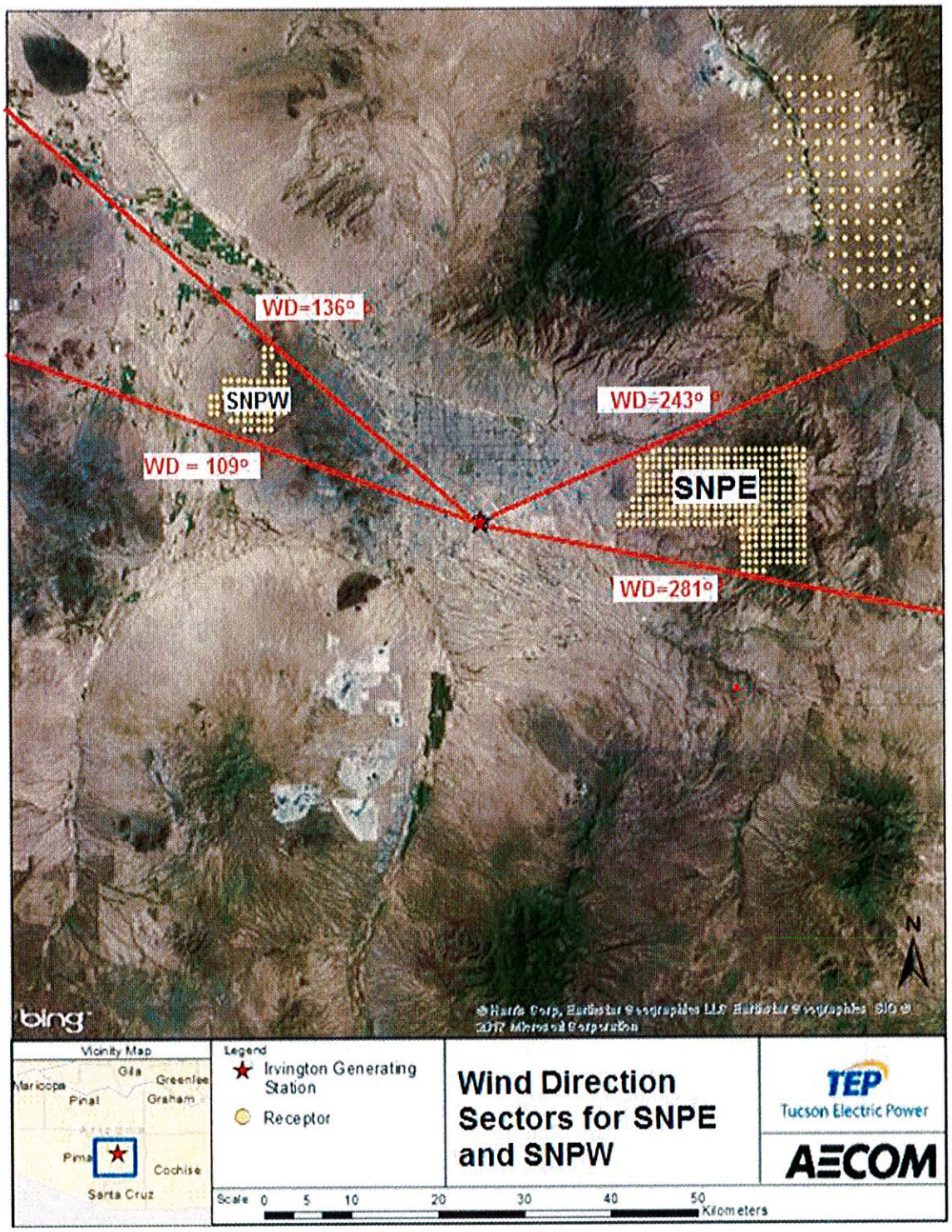
The spreadsheet sent with the PLUVUE protocol (also included in the modeling archive; *PLUVUE Hours.xlsx*) carried out this filtering process on the five years of meteorological data. This resulted in a total of 4,648 simulations for each emission case, totaled over the 16 lines-of-

sight. The number of hours simulated for each line-of-sight defined by observer-terrain target combination is provided in **Table 3-4**.

Table 3-4 Number of Hours Simulated for Each Observer-Terrain Target Combination

Class I Area	Observer-Target Combination	Number of Hours Simulated
SNPW	W1	137
SNPW	W2	137
SNPW	W3	324
SNPW	W4	324
SNPW	W5	119
SNPW	W6	119
SNPW	W7	665
SNPW	W8	665
SNPE	E1	348
SNPE	E2	348
SNPE	E3	548
SNPE	E4	548
SNPE	E5	54
SNPE	E6	54
SNPE	E7	128
SNPE	E8	128

Figure 3-7 Wind Direction Sectors for Saguaro National Park East and West



3.6 Other Specifications for PLUVUE II runs

An example PLUVUE II input file for the observer-target combination illustrated in **Figure 3-8** is provided in **Figure 3-9**. For PLUVUE II inputs that are not discussed above nor related to the site-specific application (such as particle distributions and optical properties), PLUVUE II default values were applied. Each run applied the meteorological conditions and the measured background concentrations at the time of emission to estimate dispersion, transport and chemical processes. The time of day for the observer to view a plume as it passes over the Class I area was from one to four hours after the emissions hour, depending on the average wind speed starting at the hour of the release to the hour the plume reached the nearest point of the Class I area. In this illustration, for a wind speed of 13.3 mph (21.4 km/hr), the plume would reach the Class I area after an hour of transport. As such, the time of the observation was set to 9 AM, or one hour after the time of emission.

In analyzing the output of PLUVUE II, based on discussion with the NPS, results for lines of sight aimed almost straight up and down the plume were excluded. This situation occurs if a plume centerline passes very close to an observer so that it is nearly overhead and the observer is looking either toward or directly away from the project location. In VISCREEN, these lines of sight are excluded by setting a minimum value of the angle between the line of sight and the plume centerline (alpha) to 11.25 degrees. For the PLUVUE assessment, the minimum alpha for which the results were analyzed was set to 10 degrees.

4. Interpretation of Model Results

Results of the updated PLUVUE assessment have been summarized in tabular format. Results of plume visibility parameters, plume contrast (C_p) and perceptibility (ΔE) have been evaluated for background sky and both black and gray terrain for each line of sight. It is understood that there are no established thresholds for either magnitude or frequency of the modeled plume visibility parameters that define the degree of acceptability and that the determination needs to account for multiple factors. Some refined approaches to interpreting PLUVUE II results that may be considered are discussed below.

It should be noted that a comparison of the PLUVUE II results from the original modeling to this updated version shows very minor differences. This was expected given the minor adjustments made to the source parameters.

The PLUVUE II parameters used to evaluate the potential for visible plumes are plume contrast (C_p) and the plume perceptibility parameter (ΔE). Values for these parameters were computed for the NPS-provided observation points within the two units of Saguaro National Park. For PLUVUE II assessments, Federal Land Managers (FLMs) suggest in the FLAG 2010 guidance that the sensitive detection thresholds of +/- 0.02 for C_p and 1.0 for ΔE apply for a keen observer with an enhanced ability to detect changes in the viewed resource. In addition to these thresholds, results were also compared to the VISCREEN thresholds of +/- 0.05 for C_p and 2.0 for ΔE. These are levels are more in-line with plumes that could be noticed by the typical observer. For each parameter, two additional levels were also evaluated (+/- 0.035, 0.075 for C_p and 1.5 and 3 for ΔE) to provide supplemental information on the magnitude and frequency. These supplemental frequency analyses are provided in **Attachment B** for Case 1 and **Attachment C** for Case 2.

The frequency analysis for cases exceeding the Cp and ΔE thresholds was based on the following model parameters computed by PLUVUE II. These included:

- C_p and ΔE with a sky background;
- C_p and ΔE with background terrain for an observer whose eyes have adjusted to the terrain[9], idealistically represented by two uniformly reflective backgrounds (black and gray).

A summary of the modeling results for the background sky and using the more the stringent threshold recommended by the NPS for refined plume visibility assessments are provided in **Table 4-1** and **4-2** (for black background and for gray background, respectively) for Emissions Case 1 and **Tables 4-3** and **4-4** for Emissions Case 2. The results summarized in these tables represent the maximum magnitude among the 12 lines of sight modeled for each observer for each simulated hour. The tables were generated by a computer program "POSTPLU", which reads the output file and compiles statistics for each PLUVUE II simulation. These tables

[9] The addendum to the PLUVUE II User's Guide (EPA, 1996) indicates that the additional terrain calculation for C_p was incorporated based on unpublished correspondence from Warren White a professor at Washington University in St. Louis indicating that *"for black terrain backgrounds, it is more likely that the eye is accommodated…to the horizon sky"*. This concept is inappropriate for Saguaro National Park because there are no truly black terrain backgrounds.

indicate that the number of hours with excursions of one or more of the visibility parameters comprise a very small percentage of the daylight hours. The greatest percent of excursion hours Case 1 at observer W8 is only 0.81% (initial modeling was 0.82%) of the daytime hours if the background terrain were black. For a more applicable gray terrain, the greatest percent of excursion hours for Case 1 is at observer W4 with the frequency of 0.60% (initial modeling was 0.59%). For Case 2, the corresponding maximum black terrain and gray terrain frequencies are slightly lower (0.70% and 0.54%, respectively). The initial modeling was 0.70% and 0.52% for Case 2 for black and gray terrain, respectively. TEP estimates that the mode of operation corresponding to Case 1 would be expected to occur less than 1% of the time and that Case 2 is expected to occur less than 10% percent of the time annually. Thus the actual frequency of these modeled excursions will be much lower than indicated by the modeling, which assumes continuous operation of all ten RICE units in these two modes.

Figures 4-1 through **4-16** provide time-series plots of the modeled Case 1 visibility parameters for each observer for a background sky, black background terrain and gray background terrain (Case 2 time-series plots are provided in **Attachment D**). These plots indicate that the modeled visibility parameters are generally well below the NPS thresholds, with relatively few excursions. When considering the plume screening level thresholds, which are more indicative of when a plume could be seen by a casual observer, the number of excursions indicated in the plots decrease considerably. [Note that the plotting routine in Excel depicts the black, gray and sky background results in order. Thus, in cases where model results for the three backgrounds overlap, the plots depict only the results for the black background.]

A review of photographs taken within the parks, which are available for example, from Google Earth™, indicated that a gray background terrain is likely to generally more applicable than black terrain. The example of a scenic vista provided in **Figure 4-17** illustrates this point. Because there are no snow-covered peaks, modeled results for a white terrain background were computed, but not analyzed for this assessment.

The NPS has requested an additional analysis of the PLUVUE II output that sorts the number of hours where 2 or more observer-target combination sight paths are impacted by the same day and time meteorological condition. This "sorting" analysis is provided in the PLUVUE II modeling archive.

Table 4-1 PLUVUE II Summary for Case 1 with a Black Terrain Background

Modeling Statistics for 5 Years of Simulations*	SNPE1	SNPE2	SNPE3	SNPE4	SNPE5	SNPE6	SNPE7	SNPE8
Number of PLUVUE Output Files	348	348	548	548	54	54	128	128
Total Number of Excursions Found	32	42	36	34	0	3	14	10
Number of Excursion Hours found	17	20	23	18	0	3	10	6
Number of Excursion Days with Multiple Hours	1	0	1	0	0	0	0	0
Number of Excursion Days with Consecutive Hours	1	0	1	0	0	0	0	0
Number of Excursion Hours due to BOTH CP & DE	8	10	10	11	0	0	4	3
Number of Excursion Hours due to ONLY CP (no DE)	2	9	8	5	0	2	6	3
Number of Excursion Hours due to ONLY sky CP	0	5	0	1	0	0	0	0
Number of Excursion Hours due to ONLY background CP	10	19	18	16	0	2	10	6
Number of Excursion Hours due to ONLY DE (no CP)	7	1	5	2	0	1	0	0
Number of Excursion Hours due to ONLY sky DE	8	7	8	6	0	0	0	1
Number of Excursion Hours due to ONLY background DE	14	11	10	11	0	1	4	3
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.15%***	***0.19%***	***0.16%***	***0.16%***	***0.00%***	***0.01%***	***0.06%***	***0.05%***

Modeling Statistics for 5 Years of Simulations*	SNPW1	SNPW2	SNPW3	SNPW4	SNPW5	SNPW6	SNPW7	SNPW8
Number of PLUVUE Output Files	137	137	324	324	119	119	665	665
Total Number of Excursions Found	80	50	80	164	23	79	78	177
Number of Excursion Hours found	44	26	46	74	12	36	62	105
Number of Excursion Days with Multiple Hours	1	1	3	2	0	0	1	3
Number of Excursion Days with Consecutive Hours	1	0	2	2	0	0	0	3
Number of Excursion Hours due to BOTH CP & DE	27	14	18	57	7	27	12	39
Number of Excursion Hours due to ONLY CP (no DE)	15	8	11	15	3	9	33	53
Number of Excursion Hours due to ONLY sky CP	3	4	5	11	1	6	1	16
Number of Excursion Hours due to ONLY background CP	42	22	28	72	10	36	44	92
Number of Excursion Hours due to ONLY DE (no CP)	2	4	17	2	2	0	17	13
Number of Excursion Hours due to ONLY sky DE	13	13	29	29	5	12	23	39
Number of Excursion Hours due to ONLY background DE	22	11	18	52	7	25	10	30
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.36%***	***0.23%***	***0.36%***	***0.75%***	***0.10%***	***0.36%***	***0.36%***	***0.81%***

* Plume Contrast Threshhold 0.02

Delta E Threshold 1

Table 4-2 PLUVUE II Summary for Case 1 with a Gray Terrain Background

Modeling Statistics for 5 Years of Simulations*	SNPE1	SNPE2	SNPE3	SNPE4	SNPE5	SNPE6	SNPE7	SNPE8
Number of PLUVUE Output Files	348	348	548	548	54	54	128	128
Total Number of Excursions Found	20	31	20	15	0	1	8	4
Number of Excursion Hours found	12	10	12	8	0	1	4	2
Number of Excursion Days with Multiple Hours	1	0	1	0	0	0	0	0
Number of Excursion Days with Consecutive Hours	1	0	1	0	0	0	0	0
Number of Excursion Hours due to BOTH CP & DE	2	9	3	3	0	0	4	1
Number of Excursion Hours due to ONLY CP (no DE)	0	0	1	0	0	0	0	0
Number of Excursion Hours due to ONLY sky CP	0	5	0	1	0	0	0	0
Number of Excursion Hours due to ONLY background CP	2	9	4	2	0	0	4	1
Number of Excursion Hours due to ONLY DE (no CP)	10	1	8	5	0	1	0	1
Number of Excursion Hours due to ONLY sky DE	8	7	8	6	0	0	0	1
Number of Excursion Hours due to ONLY background DE	10	10	8	6	0	1	4	2
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.09%***	***0.14%***	***0.09%***	***0.07%***	***0.00%***	***0.00%***	***0.04%***	***0.02%***

Modeling Statistics for 5 Years of Simulations*	SNPW1	SNPW2	SNPW3	SNPW4	SNPW5	SNPW6	SNPW7	SNPW8
Number of PLUVUE Output Files	137	137	324	324	119	119	665	665
Total Number of Excursions Found	53	29	62	131	12	68	34	104
Number of Excursion Hours found	29	14	34	57	7	27	25	50
Number of Excursion Days with Multiple Hours	0	0	1	0	0	0	0	0
Number of Excursion Days with Consecutive Hours	0	0	1	0	0	0	0	0
Number of Excursion Hours due to BOTH CP & DE	15	4	5	41	2	25	2	20
Number of Excursion Hours due to ONLY CP (no DE)	7	1	4	11	1	2	2	9
Number of Excursion Hours due to ONLY sky CP	3	4	5	11	1	6	1	16
Number of Excursion Hours due to ONLY background CP	22	5	7	52	3	26	3	28
Number of Excursion Hours due to ONLY DE (no CP)	7	9	25	5	4	0	21	21
Number of Excursion Hours due to ONLY sky DE	13	13	29	29	5	12	23	39
Number of Excursion Hours due to ONLY background DE	15	7	21	39	3	24	7	21
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.24%***	***0.13%***	***0.28%***	***0.60%***	***0.05%***	***0.31%***	***0.16%***	***0.47%***

* Plume Contrast Threshhold 0.02
Delta E Threshold 1

Table 4-3 PLUVUE II Summary for Case 2 with a Black Terrain Background

Modeling Statistics for 5 Years of Simulations*	SNPE1	SNPE2	SNPE3	SNPE4	SNPE5	SNPE6	SNPE7	SNPE8
Number of PLUVUE Output Files	348	348	548	548	54	54	128	128
Total Number of Excursions Found	21	39	20	17	0	3	11	4
Number of Excursion Hours found	12	18	12	11	0	3	7	2
Number of Excursion Days with Multiple Hours	0	0	1	0	0	0	0	0
Number of Excursion Days with Consecutive Hours	0	0	1	0	0	0	0	0
Number of Excursion Hours due to BOTH CP & DE	4	9	4	3	0	0	4	2
Number of Excursion Hours due to ONLY CP (no DE)	4	7	4	5	0	2	3	0
Number of Excursion Hours due to ONLY sky CP	0	5	0	0	0	0	0	0
Number of Excursion Hours due to ONLY background CP	8	16	8	8	0	2	7	2
Number of Excursion Hours due to ONLY DE (no CP)	4	2	4	3	0	1	0	0
Number of Excursion Hours due to ONLY sky DE	5	8	6	4	0	0	0	1
Number of Excursion Hours due to ONLY background DE	8	10	6	5	0	1	4	1
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.10%***	***0.18%***	***0.09%***	***0.08%***	***0.00%***	***0.01%***	***0.05%***	***0.02%***

Modeling Statistics for 5 Years of Simulations*	SNPW1	SNPW2	SNPW3	SNPW4	SNPW5	SNPW6	SNPW7	SNPW8
Number of PLUVUE Output Files	137	137	324	324	119	119	665	665
Total Number of Excursions Found	71	39	80	144	24	71	65	153
Number of Excursion Hours found	39	21	46	68	12	33	51	91
Number of Excursion Days with Multiple Hours	1	0	2	2	0	0	1	1
Number of Excursion Days with Consecutive Hours	1	0	2	2	0	0	0	1
Number of Excursion Hours due to BOTH CP & DE	24	9	19	43	8	25	8	34
Number of Excursion Hours due to ONLY CP (no DE)	13	8	8	23	2	8	25	37
Number of Excursion Hours due to ONLY sky CP	3	3	5	11	1	5	2	15
Number of Excursion Hours due to ONLY background CP	37	17	24	66	10	33	32	71
Number of Excursion Hours due to ONLY DE (no CP)	2	4	19	2	2	0	18	20
Number of Excursion Hours due to ONLY sky DE	10	12	34	28	7	13	25	43
Number of Excursion Hours due to ONLY background DE	21	7	17	39	6	20	6	24
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.32%***	***0.18%***	***0.36%***	***0.66%***	***0.11%***	***0.32%***	***0.30%***	***0.70%***

* Plume Contrast Threshhold 0.02
Delta E Threshold 1

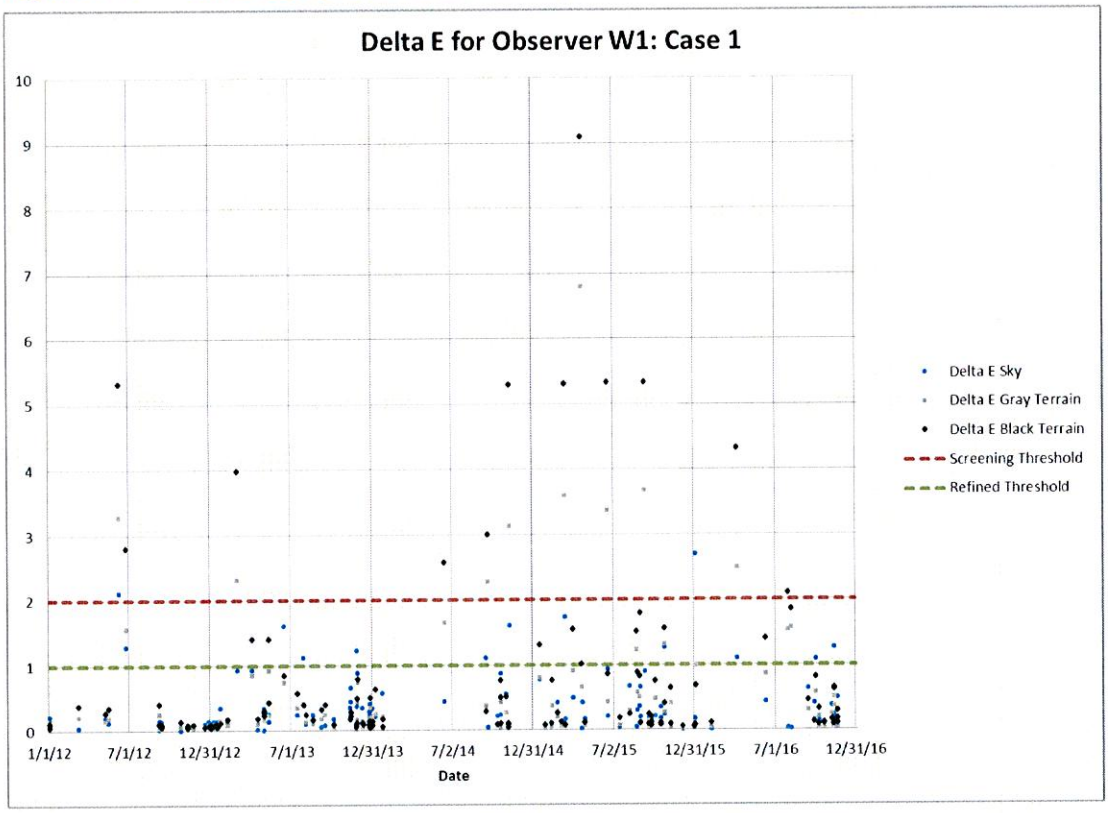
Table 4-4 PLUVUE II Summary for Case 2 with a Gray Terrain Background

Modeling Statistics for 5 Years of Simulations*	SNPE1	SNPE2	SNPE3	SNPE4	SNPE5	SNPE6	SNPE7	SNPE8
Number of PLUVUE Output Files	348	348	548	548	54	54	128	128
Total Number of Excursions Found	13	30	12	9	0	1	7	3
Number of Excursion Hours found	7	11	7	5	0	1	4	2
Number of Excursion Days with Multiple Hours	0	0	1	0	0	0	0	0
Number of Excursion Days with Consecutive Hours	0	0	1	0	0	0	0	0
Number of Excursion Hours due to BOTH CP & DE	1	7	1	0	0	0	3	0
Number of Excursion Hours due to ONLY CP (no DE)	1	1	0	1	0	0	1	1
Number of Excursion Hours due to ONLY sky CP	0	5	0	0	0	0	0	0
Number of Excursion Hours due to ONLY background CP	2	8	1	1	0	0	4	1
Number of Excursion Hours due to ONLY DE (no CP)	5	3	6	4	0	1	0	1
Number of Excursion Hours due to ONLY sky DE	5	8	6	4	0	0	0	1
Number of Excursion Hours due to ONLY background DE	6	9	5	4	0	1	3	1
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.06%***	***0.14%***	***0.05%***	***0.04%***	***0.00%***	***0.00%***	***0.03%***	***0.01%***

Modeling Statistics for 5 Years of Simulations*	SNPW1	SNPW2	SNPW3	SNPW4	SNPW5	SNPW6	SNPW7	SNPW8
Number of PLUVUE Output Files	137	137	324	324	119	119	665	665
Total Number of Excursions Found	49	26	63	118	13	57	36	100
Number of Excursion Hours found	26	12	37	50	7	26	25	53
Number of Excursion Days with Multiple Hours	0	0	1	0	0	0	0	0
Number of Excursion Days with Consecutive Hours	0	0	1	0	0	0	0	0
Number of Excursion Hours due to BOTH CP & DE	15	3	6	34	2	17	4	19
Number of Excursion Hours due to ONLY CP (no DE)	6	0	2	12	0	8	0	7
Number of Excursion Hours due to ONLY sky CP	3	3	5	11	1	5	2	15
Number of Excursion Hours due to ONLY background CP	21	3	5	46	2	24	2	23
Number of Excursion Hours due to ONLY DE (no CP)	5	9	29	4	5	1	21	27
Number of Excursion Hours due to ONLY sky DE	10	12	34	28	7	13	25	43
Number of Excursion Hours due to ONLY background DE	15	8	19	33	3	15	7	19
Percent of Excursion Hours Over 5-years (Daylight Hours)	***0.22%***	***0.12%***	***0.29%***	***0.54%***	***0.06%***	***0.26%***	***0.16%***	***0.46%***

* Plume Contrast Threshhold 0.02
Delta E Threshold 1

Figure 4-1 Time Series of Delta E and Cp for Case 1: Observer W1



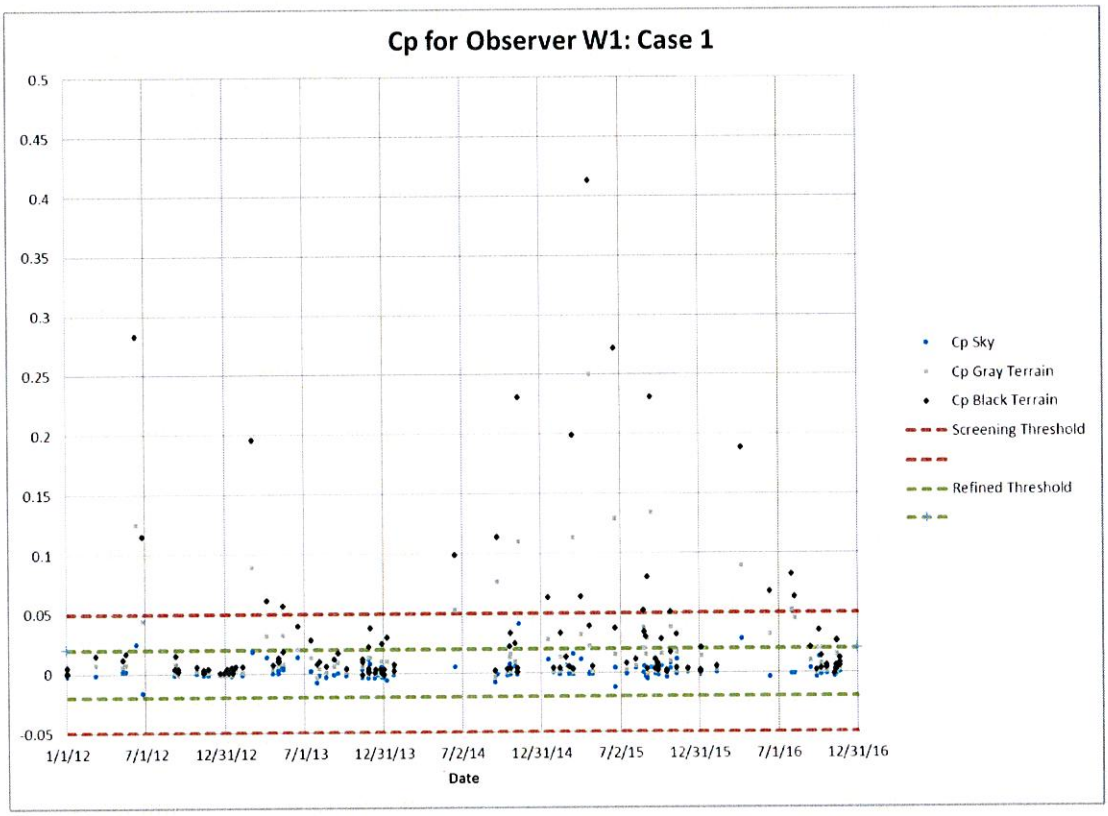
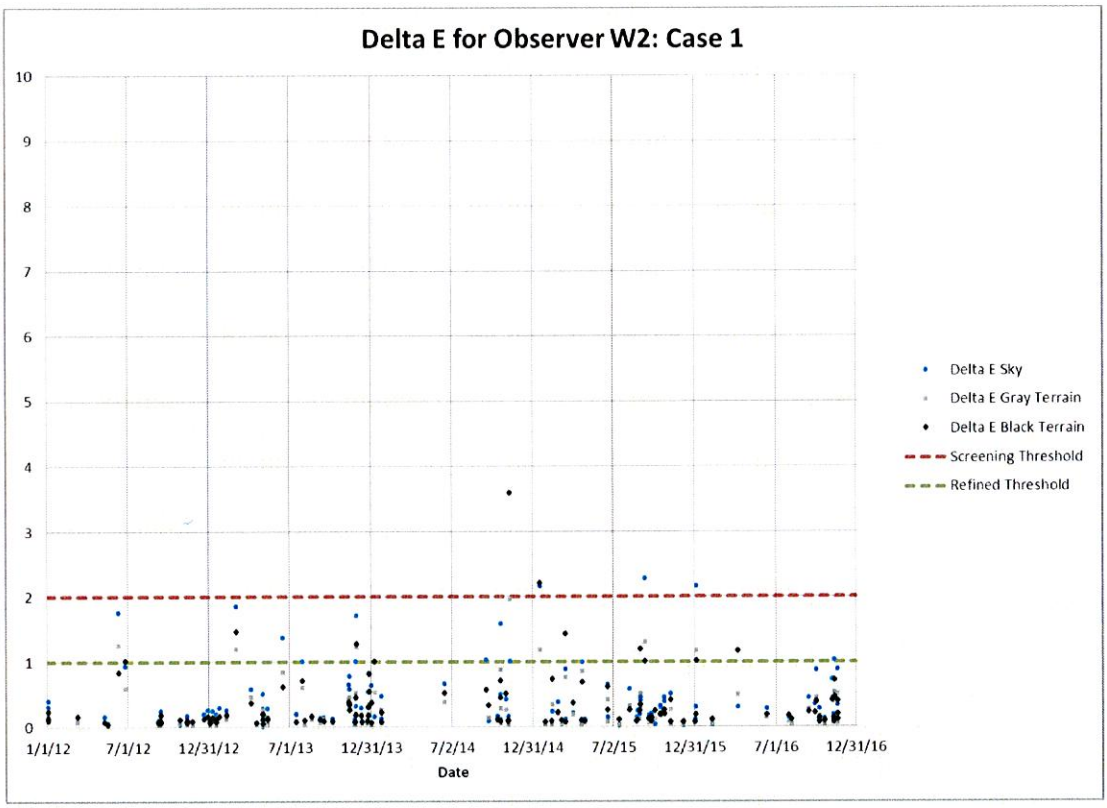


Figure 4-2 Time Series of Delta E and Cp for Case 1: Observer W2



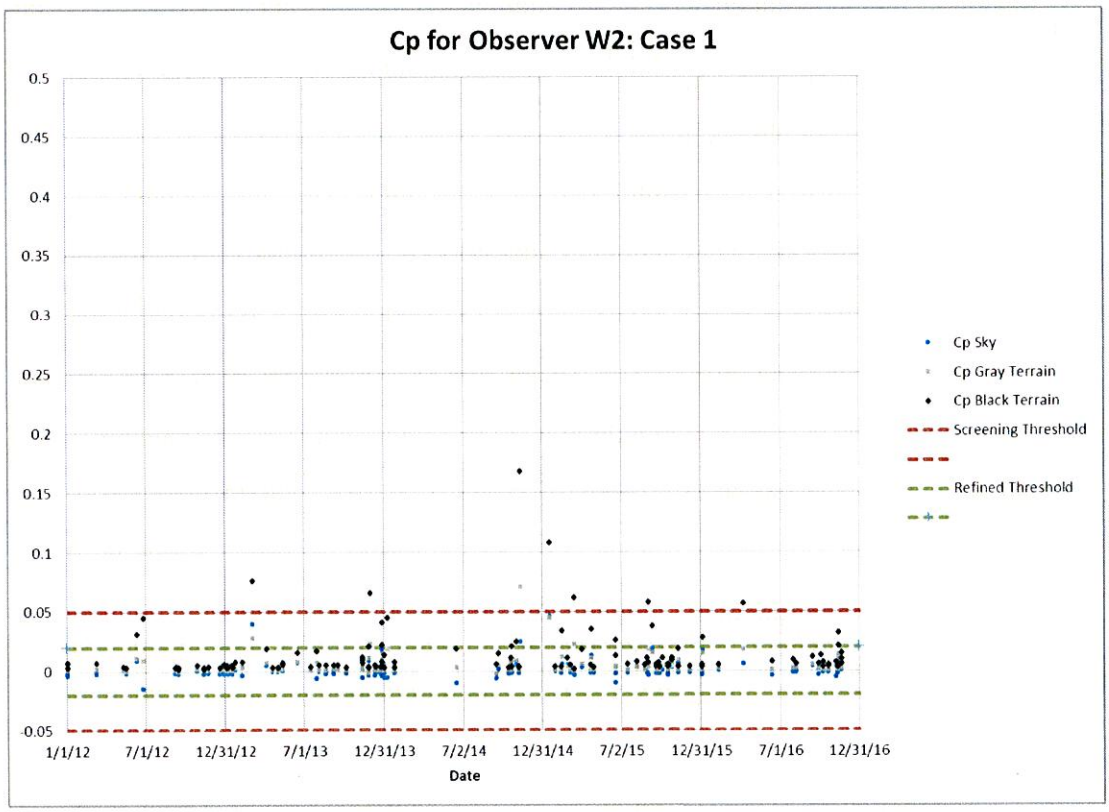
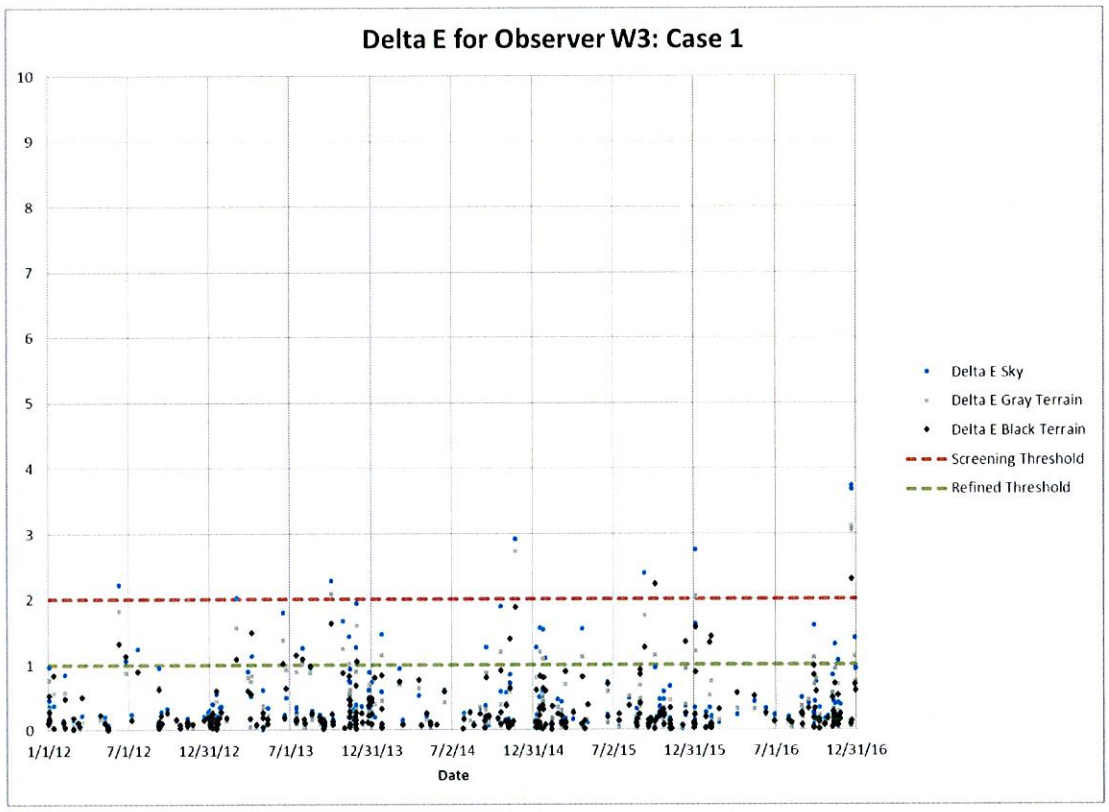


