RESEARCH

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SIMPLIFIED SPT PERFORMANCE-BASED ASSESSMENT OF LIQUEFACTION AND EFFECTS: *TASKS 3 AND 4*

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16. Abstract

The purpose of the research being performed is to provide the benefit of the full performance-based probabilistic earthquake hazard analysis, without requiring special software, training, and experience. To do this, simplified models of liquefaction triggering and lateral spread displacements that approximate the results of the full probabilistic analysis were developed. This report provides the derivation and validation of these simplified models, addressing Tasks 3 and 4 of the TPF-5(296) research contract.

These simplified procedures are based on retrieving a reference value from a hazard-targeted liquefaction parameter map and calculating site-specific correction factors to adjust the reference value to represent the parameter for the site-specific soil profile. Site-specific values calculated using the simplified method are compared to those calculated using a full probabilistic method for ten cities in the United States. The difference between the full and simplified procedures for both post-liquefaction free-field settlement and Newmark seismic slope displacements models is shown to be within an acceptable amount. This shows that the simplified procedures derived in this report can reasonably approximate the results of a full probabilistic procedure.

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UNIT CONVERSION FACTORS

Units used in this report and not conforming to the UDOT standard unit of measurement (U.S. Customary system) are given below with their U.S. Customary equivalents:

SI* (MODERN METRIC) CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
		AREA		
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.093	square meters	m^2
yd^2	square yard	0.836	square meters	m^2
ac	acres	0.405	hectares	ha
mi^2	square miles	2.59	square kilometers	km^2
		VOLUME		
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft^3	cubic feet	0.028	cubic meters	m^3
yd^3	cubic yards	0.765	cubic meters	m^3
	NOTE: volumes greater than 1000 L shall be shown in m^3			
		MASS		
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
		TEMPERATURE (exact degrees)		
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
		ILLUMINATION		
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	$candela/m^2$	cd/m^2
		FORCE and PRESSURE or STRESS		
lbf	poundforce	4.45	newtons	N
lbf/in^2	poundforce per square inch	6.89	kilopascals	kPa

APPROXIMATE CONVERSIONS FROM SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
		AREA		
mm^2	square millimeters	0.0016	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.195	square yards	yd^2
ha	hectares	2.47	acres	ac
km^2	square kilometers	0.386	square miles	mi^2
		VOLUME		
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m^3	cubic meters	35.314	cubic feet	ft^3
m^3	cubic meters	1.307	cubic yards	yd^3
		MASS		
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
		TEMPERATURE (exact degrees)		
°C	Celsius	1.8C+32	Fahrenheit	°F
		ILLUMINATION		
lx	lux	0.0929	foot-candles	fc
cd/m^2	$candela/m^2$	0.2919	foot-Lamberts	fl
		FORCE and PRESSURE or STRESS		
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in^2

*SI is the symbol for the International System of Units. (Adapted from FHWA report template, Revised March 2003)

LIST OF ACRONYMS

EDP	Engineering Demand Parameter
FHWA	Federal Highway Administration
GMPE	Ground Motion Predictive Equation
IM	Intensity Measure
PBEE	Performance-Based Earthquake Engineering
PSHA	Probabilistic Seismic Hazard Analysis
UDOT	Utah Department of Transportation

LIST OF TERMS

Post-Liquefaction Free-Field Settlement Terms

CRR	cyclic resistance ratio
CRR^{ref}	cyclic resistance ratio associated with the reference soil profile
CRR^{site}	cyclic resistance ratio for the site profile
CSR	cyclic stress ratio
CSR^{ref}	uniform hazard estimate of CSR associated with the reference soil profile
CSR^{site}	uniform hazard estimate of CSR associated with the site specific soil profile
$CSR_{SS,20,1D,atm}$	adjusted CSR to account for multi-directional shaking effects
CSR^{site}	site-specific uniform hazard estimate of CSR
DF_i	depth factor for soil sub-layer
D_R	relative density
FC	fines content (%)
F_{PGA}	soil amplification factor
FS_{Liq}	factor of safety against liquefaction triggering
FS_L^{site}	site-specific uniform hazard estimate of FS_L
F_α	limiting factor of safety (used in Ishihara and Yoshimine model)
F_α^{ref}	limiting factor of safety associated with reference soil profile
F_α^{site}	limiting factor of safety associate with site soil profile
K_{md}	multidirectional correction factor for unidirectional applied loading
K_{Mw}	magnitude correction factor
K_σ	non-linear increase in cyclic resistance correction factor
min(.)	use minimum value inside parentheses mathematical operator
M_w	mean moment magnitude
N	SPT blow count (uncorrected)
$(N_1)_{60}$	SPT resistance corrected to 60% efficiency and 1 atm pressure
$(N_1)_{60,cs}$	clean sand-equivalent SPT corrected to 60% efficiency and 1 atm pressure
N_{req}	SPT resistance required to resist or prevent liquefaction
N_{req}^{ref}	uniform hazard estimate of N_{req} associated with the reference soil profile
N_{req}^{site}	site-specific uniform hazard estimate of N_{req}

N_{site}	standard penetration test resistance of site profile layer
P_a	atmospheric pressure (1 atm, 101.3 kPa, 0.2116 psf)
PGA	peak ground acceleration
P_L	probability of liquefaction
$s_{profile}$	estimated total settlement for soil profile using equivalent strain approach
SPT	Standard Penetration Test
t_i	thickness of soil sub-layer
$V_{s,12}$	average shear wave velocity in upper 12 m (39.37 ft) of soil profile
z_{cr}	maximum depth at which vertical strain can occur (z_{cr} *= 18 meters)*
$\Delta\varepsilon$	site-specific adjustment factor
ε_v	vertical strain
$\varepsilon_{v,calibrated}^{site}$	site-specific strain calibrated for model non-linearity
ε_v^{ref}	vertical strain for the reference soil profile
ε_v^{site}	site-specific vertical strain
$\varepsilon_{v,eqv.}$	equivalent vertical strain for entire soil profile
$\varepsilon_{v,max}$	maximum limiting vertical strain for a soil layer
γ	unit weight of soil (e.g. pcf, kN/m^3, etc.)
γ_{max}	maximum limiting shear strain
γ_{min}	minimum limiting shear strain
$\lambda_{\varepsilon,v,i}$	mean annual rate of exceeding vertical strain
$\mu_{ln\varepsilon}$	mean value of the natural logarithm of vertical strain
σ_ε	error term for either model + parametric uncertainty or parametric uncertainty
σ'_{vo}	effective vertical stress in the soil
Φ	standard normal cumulative distribution function
Φ^{-1}	inverse standard normal cumulative distribution function

Seismic Slope Displacement Terms

$\ln D$	natural logarithm of seismic slope displacement (cm)
k_y	yield acceleration (g)
PGA	peak ground acceleration (g)

M	earthquake moment magnitude (g)
σ_{ln}	standard deviation for the scalar model
λ_D	mean annual rate of not exceeding a seismic slope displacement value
D	seismic slope displacement (cm)
GM_i	single ground motion parameter
T_s	initial fundamental period of the sliding mass (s)
f_a	soil amplification factor (from AASHTO 2012 Values of site factor table)
$\ln D^{site}$	natural log of seismic slope displacement adjusted for the site-specific conditions
$\ln D^{ref}$	natural log of seismic slope displacement corresponding to the reference site
$\Delta \ln D$	adjustment factor for seismic slope displacement
k_y^{site}	yield acceleration adjusted for site-specific conditions (g)
PGA^{site}	peak ground acceleration adjusted for site-specific conditions (g)
k_y^{ref}	yield acceleration for the corresponding to the reference site (g)
PGA^{ref}	peak ground acceleration corresponding to the reference site (g)
f_a^{site}	soil amplification factor adjusted for site-specific conditions
f_a^{ref}	soil amplification factor corresponding to the reference site

EXECUTIVE SUMMARY

The purpose of the research being performed is to provide the benefit of the full performance-based probabilistic earthquake hazard analysis, without requiring special software, training, and experience. To do this, simplified models of post-liquefaction free-field settlement and Newmark seismic slope displacements that approximate the results of the full probabilistic analysis were developed. These simplified methods are designed to require only a few calculations programmed into a spreadsheet and provided liquefaction reference parameter maps. This report provides the derivation and validation of these simplified models, addressing Tasks 3 and 4 of the TPF-5(296) research contract.

The simplified procedure for vertical strains in a soil profile is derived based on the Cetin et al. (2009) and Ishihara and Yoshimine (1992) volumetric strain models. The simplified method involves obtaining a reference strain value (i.e. ε_v^{ref}) from a hazard-targeted liquefaction parameter map and calculating a site-specific correction (i.e. $\Delta\varepsilon$) to adjust the reference strain to obtain the actual site strain (i.e. ε_v^{site}). Values of ε_v^{site} were calculated using the simplified method and compared to values of ε_v^{site} calculated using a full probabilistic method for ten cities in the United States. The simplified strain procedure was shown to be a reasonable approximation of the full performance-based procedure

The simplified procedure for seismic slope displacements is derived based on the Rathje and Saygili (2009), and Bray and Travasarou (2007) simplified empirical Newmark sliding block models. This simplified procedure involves retrieving a reference value for seismic slope displacement (i.e. $[\ \ln D\ ]^{ref}$) from a hazard-targeted parameter map and calculating the site-specific correction factor (i.e. $\Delta\ln D$) to adjust the reference value to represent the actual seismic slope displacement at the site (i.e. D^{site}). Values of D^{site} were calculated using the simplified method and compared to values of D^{site} calculated using a full probabilistic method for ten cities in the United States. The simplified procedure was shown to be a reasonable approximation of the full probabilistic procedure.

1.0 INTRODUCTION

1.1 Problem Statement

The purpose of the research being performed is to provide the benefit of the full performance-based probabilistic earthquake hazard analysis, without requiring special software, training, and experience. To do this, simplified models of post-liquefaction free-field settlement and Newmark seismic slope displacements were developed that approximate the results of the full probabilistic analysis. The simplified models need to be validated to ensure that the simplified models provide results that adequately approximate the results from full performance-based model at a given return period.

1.2 Objectives

The objective of this report is to introduce the original models used to determine the earthquake hazards (i.e. post-liquefaction free-field settlement and Newmark seismic slope displacements), provide in-depth derivations that demonstrate the development of the simplified methods, and then validate the simplified models by performing a site-specific analysis for several different sites using the simplified and full models, addressing Tasks 3 and 4 of the TPF-5(296) research contract.

1.3 Scope

The tasks to be performed in this research will be: deriving the simplified models, performing site-specific earthquake hazard analysis using the simplified and full models, and comparing the site-specific hazards to determine how closely the simplified model approximates the full model.

1.4 Outline of Report

The research conducted for this report will contain the following:

- Introduction

- Derivation of the Simplified Models
- Validation of the Simplified Models
- Conclusions
- Appendices

2.0 DERIVATION OF THE SIMPLIFIED MODELS

2.1 Overview

This section describes the derivation of the simplified models of post-liquefaction free-field settlement and Newmark seismic slope displacement. The original models will be introduced and the derivation process for the simplified models will be described in detail.

2.2 Performance-Based Post-liquefaction Free-field Settlement Models

This section will provide a brief overview of the Cetin et al. (2009) and Ishihara and Yoshimine (1992) post-liquefaction free-field settlement models and how they fit into the PEER performance-based earthquake engineering framework.

2.2.1 Cetin et al. (2009) Settlement Model

The Cetin et al (2009) method involves creating hazard curves of strain and, subsequently, settlement for each sublayer in a soil profile. Mayfield et al. (2010) demonstrated the relationship between the cyclic stress ratio, *CSR* and the minimum SPT resistance required to resist liquefaction triggering, N_{req} as:

$$CSR = CRR(N_{req}) \tag{1}$$

where CRR is the cyclic resistance ratio (i.e., the soil's resistance to liquefaction triggering). Mayfield (2010) further showed that the CRR for a given soil layer could be computed with the Cetin et al. (2004) probabilistic liquefaction triggering model as:

$$CRR = \exp\left[\frac{N_{req}^{Cetin} - 29.06\ln M_w - 3.82\ln\left(\frac{\sigma_{vo}^{'}}{p_a}\right) + 15.25 + \sigma_e\Phi^{-1}(P_L)}{13.79}\right] \tag{2}$$

where N_{req}^{Cetin} is the N_{req} according to the Cetin et al. (2004) probabilistic liquefaction triggering curves, M_w is earthquake moment magnitude, $\sigma_{vo}^{'}$ is initial vertical effective stress, p_a is

atmospheric pressure (in same units as σ'_{vo}), σ_e is the estimated model and parameter uncertainty (standard deviation), and $\Phi^{-1}(P_L)$ is the inverse standard cumulative normal distribution of the probability of liquefaction (P_L). Cetin et al. (2004) used the simplifying assumptions of M_w = 7.5, σ'_{vo} = 1 atm. If these assumptions are combined with the assumption that P_L = 50% (focusing solely on the median liquefaction triggering curve), then Equation (2) can be simplified as

$$CRR = \exp\left[\frac{N_{req}^{Cetin} - 29.06 * \ln(7.5) + 15.25}{13.79}\right] \tag{3}$$

Cetin et al (2004) showed that if parametric uncertainty is excluded, the coefficients 29.06, 15.25, and 13.79 change to 29.53, 16.85, and 13.32, respectively.

Cetin et al. (2009) also observed that effects from multi-directional shaking have a significant impact on the observed post-liquefaction volumetric strains. Cetin et al. (2009) computed the equivalent *CSR* at 20 cycles of one-dimensional direct simple shear loading at 1.0 atmosphere of confining stress, $CSR_{SS,20,1D,1atm}$ as:

$$CSR_{SS,20,1D,1atm} = \frac{CSR_{field}}{K_{md} K_{M_w} K_\sigma} \tag{4}$$

where CSR_{field} is the *CSR* computed in Equation (1), K_{md} is the correction factor to convert the multidirectionally applied CSR_{field} value to the value of a unidirectionally applied laboratory *CSR*, K_{M_w} is the correction factor to convert the *CSR* to a value corresponding to a M_w = 7.5 earthquake, and K_σ is the correction factor used to account for the nonlinear increase in cyclic resistance to shear stresses with increasing confining effective stresses. Because the assumptions M_w = 7.5 and σ'_{vo} = 1 atm were already used in computing N_{req}^{Cetin}, Equation (4) can be simplified as:

$$CSR_{SS,20,1D,1atm} = \frac{CSR_{field}}{K_{md}} \tag{5}$$

$$K_{md} = 0.361 \cdot \ln(D_R) - 0.579 \tag{6}$$

where D_R is the relative density (in percent) of the soil layer. D_R is often approximated as:

$$D_R(\%) \approx \sqrt{\frac{(N_1)_{60,CS}}{60}} \tag{7}$$

Once the $CSR_{SS,20,1D,1atm}$ values for each N_{req} have been obtained for each sublayer in the soil profile, the strain hazard curves for each sublayer can be calculated.

The methodology used to compute the strain hazard curves is that of the PEER framework, which computes the mean annual rate of exceeding some engineering design parameter (*EDP*) given some intensity measure(s) (*IM*). Kramer et al (2014) showed that the mean annual rate of exceeding some engineering demand parameter, *edp* as a function of intensity measure, *im* is given as:

$$\lambda_{edp} = \sum_{i=1}^{N_{IM}} P\left[EDP > edp \middle| IM = im_i \right] \Delta\lambda_{IM}(im_i) \tag{8}$$

Kramer et al (2008) and Kramer et al (2014) demonstrated that applying Equation (8) to the analysis of liquefaction-induced settlement yields:

$$\lambda_{\varepsilon_{vi}} = \sum_{m=1}^{N_{CSR}} P\left[\varepsilon_{vi} > \varepsilon_{vi}^{*} \middle| CSR_i, N_i \right] \Delta\lambda_{CSR} \tag{9}$$

where ε_{vi} is the strain of a given sublayer, CSR_i is the $CSR_{SS,20,1D,1atm}$ computed in Equation (5), N_i is the $N_{1,60,CS}$ computed from the blow count of a standard penetration test (SPT), and $\Delta\lambda_{CSR}$ is the incremental joint mean annual rate of exceedance for the given CSR. Furthermore, Kramer et al (2008) and Kramer et al (2014) explained that:

$$P\left[\varepsilon_v > \varepsilon_v^{*} \middle| CSR, N \right] = \Phi\left[\frac{\mu_{\ln \varepsilon_v} - \ln \varepsilon_v^{*}}{\sigma_{\ln \varepsilon_v}} \right] \tag{10}$$

where $\Phi(\cdot)$ is the standard normal cumulative distribution function, $\mu_{\ln \varepsilon_v}$ is the mean computed value of $\ln \varepsilon_v$, and $\sigma_{\ln \varepsilon_v}$ is the standard deviation of the probability function which was found to be 0.61 by Cetin et al (2009). Cetin et al (2009) showed that the mean value of $\ln \varepsilon_v$ can be computed as:

$$\varepsilon_v = \frac{\left[1.879\ln\left[\frac{780.416\ln(CSR_{SS,20,1D,1atm}) - N_{1,60,CS} + 2,442.465}{636.613N_{1,60,CS} + 306.732}\right] + 5.583\right]}{100} \quad (11)$$

$$\lim: 5 \le N_{1,60,CS} \le 40, \quad 0.05 \le \mathrm{CSR}_{SS,20,1D,1atm} \le 0.60$$

By repeating Equations (9) and (10) for a wide range of strain values, a hazard curve of free-field post-liquefaction volumetric strains can be developed for each soil sublayer.

The strains computed in Equation (11) do not consider the uncertainty in the soil response, (i.e. the likelihood that the soil will liquefy given some level of ground shaking). This uncertainty is represented by the probability of liquefaction (P_L). which was shown by Ulmer et al (2015) to be computed as:

$$P_L = \Phi\left[-\frac{N_{site} - N_{req}}{4.21}\right] \quad (12)$$

If parametric uncertainty is ignored, the denominator of Equation (12) becomes 2.7. To account for P_L, the mean value of $\ln \varepsilon_v$ computed in Equation (11) is multiplied by the P_L computed in Equation (12).

Kramer et al (2008) explained that direct computation of volumetric strain distributions from any volumetric strain relationship has been found to produce significant probabilities of unrealistically large strain values, thus causing the assumption of log-normally distributed volumetric strains. For low values of $N_{1,60,\mathrm{CS}}$, the slope of the lognormal function increased dramatically, resulting in infinitely increasing values of strain with decreasing values of $N_{1,60,\mathrm{CS}}$. Extensive experimentation, however, has shown that soil has a limited ability to densify, and must be governed by some limiting maximum volumetric strain. Huang (2008) performed a study to find the maximum limiting value of vertical strain using the deterministic soil models of Tokimatsu and Seed (1987), Ishihara and Yoshimine (1992), Shamoto et al (1998), and Wu and Seed (2004). A weighted average of the four relationships was used to create a recommended relationship for the estimated mean limiting volumetric strain as shown in Figure 1.

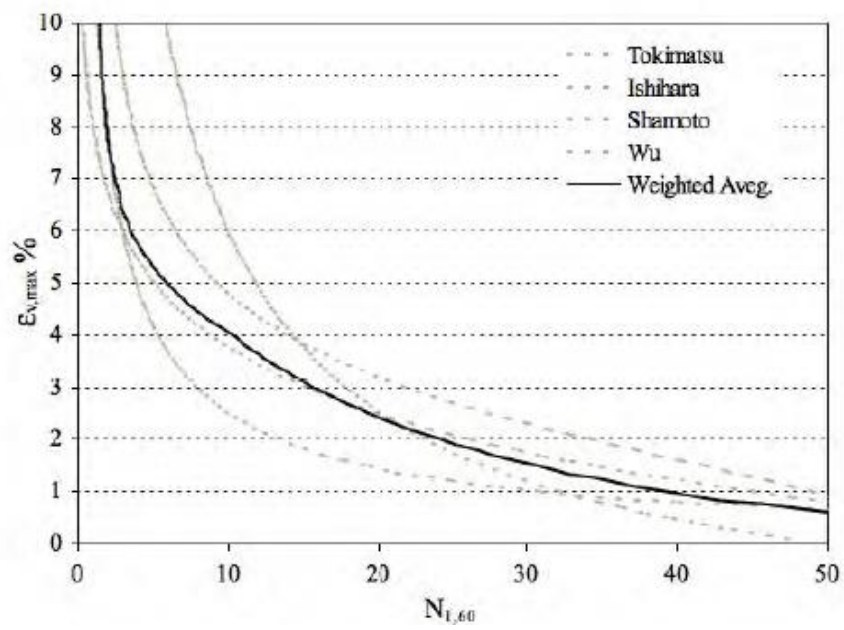

Figure 1 Mean limiting strain relationship derived from deterministic vertical strain models (after Huang, 2008)

The relationship for the recommended mean limiting volumetric strain shown in Figure 1 can be approximated as:

$$\bar{\varepsilon}_{v,\max}(\%) = 9.2081 - 2.24\ln\left[(N_1)_{60,CS}\right] \tag{13}$$

The approximation found in Equation (13) was used for this study. Huang (2008) suggested that, because the maximum strain relationship is approximate, $\bar{\varepsilon}_{v,\max}$ be uniformly distributed over a range of $0.5*\bar{\varepsilon}_{v,\max}$ to $1.5*\bar{\varepsilon}_{v,\max}$. In this study, $\bar{\varepsilon}_{v,\max}$ was distributed uniformly over this recommended range using increments of $0.02*\bar{\varepsilon}_{v,\max}$.

Once the hazard curves were computed and weighted according to the recommendations of Huang (2008), settlement hazard curves were computed. The details of the settlement computation will be provided later in this section.

2.2.2 Ishihara and Yoshimine (1992) Settlement Model

The Ishihara and Yoshimine (1992) method is similar to the Cetin et al (2009) method, except that instead of computing strains as a function of CSR, strains are computed as a function

of the factor of safety against liquefaction (FS_L). Hazard curves of strain and settlement are computed for each sublayer in a soil profile. The FS_L is computed for Boulanger and Idriss (2012) N_{req} values from 1 to 49 using the following relationship provided by Ulmer et al (2015):

$$FS_L = \exp\left[\left(\frac{N_{1,60,CS} - N_{req}}{14.1}\right) + \left(\frac{N_{1,60,CS}{}^2 - N_{req}{}^2}{126^2}\right) - \left(\frac{N_{1,60,CS}{}^3 - N_{req}{}^3}{23.6^3}\right) + \left(\frac{N_{1,60,CS}{}^4 - N_{req}{}^4}{25.4^4}\right)\right] \tag{14}$$

Once the FS_{liq} values for each N_{req} have been obtained for each sublayer in the soil profile, the strain hazard curves for each sublayer can be computed. This is done using the PEER framework as explained in the Cetin et al (2009) method. Equation (9) can be adjusted to account for the change in intensity measure (from CSR to FS_{liq}) as expressed by

$$\lambda_{\varepsilon_{vi}} = \sum_{m=1}^{N_{FS_{liq}}} P\left[\varepsilon_{vi} > \varepsilon_{vi}^{*} \middle| FS_{L_i}, N_i\right] \Delta\Lambda_{FS_L} \tag{15}$$

Equation (10) is utilized again, with $\sigma_{\ln \varepsilon_v}$ = 1.12. Idriss and Boulanger (2008) approximate Ishihara and Yoshimine (1992) volumetric strain curves as:

$$\varepsilon_v = 1.5 \cdot \exp\left(-0.369\sqrt{(N_1)_{60,CS}}\right) \cdot \min\left(0.08, \gamma_{\max}\right) \tag{16}$$

where $\min(\cdot)$ signifies the use of the minimum value found within the parenthesis, and $\gamma_{\max}$ is the limiting shear strain and is computed as

$$\gamma_{\max} = 0 \text{ if } FS_L \geq 2 \tag{17}$$

$$\gamma_{\max} = \min\left(\gamma_{\lim}, 0.035(2\text{-}FS_L)\left(\frac{1\text{-}F_\alpha}{FS_L\text{-}F_\alpha}\right)\right) \quad \text{if } 2 > FS_L > F_\alpha \tag{18}$$

$$\gamma_{\max} = \gamma_{\lim} \text{ if } FS_L \leq F_\alpha \tag{19}$$

where γ_{lim} is computed as

$$\gamma_{\text{lim}} = 1.859\left(1.1 - \sqrt{\frac{N_{1,60,CS}}{46}}\right)^3 \geq 0 \tag{20}$$

and F_α is computed as

$$F_\alpha = .032 + 4.7D_R - 6.0(D_R)^2 \tag{21}$$

where D_R is the relative density of the soil sublayer as a decimal.

It should be mentioned that the strains computed in Equation (16) do not consider the likelihood of liquefaction occurring, or P_L. To account for P_L, the following equation can be applied as demonstrated by Ulmer et al (2015):

$$P_L = \Phi\left[\ln\left(FS_L{}^{-3.61}\right)\right] \tag{22}$$

where FS_L is computed with the Boulanger and Idriss (2012) probabilistic liquefaction triggering curves. If parametric uncertainty is ignored in the Boulanger and Idriss (2012) model, then the exponent in Equation (22) becomes -7.69. To account for P_L, the mean value of $\ln \varepsilon_v$ computed in Equation (16) is multiplied by the P_L computed in Equation (22).

The maximum strain considerations introduced by Huang (2008) are also considered with the Ishihara and Yoshimine (1992) model, with $\bar{\varepsilon}_{v,\max}$ uniformly distributed over a range of 0.5* $\bar{\varepsilon}_{v,\max}$ to 1.5* $\bar{\varepsilon}_{v,\max}$.

2.2.3 Settlement Computation

The method proposed by Cetin et al. (2009) to compute the settlement from the strain hazard curves introduced an equivalent strain for the entire soil profile, defined as

$$\varepsilon_{v,\text{eqv.}} = \frac{\sum(\varepsilon_{v,i} \cdot t_i \cdot DF_i)}{\sum(t_i \cdot DF_i)} \tag{23}$$

where $\varepsilon_{v,eqv.}$ is the equivalent strain for the soil profile; $\varepsilon_{v,i}$ is the strain for a given sublayer in the soil profile; t_i is the thickness of the given susceptible sublayer; and DF_i is the depth weighting factor of the given soil sublayer and is computed as:

$$DF_i = 1 - \frac{d_i}{18m} \tag{24}$$

where d_i is the depth of the given sublayer in meters. Because settlement is a function of strain, depth, and thickness of the soil layer, it is compatible with the Cetin et al. (2009) and Ishihara and Yoshimine (1992) models. The settlement for the soil profile is then computed as:

$$s_{profile} = \phi \cdot \varepsilon_{v,eqv.} \sum t_i \tag{25}$$

where $s_{profile}$ is the computed settlement for the soil profile and ϕ is a calibration factor for observed post-liquefaction case histories and is equal to 0.9 for the Ishihara and Yoshimine (1992) model and 1.15 for the Cetin et al. model (Cetin et al. 2009).

2.3 Simplified Post-liquefaction Free-field Settlement Models

The performance-based approximation of vertical strains in a soil layer summarized in Sections 2.2.1 and 2.2.2 is an effective solution to mitigating the deficiencies introduced by the conventional (i.e. "pseudo-probabilistic") approximation of vertical strains, which utilizes probabilistic ground motions to estimate vertical strains in a deterministic manner. Unfortunately, the performance-based approach is complex and difficult for many engineers to use in a practical manner. Specialized computational tools such as *PBliquefY* (Franke et al. 2014c) have been developed to aid in the implementation of the performance-based procedure; however, performing a performance-based analysis may still not be practical for professionals who routinely need to perform and/or validate vertical strain hazard calculations in a rapid and efficient manner.

An ideal solution to this dilemma would be the introduction of a new liquefaction analysis procedure that combined the simplicity and user-friendliness of traditional liquefaction hazard maps with the flexibility and power of a site-specific performance-based liquefaction triggering analysis. Mayfield et al. (2010) developed a simplified, map-based procedure that

could be used to approximate performance-based liquefaction triggering using the Cetin et al. (2004) liquefaction triggering model. Franke et al. (2014d) then refined the Mayfield et al. simplified procedure for easier implementation in seismic codes and provisions.

Mayfield et al. (2010) introduced the idea, using the Cetin et al. (2004) liquefaction model, that probabilistic approximations of SPT resistance required to resist liquefaction can be computed for a *reference* soil profile (see Figure 2) across a grid of geographic locations to develop contour plots called liquefaction parameter maps. These liquefaction parameter maps serve as a proxy for the seismic loading that affects liquefaction triggering and that can be expected for a given return period. Since site-specific soil conditions are most likely different from the reference profile, Mayfield et al. demonstrated how the mapped reference parameter values could be adjusted for site-specific conditions.

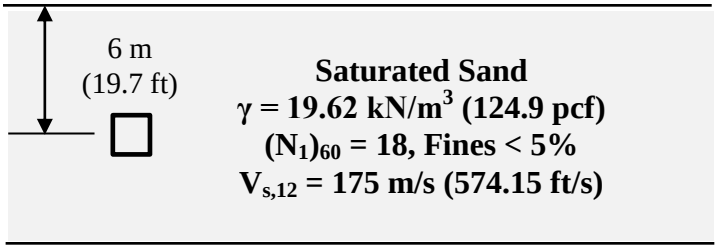

Figure 2: Reference soil profile used to develop liquefaction loading maps in the proposed simplified uniform hazard liquefaction procedure

In a similar manner to the Mayfield et al. (2010) liquefaction triggering procedure, vertical strains for a *reference* profile can be probabilistically computed across a grid of geographic locations. The calculated reference strains, ε_v^{ref} , will be an indication of ground motions; however, they will need to be adjusted for site-specific conditions. A detailed derivation of the vertical strain correction, both for the Ishihara and Yoshimine (1992) and Cetin et al. (2009) vertical strain models, will be given.

The simplified performance-based post-liquefaction settlement procedure using the Ishihara and Yoshimine (1992) strain model builds upon the recently developed simplified performance-based liquefaction triggering procedure in that it requires both the CSR^{ref} and CSR^{site} from the Boulanger and Idriss (2012) triggering model. Similarly, the simplified post-liquefaction settlement procedure using the Cetin et al. (2009) strain model will require both

N_{req}^{ref} and N_{req}^{site} obtained from the simplified performance-based liquefaction triggering procedure using the Cetin et al. (2004) triggering model. The Year 1 Final Report of this study included the derivation of the simplified performance-based liquefaction triggering procedure using the Boulanger and Idriss (2012) model. Please refer to Mayfield et al. (2010) for clarification on the simplified performance-based liquefaction triggering procedure using the Cetin et al. (2004) model.