Figure 4-3 Time Series of Delta E and Cp for Case 1: Observer W3



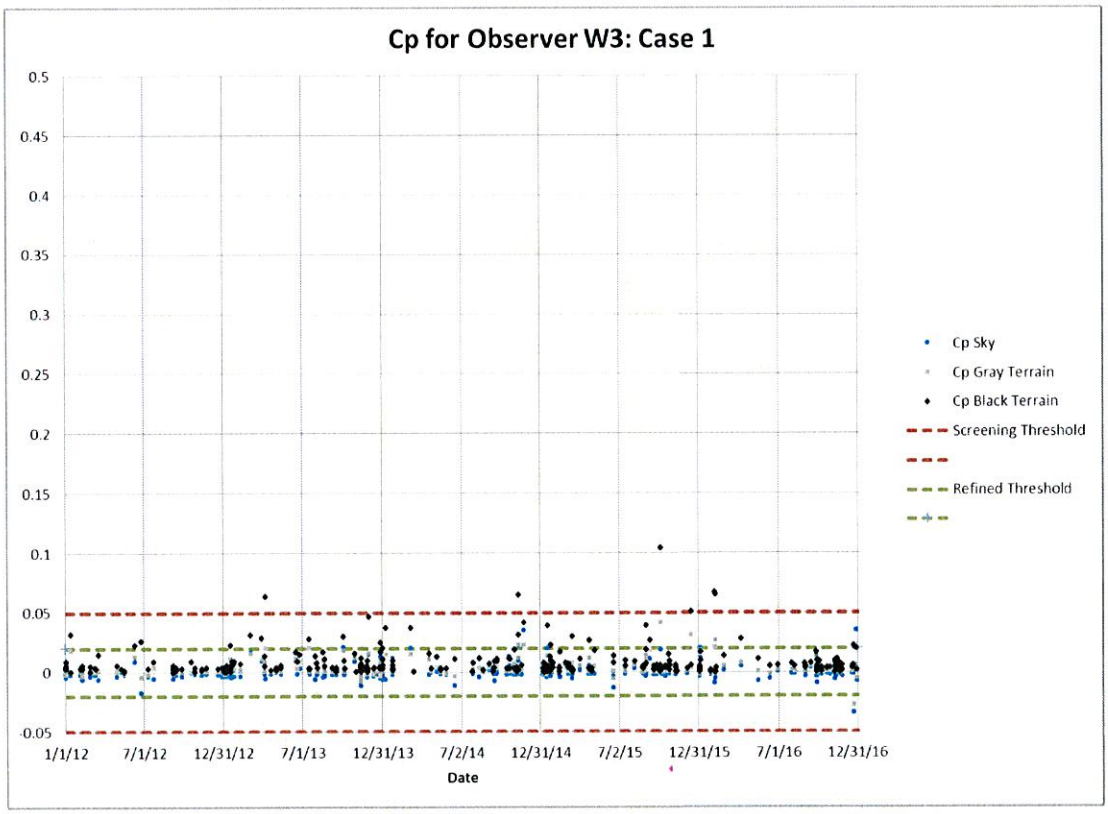
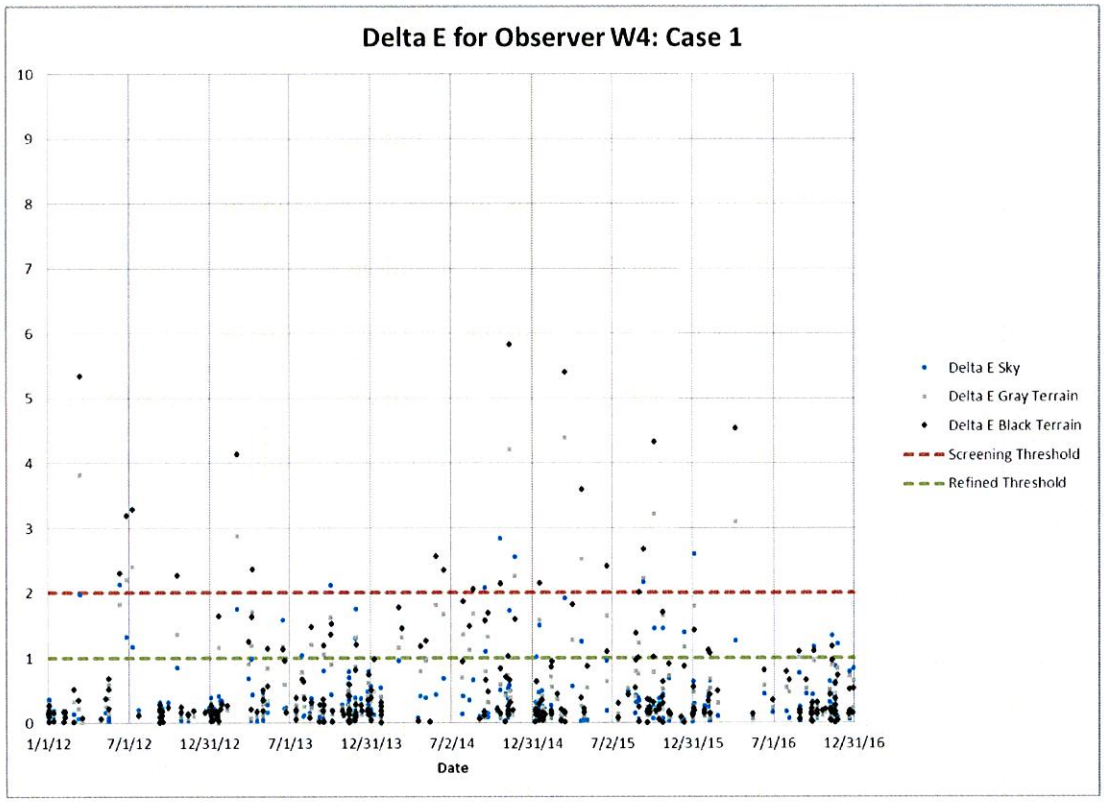


Figure 4-4 Time Series of Delta E and Cp for Case 1: Observer W4



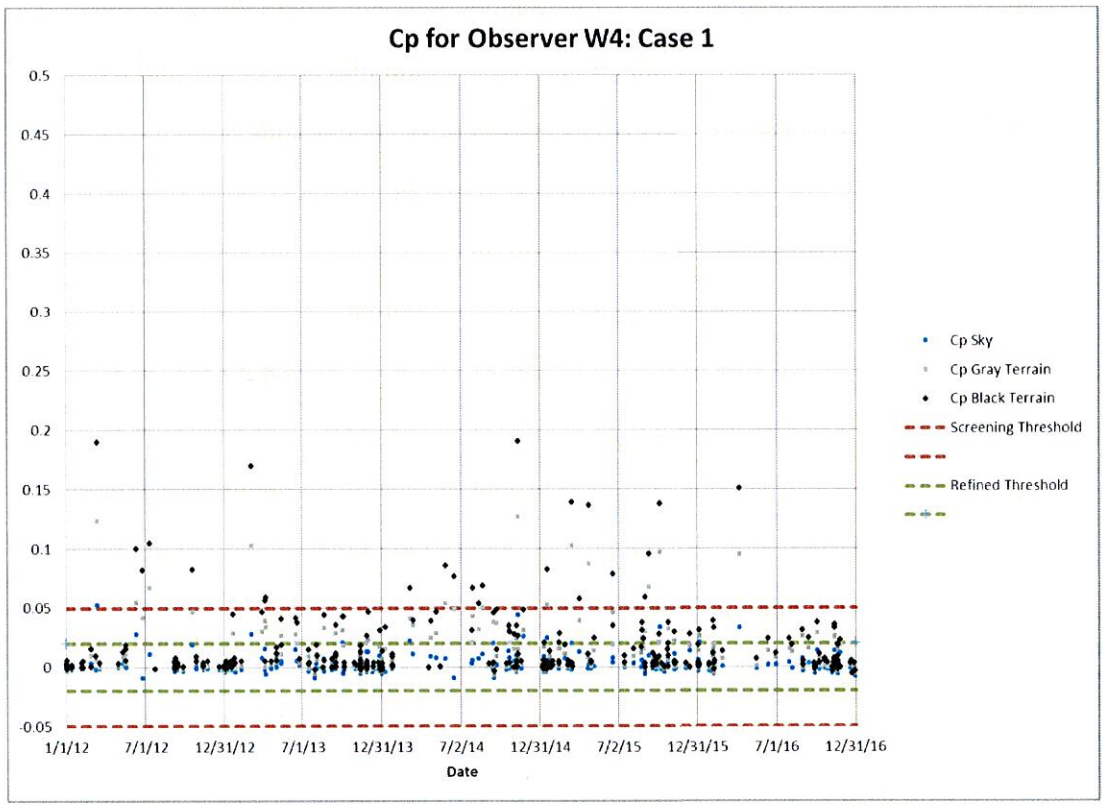
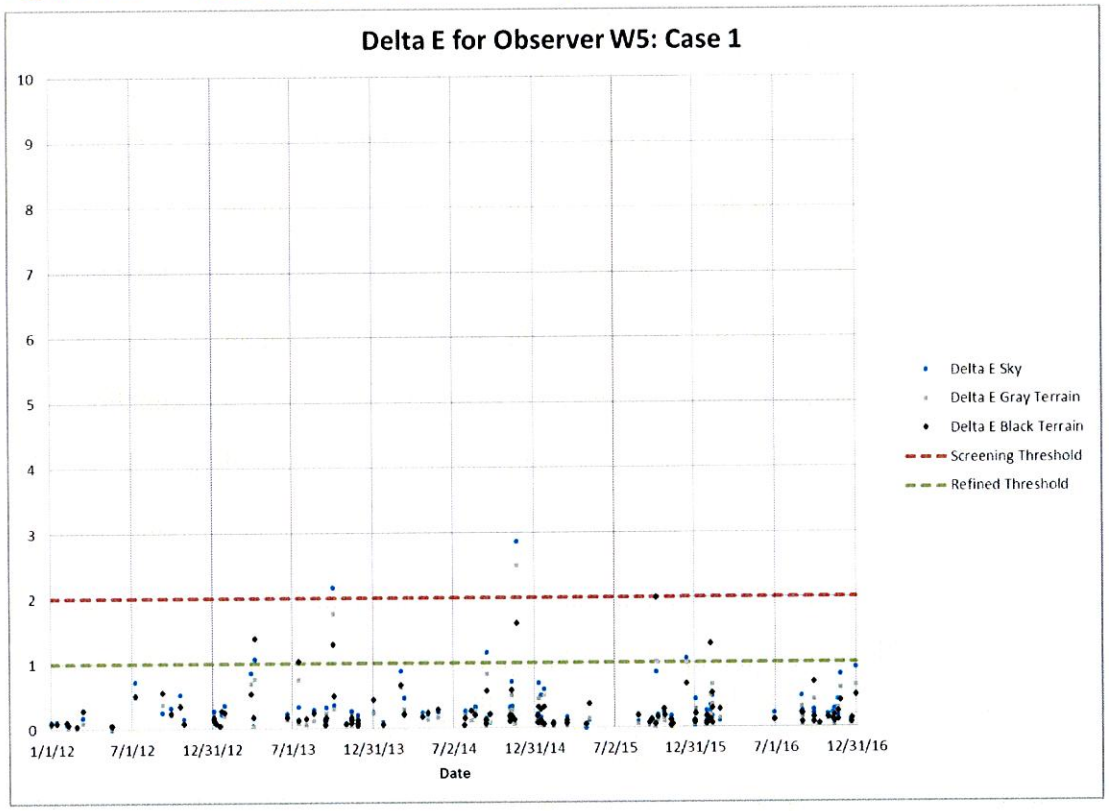


Figure 4-5 Time Series of Delta E and Cp for Case 1: Observer W5



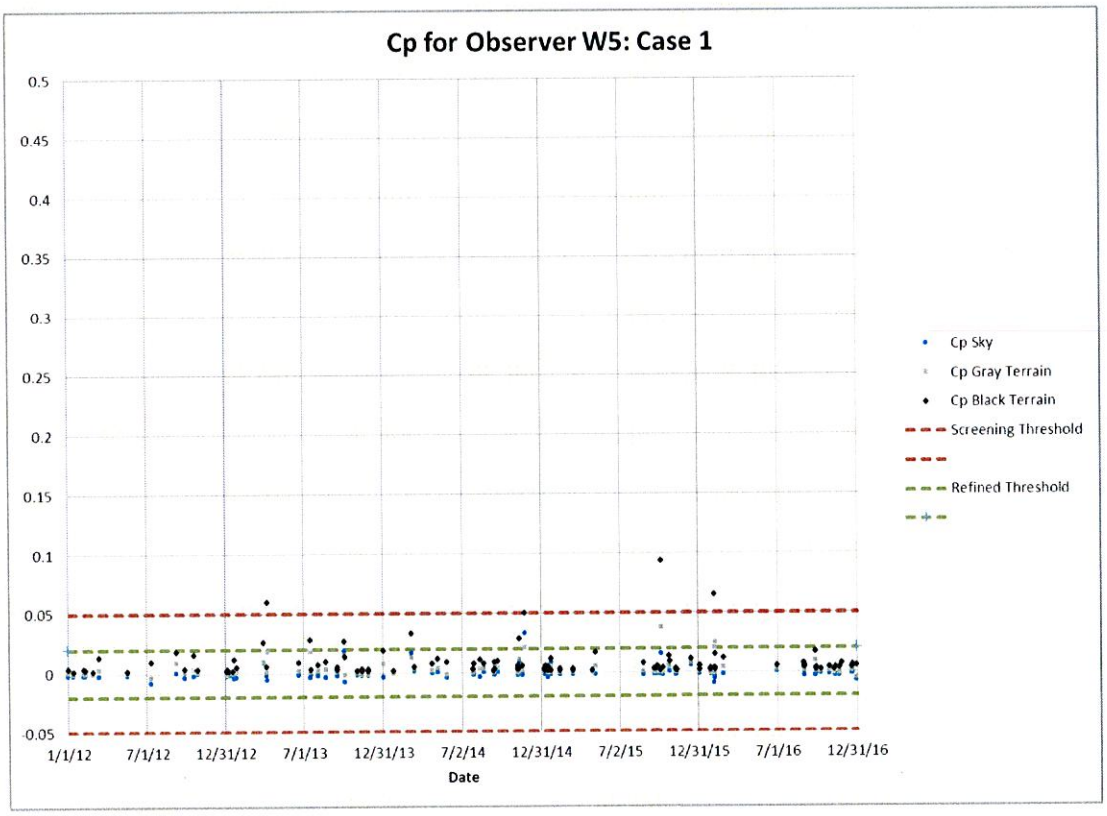
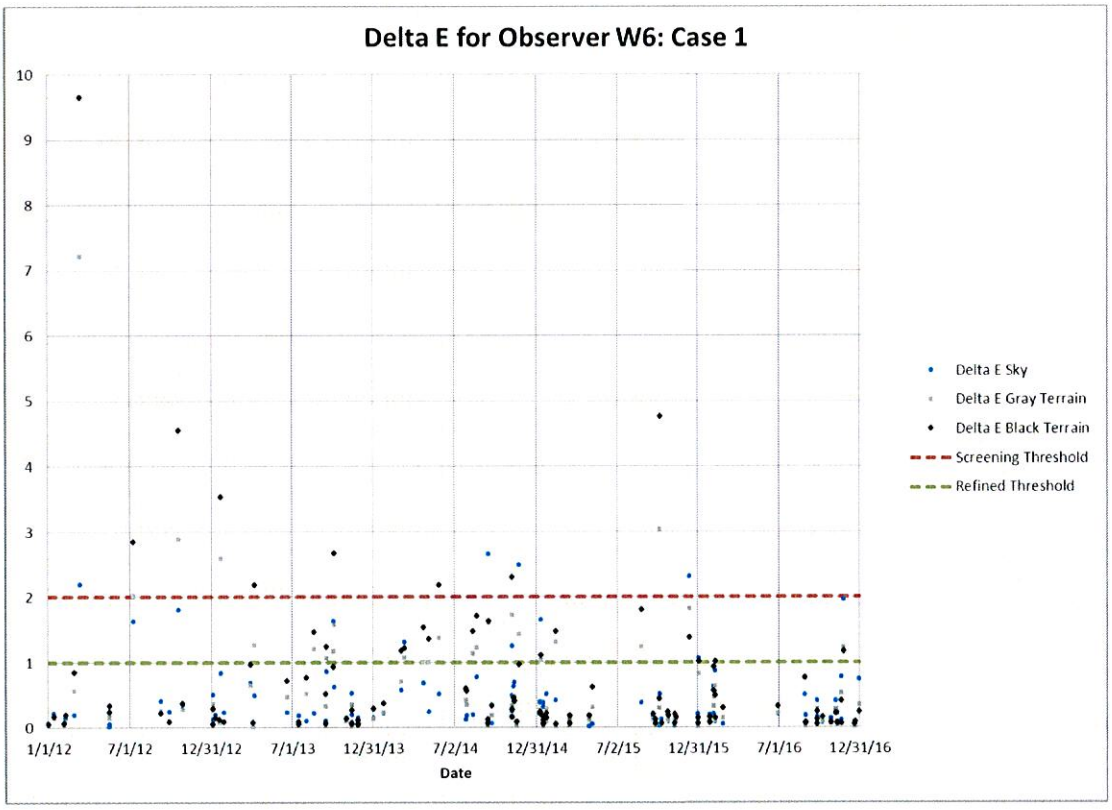


Figure 4-6 Time Series of Delta E and Cp for Case 1: Observer W6



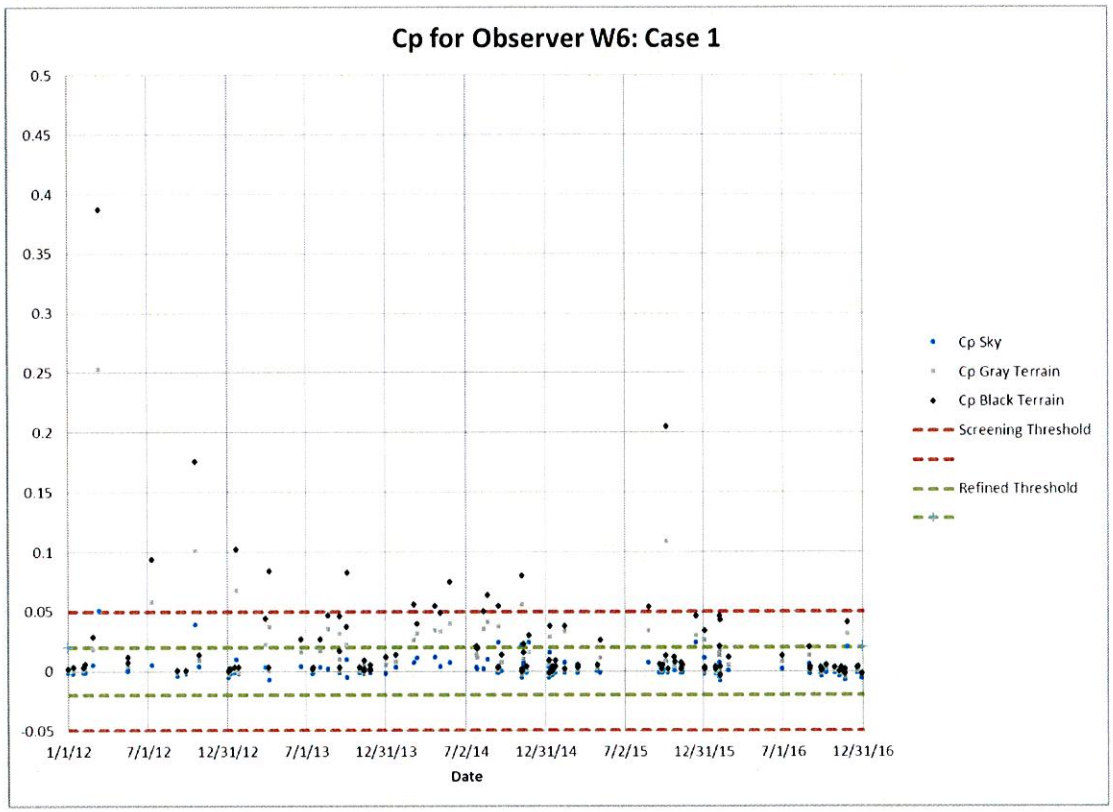
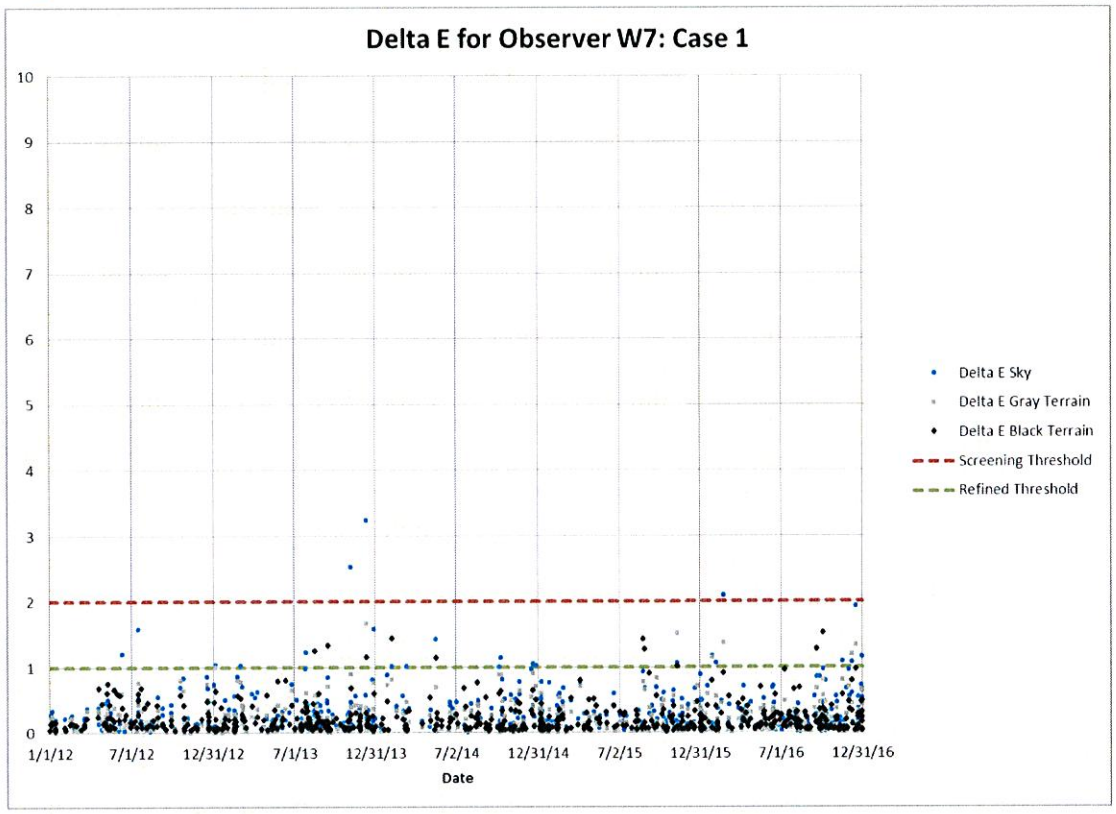


Figure 4-7 Time Series of Delta E and Cp for Case 1: Observer W7



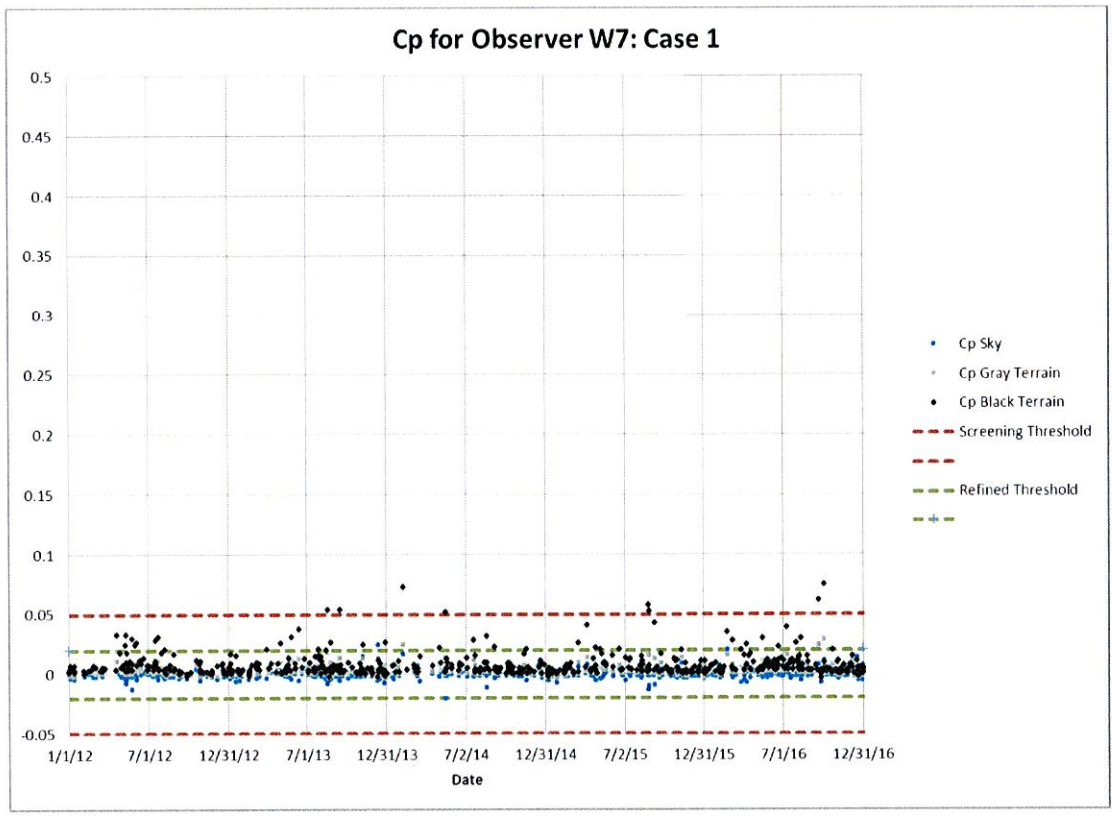
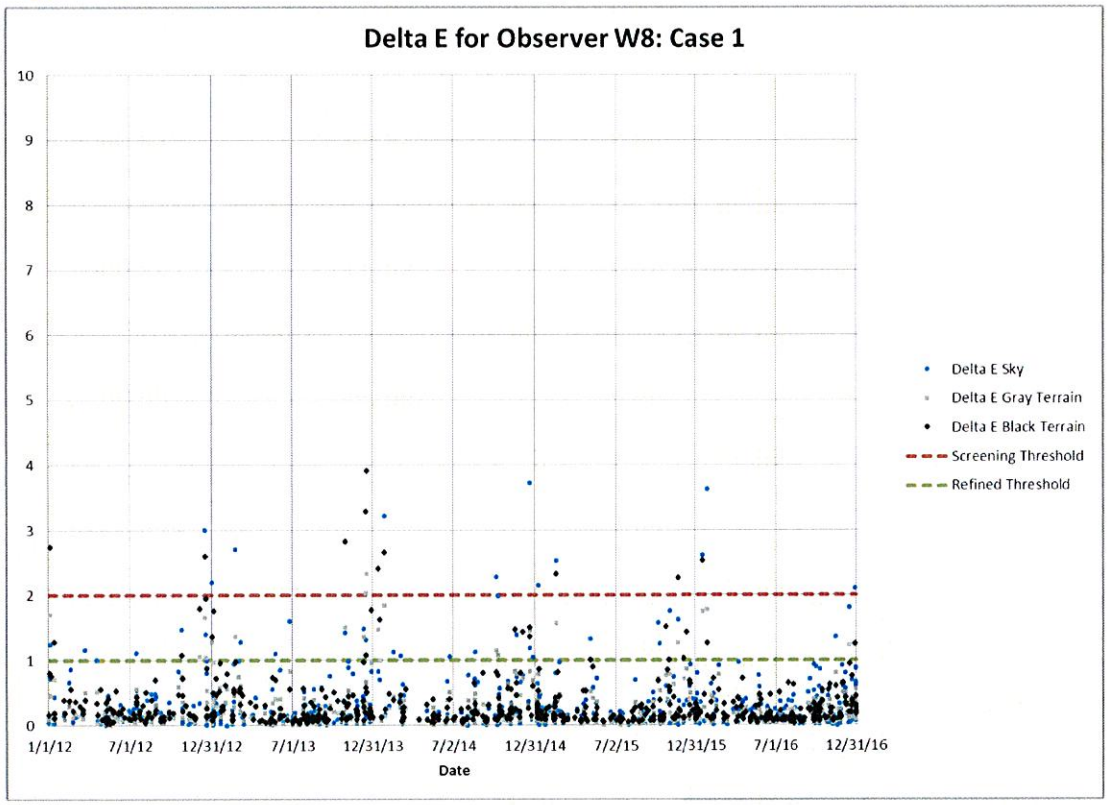


Figure 4-8 Time Series of Delta E and Cp for Case 1: Observer W8



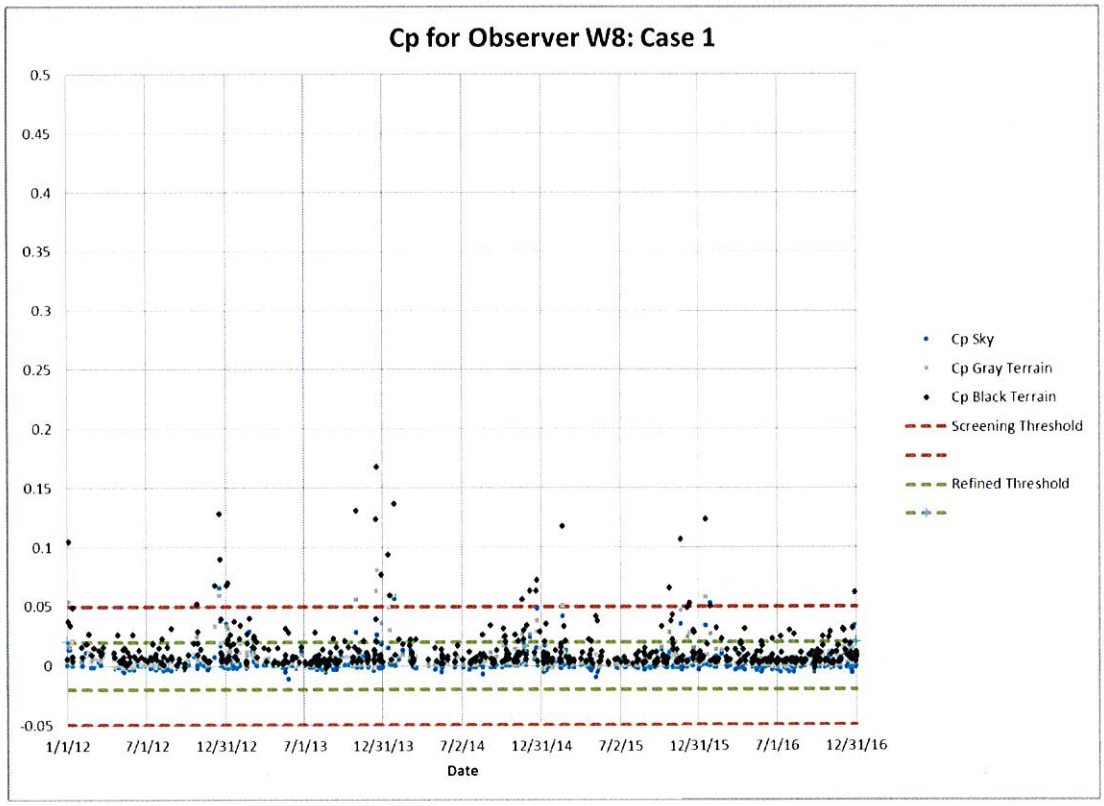
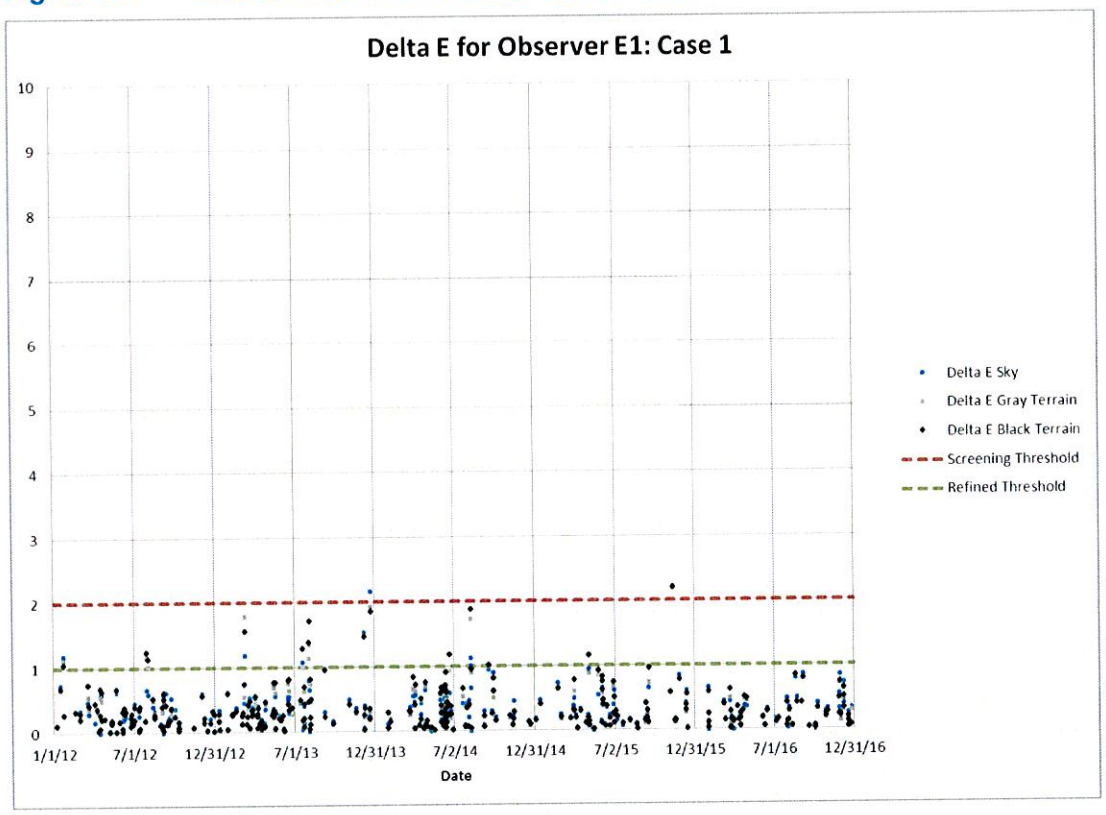


Figure 4-9 Time Series of Delta E and Cp for Case 1: Observer E1



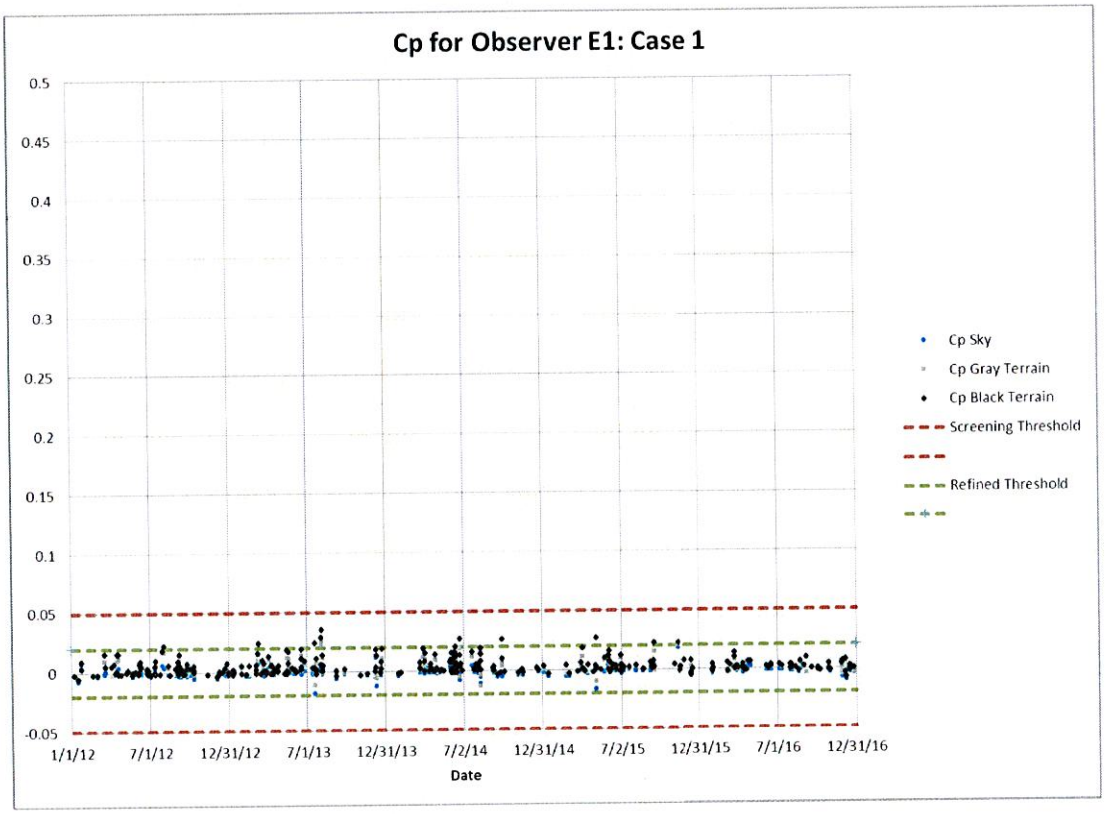
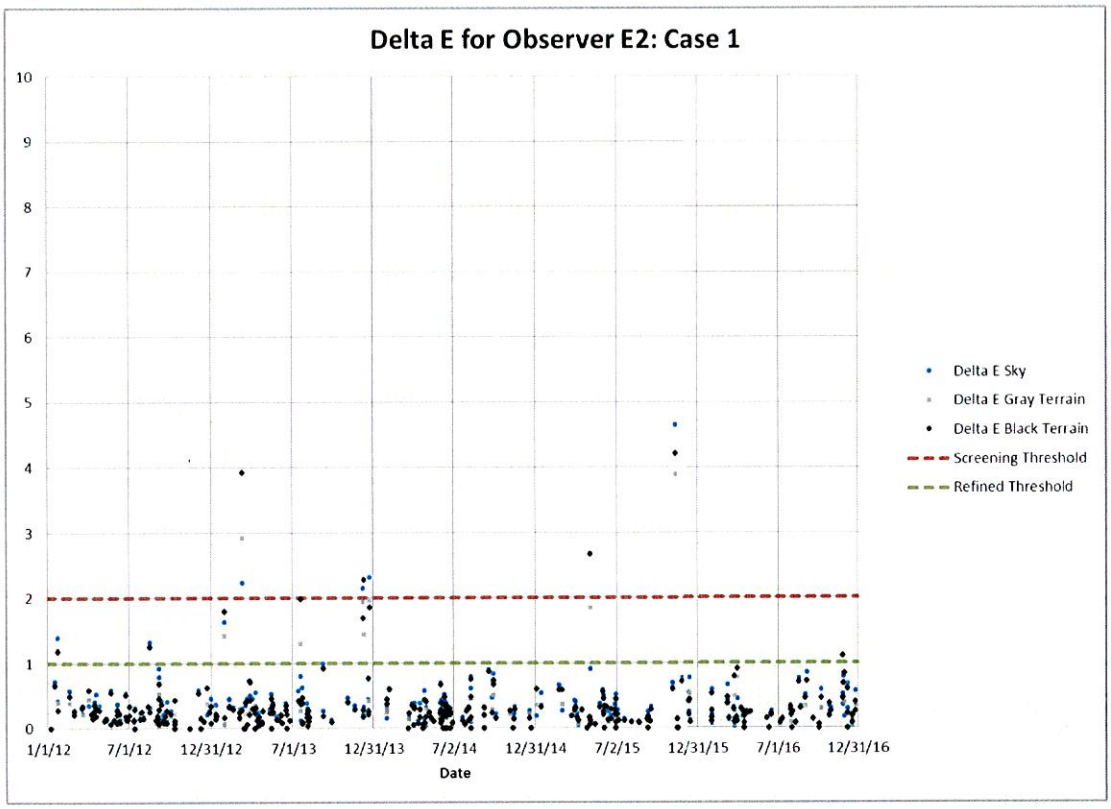


Figure 4-10 Time Series of Delta E and Cp for Case 1: Observer E2



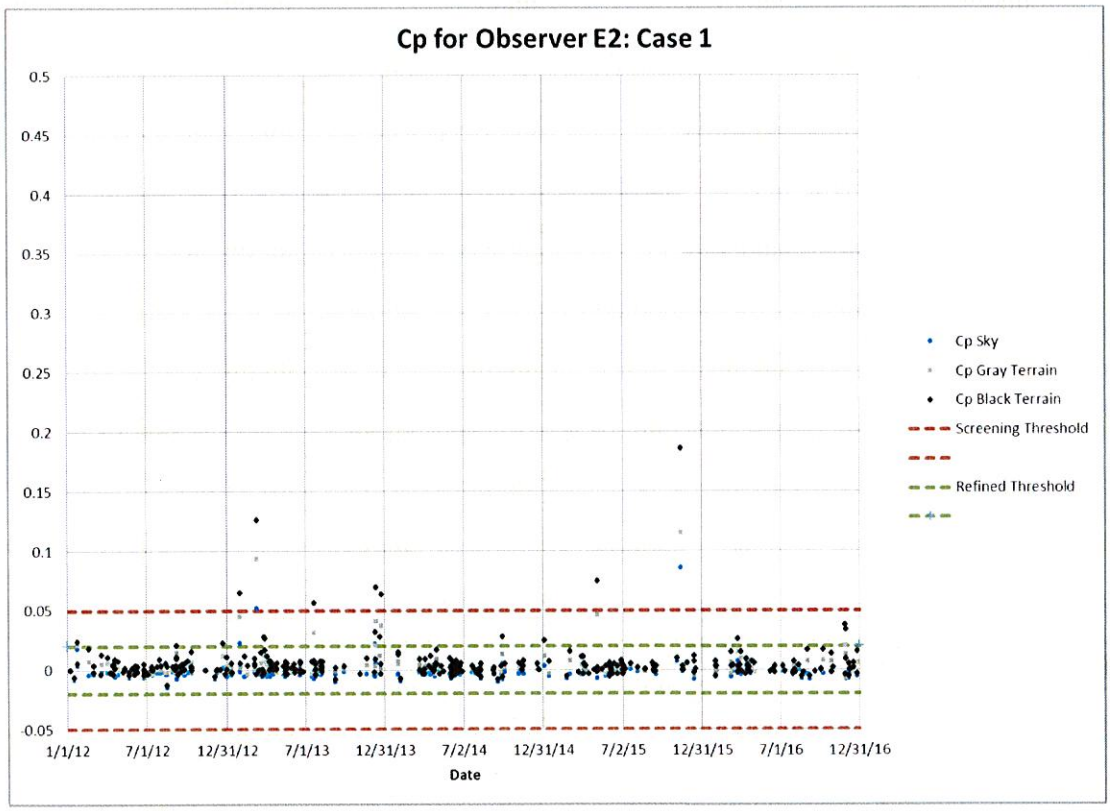
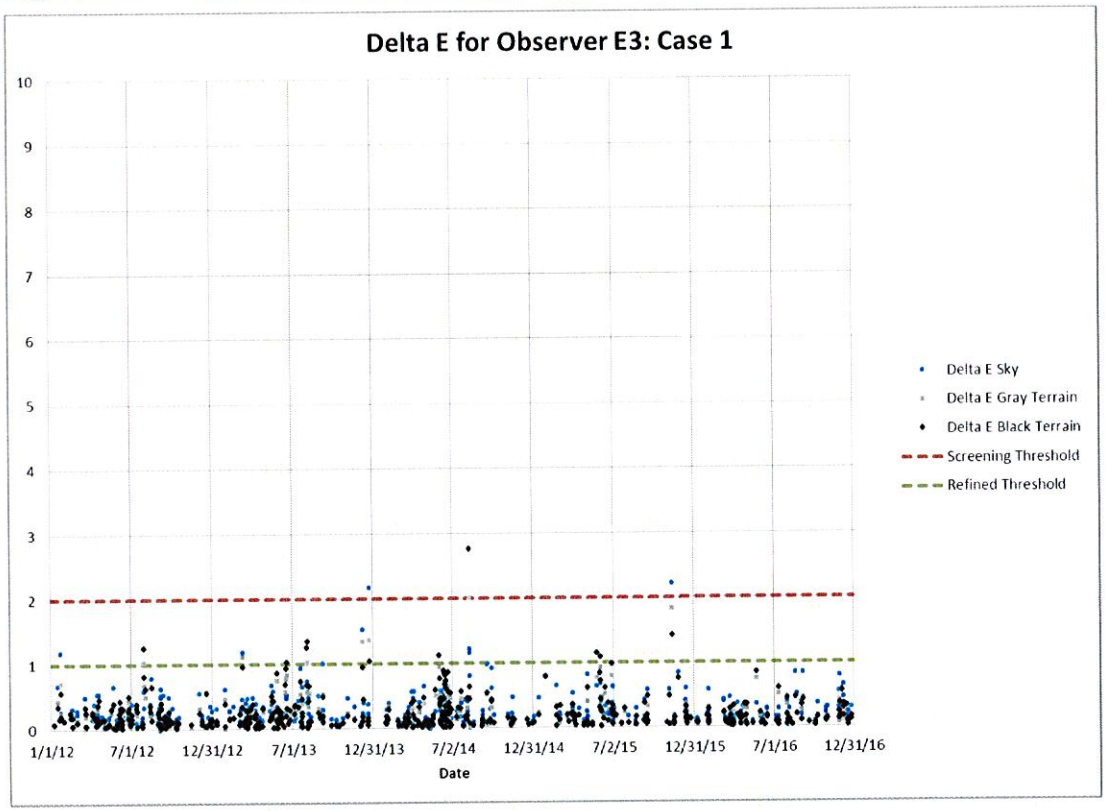


Figure 4-11 Time Series of Delta E and Cp for Case 1: Observer E3



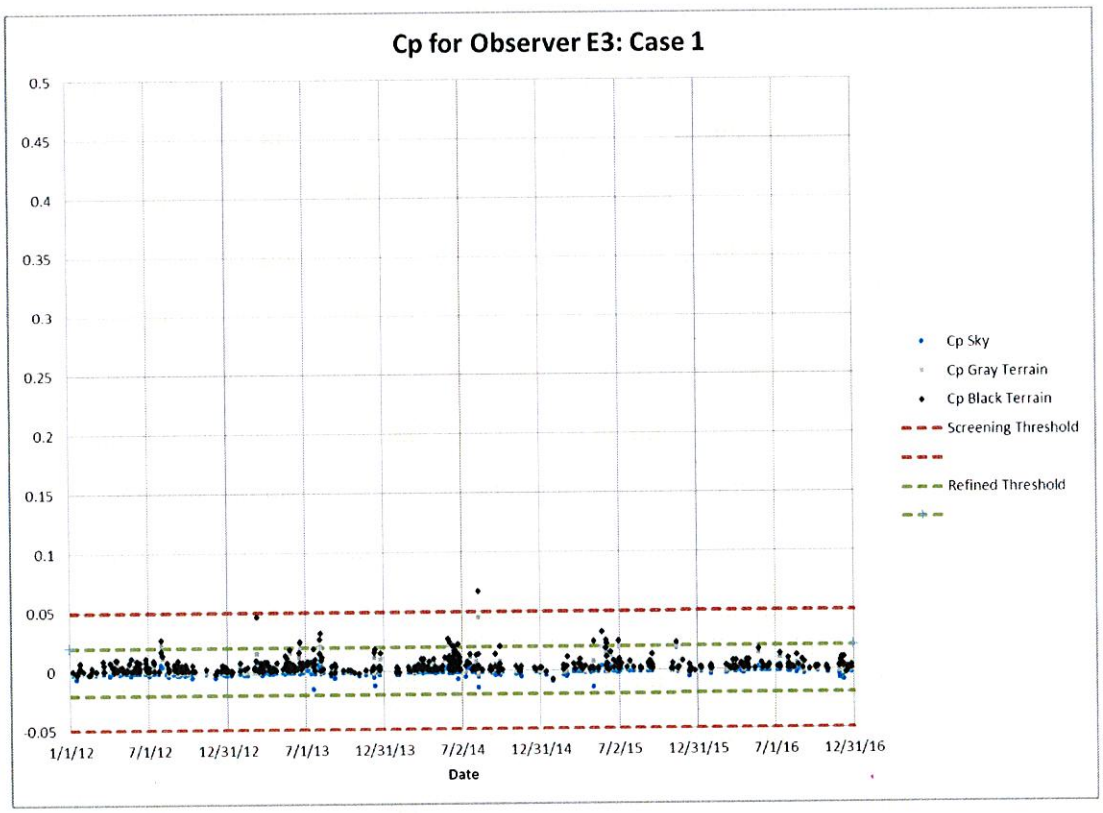
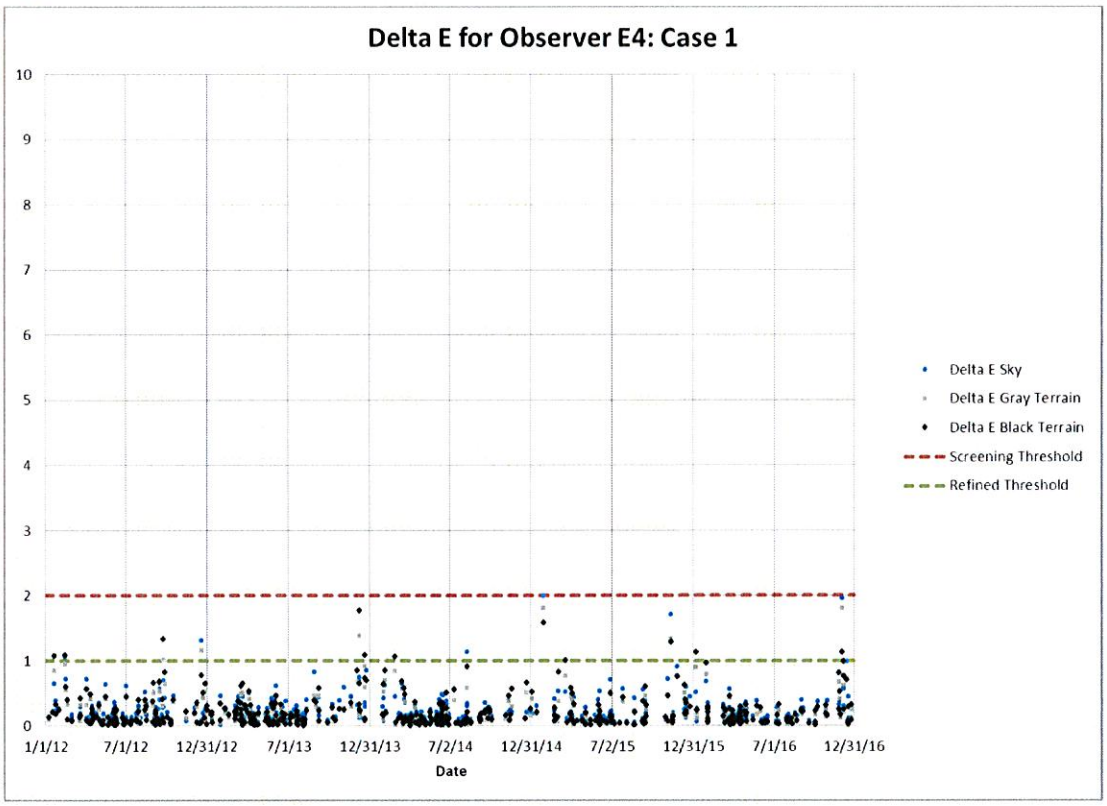


Figure 4-12 Time Series of Delta E and Cp for Case 1: Observer E4



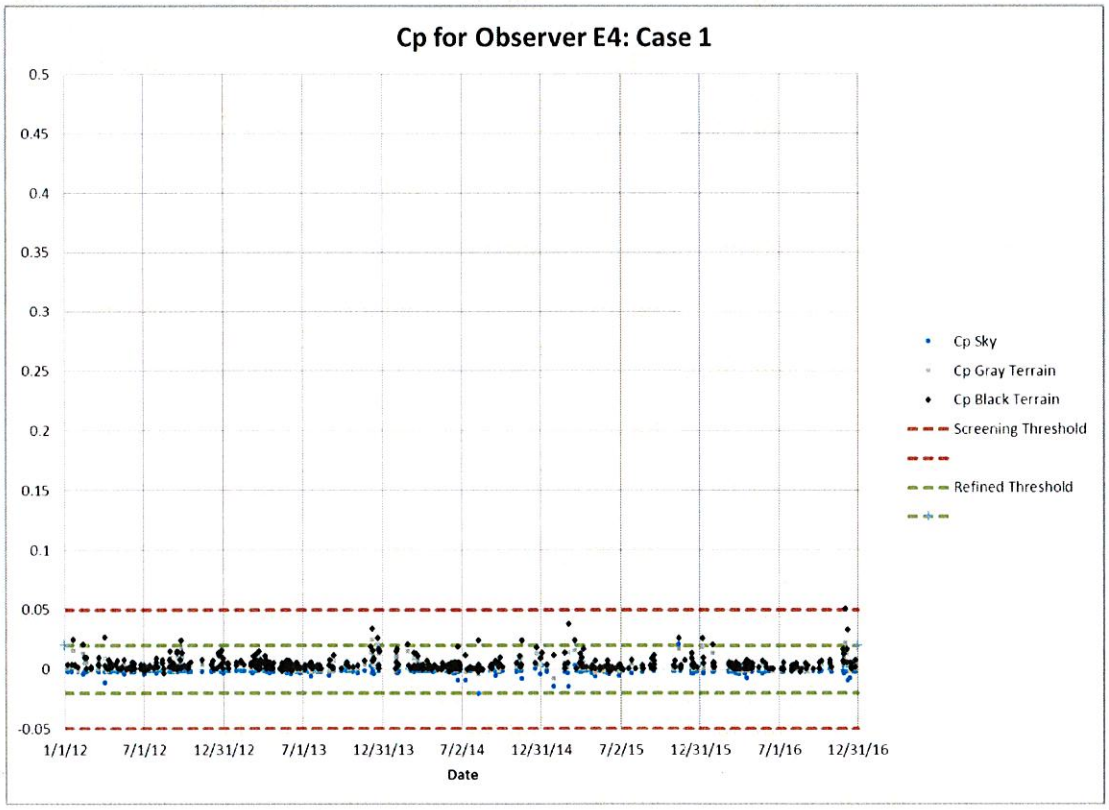
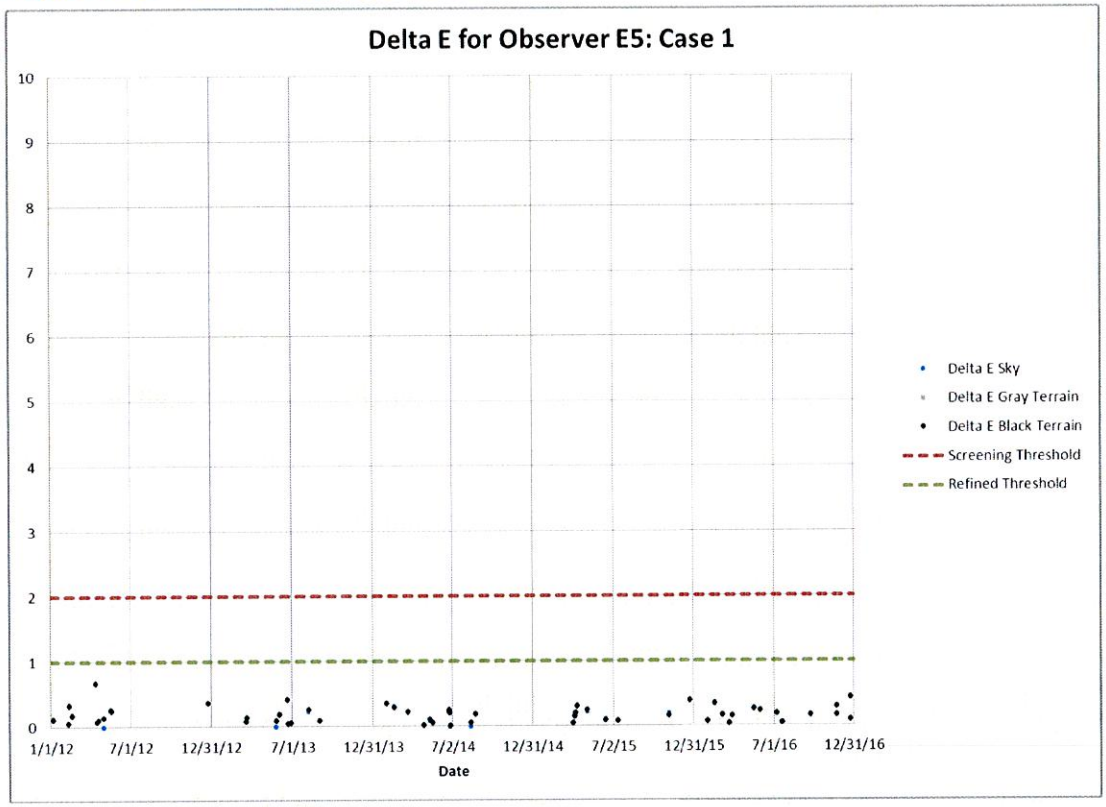


Figure 4-13 Time Series of Delta E and Cp for Case 1: Observer E5



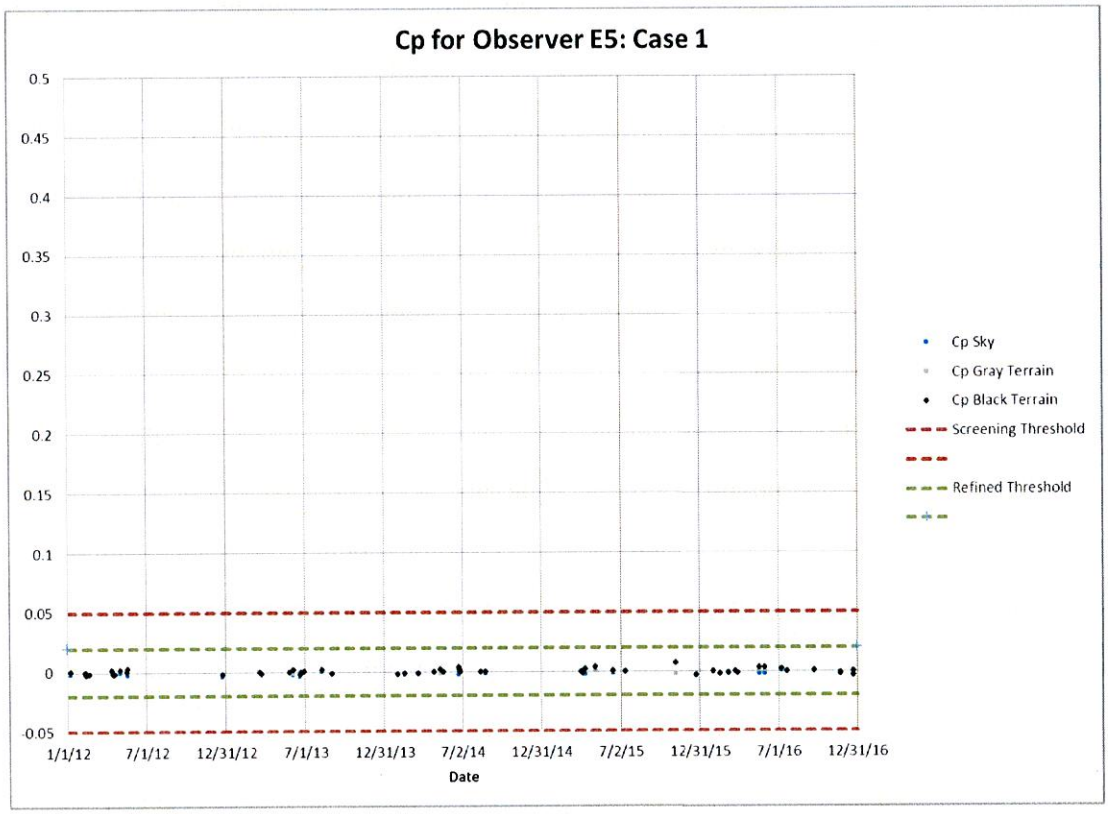
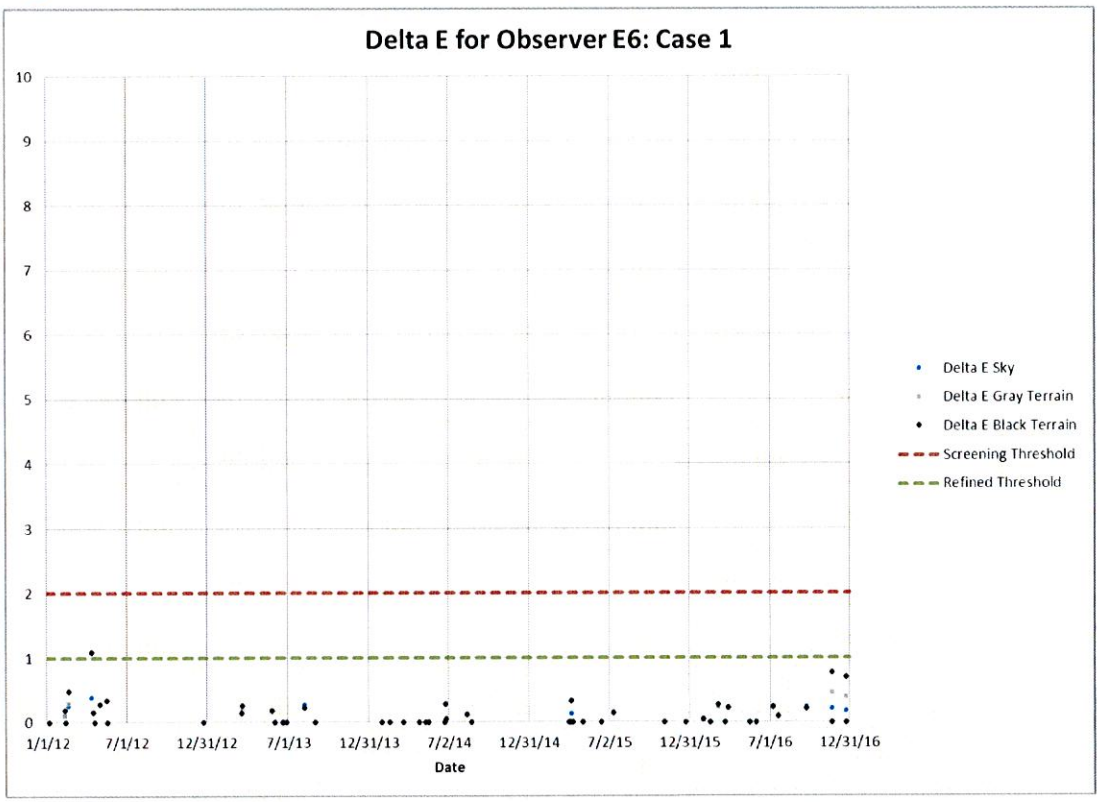