2.3.1 Site-Specific Correction for Reference Strain using the Cetin et al. (2009) Model

Because ε_v^{ref} was developed using the reference soil profile, it must be corrected for site-specific soil conditions and depths to be used in computing site-specific uniform hazard values of ε_v^{site}. If ε_v^{site} represents the site-specific uniform hazard value of vertical strain for a particular soil layer, then ε_v^{ref} and ε_v^{site} can be related as:

$$\ln(\varepsilon_{v,approx}^{site} + 0.01) = \ln(\varepsilon_{v,approx}^{ref} + 0.01) \cdot \Delta\varepsilon \tag{26}$$

where $\Delta\varepsilon$ is a site-specific correction factor. A value of 0.01 was added to both ε_v^{site} and ε_v^{ref} to prevent a value of zero from occurring in the natural log operators. Rearranging Equation (26), we can solve for the correction factor $\Delta\varepsilon$ as:

$$\Delta\varepsilon = \frac{\ln(\varepsilon_{v,approx}^{site} + 0.01)}{\ln(\varepsilon_{v,approx}^{ref} + 0.01)} \tag{27}$$

Thus, the strain correction factor for a given soil sublayer can be estimated if values of ε_v^{ref} and ε_v^{site} are approximated from the reference soil information and the actual soil sublayer information, respectively. Using the knowledge and assumptions presented in Equations (4), (5), (6), and (11), and by treating the reference soil profile shown in Figure 2 as a single soil layer (i.e., $i = 1$), ε_v^{ref} can be approximated using the Cetin et al. (2009) post-liquefaction volumetric strain model at a given return period as:

$$\varepsilon_{v,approx}^{ref} \approx 0.01 \cdot \left[1.879 \cdot \left[\frac{780.416 \cdot \ln\left(\frac{CRR(N_{req}^{ref})}{0.866} \right) + 2424.465}{11,765.766} \right] + 5.583 \right] \cdot \left[\Phi\left(-\frac{18 - N_{req}^{ref}}{4.21} \right) \right] \tag{28}$$

where N_{req}^{ref} is the minimum SPT resistance value pertaining to the Cetin et al. (2004) triggering model required to resist liquefaction in the reference soil sublayer shown in Figure 2, and is obtained from the appropriate liquefaction parameter map at the desired return period. Note that Equation (28) also assumes the incorporation of P_L in the computation of volumetric strains.

$\varepsilon_{v,approx}^{site}$ is approximated in a similar manner to $\varepsilon_{v,approx}^{ref}$ using the Cetin et al. (2009) strain model:

$$\varepsilon_{v,approx}^{site} \approx 0.01 \cdot \left[1.879 \cdot \left[\frac{780.416 \cdot \ln\left(\frac{CRR(N_{req}^{site})}{0.361 \cdot \ln\left(D_R^{site}\right) - 0.579} \right) - \left(N_1\right)_{60,CS}^{site} + 2442.465}{636.613 \cdot \left(N_1\right)_{60,CS}^{site} + 306.732} \right] + 5.583 \right] \cdot \left[\Phi\left(-\frac{\left(N_1\right)_{60,CS}^{site} - N_{req}^{site}}{4.21} \right) \right] \tag{29}$$

where N_{req}^{site} is the site-specific minimum SPT resistance required to prevent liquefaction triggering using the Cetin et al. (2004) model, as computed using the simplified performance-based liquefaction triggering procedure (see Year 1 Final Report); $\left(N_1\right)_{60,CS}^{site}$ is the site-specific, clean sand-equivalent SPT resistance for the soil sublayer of interest; and D_R^{site} is the corresponding site-specific relative density of the soil sublayer of interest (in percent) and is calculated from Equation (7).

Once the correction factor for a given soil sublayer is computed using Equations (27) through (29), site-specific adjusted strains can be computed for a given soil sublayer as:

$$\varepsilon_v^{site} = \exp\left[\Delta\varepsilon \cdot \ln\left(\varepsilon_v^{ref} + 0.01\right)\right] - 0.01 \tag{30}$$

where ε_v^{ref} is the reference adjusted strain obtained from the appropriate Cetin post-liquefaction settlement parameter map at a return period of interest.

Due to the non-linearity of the model, a calibration equation was developed to correct the bias. The final simplified site strain can be calculated as:

$$\varepsilon_{v,calibrated}^{site} = 6.6896 \cdot \left(\varepsilon_v^{site}\right)^2 + 0.8833 \cdot \varepsilon_v^{site} \tag{31}$$

where ε_v^{site} is the site strain as calculated in equation (30). Once $\varepsilon_{v,calibrated}^{site}$ has been computed, equations (23) and (25) may be applied to obtain the equivalent strain and settlement for the entire profile.

2.3.2 Site-Specific Correction for Reference Strain using the Ishihara and Yoshimine (1992) Model

The framework presented in Section 2.3.1 can also be applied to the Ishihara and Yoshimine (1992) settlement model. We can use Equation (26) to again define the correction factor, $\Delta\varepsilon$.

If the reference soil profile is treated as a single layer (i.e., $i = 1$), then the adjusted reference strain using the Ishihara and Yoshimine (1992) model as demonstrated by Idriss and Boulanger (2008) and later calibrated to observed post-liquefaction settlement case histories by Cetin et al. (2009) can be approximated as:

$$\varepsilon_{v,approx}^{ref} \approx \left[0.3135 \cdot \min\left[\begin{matrix}0.08 \\ \gamma_{\max}^{ref}\end{matrix}\right]\right] \cdot \Phi\left[\ln\left(FS_L^{ref\,-3.61}\right)\right] \tag{32}$$

where FS_L^{ref} is the factor of safety against liquefaction triggering for the reference soil sublayer at the return period of interest using the Boulanger and Idriss (2012) model with the simplified performance-based liquefaction triggering procedure (see Year 1 Final Report); and where $\gamma_{\max}^{ref}$ is the limiting shear strain for the reference soil sublayer and is computed as:

$$\gamma_{\max}^{ref} = 0 \;\text{ if }\; FS_{liq}^{ref} \geq 2 \tag{33}$$

$$\gamma_{\max}^{ref} = \min\left(\begin{array}{l}\gamma_{\lim}^{ref} \\ 0.035(2 - FS_L^{ref})\left(\dfrac{0.3806}{FS_L^{ref} - 0.6194}\right)\end{array}\right) \quad \text{if } 2 > FS_L^{ref} > 0.6194 \tag{34}$$

and where $\gamma_{\lim}^{ref}$ is computed as:

$$\gamma_{\max}^{ref} = 0.1985 \text{ if } FS_L^{ref} \leq 0.6194 \tag{35}$$

$$\gamma_{\lim}^{ref} = 1.859\left(1.1 - \sqrt{\frac{(N_1)_{60,CS}^{ref}}{46}}\right)^3 \geq 0 \quad \text{if } FS_L^{ref} > 0.6194 \tag{36}$$

The site-specific adjusted strain for a given soil sublayer $\varepsilon_{v,approx}^{site}$ can be approximated using the Ishihara and Yoshimine (1992) model as:

$$\varepsilon_{v,approx}^{site} \approx \left[1.5 \cdot \exp\left[-0.369 \cdot \sqrt{(N_1)_{60,CS}^{site}}\right] \cdot \min\left[\begin{array}{l}0.08 \\ \gamma_{\max}^{site}\end{array}\right]\right] \cdot \Phi\left[\ln\left(FS_L^{site-3.61}\right)\right] \tag{37}$$

where $(N_1)_{60,CS}^{site}$ is the Idriss and Boulanger (2008) clean sand-equivalent SPT resistance value for the soil sublayer of interest; FS_L^{site} is the site-specific factor of safety against liquefaction triggering for the soil sublayer of interest at the return period of interest from the simplified performance-based liquefaction triggering procedure; $\gamma_{\max}^{site}$ is the site-specific limiting shear strain for the soil sublayer and is computed as:

$$\gamma_{\max}^{site} = 0 \text{ if } FS_L^{site} \geq 2 \tag{38}$$

$$\gamma_{\max}^{site} = \min\left(\begin{array}{l}\gamma_{\lim}^{site} \\ 0.035(2 - FS_L^{site})\left(\dfrac{1 - F_\alpha^{site}}{FS_L^{site} - F_\alpha^{site}}\right)\end{array}\right) \quad \text{if } 2 > FS_L^{site} > F_\alpha^{site} \tag{39}$$

$$\gamma_{\max}^{site} = \gamma_{\lim}^{site} \text{ if } FS_L^{site} \leq F_\alpha^{site} \tag{40}$$

where $\gamma_{\lim}^{site}$ is computed as

$$\gamma_{\lim}^{site} = 1.859\left(1.1 - \sqrt{\frac{(N_1)_{60,CS}^{site}}{46}}\right)^3 \geq 0 \tag{41}$$

and F_α^{site} is a limiting factor of safety computed as:

$$F_\alpha^{site} = 0.032 + 0.69\sqrt{(N_1)_{60,CS}^{site}} - 0.13(N_1)_{60,CS}^{site} \tag{42}$$

The correction factor $\Delta\varepsilon$ for a given soil sublayer using the Ishihara and Yoshimine (1992) model can then be computed as:

$$\Delta\varepsilon = \frac{\ln\left(\varepsilon_{v,approx}^{site} + 0.01\right)}{\ln\left(\varepsilon_{v,approx}^{ref} + 0.01\right)} \tag{43}$$

where $\varepsilon_{v,approx}^{ref}$ and $\varepsilon_{v,approx}^{site}$ are approximated at the return period of interest using Equations (32) and (37), respectively.

Once $\Delta\varepsilon$ has been computed for the desired soil sublayer, the site-specific, adjusted post-liquefaction volumetric strain for the soil sublayer can be computed as:

$$\varepsilon_v^{site} = \exp\left[\Delta\varepsilon \cdot \ln\left(\varepsilon_v^{ref} + 0.01\right)\right] - 0.01 \tag{44}$$

where ε_v^{ref} is the reference volumetric strain obtained from the appropriate Ishihara and Yoshimine settlement parameter map at the desired return period.

Again, due to the non-linearity of the model, a calibration equation was developed for the Ishihara and Yoshimine strain:

$$\varepsilon_{v,calibrated}^{site} = -142.91 \cdot \left(\varepsilon_v^{site}\right)^3 + 16.3285 \cdot \left(\varepsilon_v^{site}\right)^2 + 0.6802 \cdot \varepsilon_v^{site} \tag{45}$$

Equations (23) and (25) from section 2.2.3 can then be applied to $\varepsilon_{v,calibrated}^{site}$ to obtain equivalent strain and settlement, respectively.

2.3.3 Simplified Strain Summary

The simplified method consists of obtaining a reference strain value from a liquefaction parameter map. The reference strains are calculated for the reference profile using the full performance-based methodology. The obtained reference strain value must then be corrected for site-specific conditions using the equations presented in section 2.3.1 if using the Cetin et al. (2009) model and section 2.3.2 if using the Ishihara and Yoshimine (1992) model.

2.4 Performance-Based Newmark Seismic Slope Displacement Models

Probabilistic assessment of earthquake-induced sliding displacements of natural slopes is often based on permanent sliding displacement due to earthquake shaking. Empirical probabilistic seismic slope displacement models developed by Rathje and Saygili (2009) and Bray and Travasarou (2007) were used to create a numerical tool to compute the full performance-based seismic slope displacement. The capability to evaluate these models in a probabilistic manner was an added to *PBLiquefY*.

2.4.1 Rathje and Saygili (2009) Model

The Rathje and Saygili (2009) model is an update and improvement of the Saygili and Rathje (2008) model. The revised model includes a magnitude term that reduces scatter in the model, and it also includes an improved estimate of the standard deviation. The Rathje and Saygili (2009) and model presents both a scalar and vector and models. For the purposes of this study the scalar model is the only one used. The empirical displacement model is based on rigid sliding block displacements computed from recorded horizontal acceleration-time histories. Over 2,000 motions were used, and each was scaled by factors of 1.0, 2.0 and 3.0. Displacements were calculated for k_y values of 0.05, 0.1, 0.2 and 0.3. The proposed model presented in 2009 was the following:

$$\ln D = 4.89 - 4.85\left(\frac{k_y}{a_{\max}}\right) - 19.64\left(\frac{k_y}{a_{\max}}\right)^2 + 42.49\left(\frac{k_y}{a_{\max}}\right)^3 - 29.06\left(\frac{k_y}{a_{\max}}\right)^4 + 0.72\ln\left(a_{\max}\right) + 0.89\left(M - 6\right) \quad (46)$$

where D is the seismic slope displacement in units of cm is, k_y is the yield acceleration and $a_{\max}$ is peak ground surface acceleration both in units of g., and *M* is the earthquake moment magnitude. The overall standard deviation for this new model is 0.95.

2.4.2 Bray and Travasarou (2007) Model

The Bray and Travasarou (2007) model utilizes a nonlinear fully coupled stick-slip sliding block model. The model separates the probability of "zero" displacement from the distribution of "nonzero" displacement, so that very low values do not bias the results. For the Newmark rigid sliding block case (T_s=0), the natural logarithm of the seismic displacement can be computed as:

$$\begin{aligned}\ln(D) = &-0.22 - 2.83\ln(k_y) - 0.333\left(\ln(k_y)\right)^2 + 0.566\ln(k_y)\ln(a_{\max}) \\ &+3.04\ln(a_{\max}) - 0.244\left(\ln(a_{\max})\right)^2 + 0.278(M-7)\end{aligned} \tag{47}$$

where the standard deviation for this model is 0.67.

The methodology presented by Bray and Travasarou can be used to calculate the probability of the seismic displacement exceeding a selected threshold of displacement (*d*) for a specified earthquake scenario and slope properties.

2.4.3 Performance-based Implementation of Seismic Slope Displacement Models

The performance-based application of a seismic slope displacement model involves the incorporation of a probabilistic hazard framework (Rathje and Saygili 2008). A hazard curve showing the mean annual rate of exceeding a seismic slope displacement d^* can be computed as:

$$\lambda_{d^*} = \sum P\left[D > d^* \mid \mathrm{GM}_i, k_y\right] \cdot \Delta\lambda_{GM} \tag{48}$$

where $\sum P\left[D > d^* \mid \mathrm{GM}_i, k_y\right]$ is the conditional probability of exceeding displacement d^* given a ground motion level *i*, and $\Delta\lambda_{GM}$ is the incremental mean annual rate of exceedance from the ground motion hazard curve. The sum in the equation represents the integration over all possible

ground motion levels. Because only a single ground motion parameter is used to predict D, this approach is considered a scalar probabilistic assessment.

2.5 Simplified Performance-Based Seismic Slope Displacement Procedure

The simplified performance-based seismic slope displacement procedure seeks to approximate displacements calculated by the full-performance based seismic slope displacement procedure described in Section 2.4.3. The models described above will be incorporated in the simplified procedure at specific return periods.

The simplified seismic slope displacement model is derived from the following equation:

$$\ln D^{site} = \ln D^{ref} + \Delta \ln D \tag{49}$$

where D^{site} is the actual performance-based seismic slope displacement at the desired return period, D^{ref} is a reference performance-based seismic slope displacement based on a constant set of reference conditions, and $\Delta \ln D$ is a displacement correction function.

While a series of performance-based analyses can be performed with a constant set of reference conditions to compute $\ln D^{ref}$ at a desired return period across a geographic area, the values of $\ln D^{site}$ and $\Delta \ln D$ are unknown and must be approximated. The value of $\ln D^{site}$ can be approximated with the Rathje and Saygilie (2009) model as:

$$\begin{aligned} \ln D^{site} \approx\ & 4.89 - 4.85\left(\frac{k_y^{site}}{a_{\max}}\right) - 19.64\left(\frac{k_y^{site}}{a_{\max}}\right)^2 + 42.49\left(\frac{k_y^{site}}{a_{\max}}\right)^3 \\ & - 29.06\left(\frac{k_y^{site}}{a_{\max}}\right)^4 + 0.72\ln\left(a_{\max}\right) + 0.89\left(M - 6\right) \end{aligned} \tag{50}$$

where $a_{\max}$ is obtained from the seismic hazard curve for $a_{\max}$ at the return period of interest, and k_y^{site} is the site-specific yield acceleration, which is usually estimated using a two-dimensional pseudo-static slope stability analysis.

Using the Bray and Travasarou (2007) model, the same approximation is computed as:

$$\ln D^{site} \approx -0.22 - 2.83\ln\left(k_y^{site}\right) - 0.333\left(\ln\left(k_y^{site}\right)\right)^2 + 0.566\ln\left(k_y^{site}\right)\ln\left(a_{\max}\right) + 3.04\ln\left(a_{\max}\right) - 0.244\left(\ln\left(a_{\max}\right)\right)^2 + 0.278\left(M-7\right) \quad (51)$$

Similarly, the reference seismic slope displacement can be approximated in order to compute $\Delta \ln D$. The reference seismic slope displacement can be approximated using the Rathje and Saygili (2009) model as:

$$\ln D^{ref} \approx 4.89 - 4.85\left(\frac{k_y^{ref}}{a_{\max}^{ref}}\right) - 19.64\left(\frac{k_y^{ref}}{a_{\max}^{ref}}\right)^2 + 42.49\left(\frac{k_y^{ref}}{a_{\max}^{ref}}\right)^3 - 29.06\left(\frac{k_y^{ref}}{a_{\max}^{ref}}\right)^4 + 0.72\ln\left(a_{\max}^{ref}\right) + 0.89\left(M-6\right) \quad (52)$$

where k_y^{ref} is the constant reference yield acceleration, and $a_{\max}^{ref}$ is the peak ground surface acceleration at the return period of interest from the seismic hazard curve corresponding to the reference soil condition.

Using the Bray and Travasarou (2007) model, the reference seismic slope displacement can be approximated as:

$$\ln D^{ref} \approx -0.22 - 2.83\ln\left(k_y^{ref}\right) - 0.333\left(\ln\left(k_y^{ref}\right)\right)^2 + 0.566\ln\left(k_y^{ref}\right)\ln\left(a_{\max}^{ref}\right) + 3.04\ln\left(a_{\max}^{ref}\right) - 0.244\left(\ln\left(a_{\max}^{ref}\right)\right)^2 + 0.278\left(M-7\right) \quad (53)$$

With approximated values of $\ln D^{ref}$ and $\ln D^{site}$, we can now approximate $\Delta \ln D$ as:

$$\Delta \ln D = \ln D^{site} - \ln D^{ref} \quad (54)$$

Substituting Equations (50) and (52) into Equation (54), $\Delta \ln D$ for the Rathje and Saygilie (2009) model can be represented as:

$$\left(\Delta \ln D\right)_{rathje} \approx \frac{4.85}{PGA}\left(\frac{k_y^{ref}}{f_a^{ref}} - \frac{k_y^{site}}{f_a^{site}}\right) + \frac{19.64}{(PGA)^2}\left[\left(\frac{k_y^{ref}}{f_a^{ref}}\right)^2 - \left(\frac{k_y^{site}}{f_a^{site}}\right)^2\right] + \frac{42.49}{(PGA)^3}\left[\left(\frac{k_y^{site}}{f_a^{site}}\right)^3 - \left(\frac{k_y^{ref}}{f_a^{ref}}\right)^3\right] + \frac{29.06}{(PGA)^4}\left[\left(\frac{k_y^{ref}}{f_a^{ref}}\right)^4 - \left(\frac{k_y^{site}}{f_a^{site}}\right)^4\right] + 0.79\ln\left(\frac{f_a^{site}}{f_a^{ref}}\right) \quad (55)$$

where PGA is the hazard-targeted peak ground acceleration corresponding to rock (i.e., $V_{s,30} = 760$ m/s); and f_a^{ref} and f_a^{site} are the reference and site-specific soil amplification factors (see Year 1 Quarter 1 Update Report).

Similarly, $\Delta \ln D$ can be approximate for the Bray and Travasarou (2007) model as:

$$\begin{aligned}(\Delta \ln D)_{bray} &= 2.83\left[\ln\left(\frac{k_y^{ref}}{f_a^{ref}}\right) - \ln\left(\frac{k_y^{site}}{f_a^{site}}\right)\right] + 0.333\left[\ln\left(\frac{k_y^{ref}}{f_a^{ref}}\right)^2 - \ln\left(\frac{k_y^{site}}{f_a^{site}}\right)^2\right] \\ &+0.566\ln(PGA)\left[\ln\left(\frac{k_y^{site}}{f_a^{site}}\right) - \ln\left(\frac{k_y^{ref}}{f_a^{ref}}\right)\right]\end{aligned} \quad (56)$$

With this simplified performance-based approach for estimating seismic slope displacements, an engineer can compute uniform hazard estimates of seismic slope displacement at a targeted hazard level in a relatively simple manner. Certain assumptions are needed as inputs such as the yield acceleration for the specific slope using limit equilibrium slope stability methods. It is also required to obtain the probabilistic estimate of PGA from the USGS NSHMP website for rock (i.e., $V_{s,30} = 760$ m/s) at the targeted hazard level. A site-specific soil amplification factor for the ground motion is obtained from either the AASHTO seismic design provisions (based on soil site classification) or from a site-specific site response analysis.

Once approximations of $\Delta \ln D$ are available, site-specific, hazard-targeted estimates of seismic slope displacement can be computed as:

$$D^{site} = \exp\left[\ln D^{ref} + \Delta \ln D\right] = (D^{ref})\exp\left[\Delta \ln D\right] \quad (57)$$

where D^{ref} is obtained from the appropriate seismic slope displacement reference parameter map.

2.6 Summary

The derivations of the simplified post-liquefaction free-field settlement and seismic slope displacement models show how to approximate a full performance-based analysis using simple calculations and mapped reference parameters. The simplified post-liquefaction free-field

settlement model is based on the Cetin et al. (2009) and Ishihara and Yoshimine (1992) volumetric strain models, while the simplified seismic slope displacement procedure is based on Rathje and Saygili (2009), and Bray and Travasarou (2007) seismic slope displacement models.

3.0 VALIDATION OF THE SIMPLIFIED MODELS

3.1 Overview

The effectiveness of the simplified performance-based procedure introduced in this report depends on how closely they approximate the results of a complete site-specific probabilistic seismic hazard analysis. To evaluate the accuracy of the introduced simplified procedures, a comparison between the simplified and full performance-based methods will be performed for ten sites throughout the United States. These sites will be evaluated for three different return periods: 475, 1033, and 2475 years.

3.1.1 Sites used in the Analysis

The sites chosen for the analysis were selected from previous published performance-based liquefaction studies (e.g., Kramer and Mayfield 2007). The selected sites represent 10 different cities across the United States, and are listed in Table 1. Two of the locations (Charleston and Memphis) are in areas of low recent seismicity with very large historical earthquakes. Four of the sites (Santa Monica, San Jose, San Francisco, and Eureka) are located in very active seismic environments. Three of the sites (Seattle, Portland, and Eureka) are in areas subject to large-magnitude subduction earthquakes. Two sites (San Francisco and San Jose) are in relatively close proximity (~60 km) to each other. Finally, two of the sites (Salt Lake City and Butte) are located in extensional seismic regimes governed largely by normal faults.

Table 1: Locations used for the validation of the simplified models

Site	Latitude	Longitude
Butte, MT	46.003	-112.533
Charleston, SC	32.726	-79.931
Eureka, CA	40.802	-124.162
Memphis, TN	35.149	-90.048
Portland, OR	45.523	-122.675
Salt Lake City, UT	40.755	-111.898
San Francisco, CA	37.775	-122.418
San Jose, CA	37.339	-121.893
Santa Monica, CA	34.015	-118.492
Seattle, WA	47.53	-122.3

3.2 Simplified Post-liquefaction Free-field Settlement Model Validation

3.2.1 *PBLiquefY*

The site-specific analysis for the full performance-based method was performed using *PBLiquefY* (Franke et al., 2014c). *PBLiquefY* was also used to create the liquefaction loading maps used to determine the reference values (e.g. CSR^{ref} (%), ε_v^{ref}) necessary to perform the simplified settlement procedure. The 2008 USGS ground motion deaggregations were used in both the full and simplified methods.

3.2.2 Site Profiles

A full performance-based analysis was performed for five different soil profiles. The proposed simplified procedure was performed for the same soil profiles using both the Cetin et al. (2009) and Ishihara and Yoshimine (1992) models as explained in Section 2.3. Soil properties throughout the five profiles generally remained constant, with the exception of the SPT resistance values. The soil properties for the five different soil profiles were as follows:

- Depths ranging from 0 to 18 meters.
- Soil Type: Silty Sand (SM)

- $V_{s,12}$: 190 meters per second
- Plasticity Index: 0
- Liquid Limit: 30 %
- Water Content: 30%
- Fines Content: 0 to 10 %
- Unit Weight: 19.62 kN per cubic meter

The water table on three of the analyzed profiles existed two meters below grade while the other two profiles had a water table at ground surface. N_{field} (field observed SPT resistance) values for the five different profiles can be seen in Figure 3.

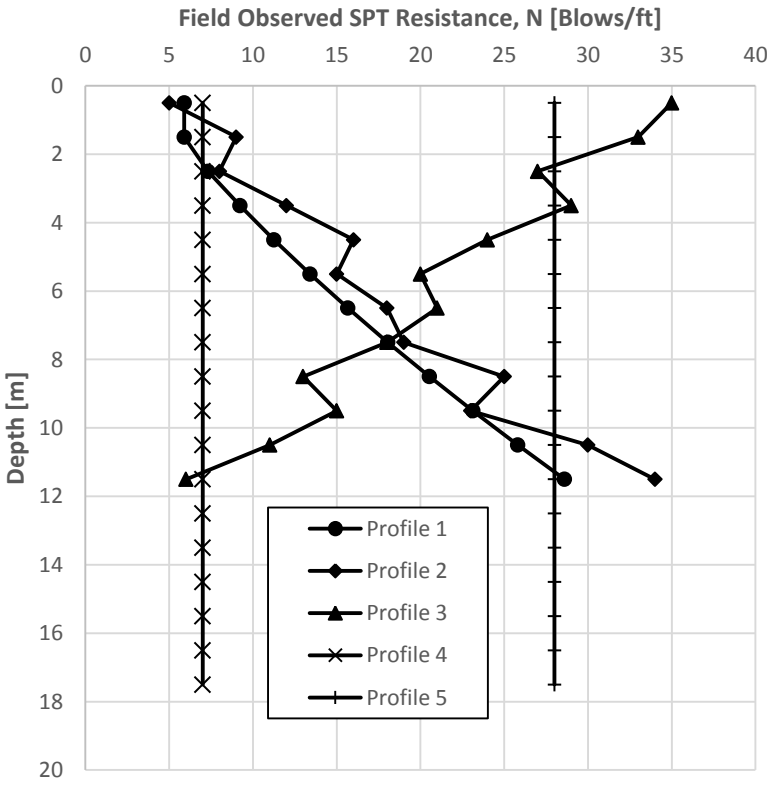

Figure 3: Field-observed SPT resistances for each soil profile

3.2.3 Validation of the Simplified Performance-Based Cetin et al. (2009) Model

Individual sub-layer strains and total surface settlements were computed using both the full performance-based method and the proposed simplified procedure. Once the full performance based method was computed along with the simplified method, the sub-layer strains

and settlements were plotted against each other. The results for sub-layer strains can be seen in Figure 4 and Figure 5 with the abscissa as the full performance-based results; the simplified method values are plotted as the ordinate points. Ideally the plotted values should line up on a 1:1 (i.e., 45-degree angle) line.

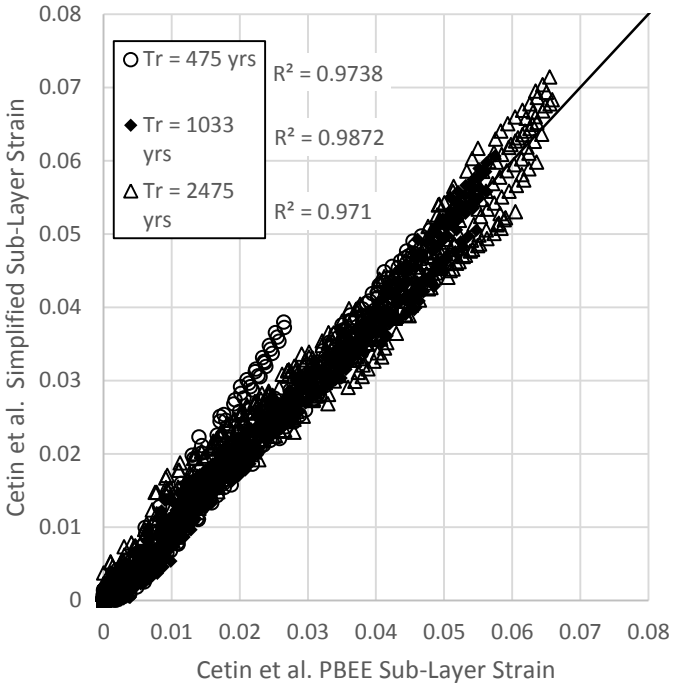

Figure 4: Individual Sublayer Cetin et al. Performance based strain vs. simplified strain separated by return period

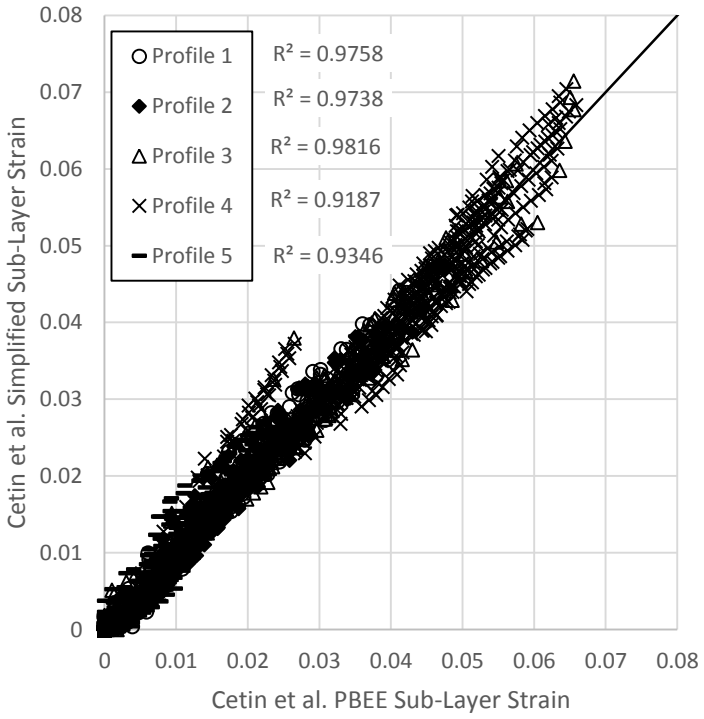

Figure 5: Sub-layer Cetin et al. Performance based strain vs. simplified strain separated by profile

Figure 4 and Figure 5 demonstrate a close relationship between the full performance-based method and the proposed simplified method. The high R^2 values indicate relatively low scatter along the relationship.

The plots associated with the Cetin et al. (2009) volumetric strain model demonstrate a close relationship between the full performance-based method and the proposed simplified procedure. Areas of highest scatter exist for the data associated with profile 4. Profile 4 could be considered as a "worst case scenario" where field observed SPT resistance is a uniform 7 blows per foot throughout the entire profile which is 18 meters thick.

3.2.4 Validation of the Simplified Performance-Based Ishihara and Yoshimine Model

The full performance based results were also plotted against the proposed simplified method utilizing the Ishihara and Yoshimine (1992) settlement model. The results are presented in Figure 6 and Figure 7. Again, an ideal fit would be a 1:1 slope trend in the data.