Figure 4-14 Time Series of Delta E and Cp for Case 1: Observer E6



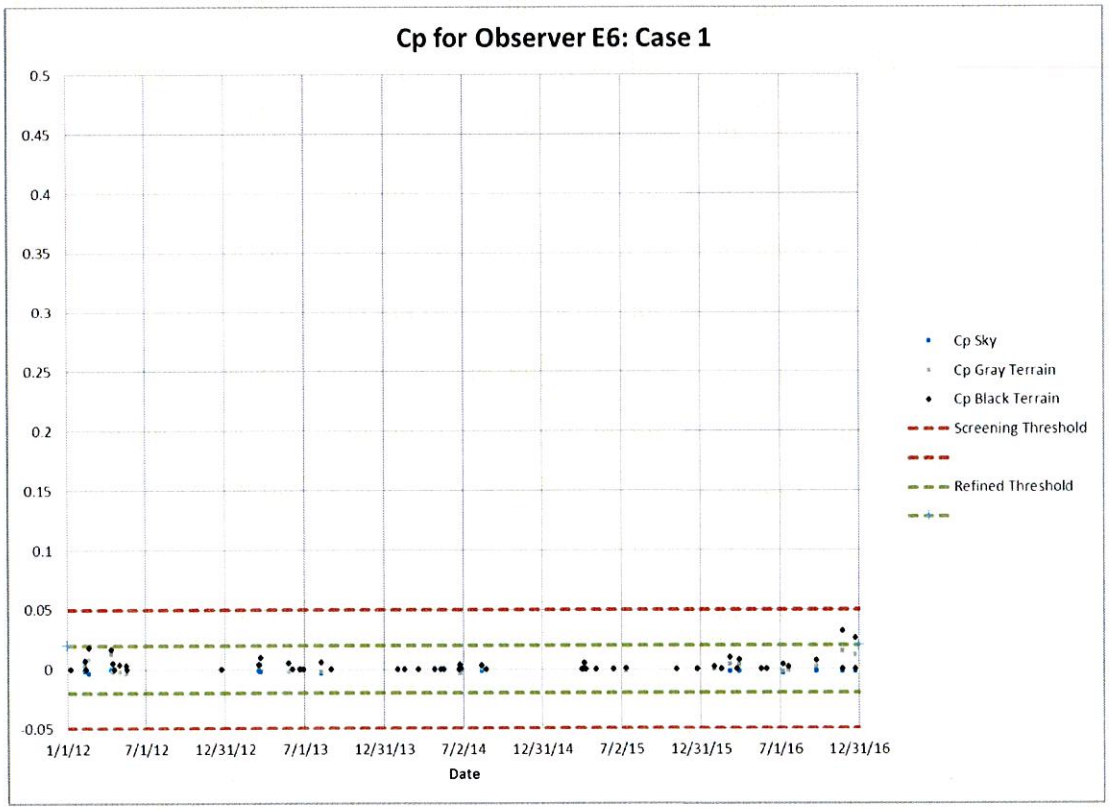
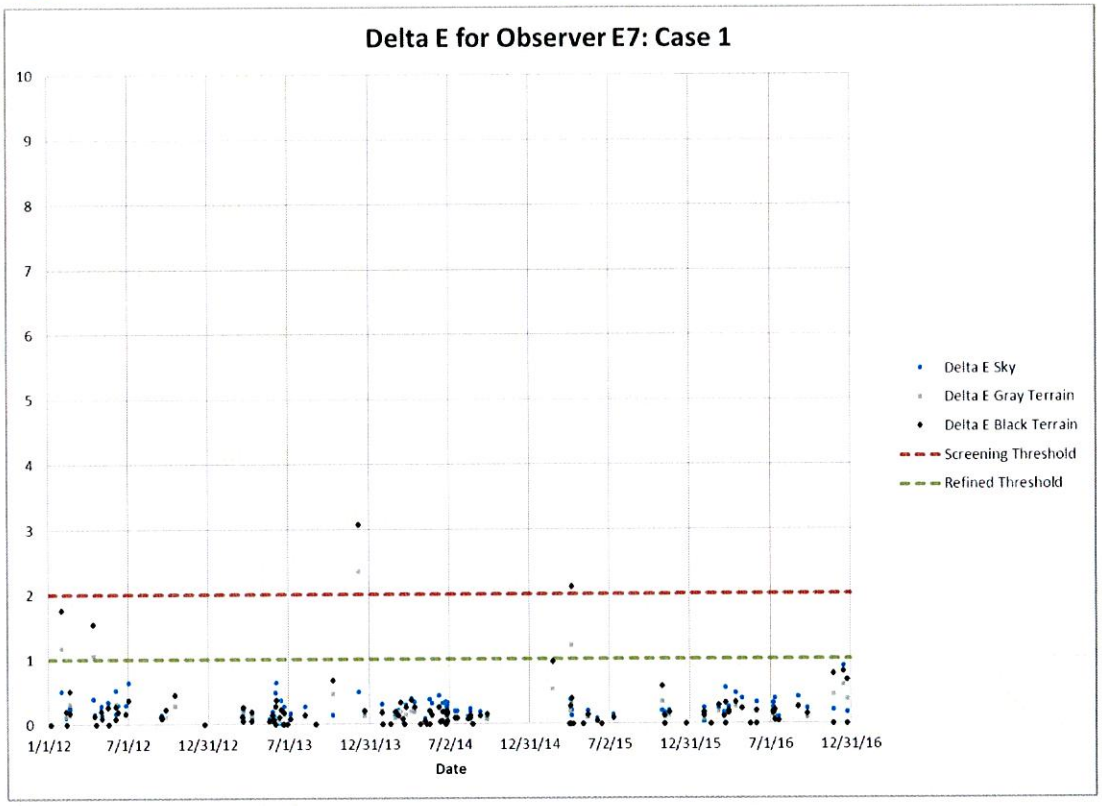


Figure 4-15 Time Series of Delta E and Cp for Case 1: Observer E7



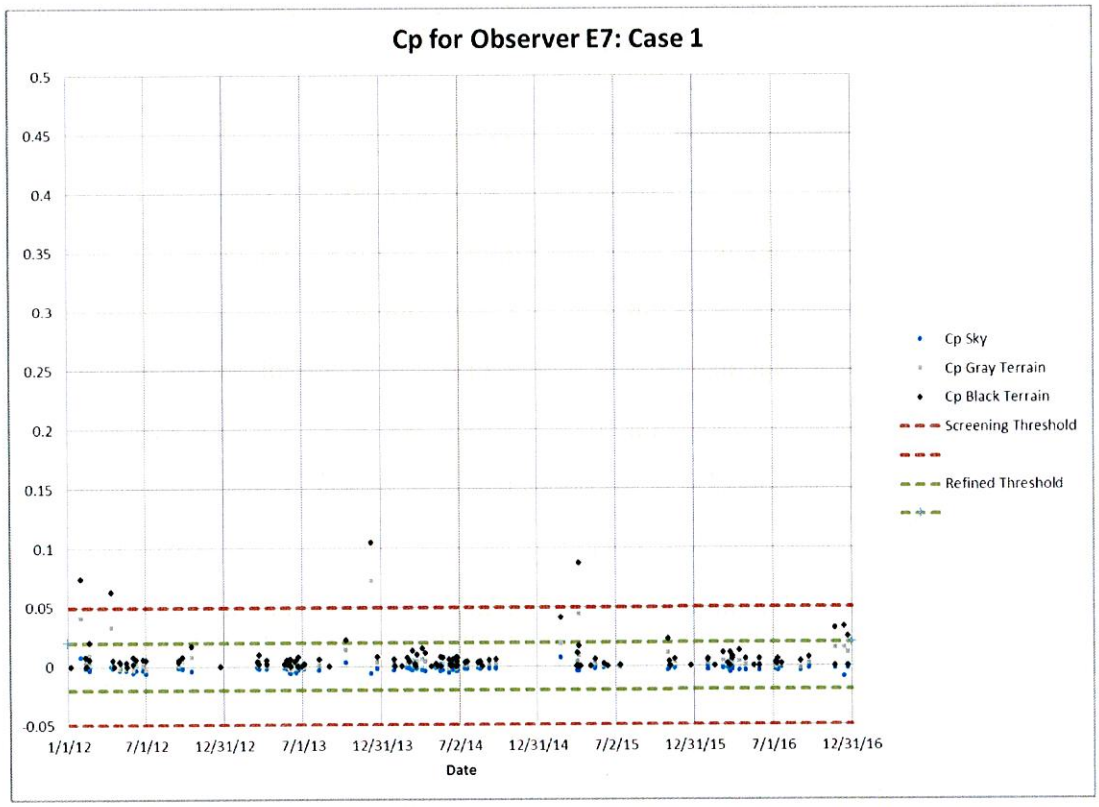
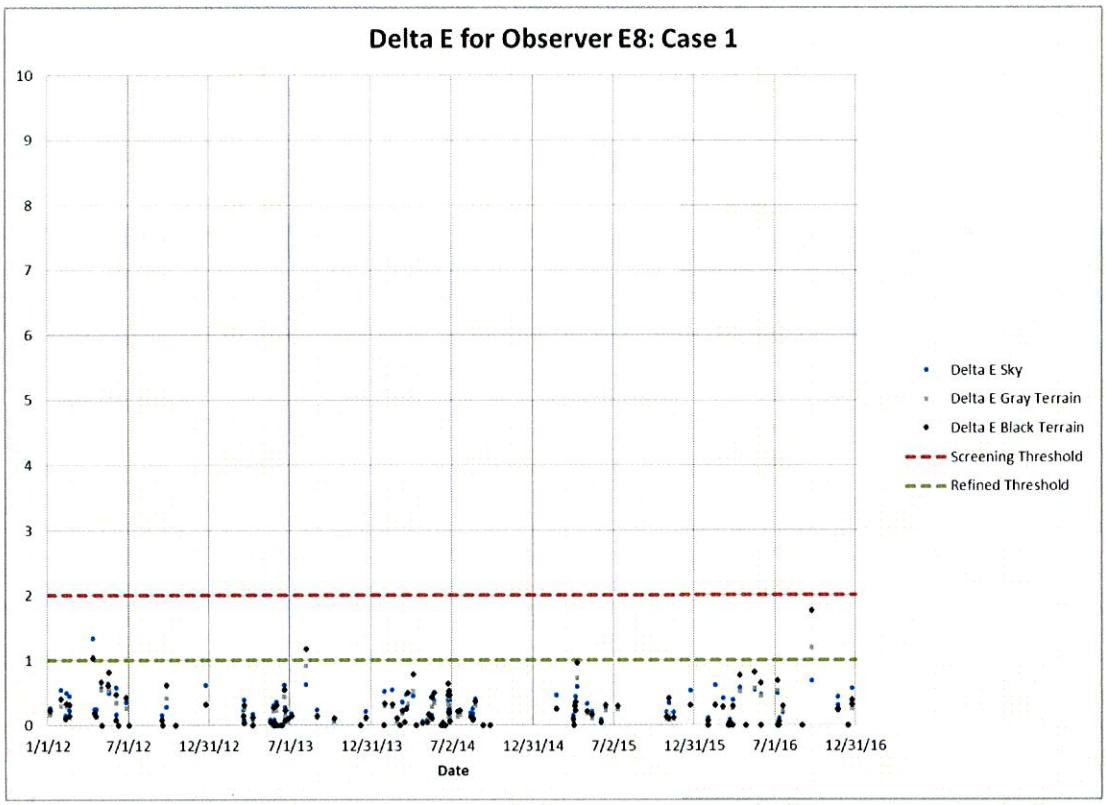
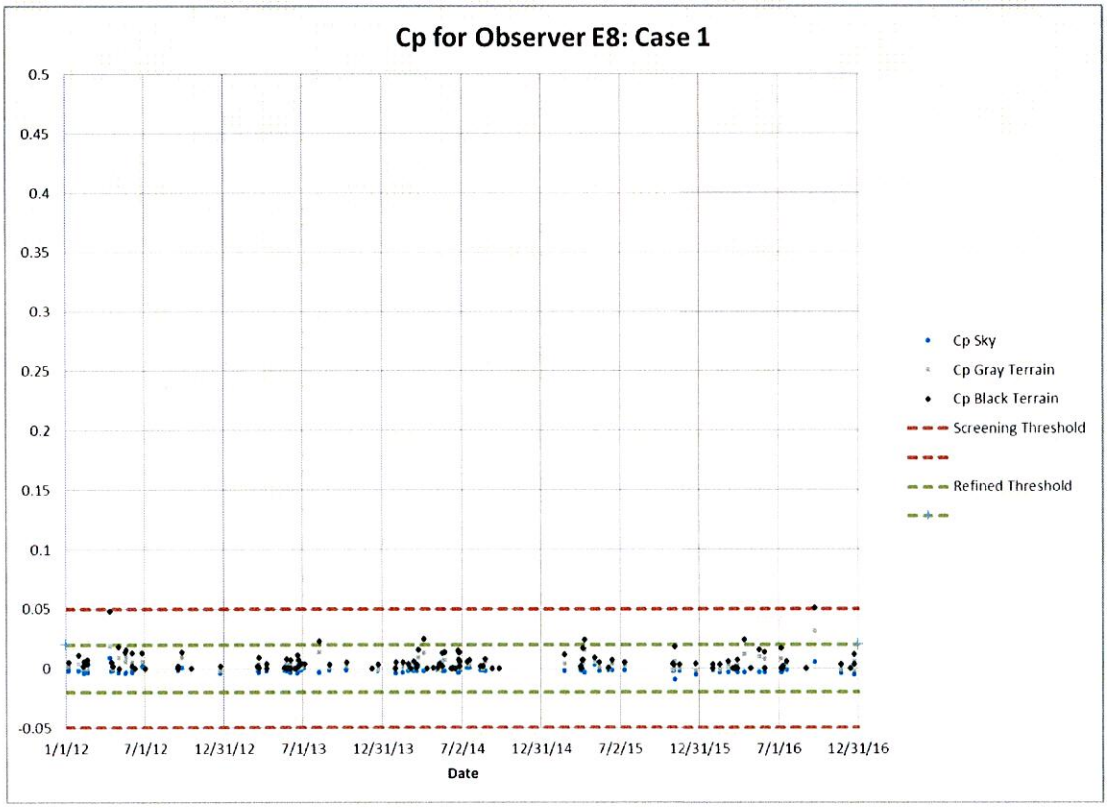


Figure 4-16 Time Series of Delta E and Cp for Case 1: Observer E8





A confounding factor when interpreting terrain background calculations is that they are based on the highly idealized assumption that terrain has no color (gray or black) and is uniform (like a blank wall). This simplistic characterization results in an exaggeration overestimate of the ability of a plume to be seen. As can be seen in **Figure 4-17,** the background is colorful and mottled rather than uniformly gray or black.

Figure 4-17 Photo of Saguaro National Park

Photo credit: https://www.expedia.com/pictures/arizona/southern-arizona.d6054714/landscape/.

5. Summary and Conclusions

An updated (revision 1) refined visibility assessment was conducted following guidance from the NPS. This revision included changes to the exhaust gas temperature and velocity of the modeled source based on changes to the operation of 2 of the 10 RICE units. A total of 16 combinations of observer and target terrain points identified by the NPS were evaluated over five years of hourly meteorological conditions. This analysis was conducted for two emission cases, Case 1 representing simultaneous start of the 10 RICE units and Case 2 representing all 10 RICE units at 100% load. This resulted in applying EPA's plume visibility model, PLUVUE II for nearly 10,000 model runs, each representing an hour for which a plume from the RICE units could pass between the observer and the specified terrain target.

The resulting conservative analysis demonstrated that modeled excursions of the NPS visibility parameter thresholds were very infrequent and rarely occurred on the same day or on consecutive hours. Even at the observer with the highest modeled frequency of excursions, this occurred on well below 1% of the daylight hours and is consistent with the previous modeling demonstration, which was accepted by the NPS. Given that the expected frequency of the RICE units operating at the modeled loads is small, the actual frequency of excursions will be much smaller than that modeled.

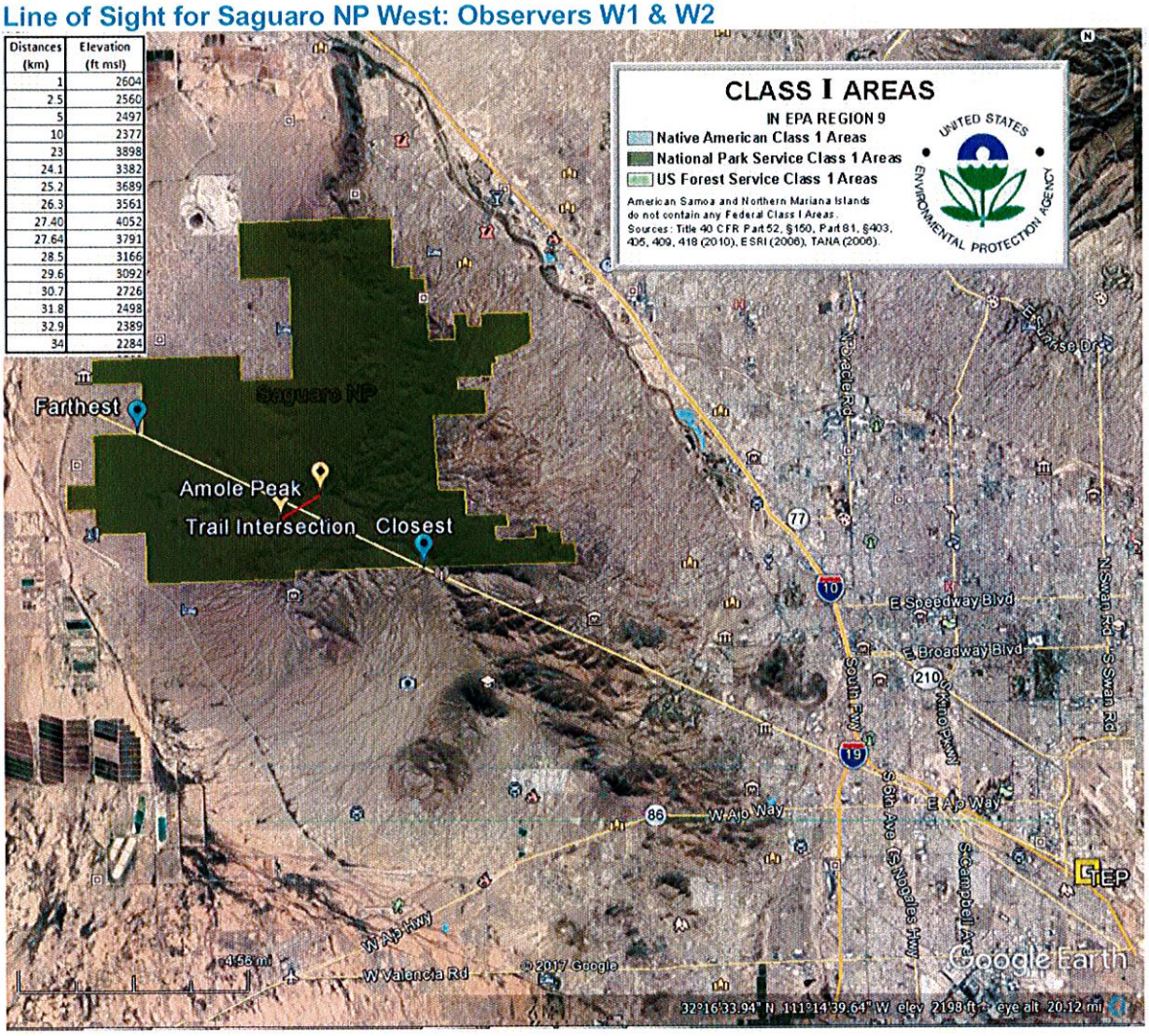
Another aspect to interpreting model results for terrain backgrounds is that the actual background, rather than being a uniform gray or black, is mottled and with a variety of color, which would tend to further mask the plume visibility. To account for this effect, one could use higher thresholds for plume contrast (C_p) and perceptibility (ΔE). Consideration of more applicable (higher) thresholds would result in a much lower frequency of modeled excursions.

Attachment A

Line of Sights Used in PLUVUE II Modeling for Observers in Saguaro NP East and West Units

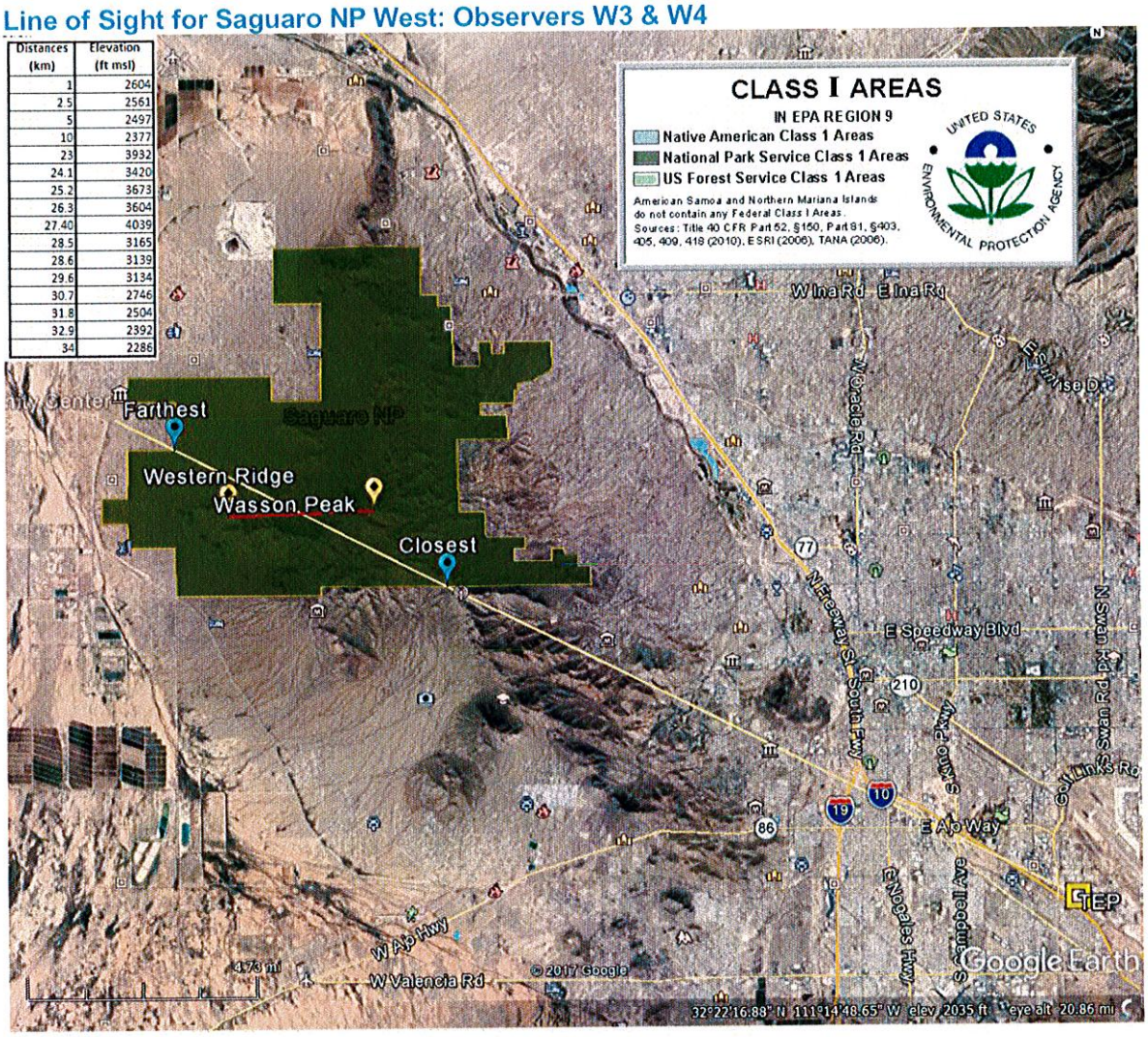
Line of Sight for Saguaro NP West: Observers W1 & W2

Distances (km)	Elevation (ft msl)
1	2604
2.5	2560
5	2497
10	2377
23	3898
24.1	3382
25.2	3689
26.3	3561
27.40	4052
27.64	3791
28.5	3166
29.6	3092
30.7	2726
31.8	2498
32.9	2389
34	2284



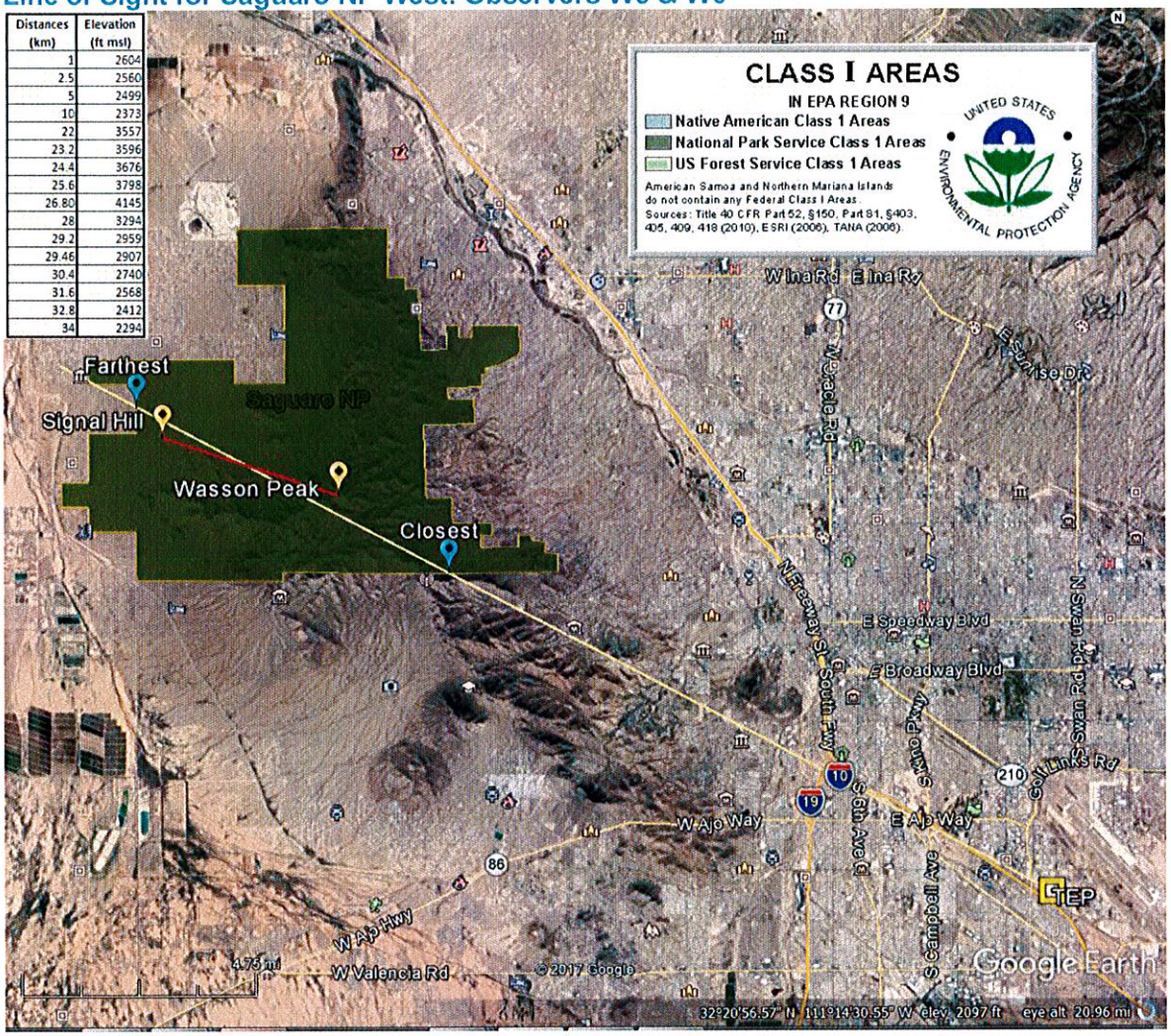
Line of Sight for Saguaro NP West: Observers W3 & W4

Distances (km)	Elevation (ft msl)
1	2604
2.5	2561
5	2497
10	2377
23	3932
24.1	3420
25.2	3673
26.3	3604
27.40	4039
28.5	3165
28.6	3139
29.6	3134
30.7	2746
31.8	2504
32.9	2392
34	2286



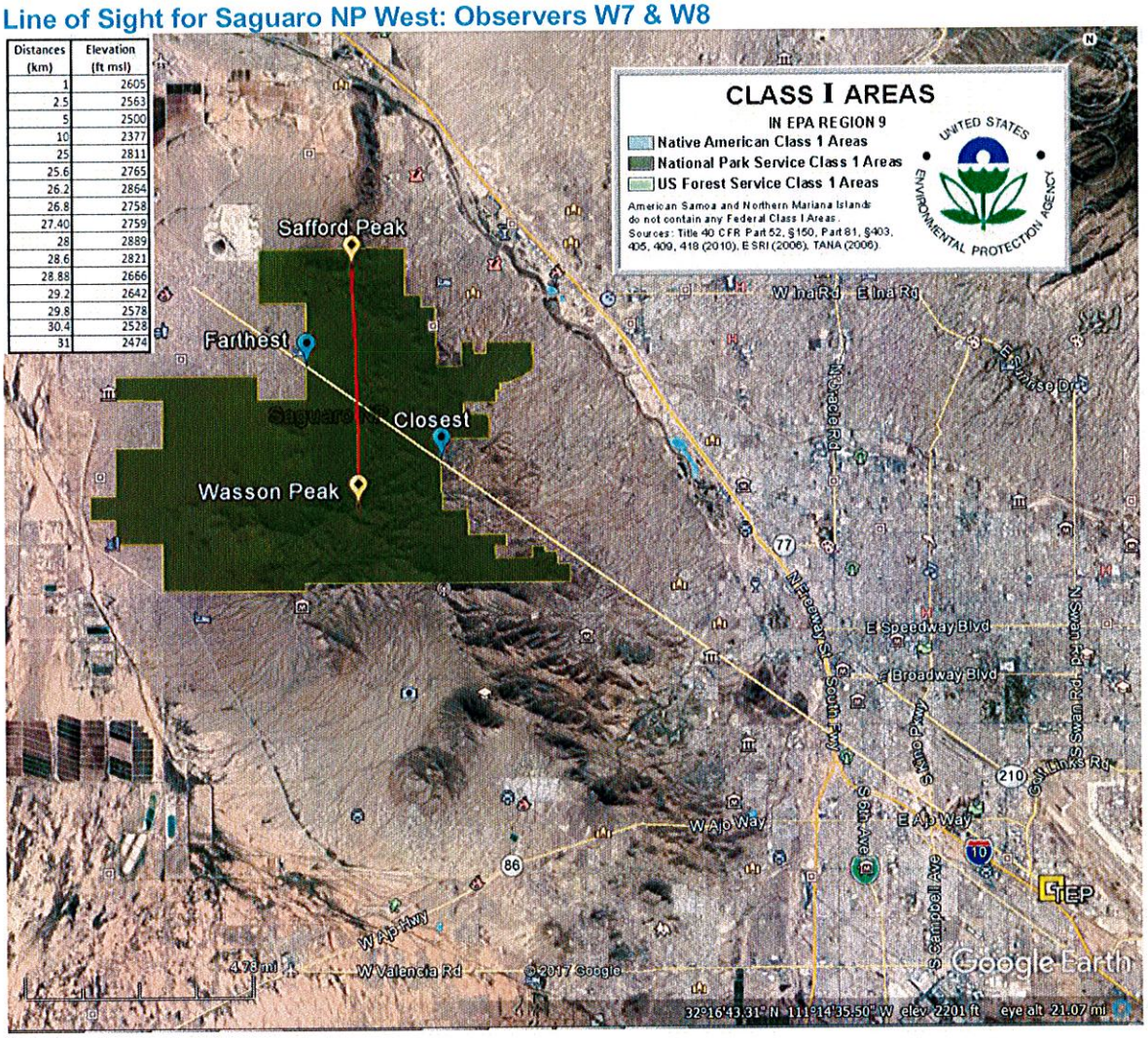
Line of Sight for Saguaro NP West: Observers W5 & W6

Distances (km)	Elevation (ft msl)
1	2604
2.5	2560
5	2499
10	2373
22	3557
23.2	3596
24.4	3676
25.6	3798
26.80	4145
28	3294
29.2	2959
29.46	2907
30.4	2740
31.6	2568
32.8	2412
34	2294



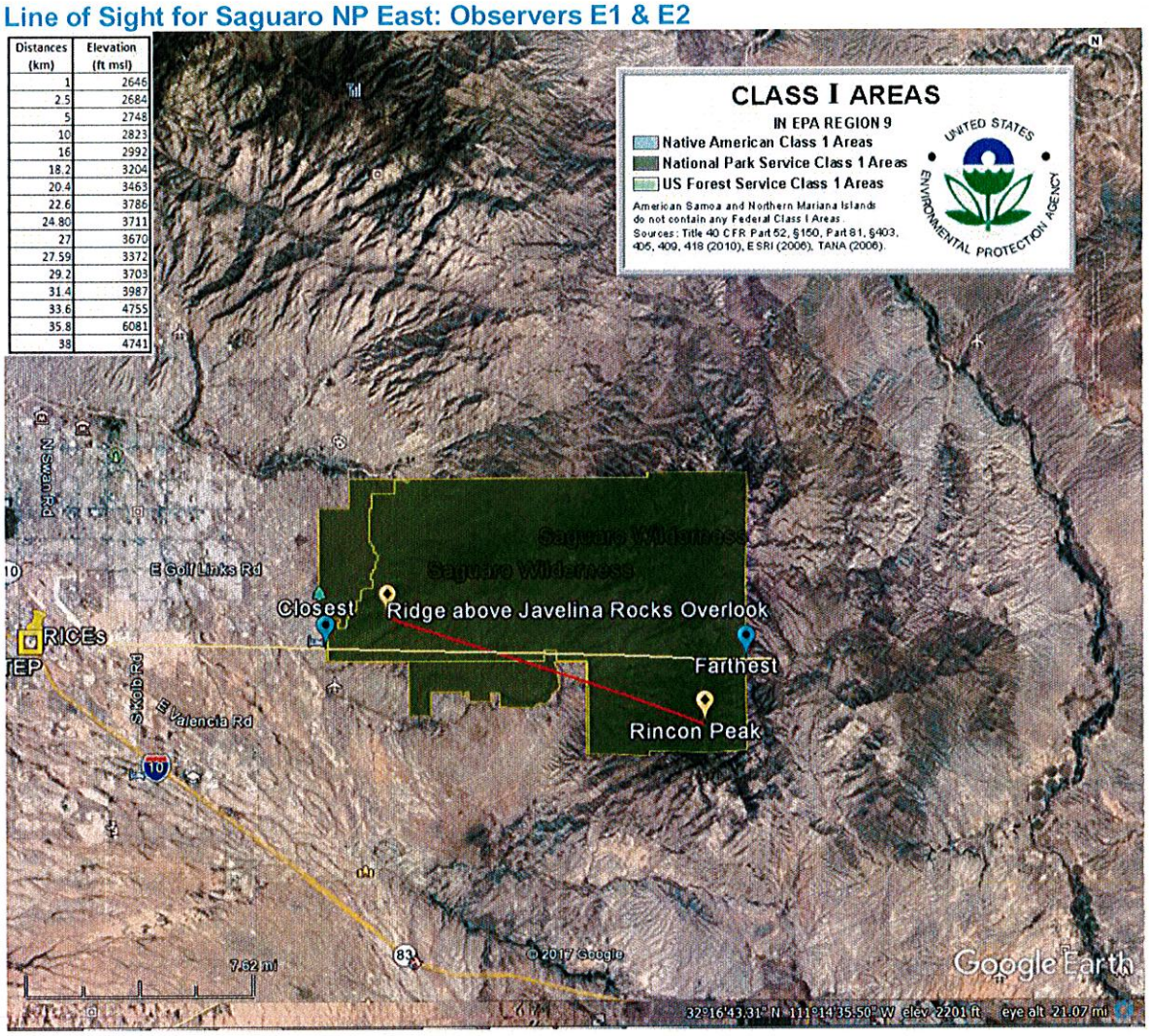
Line of Sight for Saguaro NP West: Observers W7 & W8

Distances (km)	Elevation (ft msl)
1	2605
2.5	2563
5	2500
10	2377
25	2811
25.6	2765
26.2	2864
26.8	2758
27.40	2759
28	2889
28.6	2821
28.88	2666
29.2	2642
29.8	2578
30.4	2528
31	2474



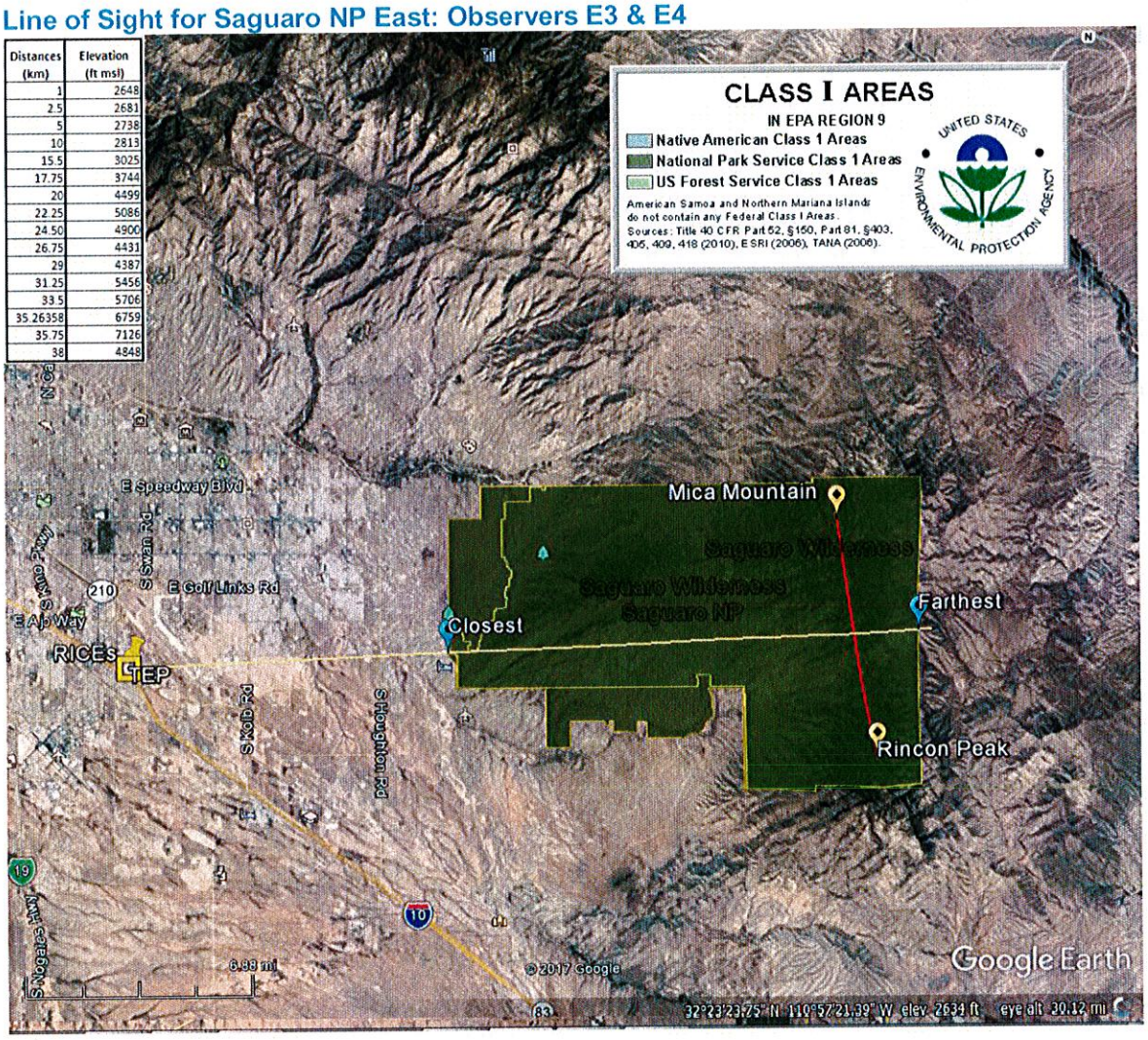
Line of Sight for Saguaro NP East: Observers E1 & E2

Distances (km)	Elevation (ft msl)
1	2646
2.5	2684
5	2748
10	2823
16	2992
18.2	3204
20.4	3463
22.6	3786
24.80	3711
27	3670
27.59	3372
29.2	3703
31.4	3987
33.6	4755
35.8	6081
38	4741



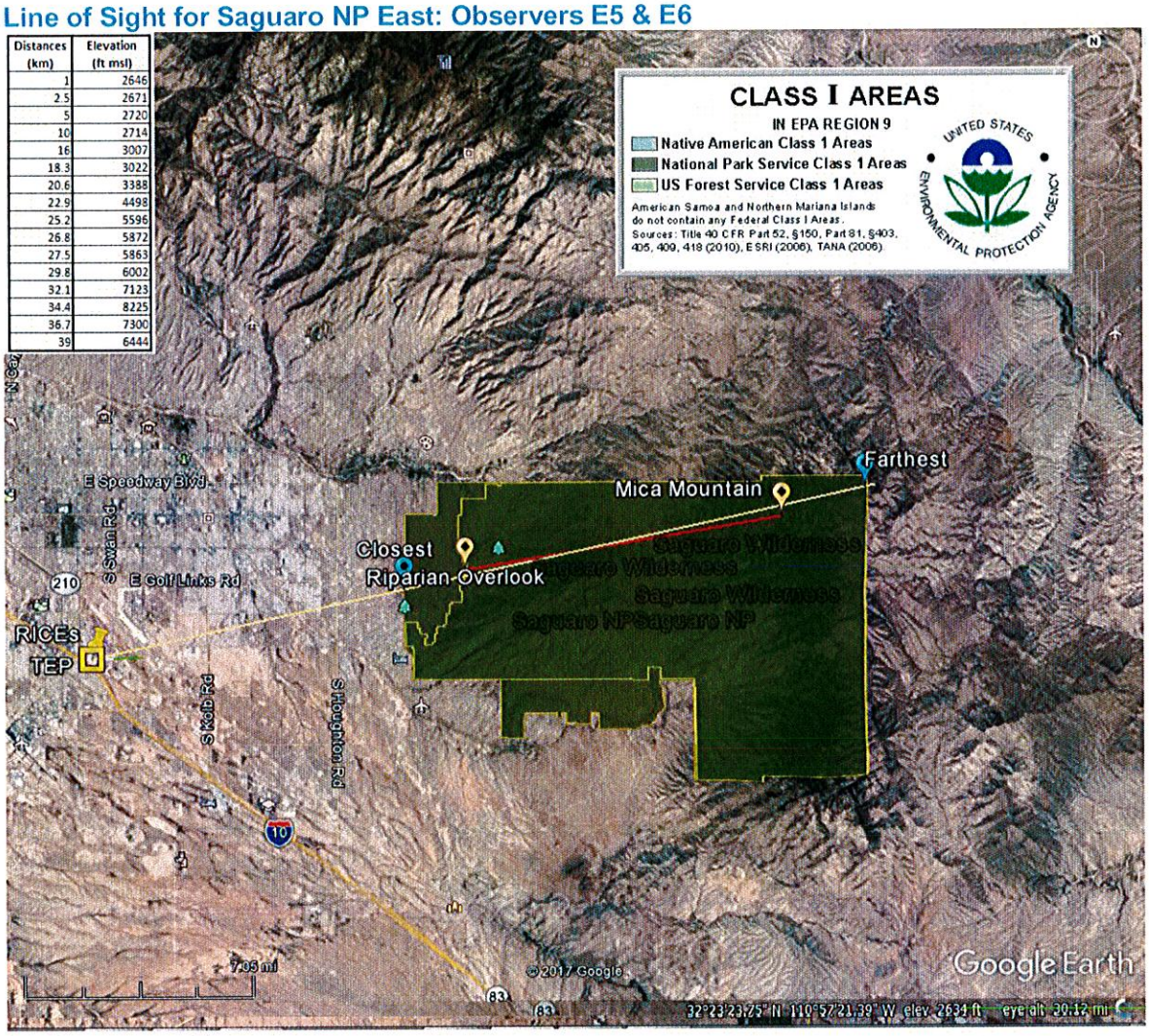
Line of Sight for Saguaro NP East: Observers E3 & E4

Distances (km)	Elevation (ft msl)
1	2648
2.5	2681
5	2738
10	2813
15.5	3025
17.75	3744
20	4499
22.25	5086
24.50	4900
26.75	4431
29	4387
31.25	5456
33.5	5706
35.26358	6759
35.75	7126
38	4848



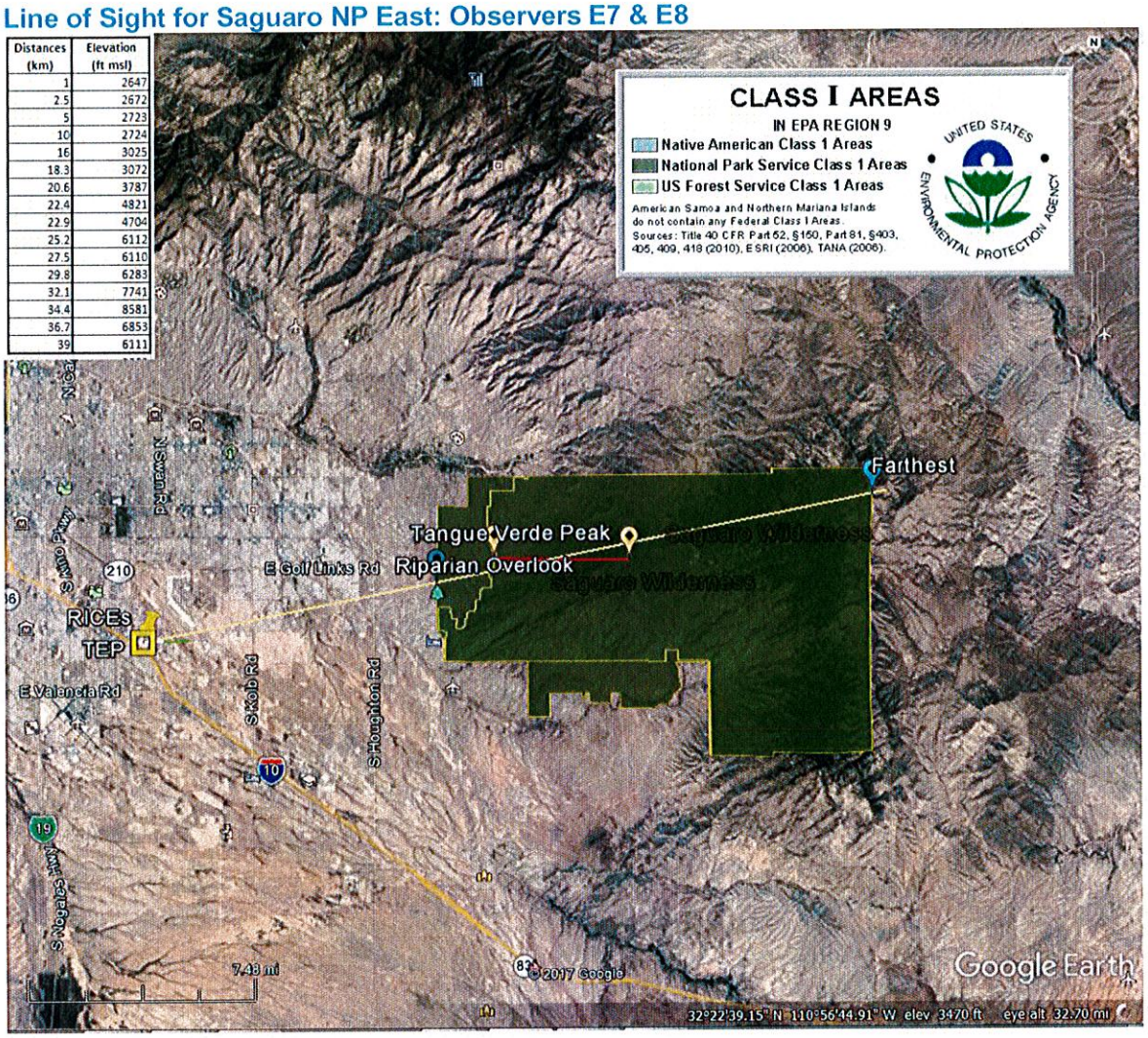
Line of Sight for Saguaro NP East: Observers E5 & E6

Distances (km)	Elevation (ft msl)
1	2646
2.5	2671
5	2720
10	2714
16	3007
18.3	3022
20.6	3388
22.9	4498
25.2	5596
26.8	5872
27.5	5863
29.8	6002
32.1	7123
34.4	8225
36.7	7300
39	6444



Line of Sight for Saguaro NP East: Observers E7 & E8

Distances (km)	Elevation (ft msl)
1	2647
2.5	2672
5	2723
10	2724
16	3025
18.3	3072
20.6	3787
22.4	4821
22.9	4704
25.2	6112
27.5	6110
29.8	6283
32.1	7741
34.4	8581
36.7	6853
39	6111



Attachment B

Statistical Summaries for Case 1 at Saguaro NP East and West Units – Revision 1

Observer w1

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0.2	0	0.6	0.2	0	0.2	0.4	0.6	0	2.6	2.6	0	0.4	1.2	0.6	0	0	0	0	0	0	0	0	0.4	0	0	0	0
1.5	0.2	0	0.2	0	0	0.4	0	0	0	0	0.2	0	1	1	0	0.2	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0	0	0	0.2	0	0	0	0	0	0	0.4	0.4	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.4	1	0.2	1	0.2	0.4	0.6	0.2	0.2	0	4.4	4.4	0	1.4	2.2	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0.4	0.6	0	0.8	0.2	0.4	0.6	0.2	0.2	0	3.4	3.4	0	1	2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.4	0.4	0	0.8	0.2	0	0.4	0	0.2	0	2.4	2.4	0	1	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.4	0.4	0	0.4	0	0	0.4	0	0.2	0	1.8	1.8	0	0.6	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0.4	0.4	0	0.8	0.2	0.4	0.4	0.2	0.2	0	3	3	0	1	1.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0.4	0.4	0	0.8	0.2	0.2	0.4	0	0.2	0	2.6	2.6	0	1	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.4	0.4	0	0.4	0	0	0.4	0	0.2	0	1.8	1.8	0	0.6	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.2	0.2	0	0.4	0	0	0.2	0	0.2	0	1.2	1.2	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0.2	0	0.2	0	0	0	0	0.2	0	0.6	0.6	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.2	0.4	1	0.2	1.4	0.4	0.8	0.8	1	1.4	0.2	8.4	8.2	1	1.6	3.8	2.4	0.6	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.4	1	0.2	1.4	0.2	0.4	0.6	0.2	0.4	0	5	4.8	1	1.4	2.6	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.4	0.8	0.2	1	0.2	0.4	0.6	0.2	0.2	0	4.2	4.2	0	1.4	2.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.4	0.4	0	0.8	0.2	0	0.6	0	0.2	0	2.6	2.6	0	1	1.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.4	1	0.2	1	0.2	0.4	0.6	0.2	0.2	0	4.4	4.4	0	1.4	2.2	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.4	0.4	0	0.8	0.2	0.4	0.4	0.2	0.2	0	3	3	0	1	1.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.4	0.4	0	0.6	0.2	0	0.4	0	0.2	0	2.2	2.2	0	0.8	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.4	0.4	0	0.4	0	0	0.4	0	0.2	0	1.8	1.8	0	0.6	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer w2

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0	0.4	0.2	0	0.4	0.2	0.8	0	2.6	2.6	0	0.2	1	0.8	0.2	0	0	0	0	0	0	0	0.4	0	0	0	0
1.5	0.4	0	0.2	0	0	0.2	0	0	0.2	0.2	0.2	0	1.4	1.4	0	0.2	0.6	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0.4	0	0	0	0	0	0	0	0.2	0	0	0	0.6	0.6	0	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0	0.4	0.2	0	0.2	0	0	0.4	0	0.4	0	2.2	2.2	0	0.2	1	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0	0.2	0	0	0.2	0	0.4	0	1.4	1.4	0	0.2	0.6	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.2	0	0	0	0	0	0	0	0.4	0	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.2	0.4	0.4	0	0.6	0	0	0.4	0.2	1.2	0.4	4.4	4.2	0	0.8	1.2	1.6	0.6	0	0	0	0	0	0	0	0.2	0	0	0	0
0.035	0.4	0	0.4	0.2	0	0.2	0	0	0.4	0	0.4	0.2	2.2	2.2	0	0.2	1	0.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.4	0.2	0	0	0	0	0.2	0	0.4	0	1.4	1.4	0	0	0.8	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0.2	0	0.2	0	0	0	0	0	0	0	0.2	0	0.6	0.6	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.4	0	0	0	0	0	0	0	0.4	0	1	1	0	0	0.6	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer w3

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.4	0	0.2	0.4	0	0.6	0.4	0	0.6	0.6	1.2	0.4	6.2	5.8	1	0.6	1	2.2	0.6	0	0.2	0	0	0	0.2	0.2	0.6	0.2	0	0	0
1.5	0.8	0	0.2	0.2	0	0.4	0	0	0.4	0.6	0.4	0.2	3.4	3.2	1	0.4	0.8	1.2	0.4	0	0	0	0	0	0.2	0	0.2	0	0	0	0
2	0.2	0	0.2	0	0	0.2	0	0	0.2	0.2	0.2	0.2	1.6	1.6	0	0.2	0.4	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0.4	0.2	0.2	0	0.6	0.4	0	0.2	0.4	0.6	0.4	3.6	3.6	0	0.4	1.2	0.6	0.6	0	0	0	0	0	0.2	0.2	0.2	0	0.2	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0.4	0.2	0.2	1	1	0	0	0.2	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.4	0.4	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	0	0.2	0.2	0	0.4	0.2	0	0.4	0.8	0.6	0.4	4.6	4.2	1	0.4	1	1.4	0.6	0	0	0	0	0	0.2	0.2	0.4	0	0	0	0
1.5	0.2	0	0.2	0	0	0.2	0	0	0.2	0.2	0.4	0.2	1.8	1.8	0	0.2	0.4	0.6	0.2	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0.2	1	1	0	0	0	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	1.4	1.2	0	0	0.2	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	1	0.4	0.8	0.6	0	0.4	0.2	0	0.4	0.4	0.8	0.6	5.6	5.4	1	0.6	1.4	1.6	0.8	0	0	0	0	0	0.2	0.4	0.4	0	0.2	0	0
0.035	0.4	0.4	0.2	0.2	0	0	0	0	0.2	0.2	0.6	0.2	2.4	2.4	0	0	0.6	1	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0
0.05	0	0.4	0	0.2	0	0	0	0	0	0.2	0.2	0.2	1.2	1.2	0	0	0.6	0	0.4	0	0	0	0	0	0	0.2	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.4	0	0	0	0	0	0	0	0.2	0.4	0.4	1.6	1.6	0	0	0.4	0.2	0.4	0	0	0	0	0	0.2	0.2	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer w4

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0	0.8	0.4	0	0.6	0.4	0	0.6	1	1.2	0.2	5.8	5.8	0	0.8	2.6	1.6	0.4	0	0	0	0	0	0	0	0.4	0	0	0	0
1.5	0.2	0	0.6	0	0	0.4	0	0	0.4	0.4	0.6	0	2.6	2.6	0	0.2	1.6	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0	0	0	0.2	0	0	0.4	0.4	0.2	0	1.4	1.4	0	0.2	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0.4	1.2	1.2	0.6	1.2	0.4	1.2	1	1.6	1	0	10.4	10.2	1	2.6	5.4	1.8	0.6	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.4	0	0.8	1	0.2	0.8	0.4	0.2	0.8	1	0.4	0	6	6	0	1.8	3	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0.6	0.6	0.2	0.8	0.2	0.2	0.4	0.6	0.2	0	4	4	0	1.6	2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.6	0.4	0	0.2	0.2	0	0	0.2	0.2	0	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0	1	1	0.2	1	0.4	0.8	1	1	0.6	0.2	7.8	7.8	0	2.2	3.8	1.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.4	0	0.6	0.6	0.2	0.8	0.2	0.2	0.4	0.8	0.4	0	4.6	4.6	0	1.6	2.2	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.6	0.4	0	0.2	0.2	0	0.2	0.4	0.4	0	2.4	2.4	0	0.6	1.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.4	0.2	0	0	0	0	0	0.2	0.2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.4	0	0.6	0.2	0	0.2	0	0	0	0.4	0.4	0	2.2	2.2	0	0.2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	1	0.8	1.2	1.2	0.8	1.6	0.8	1.4	1.2	1.8	2.2	0.4	14.4	14	2	3.4	5.8	4	1.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.4	0.2	1.2	1.2	0.6	1.2	0.4	0.8	1	1.2	0.8	0	9	9	0	2.8	4.2	1.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.8	1	0.2	0.8	0.4	0.4	0.4	0.4	0.2	0	4.8	4.8	0	2	2.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0.2	0	0.6	0.4	0.2	0.8	0.2	0	0.2	0.4	0.2	0	3.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0	1.2	1.2	0.6	1	0.6	1.2	1	1.4	1.6	0	10.4	10.4	0	3	5	2.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.8	0.8	0.2	0.8	0.4	0.2	0.6	0.4	0.2	0	4.6	4.6	0	1.8	2.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	2.6	2.6	0	1	1.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.6	0.4	0	0	0	0	0	0.2	0.2	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer w5

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.2	0	0	0	0	0.2	0.2	0.2	0.2	1	1	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0.2	0	0.2	0	0	0.2	0	0	0.4	0.2	0	1.2	1.2	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0
1.5	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0.4	0.2	0	0.6	0.6	0	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.2	0.4	0.2	0	0	0.2	0	0	0.4	0.4	0	1.8	1.8	0	0	0.4	1	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0
0.035	0	0.2	0	0.2	0	0	0	0	0	0.2	0.2	0	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0	0.6	0.6	0	0	0.4	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.2	0	0	0	0	0	0	0	0.2	0.2	0	0.6	0.6	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer w6

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.4	0	0	0	0.2	0	0.2	0.4	0.6	0.2	2.4	2.4	0	0.2	1	1	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.2	0	0	0	0.2	0	0.2	0.4	0.4	0.2	1.8	1.8	0	0.2	0.6	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0.2	0	0.2	0.2	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0.4	0.6	0.4	0.4	0	0.2	0.8	0.4	0.6	0.4	0.2	5	5	0	1.2	2	1.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.2	0.4	0.2	0	0.2	0.4	0.2	0.6	0.2	0	2.6	2.6	0	0.6	1.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0.2	0.2	0.2	0	0.2	0	0	0.6	0.2	0	1.8	1.8	0	0.4	1	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0.2	0	0.2	0	0	0	0	0	0	0.4	0	0	0.8	0.8	0	0	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0.2	0.4	0.4	0.4	0	0.2	0.8	0.4	0.8	0.6	0.2	4.8	4.8	0	1.2	2	1.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.2	0	0	0	0.2	0	0.2	0.6	0.2	0.2	1.8	1.8	0	0.2	1	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0.2	0	0	0	0.2	0	0	0.4	0	0	1	1	0	0.2	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0.2	0	0	0	0	0	0.2	0.2	0.4	0.2	1.2	1.2	0	0	0.8	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	1	0.8	0.4	0.6	0.2	0.4	1	0.4	0.8	0.8	0.2	7.2	7.2	0	1.6	2.4	2.2	1	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.4	0.6	0.8	0.4	0.4	0	0.2	0.8	0.4	0.8	0.4	0.2	5.4	5.4	0	1.2	2	1.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.4	0.4	0.2	0	0.2	0.4	0.2	0.6	0.2	0	2.8	2.8	0	0.6	1.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0.2	0	0.2	0.2	0	0	0.2	0	0	0.6	0.2	0	1.6	1.6	0	0.2	1	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.2	0.8	0.4	0.4	0	0.2	0.8	0.4	0.8	0.4	0.2	5.2	5.2	0	1.2	2	1.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.2	0.2	0.2	0	0.2	0.2	0.2	0.6	0.2	0	2.2	2.2	0	0.6	1.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.2	0	0	0	0.2	0	0	0.4	0.2	0	1.2	1.2	0	0.2	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.2	0	0	0	0	0	0	0.4	0	0	0.6	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer w7

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0.6	0.4	0	0.2	0.2	0.4	0	0	0.4	0.6	1.4	4.6	4.6	0	0.2	0.6	3.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0.2	0	0	0	0	0.2	0	0	0	0.2	0.6	1.2	1.2	0	0	0.2	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0.6	0.6	0	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0.2	0	0	0.2	0	0	0.6	0.4	0.2	0.2	0.2	2	2	0	0.8	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0.2	0	0	0	0	0	0	0	0	0.2	0.6	1.4	1.4	0	0	0	1.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.4	0.6	0.8	2	0.8	1.2	1.4	0.8	0.2	0.4	0.2	8.8	8.8	0	5.6	2	1	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0.2	0	0.2	0.2	0.2	0.2	0.6	0.6	0.2	0	0	2.4	2.4	0	1.2	0.8	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0.2	0	0	0.2	0	0	0.6	0.4	0.2	0	0	1.6	1.6	0	0.8	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.2	0	0	0	0	0	0	0.2	0.2	0	0	0.6	0.6	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer w8

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.2	0.6	0.6	0.2	0.4	0.4	0.2	0.2	0	1.2	0.8	2	7.8	7.8	0	0.4	1.6	4.4	1.4	0	0	0	0	0	0	0	0	0	0	0	0
1.5	1	0.4	0	0	0	0.2	0	0	0	0.6	0.4	0.8	3.4	3.4	0	0	0.2	2.4	0.8	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0.4	0	0	0	0	0	0	0	0.2	0	0.6	2.2	2.2	0	0	0	1.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0
3	0.4	0	0	0	0	0	0	0	0	0	0	0.4	0.8	0.8	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.8	0.2	0	0	0.2	0	0	0	0	0.8	0.4	2.6	6	5.8	1	0.2	0.8	3.2	1.8	0	0	0	0	0	0	0	0	0	0	0	0
1.5	1.2	0.2	0	0	0	0	0	0	0	0.4	0.2	1.4	3.4	3.4	0	0	0.4	2.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0
2	0.8	0.2	0	0	0	0	0	0	0	0.2	0.2	0.6	2	2	0	0	0.2	1.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.2	0.4	0	0	0	0	0	0	0	0.6	0.2	1.8	4.2	4.2	0	0	0.2	3.4	0.6	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.8	0.2	0	0	0	0	0	0	0	0	0	0.6	1.6	1.6	0	0	0	1.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.8	0.4	0	0	0	0	0	0	0	0.6	0.2	1.2	3.2	3.2	0	0	0.4	2	0.8	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.4	0.2	0	0	0	0	0	0	0	0	0	0.6	1.2	1.2	0	0	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.4	0	0	0	0	0	0	0	0	0	0	0.2	0.6	0.6	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	3	2.2	0.8	0.8	1	0.2	0.6	0.8	0.4	2.6	2	4	18.4	17.8	3	3.2	3	7.2	4.8	0.2	0	0	0	0	0	0	0	0	0	0	0
0.035	2.2	0.4	0	0	0.4	0	0	0	0	1	0.4	2.8	7.2	7	1	0.4	1	3.8	2	0	0	0	0	0	0	0	0	0	0	0	0
0.05	1.4	0.2	0	0	0	0	0	0	0	0.6	0.4	2.2	4.8	4.8	0	0	0.6	2.8	1.4	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0.8	0.2	0	0	0	0	0	0	0	0.2	0.2	1	2.4	2.4	0	0	0.2	1.8	0.4	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	/yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	1.8	0.4	0	0	0	0	0	0	0	0.6	0.4	2.4	5.6	5.6	0	0	0.6	3.4	1.6	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.8	0.2	0	0	0	0	0	0	0	0.2	0.2	1.2	2.6	2.6	0	0	0.2	2	0.4	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.6	0.2	0	0	0	0	0	0	0	0.2	0	0.6	1.6	1.6	0	0	0.2	1.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E1

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0	0	0.2	0.4	0	0	0.2	0.4	1.6	1.4	1	0.2	0.4	0.4	0	0	0.2	0	0	0	0	0	0.2	0.2	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.6	0.6	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0.2	0.2	0.4	0.8	0.2	0	0.2	0.4	2.8	2.8	0	0.4	0.4	0.4	0	0	0.2	0	0	0	0.2	0	0	0.6	0.6	0	0
1.5	0	0	0.2	0	0	0	0	0.4	0	0	0.2	0.2	1	1	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0	0	0.2	0.8	0	0	0.2	0.4	2	2	0	0	0.4	0.4	0	0	0.2	0	0	0	0	0	0	0.6	0.4	0	0
1.5	0	0	0.2	0	0	0	0	0.2	0	0	0.2	0.2	0.8	0.8	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0.2	0	0.2	0.2	0.2	0.6	0.4	0	0.2	0	2	2	0	0.4	0.4	0	0.2	0	0	0	0	0	0	0	0	0.4	0.6	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0.4	0	0	0	0	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E2

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0	0	0	0.2	0	0	0.2	0.4	1.4	1.4	0	0	0.4	0.6	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0
1.5	0.2	0	0.2	0	0	0	0	0	0	0	0.2	0.4	1	1	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0.2	0	0.2	0.2	0	0	0.4	0.6	2.2	2.2	0	0.4	0.4	0.8	0.2	0	0	0	0	0	0	0	0.4	0	0	0	0
1.5	0.2	0	0.2	0	0.2	0	0.2	0	0	0	0.2	0.6	1.6	1.6	0	0.4	0.4	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0.2	0.8	0.8	0	0.2	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0.2	0	0.2	0.2	0	0	0.2	0.6	2	2	0	0.4	0.4	0.8	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0
1.5	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0.4	1	1	0	0.2	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.2	0	0	0	0	0	0	0	0.2	0.4	1	1	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.2	0	0	0	0	0	0	0	0.2	0.2	0.6	0.6	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0	0.8	0	0.2	0	0.2	0	0.4	0	0.6	1	3.8	3.8	0	0.4	0.4	1.4	0.4	0	0	0	0	0	0	0.4	0.4	0.4	0	0	0
0.035	0.2	0	0.2	0	0.2	0	0.2	0	0	0	0.4	0.4	1.6	1.6	0	0.4	0.4	0.6	0	0	0	0	0	0	0	0	0.2	0	0	0	0
0.05	0.2	0	0.2	0	0.2	0	0.2	0	0	0	0.2	0.4	1.4	1.4	0	0.4	0.4	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.4	0	0.2	0	0.2	0	0.2	0	0	0	0.2	0.6	1.8	1.8	0	0.4	0.4	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.2	0	0.2	0	0	0	0	0	0.2	0.4	1.2	1.2	0	0.2	0.4	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E3

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0	0	0	0.4	0.2	0	0.2	0.4	1.6	1.4	1	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0.4	0.2	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.6	0.6	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0.4	0.4	0.2	0.6	0	0	0.2	0.2	2	2	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0.6	1	0	0
1.5	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
2	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0.2	0	0	0	0.2	0.6	0	0	0.2	0.4	1.6	1.6	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0.4	0.4	0	0
1.5	0	0	0	0	0	0	0	0.2	0	0	0.2	0	0.4	0.4	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
2	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0.2	0	0.6	1.8	0.2	0.6	0	0	0.2	0	3.6	3.6	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0.6	2.4	0	0
0.035	0	0	0.2	0	0	0	0	0.2	0	0	0	0	0.4	0.4	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.05	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0.2	0	0.2	0.4	0	0	0	0	0.8	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0	0
0.035	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E4