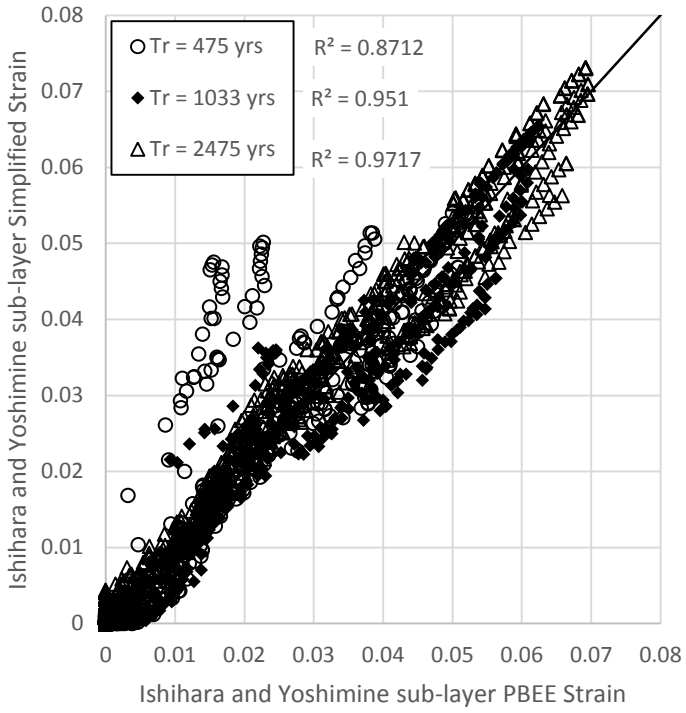

Figure 6: Ishihara and Yoshimine (1992) sub-layer PBEE strains vs. simplified strains separated by return period

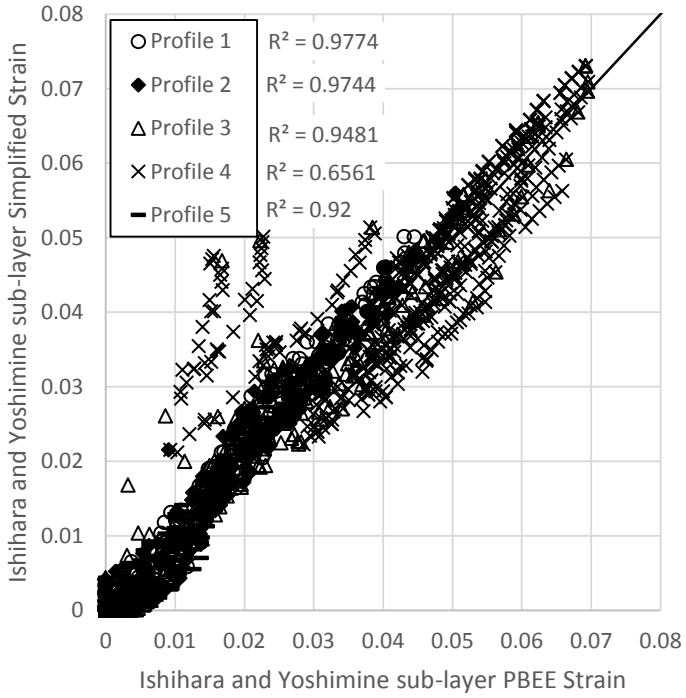

Figure 7: Ishihara and Yoshimine (1992) sub-layer PBEE strains vs. simplified strain separated by profile

The reader will note that there is more scatter in the Ishihara and Yoshimine results shown in Figures 6 and 7 than in the Cetin et al. results shown in Figures 4 and 5. Reasons/explanations for this increased scatter include the quadratic nature of the Boulanger and Idriss (2012) liquefaction triggering relationship upon which the Ishihara and Yoshimine strains are being computed, and the highly non-linear nature of the Ishihara and Yoshimine relationships between FS_L and ε_v itself. The reader must also remember that the simplified performance-based strain estimation procedure presented here inherently incorporates the inaccuracies/errors from the simplified performance-based liquefaction triggering procedure as well as its own inaccuracies/errors. Therefore, much of the scatter that is apparent in Figures 4 through 7 can be attributed to these compounding errors, and will always be a challenge associated with the simplified performance-based computation of liquefaction effects that are conditional upon liquefaction triggering analysis results. Furthermore, most of the scatter shown in Figures 4 through 7 is associated with Soil Profile #4, which was created to represent a "worst case scenario" in which all of the soil from the ground surface to a depth of 18 meters has $(N_1)_{60}$ values less than 8 blows per 0.33 meter. This scatter appears aggravated further in areas of low seismicity (i.e., where probabilistic PGA estimates are less than 0.2g) at low return periods (e.g., 475 years). Fortunately, the scatter in the results is considerably smaller for more typical soil conditions in which the SPT resistances were either greater than 8 blows per 0.33 meter, or are more varied in SPT resistance and are not uniformly small.

The overarching challenge here is that the simplified method is attempting to closely approximate the performance-based results of a very complex, non-linear liquefaction effect using a simple linear transfer function. As such, some level of scatter in the approximation is going to be inevitable. However, the more important questions that should be asked are, "Does the simplified procedure accurately approximate the full performance-based procedure *on average*?", and "Are the scatter in the simplified procedure and any associated predictive errors going to negatively impact my engineering decisions in design?" The first question is answered by evaluating the trendlines of the data points in Figures 4 through 7, which showed trendlines with slopes ranging from 0.99 to 1.01. Therefore, the data suggests that, on average, the simplified performance-based volumetric strain prediction procedure will accurately approximate the results of the full performance-based volumetric strain prediction procedure over many calculations.

The second important question can be addressed by evaluating the computed ground surface settlements for each soil profile/site/return period combination. Ground surface settlement plots comparing simplified performance-based settlements with the full performance-based settlements are presented in Figures 8 through 11. Figures 8 and 9 demonstrate that the simplified performance-based procedure for the Cetin et al. (2009) approach provides a good approximation of the full-performance-based procedure, with trendlines showing slopes of 1.0 and R^2 values greater than 0.968 for all three return periods and all five soil profiles. Figures 10 and 11 demonstrate that that the simplified performance-based procedure for the Ishihara and Yoshimine (1992) approach is slightly less precise than the procedure for the Cetin et al. (2009) approach, with trendlines also showing slopes of 1.0, but R^2 values greater than 0.922 for all three return periods and all five soil profiles. However, note from Figures 10 and 11 that the simplified performance-based procedure closely approximates the settlements from the full performance-based procedure at predicted settlements that are less than 30 cm (i.e., 1 foot) for all soil profiles and return periods. Only Soil Profile #5 shows some slight deviation from the trendline at one of 30 possible site/return period combinations within this predictive range. Therefore, it appears that significant error in the predicted post-liquefaction settlement will likely only occur in the instance that more than 30 cm of ground surface settlement is predicted. In such cases, it is likely that such errors would not substantially change or affect the likely remediation that would be recommended by design engineers.

Because the simplified performance-based volumetric strain procedure closely approximates the volumetric strains from the full performance-based procedure on average, and because the procedure's computed post-liquefaction ground surface settlements accurately and precisely approximate the post-liquefaction ground surface settlements from the full performance-based procedure, it can be assumed to provide a reasonable approximation of the full performance-based procedure for most typical design situations in most seismic environments in the U.S. The engineer must be aware that the simplified performance-based procedure incorporating the Ishihara and Yoshimine (1992) volumetric strain model shows less precision in its ability to approximate the full performance-based approach when more than 30 cm (i.e., 1 foot) of total post-liquefaction settlement is predicted, particularly when a large portion of the soil profile has very low SPT resistances (i.e., $(N_1)_{60} < 8$ blowcounts per 0.33 meter).

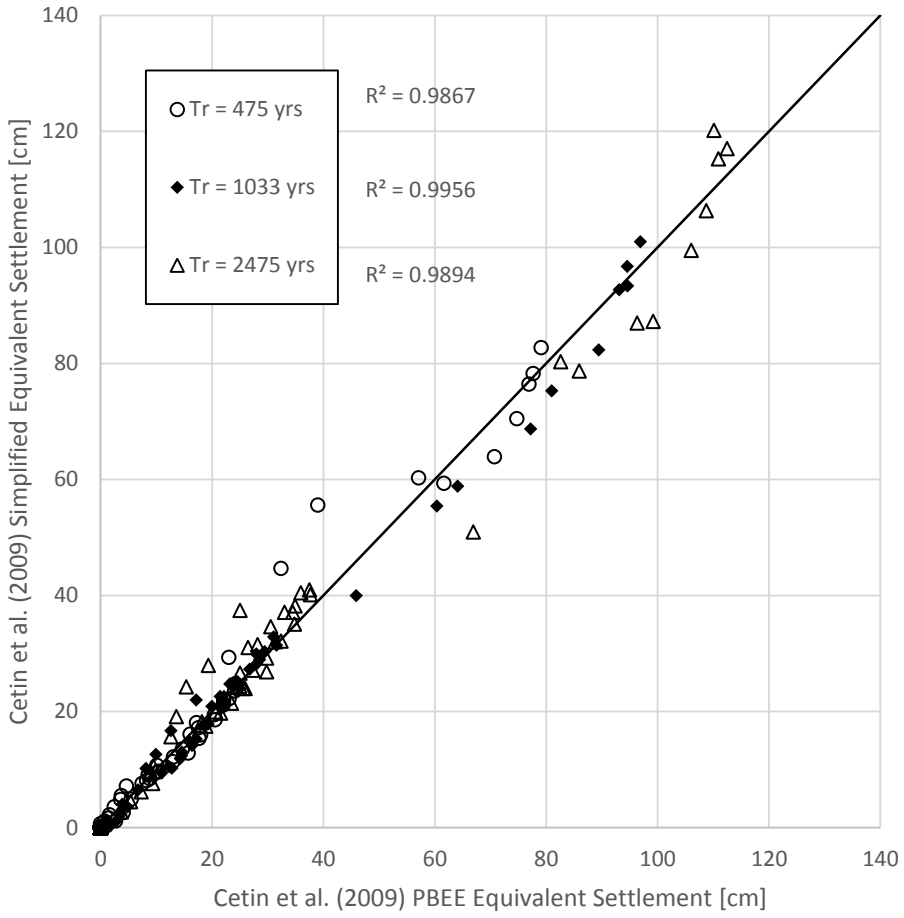

Figure 8: Cetin et al. (2009) PBEE settlements vs. simplified procedure settlements separated by return period

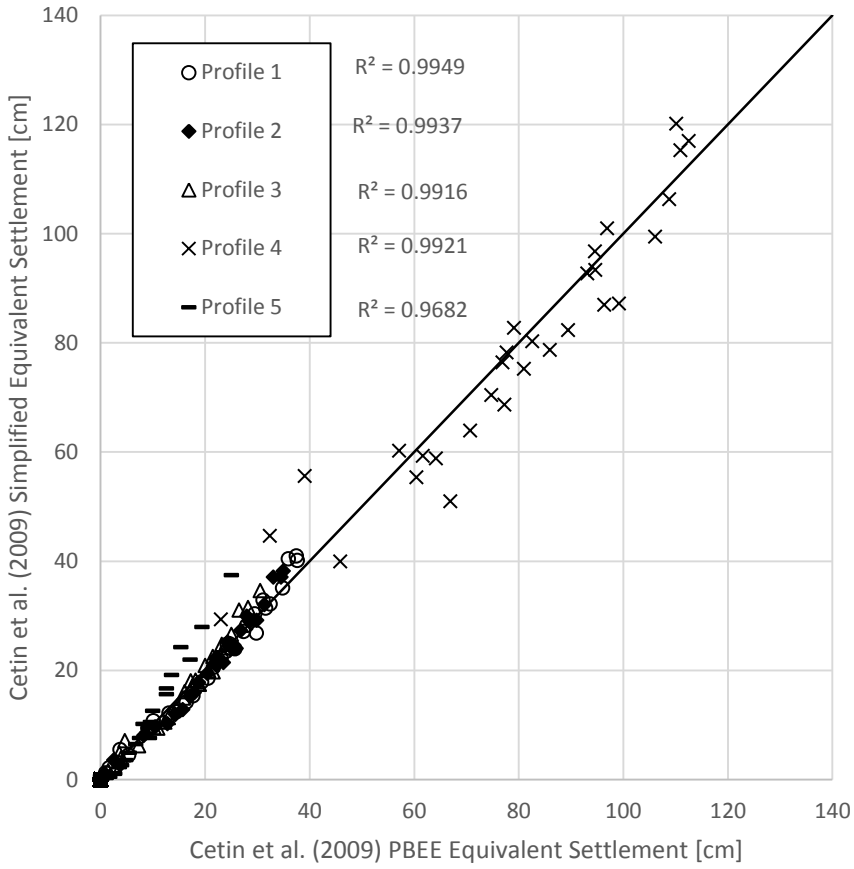

Figure 9: Cetin et al. (2009) PBEE settlements vs. simplified method settlements separated by soil profile

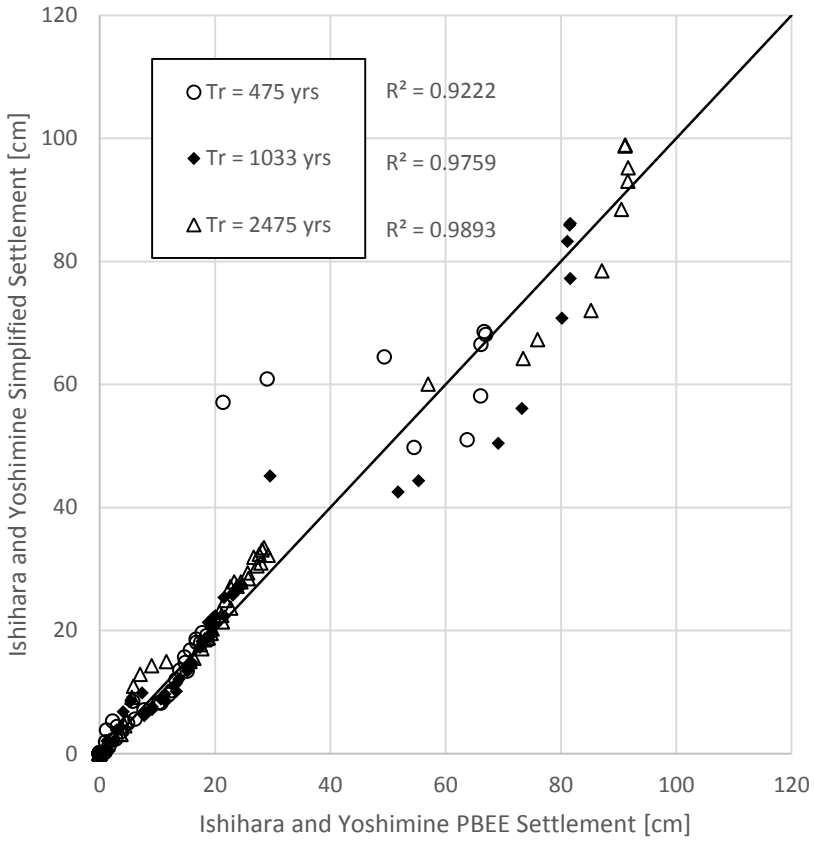

Figure 10: Ishihara and Yoshimine (1992) PBEE settlements vs. simplified settlements separated by return period

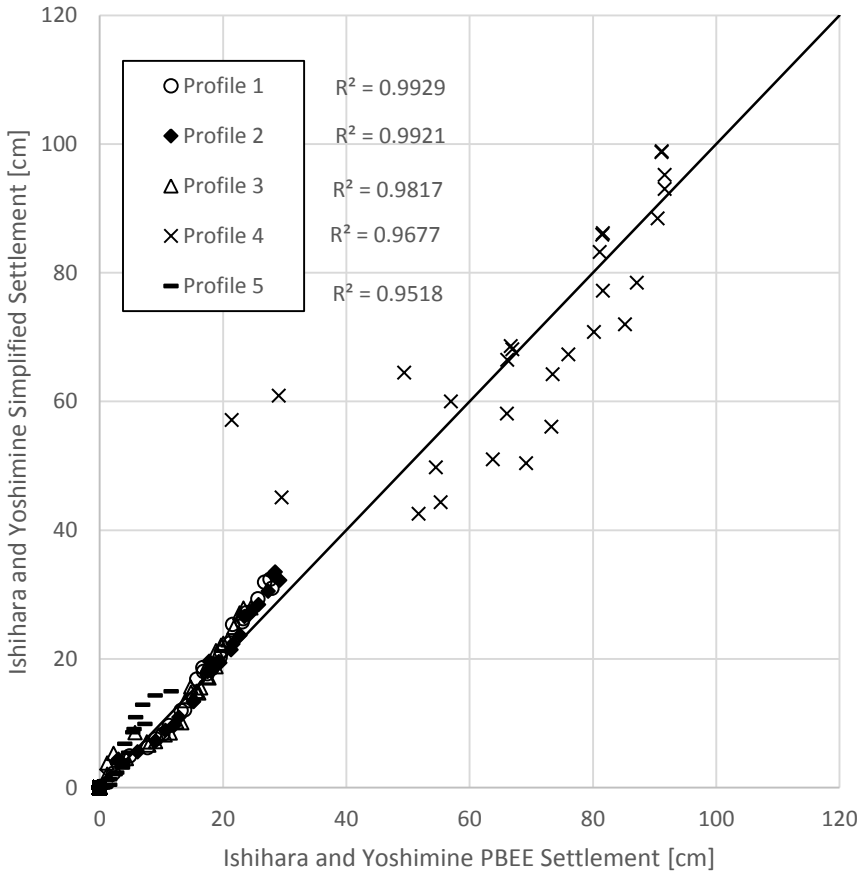

Figure 11: Ishihara and Yoshimine (1992) PBEE settlements vs. simplified settlements separated by soil profile

3.2.5 Discussion

Some engineers may interpret from Figures 3 through 11 that the simplified performance-based settlement procedure tends to over-predict settlements for very loose soils (i.e., N<8). However, this interpretation is not accurate. Note from Figures 9 and 11 Soil Profile #4 showed both over-prediction and under-prediction in this scatter about the 45-degree line. In addition, overall settlement predictions, even with the very loose soil layers included, tend to be good approximations of the full performance-based settlements (as shown in Figures 8 through 11) – particularly when the predicted settlements are less than about 30 cm (i.e., 1 foot).

Finally, some engineers may interpret these results as stating that low-seismicity areas should not be concerned with quantifying liquefaction-induced settlements. This statement stems from the perception that our simplified procedures tends to over-predict strains in areas of low

seismicity, which is not true. Just as many cases of under-prediction were observed as were cases of over-prediction in areas of low seismicity. It can therefore be concluded that very loose soil layers in areas of low seismicity tend to show more scatter in their predicted post-liquefaction strains. However, when considering all of the strains collectively, the simplified procedure closely approximates the results from the full performance-based procedure on average. This is why the total computed settlements at the ground surface (as discussed above) tend reasonably approximate of the full performance-based procedure. Rather than infer generic and generalized recommendations based on these limited results, it is recommended that liquefaction hazards should be evaluated consistently everywhere, and that design decisions should be objectively based on the results of those evaluations.

3.3 Simplified Seismic Slope Displacement Model Validation

To evaluate the accuracy of the simplified performance-based procedure for seismic slope displacements, reference parameters of $k_y^{ref} = 0.1g$ and $f_a^{ref} = 1.0$ were selected. Values of k_y^{site} ranging from 0.1g to 0.5g were selected for the "site-specific" site conditions. Values of PGA and mean M were obtained for the ten selected U.S. cities from the 2008 USGS deaggregation for three return periods: 475 years, 1,033 years, and 2,475 years. Values of f_a^{site} were obtained from current AASHTO seismic design provisions using tabulated values of f_{pga} as a function of PGA. Subsequent values of mean M, PGA, and f_{pga} for the three return periods are summarized in Table 2 for the ten cities evaluated in this study.

Table 2: Summary of Magnitude, PGA and f_a site used for each city used in the validation

Site	Tr = 475			Tr = 1033			Tr = 2475		
	Mean M	PGA	f_a	Mean M	PGA	f_a	Mean M	PGA	f_a
Butte	6.03	0.0834	1.600	6.03	0.1206	1.559	6.05	0.1785	1.443
Charleston	6.61	0.1513	1.497	6.87	0.3680	1.132	7.00	0.7287	1.000
Eureka	7.33	0.6154	1.000	7.40	0.9662	1.000	7.45	1.4004	1.000
Memphis	6.98	0.1604	1.479	7.19	0.3346	1.165	7.24	0.5711	1.000
Portland	7.24	0.1990	1.402	7.29	0.2980	1.204	7.31	0.4366	1.063
Salt Lake City	6.75	0.2126	1.375	6.84	0.4030	1.097	6.90	0.6717	1.000
San Francisco	7.31	0.4394	1.061	7.38	0.5685	1.000	7.44	0.7254	1.000
San Jose	6.66	0.4560	1.044	6.67	0.5627	1.000	6.66	0.6911	1.000
Santa Monica	6.74	0.3852	1.115	6.79	0.5372	1.000	6.84	0.7415	1.000
Seattle	6.75	0.3110	1.189	6.82	0.4444	1.056	6.88	0.6432	1.000

The full performance-based seismic slope displacement equation as described in Section 2.4.3 was implemented in *PBLiquefY* with the reference values described above to compute D^{ref} for the ten U.S. cities at the three return periods of interest. Additionally, *PBLiquefY* was used to compute site-specific, full performance-based values of D^{site} using the selected values of k_y^{site} at each of the ten cities for all three return periods. Site-specific values of k_y^{site} were then used to compute simplified approximations of D^{site} using Equations (55), (56), and (57) and the seismic loading values summarized in Table 2: Summary of Magnitude, PGA and f_a site used for each city used in the validation

Figure 12 and Figure 13 below show the comparison of the full and simplified performance-based seismic slope displacement predictions for both the Rathje and Saygili (2009) and Bray and Travasarou (2007) models, respectively.

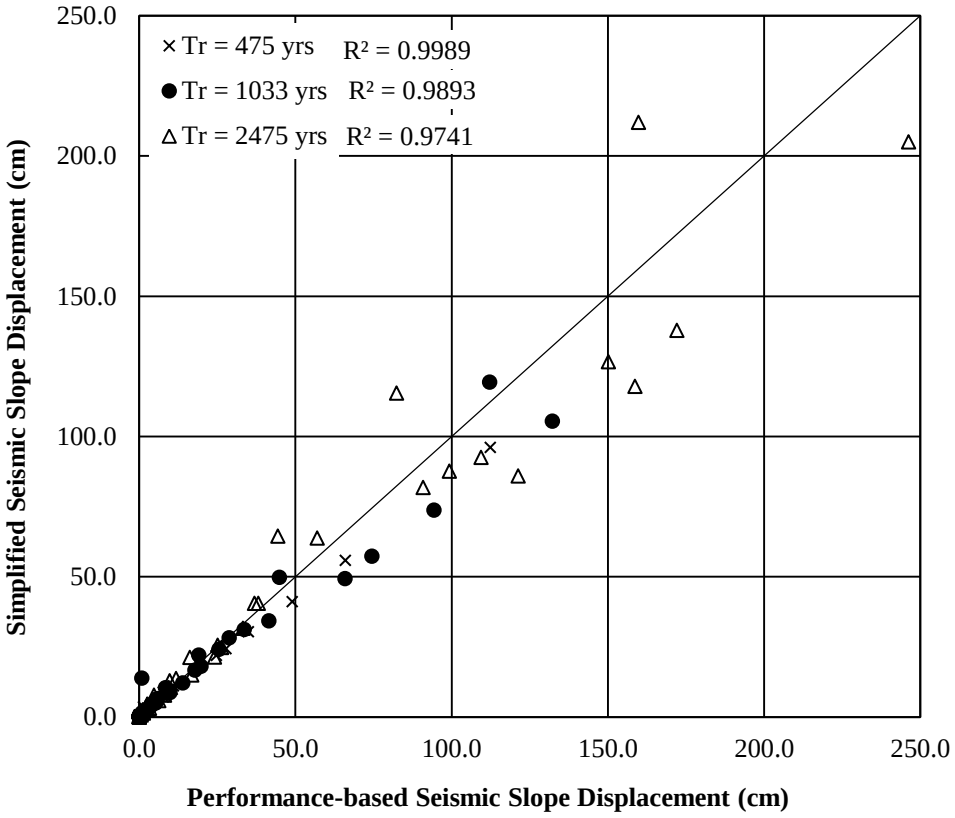

Figure 12: Comparison of seismic slope displacements for the simplified and full performance-based models based on Rathje and Saygili (2009)

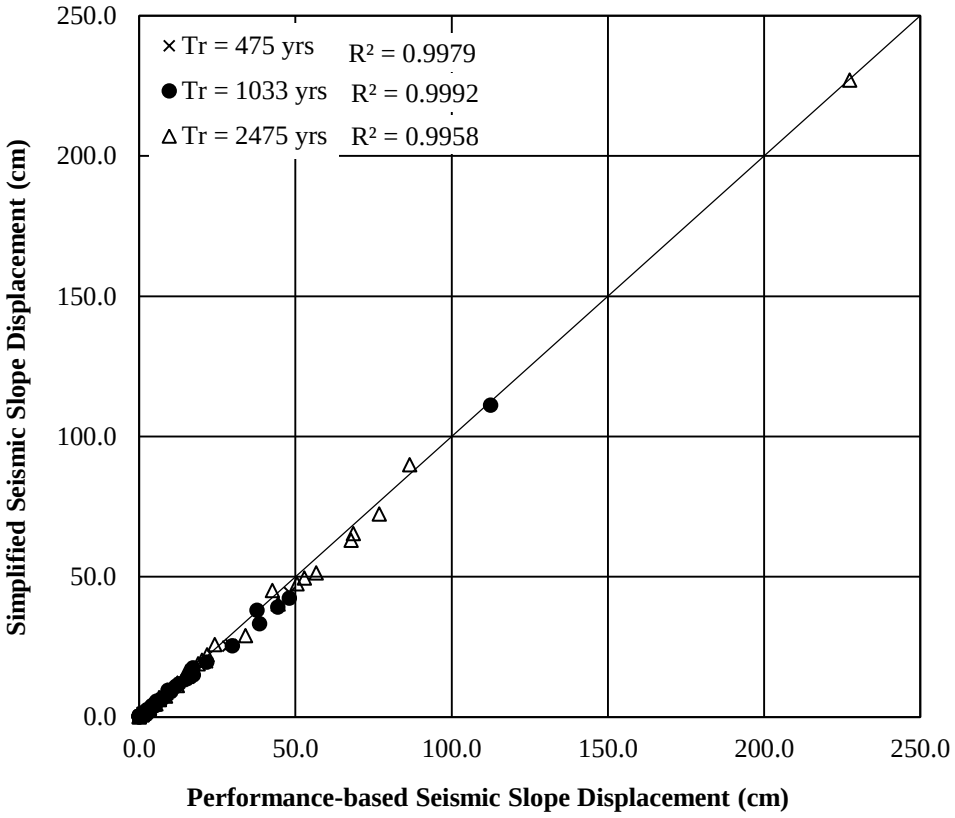

Figure 13: Comparison of seismic slope displacements for the simplified and full performance-based models based on Bray and Travasarou (2007)

As seen in Figure 12 and Figure 13, there is generally a good correlation between the full-performance based procedure and the simplified performance-based procedure with both models, although the simplified procedure using the Bray and Travasarou (2007) model provides a better approximation of the full performance-based results than the procedure using the Rathje and Saygili (2009) model. The Rathje and Saygili (2009) model incorporates a 4^{th}-order polynomial function of $\left(k_y / PGA\right)$, which can lead to greater discrepancies between the simplified performance-based slope displacements and the full performance-based slope displacements at higher predicted displacements. Nevertheless, relatively high R^2 values indicate that the correlation accounts for nearly all of the variability in the computed response data. The average discrepancy across all return periods and yield accelerations included in this study for the simplified procedure using the Rathje and Saygili (2009) model was 4.9 cm. The average discrepancy for the simplified procedure using the Bray and Travasarou (2007) model was 0.8

cm. However, note that the simplified procedure incorporating the Rathje and Saygili (2009) model accurately and precisely approximates the results of the full performance-based procedure up to predicted displacements of about 50 cm, which is a much greater displacement than what is typically considered acceptable for most bridge foundations. For predicted displacements greater than 50 cm, the engineer should interpret the results with caution, understanding that the simplified Rathje and Saygili (2009) results may be imprecise. From these results we can conclude that the simplified procedure for approximating probabilistic seismic slope displacements will adequately approximate the results of a full performance-based procedure for most practical design applications, particularly if an allowable limit state of 30 cm (i.e., 12 inches) is specified for foundation design.

3.4 Summary

Ten sites throughout the United States were analyzed using both the full and simplified performance-based post-liquefaction settlement and seismic slope displacement procedures for three different return periods: 475, 1033, and 2475 years. Both the simplified post-liquefaction free-field settlement procedure and the simplified seismic slope displacement procedure demonstrated accurate and precise approximations of their respective full performance-based procedures at predicted slope displacements of 30 cm or less. At greater predicted displacements, the simplified procedure with the Rathje and Saygili (2009) model showed more scatter in its ability to approximate the full performance-based procedure. Caution and engineering judgment should be used when such circumstances are encountered in design.

4.0 CONCLUSIONS

4.1 Summary

The purpose of the research being performed is to provide the benefit of the full performance-based probabilistic earthquake hazard analysis, without requiring special software, training, and experience. To accomplish this goal, simplified models of post-liquefaction free-field settlement and seismic slope displacement were developed that reasonably approximate the results of full performance-based analyses at predicted displacements and settlements less than 30 cm. At predicted displacements and settlements greater than 30 cm, the simplified performance-based procedures were observed to become more imprecise, particularly for the Ishihara and Yoshimine (1992) volumetric strain approach and the Rathje and Saygili (2009) seismic slope displacement approach. The objective of this report was to introduce the original models used to determine earthquake hazards (i.e. post-liquefaction free-field settlement and seismic slope displacement), provide in-depth derivations that demonstrate the development of the simplified methods, and then validate the simplified models by performing a site-specific analysis for several different sites using the simplified and full models.

4.2 Findings

4.2.1 Derivation of the Simplified Procedures

The derivations of the simplified liquefaction triggering and lateral spread displacement models show how to approximate a full performance-based analysis using simple calculations and mapped reference parameters. The simplified post-liquefaction free-field settlement procedure is based on the Cetin et al. (2009) and Ishihara and Yoshimine (1992) volumetric strain models, while the simplified seismic slope displacement procedure is based on the Rathje and Saygili (2009) and Bray and Travasarou (2007) seismic slope displacement models.

4.2.2 Validation of the Simplified Procedures

Ten sites throughout the United States were analyzed using both the full and simplified probabilistic procedures for three different return periods: 475, 1033, and 2475 years. Both the

simplified post-liquefaction free-field settlement procedure and the simplified seismic slope displacement procedure provided reasonable approximations of their corresponding full performance-based procedures at predicted settlements and seismic slope displacements that were less than 30 cm. The largest imprecisions seemed to occur when a large portion of the soil profile included very loose, liquefiable soil with $(N_1)_{60} < 8$ blowcounts per 0.33 meter. Nevertheless, the observed results from this study suggest that the simplified procedures presented in this report can be used to approximate the results of a full performance-based procedure for most typical design situations.

4.3 Limitations and Challenges

Observations associated with the simplified performance post-liquefaction settlement and Newmark seismic slope displacement analyses suggest that the simplified procedures tend to become more imprecise in their ability to approximate their corresponding full performance-based procedures at predicted ground surface settlement or seismic slope displacements that are greater than 30 cm (i.e., 12 inches or 1 foot), particularly when using the Ishihara and Yoshimine (1992) settlement model and the Rathje and Saygili (2009) seismic slope displacement model. In understanding the reasons for these imprecisions, it is important to emphasize the *simplified* nature of these simplified procedures. The most likely reasons for the increased scatter in the simplified post-liquefaction settlement procedure are the highly non-linear form of the Ishihara and Yoshimine (1992) predictive model, and the fact that the simplified post-liquefaction settlement procedure uses the results of a simplified performance-based liquefaction triggering assessment as input. Therefore, all of the bias and error resulting from the simplified liquefaction triggering assessment is "adopted" by the post-liquefaction settlement procedure, and is augmented by any bias and/or error associated with the non-linearity of the incorporated volumetric strain models. In other words, we are observing a classic case of compounding errors. The most likely reason for the increased scatter in the simplified seismic slope displacement procedure is the complex 4th-order polynomial function of (k_y / PGA) that is used by the Rathje and Saygili (2009) model. Regardless, the trendlines in both the simplified post-liquefaction strain procedure and the simplified seismic slope displacement procedure demonstrate that the simplified procedures closely approximate the results of their corresponding full performance-

based procedures on average. Therefore, an engineer can confidently use these simplified procedures when 30 cm (i.e., 12 inches or 1 foot) or less of post-liquefaction ground surface settlement or seismic slope displacement is predicted. In the case when more than 30 cm of predicted ground surface settlement or seismic slope displacement is predicted, then engineering judgment should be used with the simplified performance-based procedures, particularly when the Ishihara and Yoshimine (1992) and Rathje and Saygili (2009) models are being used. In such cases, the engineer should understand that thick segments (i.e., greater than about 3 meters of total thickness) of very loose, liquefiable soil (i.e., $\left(N_1\right)_{60} < 8$) could lead to inaccurate probabilistic predictions of post-liquefaction settlement and/or seismic slope displacement. Under such circumstances, the engineer may wish to consider performing a full performance-based assessment of liquefaction and its effects rather than relying upon the results of simplified procedures presented in this report.