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0.2	0	0	0	0	0	0.2	0	0	0.2	0.4	1.2	1.2	0	0	0.4	0.2	0.2	0	0	0	0	0	0.2	0	0.2	0	0	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0	0.2	0.2	0.6	0.6	0	0	0.2	0.2	0	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0.4	0.2	0	0	0	0	0	0.2	0	0.2	0.6	2.2	2.2	0	0	0.2	0.2	0	0	0	0	0	0	0.2	0.2	0.8	0.6	0	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0	0	0	0	0	0.2	0	0.2	0.6	1.2	1.2	0	0	0.2	0.2	0.2	0	0	0	0	0	0.2	0.2	0	0.2	0	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.4	0.4	0.2	0	0	0	0.2	0.2	0	0.4	0.8	3.2	3.2	0	0	0.6	0.6	0.2	0	0	0	0	0	0	0	0.2	1	0.6	0	0
0.035	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E5

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0	0	0	0	0
0.035	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E6

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0.4	0	0	0	0	0	0	0	0	0.2	0.2	1	1	0	0	0	0	0	0	0	0.2	0	0	0.2	0.4	0.2	0	0	0	0
0.035	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E7

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
1.5	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
2	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0.2	0	0.4	0	0	0	0	0	0.4	0.2	0.6	2	2	0	0	0	0.6	0.2	0	0.2	0.2	0	0.2	0	0.2	0.4	0	0	0	0
0.035	0.2	0.2	0	0.4	0	0	0	0	0	0	0	0.2	1	1	0	0	0	0.4	0.2	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.05	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.075	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.035	0.2	0	0	0.2	0	0	0	0	0	0	0	0.2	0.6	0.6	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer E8

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0.2	0	0	0	0	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0.6	0.6	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0.2	0	0	0	0	0	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0.2	0	0.2	0.2	0	0	0	0.2	1.2	1.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0.8	0.2	0	0
0.035	0	0	0	0	0	0	0.2	0	0	0	0	0	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Attachment C

Statistical Summaries for Case 2 at Saguaro NP East and West Units – Revision 1

Observer W1

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0.4	0	0.4	0	0	0	0.4	0.6	0	2	2	0	0.2	1.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0	0	0	0.4	0	0	0	0	0.2	0	0.8	0.8	0	0.2	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0	0	0	0.2	0	0	0	0	0	0	0.4	0.4	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.4	0.8	0.2	1	0.2	0.4	0.6	0.2	0.2	0	4.2	4.2	0	1.4	2.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0.4	0.4	0	0.8	0.2	0	0.4	0	0.2	0	2.4	2.4	0	1	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.4	0.4	0	0.6	0	0	0.4	0	0.2	0	2	2	0	0.8	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.4	0.4	0	0.4	0	0	0.2	0	0.2	0	1.6	1.6	0	0.6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.4	0.4	0	0.8	0.2	0.2	0.4	0.2	0.2	0	3	3	0	1	1.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0.4	0.4	0	0.4	0	0	0.4	0	0.2	0	1.8	1.8	0	0.6	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0.2	0	0.4	0	0	0.2	0	0.2	0	1.2	1.2	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0.2	0	0.2	0	0	0	0	0.2	0	0.6	0.6	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.4	0.2	0.4	1	0.2	1.4	0.4	0.8	0.6	0.8	1	0.2	7.4	7.2	1	1.6	3.6	1.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.4	0.8	0.2	1	0.2	0.4	0.6	0.2	0.2	0	4.2	4.2	0	1.4	2.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.4	0.6	0	1	0.2	0	0.6	0	0.2	0	3	3	0	1.2	1.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.4	0.4	0	0.8	0	0	0.4	0	0.2	0	2.2	2.2	0	1	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.4	0.8	0.2	1	0.2	0.4	0.6	0.2	0.2	0	4.2	4.2	0	1.4	2.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.4	0.4	0	0.8	0.2	0.2	0.4	0	0.2	0	2.6	2.6	0	1	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.4	0.4	0	0.4	0	0	0.4	0	0.2	0	1.8	1.8	0	0.6	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.2	0.2	0	0.4	0	0	0.2	0	0.2	0	1.2	1.2	0	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W2

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0.2	0	0.4	0	0	0.2	0.2	0.8	0	2.4	2.4	0	0.4	1	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.4	0	0.2	0	0	0.2	0	0	0.2	0.2	0.2	0	1.4	1.4	0	0.2	0.6	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0.4	0	0.2	0	0	0	0	0	0.2	0	0	0	0.8	0.8	0	0	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.4	0	0	0	0	0	0.2	0	0.4	0	1.4	1.4	0	0	0.8	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0.2	0	0.2	0	0	0.2	0	0.4	0	1.6	1.6	0	0.4	0.6	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.2	0	0	0	0	0	0	0	0.2	0	0.6	0.6	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.2	0.4	0.4	0	0.6	0	0	0.4	0	0.6	0.2	3.4	3.4	0	0.8	1.2	0.8	0.6	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.4	0.2	0	0.2	0	0	0.2	0	0.4	0	1.6	1.6	0	0.2	0.8	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.2	0	0	0	0	0	0	0	0.4	0	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.2	0	0	0	0	0	0	0	0.2	0	0.6	0.6	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W3

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.6	0	0.6	0.2	0	0.4	0.4	0	0.6	0.8	1.6	0.6	6.8	6.6	1	0.4	1.2	3	0.8	0	0.2	0	0	0	0.2	0.2	0.6	0.2	0	0	0
1.5	1	0	0.2	0.2	0	0.4	0	0	0.2	0.6	0.4	0.2	3.2	3	1	0.4	0.8	1.2	0.6	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0.2	0	0.2	0	0	0.2	0	0	0.2	0.4	0.4	0.2	1.8	1.8	0	0.2	0.6	0.6	0.2	0	0	0	0	0	0.2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0.4	0.2	0.4	0	0.4	0	0	0.2	0.4	0.6	0.4	3.4	3.4	0	0.4	1.2	0.8	0.6	0	0	0	0	0	0.2	0.2	0	0	0	0	0
1.5	0.2	0	0	0	0	0.2	0	0	0	0.4	0.2	0.2	1.2	1.2	0	0.2	0.2	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	0	0.2	0.2	0	0.6	0	0	0.2	0.6	0.6	0.4	3.8	3.6	1	0.4	1	1.6	0.6	0	0	0	0	0	0.2	0	0	0	0	0	0
1.5	0.2	0	0.2	0	0	0.2	0	0	0.2	0.2	0.4	0.2	1.6	1.6	0	0.2	0.4	0.6	0.2	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0.2	0	0	0	0	0.2	0	0	0	0.2	0.2	0.2	1	1	0	0.2	0	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0	0	0	0	0	0	0	0	0.4	0.4	1	1	0	0	0.2	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.4	0.8	0.6	0	0.4	0.2	0	0.4	0.4	0.8	0.2	4.8	4.6	1	0.6	1.4	1.6	0.6	0	0	0	0	0	0	0.4	0	0	0.2	0	0
0.035	0	0.4	0	0.2	0	0	0	0	0	0.2	0.4	0.2	1.4	1.4	0	0	0.6	0	0.6	0	0	0	0	0	0	0.2	0	0	0	0	0
0.05	0	0.4	0	0.2	0	0	0	0	0	0.2	0.2	0	1	1	0	0	0.6	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.2	0	0	0	0	0	0	0	0.2	0.2	0.4	1	1	0	0	0.2	0.2	0.2	0	0	0	0	0	0.2	0.2	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W4

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0	1	0.6	0	0.4	0	0	0.4	1.2	1.2	0.2	5.6	5.6	0	0.4	3	1.8	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.4	0	0.6	0.2	0	0.4	0	0	0.4	0.6	0.8	0	3.4	3.4	0	0.4	1.8	1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0	0	0	0.2	0	0	0.4	0.4	0.2	0	1.4	1.4	0	0.2	0.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.6	0	1.2	1	0.2	1	0.4	0.8	0.8	1.2	0.6	0	7.8	7.8	0	2.2	3.6	1.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.6	0.6	0.2	0.8	0.2	0.2	0.2	0.6	0.4	0	4	4	0	1.6	2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.6	0.4	0	0.2	0.2	0	0.2	0.4	0.2	0	2.2	2.2	0	0.6	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.6	0.2	0	0	0	0	0	0.2	0.2	0	1.2	1.2	0	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	1	1	0.2	1	0.4	0.2	0.6	1	0.6	0.2	6.6	6.6	0	1.8	3.4	1	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.6	0.4	0	0.2	0.2	0	0.2	0.6	0.4	0	2.8	2.8	0	0.6	1.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.6	0.4	0	0	0	0	0.2	0.4	0.4	0	2	2	0	0.2	1.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.4	0	0.6	0.2	0	0.2	0	0	0	0.4	0.4	0	2.2	2.2	0	0.2	1.2	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.8	0.6	1.2	1.2	0.8	1.4	0.6	1.2	1.2	1.8	2	0.4	13.2	12.8	2	3.2	5.4	3.4	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.4	0	1	1	0.4	0.8	0.4	0.4	0.8	0.8	0.6	0	6.6	6.6	0	2.2	2.6	1.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.8	0.4	0.2	0.8	0.4	0.2	0.2	0.4	0.2	0	3.8	3.8	0	1.8	1.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.6	0.4	0	0.2	0.2	0	0.2	0.2	0.2	0	2	2	0	0.6	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																	
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0	1.2	1.2	0.6	1	0.4	1	1	1.2	1	0	9.2	9.2	0	2.6	4.6	1.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.6	0.4	0.2	0.8	0.2	0.2	0.2	0.4	0.2	0	3.4	3.4	0	1.6	1.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.6	0.4	0	0	0.2	0	0.2	0.2	0.2	0	1.8	1.8	0	0.4	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.6	0.2	0	0	0	0	0	0.2	0.2	0	1.2	1.2	0	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W5

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0.4	0	0	0	0	0	0.2	0.4	0.2	0.2	1.4	1.4	0	0	0.4	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0.4	0	0.2	0	0	0	0	0	0.4	0.2	0	1.2	1.2	0	0	0.4	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0.6	0.6	0	0	0	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.4	0.4	0.2	0	0	0.2	0	0	0.4	0.4	0	2	2	0	0	0.4	1	0.4	0	0	0	0	0	0	0	0	0	0.2	0	0
0.035	0	0.4	0	0.2	0	0	0	0	0	0.2	0.2	0	1	1	0	0	0.4	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0.4	0.4	0	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W6

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.4	0	0	0	0	0.2	0.4	0.4	0.6	0.2	2.6	2.6	0	0.2	1.2	1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.2	0	0	0	0	0	0.2	0.4	0.4	0.2	1.6	1.6	0	0	0.6	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0.2	0.2	0.4	0.2	1.2	1.2	0	0	0.6	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0.2	0.2	0.4	0.4	0	0.2	0.8	0.2	0.6	0.6	0.2	4	4	0	1.2	1.6	1	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.2	0.2	0.2	0	0.2	0	0	0.6	0.2	0	1.8	1.8	0	0.4	1	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.2	0	0.2	0	0	0	0.2	0	0	0.4	0	0	1	1	0	0.2	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.2	0	0	0	0	0	0	0.4	0	0	0.6	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0.2	0.2	0	0	0	0.2	0.2	0.2	0.8	0.6	0.2	3	3	0	0.4	1	1.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.2	0	0.2	0	0	0	0	0	0.2	0.4	0.2	0.2	1.4	1.4	0	0	0.8	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0	0.4	0	0	0.6	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0.2	0	0	0	0	0	0.2	0.2	0.2	0.2	1	1	0	0	0.6	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.8	0.8	0.4	0.6	0.2	0.2	1	0.4	0.8	0.6	0.2	6.6	6.6	0	1.4	2.4	2	0.8	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0.2	0.6	0.4	0.4	0	0.2	0.8	0.4	0.6	0.2	0.2	4.2	4.2	0	1.2	1.8	0.8	0.4	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.2	0.2	0.2	0	0.2	0.2	0	0.6	0.2	0	2	2	0	0.6	1	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0.2	0	0.2	0	0	0	0	0	0	0.4	0	0	0.8	0.8	0	0	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.6	0.2	0.6	0.4	0.4	0	0.2	0.8	0.4	0.6	0.4	0.2	4.8	4.8	0	1.2	2	1.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.2	0	0	0	0.2	0	0	0.4	0.2	0	1.2	1.2	0	0.2	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.2	0	0	0	0	0	0	0.4	0	0	0.8	0.8	0	0	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.2	0	0	0	0	0	0	0.4	0	0	0.6	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W7

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0.6	0.4	0	0	0.2	0.6	0	0.2	0.6	0.6	1.4	5	5	0	0	1.2	3.2	0.6	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0.2	0	0	0	0	0.2	0	0	0	0.2	0.6	1.2	1.2	0	0	0.2	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0.6	0.6	0	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0.2	0	0	0	0	0	0.2	0.2	0.2	0.2	0.2	1.2	1.2	0	0.2	0.4	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0.2	0	0	0	0	0	0	0	0	0.2	0.6	1.4	1.4	0	0	0	1.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.4	0.4	0.4	1.4	0.4	1	1.2	0.6	0.2	0.2	0.2	6.4	6.4	0	4.2	1.4	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0.2	0	0	0.2	0	0	0.6	0.4	0.2	0	0	1.6	1.6	0	0.8	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W8

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	1.2	0.8	0.4	0	0.4	0.2	0.2	0.2	1.2	1	2	8.6	8.6	0	0	2	4.8	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	1	0.4	0	0	0	0.2	0	0	0	1	0.4	1	4	4	0	0	0.6	2.6	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0.4	0	0	0	0	0	0	0	0.4	0	0.6	2.4	2.4	0	0	0	1.8	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0.4	0	0	0	0	0	0	0	0	0	0	0.2	0.6	0.6	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.6	0.2	0	0	0	0	0	0	0	0.4	0.4	2.2	4.8	4.8	0	0	0.4	3	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.8	0.2	0	0	0	0	0	0	0	0.2	0.2	0.8	2.2	2.2	0	0	0.2	1.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0.6	0	0	0	0	0	0	0	0	0.2	0	0.6	1.4	1.4	0	0	0.2	1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.2	0.4	0	0	0	0	0	0	0	0.6	0.2	1.4	3.8	3.8	0	0	0.2	3	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0.6	0	0	0	0	0	0	0	0	0	0	0.4	1	1	0	0	0	0.8	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.8	0.4	0	0	0	0	0	0	0	0.6	0.2	1	3	3	0	0	0.4	2	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.4	0.2	0	0	0	0	0	0	0	0	0	0.4	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	2.8	1.4	0.2	0.4	1	0	0.6	0.6	0.2	1.8	1.4	3.8	14.2	14	1	2.6	1.6	6.2	3.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	1.8	0.2	0	0	0.2	0	0	0	0	0.6	0.4	2.4	5.6	5.6	0	0.2	0.6	3.2	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	1.2	0.2	0	0	0	0	0	0	0	0.4	0.2	1.6	3.6	3.6	0	0	0.4	2.4	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0.6	0.2	0	0	0	0	0	0	0	0.2	0.2	0.6	1.8	1.8	0	0	0.2	1.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	1.6	0.2	0	0	0	0	0	0	0	0.4	0.4	2	4.6	4.6	0	0	0.4	3	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.8	0.2	0	0	0	0	0	0	0	0.2	0.2	0.6	2	2	0	0	0.2	1.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W1

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0	0	0	0	0	0	0.2	0.4	1	1	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.6	0.6	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0	0	0	0.6	0	0	0.2	0.4	1.6	1.6	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0.2	0.4	0	0
1.5	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0	0	0	0.2	0	0	0.2	0.4	1.2	1.2	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0.2	0	0	0
1.5	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0.2	0	0.2	0.2	0.2	0.4	0.2	0	0.2	0	1.6	1.6	0	0.4	0.4	0	0.2	0	0	0	0	0	0	0	0	0	0.6	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0.2	0	0	0.2	0	0.4	0.4	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W2

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0	0	0	0.2	0.2	0	0.2	0.4	1.6	1.6	0	0	0.4	0.8	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0
1.5	0.4	0	0.2	0	0	0	0	0	0	0	0.2	0.4	1.2	1.2	0	0	0.4	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0.2	0	0.2	0.2	0	0	0.2	0.6	2	2	0	0.4	0.4	0.8	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0
1.5	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0.6	1.2	1.2	0	0.2	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.6	0.6	0	0.2	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.4	0	0.2	0	0.2	0	0	0.2	0	0	0.2	0.6	1.8	1.8	0	0.2	0.4	0.8	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0
1.5	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.8	0.8	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0.2	0	0	0	0	0	0	0	0.2	0.2	0.6	0.6	0	0	0.4	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.2	0	0	0	0	0	0	0	0.2	0.4	1	1	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.4	0	0.8	0	0.2	0	0.2	0	0.2	0	0.6	0.8	3.2	3.2	0	0.4	0.4	1.2	0.4	0	0	0	0	0	0	0	0.4	0.4	0	0	0
0.035	0.2	0	0.2	0	0.2	0	0.2	0	0	0	0.2	0.4	1.4	1.4	0	0.4	0.4	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.2	0	0.2	0	0.2	0	0	0	0	0	0.2	0.2	1	1	0	0.2	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.2	0	0.2	0	0.2	0	0	0	0.2	0.6	1.6	1.6	0	0.4	0.4	0.6	0.2	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0.2	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.8	0.8	0	0.2	0.4	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0.4	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W3

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0.2	0	0	0	0	0.2	0	0	0.2	0.4	1.2	1.2	0	0	0.4	0.4	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.6	0.6	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0.2	0	0	0	0	0.4	0	0	0.2	0.4	1.2	1.2	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0
1.5	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
2	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0.2	0	0	0	0	0.2	0	0	0.2	0.4	1	1	0	0	0.4	0.2	0.2	0	0	0	0	0	0	0	0	0.2	0	0	0
1.5	0	0	0	0	0	0	0	0.2	0	0	0.2	0	0.4	0.4	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0.2	0	0.4	0	0.2	0.6	0	0	0.2	0	1.6	1.6	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0.6	0.6	0	0
0.035	0	0	0.2	0	0	0	0	0.2	0	0	0	0	0.4	0.4	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.05	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.035	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W4

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0	0	0	0	0	0	0	0.2	0.4	0.8	0.8	0	0	0.2	0.2	0.2	0	0	0	0	0	0.2	0	0	0	0	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0	0.2	0.2	0.6	0.6	0	0	0.2	0.2	0	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0	0	0	0	0	0.2	0	0.2	0.4	1	1	0	0	0.2	0.2	0	0	0	0	0	0	0.2	0.2	0	0.2	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0	0	0	0	0	0	0	0.2	0.4	0.8	0.8	0	0	0.2	0.2	0.2	0	0	0	0	0	0.2	0	0	0	0	0	0
1.5	0.2	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0.2	0.2	0	0	0	0.2	0	0	0.2	0.6	1.6	1.6	0	0	0.6	0.6	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)																
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W5

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W6

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.4	0.4	0	0	0	0	0	0	0	0.2	0	0	0	0	0.2	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/	Days/	Consecutive	Observed Hour per year (Local Standard Time)														
Greater than	1	2	3	4	5	6	7	8	9	10	11	12	yr	yr	Hours	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W7

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
1.5	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.6	0.6	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0.2	0	0.4	0	0	0	0	0	0	0.2	0.4	1.4	1.4	0	0	0	0.4	0.2	0	0	0.2	0	0.2	0	0.2	0.2	0	0	0	0
0.035	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.05	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0.2	0	0	0.4	0	0	0	0	0	0	0	0.2	0.8	0.8	0	0	0	0.4	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0
0.035	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Observer W8

Delta E - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0	0	0	0	0	0.2	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Delta E-Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Sky	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

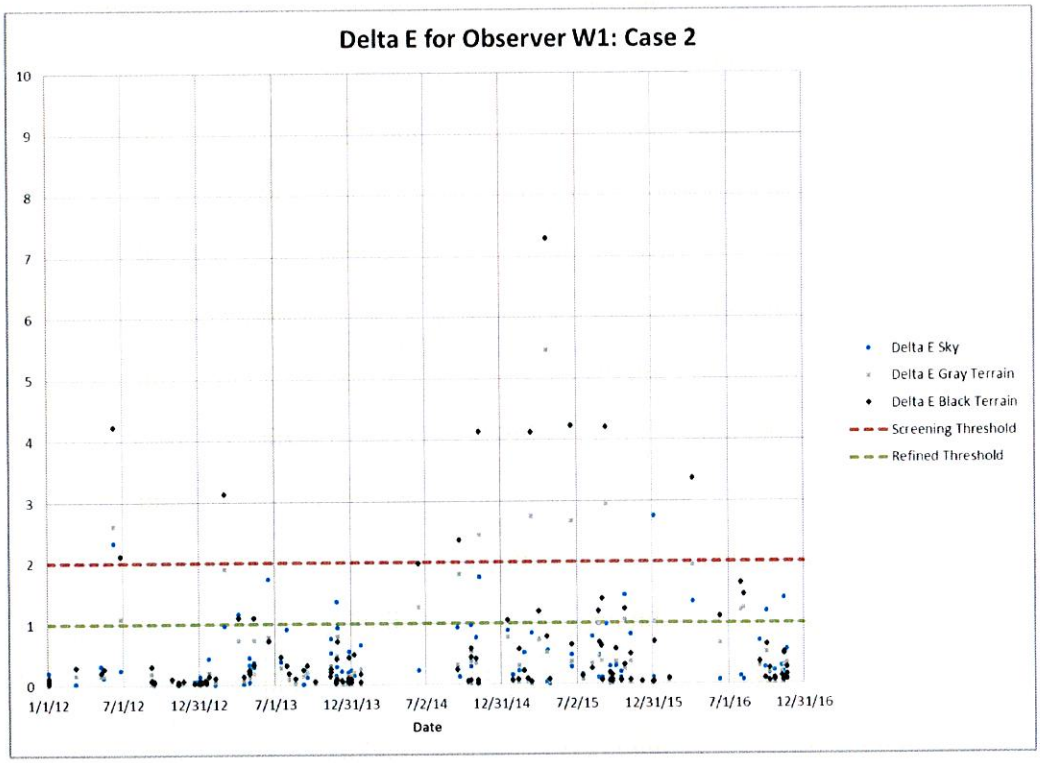
Cp - Black Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0.2	0	0	0	0	0.2	0	0	0	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.035	0	0	0	0.2	0	0	0	0	0.2	0	0	0	0.4	0.4	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cp - Gray Terrain	Monthly Distribution of Average Hours per year												Hours/ yr	Days/ yr	Consecutive Hours	Observed Hour per year (Local Standard Time)															
Greater than	1	2	3	4	5	6	7	8	9	10	11	12				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.02	0	0	0	0	0	0	0	0	0.2	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
0.035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Attachment D

Time-series Plots of the Modeled Case 2 Visibility Parameters for Each Observer for a Background Sky, Black Background Terrain and Gray Background Terrain – Revision 1

Figure D-1 Time Series of Delta E and Cp for Case 2: Observer W1



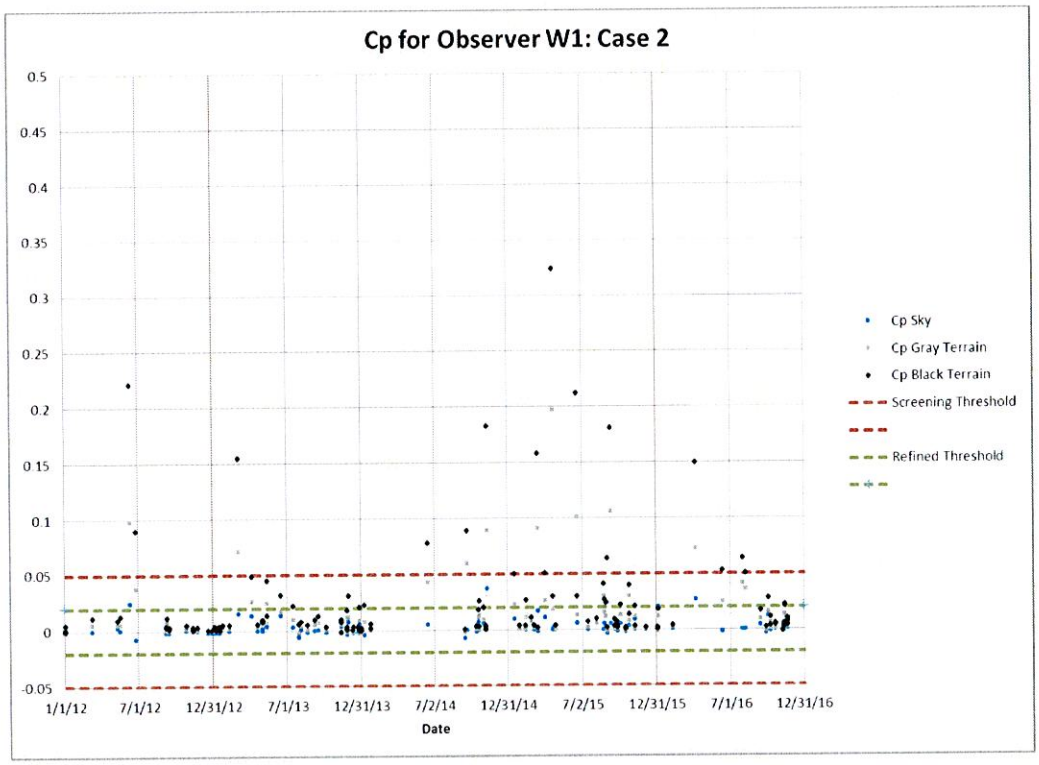
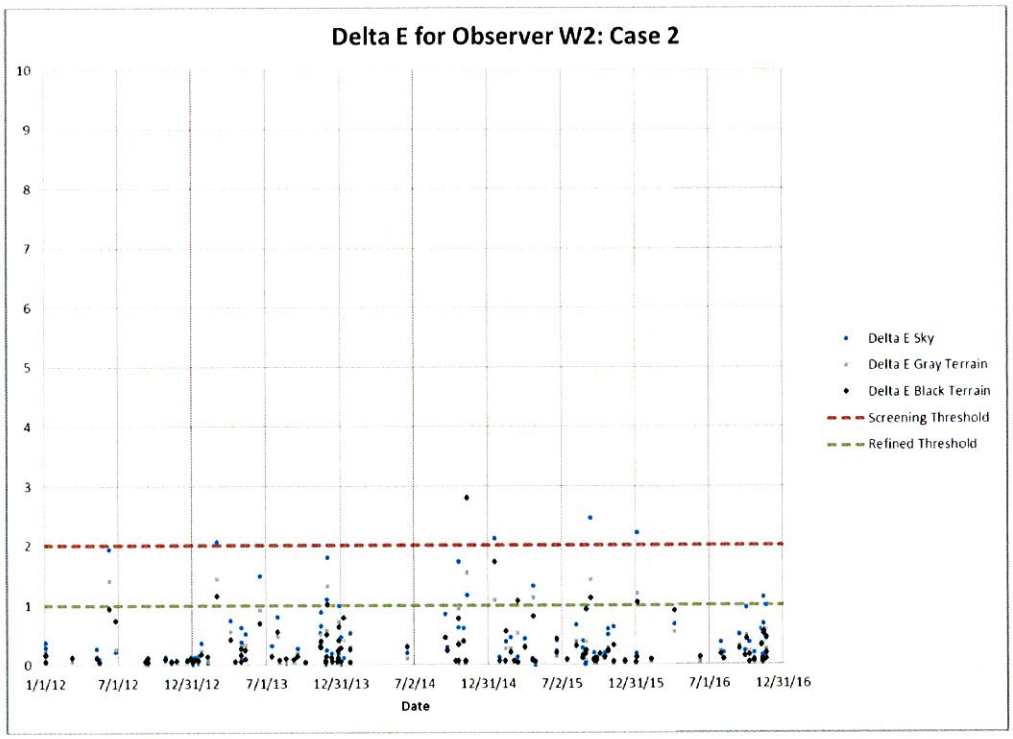


Figure D-2 Time Series of Delta E and Cp for Case 2: Observer W2



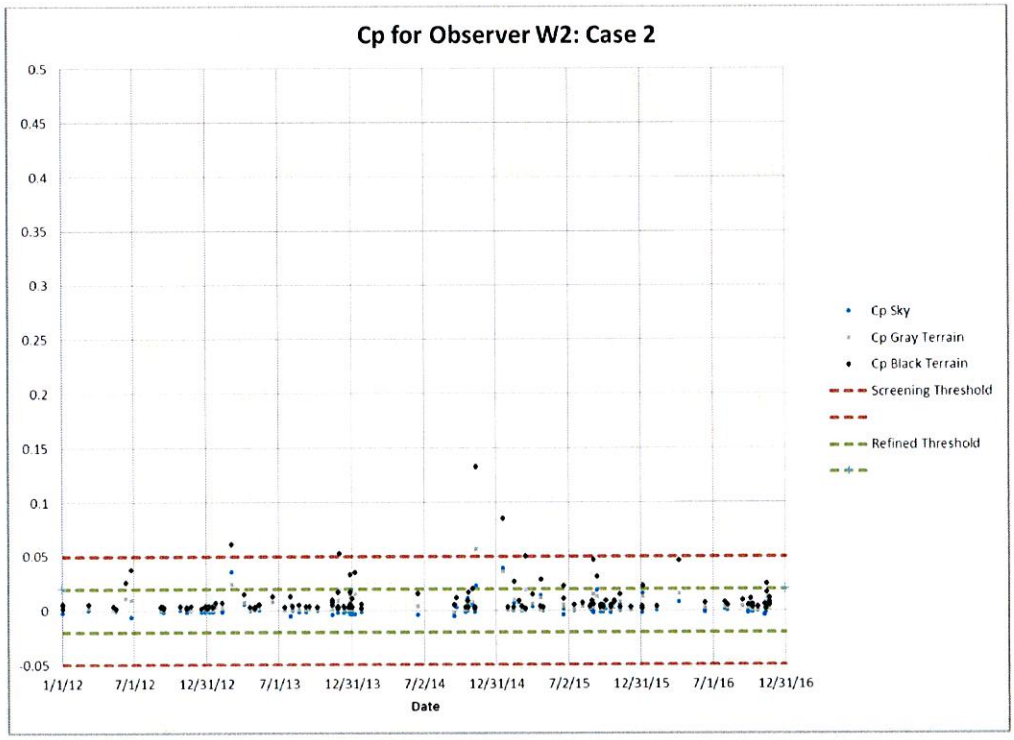
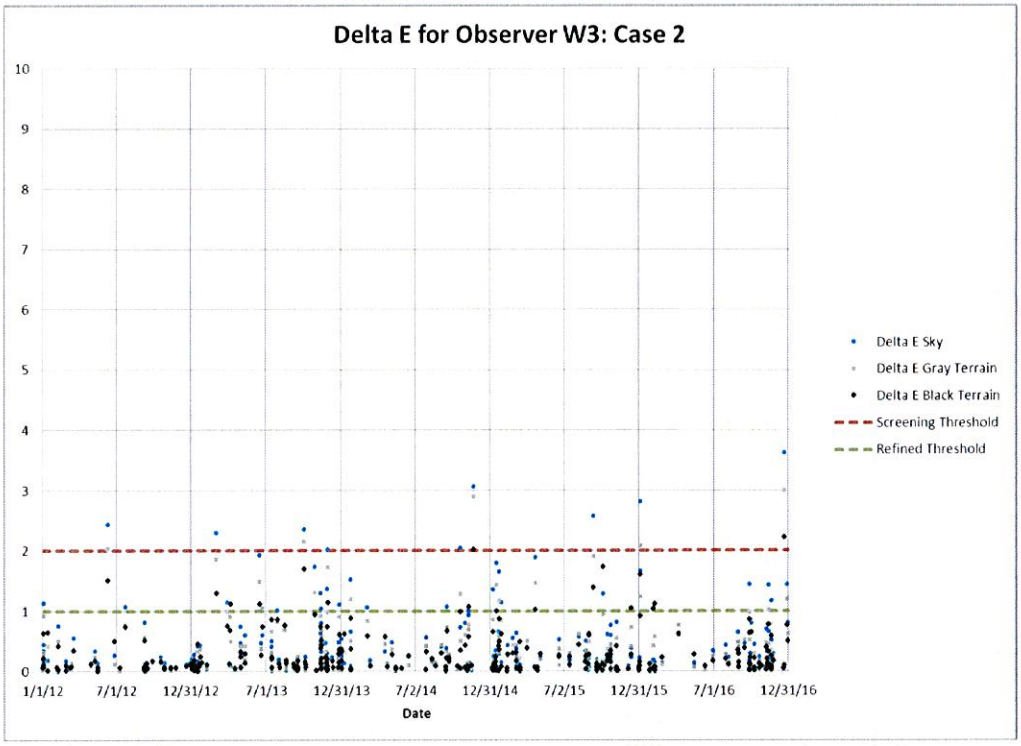


Figure D-3 Time Series of Delta E and Cp for Case 2: Observer W3



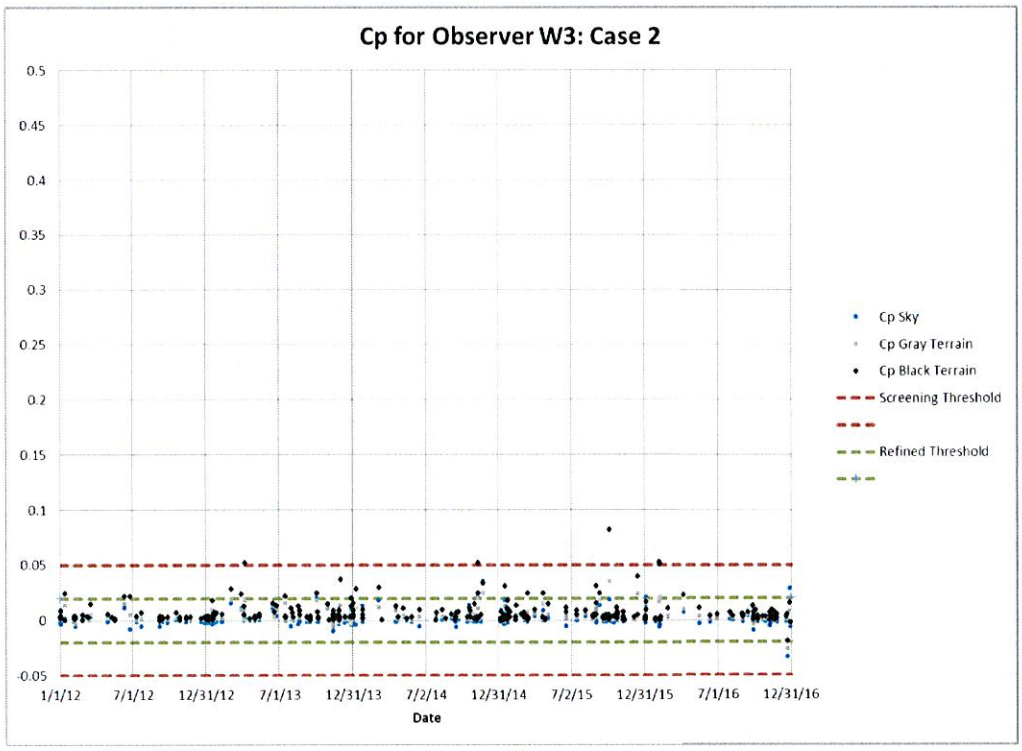
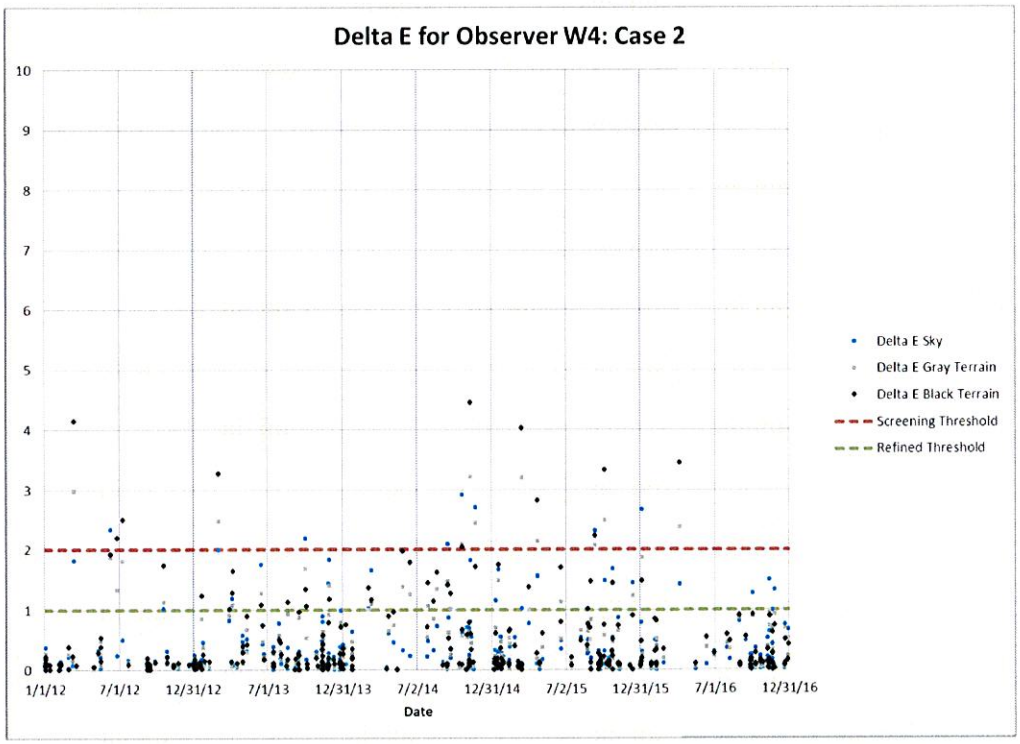


Figure D-4 Time Series of Delta E and Cp for Case 2: Observer W4



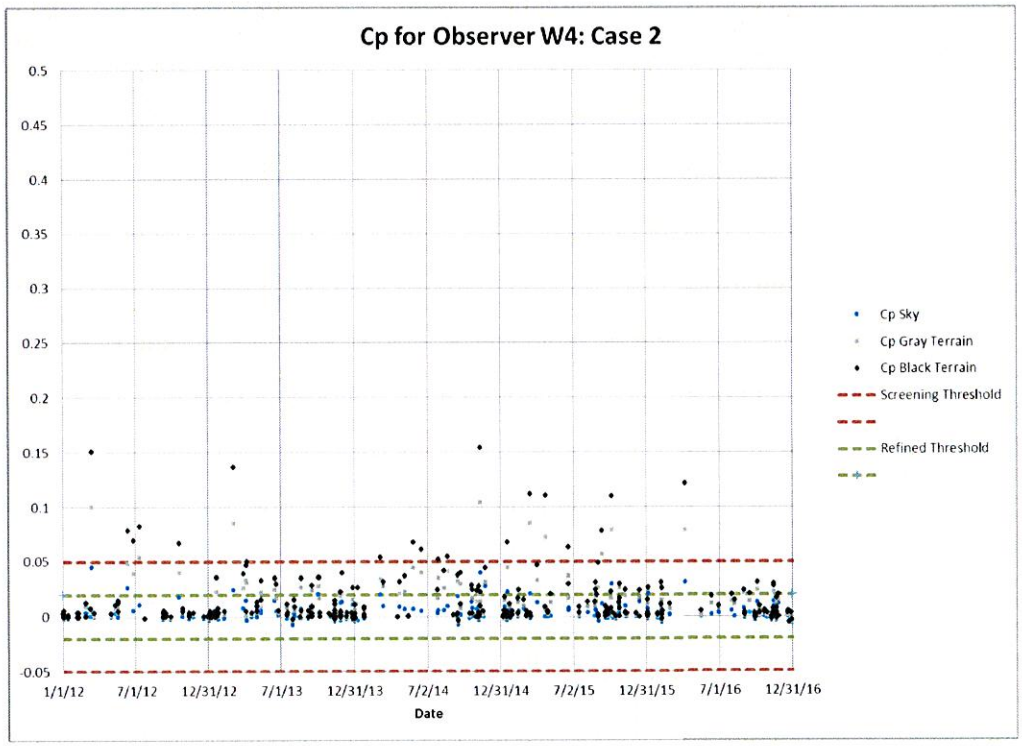
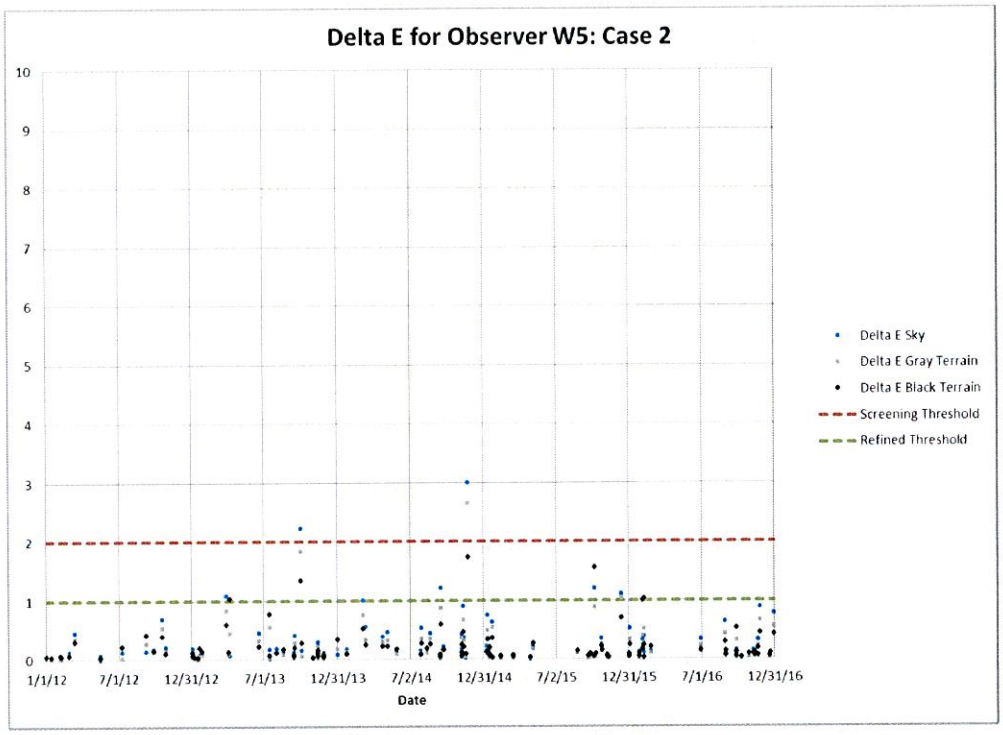


Figure D-5 Time Series of Delta E and Cp for Case 2: Observer W5



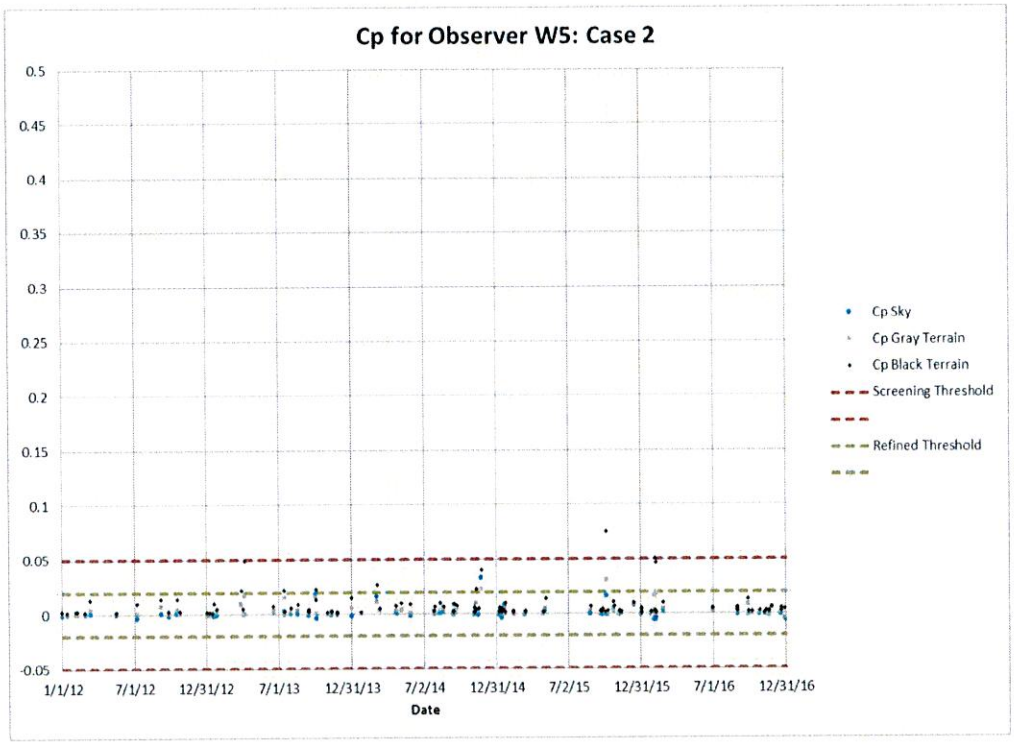
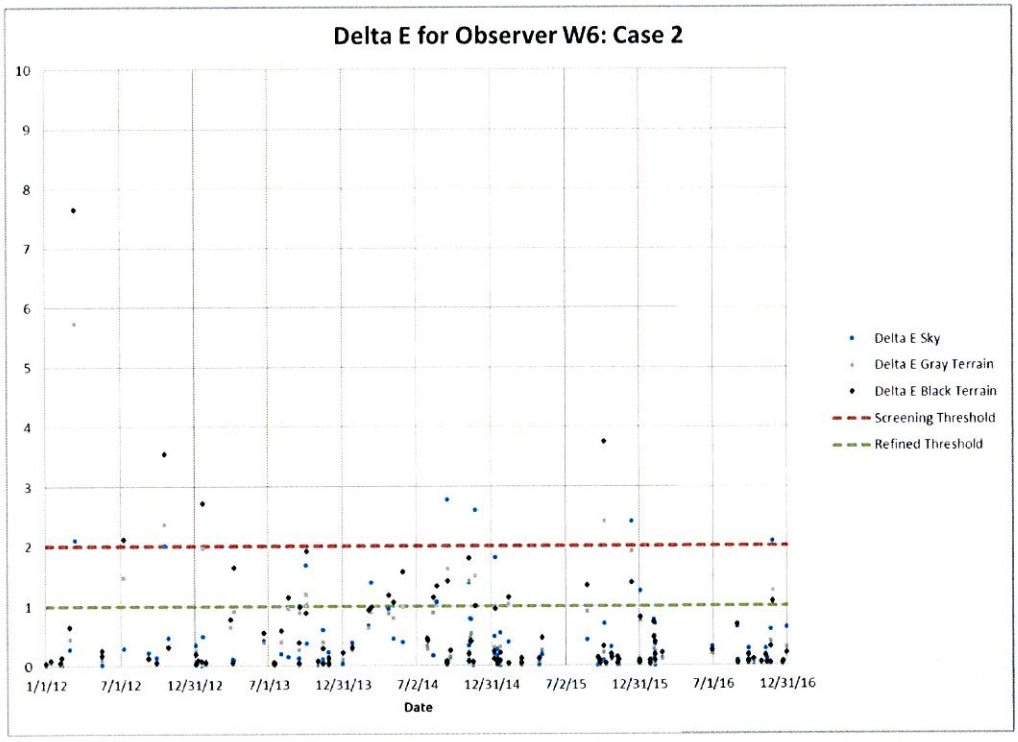


Figure D-6 Time Series of Delta E and Cp for Case 2: Observer W6



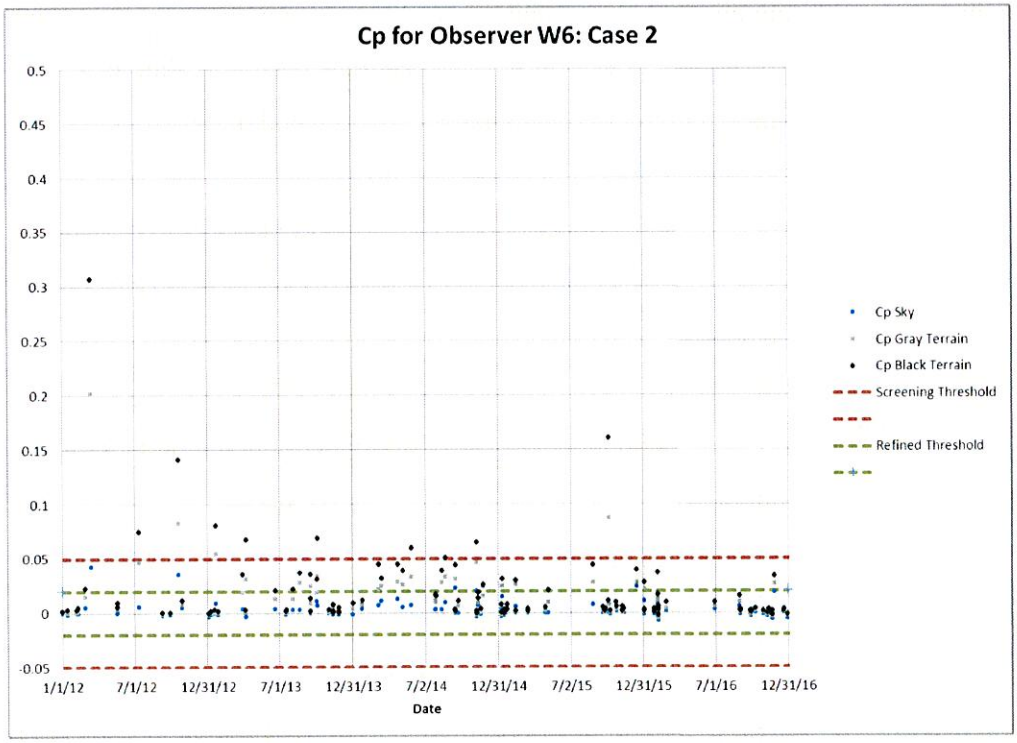
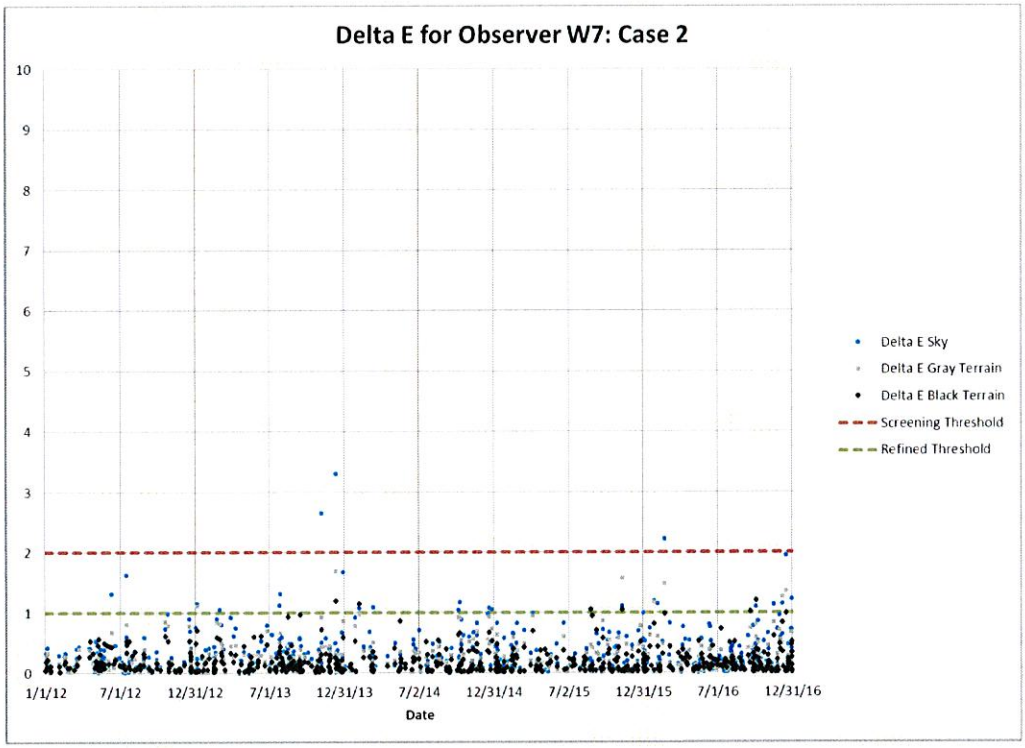


Figure D-7 Time Series of Delta E and Cp for Case 2: Observer W7



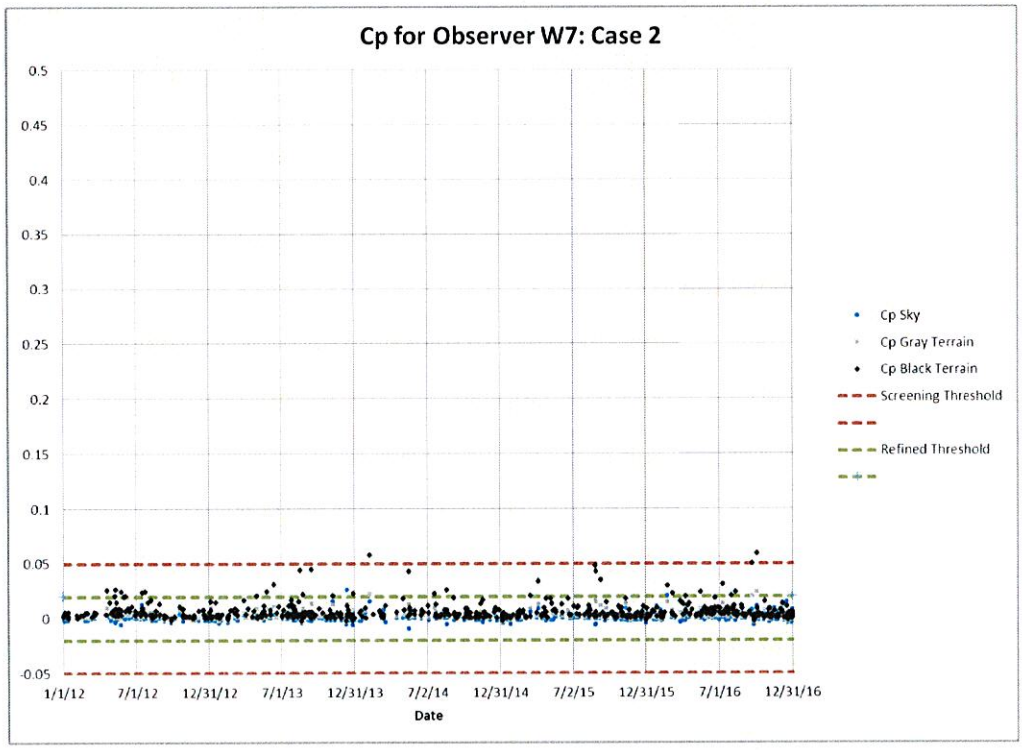
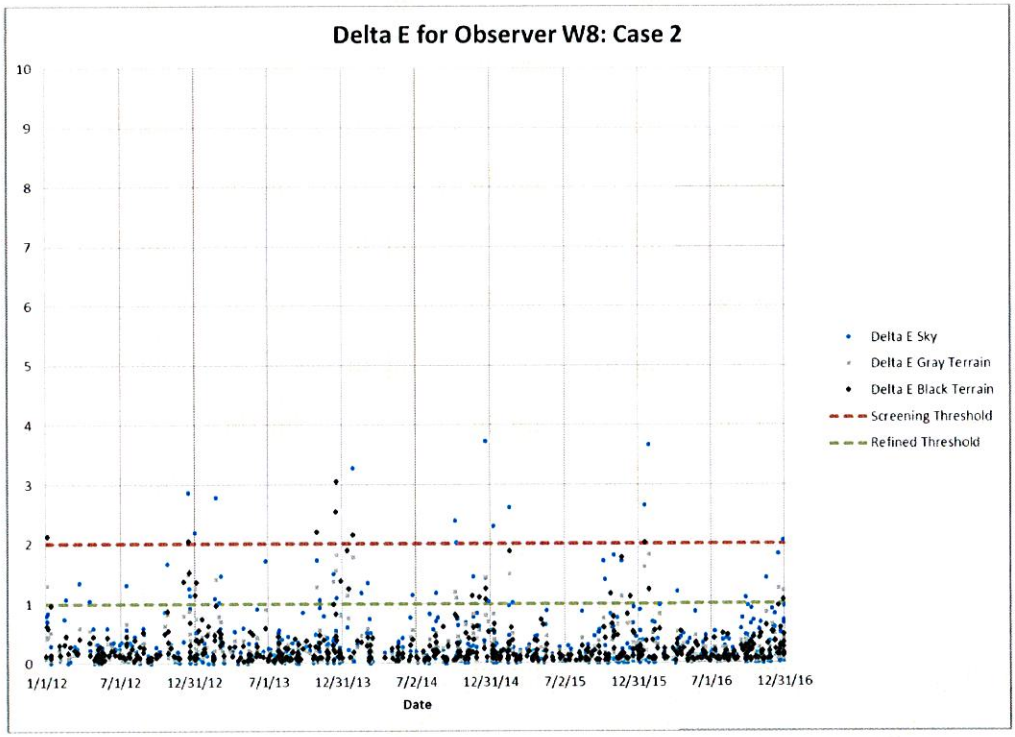


Figure D-8 Time Series of Delta E and Cp for Case 2: Observer W8



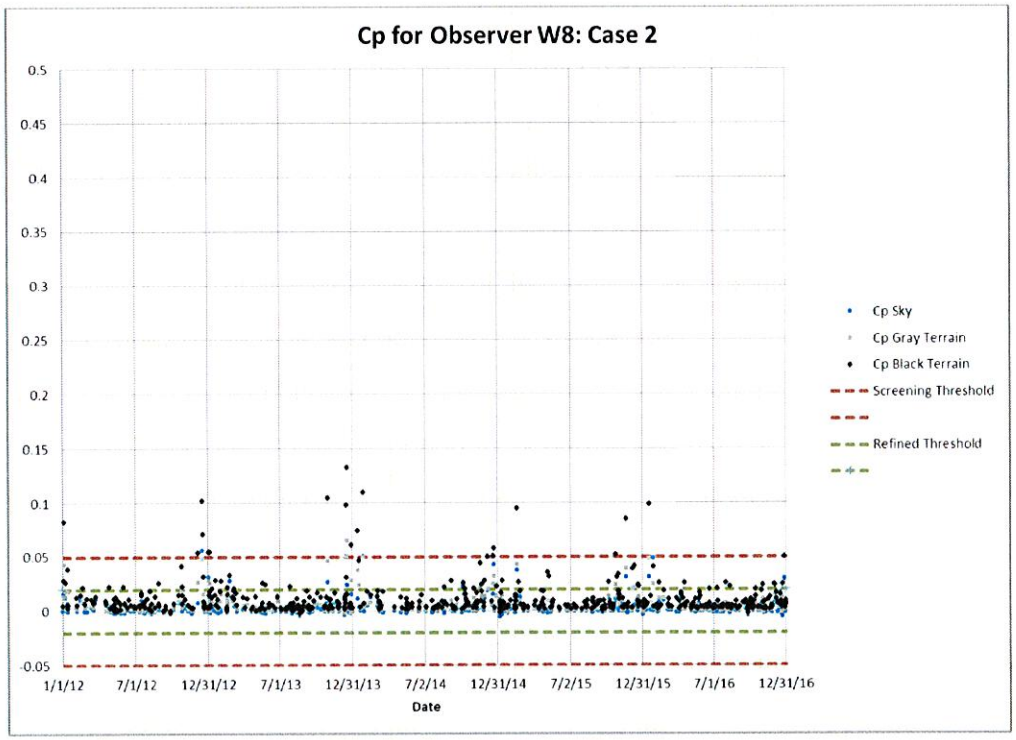
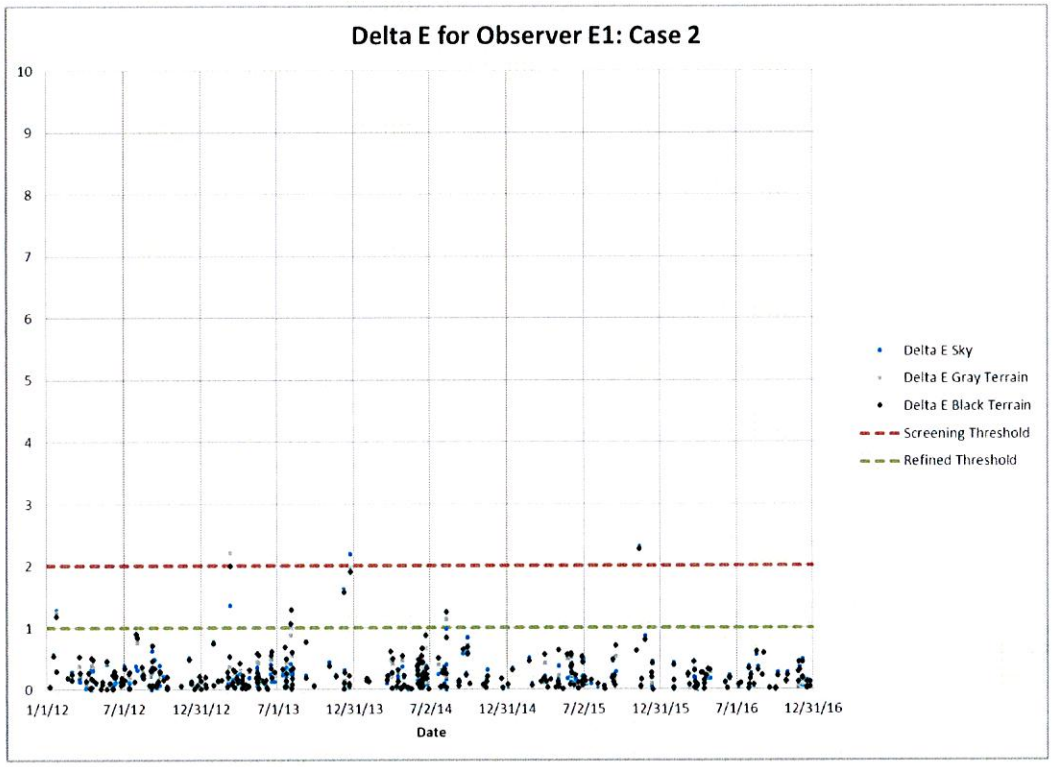


Figure D-9 Time Series of Delta E and Cp for Case 2: Observer E1



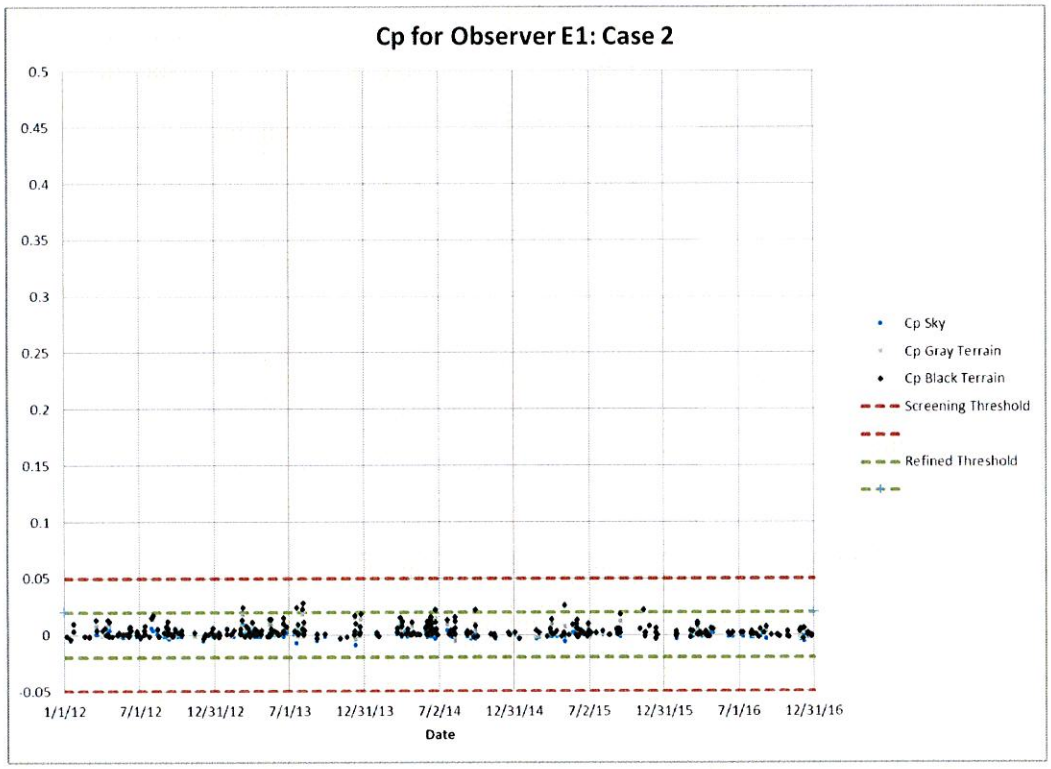
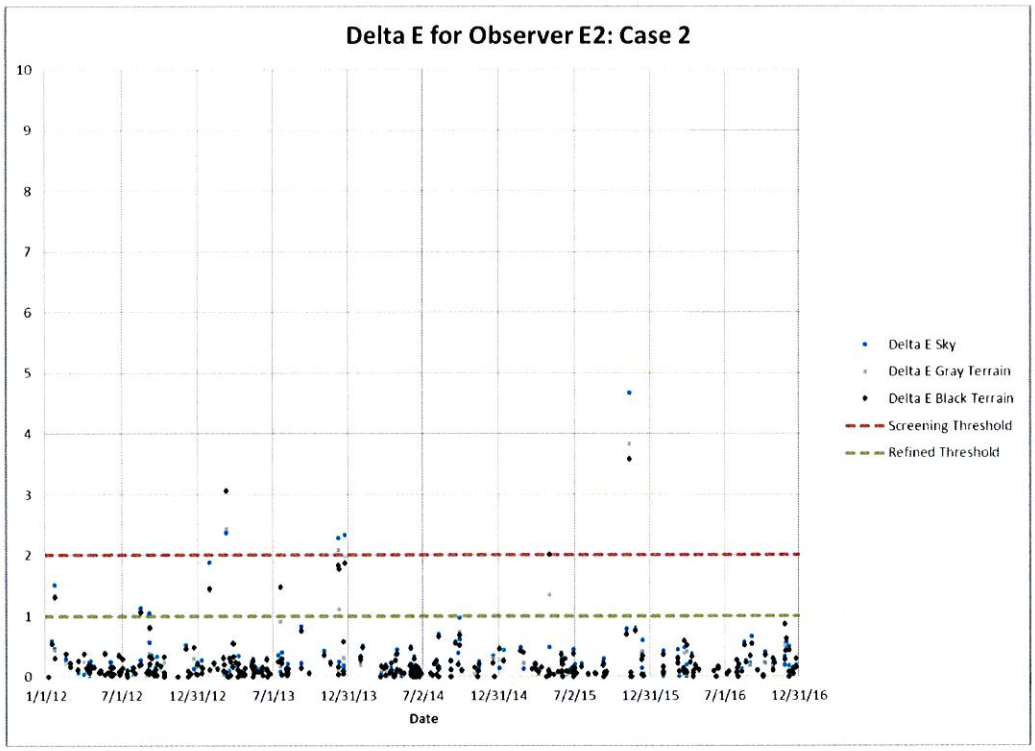