References

Boulanger, R., & and Idriss, I. (2012). Probabilistic Standard-Penetration Test-Based Liquefaction-Triggering Procedure. *Journal of Geotechnical and Geoevironmental Engineering*, 1185-1195.

Bray, J. D., ASCE, F., & Travasarou, T. (2007, April). Simplified Procedure for Estimating Earthquake-Induced Deviatoric Slope Displacements. *Journal of Geotechnical and Geoenvironmental Engineering*, 381-392.

Cetin, K. O., & al., e. (2009, March). Probabilistic Model for the Assessment of Cyclical Induced Reconsolidation (Volumetric) Settlements. *Journal of Geotechnical and Geoenvironmental Engineering*, 387-396.

Cetin, K. O., Seed, R. B., Kiureghian, A. D., Tokimatsu, K., Harder Jr., L. F., Kayen, R. E., & Moss, R. E. (2004, December). Standard Penetration Test-Based Probabilistic and Deterministic Assessment of Seismic Soil Liquefaction Potential. *Journal of Geotechnical and Geoenvironmental Engineering*, 1314-1340.

Franke, K., Mayfield, R., & and Wright, A. (2014d). Simplified uniform hazard analysis for bridges. *Transportation Research Record.* Washington D.C.

Franke, K., Wright, A., & Hatch, C. (2014c). PBLiquefY: A new analysis tool for the performance-based evaluation of liquefaction triggering. *Proceedings, 10th National Conference on Earthquake Engineering.* Oakland, CA: EERI.

Huang, Y.-M. (2008). *Performance-based design and evaluation for liquefaction-related seimic hazards.* Seattle, Washington: University of Washington.

Idriss, I., & Boulanger, R. (2008). Soil liquefaction during earthquakes. *Monograph MNO-12* (p. 261 pp). Oakland, CA: Earthquake Engineering Research Institute.

Ishihara, K., & Yoshimine, M. (1992). Evaluation of settlements in sand deposits following liquefaction during earthquakes. *Soils Found., 32*, 173-188.

Kramer, S. L. (2008). *Evaluation of liquefaction hazards in Washington State.* Seattle: WSDOT Report.

Kramer, S. L. (2014). Performance-based design methodologies for geotechnical earthquake engineering. *Bull Earthquake Engineering*, 1049-1070.

Mayfield, R. T., Kramer, S. L., & Huang, Y.-M. (2010, January). Simplified Approximation Procedure for Perfomance-Based Evaluation on Liquefaction Potential. *Journal of Geotechnical and Geoenvironmental Engineering*, 140-150.

Rathje, E. M., & Saygili, G. (2009, March). Probabilistic Assesment of Earthquake-Induced Sliding Displacements of Natural Slopes. *Bulletin of the New Zeland Society of Earthquake Engineering, 42*(1), 18-27.

Shamoto, Y., Zhang, J.-M., & Tokimatsu, K. (1998). New charts for predicting large residual post-liquefaction ground deformation. *Soil Dynamics and Earthquake Engineering*, 427-438.

Tokimatsu, K., & Seed, B. H. (1987). Evaluation of settlements in sand due to earthquake shaking. *Journal of Geotechnical and Geoenvironmental Engineering*, 861-878.

USGS. (2013, May 17). *2008 Interactive Deaggregations*. Retrieved June 2015, from Geologic Hazards Science Center: http://geohazards.usgs.gov/deaggint/2008/

Wu, J., & Seed, R. B. (2004). Estimating liquefaction-induced ground settlement (case studies). *5th International Conf. on Case Histories in Geotechnical Engineering.*

Youd, T., Hansen, C., & Bartlett, S. (2002). Revised multilinear regression equations for prediction of lateral spread displacement. *Journal of Geotechnical and Geoenvironmental Engineering*, 128(12), 1007-1017.

APPENDIX A: Supplementary Validation Data

The following tables are supplementary to the validation of this report. Table A. 3 and A.4 show the results from the simplified seismic slope displacement procedure. The D^{ref} values were generated from PBLiquefY using a k_y^{ref} value of 0.1 g. To calculate D^{site}, equation (54) was used with a f_a^{ref} value of 1, k_y^{site} of 0.1, 0.2, 0.3, 0.4, and 0.5 g and f_a^{site} values from Table 2. Table A. 5 shows the results of the full probabilistic seismic slope displacement procedure. These values were all generated from PBLiquefY with k_y^{site} of 0.1, 0.2, 0.3, 0.4, and 0.5 g and f_a^{site} values from Table 2.

Table A. 6 shows the supplementary validations data for the volumetric strains based off the Cetin et al. 2009 model. Table A. 7 displays the Ishihara and Yoshimine 1992 volumetric strain model supplementary validation data.

Table A. 3: Results from Simplified Seismic Slope Displacement Procedure based on Rathje & Sygili 2009

	Site	D^{ref} Rathje & Saygili (cm)			ΔlnD (Rathje & Saygili)			D^{site} Rathje & Saygili (cm)		
		475 Yrs.	1033 Yrs.	2475 Yrs.	475 Yrs.	1033 Yrs.	2475 Yrs.	475 Yrs.	1033 Yrs.	2475 Yrs.
	Butte	<0.5	<0.5	0.7	15.3	3.3	1.5	0.0	13.8	3.2
	Charleston	<0.5	12.5	81.8	2.0	0.4	0.0	3.6	18.1	81.8
	Eureka	96.0	280.1	670.9	0.0	0.0	0.0	96.0	280.1	670.9
k_y^{ref}=0.1	Memphis	0.5	17.5	92.6	1.8	0.5	0.0	3.0	28.2	92.6
k_y^{site}=0.1	Portland	2.9	18.5	72.9	1.3	0.6	0.2	11.1	34.3	86.0
	Salt Lake City	2.6	24.0	87.6	1.2	0.3	0.0	8.8	31.2	87.6
	San Francisco	47.6	105.5	205.0	0.2	0.0	0.0	55.8	105.5	205.0
	San Jose	36.7	73.7	137.8	0.1	0.0	0.0	41.1	73.7	137.8
	Santa Monica	22.2	57.2	126.6	0.3	0.0	0.0	30.4	57.2	126.6
	Seattle	12.5	42.7	117.8	0.6	0.1	0.0	21.9	49.4	117.8
	Butte	<0.5	<0.5	0.7	-33.7	-6.1	-1.7	0.0	0.0	0.1
	Charleston	<0.5	12.5	81.8	-2.6	-1.5	-1.2	0.0	2.7	25.6
	Eureka	96.0	280.1	670.9	-1.4	-0.9	-0.5	24.4	119.3	387.1
	Memphis	0.5	17.5	92.6	-2.2	-1.5	-1.5	0.1	3.9	21.3
k_y^{ref}=0.1	Portland	2.9	18.5	72.9	-1.5	-1.5	-1.6	0.7	4.1	15.0
k_y^{site}=0.2	Salt Lake City	2.6	24.0	87.6	-1.4	-1.5	-1.3	0.6	5.1	24.8
	San Francisco	47.6	105.5	205.0	-1.6	-1.5	-1.2	9.8	24.1	63.8
	San Jose	36.7	73.7	137.8	-1.6	-1.5	-1.2	7.4	16.7	40.5
	Santa Monica	22.2	57.2	126.6	-1.5	-1.5	-1.1	4.8	12.2	40.5
	Seattle	12.5	42.7	117.8	-1.5	-1.6	-1.3	2.8	8.7	31.6
	Butte	<0.5	<0.5	0.7	-347.7	-66.1	-14.1	0.0	0.0	0.0
	Charleston	<0.5	12.5	81.8	-26.2	-3.5	-2.3	0.0	0.4	8.5
	Eureka	96.0	280.1	670.9	-2.6	-1.7	-1.2	7.1	49.7	212.0
	Memphis	0.5	17.5	92.6	-20.9	-3.8	-2.8	0.0	0.4	5.8
k_y^{ref}=0.1	Portland	2.9	18.5	72.9	-9.8	-4.4	-3.2	0.0	0.2	3.0
k_y^{site}=0.3	Salt Lake City	2.6	24.0	87.6	-8.1	-3.3	-2.4	0.0	0.9	7.8
	San Francisco	47.6	105.5	205.0	-3.2	-2.8	-2.3	2.0	6.5	21.2
	San Jose	36.7	73.7	137.8	-3.1	-2.8	-2.4	1.6	4.5	12.9
	Santa Monica	22.2	57.2	126.6	-3.4	-2.9	-2.2	0.8	3.1	13.7
	Seattle	12.5	42.7	117.8	-4.1	-3.2	-2.5	0.2	1.8	9.6
	Butte	<0.5	<0.5	0.7	-1368.6	-277.9	-60.2	0.0	0.0	0.0
	Charleston	<0.5	12.5	81.8	-112.9	-7.7	-3.3	0.0	0.0	3.2
	Eureka	96.0	280.1	670.9	-3.8	-2.5	-1.8	2.1	22.0	115.5
	Memphis	0.5	17.5	92.6	-90.1	-9.5	-4.2	0.0	0.0	1.4
k_y^{ref}=0.1	Portland	2.9	18.5	72.9	-40.8	-13.1	-5.8	0.0	0.0	0.2
k_y^{site}=0.4	Salt Lake City	2.6	24.0	87.6	-32.6	-6.5	-3.5	0.0	0.0	2.6
	San Francisco	47.6	105.5	205.0	-5.8	-4.2	-3.3	0.1	1.6	7.8
	San Jose	36.7	73.7	137.8	-5.6	-4.3	-3.4	0.1	1.0	4.5
	Santa Monica	22.2	57.2	126.6	-7.0	-4.5	-3.2	0.0	0.6	5.1
	Seattle	12.5	42.7	117.8	-11.6	-5.7	-3.7	0.0	0.1	3.1
	Butte	<0.5	<0.5	0.7	-3757.7	-798.4	-180.7	0.0	0.0	0.0
	Charleston	<0.5	12.5	81.8	-333.6	-18.8	-4.4	0.0	0.0	1.1
	Eureka	96.0	280.1	670.9	-5.6	-3.3	-2.3	0.3	10.4	64.5
	Memphis	0.5	17.5	92.6	-267.9	-25.1	-6.6	0.0	0.0	0.1
k_y^{ref}=0.1	Portland	2.9	18.5	72.9	-122.8	-36.8	-12.3	0.0	0.0	0.0
k_y^{site}=0.5	Salt Lake City	2.6	24.0	87.6	-98.0	-14.7	-4.9	0.0	0.0	0.7
	San Francisco	47.6	105.5	205.0	-12.1	-6.7	-4.4	0.0	0.1	2.6
	San Jose	36.7	73.7	137.8	-11.2	-6.8	-4.7	0.0	0.1	1.3
	Santa Monica	22.2	57.2	126.6	-16.6	-7.7	-4.3	0.0	0.0	1.8
	Seattle	12.5	42.7	117.8	-31.9	-11.8	-5.2	0.0	0.0	0.6

Table A.4: Results from Simplified Seismic Slope Displacement Procedure based on Bray & Travasarou 2007

	Site	D^{ref} Bray & Travasarou (cm)			ΔlnD (Bray & Travasarou)			D^{site} Bray & Travasarou (cm)		
		475 Yrs.	1033 Yrs.	2475 Yrs.	475 Yrs.	1033 Yrs.	2475 Yrs.	475 Yrs.	1033 Yrs.	2475 Yrs.
	Butte	0.5	0.7	2.1	1.2	1.0	0.8	1.7	2.1	4.7
	Charleston	1.2	10.9	47.4	0.9	0.2	0.0	3.0	13.6	47.4
	Eureka	44.3	111.1	227.0	0.0	0.0	0.0	44.3	111.1	227.0
k_y^{ref}=0.1	Memphis	1.7	11.6	40.3	0.9	0.3	0.0	4.1	15.4	40.3
k_y^{site}=0.1	Portland	3.7	10.5	26.1	0.7	0.4	0.1	7.5	15.0	29.0
	Salt Lake City	3.8	16.6	49.5	0.7	0.2	0.0	7.4	19.6	49.5
	San Francisco	23.3	42.3	72.3	0.1	0.0	0.0	25.8	42.3	72.3
	San Jose	23.4	39.1	63.0	0.1	0.0	0.0	25.2	39.1	63.0
	Santa Monica	15.9	33.2	65.4	0.2	0.0	0.0	19.3	33.2	65.4
	Seattle	10.0	23.1	51.4	0.3	0.1	0.0	13.9	25.4	51.4
	Butte	0.5	0.7	2.1	-0.6	-0.6	-0.8	0.3	0.4	1.0
	Charleston	1.2	10.9	47.4	-0.7	-1.2	-1.2	0.6	3.4	14.5
	Eureka	44.3	111.1	227.0	-1.2	-1.1	-0.9	12.7	38.0	89.9
	Memphis	1.7	11.6	40.3	-0.7	-1.1	-1.3	0.8	3.7	11.2
k_y^{ref}=0.1	Portland	3.7	10.5	26.1	-0.8	-1.1	-1.2	1.6	3.5	7.5
k_y^{site}=0.2	Salt Lake City	3.8	16.6	49.5	-0.9	-1.2	-1.2	1.6	5.0	14.7
	San Francisco	23.3	42.3	72.3	-1.3	-1.3	-1.2	6.7	11.8	22.1
	San Jose	23.4	39.1	63.0	-1.3	-1.3	-1.2	6.6	10.8	18.9
	Santa Monica	15.9	33.2	65.4	-1.2	-1.3	-1.2	4.8	9.0	20.2
	Seattle	10.0	23.1	51.4	-1.1	-1.3	-1.2	3.3	6.6	15.0
	Butte	0.5	0.7	2.1	-1.8	-1.8	-1.8	0.1	0.1	0.3
	Charleston	1.2	10.9	47.4	-1.8	-2.1	-2.0	0.2	1.3	6.3
	Eureka	44.3	111.1	227.0	-2.1	-1.8	-1.6	5.3	17.5	45.1
	Memphis	1.7	11.6	40.3	-1.8	-2.1	-2.2	0.3	1.4	4.6
k_y^{ref}=0.1	Portland	3.7	10.5	26.1	-1.9	-2.1	-2.2	0.6	1.3	2.9
k_y^{site}=0.3	Salt Lake City	3.8	16.6	49.5	-1.9	-2.2	-2.1	0.6	1.9	6.2
	San Francisco	23.3	42.3	72.3	-2.2	-2.2	-2.0	2.6	4.8	9.5
	San Jose	23.4	39.1	63.0	-2.2	-2.2	-2.1	2.6	4.4	8.1
	Santa Monica	15.9	33.2	65.4	-2.1	-2.2	-2.0	1.9	3.6	8.7
	Seattle	10.0	23.1	51.4	-2.1	-2.2	-2.1	1.2	2.6	6.3
	Butte	0.5	0.7	2.1	-2.8	-2.6	-2.7	0.0	0.1	0.1
	Charleston	1.2	10.9	47.4	-2.6	-2.9	-2.7	0.1	0.6	3.2
	Eureka	44.3	111.1	227.0	-2.8	-2.5	-2.2	2.6	9.4	25.8
	Memphis	1.7	11.6	40.3	-2.6	-2.9	-2.9	0.1	0.7	2.3
k_y^{ref}=0.1	Portland	3.7	10.5	26.1	-2.7	-2.9	-2.9	0.3	0.6	1.4
k_y^{site}=0.4	Salt Lake City	3.8	16.6	49.5	-2.7	-2.9	-2.7	0.3	0.9	3.2
	San Francisco	23.3	42.3	72.3	-2.9	-2.9	-2.7	1.3	2.4	4.9
	San Jose	23.4	39.1	63.0	-2.9	-2.9	-2.7	1.2	2.2	4.1
	Santa Monica	15.9	33.2	65.4	-2.9	-2.9	-2.7	0.9	1.8	4.5
	Seattle	10.0	23.1	51.4	-2.9	-2.9	-2.8	0.6	1.2	3.2
	Butte	0.5	0.7	2.1	-3.5	-3.4	-3.3	0.0	0.0	0.1
	Charleston	1.2	10.9	47.4	-3.3	-3.5	-3.2	0.0	0.3	1.9
	Eureka	44.3	111.1	227.0	-3.4	-3.0	-2.6	1.5	5.6	16.2
	Memphis	1.7	11.6	40.3	-3.3	-3.5	-3.5	0.1	0.4	1.3
k_y^{ref}=0.1	Portland	3.7	10.5	26.1	-3.3	-3.5	-3.5	0.1	0.3	0.8
k_y^{site}=0.5	Salt Lake City	3.8	16.6	49.5	-3.4	-3.5	-3.3	0.1	0.5	1.8
	San Francisco	23.3	42.3	72.3	-3.5	-3.5	-3.2	0.7	1.3	2.8
	San Jose	23.4	39.1	63.0	-3.5	-3.5	-3.3	0.7	1.2	2.4
	Santa Monica	15.9	33.2	65.4	-3.5	-3.5	-3.2	0.5	1.0	2.6
	Seattle	10.0	23.1	51.4	-3.5	-3.5	-3.4	0.3	0.7	1.8

Table A. 5: Results from Full Probabilisitic Seismic Slope Displacement Procedure

	Site	Latitude	Longitude	Full PB Method Rathje & Saygili			Full PB Method Bray & Travasarou		
				D^{site} (cm)			D^{site} (cm)		
				475 Yrs	1033 Yrs	2475 Yrs	475 Yrs	1033 Yrs	2475 Yrs
	Butte	46.003	-112.533	<0.5	0.8	3.3	1.0	2.4	5.3
	Charleston	32.726	-79.931	1.4	19.8	90.9	3.1	15.3	50.5
k_y^{ref}=0.1	Eureka	40.802	-124.162	112.4	313.9	759.3	48.2	112.5	227.4
k_y^{site}=0.1	Memphis	35.149	-90.048	2.6	28.8	109.4	4.2	16.5	44.4
	Portland	45.523	-122.675	11.0	41.5	121.3	8.1	17.3	34.0
	Salt Lake City	40.755	-111.898	7.7	33.6	99.3	7.8	21.7	52.9
	San Francisco	37.775	-122.418	66.0	132.3	246.2	29.3	48.1	76.8
	San Jose	37.339	-121.893	48.9	94.3	172.1	28.4	44.4	67.8
	Santa Monica	34.015	-118.492	35.0	74.5	150.2	21.8	38.5	68.5
	Seattle	47.53	-122.3	24.7	65.9	158.7	15.9	29.8	56.6
	Butte	46.003	-112.533	<0.5	<0.5	<0.5	<0.5	<0.5	1.1
	Charleston	32.726	-79.931	<0.5	2.7	25.1	0.6	3.7	14.9
	Eureka	40.802	-124.162	27.7	112.1	330.0	13.7	37.8	86.5
	Memphis	35.149	-90.048	<0.5	3.7	24.1	0.8	3.9	12.3
k_y^{ref}=0.1	Portland	45.523	-122.675	<0.5	3.9	16.8	1.7	3.9	8.4
k_y^{site}=0.2	Salt Lake City	40.755	-111.898	<0.5	5.4	26.3	1.7	5.4	15.5
	San Francisco	37.775	-122.418	10.6	25.5	57.0	7.4	12.7	21.7
	San Jose	37.339	-121.893	8.3	17.8	36.9	7.2	11.7	18.9
	Santa Monica	34.015	-118.492	4.9	14.0	38.2	5.3	10.2	20.1
	Seattle	47.53	-122.3	2.6	9.9	33.2	3.7	7.4	15.8
	Butte	46.003	-112.533	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Charleston	32.726	-79.931	<0.5	<0.5	7.9	<0.5	1.4	6.3
	Eureka	40.802	-124.162	7.7	44.9	159.8	5.7	17.3	42.7
	Memphis	35.149	-90.048	<0.5	<0.5	6.3	<0.5	1.5	5.0
k_y^{ref}=0.1	Portland	45.523	-122.675	<0.5	<0.5	2.3	0.6	1.4	3.2
k_y^{site}=0.3	Salt Lake City	40.755	-111.898	<0.5	0.9	8.1	0.6	2.1	6.5
	San Francisco	37.775	-122.418	1.7	5.8	16.2	2.8	5.1	9.0
	San Jose	37.339	-121.893	1.4	3.9	9.8	2.8	4.7	7.7
	Santa Monica	34.015	-118.492	0.7	3.1	11.8	2.0	4.0	8.5
	Seattle	47.53	-122.3	<0.5	1.5	8.5	1.3	2.9	6.5
	Butte	46.003	-112.533	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Charleston	32.726	-79.931	<0.5	<0.5	2.5	<0.5	0.7	3.2
	Eureka	40.802	-124.162	2.1	19.1	82.4	2.9	9.3	24.2
	Memphis	35.149	-90.048	<0.5	<0.5	1.4	<0.5	0.7	2.5
k_y^{ref}=0.1	Portland	45.523	-122.675	<0.5	<0.5	<0.5	<0.5	0.6	1.5
k_y^{site}=0.4	Salt Lake City	40.755	-111.898	<0.5	<0.5	2.6	<0.5	1.0	3.3
	San Francisco	37.775	-122.418	<0.5	1.1	4.7	1.3	2.5	4.5
	San Jose	37.339	-121.893	<0.5	0.7	2.6	1.3	2.3	3.9
	Santa Monica	34.015	-118.492	<0.5	0.5	4.0	0.9	2.0	4.3
	Seattle	47.53	-122.3	<0.5	<0.5	2.2	0.6	1.4	3.2
	Butte	46.003	-112.533	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Charleston	32.726	-79.931	<0.5	<0.5	0.6	<0.5	<0.5	1.8
	Eureka	40.802	-124.162	<0.5	8.4	44.4	1.6	5.5	15.1
	Memphis	35.149	-90.048	<0.5	<0.5	<0.5	<0.5	<0.5	1.4
k_y^{ref}=0.1	Portland	45.523	-122.675	<0.5	<0.5	<0.5	<0.5	<0.5	0.8
k_y^{site}=0.5	Salt Lake City	40.755	-111.898	<0.5	<0.5	0.6	<0.5	0.5	1.9
	San Francisco	37.775	-122.418	<0.5	<0.5	1.1	0.7	1.4	2.5
	San Jose	37.339	-121.893	<0.5	<0.5	0.6	0.7	1.2	2.2
	Santa Monica	34.015	-118.492	<0.5	<0.5	1.2	0.5	1.1	2.5
	Seattle	47.53	-122.3	<0.5	<0.5	<0.5	<0.5	0.7	1.8

Table A. 6: Cetin Volumetric Strain supplementary validation data

Soil Profile					Simplified Procedure					Full PBEE	
Profile	Location	T_R	Sample Depth [m]	$(N_1)_{60,CS}^{site}$	N_{req}^{site}	$\Delta\varepsilon$	ε_v^{ref}	ε_v^{site}	$\varepsilon_{v,equiv}$	$\varepsilon_{v,equiv}$	ε_v^{site}
1	Butte	475	2.5	10.63	3.01	1	0	3.06E-18	1.6876E-05	0	0
			3.5	12.63	5.79	0.997611	0	9.78E-05			0
			4.5	15.14	7.46	0.999204	0	3.24E-05			0
			5.5	17.28	8.52	1	0	3.06E-18			0
			6.5	19.3	9.16	1	0	3.06E-18			0
			7.5	21.31	9.51	1	0	3.06E-18			0
			8.5	23.31	9.62	1	0	3.06E-18			0
			9.5	25.27	9.55	1	0	3.06E-18			0
			10.5	27.15	9.36	1	0	3.06E-18			0
			11.5	29.01	9.1	1	0	3.06E-18			0
		2475	2.5	10.63	11.42	0.891544	0.0013	0.007815	0.0038784	0.0046912	0.00901
			3.5	12.63	14.21	0.882104	0.0013	0.008608			0.01083
			4.5	15.14	15.88	0.910827	0.0013	0.00632			0.00729
			5.5	17.28	16.93	0.940659	0.0013	0.004299			0.00559
			6.5	19.3	17.58	0.972204	0.0013	0.002489			0.00356
			7.5	21.31	17.93	1.001389	0.0013	0.001064			0.00118
			8.5	23.31	18.04	1.021715	0.0013	0.000193			0
			9.5	25.27	17.97	1.031451	0.0013	0			0
			10.5	27.15	17.78	1.034526	0.0013	0			0
			11.5	29.01	17.52	1.035157	0.0013	0			0
		1033	2.5	10.63	7.59	0.955102	0	0.002064	0.00102126	0.0008533	0.00264
			3.5	12.63	10.37	0.943005	0	0.002711			0.00226
			4.5	15.14	12.04	0.961836	0	0.001722			0.00123
			5.5	17.28	13.1	0.977851	0	0.000956			0
			6.5	19.3	13.74	0.990239	0	0.000408			0
			7.5	21.31	14.09	0.99734	0	0.000109			0
			8.5	23.31	14.2	1.000015	0	0			0
			9.5	25.27	14.13	1.000532	0	0			0
			10.5	27.15	13.94	1.000532	0	0			0
			11.5	29.01	13.68	1.000532	0	0			0
1	Charleston	475	2.5	10.63	9.26	0.922723	0	0.003898	0.00187682	0.0014218	0.00356
			3.5	12.63	12.05	0.909841	0	0.004723			0.00328
			4.5	15.14	13.72	0.934976	0	0.003165			0.00252
			5.5	17.28	14.77	0.958916	0	0.001869			0.00157
			6.5	19.3	15.42	0.980367	0	0.000842			0
			7.5	21.31	15.77	0.995884	0	0.000169			0
			8.5	23.31	15.88	1.003739	0	0			0
			9.5	25.27	15.81	1.006284	0	0			0
			10.5	27.15	15.62	1.006744	0	0			0
			11.5	29.01	15.36	1.006744	0	0			0
		2475	2.5	10.63	27.96	0.952548	0.0227	0.030569	0.02166175	0.0214254	0.03155
			3.5	12.63	30.75	0.966423	0.0227	0.028336			0.0281
			4.5	15.14	32.42	0.988206	0.0227	0.025116			0.02545
			5.5	17.28	33.47	1.006147	0.0227	0.022701			0.02215
			6.5	19.3	34.12	1.023278	0.0227	0.020576			0.02055
			7.5	21.31	34.47	1.040893	0.0227	0.01856			0.019
			8.5	23.31	34.58	1.059395	0.0227	0.01661			0.01522
			9.5	25.27	34.51	1.079489	0.0227	0.014669			0.01333

			10.5	27.15	34.32	1.102829	0.0227	0.012623			0.0114
			11.5	29.01	34.06	1.133268	0.0227	0.010252			0.00936
		1033	2.5	10.63	19.72	0.944922	0.013	0.018414	0.01078697	0.0126263	0.01999
			3.5	12.63	22.51	0.955289	0.013	0.017196			0.01944
			4.5	15.14	24.17	0.97878	0.013	0.014661			0.01606
			5.5	17.28	25.23	0.999932	0.013	0.012617			0.01412
			6.5	19.3	25.88	1.023568	0.013	0.010568			0.01213
			7.5	21.31	26.22	1.053755	0.013	0.008267			0.01026
			8.5	23.31	26.33	1.093395	0.013	0.005703			0.00865
			9.5	25.27	26.27	1.142258	0.013	0.003124			0.00507
			10.5	27.15	26.07	1.193914	0.013	0.000949			0.00326
			11.5	29.01	25.82	1.237485	0.013	0			0.00106
1	Eureka	475	2.5	10.63	28.1	0.952865	0.0216	0.029008	0.02043331	0.0209146	0.03066
			3.5	12.63	30.88	0.966811	0.0216	0.026845			0.02701
			4.5	15.14	32.55	0.988591	0.0216	0.023742			0.02442
			5.5	17.28	33.61	1.006475	0.0216	0.021423			0.0229
			6.5	19.3	34.25	1.023636	0.0216	0.019374			0.01922
			7.5	21.31	34.6	1.041217	0.0216	0.017436			0.01756
			8.5	23.31	34.71	1.059646	0.0216	0.015566			0.0156
			9.5	25.27	34.64	1.079575	0.0216	0.013713			0.01363
			10.5	27.15	34.45	1.102579	0.0216	0.011769			0.01161
			11.5	29.01	34.19	1.132467	0.0216	0.009523			0.00944
		2475	2.5	10.63	40.02	0.950731	0.0335	0.04716	0.03561148	0.0325997	0.04635
			3.5	12.63	42.81	0.965705	0.0335	0.043868			0.04219
			4.5	15.14	44.48	0.98652	0.0335	0.039652			0.03707
			5.5	17.28	45.53	1.003292	0.0335	0.036534			0.03304
			6.5	19.3	46.18	1.018869	0.0335	0.03384			0.03018
			7.5	21.31	46.53	1.034375	0.0335	0.031339			0.02701
			8.5	23.31	46.64	1.049905	0.0335	0.028999			0.02583
			9.5	25.27	46.57	1.065264	0.0335	0.026838			0.02228
			10.5	27.15	46.38	1.08014	0.0335	0.024877			0.02058
			11.5	29.01	46.12	1.094946	0.0335	0.023047			0.01885
		1033	2.5	10.63	34.7	0.951316	0.0271	0.037122	0.02729223	0.0274852	0.03983
			3.5	12.63	37.48	0.965991	0.0271	0.034415			0.03528
			4.5	15.14	39.15	0.987201	0.0271	0.030817			0.03132
			5.5	17.28	40.2	1.004425	0.0271	0.028145			0.02854
			6.5	19.3	40.85	1.020578	0.0271	0.025824			0.02528
			7.5	21.31	41.2	1.036818	0.0271	0.023657			0.02377
			8.5	23.31	41.31	1.053241	0.0271	0.021621			0.0203
			9.5	25.27	41.24	1.069642	0.0271	0.019731			0.01866
			10.5	27.15	41.05	1.085729	0.0271	0.018007			0.01685
			11.5	29.01	40.79	1.102175	0.0271	0.016365			0.01489
1	Memphis	475	2.5	10.63	11.48	0.8847	0.0017	0.009105	0.00478839	0.0032654	0.00621
			3.5	12.63	14.27	0.875472	0.0017	0.00994			0.0061
			4.5	15.14	15.93	0.904254	0.0017	0.007471			0.00579
			5.5	17.28	16.99	0.93372	0.0017	0.005319			0.00342
			6.5	19.3	17.64	0.96524	0.0017	0.003368			0.00284
			7.5	21.31	17.98	0.994723	0.0017	0.001816			0.00198
			8.5	23.31	18.09	1.015259	0.0017	0.000869			0
			9.5	25.27	18.03	1.025148	0.0017	0.000447			0
			10.5	27.15	17.83	1.02834	0.0017	0.000316			0
			11.5	29.01	17.58	1.028997	0.0017	0.000289			0
		2475	2.5	10.63	26.88	0.952915	0.0221	0.029693	0.02084148	0.0223492	0.03259
			3.5	12.63	29.67	0.966609	0.0221	0.027533			0.02905
			4.5	15.14	31.34	0.988498	0.0221	0.024361			0.02654
			5.5	17.28	32.39	1.006586	0.0221	0.021977			0.02336
			6.5	19.3	33.04	1.023947	0.0221	0.01987			0.02179

			7.5	21.31	33.39	1.041968	0.0221	0.017855			0.01826
			8.5	23.31	33.5	1.061305	0.0221	0.01587			0.01658
			9.5	25.27	33.43	1.083195	0.0221	0.013823			0.0148
			10.5	27.15	33.24	1.109906	0.0221	0.011582			0.01299
			11.5	29.01	32.98	1.145444	0.0221	0.008981			0.00903
		1033	2.5	10.63	20.81	0.94212	0.0141	0.020204	0.01231925	0.0142887	0.0228
			3.5	12.63	23.59	0.953506	0.0141	0.018787			0.02019
			4.5	15.14	25.26	0.976282	0.0141	0.016184			0.01876
			5.5	17.28	26.32	0.996264	0.0141	0.014129			0.01505
			6.5	19.3	26.97	1.017746	0.0141	0.012131			0.01304
			7.5	21.31	27.31	1.044287	0.0141	0.00993			0.01092
			8.5	23.31	27.42	1.079035	0.0141	0.007435			0.00909
			9.5	25.27	27.35	1.123903	0.0141	0.004753			0.00755
			10.5	27.15	27.16	1.17509	0.0141	0.002289			0.00584
			11.5	29.01	26.9	1.224489	0.0141	0.000384			0.00389
1	Portland	475	2.5	10.63	17.72	0.900522	0.0092	0.018621	0.01058604	0.0113698	0.01979
			3.5	12.63	20.5	0.907747	0.0092	0.017718			0.01884
			4.5	15.14	22.17	0.93168	0.0092	0.014962			0.01539
			5.5	17.28	23.23	0.954779	0.0092	0.012607			0.01378
			6.5	19.3	23.87	0.98241	0.0092	0.010131			0.01014
			7.5	21.31	24.22	1.018105	0.0092	0.007399			0.00859
			8.5	23.31	24.33	1.06289	0.0092	0.004584			0.00505
			9.5	25.27	24.26	1.111511	0.0092	0.002139			0.00331
			10.5	27.15	24.07	1.152771	0.0092	0.000458			0.00105
			11.5	29.01	23.81	1.179429	0.0092	0			0
		2475	2.5	10.63	26.08	0.949783	0.0241	0.03298	0.02331514	0.0259157	0.03794
			3.5	12.63	28.87	0.963275	0.0241	0.030682			0.03465
			4.5	15.14	30.54	0.98517	0.0241	0.027253			0.03079
			5.5	17.28	31.59	1.003316	0.0241	0.024666			0.02797
			6.5	19.3	32.24	1.020823	0.0241	0.022369			0.02492
			7.5	21.31	32.59	1.039182	0.0241	0.020151			0.0217
			8.5	23.31	32.7	1.059312	0.0241	0.017923			0.01845
			9.5	25.27	32.63	1.08292	0.0241	0.015554			0.01506
			10.5	27.15	32.44	1.112608	0.0241	0.012907			0.01342
			11.5	29.01	32.18	1.152077	0.0241	0.00988			0.01179
		1033	2.5	10.63	22.15	0.940207	0.0189	0.027089	0.0178509	0.0188178	0.02871
			3.5	12.63	24.93	0.952387	0.0189	0.025255			0.02659
			4.5	15.14	26.6	0.974665	0.0189	0.022169			0.02386
			5.5	17.28	27.65	0.993771	0.0189	0.019774			0.02075
			6.5	19.3	28.3	1.013405	0.0189	0.01753			0.01709
			7.5	21.31	28.65	1.036375	0.0189	0.015155			0.01552
			8.5	23.31	28.76	1.065651	0.0189	0.012474			0.01201
			9.5	25.27	28.69	1.104197	0.0189	0.009448			0.01025
			10.5	27.15	28.5	1.151669	0.0189	0.006371			0.00855
			11.5	29.01	28.24	1.20376	0.0189	0.003654			0.00511
1	SLC	475	2.5	10.63	15.83	0.894003	0.0076	0.017011	0.00933661	0.0087834	0.01526
			3.5	12.63	18.62	0.896985	0.0076	0.016652			0.01576
			4.5	15.14	20.29	0.92296	0.0076	0.013752			0.01228
			5.5	17.28	21.34	0.949702	0.0076	0.011153			0.01067
			6.5	19.3	21.99	0.98209	0.0076	0.008449			0.00893
			7.5	21.31	22.34	1.022624	0.0076	0.005633			0.00527
			8.5	23.31	22.45	1.068195	0.0076	0.003072			0.0035
			9.5	25.27	22.38	1.109232	0.0076	0.001201			0.00124
			10.5	27.15	22.19	1.136256	0.0076	0.000153			0
			11.5	29.01	21.93	1.14926	0.0076	0			0
		2475	2.5	10.63	27.06	0.952748	0.0245	0.033103	0.02355876	0.0237945	0.03555
			3.5	12.63	29.85	0.966472	0.0245	0.030768			0.0322

			4.5	15.14	31.51	0.988389	0.0245	0.027339			0.0282
			5.5	17.28	32.57	1.006401	0.0245	0.024773			0.02553
			6.5	19.3	33.22	1.023719	0.0245	0.0225			0.02223
			7.5	21.31	33.56	1.041719	0.0245	0.020321			0.01903
			8.5	23.31	33.67	1.0609	0.0245	0.018187			0.01768
			9.5	25.27	33.6	1.082461	0.0245	0.015998			0.01424
			10.5	27.15	33.41	1.108578	0.0245	0.013612			0.01277
			11.5	29.01	33.16	1.143098	0.0245	0.010848			0.00914
		1033	2.5	10.63	21.4	0.948283	0.0177	0.024245	0.01549816	0.016799	0.02496
			3.5	12.63	24.18	0.960149	0.0177	0.022598			0.02472
			4.5	15.14	25.85	0.982846	0.0177	0.019701			0.02172
			5.5	17.28	26.91	1.002502	0.0177	0.017436			0.01836
			6.5	19.3	27.55	1.023315	0.0177	0.015259			0.01686
			7.5	21.31	27.9	1.048277	0.0177	0.012913			0.0131
			8.5	23.31	28.01	1.080747	0.0177	0.010241			0.01144
			9.5	25.27	27.94	1.123223	0.0177	0.007291			0.00803
			10.5	27.15	27.75	1.173542	0.0177	0.004447			0.00676
			11.5	29.01	27.49	1.225119	0.0177	0.00211			0.00321
1	San Fran	475	2.5	10.63	25.2	0.949686	0.0226	0.03095	0.02155216	0.0210946	0.03011
			3.5	12.63	27.98	0.96303	0.0226	0.028776			0.02848
			4.5	15.14	29.65	0.985018	0.0226	0.025481			0.02581
			5.5	17.28	30.7	1.003318	0.0226	0.022988			0.02233
			6.5	19.3	31.35	1.021111	0.0226	0.020761			0.0207
			7.5	21.31	31.7	1.040063	0.0226	0.018581			0.01717
			8.5	23.31	31.81	1.061482	0.0226	0.016335			0.01547
			9.5	25.27	31.74	1.087625	0.0226	0.013872			0.0138
			10.5	27.15	31.55	1.12124	0.0226	0.011099			0.01014
			11.5	29.01	31.29	1.165178	0.0226	0.008036			0.00839
		2475	2.5	10.63	32.45	0.951473	0.0333	0.046647	0.03488472	0.0327585	0.04643
			3.5	12.63	35.24	0.965911	0.0333	0.043498			0.04214
			4.5	15.14	36.91	0.987296	0.0333	0.039199			0.03898
			5.5	17.28	37.96	1.004733	0.0333	0.035991			0.03499
			6.5	19.3	38.61	1.021165	0.0333	0.033189			0.03019
			7.5	21.31	38.96	1.03777	0.0333	0.030559			0.02714
			8.5	23.31	39.07	1.054654	0.0333	0.028076			0.02415
			9.5	25.27	39	1.071657	0.0333	0.025753			0.02287
			10.5	27.15	38.81	1.088672	0.0333	0.023595			0.01962
			11.5	29.01	38.55	1.106993	0.0333	0.02144			0.01629
		1033	2.5	10.63	28.58	0.952371	0.0286	0.039177	0.02858211	0.0270398	0.03973
			3.5	12.63	31.37	0.966341	0.0286	0.036495			0.03508
			4.5	15.14	33.04	0.988066	0.0286	0.032658			0.03108
			5.5	17.28	34.09	1.005928	0.0286	0.029778			0.02829
			6.5	19.3	34.74	1.022945	0.0286	0.027246			0.02511
			7.5	21.31	35.09	1.040374	0.0286	0.024846			0.02372
			8.5	23.31	35.2	1.058523	0.0286	0.022538			0.0205
			9.5	25.27	35.13	1.077856	0.0286	0.020276			0.01721
			10.5	27.15	34.94	1.099665	0.0286	0.017944			0.01575
			11.5	29.01	34.68	1.127522	0.0286	0.015269			0.01228
1	San Jose	475	2.5	10.63	23.17	0.952489	0.0213	0.028609	0.01927922	0.0200739	0.0293
			3.5	12.63	25.95	0.965269	0.0213	0.026639			0.02742
			4.5	15.14	27.62	0.987612	0.0213	0.023472			0.02472
			5.5	17.28	28.67	1.006509	0.0213	0.021043			0.02137
			6.5	19.3	29.32	1.025455	0.0213	0.018815			0.01977
			7.5	21.31	29.67	1.046806	0.0213	0.016528			0.01633
			8.5	23.31	29.78	1.073015	0.0213	0.014009			0.01484
			9.5	25.27	29.71	1.107222	0.0213	0.011139			0.01141
			10.5	27.15	29.52	1.150873	0.0213	0.008054			0.00988

			11.5	29.01	29.26	1.20262	0.0213	0.005077			0.00686
		2475	2.5	10.63	29.38	0.952443	0.0338	0.047286	0.03516337	0.0312521	0.04531
			3.5	12.63	32.16	0.966571	0.0338	0.044174			0.04121
			4.5	15.14	33.83	0.988231	0.0338	0.039776			0.03605
			5.5	17.28	34.88	1.006006	0.0338	0.036476			0.0338
			6.5	19.3	35.53	1.022895	0.0338	0.033575			0.02911
			7.5	21.31	35.88	1.040126	0.0338	0.030832			0.02624
			8.5	23.31	35.99	1.057922	0.0338	0.028209			0.02328
			9.5	25.27	35.92	1.076511	0.0338	0.025678			0.02043
			10.5	27.15	35.73	1.09676	0.0338	0.023142			0.01735
			11.5	29.01	35.47	1.121769	0.0338	0.020299			0.01439
		1033	2.5	10.63	26.1	0.953812	0.0272	0.036848	0.02637278	0.0256463	0.03696
			3.5	12.63	28.89	0.967365	0.0272	0.034361			0.03589
			4.5	15.14	30.56	0.989351	0.0272	0.030647			0.02996
			5.5	17.28	31.61	1.007571	0.0272	0.027844			0.02724
			6.5	19.3	32.26	1.025146	0.0272	0.025352			0.02418
			7.5	21.31	32.61	1.043571	0.0272	0.022946			0.02101
			8.5	23.31	32.72	1.063762	0.0272	0.020527			0.01802
			9.5	25.27	32.65	1.087421	0.0272	0.017956			0.01684
			10.5	27.15	32.46	1.117152	0.0272	0.015081			0.0136
			11.5	29.01	32.2	1.156685	0.0272	0.011786			0.01042
1	Santa Monica	475	2.5	10.63	21.63	0.946942	0.0181	0.025017	0.01614304	0.017865	0.02742
			3.5	12.63	24.42	0.958868	0.0181	0.023325			0.02534
			4.5	15.14	26.08	0.981518	0.0181	0.02037			0.02255
			5.5	17.28	27.14	1.000994	0.0181	0.018074			0.01925
			6.5	19.3	27.79	1.021376	0.0181	0.01589			0.01758
			7.5	21.31	28.13	1.045805	0.0181	0.013532			0.0141
			8.5	23.31	28.24	1.077295	0.0181	0.010862			0.01266
			9.5	25.27	28.17	1.11862	0.0181	0.007891			0.0093
			10.5	27.15	27.98	1.168218	0.0181	0.004977			0.00621
			11.5	29.01	27.72	1.220181	0.0181	0.002527			0.00487
		2475	2.5	10.63	29.13	0.952209	0.0301	0.041498	0.03049678	0.0302798	0.04326
			3.5	12.63	31.92	0.966258	0.0301	0.038686			0.04073
			4.5	15.14	33.59	0.987932	0.0301	0.034692			0.03548
			5.5	17.28	34.64	1.005728	0.0301	0.031697			0.03114
			6.5	19.3	35.29	1.022651	0.0301	0.029065			0.02851
			7.5	21.31	35.64	1.039934	0.0301	0.026577			0.02574
			8.5	23.31	35.75	1.057824	0.0301	0.024195			0.02288
			9.5	25.27	35.68	1.076612	0.0301	0.021888			0.01997
			10.5	27.15	35.49	1.097288	0.0301	0.019559			0.01689
			11.5	29.01	35.23	1.123102	0.0301	0.016928			0.01375
		1033	2.5	10.63	24.77	0.95381	0.0258	0.03486	0.02453259	0.0243569	0.03496
			3.5	12.63	27.56	0.967054	0.0258	0.032522			0.03373
			4.5	15.14	29.23	0.989186	0.0258	0.028926			0.02977
			5.5	17.28	30.28	1.007651	0.0258	0.026198			0.02512
			6.5	19.3	30.93	1.025687	0.0258	0.023747			0.02386
			7.5	21.31	31.28	1.045078	0.0258	0.021328			0.02075
			8.5	23.31	31.39	1.067348	0.0258	0.018798			0.01764
			9.5	25.27	31.32	1.095016	0.0258	0.015986			0.0145
			10.5	27.15	31.13	1.130783	0.0258	0.01282			0.01129
			11.5	29.01	30.87	1.1769	0.0258	0.009395			0.00994
1	Seattle	475	2.5	10.63	20.02	0.939978	0.0151	0.021809	0.0133331	0.0153664	0.02446
			3.5	12.63	22.8	0.950667	0.0151	0.020408			0.02213
			4.5	15.14	24.47	0.973781	0.0151	0.017621			0.0192
			5.5	17.28	25.53	0.99448	0.0151	0.01538			0.01773
			6.5	19.3	26.18	1.017364	0.0151	0.01315			0.01408
			7.5	21.31	26.52	1.046358	0.0151	0.010652			0.01235

			8.5	23.31	26.63	1.08448	0.0151	0.007845			0.01088
			9.5	25.27	26.56	1.132354	0.0151	0.00495			0.00778
			10.5	27.15	26.37	1.183782	0.0151	0.002459			0.00436
			11.5	29.01	26.11	1.229164	0.0151	0.000681			0.00244
		2475	2.5	10.63	28.15	0.953088	0.0282	0.038466	0.02795938	0.028201	0.04168
			3.5	12.63	30.93	0.967045	0.0282	0.035824			0.03879
			4.5	15.14	32.6	0.988826	0.0282	0.032031			0.03335
			5.5	17.28	33.66	1.006708	0.0282	0.029189			0.02914
			6.5	19.3	34.3	1.023864	0.0282	0.026673			0.02622
			7.5	21.31	34.65	1.041433	0.0282	0.024292			0.02315
			8.5	23.31	34.76	1.059838	0.0282	0.02199			0.02018
			9.5	25.27	34.69	1.079706	0.0282	0.019707			0.01708
			10.5	27.15	34.5	1.102587	0.0282	0.017313			0.01574
			11.5	29.01	34.24	1.132268	0.0282	0.014541			0.01227
		1033	2.5	10.63	23.83	0.951105	0.0224	0.030436	0.02085441	0.0217059	0.03204
			3.5	12.63	26.61	0.964093	0.0224	0.028344			0.03023
			4.5	15.14	28.28	0.986292	0.0224	0.025057			0.02613
			5.5	17.28	29.34	1.004885	0.0224	0.022558			0.02321
			6.5	19.3	29.98	1.023414	0.0224	0.020274			0.01994
			7.5	21.31	30.33	1.043786	0.0224	0.017978			0.01875
			8.5	23.31	30.44	1.068118	0.0224	0.015502			0.01542
			9.5	25.27	30.37	1.099379	0.0224	0.012694			0.01199
			10.5	27.15	30.18	1.139745	0.0224	0.009597			0.01043
			11.5	29.01	29.92	1.189564	0.0224	0.006451			0.00875
2	Butte	475	2.5	10.53	3.00714	1	0	3.06E-18	3.0646E-18	0	0
			3.5	15.26	5.7933	1	0	3.06E-18			0
			4.5	19.88	7.46115	1	0	3.06E-18			0
			5.5	18.02	8.51608	1	0	3.06E-18			0
			6.5	20.69	9.16444	1	0	3.06E-18			0
			7.5	21.05	9.51046	1	0	3.06E-18			0
			8.5	26.59	9.62099	1	0	3.06E-18			0
			9.5	23.69	9.55229	1	0	3.06E-18			0
			10.5	29.67	9.36062	1	0	3.06E-18			0
			11.5	32.46	9.10304	1	0	3.06E-18			0
		2475	2.5	10.53	11.4249	0.88826	0.0013	0.008086	0.00231838	0.0032595	0.01021
			3.5	15.26	14.2111	0.953185	0.0013	0.003543			0.00402
			4.5	19.88	15.8789	1.009609	0.0013	0.000701			0.00149
			5.5	18.02	16.9339	0.957943	0.0013	0.003269			0.00457
			6.5	20.69	17.5822	0.997294	0.0013	0.001251			0.00295
			7.5	21.05	17.9282	0.997558	0.0013	0.001239			0.00294
			8.5	26.59	18.0388	1.033768	0.0013	0			0
			9.5	23.69	17.9701	1.02477	0.0013	7E-05			0
			10.5	29.67	17.7784	1.035179	0.0013	0			0
			11.5	32.46	17.5208	1.035199	0.0013	0			0
		1033	2.5	10.53	7.58716	0.952922	0	0.002178	0.00049117	0.000315	0.00224
			3.5	15.26	10.3733	0.985314	0	0.000621			0
			4.5	19.88	12.0412	0.998992	0	4.11E-05			0
			5.5	18.02	13.0961	0.985497	0	0.000613			0
			6.5	20.69	13.7445	0.996639	0	0.000138			0
			7.5	21.05	14.0905	0.996614	0	0.000139			0
			8.5	26.59	14.201	1.000532	0	0			0
			9.5	23.69	14.1323	1.000251	0	0			0
			10.5	29.67	13.9406	1.000532	0	0			0
			11.5	32.46	13.6831	1.000532	0	0			0
2	Charleston	475	2.5	10.53	9.26354	0.919723	0	0.004085	0.00094432	0.0006733	0.00312
			3.5	15.26	12.0497	0.96971	0	0.001337			0.00177
			4.5	19.88	13.7176	0.999793	0	8.44E-06			0

			5.5	18.02	14.7725	0.971439	0	0.001255			0
			6.5	20.69	15.4208	0.994069	0	0.000245			0
			7.5	21.05	15.7669	0.994113	0	0.000243			0
			8.5	26.59	15.8774	1.006665	0	0			0
			9.5	23.69	15.8087	1.004659	0	0			0
			10.5	29.67	15.617	1.006744	0	0			0
			11.5	32.46	15.3594	1.006744	0	0			0
		2475	2.5	10.53	27.9618	0.951136	0.0227	0.030804	0.01946917	0.0192621	0.031
			3.5	15.26	30.748	0.997525	0.0227	0.023836			0.02459
			4.5	19.88	32.4158	1.038245	0.0227	0.018853			0.0182
			5.5	18.02	33.4707	1.013723	0.0227	0.02174			0.02118
			6.5	20.69	34.1191	1.036829	0.0227	0.019011			0.01835
			7.5	21.05	34.4651	1.038433	0.0227	0.018832			0.01843
			8.5	26.59	34.5756	1.093517	0.0227	0.013414			0.01257
			9.5	23.69	34.5069	1.063546	0.0227	0.016194			0.01554
			10.5	29.67	34.3153	1.14062	0.0227	0.009725			0.00966
			11.5	32.46	34.0577	1.203634	0.0227	0.005829			0.00657
		1033	2.5	10.53	19.7206	0.943143	0.013	0.018629	0.00888826	0.0111304	0.02148
			3.5	15.26	22.5067	0.996836	0.013	0.012903			0.01524
			4.5	19.88	24.1746	1.059839	0.013	0.007842			0.01032
			5.5	18.02	25.2295	1.01101	0.013	0.011627			0.01289
			6.5	20.69	25.8779	1.047514	0.013	0.008716			0.01169
			7.5	21.05	26.2239	1.04885	0.013	0.008619			0.01178
			8.5	26.59	26.3344	1.17399	0.013	0.001729			0.00443
			9.5	23.69	26.2657	1.103544	0.013	0.005119			0.00707
			10.5	29.67	26.074	1.244054	0.013	0			0.00131
			11.5	32.46	25.8165	1.274067	0.013	0			0
2	Eureka	475	2.5	10.53	28.0968	0.951478	0.0216	0.029231	0.01833304	0.019118	0.03016
			3.5	15.26	30.883	0.997841	0.0216	0.022518			0.02333
			4.5	19.88	32.5508	1.038497	0.0216	0.017726			0.0187
			5.5	18.02	33.6057	1.014062	0.0216	0.020497			0.02189
			6.5	20.69	34.2541	1.03713	0.0216	0.017873			0.01895
			7.5	21.05	34.6001	1.038737	0.0216	0.0177			0.01703
			8.5	26.59	34.7106	1.093382	0.0216	0.012522			0.01292
			9.5	23.69	34.6419	1.063738	0.0216	0.015172			0.01598
			10.5	29.67	34.4503	1.139625	0.0216	0.009027			0.00979
			11.5	32.46	34.1927	1.201758	0.0216	0.00531			0.00651
		2475	2.5	10.53	40.02	0.949497	0.0335	0.047442	0.0332176	0.030395	0.04754
			3.5	15.26	42.81	0.992935	0.0335	0.038431			0.03797
			4.5	19.88	44.48	1.029676	0.0335	0.032079			0.02942
			5.5	18.02	45.53	1.009901	0.0335	0.035368			0.03212
			6.5	20.69	46.18	1.030516	0.0335	0.031945			0.02802
			7.5	21.05	46.53	1.032259	0.0335	0.03167			0.0284
			8.5	26.59	46.64	1.074914	0.0335	0.025551			0.02181
			9.5	23.69	46.57	1.053127	0.0335	0.028534			0.02424
			10.5	29.67	46.38	1.098604	0.0335	0.022612			0.01731
			11.5	32.46	46.12	1.119868	0.0335	0.020216			0.01441
		1033	2.5	10.53	34.6958	0.950035	0.0271	0.037367	0.02517577	0.0248289	0.03928
			3.5	15.26	37.482	0.994617	0.0271	0.02964			0.03014
			4.5	19.88	39.1498	1.032757	0.0271	0.024184			0.0247
			5.5	18.02	40.2047	1.011369	0.0271	0.027126			0.02759
			6.5	20.69	40.8531	1.032872	0.0271	0.024169			0.02312
			7.5	21.05	41.1991	1.034582	0.0271	0.023946			0.02344
			8.5	26.59	41.3096	1.079951	0.0271	0.018612			0.01603
			9.5	23.69	41.2409	1.056695	0.0271	0.021211			0.02077
			10.5	29.67	41.0493	1.10613	0.0271	0.015988			0.01338
			11.5	32.46	40.7917	1.132817	0.0271	0.013603			0.01012

			2.5	10.53	11.4807	0.881549	0.0017	0.009385			0.00767
			3.5	15.26	14.2669	0.946243	0.0017	0.004504			0.00373
			4.5	19.88	15.9347	1.002919	0.0017	0.001426			0
			5.5	18.02	16.9897	0.951053	0.0017	0.004206			0.00213
		475	6.5	20.69	17.638	0.99051	0.0017	0.002024	0.00309611	0.0021653	0.00176
			7.5	21.05	17.9841	0.990779	0.0017	0.00201			0.00174
			8.5	26.59	18.0946	1.02755	0.0017	0.000348			0
			9.5	23.69	18.0259	1.018325	0.0017	0.000736			0
			10.5	29.67	17.8342	1.029022	0.0017	0.000288			0
			11.5	32.46	17.5766	1.029045	0.0017	0.000287			0
			2.5	10.53	26.8838	0.951471	0.0221	0.029929			0.03391
			3.5	15.26	29.67	0.998231	0.0221	0.023053			0.02586
			4.5	19.88	31.3378	1.039713	0.0221	0.018098			0.01961
			5.5	18.02	32.3927	1.014292	0.0221	0.021021			0.02242
2	Memphis	2475	6.5	20.69	33.0411	1.037839	0.0221	0.018302	0.01862041	0.0204465	0.01964
			7.5	21.05	33.3871	1.039419	0.0221	0.01813			0.01969
			8.5	26.59	33.4976	1.099007	0.0221	0.012465			0.01212
			9.5	23.69	33.4289	1.065748	0.0221	0.015438			0.01687
			10.5	29.67	33.2373	1.153765	0.0221	0.008428			0.00942
			11.5	32.46	32.9797	1.223143	0.0221	0.004506			0.00644
			2.5	10.53	20.8078	0.940476	0.0141	0.020415			0.0222
			3.5	15.26	23.594	0.991679	0.0141	0.014583			0.01613
			4.5	19.88	25.2618	1.048283	0.0141	0.009622			0.01282
			5.5	18.02	26.3168	1.006233	0.0141	0.013176			0.0158
		1033	6.5	20.69	26.9651	1.038683	0.0141	0.010372	0.01035401	0.0124403	0.01236
			7.5	21.05	27.3111	1.040065	0.0141	0.010261			0.01256
			8.5	26.59	27.4217	1.154709	0.0141	0.003203			0.00506
			9.5	23.69	27.353	1.088105	0.0141	0.006847			0.00945
			10.5	29.67	27.1613	1.232542	0.0141	0.00011			0.00232
			11.5	32.46	26.9037	1.274546	0.0141	0			0
			2.5	10.53	17.7174	0.898562	0.0092	0.018872			0.0192
			3.5	15.26	20.5036	0.955628	0.0092	0.012526			0.01369
			4.5	19.88	22.1714	1.027861	0.0092	0.006733			0.00724
			5.5	18.02	23.2264	0.968085	0.0092	0.011371			0.01284
		475	6.5	20.69	23.8747	1.011191	0.0092	0.007891	0.00839562	0.0091143	0.00814
			7.5	21.05	24.2207	1.012335	0.0092	0.007809			0.00807
			8.5	26.59	24.3313	1.138003	0.0092	0.001023			0.00257
			9.5	23.69	24.2626	1.073748	0.0092	0.003988			0.00536
			10.5	29.67	24.0709	1.182606	0.0092	0			0
			11.5	32.46	23.8133	1.194647	0.0092	0			0
			2.5	10.53	26.0823	0.948333	0.0241	0.033236			0.03723
			3.5	15.26	28.8685	0.995235	0.0241	0.025791			0.02838
			4.5	19.88	30.5363	1.037323	0.0241	0.020367			0.02128
2	Portland		5.5	18.02	31.5912	1.011126	0.0241	0.023618			0.02517
		2475	6.5	20.69	32.2396	1.035014	0.0241	0.020638	0.02085727	0.0225717	0.02107
			7.5	21.05	32.5856	1.03657	0.0241	0.020455			0.02126
			8.5	26.59	32.6961	1.100382	0.0241	0.013956			0.01474
			9.5	23.69	32.6274	1.064064	0.0241	0.017426			0.01879
			10.5	29.67	32.4358	1.161106	0.0241	0.009257			0.01042
			11.5	32.46	32.1782	1.233434	0.0241	0.005035			0.00754
			2.5	10.53	22.1459	0.938669	0.0189	0.027329			0.02798
			3.5	15.26	24.9321	0.987778	0.0189	0.020502			0.02163
			4.5	19.88	26.5999	1.038183	0.0189	0.014979			0.01549
		1033	5.5	18.02	27.6548	1.00271	0.0189	0.018726	0.01547905	0.0163027	0.01969
			6.5	20.69	28.3032	1.03139	0.0189	0.015649			0.01509
			7.5	21.05	28.6492	1.032819	0.0189	0.015507			0.01509
			8.5	26.59	28.7597	1.132288	0.0189	0.00755			0.00981

			9.5	23.69	28.691	1.073295	0.0189	0.011831			0.01226
			10.5	29.67	28.4994	1.213271	0.0189	0.00322			0.00582
			11.5	32.46	28.2418	1.269812	0.0189	0.00097			0.00271
2	SLC	475	2.5	10.53	15.8333	0.891571	0.0076	0.017308	0.00700709	0.0072078	0.01653
			3.5	15.26	18.6194	0.954978	0.0076	0.010681			0.0107
			4.5	19.88	20.2873	1.035025	0.0076	0.004878			0.00578
			5.5	18.02	21.3422	0.965818	0.0076	0.009752			0.00969
			6.5	20.69	21.9906	1.015402	0.0076	0.006094			0.0068
			7.5	21.05	22.3366	1.016342	0.0076	0.006033			0.0068
			8.5	26.59	22.4471	1.127484	0.0076	0.000478			0
			9.5	23.69	22.3784	1.078287	0.0076	0.002577			0.00385
			10.5	29.67	22.1867	1.15051	0.0076	0			0
			11.5	32.46	21.9292	1.154399	0.0076	0			0
		2475	2.5	10.53	27.0598	0.951327	0.0245	0.033354	0.02116828	0.0217209	0.0369
			3.5	15.26	29.846	0.998019	0.0245	0.02594			0.02782
			4.5	19.88	31.5138	1.039356	0.0245	0.020597			0.02037
			5.5	18.02	32.5687	1.014102	0.0245	0.02374			0.02447
			6.5	20.69	33.2171	1.037566	0.0245	0.020808			0.02031
			7.5	21.05	33.5631	1.03915	0.0245	0.020622			0.02048
			8.5	26.59	33.6736	1.097888	0.0245	0.014556			0.0137
			9.5	23.69	33.6049	1.065245	0.0245	0.017729			0.01619
			10.5	29.67	33.4133	1.151326	0.0245	0.010248			0.00948
			11.5	32.46	33.1557	1.219793	0.0245	0.005988			0.00699
		1033	2.5	10.53	21.3975	0.946675	0.0177	0.024476	0.01324899	0.0149202	0.02633
			3.5	15.26	24.1836	0.997222	0.0177	0.018024			0.01943
			4.5	19.88	25.8515	1.051263	0.0177	0.01265			0.0149
			5.5	18.02	26.9064	1.012064	0.0177	0.016409			0.01737
			6.5	20.69	27.5548	1.042921	0.0177	0.013394			0.01448
			7.5	21.05	27.9008	1.044336	0.0177	0.013265			0.01469
			8.5	26.59	28.0113	1.153245	0.0177	0.005519			0.00765
			9.5	23.69	27.9426	1.089239	0.0177	0.009605			0.01182
			10.5	29.67	27.7509	1.233967	0.0177	0.001758			0.00361
			11.5	32.46	27.4934	1.282962	0.0177	2.96E-05			0.00188
2	San Fran	475	2.5	10.53	25.1953	0.948248	0.0226	0.031193	0.01914822	0.0192203	0.03156
			3.5	15.26	27.9815	0.99553	0.0226	0.024023			0.0249
			4.5	19.88	29.6493	1.038715	0.0226	0.01873			0.01857
			5.5	18.02	30.7043	1.011273	0.0226	0.021969			0.02135
			6.5	20.69	31.3526	1.035779	0.0226	0.019057			0.01854
			7.5	21.05	31.6986	1.037312	0.0226	0.018886			0.01859
			8.5	26.59	31.8092	1.107258	0.0226	0.012203			0.01129
			9.5	23.69	31.7405	1.066663	0.0226	0.015824			0.01587
			10.5	29.67	31.5488	1.1748	0.0226	0.007439			0.00883
			11.5	32.46	31.2912	1.248464	0.0226	0.003589			0.0046
		2475	2.5	10.53	32.4538	0.950133	0.0333	0.04695	0.03225553	0.0300164	0.04761
			3.5	15.26	35.24	0.995248	0.0333	0.037705			0.03612
			4.5	19.88	36.9078	1.034073	0.0333	0.031128			0.02984
			5.5	18.02	37.9627	1.011859	0.0333	0.034751			0.03211
			6.5	20.69	38.6111	1.033799	0.0333	0.031171			0.02815
			7.5	21.05	38.9571	1.035481	0.0333	0.030911			0.0285
			8.5	26.59	39.0676	1.082447	0.0333	0.024366			0.02059
			9.5	23.69	38.9989	1.058247	0.0333	0.02757			0.02456
			10.5	29.67	38.8073	1.111444	0.0333	0.020941			0.01688
			11.5	32.46	38.5497	1.145683	0.0333	0.017405			0.01263
		1033	2.5	10.53	28.5838	0.950963	0.0286	0.039457	0.02600219	0.0243433	0.0391
			3.5	15.26	31.37	0.997155	0.0286	0.031163			0.03012
			4.5	19.88	33.0378	1.037524	0.0286	0.025225			0.02297
			5.5	18.02	34.0927	1.013424	0.0286	0.028639			0.02738