Figure D-10 Time Series of Delta E and Cp for Case 1: Observer E2



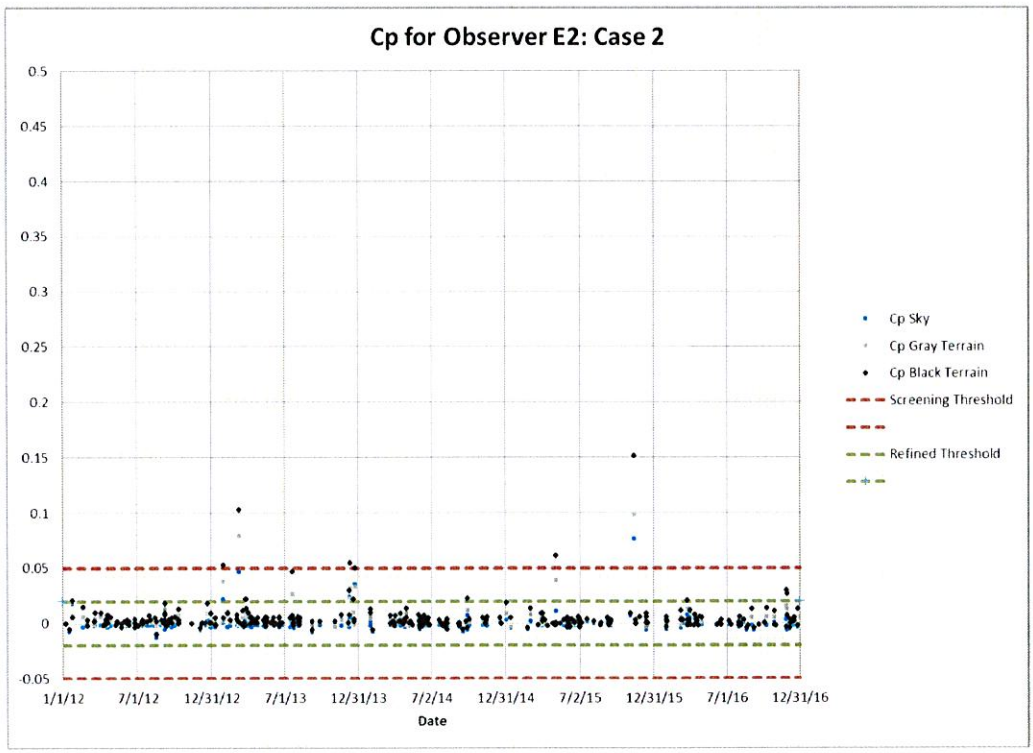
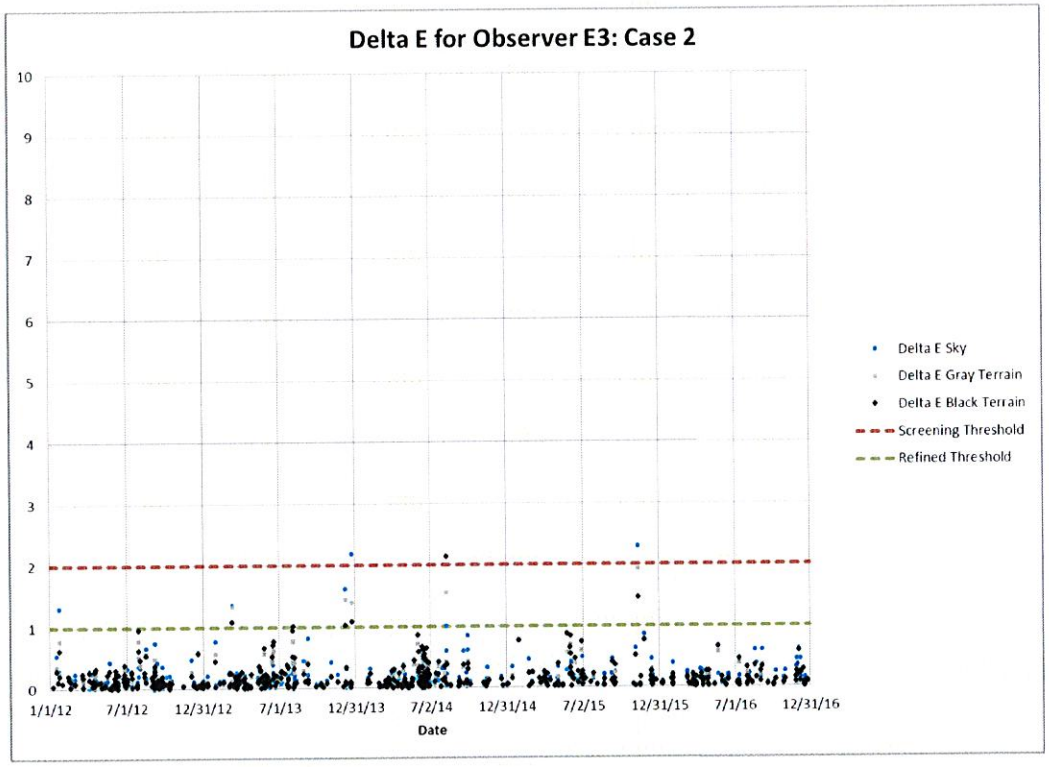


Figure D-11 Time Series of Delta E and Cp for Case 2: Observer E3



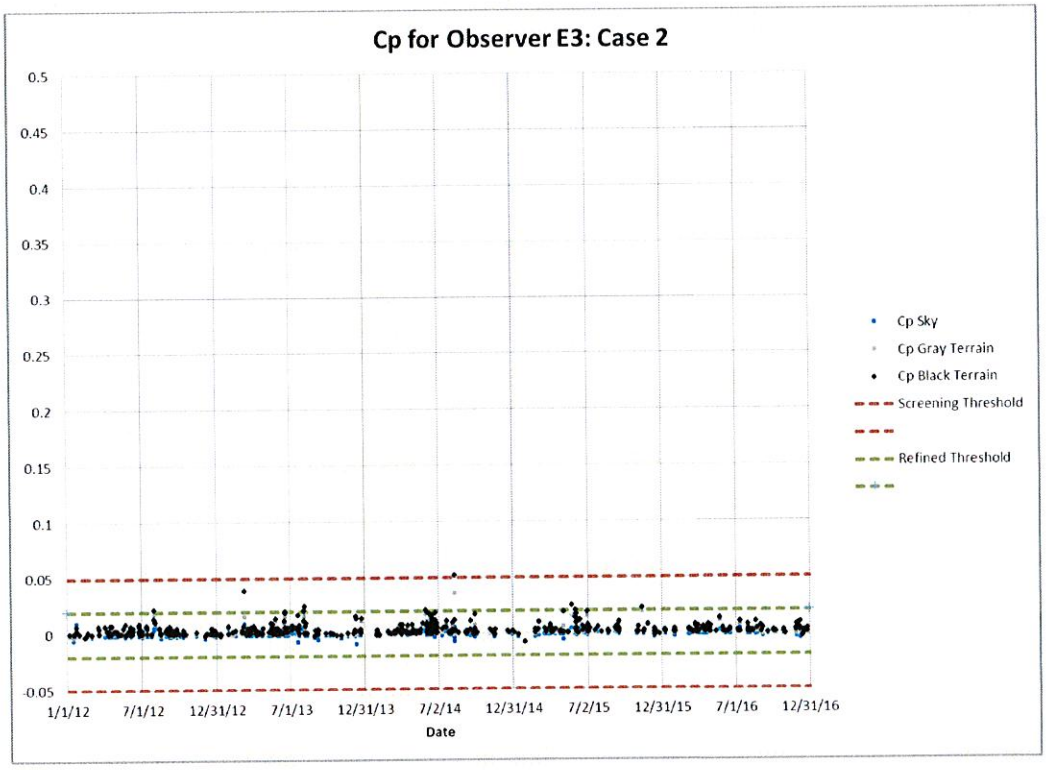
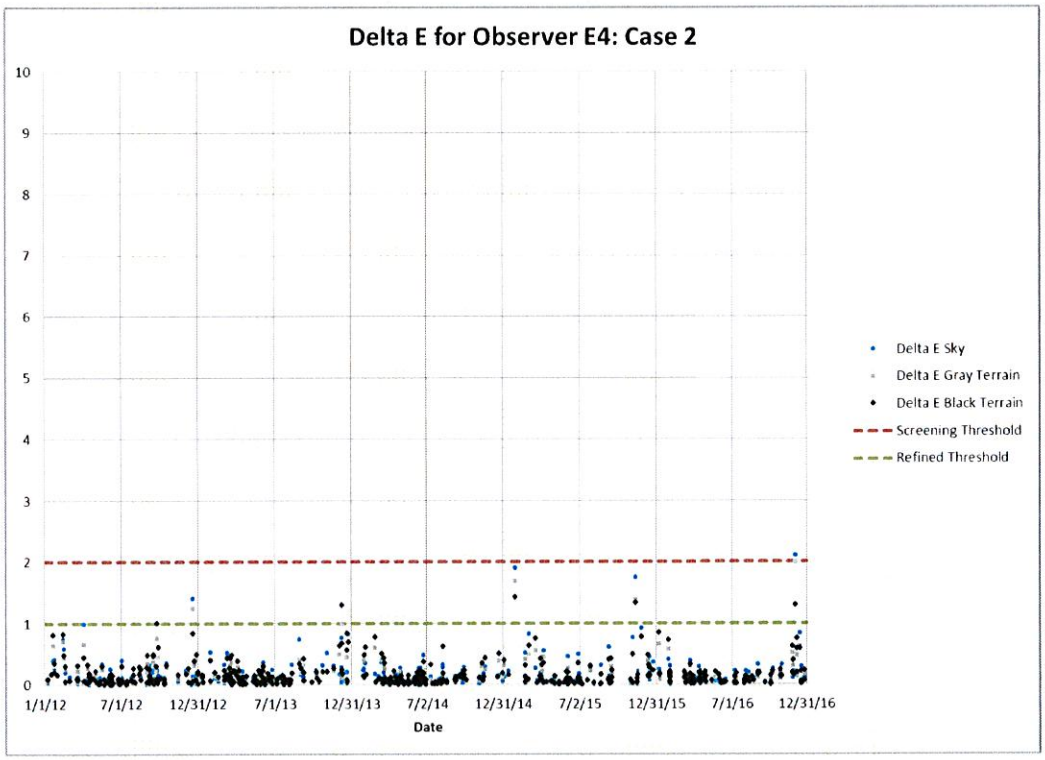


Figure D-12 Time Series of Delta E and Cp for Case 2: Observer E4



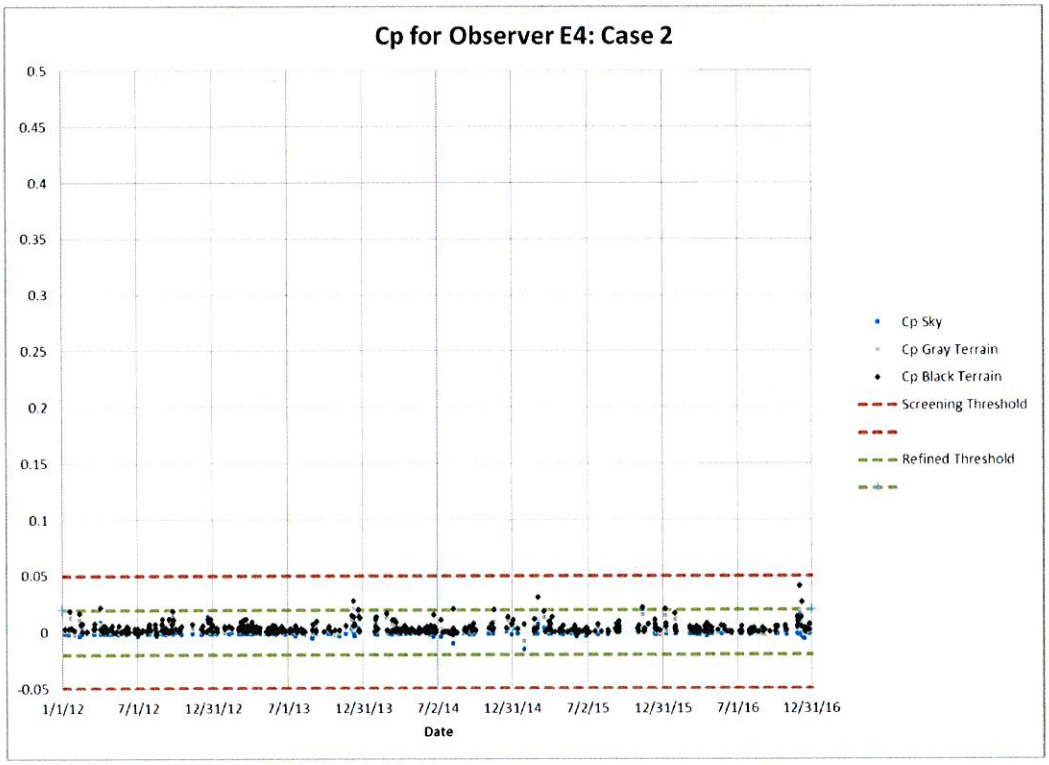
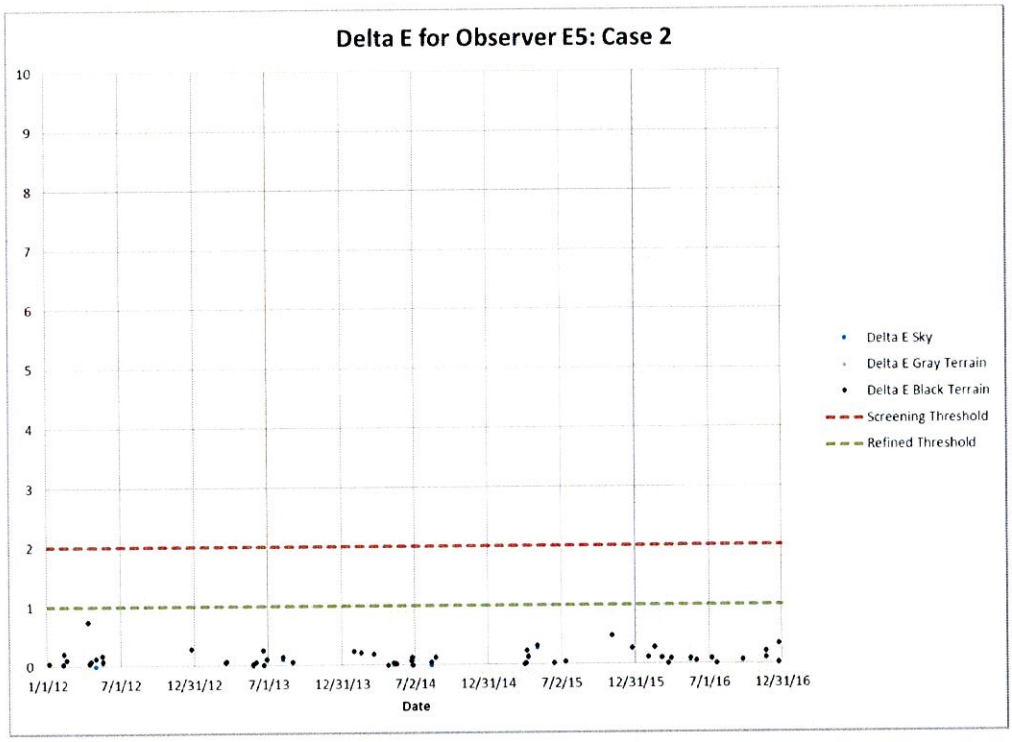


Figure D-13 Time Series of Delta E and Cp for Case 2: Observer E5



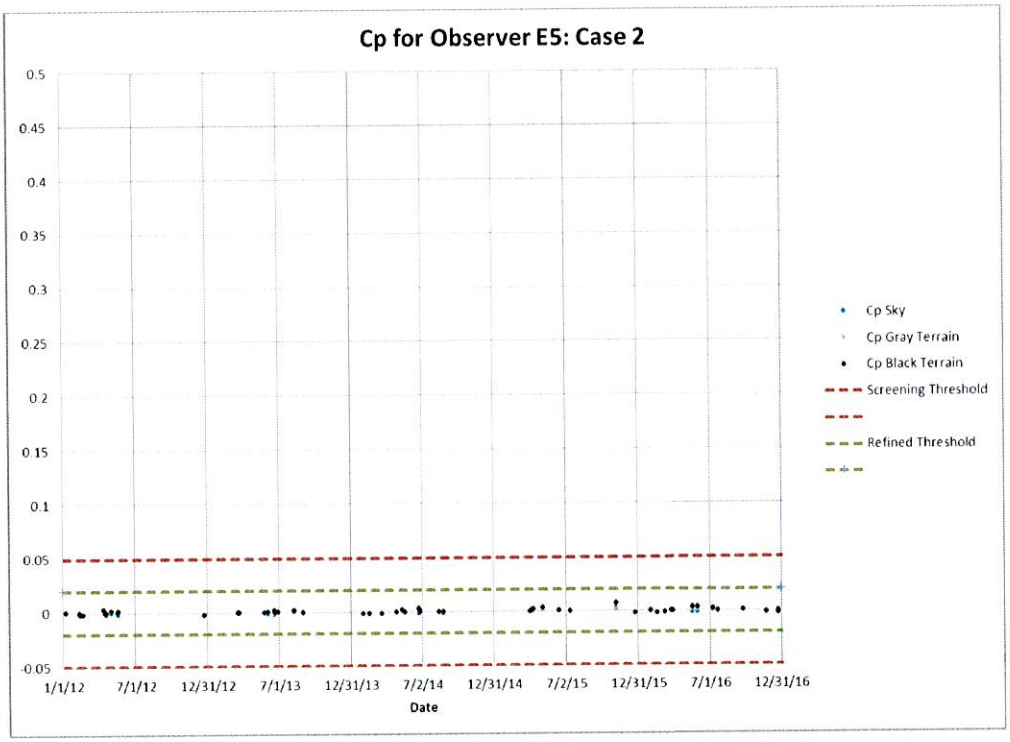
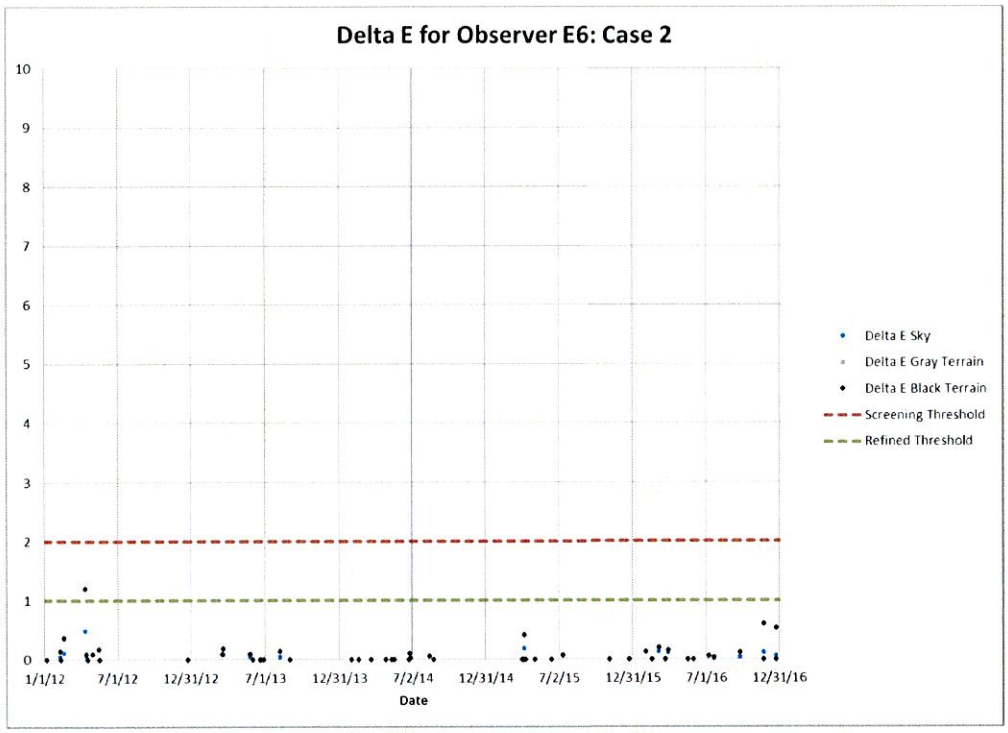


Figure D-14 Time Series of Delta E and Cp for Case 1: Observer E6



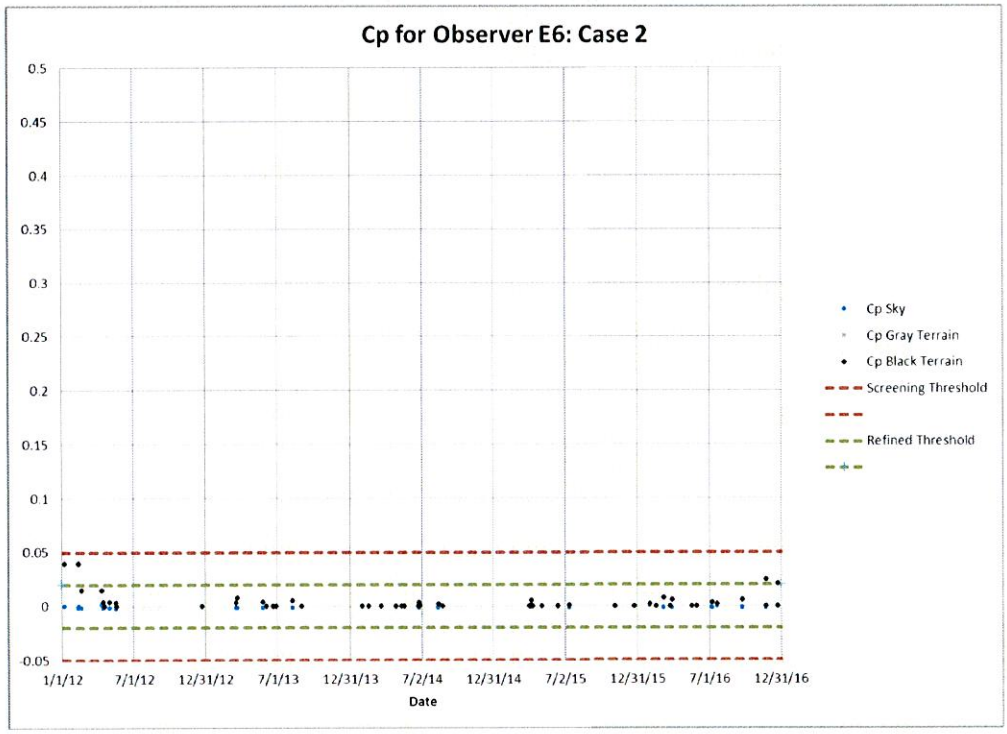
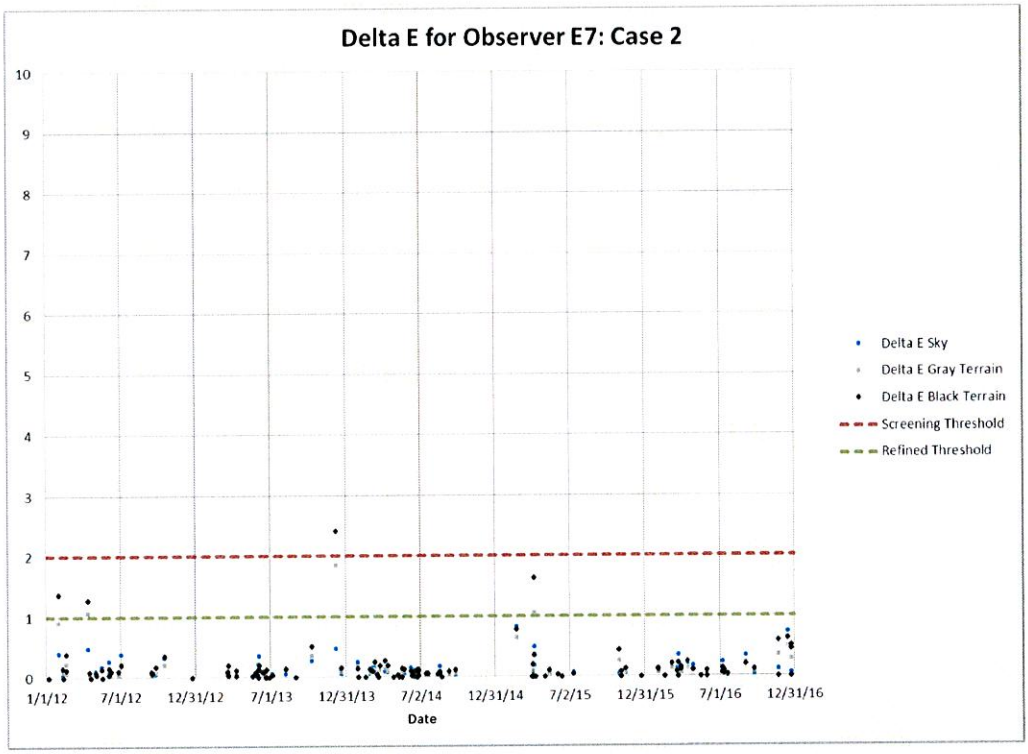


Figure D-15 Time Series of Delta E and Cp for Case 2: Observer E7



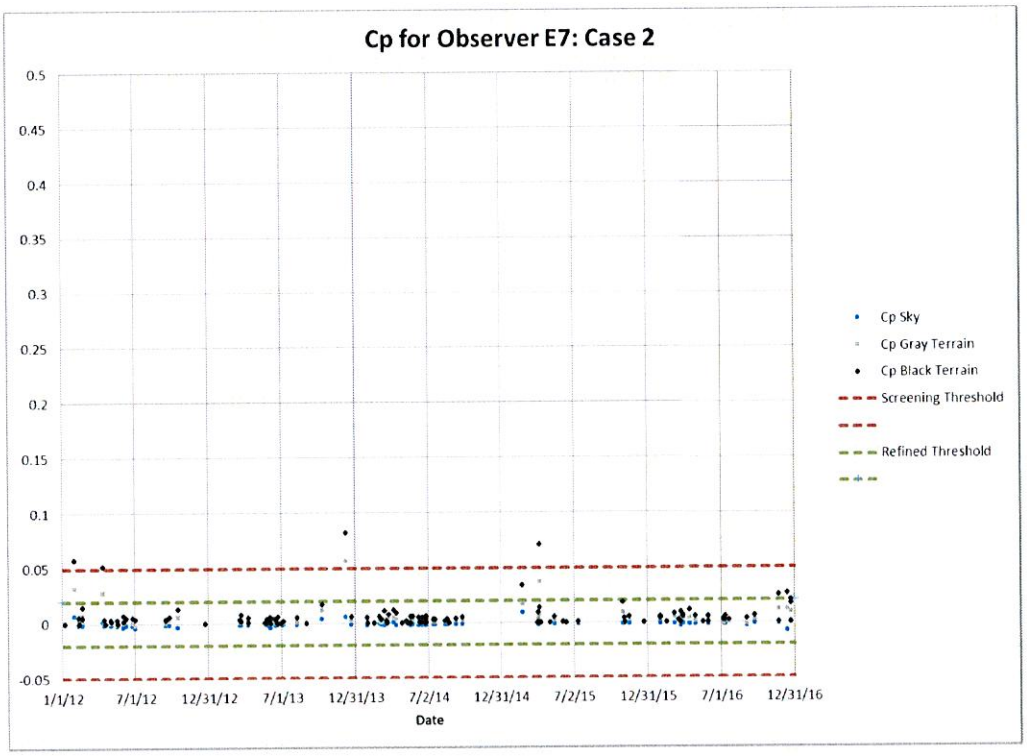
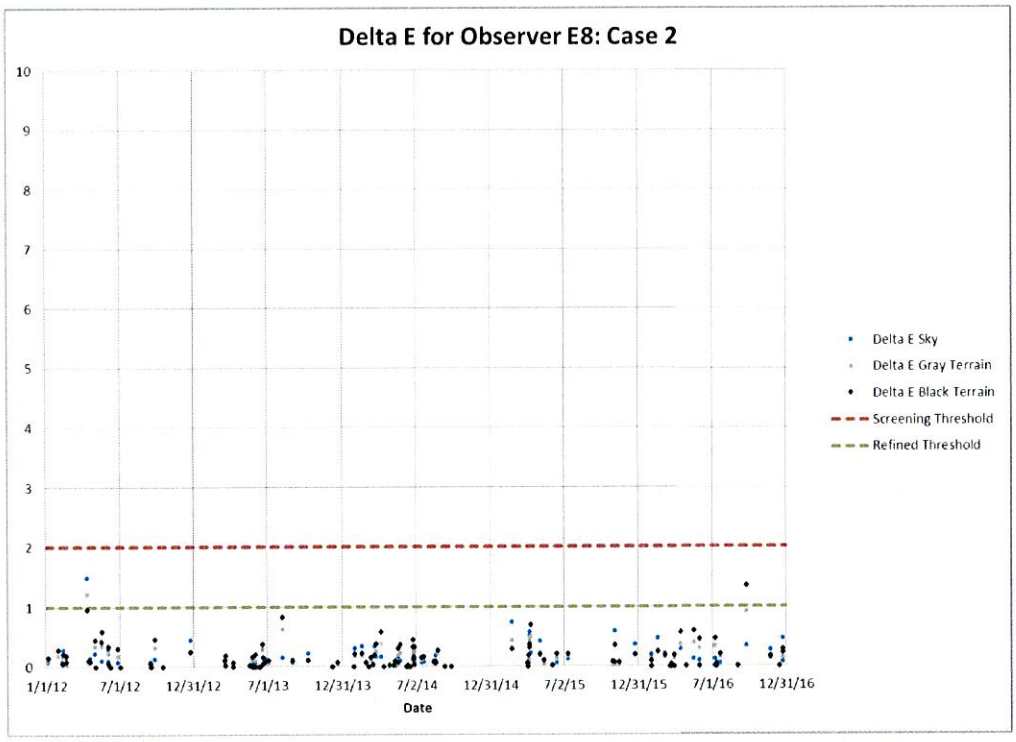
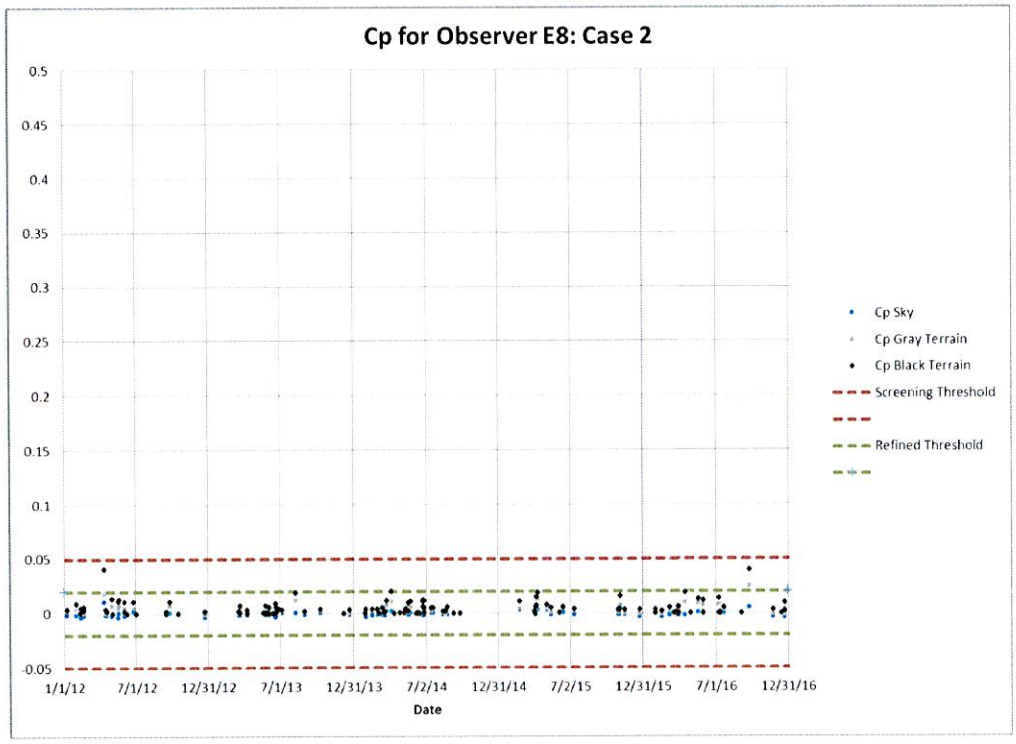



Figure D-16 Time Series of Delta E and Cp for Case 2: Observer E8