			6.5	20.69	34.7411	1.036323	0.0286	0.025387			0.02307
			7.5	21.05	35.0871	1.037939	0.0286	0.02517			0.02336
			8.5	26.59	35.1976	1.091066	0.0286	0.018837			0.01686
			9.5	23.69	35.1289	1.062533	0.0286	0.022053			0.01903
			10.5	29.67	34.9373	1.134289	0.0286	0.014666			0.01286
			11.5	32.46	34.6797	1.193012	0.0286	0.010097			0.00826
2	San Jose	475	2.5	10.53	23.1656	0.95098	0.0213	0.028849	0.01688376	0.0177867	0.03072
			3.5	15.26	25.9517	0.999693	0.0213	0.021895			0.02213
			4.5	19.88	27.6196	1.047293	0.0213	0.016479			0.01784
			5.5	18.02	28.6745	1.015076	0.0213	0.020012			0.02035
			6.5	20.69	29.3229	1.042096	0.0213	0.017014			0.01771
			7.5	21.05	29.6689	1.043577	0.0213	0.01686			0.01779
			8.5	26.59	29.7794	1.132819	0.0213	0.009259			0.01084
			9.5	23.69	29.7107	1.079746	0.0213	0.013409			0.01335
			10.5	29.67	29.5191	1.212763	0.0213	0.004566			0.00535
			11.5	32.46	29.2615	1.279086	0.0213	0.001708			0.00263
		2475	2.5	10.53	29.3758	0.951084	0.0338	0.047596	0.03226069	0.0287253	0.04673
			3.5	15.26	32.162	0.997053	0.0338	0.038105			0.03504
			4.5	19.88	33.8298	1.037052	0.0338	0.031306			0.02703
			5.5	18.02	34.8847	1.01341	0.0338	0.035177			0.03298
			6.5	20.69	35.5331	1.036085	0.0338	0.031456			0.0272
			7.5	21.05	35.8791	1.037717	0.0338	0.031203			0.02756
			8.5	26.59	35.9896	1.088906	0.0338	0.024099			0.01826
			9.5	23.69	35.9209	1.061794	0.0338	0.027664			0.02392
			10.5	29.67	35.7293	1.127867	0.0338	0.01965			0.01499
			11.5	32.46	35.4717	1.180924	0.0338	0.014649			0.00907
		1033	2.5	10.53	26.1018	0.952358	0.0272	0.037125	0.02370425	0.0232951	0.03833
			3.5	15.26	28.888	0.999452	0.0272	0.029064			0.02934
			4.5	19.88	30.5558	1.041697	0.0272	0.023182			0.02227
			5.5	18.02	31.6107	1.015413	0.0272	0.026707			0.02638
			6.5	20.69	32.2591	1.039391	0.0272	0.023474			0.02226
			7.5	21.05	32.6051	1.040954	0.0272	0.023276			0.02257
			8.5	26.59	32.7156	1.104916	0.0272	0.01622			0.01449
			9.5	23.69	32.6469	1.06853	0.0272	0.019987			0.01841
			10.5	29.67	32.4553	1.165746	0.0272	0.011106			0.01086
			11.5	32.46	32.1977	1.238323	0.0272	0.006491			0.00678
2	Santa Monica	475	2.5	10.53	21.6289	0.945343	0.0181	0.025252	0.01386216	0.0156261	0.0288
			3.5	15.26	24.4151	0.995476	0.0181	0.018703			0.02007
			4.5	19.88	26.0829	1.048389	0.0181	0.013298			0.01589
			5.5	18.02	27.1378	1.010368	0.0181	0.017043			0.01816
			6.5	20.69	27.7862	1.040542	0.0181	0.014018			0.01551
			7.5	21.05	28.1322	1.041963	0.0181	0.013885			0.01565
			8.5	26.59	28.2427	1.148086	0.0181	0.006084			0.00701
			9.5	23.69	28.174	1.085501	0.0181	0.010227			0.01114
			10.5	29.67	27.9824	1.22923	0.0181	0.002153			0.0033
			11.5	32.46	27.7248	1.280721	0.0181	0.000276			0.00171
		2475	2.5	10.53	29.1328	0.950816	0.0301	0.041786	0.02784939	0.0272555	0.0445
			3.5	15.26	31.919	0.996841	0.0301	0.033162			0.03481
			4.5	19.88	33.5868	1.036939	0.0301	0.026994			0.02668
			5.5	18.02	34.6417	1.013169	0.0301	0.030515			0.03036
			6.5	20.69	35.2901	1.035904	0.0301	0.02714			0.02671
			7.5	21.05	35.6361	1.037531	0.0301	0.026911			0.02506
			8.5	26.59	35.7466	1.089246	0.0301	0.02044			0.01766
			9.5	23.69	35.6779	1.061747	0.0301	0.023697			0.02126
			10.5	29.67	35.4863	1.129424	0.0301	0.016327			0.01231
			11.5	32.46	35.2287	1.184211	0.0301	0.011737			0.00813
		1033	2.5	10.53	24.7748	0.952305	0.0258	0.035135	0.02187845	0.0211163	0.03644

			3.5	15.26	27.561	1	0.0258	0.0273			0.02737
			4.5	19.88	29.2288	1.04403	0.0258	0.021453			0.0202
			5.5	18.02	30.2837	1.015736	0.0258	0.025074			0.02407
			6.5	20.69	30.9321	1.040718	0.0258	0.021854			0.02005
			7.5	21.05	31.2781	1.042246	0.0258	0.021668			0.02024
			8.5	26.59	31.3886	1.115897	0.0258	0.014078			0.01214
			9.5	23.69	31.3199	1.072817	0.0258	0.018215			0.01619
			10.5	29.67	31.1283	1.186813	0.0258	0.008742			0.00835
			11.5	32.46	30.8707	1.260485	0.0258	0.004644			0.00443
2	Seattle	475	2.5	10.53	20.018	0.938262	0.0151	0.022041	0.01115503	0.0136692	0.02586
			3.5	15.26	22.8042	0.990968	0.0151	0.015744			0.01874
			4.5	19.88	24.472	1.051852	0.0151	0.010216			0.0123
			5.5	18.02	25.527	1.005193	0.0151	0.014305			0.01669
			6.5	20.69	26.1753	1.040352	0.0151	0.011142			0.01374
			7.5	21.05	26.5213	1.041696	0.0151	0.011031			0.01394
			8.5	26.59	26.6319	1.163732	0.0151	0.003363			0.00541
			9.5	23.69	26.5632	1.094344	0.0151	0.007196			0.00935
			10.5	29.67	26.3715	1.236041	0.0151	0.000441			0.00283
			11.5	32.46	26.1139	1.269091	0.0151	0			0
		2475	2.5	10.53	28.1468	0.951702	0.0282	0.038738	0.02537841	0.0259541	0.043
			3.5	15.26	30.933	0.998061	0.0282	0.030534			0.03296
			4.5	19.88	32.6008	1.038697	0.0282	0.02465			0.02444
			5.5	18.02	33.6557	1.014291	0.0282	0.028053			0.02836
			6.5	20.69	34.3041	1.037348	0.0282	0.024829			0.02441
			7.5	21.05	34.6501	1.038956	0.0282	0.024616			0.0247
			8.5	26.59	34.7606	1.09345	0.0282	0.018241			0.01683
			9.5	23.69	34.6919	1.063919	0.0282	0.021504			0.02073
			10.5	29.67	34.5003	1.139383	0.0282	0.013928			0.01288
			11.5	32.46	34.2427	1.201191	0.0282	0.009304			0.00821
		1033	2.5	10.53	23.8272	0.949614	0.0224	0.030684	0.0183932	0.0194093	0.03327
			3.5	15.26	26.6133	0.997747	0.0224	0.023492			0.02583
			4.5	19.88	28.2812	1.043547	0.0224	0.018004			0.01829
			5.5	18.02	29.3361	1.013253	0.0224	0.021502			0.02239
			6.5	20.69	29.9845	1.039238	0.0224	0.018472			0.01809
			7.5	21.05	30.3305	1.040736	0.0224	0.018308			0.01813
			8.5	26.59	30.441	1.122935	0.0224	0.010821			0.01155
			9.5	23.69	30.3723	1.074243	0.0224	0.01492			0.01585
			10.5	29.67	30.1807	1.199689	0.0224	0.005889			0.00734
			11.5	32.46	29.9231	1.270042	0.0224	0.002576			0.00308
3	Butte	475	2.5	34.1	3.01	1	0	3.06E-18	0.00142317	0.0012936	0
			3.5	36.03	5.79	1	0	3.06E-18			0
			4.5	29.53	7.46	1	0	3.06E-18			0
			5.5	23.83	8.52	1	0	3.06E-18			0
			6.5	24.04	9.16	1	0	3.06E-18			0
			7.5	19.98	9.51	1	0	3.06E-18			0
			8.5	14.11	9.62	0.980512	0	0.000835			0
			9.5	15.66	9.55	0.993707	0	0.00026			0
			10.5	11.26	9.36	0.931386	0	0.003375			0.00347
			11.5	6.22	9.1	0.772586	0	0.018629			0.01789
		2475	2.5	34.1	11.42	1.035199	0.0013	0	0.00536733	0.0063639	0
			3.5	36.03	14.21	1.035199	0.0013	0			0
			4.5	29.53	15.88	1.035199	0.0013	0			0
			5.5	23.83	16.93	1.030424	0.0013	0			0
			6.5	24.04	17.58	1.028647	0.0013	0			0
			7.5	19.98	17.93	0.97897	0.0013	0.002139			0.00383
			8.5	14.11	18.04	0.84133	0.0013	0.012563			0.01401
			9.5	15.66	17.97	0.877771	0.0013	0.008986			0.01007

			10.5	11.26	17.78	0.789391	0.0013	0.019169			0.0228
			11.5	6.22	17.52	0.706509	0.0013	0.035147			0.04158
		1033	2.5	34.1	7.59	1.000532	0	0	0.00345523	0.003407	0
			3.5	36.03	10.37	1.000532	0	0			0
			4.5	29.53	12.04	1.000532	0	0			0
			5.5	23.83	13.1	1.000532	0	0			0
			6.5	24.04	13.74	1.000488	0	0			0
			7.5	19.98	14.09	0.992149	0	0.000326			0
			8.5	14.11	14.2	0.892492	0	0.005933			0.00679
			9.5	15.66	14.13	0.932312	0	0.00332			0.00339
			10.5	11.26	13.94	0.821795	0	0.012318			0.01249
			11.5	6.22	13.68	0.706773	0	0.030719			0.02888
3	Charleston	475	2.5	34.1	9.26	1.006744	0	0	0.00419332	0.0031275	0
			3.5	36.03	12.05	1.006744	0	0			0
			4.5	29.53	13.72	1.006744	0	0			0
			5.5	23.83	14.77	1.006136	0	0			0
			6.5	24.04	15.42	1.0057	0	0			0
			7.5	19.98	15.77	0.984275	0	0.000667			0
			8.5	14.11	15.88	0.859568	0	0.008584			0.00643
			9.5	15.66	15.81	0.900532	0	0.005358			0.00481
			10.5	11.26	15.62	0.796108	0	0.015378			0.01181
			11.5	6.22	15.36	0.698677	0	0.032589			0.02362
		2475	2.5	34.1	27.96	1.347623	0.0227	0	0.01583149	0.0158159	0
			3.5	36.03	30.75	1.340124	0.0227	0.000194			0
			4.5	29.53	32.42	1.172516	0.0227	0.007623			0.00876
			5.5	23.83	33.47	1.07207	0.0227	0.015365			0.01443
			6.5	24.04	34.12	1.069611	0.0227	0.015601			0.01417
			7.5	19.98	34.47	1.028126	0.0227	0.020005			0.01903
			8.5	14.11	34.58	0.967642	0.0227	0.028147			0.02806
			9.5	15.66	34.51	0.98459	0.0227	0.025627			0.02673
			10.5	11.26	34.32	0.93558	0.0227	0.03351			0.03426
			11.5	6.22	34.06	0.864534	0.0227	0.048872			0.0504
		1033	2.5	34.1	19.7206	1.28275	0.013	0	0.00815784	0.0095289	0
			3.5	36.03	22.5067	1.282737	0.013	0			0
			4.5	29.53	24.1746	1.265567	0.013	0			0
			5.5	23.83	25.2295	1.130776	0.013	0.003679			0.00648
			6.5	24.04	25.8779	1.120725	0.013	0.00419			0.00604
			7.5	19.98	26.2239	1.030286	0.013	0.010027			0.01241
			8.5	14.11	26.3344	0.950344	0.013	0.017769			0.02081
			9.5	15.66	26.2657	0.969996	0.013	0.015575			0.01709
			10.5	11.26	26.074	0.915173	0.013	0.022282			0.0242
			11.5	6.22	25.8165	0.839343	0.013	0.035323			0.03739
3	Eureka	475	2.5	34.1	28.0968	1.347972	0.0216	0	0.01492001	0.015286	0
			3.5	36.03	30.883	1.340113	0.0216	0			0
			4.5	29.53	32.5508	1.170995	0.0216	0.007027			0.00892
			5.5	23.83	33.6057	1.072141	0.0216	0.014385			0.01484
			6.5	24.04	34.2541	1.069746	0.0216	0.014606			0.0146
			7.5	19.98	34.6001	1.028481	0.0216	0.018824			0.01968
			8.5	14.11	34.7106	0.968079	0.0216	0.026655			0.02745
			9.5	15.66	34.6419	0.985002	0.0216	0.024232			0.02404
			10.5	11.26	34.4503	0.936047	0.0216	0.031819			0.03239
			11.5	6.22	34.1927	0.86504	0.0216	0.046628			0.04507
		2475	2.5	34.1	40.02	1.179897	0.0335	0.014499	0.0301022	0.0265829	0.01093
			3.5	36.03	42.81	1.172759	0.0335	0.015107			0.00941
			4.5	29.53	44.48	1.106253	0.0335	0.021725			0.01611
			5.5	23.83	45.53	1.058176	0.0335	0.027817			0.02498
			6.5	24.04	46.18	1.057319	0.0335	0.027938			0.02481

			7.5	19.98	46.53	1.023431	0.0335	0.033086			0.03071
			8.5	14.11	46.64	0.970184	0.0335	0.042927			0.04015
			9.5	15.66	46.57	0.985258	0.0335	0.039897			0.03733
			10.5	11.26	46.38	0.941029	0.0335	0.049418			0.04747
			11.5	6.22	46.12	0.875371	0.0335	0.067724			0.06556
		1033	2.5	34.1	34.6958	1.261011	0.0271	0.005238	0.02161463	0.0210457	0.0052
			3.5	36.03	37.482	1.241703	0.0271	0.006234			0.0052
			4.5	29.53	39.1498	1.116936	0.0271	0.014989			0.01222
			5.5	23.83	40.2047	1.062567	0.0271	0.020529			0.01956
			6.5	24.04	40.8531	1.061338	0.0271	0.020671			0.01935
			7.5	19.98	41.1991	1.025253	0.0271	0.025184			0.02579
			8.5	14.11	41.3096	0.969342	0.0271	0.033822			0.0342
			9.5	15.66	41.2409	0.985111	0.0271	0.031156			0.03106
			10.5	11.26	41.0493	0.939086	0.0271	0.039527			0.04022
			11.5	6.22	40.7917	0.871353	0.0271	0.055744			0.05627
3	Memphis	475	2.5	34.1	11.4807	1.029045	0.0017	0.000287	0.00621314	0.004032	0
			3.5	36.03	14.2669	1.029045	0.0017	0.000287			0
			4.5	29.53	15.9347	1.029045	0.0017	0.000287			0
			5.5	23.83	16.9897	1.024088	0.0017	0.000491			0
			6.5	24.04	17.638	1.022273	0.0017	0.000568			0
			7.5	19.98	17.9841	0.972139	0.0017	0.002983			0.00103
			8.5	14.11	18.0946	0.835417	0.0017	0.014118			0.0092
			9.5	15.66	18.0259	0.871419	0.0017	0.010321			0.00766
			10.5	11.26	17.8342	0.784113	0.0017	0.021106			0.01442
			11.5	6.22	17.5766	0.702044	0.0017	0.037975			0.02647
		2475	2.5	34.1	26.8838	1.347067	0.0221	0	0.01516711	0.0164597	0
			3.5	36.03	29.67	1.342326	0.0221	0			0
			4.5	29.53	31.3378	1.190503	0.0221	0.006208			0.00707
			5.5	23.83	32.3927	1.075433	0.0221	0.014526			0.01401
			6.5	24.04	33.0411	1.072466	0.0221	0.014801			0.0157
			7.5	19.98	33.3871	1.02886	0.0221	0.019304			0.02023
			8.5	14.11	33.4976	0.967383	0.0221	0.027415			0.03082
			9.5	15.66	33.4289	0.98456	0.0221	0.024908			0.02769
			10.5	11.26	33.2373	0.934969	0.0221	0.032749			0.03687
			11.5	6.22	32.9797	0.863276	0.0221	0.048046			0.05266
		1033	2.5	34.1	20.8078	1.290603	0.0141	0	0.00913039	0.0107039	0
			3.5	36.03	23.594	1.29054	0.0141	0			0
			4.5	29.53	25.2618	1.261344	0.0141	0			0.00175
			5.5	23.83	26.3168	1.11251	0.0141	0.005382			0.00714
			6.5	24.04	26.9651	1.103504	0.0141	0.005904			0.00861
			7.5	19.98	27.3111	1.023892	0.0141	0.011596			0.01321
			8.5	14.11	27.4217	0.950082	0.0141	0.019205			0.02148
			9.5	15.66	27.353	0.968973	0.0141	0.016988			0.01984
			10.5	11.26	27.1613	0.915644	0.0141	0.023828			0.0265
			11.5	6.22	26.9037	0.840815	0.0141	0.037209			0.03928
3	Portland	475	2.5	34.1	17.7174	1.196712	0.0092	0	0.0082857	0.0088749	0
			3.5	36.03	20.5036	1.196712	0.0092	0			0
			4.5	29.53	22.1714	1.191914	0.0092	0			0
			5.5	23.83	23.2264	1.101421	0.0092	0.002601			0.00325
			6.5	24.04	23.8747	1.091371	0.0092	0.003084			0.00469
			7.5	19.98	24.2207	0.989957	0.0092	0.009512			0.0104
			8.5	14.11	24.3313	0.898569	0.0092	0.018871			0.0191
			9.5	15.66	24.2626	0.91936	0.0092	0.016338			0.01758
			10.5	11.26	24.0709	0.863433	0.0092	0.023841			0.02588
			11.5	6.22	23.8133	0.789775	0.0092	0.037942			0.03809
		2475	2.5	34.1	26.0823	1.339966	0.0241	0.000707	0.01713037	0.0187369	0
			3.5	36.03	28.8685	1.336782	0.0241	0.000811			0

			4.5	29.53	30.5363	1.200662	0.0241	0.006791			0.00885
			5.5	23.83	31.5912	1.074867	0.0241	0.016334			0.01651
			6.5	24.04	32.2396	1.071407	0.0241	0.016678			0.01601
			7.5	19.98	32.5856	1.025776	0.0241	0.021752			0.02335
			8.5	14.11	32.6961	0.963689	0.0241	0.030614			0.03411
			9.5	15.66	32.6274	0.980988	0.0241	0.027881			0.03134
			10.5	11.26	32.4358	0.931117	0.0241	0.036415			0.043
			11.5	6.22	32.1782	0.859189	0.0241	0.053021			0.06047
		1033	2.5	34.1	22.1459	1.300316	0.0189	0	0.01296204	0.0137767	0
			3.5	36.03	24.9321	1.300098	0.0189	0			0
			4.5	29.53	26.5999	1.249879	0.0189	0.001703			0.00244
			5.5	23.83	27.6548	1.093622	0.0189	0.010226			0.00999
			6.5	24.04	28.3032	1.086203	0.0189	0.010795			0.01146
			7.5	19.98	28.6492	1.018939	0.0189	0.016934			0.01747
			8.5	14.11	28.7597	0.950351	0.0189	0.025554			0.02737
			9.5	15.66	28.691	0.968594	0.0189	0.022977			0.0244
			10.5	11.26	28.4994	0.91662	0.0189	0.030971			0.03294
			11.5	6.22	28.2418	0.84288	0.0189	0.04657			0.05045
3	SLC	475	2.5	34.1	15.8333	1.154773	0.0076	0	0.00787746	0.0074606	0
			3.5	36.03	18.6194	1.154773	0.0076	0			0
			4.5	29.53	20.2873	1.153732	0.0076	0			0
			5.5	23.83	21.3422	1.101967	0.0076	0.001506			0.00106
			6.5	24.04	21.9906	1.093637	0.0076	0.001869			0.00266
			7.5	19.98	22.3366	0.990687	0.0076	0.007803			0.00725
			8.5	14.11	22.4471	0.88097	0.0076	0.01865			0.0173
			9.5	15.66	22.3784	0.905014	0.0076	0.015713			0.01585
			10.5	11.26	22.1867	0.843386	0.0076	0.024082			0.02212
			11.5	6.22	21.9292	0.768815	0.0076	0.038911			0.03627
		2475	2.5	34.1	27.0598	1.34725	0.0245	0.000638	0.01733688	0.017972	0
			3.5	36.03	29.846	1.342115	0.0245	0.000805			0
			4.5	29.53	31.5138	1.187328	0.0245	0.007856			0.0089
			5.5	23.83	32.5687	1.07471	0.0245	0.016761			0.01534
			6.5	24.04	33.2171	1.07184	0.0245	0.01705			0.01503
			7.5	19.98	33.5631	1.028643	0.0245	0.021886			0.02273
			8.5	14.11	33.6736	0.967341	0.0245	0.030625			0.03382
			9.5	15.66	33.6049	0.984478	0.0245	0.027925			0.02919
			10.5	11.26	33.4133	0.934989	0.0245	0.036362			0.04077
			11.5	6.22	33.1557	0.863409	0.0245	0.052773			0.05822
		1033	2.5	34.1	21.3975	1.304753	0.0177	0	0.01129721	0.0126863	0
			3.5	36.03	24.1836	1.304641	0.0177	0			0
			4.5	29.53	25.8515	1.266734	0.0177	0.000563			0.00114
			5.5	23.83	26.9064	1.112052	0.0177	0.008013			0.00929
			6.5	24.04	27.5548	1.103661	0.0177	0.00858			0.01077
			7.5	19.98	27.9008	1.02915	0.0177	0.014686			0.01513
			8.5	14.11	28.0113	0.957373	0.0177	0.022975			0.02541
			9.5	15.66	27.9426	0.97609	0.0177	0.02053			0.02238
			10.5	11.26	27.7509	0.923007	0.0177	0.028093			0.03122
			11.5	6.22	27.4934	0.848109	0.0177	0.042859			0.04854
3	San Fran	475	2.5	34.1	25.1953	1.335505	0.0226	0.000313	0.01571825	0.0150126	0
			3.5	36.03	27.9815	1.333561	0.0226	0.000374			0
			4.5	29.53	29.6493	1.216591	0.0226	0.005111			0.00534
			5.5	23.83	30.7043	1.079073	0.0226	0.014646			0.01309
			6.5	24.04	31.3526	1.074921	0.0226	0.015033			0.0147
			7.5	19.98	31.6986	1.02612	0.0226	0.020166			0.01914
			8.5	14.11	31.8092	0.962989	0.0226	0.028782			0.02854
			9.5	15.66	31.7405	0.980498	0.0226	0.02613			0.02503
			10.5	11.26	31.5488	0.930113	0.0226	0.034405			0.03331

			11.5	6.22	31.2912	0.857649	0.0226	0.050533			0.04797
		2475	2.5	34.1	32.4538	1.30423	0.0333	0.006181	0.02740267	0.0245235	0.00304
			3.5	36.03	35.24	1.284581	0.0333	0.00722			0.0044
			4.5	29.53	36.9078	1.126209	0.0333	0.019354			0.01463
			5.5	23.83	37.9627	1.064602	0.0333	0.026696			0.02362
			6.5	24.04	38.6111	1.063149	0.0333	0.026894			0.02345
			7.5	19.98	38.9571	1.025898	0.0333	0.03242			0.03069
			8.5	14.11	39.0676	0.968667	0.0333	0.04292			0.04179
			9.5	15.66	38.9989	0.98478	0.0333	0.039684			0.03707
			10.5	11.26	38.8073	0.937877	0.0333	0.049812			0.04895
			11.5	6.22	38.5497	0.869155	0.0333	0.069308			0.06503
		1033	2.5	34.1	28.5838	1.346275	0.0286	0.002248	0.02151319	0.020169	0.00188
			3.5	36.03	31.37	1.336948	0.0286	0.002603			0.00151
			4.5	29.53	33.0378	1.163386	0.0286	0.012262			0.01062
			5.5	23.83	34.0927	1.070546	0.0286	0.021109			0.01819
			6.5	24.04	34.7411	1.068327	0.0286	0.021367			0.01986
			7.5	19.98	35.0871	1.027785	0.0286	0.02656			0.02556
			8.5	14.11	35.1976	0.967811	0.0286	0.036223			0.03555
			9.5	15.66	35.1289	0.984628	0.0286	0.03324			0.03257
			10.5	11.26	34.9373	0.935942	0.0286	0.042564			0.04157
			11.5	6.22	34.6797	0.865239	0.0286	0.060613			0.05748
		475	2.5	34.1	23.1656	1.325674	0.0213	0.000116	0.01400302	0.0140145	0
			3.5	36.03	25.9517	1.325175	0.0213	0.000132			0
			4.5	29.53	27.6196	1.253826	0.0213	0.002705			0.00335
			5.5	23.83	28.6745	1.097252	0.0213	0.011931			0.01248
			6.5	24.04	29.3229	1.09098	0.0213	0.012448			0.01217
			7.5	19.98	29.6689	1.030789	0.0213	0.018223			0.01825
			8.5	14.11	29.7794	0.964006	0.0213	0.026828			0.02731
			9.5	15.66	29.7107	0.98213	0.0213	0.024218			0.02409
			10.5	11.26	29.5191	0.930266	0.0213	0.032339			0.03218
			11.5	6.22	29.2615	0.856265	0.0213	0.048186			0.04665
3	San Jose	2475	2.5	34.1	29.3758	1.342961	0.0338	0.004587	0.02699332	0.0230305	0.00133
			3.5	36.03	32.162	1.331086	0.0338	0.005128			0.00104
			4.5	29.53	33.8298	1.153375	0.0338	0.017108			0.01278
			5.5	23.83	34.8847	1.069299	0.0338	0.026635			0.02107
			6.5	24.04	35.5331	1.067313	0.0338	0.026904			0.02273
			7.5	19.98	35.8791	1.027702	0.0338	0.032789			0.02965
			8.5	14.11	35.9896	0.968328	0.0338	0.043801			0.0405
			9.5	15.66	35.9209	0.984994	0.0338	0.040406			0.03772
			10.5	11.26	35.7293	0.936686	0.0338	0.051005			0.04768
			11.5	6.22	35.4717	0.866393	0.0338	0.071405			0.06554
		1033	2.5	34.1	26.1018	1.345735	0.0272	0.001724	0.01961717	0.0187036	0
			3.5	36.03	28.888	1.342504	0.0272	0.001839			0
			4.5	29.53	30.5558	1.205406	0.0272	0.008414			0.00875
			5.5	23.83	31.6107	1.079347	0.0272	0.018804			0.01768
			6.5	24.04	32.2591	1.075886	0.0272	0.019176			0.01734
			7.5	19.98	32.6051	1.030122	0.0272	0.024683			0.02468
			8.5	14.11	32.7156	0.967792	0.0272	0.034285			0.03433
			9.5	15.66	32.6469	0.98516	0.0272	0.031326			0.03137
			10.5	11.26	32.4553	0.935088	0.0272	0.040558			0.04027
			11.5	6.22	32.1977	0.862867	0.0272	0.058463			0.05614
3	Santa Monica	475	2.5	34.1	21.6289	1.305028	0.0181	0	0.0117508	0.0127982	0
			3.5	36.03	24.4151	1.304889	0.0181	0			0
			4.5	29.53	26.0829	1.263325	0.0181	0.000866			0.001
			5.5	23.83	27.1378	1.107572	0.0181	0.008632			0.01054
			6.5	24.04	27.7862	1.09947	0.0181	0.009199			0.01008
			7.5	19.98	28.1322	1.02719	0.0181	0.015304			0.01605

			8.5	14.11	28.2427	0.956384	0.0181	0.023669			0.02679
			9.5	15.66	28.174	0.97497	0.0181	0.021191			0.02348
			10.5	11.26	27.9824	0.922177	0.0181	0.028866			0.03148
			11.5	6.22	27.7248	0.847548	0.0181	0.043852			0.04429
		2475	2.5	34.1	29.1328	1.343917	0.0301	0.002952	0.02313403	0.0217706	0.00161
			3.5	36.03	31.919	1.332837	0.0301	0.003399			0.00128
			4.5	29.53	33.5868	1.156007	0.0301	0.013968			0.01001
			5.5	23.83	34.6417	1.069392	0.0301	0.022752			0.02059
			6.5	24.04	35.2901	1.067342	0.0301	0.023003			0.0203
			7.5	19.98	35.6361	1.027477	0.0301	0.028351			0.02707
			8.5	14.11	35.7466	0.967938	0.0301	0.038362			0.03957
			9.5	15.66	35.6779	0.984645	0.0301	0.035272			0.03507
			10.5	11.26	35.4863	0.936235	0.0301	0.044928			0.04651
			11.5	6.22	35.2287	0.865834	0.0301	0.063585			0.06435
		1033	2.5	34.1	24.7748	1.338748	0.0258	0.001438	0.01816325	0.0173968	0
			3.5	36.03	27.561	1.337235	0.0258	0.001491			0
			4.5	29.53	29.2288	1.229356	0.0258	0.006226			0.00664
			5.5	23.83	30.2837	1.086177	0.0258	0.016847			0.01554
			6.5	24.04	30.9321	1.081626	0.0258	0.017304			0.01514
			7.5	19.98	31.2781	1.030767	0.0258	0.023093			0.02236
			8.5	14.11	31.3886	0.96679	0.0258	0.032567			0.03375
			9.5	15.66	31.3199	0.98448	0.0258	0.02966			0.02896
			10.5	11.26	31.1283	0.933623	0.0258	0.038719			0.03938
			11.5	6.22	30.8707	0.860582	0.0258	0.056315			0.05518
3	Seattle	475	2.5	34.1	20.018	1.27941	0.0151	0	0.00987561	0.0112699	0
			3.5	36.03	22.8042	1.279388	0.0151	0			0
			4.5	29.53	24.472	1.259451	0.0151	0			0
			5.5	23.83	25.527	1.120769	0.0151	0.005594			0.00722
			6.5	24.04	26.1753	1.111009	0.0151	0.006163			0.0086
			7.5	19.98	26.5213	1.023905	0.0151	0.012556			0.01435
			8.5	14.11	26.6319	0.946169	0.0151	0.020989			0.02303
			9.5	15.66	26.5632	0.965502	0.0151	0.018583			0.02184
			10.5	11.26	26.3715	0.911367	0.0151	0.025952			0.02966
			11.5	6.22	26.1139	0.836145	0.0151	0.04026			0.042
		2475	2.5	34.1	28.1468	1.348228	0.0282	0.002025	0.0209712	0.0212369	0.00186
			3.5	36.03	30.933	1.340221	0.0282	0.002322			0.0015
			4.5	29.53	32.6008	1.170529	0.0282	0.011449			0.01072
			5.5	23.83	33.6557	1.072282	0.0282	0.020537			0.0181
			6.5	24.04	34.3041	1.069906	0.0282	0.020808			0.01968
			7.5	19.98	34.6501	1.028708	0.0282	0.025998			0.02674
			8.5	14.11	34.7606	0.968334	0.0282	0.035589			0.03896
			9.5	15.66	34.6919	0.98525	0.0282	0.032627			0.03454
			10.5	11.26	34.5003	0.936309	0.0282	0.04188			0.04406
			11.5	6.22	34.2427	0.865313	0.0282	0.059801			0.06359
		1033	2.5	34.1	23.8272	1.328673	0.0224	0.000456	0.01523002	0.0162518	0
			3.5	36.03	26.6133	1.327866	0.0224	0.000482			0
			4.5	29.53	28.2812	1.242006	0.0224	0.003782			0.004
			5.5	23.83	29.3361	1.089884	0.0224	0.013506			0.01324
			6.5	24.04	29.9845	1.084377	0.0224	0.013992			0.01483
			7.5	19.98	30.3305	1.0286	0.0224	0.019669			0.02041
			8.5	14.11	30.441	0.963262	0.0224	0.028474			0.0318
			9.5	15.66	30.3723	0.98116	0.0224	0.025787			0.02883
			10.5	11.26	30.1807	0.929833	0.0224	0.034157			0.03737
			11.5	6.22	29.9231	0.856383	0.0224	0.050471			0.05476
4	Butte	475	0.5	9.77	3.4288	0.995592	0	0.000181	0.0141604	0.0111318	0
			1.5	9.77	7.51685	0.935006	0	0.003164			0.00204
			2.5	9.77	9.32013	0.888823	0	0.006205			0.00529

			3.5	10.59	10.406	0.88595	0	0.006421			0.005
			4.5	10.74	11.1017	0.872638	0	0.007472			0.00775
			5.5	10.09	11.525	0.842156	0	0.010203			0.00947
			6.5	9.53	11.7294	0.820438	0	0.012468			0.0114
			7.5	9.08	11.746	0.806719	0	0.014057			0.0139
			8.5	8.69	11.6023	0.798269	0	0.015102			0.01484
			9.5	8.33	11.3314	0.793217	0	0.015753			0.01428
			10.5	8	10.9751	0.790655	0	0.016091			0.01583
			11.5	7.71	10.5808	0.78998	0	0.016181			0.01557
			12.5	7.44	10.1947	0.789681	0	0.016221			0.01536
			13.5	7.19	9.85419	0.78897	0	0.016316			0.01514
			14.5	6.97	9.58258	0.78765	0	0.016494			0.01683
			15.5	6.77	9.38911	0.785181	0	0.016831			0.0164
			16.5	6.59	9.2716	0.781624	0	0.017325			0.01787
			17.5	6.42	9.22088	0.776884	0	0.018			0.01722
		2475	0.5	9.77	11.8466	0.853975	0.0013	0.011236	0.02460863	0.0323323	0.01202
			1.5	9.77	15.9346	0.782263	0.0013	0.020245			0.02214
			2.5	9.77	17.7379	0.76429	0.0013	0.023176			0.0266
			3.5	10.59	18.8238	0.768582	0.0013	0.022447			0.02523
			4.5	10.74	19.5194	0.765569	0.0013	0.022957			0.02799
			5.5	10.09	19.9428	0.753472	0.0013	0.025102			0.02934
			6.5	9.53	20.1472	0.744467	0.0013	0.026806			0.03295
			7.5	9.08	20.1638	0.738091	0.0013	0.028071			0.03304
			8.5	8.69	20.0201	0.733305	0.0013	0.029055			0.0359
			9.5	8.33	19.7492	0.729454	0.0013	0.029868			0.03691
			10.5	8	19.3929	0.726325	0.0013	0.030544			0.03798
			11.5	7.71	18.9986	0.72386	0.0013	0.031086			0.03741
			12.5	7.44	18.6125	0.721556	0.0013	0.031599			0.03884
			13.5	7.19	18.272	0.719245	0.0013	0.032123			0.03813
			14.5	6.97	18.0004	0.716991	0.0013	0.03264			0.0397
			15.5	6.77	17.8069	0.714606	0.0013	0.033196			0.04084
			16.5	6.59	17.6894	0.712122	0.0013	0.033784			0.04026
			17.5	6.42	17.6387	0.709438	0.0013	0.03443			0.04125
		1033	0.5	9.77	8.00883	0.923501	0	0.00385	0.01930997	0.0221663	0.00313
			1.5	9.77	12.0969	0.819754	0	0.012544			0.01282
			2.5	9.77	13.9002	0.784589	0	0.016912			0.01671
			3.5	10.59	14.986	0.786199	0	0.016691			0.01665
			4.5	10.74	15.6817	0.778981	0	0.017699			0.01712
			5.5	10.09	16.105	0.760285	0	0.020526			0.02039
			6.5	9.53	16.3094	0.747504	0	0.022657			0.02224
			7.5	9.08	16.326	0.739181	0	0.024139			0.02479
			8.5	8.69	16.1824	0.733476	0	0.025201			0.0255
			9.5	8.33	15.9115	0.729325	0	0.025998			0.02492
			10.5	8	15.5551	0.726315	0	0.026589			0.02615
			11.5	7.71	15.1608	0.724259	0	0.027			0.0278
			12.5	7.44	14.7748	0.722419	0	0.027372			0.02723
			13.5	7.19	14.4342	0.720477	0	0.027769			0.02694
			14.5	6.97	14.1626	0.71843	0	0.028194			0.0283
			15.5	6.77	13.9691	0.716002	0	0.028704			0.02985
			16.5	6.59	13.8516	0.713236	0	0.029295			0.02934
			17.5	6.42	13.8009	0.710039	0	0.029992			0.03044
4	Charleston	475	0.5	9.77	9.68521	0.885041	0	0.006491	0.02156844	0.0156491	0.00587
			1.5	9.77	13.7733	0.791634	0	0.015961			0.01143
			2.5	9.77	15.5765	0.765034	0	0.019777			0.013
			3.5	10.59	16.6624	0.768038	0	0.019314			0.01324
			4.5	10.74	17.3581	0.76308	0	0.020082			0.01442
			5.5	10.09	17.7814	0.748104	0	0.022553			0.01668

			6.5	9.53	17.9858	0.737542	0	0.02444			0.01712
			7.5	9.08	18.0024	0.730398	0	0.02579			0.01997
			8.5	8.69	17.8587	0.725269	0	0.026797			0.01912
			9.5	8.33	17.5879	0.721324	0	0.027595			0.02062
			10.5	8	17.2315	0.718268	0	0.028227			0.02016
			11.5	7.71	16.8372	0.715989	0	0.028707			0.02185
			12.5	7.44	16.4512	0.713892	0	0.029154			0.02159
			13.5	7.19	16.1106	0.711748	0	0.029618			0.02134
			14.5	6.97	15.839	0.709594	0	0.03009			0.02106
			15.5	6.77	15.6455	0.707206	0	0.030622			0.02271
			16.5	6.59	15.528	0.704621	0	0.031207			0.0223
			17.5	6.42	15.4773	0.701743	0	0.031869			0.02384
		2475	0.5	9.77	28.3835	0.938484	0.0227	0.032989	0.03878484	0.0399041	0.03321
			1.5	9.77	32.4715	0.922866	0.0227	0.035878			0.03603
			2.5	9.77	34.2748	0.916762	0.0227	0.037069			0.03876
			3.5	10.59	35.3607	0.923743	0.0227	0.03571			0.03616
			4.5	10.74	36.0563	0.923342	0.0227	0.035787			0.03778
			5.5	10.09	36.4797	0.913913	0.0227	0.037636			0.03806
			6.5	9.53	36.684	0.906123	0.0227	0.039231			0.04042
			7.5	9.08	36.7007	0.90015	0.0227	0.040496			0.04106
			8.5	8.69	36.557	0.89529	0.0227	0.041553			0.04389
			9.5	8.33	36.2861	0.891058	0.0227	0.042494			0.04494
			10.5	8	35.9298	0.88735	0.0227	0.043335			0.046
			11.5	7.71	35.5355	0.884201	0.0227	0.044062			0.04514
			12.5	7.44	35.1494	0.881218	0.0227	0.044762			0.04632
			13.5	7.19	34.8088	0.878313	0.0227	0.045453			0.04602
			14.5	6.97	34.5372	0.875599	0.0227	0.046108			0.04721
			15.5	6.77	34.3438	0.872918	0.0227	0.046763			0.04837
			16.5	6.59	34.2262	0.870296	0.0227	0.047413			0.04803
			17.5	6.42	34.1755	0.867609	0.0227	0.048088			0.04915
		1033	0.5	9.77	20.1422	0.926664	0.013	0.020718	0.02675788	0.0291824	0.02213
			1.5	9.77	24.2303	0.903152	0.013	0.02402			0.02645
			2.5	9.77	26.0335	0.894802	0.013	0.025293			0.02725
			3.5	10.59	27.1194	0.901373	0.013	0.024287			0.02622
			4.5	10.74	27.8151	0.900355	0.013	0.024441			0.02772
			5.5	10.09	28.2384	0.88994	0.013	0.02606			0.02811
			6.5	9.53	28.4428	0.881503	0.013	0.027438			0.02891
			7.5	9.08	28.4594	0.875159	0.013	0.028514			0.03167
			8.5	8.69	28.3157	0.870118	0.013	0.029396			0.0326
			9.5	8.33	28.0449	0.865832	0.013	0.030165			0.0338
			10.5	8	27.6885	0.862158	0.013	0.030837			0.03335
			11.5	7.71	27.2942	0.859101	0.013	0.031407			0.03464
			12.5	7.44	26.9082	0.856212	0.013	0.031954			0.03436
			13.5	7.19	26.5676	0.853375	0.013	0.0325			0.03568
			14.5	6.97	26.296	0.850693	0.013	0.033023			0.0354
			15.5	6.77	26.1025	0.847992	0.013	0.033558			0.0367
			16.5	6.59	25.985	0.845302	0.013	0.034098			0.03636
			17.5	6.42	25.9343	0.842501	0.013	0.034669			0.0376
4	Eureka	475	0.5	9.77	28.5185	0.938851	0.0216	0.031334	0.03690356	0.037157	0.03252
			1.5	9.77	32.6065	0.923307	0.0216	0.034106			0.03401
			2.5	9.77	34.4098	0.917228	0.0216	0.035249			0.03527
			3.5	10.59	35.4957	0.924215	0.0216	0.033938			0.03481
			4.5	10.74	36.1913	0.923821	0.0216	0.034011			0.0346
			5.5	10.09	36.6147	0.914404	0.0216	0.035792			0.03526
			6.5	9.53	36.819	0.906621	0.0216	0.037328			0.03796
			7.5	9.08	36.8357	0.900651	0.0216	0.038547			0.03882
			8.5	8.69	36.692	0.895793	0.0216	0.039566			0.03979

			9.5	8.33	36.4211	0.891561	0.0216	0.040474			0.04089
			10.5	8	36.0648	0.887852	0.0216	0.041286			0.0403
			11.5	7.71	35.6705	0.884702	0.0216	0.041988			0.04158
			12.5	7.44	35.2844	0.881717	0.0216	0.042663			0.04275
			13.5	7.19	34.9438	0.878811	0.0216	0.04333			0.04395
			14.5	6.97	34.6722	0.876096	0.0216	0.043962			0.04364
			15.5	6.77	34.4788	0.873415	0.0216	0.044595			0.04486
			16.5	6.59	34.3612	0.870793	0.0216	0.045222			0.04456
			17.5	6.42	34.3105	0.868107	0.0216	0.045873			0.04578
		2475	0.5	9.77	40.4435	0.938726	0.0335	0.049969	0.05568359	0.0536036	0.04923
			1.5	9.77	44.5315	0.928113	0.0335	0.052586			0.0519
			2.5	9.77	46.3348	0.923821	0.0335	0.053681			0.05134
			3.5	10.59	47.4207	0.930949	0.0335	0.051874			0.04924
			4.5	10.74	48.1163	0.931039	0.0335	0.051851			0.04943
			5.5	10.09	48.5397	0.922622	0.0335	0.053992			0.05167
			6.5	9.53	48.744	0.915539	0.0335	0.055859			0.05363
			7.5	9.08	48.7607	0.910007	0.0335	0.057362			0.0544
			8.5	8.69	48.617	0.905408	0.0335	0.058642			0.05516
			9.5	8.33	48.3461	0.901318	0.0335	0.059803			0.05772
			10.5	8	47.9898	0.897667	0.0335	0.060859			0.05848
			11.5	7.71	47.5955	0.894516	0.0335	0.061786			0.05948
			12.5	7.44	47.2094	0.891522	0.0335	0.062679			0.0605
			13.5	7.19	46.8688	0.888627	0.0335	0.063555			0.06154
			14.5	6.97	46.5972	0.885949	0.0335	0.064376			0.06259
			15.5	6.77	46.4038	0.883345	0.0335	0.065185			0.06365
			16.5	6.59	46.2862	0.880836	0.0335	0.065973			0.06342
			17.5	6.42	46.2355	0.878302	0.0335	0.066779			0.06447
		1033	0.5	9.77	35.1175	0.938593	0.0271	0.039627	0.04508365	0.0457251	0.04133
			1.5	9.77	39.2055	0.926202	0.0271	0.042216			0.04314
			2.5	9.77	41.0088	0.921252	0.0271	0.043295			0.04444
			3.5	10.59	42.0947	0.928341	0.0271	0.041758			0.04221
			4.5	10.74	42.7903	0.928253	0.0271	0.041777			0.04231
			5.5	10.09	43.2137	0.919453	0.0271	0.043693			0.04454
			6.5	9.53	43.418	0.912099	0.0271	0.045358			0.04517
			7.5	9.08	43.4347	0.906397	0.0271	0.04669			0.04594
			8.5	8.69	43.291	0.901695	0.0271	0.047816			0.04849
			9.5	8.33	43.0201	0.897546	0.0271	0.048832			0.04949
			10.5	8	42.6638	0.893868	0.0271	0.04975			0.05047
			11.5	7.71	42.2695	0.890713	0.0271	0.05055			0.05186
			12.5	7.44	41.8834	0.887719	0.0271	0.051322			0.05096
			13.5	7.19	41.5428	0.884816	0.0271	0.05208			0.05207
			14.5	6.97	41.2712	0.88212	0.0271	0.052794			0.05317
			15.5	6.77	41.0778	0.879484	0.0271	0.053502			0.05429
			16.5	6.59	40.9602	0.87693	0.0271	0.054197			0.054
			17.5	6.42	40.9095	0.874336	0.0271	0.054911			0.05513
4	Memphis	475	0.5	9.77	11.9024	0.847595	0.0017	0.012745	0.02684683	0.0188564	0.00822
			1.5	9.77	15.9904	0.77696	0.0017	0.022261			0.01402
			2.5	9.77	17.7937	0.759287	0.0017	0.025339			0.01766
			3.5	10.59	18.8796	0.763575	0.0017	0.024562			0.01796
			4.5	10.74	19.5753	0.76062	0.0017	0.025095			0.01713
			5.5	10.09	19.9986	0.748656	0.0017	0.027358			0.01933
			6.5	9.53	20.203	0.739738	0.0017	0.029157			0.02012
			7.5	9.08	20.2196	0.733418	0.0017	0.030493			0.02298
			8.5	8.69	20.0759	0.728669	0.0017	0.031533			0.02237
			9.5	8.33	19.805	0.724845	0.0017	0.032392			0.02368
			10.5	8	19.4487	0.721736	0.0017	0.033107			0.02335
			11.5	7.71	19.0544	0.719283	0.0017	0.033681			0.02476

			12.5	7.44	18.6683	0.716991	0.0017	0.034225			0.02456
			13.5	7.19	18.3278	0.714693	0.0017	0.034779			0.02436
			14.5	6.97	18.0562	0.712452	0.0017	0.035326			0.02578
			15.5	6.77	17.8627	0.710083	0.0017	0.035914			0.02552
			16.5	6.59	17.7452	0.707617	0.0017	0.036534			0.02523
			17.5	6.42	17.6945	0.704954	0.0017	0.037216			0.02654
		2475	0.5	9.77	27.3055	0.938566	0.0221	0.032115	0.03800647	0.041527	0.03404
			1.5	9.77	31.3935	0.922278	0.0221	0.035076			0.03869
			2.5	9.77	33.1968	0.91594	0.0221	0.036294			0.03932
			3.5	10.59	34.2827	0.922896	0.0221	0.034959			0.03877
			4.5	10.74	34.9783	0.922432	0.0221	0.035047			0.0385
			5.5	10.09	35.4017	0.912882	0.0221	0.036895			0.04052
			6.5	9.53	35.606	0.905008	0.0221	0.038486			0.04285
			7.5	9.08	35.6227	0.898983	0.0221	0.039746			0.04346
			8.5	8.69	35.479	0.894094	0.0221	0.040797			0.04427
			9.5	8.33	35.2081	0.889847	0.0221	0.04173			0.0453
			10.5	8	34.8518	0.886134	0.0221	0.042563			0.04633
			11.5	7.71	34.4575	0.882989	0.0221	0.04328			0.04745
			12.5	7.44	34.0714	0.880009	0.0221	0.043971			0.0486
			13.5	7.19	33.7308	0.877105	0.0221	0.044654			0.04828
			14.5	6.97	33.4592	0.874388	0.0221	0.045301			0.04943
			15.5	6.77	33.2658	0.8717	0.0221	0.045951			0.05057
			16.5	6.59	33.1482	0.869065	0.0221	0.046597			0.0502
			17.5	6.42	33.0975	0.86636	0.0221	0.047269			0.0513
		1033	0.5	9.77	21.2295	0.925136	0.0141	0.022473	0.02842732	0.030988	0.02468
			1.5	9.77	25.3175	0.903521	0.0141	0.025658			0.02705
			2.5	9.77	27.1208	0.895595	0.0141	0.026918			0.02964
			3.5	10.59	28.2067	0.902222	0.0141	0.025861			0.02847
			4.5	10.74	28.9023	0.901312	0.0141	0.026004			0.02817
			5.5	10.09	29.3257	0.891087	0.0141	0.027658			0.03059
			6.5	9.53	29.5301	0.882777	0.0141	0.029068			0.03102
			7.5	9.08	29.5467	0.87651	0.0141	0.030172			0.03373
			8.5	8.69	29.403	0.871511	0.0141	0.03108			0.0347
			9.5	8.33	29.1321	0.867244	0.0141	0.031873			0.03419
			10.5	8	28.7758	0.863573	0.0141	0.03257			0.03535
			11.5	7.71	28.3815	0.860508	0.0141	0.033163			0.03661
			12.5	7.44	27.9954	0.857611	0.0141	0.033732			0.0363
			13.5	7.19	27.6549	0.85477	0.0141	0.034298			0.03758
			14.5	6.97	27.3833	0.852089	0.0141	0.034841			0.03729
			15.5	6.77	27.1898	0.849398	0.0141	0.035393			0.03853
			16.5	6.59	27.0723	0.846726	0.0141	0.035949			0.03818
			17.5	6.42	27.0216	0.84395	0.0141	0.036536			0.03938
4	Portland	475	0.5	9.77	18.1391	0.879808	0.0092	0.021408	0.02865581	0.0297872	0.02145
			1.5	9.77	22.2271	0.852338	0.0092	0.025616			0.02664
			2.5	9.77	24.0304	0.84349	0.0092	0.02711			0.02706
			3.5	10.59	25.1163	0.84957	0.0092	0.026076			0.02779
			4.5	10.74	25.8119	0.848384	0.0092	0.026275			0.02711
			5.5	10.09	26.2353	0.838166	0.0092	0.028045			0.02946
			6.5	9.53	26.4397	0.829949	0.0092	0.029543			0.03195
			7.5	9.08	26.4563	0.823812	0.0092	0.030707			0.0326
			8.5	8.69	26.3126	0.818972	0.0092	0.031654			0.03349
			9.5	8.33	26.0417	0.814889	0.0092	0.032472			0.033
			10.5	8	25.6854	0.811416	0.0092	0.033184			0.03415
			11.5	7.71	25.2911	0.808546	0.0092	0.033782			0.03538
			12.5	7.44	24.905	0.805837	0.0092	0.034355			0.03505
			13.5	7.19	24.5645	0.803169	0.0092	0.034929			0.03632
			14.5	6.97	24.2929	0.800635	0.0092	0.035481			0.03799

			15.5	6.77	24.0994	0.798067	0.0092	0.03605			0.03722
			16.5	6.59	23.9819	0.795494	0.0092	0.036628			0.03884
			17.5	6.42	23.9312	0.792799	0.0092	0.037242			0.03803
		2475	0.5	9.77	26.504	0.935268	0.0241	0.035625	0.04213059	0.0479216	0.04071
			1.5	9.77	30.592	0.918505	0.0241	0.038918			0.04446
			2.5	9.77	32.3953	0.912007	0.0241	0.040269			0.04522
			3.5	10.59	33.4812	0.918916	0.0241	0.038834			0.0449
			4.5	10.74	34.1768	0.918404	0.0241	0.038939			0.04432
			5.5	10.09	34.6002	0.908793	0.0241	0.040954			0.0464
			6.5	9.53	34.8045	0.900883	0.0241	0.042684			0.04807
			7.5	9.08	34.8212	0.89484	0.0241	0.044053			0.05058
			8.5	8.69	34.6775	0.889946	0.0241	0.045192			0.0513
			9.5	8.33	34.4066	0.885703	0.0241	0.046201			0.05224
			10.5	8	34.0503	0.882001	0.0241	0.0471			0.05318
			11.5	7.71	33.656	0.878869	0.0241	0.047873			0.0542
			12.5	7.44	33.2699	0.875903	0.0241	0.048617			0.05524
			13.5	7.19	32.9293	0.87301	0.0241	0.049353			0.0563
			14.5	6.97	32.6577	0.870302	0.0241	0.050052			0.05735
			15.5	6.77	32.4643	0.867617	0.0241	0.050754			0.05839
			16.5	6.59	32.3468	0.864982	0.0241	0.051452			0.05804
			17.5	6.42	32.296	0.862274	0.0241	0.05218			0.05906
		1033	0.5	9.77	22.5676	0.924283	0.0189	0.02966	0.03634379	0.0391326	0.03
			1.5	9.77	26.6556	0.904389	0.0189	0.033171			0.03528
			2.5	9.77	28.4589	0.896914	0.0189	0.034584			0.03783
			3.5	10.59	29.5448	0.903601	0.0189	0.033318			0.03679
			4.5	10.74	30.2404	0.90281	0.0189	0.033465			0.03648
			5.5	10.09	30.6638	0.892795	0.0189	0.035386			0.03854
			6.5	9.53	30.8681	0.884627	0.0189	0.037026			0.04075
			7.5	9.08	30.8848	0.878445	0.0189	0.038313			0.04129
			8.5	8.69	30.7411	0.873492	0.0189	0.039374			0.04206
			9.5	8.33	30.4702	0.869247	0.0189	0.040305			0.04306
			10.5	8	30.1139	0.865578	0.0189	0.041127			0.04408
			11.5	7.71	29.7196	0.862505	0.0189	0.041827			0.04519
			12.5	7.44	29.3335	0.859597	0.0189	0.042499			0.04631
			13.5	7.19	28.9929	0.856751	0.0189	0.043168			0.04597
			14.5	6.97	28.7213	0.854071	0.0189	0.043806			0.04712
			15.5	6.77	28.5279	0.851391	0.0189	0.044453			0.04822
			16.5	6.59	28.4104	0.848738	0.0189	0.045103			0.04982
			17.5	6.42	28.3596	0.845991	0.0189	0.045785			0.04891
4	SLC	475	0.5	9.77	16.2549	0.868523	0.0076	0.020327	0.02909594	0.0276003	0.01859
			1.5	9.77	20.343	0.832958	0.0076	0.0258			0.02314
			2.5	9.77	22.1463	0.82288	0.0076	0.027557			0.02511
			3.5	10.59	23.2321	0.828646	0.0076	0.02654			0.0258
			4.5	10.74	23.9278	0.827193	0.0076	0.026793			0.02531
			5.5	10.09	24.3511	0.816749	0.0076	0.028676			0.02742
			6.5	9.53	24.5555	0.808437	0.0076	0.030256			0.02976
			7.5	9.08	24.5721	0.80228	0.0076	0.031475			0.03064
			8.5	8.69	24.4285	0.797466	0.0076	0.032459			0.03152
			9.5	8.33	24.1576	0.793442	0.0076	0.033302			0.03268
			10.5	8	23.8012	0.790046	0.0076	0.034029			0.03221
			11.5	7.71	23.4069	0.787264	0.0076	0.034635			0.03348
			12.5	7.44	23.0209	0.784642	0.0076	0.035215			0.03316
			13.5	7.19	22.6803	0.782049	0.0076	0.035798			0.03447
			14.5	6.97	22.4087	0.779576	0.0076	0.036362			0.0341
			15.5	6.77	22.2152	0.77705	0.0076	0.036946			0.0354
			16.5	6.59	22.0977	0.774501	0.0076	0.037544			0.035
			17.5	6.42	22.047	0.771815	0.0076	0.038184			0.03619

		2475	0.5	9.77	27.4815	0.938466	0.0245	0.035702	0.04200648	0.0465573	0.03876
			1.5	9.77	31.5695	0.922293	0.0245	0.038868			0.04241
			2.5	9.77	33.3728	0.915995	0.0245	0.040171			0.04468
			3.5	10.59	34.4587	0.922954	0.0245	0.038734			0.04219
			4.5	10.74	35.1543	0.922501	0.0245	0.038826			0.04204
			5.5	10.09	35.5777	0.912972	0.0245	0.04081			0.04571
			6.5	9.53	35.782	0.905112	0.0245	0.042517			0.04771
			7.5	9.08	35.7987	0.899097	0.0245	0.043869			0.0482
			8.5	8.69	35.655	0.894213	0.0245	0.044996			0.05091
			9.5	8.33	35.3841	0.889969	0.0245	0.045998			0.05186
			10.5	8	35.0278	0.886257	0.0245	0.046892			0.05283
			11.5	7.71	34.6335	0.883112	0.0245	0.047663			0.05388
			12.5	7.44	34.2474	0.880131	0.0245	0.048404			0.05497
			13.5	7.19	33.9068	0.877227	0.0245	0.049137			0.05406
			14.5	6.97	33.6352	0.874512	0.0245	0.049832			0.05514
			15.5	6.77	33.4418	0.871825	0.0245	0.050529			0.05619
			16.5	6.59	33.3242	0.869192	0.0245	0.051221			0.05781
			17.5	6.42	33.2735	0.866491	0.0245	0.05194			0.05882
		1033	0.5	9.77	21.8191	0.931692	0.0177	0.026716	0.03317519	0.0373115	0.02838
			1.5	9.77	25.9072	0.910742	0.0177	0.030142			0.03355
			2.5	9.77	27.7104	0.902963	0.0177	0.031509			0.0356
			3.5	10.59	28.7963	0.909669	0.0177	0.030328			0.03486
			4.5	10.74	29.492	0.908806	0.0177	0.030478			0.03415
			5.5	10.09	29.9153	0.898599	0.0177	0.0323			0.03614
			6.5	9.53	30.1197	0.890291	0.0177	0.033855			0.03828
			7.5	9.08	30.1363	0.884015	0.0177	0.035073			0.0408
			8.5	8.69	29.9926	0.879	0.0177	0.036076			0.04163
			9.5	8.33	29.7218	0.87471	0.0177	0.036954			0.04098
			10.5	8	29.3654	0.871012	0.0177	0.037727			0.04204
			11.5	7.71	28.9711	0.86792	0.0177	0.038385			0.04319
			12.5	7.44	28.5851	0.864996	0.0177	0.039017			0.04436
			13.5	7.19	28.2445	0.862131	0.0177	0.039645			0.04565
			14.5	6.97	27.9729	0.85943	0.0177	0.040246			0.04518
			15.5	6.77	27.7794	0.856724	0.0177	0.040857			0.04633
			16.5	6.59	27.6619	0.85404	0.0177	0.041471			0.04591
			17.5	6.42	27.6112	0.851256	0.0177	0.042117			0.047
4	San Fran	475	0.5	9.77	25.617	0.934939	0.0226	0.033523	0.03995644	0.0382221	0.03386
			1.5	9.77	29.705	0.917549	0.0226	0.036803			0.03504
			2.5	9.77	31.5083	0.910838	0.0226	0.038145			0.03641
			3.5	10.59	32.5942	0.917719	0.0226	0.036769			0.03561
			4.5	10.74	33.2898	0.917148	0.0226	0.036882			0.03553
			5.5	10.09	33.7132	0.907432	0.0226	0.038844			0.03797
			6.5	9.53	33.9176	0.899451	0.0226	0.040528			0.03862
			7.5	9.08	33.9342	0.893365	0.0226	0.041857			0.03949
			8.5	8.69	33.7905	0.888447	0.0226	0.042961			0.04049
			9.5	8.33	33.5196	0.884194	0.0226	0.043938			0.04174
			10.5	8	33.1633	0.88049	0.0226	0.044806			0.04122
			11.5	7.71	32.769	0.877363	0.0226	0.045552			0.0424
			12.5	7.44	32.3829	0.874402	0.0226	0.046269			0.0436
			13.5	7.19	32.0424	0.871512	0.0226	0.046979			0.04483
			14.5	6.97	31.7708	0.868803	0.0226	0.047654			0.04453
			15.5	6.77	31.5773	0.866113	0.0226	0.048333			0.04575
			16.5	6.59	31.4598	0.863469	0.0226	0.04901			0.04545
			17.5	6.42	31.4091	0.860746	0.0226	0.049717			0.04666
		2475	0.5	9.77	32.8755	0.938344	0.0333	0.0497	0.05651386	0.0543496	0.04922
			1.5	9.77	36.9635	0.925031	0.0333	0.052992			0.05148
			2.5	9.77	38.7668	0.919746	0.0333	0.054356			0.0528

			3.5	10.59	39.8527	0.926806	0.0333	0.052541			0.05077
			4.5	10.74	40.5483	0.926628	0.0333	0.052586			0.04904
			5.5	10.09	40.9717	0.917641	0.0333	0.054909			0.05298
			6.5	9.53	41.176	0.910158	0.0333	0.056921			0.05495
			7.5	9.08	41.1927	0.904374	0.0333	0.058525			0.0557
			8.5	8.69	41.049	0.899624	0.0333	0.059876			0.05658
			9.5	8.33	40.7781	0.89545	0.0333	0.061088			0.05733
			10.5	8	40.4218	0.891762	0.0333	0.062179			0.05985
			11.5	7.71	40.0275	0.888608	0.0333	0.063128			0.06087
			12.5	7.44	39.6414	0.885616	0.0333	0.064042			0.06191
			13.5	7.19	39.3008	0.882712	0.0333	0.064941			0.06297
			14.5	6.97	39.0292	0.88001	0.0333	0.065789			0.06202
			15.5	6.77	38.8358	0.87736	0.0333	0.066631			0.06308
			16.5	6.59	38.7182	0.874785	0.0333	0.06746			0.06485
			17.5	6.42	38.6675	0.872164	0.0333	0.068314			0.0659
		1033	0.5	9.77	29.0055	0.938447	0.0286	0.04203	0.04877385	0.04683	0.04115
			1.5	9.77	33.0935	0.923192	0.0286	0.045381			0.04446
			2.5	9.77	34.8968	0.917214	0.0286	0.046762			0.04571
			3.5	10.59	35.9827	0.924209	0.0286	0.04515			0.0435
			4.5	10.74	36.6783	0.923843	0.0286	0.045233			0.04354
			5.5	10.09	37.1017	0.914481	0.0286	0.047406			0.04567
			6.5	9.53	37.306	0.906738	0.0286	0.04928			0.04613
			7.5	9.08	37.3227	0.900793	0.0286	0.050766			0.0489
			8.5	8.69	37.179	0.895949	0.0286	0.052009			0.0498
			9.5	8.33	36.9081	0.891726	0.0286	0.053117			0.05084
			10.5	8	36.5518	0.88802	0.0286	0.054108			0.05186
			11.5	7.71	36.1575	0.88487	0.0286	0.054965			0.05097
			12.5	7.44	35.7714	0.881885	0.0286	0.055789			0.05208
			13.5	7.19	35.4308	0.87898	0.0286	0.056603			0.0532
			14.5	6.97	35.1592	0.876268	0.0286	0.057373			0.05431
			15.5	6.77	34.9658	0.873591	0.0286	0.058143			0.05543
			16.5	6.59	34.8482	0.870976	0.0286	0.058905			0.05514
			17.5	6.42	34.7975	0.868299	0.0286	0.059696			0.05626
4	San Jose	475	0.5	9.77	23.5872	0.936913	0.0213	0.03118	0.03779694	0.0375174	0.03295
			1.5	9.77	27.6753	0.917793	0.0213	0.034617			0.03578
			2.5	9.77	29.4786	0.910523	0.0213	0.036011			0.03687
			3.5	10.59	30.5645	0.917346	0.0213	0.034701			0.03423
			4.5	10.74	31.2601	0.916626	0.0213	0.034837			0.03595
			5.5	10.09	31.6834	0.906621	0.0213	0.03678			0.03651
			6.5	9.53	31.8878	0.89844	0.0213	0.038442			0.03717
			7.5	9.08	31.9045	0.892232	0.0213	0.03975			0.03805
			8.5	8.69	31.7608	0.887244	0.0213	0.04083			0.03906
			9.5	8.33	31.4899	0.882954	0.0213	0.041781			0.04022
			10.5	8	31.1336	0.879237	0.0213	0.042622			0.04184
			11.5	7.71	30.7392	0.876114	0.0213	0.043341			0.04107
			12.5	7.44	30.3532	0.873159	0.0213	0.044032			0.0423
			13.5	7.19	30.0126	0.870269	0.0213	0.044717			0.04356
			14.5	6.97	29.741	0.867552	0.0213	0.045371			0.04328
			15.5	6.77	29.5475	0.864842	0.0213	0.046032			0.04452
			16.5	6.59	29.43	0.862167	0.0213	0.046694			0.04424
			17.5	6.42	29.3793	0.859401	0.0213	0.047387			0.04546
		2475	0.5	9.77	29.7975	0.938728	0.0338	0.050508	0.05803215	0.0532105	0.04824
			1.5	9.77	33.8855	0.923907	0.0338	0.054229			0.05007
			2.5	9.77	35.6888	0.918083	0.0338	0.055763			0.05134
			3.5	10.59	36.7747	0.925096	0.0338	0.05392			0.04915
			4.5	10.74	37.4703	0.924772	0.0338	0.054004			0.04932
			5.5	10.09	37.8937	0.91549	0.0338	0.056459			0.05142

			6.5	9.53	38.098	0.9078	0.0338	0.058576			0.05335
			7.5	9.08	38.1147	0.901889	0.0338	0.060257			0.05413
			8.5	8.69	37.971	0.897064	0.0338	0.061663			0.05501
			9.5	8.33	37.7001	0.892849	0.0338	0.062919			0.0576
			10.5	8	37.3438	0.889146	0.0338	0.064043			0.05833
			11.5	7.71	36.9495	0.885994	0.0338	0.065015			0.05938
			12.5	7.44	36.5634	0.883006	0.0338	0.065951			0.06045
			13.5	7.19	36.2228	0.880099	0.0338	0.066874			0.06152
			14.5	6.97	35.9512	0.877388	0.0338	0.067747			0.0626
			15.5	6.77	35.7578	0.874716	0.0338	0.068618			0.06367
			16.5	6.59	35.6402	0.872109	0.0338	0.069479			0.06344
			17.5	6.42	35.5895	0.869443	0.0338	0.070371			0.0645
		1033	0.5	9.77	26.5235	0.939243	0.0272	0.039706	0.04672578	0.0456954	0.03997
			1.5	9.77	30.6115	0.922422	0.0272	0.043262			0.04324
			2.5	9.77	32.4148	0.915901	0.0272	0.04472			0.04429
			3.5	10.59	33.5007	0.92284	0.0272	0.04317			0.04193
			4.5	10.74	34.1963	0.922327	0.0272	0.043283			0.04207
			5.5	10.09	34.6197	0.912678	0.0272	0.045457			0.0441
			6.5	9.53	34.824	0.904735	0.0272	0.047325			0.04665
			7.5	9.08	34.8407	0.898668	0.0272	0.048801			0.04743
			8.5	8.69	34.697	0.893753	0.0272	0.050029			0.04818
			9.5	8.33	34.4261	0.889493	0.0272	0.051117			0.04923
			10.5	8	34.0698	0.885775	0.0272	0.052086			0.05027
			11.5	7.71	33.6755	0.88263	0.0272	0.052919			0.05158
			12.5	7.44	33.2894	0.879651	0.0272	0.053721			0.05273
			13.5	7.19	32.9488	0.876746	0.0272	0.054514			0.05191
			14.5	6.97	32.6772	0.874026	0.0272	0.055266			0.05305
			15.5	6.77	32.4838	0.87133	0.0272	0.056023			0.05419
			16.5	6.59	32.3662	0.868684	0.0272	0.056775			0.05391
			17.5	6.42	32.3155	0.865964	0.0272	0.057558			0.05503
4	Santa Monica	475	0.5	9.77	22.0506	0.930538	0.0181	0.027513	0.03402503	0.0361089	0.03095
			1.5	9.77	26.1386	0.909906	0.0181	0.030957			0.03349
			2.5	9.77	27.9419	0.902214	0.0181	0.032334			0.03432
			3.5	10.59	29.0278	0.908922	0.0181	0.03113			0.03367
			4.5	10.74	29.7234	0.908081	0.0181	0.031279			0.03328
			5.5	10.09	30.1468	0.897922	0.0181	0.033126			0.0358
			6.5	9.53	30.3511	0.889648	0.0181	0.034703			0.0364
			7.5	9.08	30.3678	0.883394	0.0181	0.03594			0.03724
			8.5	8.69	30.2241	0.878391	0.0181	0.036959			0.03822
			9.5	8.33	29.9532	0.87411	0.0181	0.037851			0.03938
			10.5	8	29.5969	0.870417	0.0181	0.038637			0.04067
			11.5	7.71	29.2026	0.867326	0.0181	0.039306			0.04019
			12.5	7.44	28.8165	0.864404	0.0181	0.039949			0.04143
			13.5	7.19	28.4759	0.86154	0.0181	0.040588			0.04269
			14.5	6.97	28.2043	0.858843	0.0181	0.041199			0.04239
			15.5	6.77	28.0109	0.856141	0.0181	0.041819			0.04363
			16.5	6.59	27.8934	0.853464	0.0181	0.042443			0.04332
			17.5	6.42	27.8426	0.850688	0.0181	0.043098			0.04454
		2475	0.5	9.77	29.5545	0.938416	0.0301	0.044444	0.05134801	0.0525522	0.04619
			1.5	9.77	33.6425	0.923468	0.0301	0.047861			0.0509
			2.5	9.77	35.4458	0.917599	0.0301	0.04927			0.05029
			3.5	10.59	36.5317	0.924605	0.0301	0.047593			0.04823
			4.5	10.74	37.2273	0.924268	0.0301	0.047672			0.04995
			5.5	10.09	37.6507	0.914964	0.0301	0.049916			0.05036
			6.5	9.53	37.855	0.90726	0.0301	0.051851			0.05225
			7.5	9.08	37.8717	0.901339	0.0301	0.053388			0.05498
			8.5	8.69	37.728	0.89651	0.0301	0.054674			0.05549

			9.5	8.33	37.4571	0.892294	0.0301	0.055821			0.05615
			10.5	8	37.1008	0.88859	0.0301	0.056849			0.05714
			11.5	7.71	36.7065	0.88544	0.0301	0.057738			0.05818
			12.5	7.44	36.3204	0.882453	0.0301	0.058593			0.05924
			13.5	7.19	35.9798	0.879548	0.0301	0.059437			0.06031
			14.5	6.97	35.7082	0.876837	0.0301	0.060235			0.06138
			15.5	6.77	35.5148	0.874164	0.0301	0.061032			0.06245
			16.5	6.59	35.3972	0.871555	0.0301	0.061821			0.06219
			17.5	6.42	35.3465	0.868886	0.0301	0.062638			0.06324
		1033	0.5	9.77	25.1965	0.93881	0.0258	0.037691	0.04478326	0.0449944	0.03823
			1.5	9.77	29.2845	0.921028	0.0258	0.041323			0.04284
			2.5	9.77	31.0878	0.914182	0.0258	0.042807			0.04369
			3.5	10.59	32.1737	0.921078	0.0258	0.041312			0.04128
			4.5	10.74	32.8693	0.920476	0.0258	0.041441			0.04289
			5.5	10.09	33.2927	0.910667	0.0258	0.043588			0.0433
			6.5	9.53	33.497	0.902616	0.0258	0.045428			0.04578
			7.5	9.08	33.5137	0.896483	0.0258	0.046879			0.0463
			8.5	8.69	33.37	0.891533	0.0258	0.048083			0.04887
			9.5	8.33	33.0991	0.887256	0.0258	0.049147			0.04793
			10.5	8	32.7428	0.883536	0.0258	0.050091			0.04898
			11.5	7.71	32.3485	0.880397	0.0258	0.0509			0.05036
			12.5	7.44	31.9624	0.877426	0.0258	0.051679			0.05176
			13.5	7.19	31.6218	0.874525	0.0258	0.05245			0.05093
			14.5	6.97	31.3502	0.871805	0.0258	0.053183			0.05206
			15.5	6.77	31.1568	0.869101	0.0258	0.053922			0.0532
			16.5	6.59	31.0392	0.86644	0.0258	0.054658			0.05487
			17.5	6.42	30.9885	0.863698	0.0258	0.055428			0.05401
4	Seattle	475	0.5	9.77	20.4397	0.922204	0.0151	0.024312	0.03086935	0.0341644	0.02795
			1.5	9.77	24.5277	0.899367	0.0151	0.027877			0.03174
			2.5	9.77	26.331	0.891175	0.0151	0.029261			0.03251
			3.5	10.59	27.4169	0.897734	0.0151	0.028148			0.03139
			4.5	10.74	28.1125	0.896751	0.0151	0.028312			0.03118
			5.5	10.09	28.5359	0.886433	0.0151	0.030089			0.03345
			6.5	9.53	28.7403	0.878068	0.0151	0.0316			0.0341
			7.5	9.08	28.7569	0.871774	0.0151	0.032782			0.03691
			8.5	8.69	28.6132	0.866766	0.0151	0.03375			0.03787
			9.5	8.33	28.3423	0.862504	0.0151	0.034594			0.03704
			10.5	8	27.986	0.858846	0.0151	0.035334			0.0382
			11.5	7.71	27.5917	0.8558	0.0151	0.035961			0.03987
			12.5	7.44	27.2056	0.852921	0.0151	0.036563			0.03914
			13.5	7.19	26.8651	0.850095	0.0151	0.037163			0.04042
			14.5	6.97	26.5935	0.847424	0.0151	0.037738			0.04013
			15.5	6.77	26.4	0.844738	0.0151	0.038325			0.04138
			16.5	6.59	26.2825	0.842065	0.0151	0.038917			0.04106
			17.5	6.42	26.2318	0.839282	0.0151	0.039543			0.04227
		2475	0.5	9.77	28.5685	0.939082	0.0282	0.041297	0.04804717	0.0512393	0.04438
			1.5	9.77	32.6565	0.923564	0.0282	0.044662			0.04883
			2.5	9.77	34.4598	0.917494	0.0282	0.046047			0.04956
			3.5	10.59	35.5457	0.924484	0.0282	0.044455			0.04753
			4.5	10.74	36.2413	0.924093	0.0282	0.044543			0.04742
			5.5	10.09	36.6647	0.914678	0.0282	0.046704			0.04945
			6.5	9.53	36.869	0.906897	0.0282	0.048566			0.05155
			7.5	9.08	36.8857	0.900928	0.0282	0.050042			0.05213
			8.5	8.69	36.742	0.89607	0.0282	0.051275			0.05439
			9.5	8.33	36.4711	0.891838	0.0282	0.052373			0.05537
			10.5	8	36.1148	0.888128	0.0282	0.053355			0.05636
			11.5	7.71	35.7205	0.884977	0.0282	0.054203			0.05741

			12.5	7.44	35.3344	0.881991	0.0282	0.055019			0.05848
			13.5	7.19	34.9938	0.879084	0.0282	0.055824			0.05956
			14.5	6.97	34.7222	0.876369	0.0282	0.056587			0.06064
			15.5	6.77	34.5288	0.873688	0.0282	0.057351			0.06171
			16.5	6.59	34.4112	0.871066	0.0282	0.058107			0.06142
			17.5	6.42	34.3605	0.86838	0.0282	0.058892			0.06246
		1033	0.5	9.77	24.2488	0.935833	0.0224	0.033068	0.03977663	0.0432123	0.03496
			1.5	9.77	28.3369	0.917333	0.0224	0.036531			0.04077
			2.5	9.77	30.1402	0.910257	0.0224	0.03794			0.04148
			3.5	10.59	31.2261	0.917098	0.0224	0.036576			0.04082
			4.5	10.74	31.9217	0.916429	0.0224	0.036708			0.04074
			5.5	10.09	32.345	0.906527	0.0224	0.038703			0.04099
			6.5	9.53	32.5494	0.898416	0.0224	0.040412			0.04292
			7.5	9.08	32.5661	0.892252	0.0224	0.041758			0.04557
			8.5	8.69	32.4224	0.887289	0.0224	0.042872			0.04642
			9.5	8.33	32.1515	0.883014	0.0224	0.043854			0.04745
			10.5	8	31.7952	0.879302	0.0224	0.044724			0.04851
			11.5	7.71	31.4009	0.876179	0.0224	0.045468			0.04965
			12.5	7.44	31.0148	0.873223	0.0224	0.046184			0.04917
			13.5	7.19	30.6742	0.870334	0.0224	0.046894			0.05049
			14.5	6.97	30.4026	0.867621	0.0224	0.04757			0.05164
			15.5	6.77	30.2092	0.864919	0.0224	0.048252			0.05279
			16.5	6.59	30.0916	0.862255	0.0224	0.048935			0.05245
			17.5	6.42	30.0409	0.859505	0.0224	0.049649			0.05357
5	Butte	475	0.5	37.29	3.4288	1	0	3.06E-18	3.0646E-18	0	0
			1.5	37.29	7.51685	1	0	3.06E-18			0
			2.5	37.29	9.32013	1	0	3.06E-18			0
			3.5	40.54	10.406	1	0	3.06E-18			0
			4.5	41.15	11.1017	1	0	3.06E-18			0
			5.5	38.57	11.525	1	0	3.06E-18			0
			6.5	36.34	11.7294	1	0	3.06E-18			0
			7.5	34.52	11.746	1	0	3.06E-18			0
			8.5	32.94	11.6023	1	0	3.06E-18			0
			9.5	31.52	11.3314	1	0	3.06E-18			0
			10.5	30.2	10.9751	1	0	3.06E-18			0
			11.5	29.03	10.5808	1	0	3.06E-18			0
			12.5	27.95	10.1947	1	0	3.06E-18			0
			13.5	26.98	9.85419	1	0	3.06E-18			0
			14.5	26.09	9.58258	1	0	3.06E-18			0
			15.5	25.29	9.38911	1	0	3.06E-18			0
			16.5	24.56	9.2716	1	0	3.06E-18			0
			17.5	23.89	9.22088	1	0	3.06E-18			0
		2475	0.5	37.29	11.8466	1.035199	0.0013	0	0	0	0
			1.5	37.29	15.9346	1.035199	0.0013	0			0
			2.5	37.29	17.7379	1.035199	0.0013	0			0
			3.5	40.54	18.8238	1.035199	0.0013	0			0
			4.5	41.15	19.5194	1.035199	0.0013	0			0
			5.5	38.57	19.9428	1.035199	0.0013	0			0
			6.5	36.34	20.1472	1.035199	0.0013	0			0
			7.5	34.52	20.1638	1.035199	0.0013	0			0
			8.5	32.94	20.0201	1.03519	0.0013	0			0
			9.5	31.52	19.7492	1.035138	0.0013	0			0
			10.5	30.2	19.3929	1.035011	0.0013	0			0
			11.5	29.03	18.9986	1.034795	0.0013	0			0
			12.5	27.95	18.6125	1.034446	0.0013	0			0
			13.5	26.98	18.272	1.033924	0.0013	0			0
			14.5	26.09	18.0004	1.033122	0.0013	0			0

			15.5	25.29	17.8069	1.031938	0.0013	0			0
			16.5	24.56	17.6894	1.030195	0.0013	0			0
			17.5	23.89	17.6387	1.027701	0.0013	0			0
		1033	0.5	37.29	8.00883	1.000532	0	0	0	0	0
			1.5	37.29	12.0969	1.000532	0	0			0
			2.5	37.29	13.9002	1.000532	0	0			0
			3.5	40.54	14.986	1.000532	0	0			0
			4.5	41.15	15.6817	1.000532	0	0			0
			5.5	38.57	16.105	1.000532	0	0			0
			6.5	36.34	16.3094	1.000532	0	0			0
			7.5	34.52	16.326	1.000532	0	0			0
			8.5	32.94	16.1824	1.000532	0	0			0
			9.5	31.52	15.9115	1.000532	0	0			0
			10.5	30.2	15.5551	1.000532	0	0			0
			11.5	29.03	15.1608	1.000532	0	0			0
			12.5	27.95	14.7748	1.000532	0	0			0
			13.5	26.98	14.4342	1.000532	0	0			0
			14.5	26.09	14.1626	1.000532	0	0			0
			15.5	25.29	13.9691	1.000532	0	0			0
			16.5	24.56	13.8516	1.000532	0	0			0
			17.5	23.89	13.8009	1.000442	0	0			0
5	Charleston	475	0.5	37.29	9.68521	1.006744	0	0	0	0	0
			1.5	37.29	13.7733	1.006744	0	0			0
			2.5	37.29	15.5765	1.006744	0	0			0
			3.5	40.54	16.6624	1.006744	0	0			0
			4.5	41.15	17.3581	1.006744	0	0			0
			5.5	38.57	17.7814	1.006744	0	0			0
			6.5	36.34	17.9858	1.006744	0	0			0
			7.5	34.52	18.0024	1.006744	0	0			0
			8.5	32.94	17.8587	1.006744	0	0			0
			9.5	31.52	17.5879	1.006744	0	0			0
			10.5	30.2	17.2315	1.006744	0	0			0
			11.5	29.03	16.8372	1.006744	0	0			0
			12.5	27.95	16.4512	1.006729	0	0			0
			13.5	26.98	16.1106	1.006678	0	0			0
			14.5	26.09	15.839	1.006575	0	0			0
			15.5	25.29	15.6455	1.006384	0	0			0
			16.5	24.56	15.528	1.006043	0	0			0
			17.5	23.89	15.4773	1.005468	0	0			0
		2475	0.5	37.29	28.3835	1.357973	0.0227	0	0.00453097	0.0043642	0
			1.5	37.29	32.4715	1.335021	0.0227	0.000354			0.00199
			2.5	37.29	34.2748	1.308377	0.0227	0.001242			0.00108
			3.5	40.54	35.3607	1.338443	0.0227	0.000246			0
			4.5	41.15	36.0563	1.337474	0.0227	0.000277			0
			5.5	38.57	36.4797	1.290363	0.0227	0.001898			0.00263
			6.5	36.34	36.684	1.234887	0.0227	0.004249			0.00442
			7.5	34.52	36.7007	1.192328	0.0227	0.006454			0.00658
			8.5	32.94	36.557	1.162515	0.0227	0.008251			0.00722
			9.5	31.52	36.2861	1.141559	0.0227	0.009659			0.00819
			10.5	30.2	35.9298	1.125844	0.0227	0.010801			0.00912
			11.5	29.03	35.5355	1.114166	0.0227	0.011702			0.01032
			12.5	27.95	35.1494	1.104356	0.0227	0.012496			0.01144
			13.5	26.98	34.8088	1.095934	0.0227	0.013205			0.01261
			14.5	26.09	34.5372	1.088154	0.0227	0.013884			0.01395
			15.5	25.29	34.3438	1.080985	0.0227	0.014531			0.01315
			16.5	24.56	34.2262	1.07419	0.0227	0.015164			0.01442
			17.5	23.89	34.1755	1.067713	0.0227	0.015785			0.01571

		1033	0.5	37.29	20.1422	1.28275	0.013	0	0.00023282	0.0008714	0
			1.5	37.29	24.2303	1.282713	0.013	0			0
			2.5	37.29	26.0335	1.282458	0.013	0			0
			3.5	40.54	27.1194	1.282713	0.013	0			0
			4.5	41.15	27.8151	1.282707	0.013	0			0
			5.5	38.57	28.2384	1.282029	0.013	0			0
			6.5	36.34	28.4428	1.278523	0.013	0			0
			7.5	34.52	28.4594	1.270264	0.013	0			0
			8.5	32.94	28.3157	1.257475	0.013	0			0
			9.5	31.52	28.0449	1.241961	0.013	0			0.00131
			10.5	30.2	27.6885	1.225096	0.013	0			0.00254
			11.5	29.03	27.2942	1.209137	0.013	0.000397			0.00376
			12.5	27.95	26.9082	1.193325	0.013	0.000971			0.00299
			13.5	26.98	26.5676	1.178011	0.013	0.001566			0.00421
			14.5	26.09	26.296	1.162387	0.013	0.002216			0.00544
			15.5	25.29	26.1025	1.146824	0.013	0.002911			0.00666
			16.5	24.56	25.985	1.131186	0.013	0.003659			0.00788
			17.5	23.89	25.9343	1.115731	0.013	0.004452			0.00712
5	Eureka	475	0.5	37.29	28.5185	1.359082	0.0216	0	0.00407054	0.0042774	0
			1.5	37.29	32.6065	1.334761	0.0216	0			0
			2.5	37.29	34.4098	1.307207	0.0216	0.000845			0.00125
			3.5	40.54	35.4957	1.338359	0.0216	0			0
			4.5	41.15	36.1913	1.337348	0.0216	0			0
			5.5	38.57	36.6147	1.288828	0.0216	0.001491			0.00296
			6.5	36.34	36.819	1.232939	0.0216	0.003782			0.00483
			7.5	34.52	36.8357	1.190652	0.0216	0.005904			0.00687
			8.5	32.94	36.692	1.161249	0.0216	0.00762			0.0075
			9.5	31.52	36.4211	1.140651	0.0216	0.008957			0.00845
			10.5	30.2	36.0648	1.125216	0.0216	0.010041			0.00937
			11.5	29.03	35.6705	1.113736	0.0216	0.010896			0.01055
			12.5	27.95	35.2844	1.104079	0.0216	0.011649			0.01165
			13.5	26.98	34.9438	1.095776	0.0216	0.012323			0.01282
			14.5	26.09	34.6722	1.088095	0.0216	0.01297			0.01217
			15.5	25.29	34.4788	1.081007	0.0216	0.013586			0.01337
			16.5	24.56	34.3612	1.074281	0.0216	0.014189			0.01471
			17.5	23.89	34.3105	1.067861	0.0216	0.014782			0.014
		2475	0.5	37.29	40.4435	1.227495	0.0335	0.010868	0.01808805	0.0121072	0.0079
			1.5	37.29	44.5315	1.169899	0.0335	0.015355			0.00979
			2.5	37.29	46.3348	1.155219	0.0335	0.016678			0.00911
			3.5	40.54	47.4207	1.177418	0.0335	0.014708			0.00757
			4.5	41.15	48.1163	1.177267	0.0335	0.014721			0.00779
			5.5	38.57	48.5397	1.151156	0.0335	0.017059			0.00936
			6.5	36.34	48.744	1.134127	0.0335	0.018726			0.01123
			7.5	34.52	48.7607	1.121703	0.0335	0.020019			0.01342
			8.5	32.94	48.617	1.11165	0.0335	0.021116			0.01599
			9.5	31.52	48.3461	1.103105	0.0335	0.022087			0.01663
			10.5	30.2	47.9898	1.095438	0.0335	0.022988			0.01729
			11.5	29.03	47.5955	1.088804	0.0335	0.023792			0.01819
			12.5	27.95	47.2094	1.082612	0.0335	0.024563			0.01907
			13.5	26.98	46.8688	1.076886	0.0335	0.025295			0.02
			14.5	26.09	46.5972	1.071346	0.0335	0.026021			0.02294
			15.5	25.29	46.4038	1.066066	0.0335	0.026729			0.02212
			16.5	24.56	46.2862	1.060935	0.0335	0.027432			0.02311
			17.5	23.89	46.2355	1.055941	0.0335	0.028133			0.02437
		1033	0.5	37.29	35.1175	1.326782	0.0271	0.002369	0.01060596	0.0082865	0.00246
			1.5	37.29	39.2055	1.232029	0.0271	0.006763			0.00539
			2.5	37.29	41.0088	1.196302	0.0271	0.008907			0.00647

			3.5	40.54	42.0947	1.241602	0.0271	0.006239			0.00468
			4.5	41.15	42.7903	1.239981	0.0271	0.006326			0.00477
			5.5	38.57	43.2137	1.182491	0.0271	0.009825			0.00655
			6.5	36.34	43.418	1.150275	0.0271	0.012184			0.00853
			7.5	34.52	43.4347	1.132027	0.0271	0.013669			0.00898
			8.5	32.94	43.291	1.119528	0.0271	0.014756			0.01146
			9.5	31.52	43.0201	1.109805	0.0271	0.015643			0.01219
			10.5	30.2	42.6638	1.101465	0.0271	0.016434			0.01308
			11.5	29.03	42.2695	1.094425	0.0271	0.017124			0.01409
			12.5	27.95	41.8834	1.087922	0.0271	0.017781			0.015
			13.5	26.98	41.5428	1.08193	0.0271	0.018403			0.01612
			14.5	26.09	41.2712	1.076121	0.0271	0.019022			0.01726
			15.5	25.29	41.0778	1.070564	0.0271	0.019629			0.01843
			16.5	24.56	40.9602	1.065139	0.0271	0.020236			0.01963
			17.5	23.89	40.9095	1.059837	0.0271	0.020844			0.02082
5	Memphis	475	0.5	37.29	11.9024	1.029045	0.0017	0.000287	0.0002978	0	0
			1.5	37.29	15.9904	1.029045	0.0017	0.000287			0
			2.5	37.29	17.7937	1.029045	0.0017	0.000287			0
			3.5	40.54	18.8796	1.029045	0.0017	0.000287			0
			4.5	41.15	19.5753	1.029045	0.0017	0.000287			0
			5.5	38.57	19.9986	1.029045	0.0017	0.000287			0
			6.5	36.34	20.203	1.029045	0.0017	0.000287			0
			7.5	34.52	20.2196	1.029045	0.0017	0.000287			0
			8.5	32.94	20.0759	1.029035	0.0017	0.000287			0
			9.5	31.52	19.805	1.028979	0.0017	0.00029			0
			10.5	30.2	19.4487	1.028845	0.0017	0.000295			0
			11.5	29.03	19.0544	1.028619	0.0017	0.000304			0
			12.5	27.95	18.6683	1.028254	0.0017	0.000319			0
			13.5	26.98	18.3278	1.027712	0.0017	0.000341			0
			14.5	26.09	18.0562	1.026882	0.0017	0.000376			0
			15.5	25.29	17.8627	1.025661	0.0017	0.000426			0
			16.5	24.56	17.7452	1.02387	0.0017	0.000501			0
			17.5	23.89	17.6945	1.021315	0.0017	0.000608			0
		2475	0.5	37.29	27.0355	1.352932	0.0221	0	0.0036699	0.0045251	0
			1.5	37.29	31.1235	1.340863	0.0221	0			0
			2.5	37.29	32.9268	1.323042	0.0221	0.000516			0.00138
			3.5	40.54	34.0127	1.342785	0.0221	0			0
			4.5	41.15	34.7083	1.342189	0.0221	0			0
			5.5	38.57	35.1317	1.309223	0.0221	0.000977			0.00284
			6.5	36.34	35.336	1.260379	0.0221	0.002826			0.00455
			7.5	34.52	35.3527	1.216777	0.0221	0.00482			0.00654
			8.5	32.94	35.209	1.183458	0.0221	0.006608			0.00705
			9.5	31.52	34.9381	1.158946	0.0221	0.008093			0.0099
			10.5	30.2	34.5818	1.140214	0.0221	0.009339			0.01072
			11.5	29.03	34.1875	1.126279	0.0221	0.010334			0.01182
			12.5	27.95	33.8014	1.114648	0.0221	0.011211			0.01286
			13.5	26.98	33.4608	1.104762	0.0221	0.011993			0.01396
			14.5	26.09	33.1892	1.095717	0.0221	0.01274			0.01308
			15.5	25.29	32.9958	1.087477	0.0221	0.013446			0.01434
			16.5	24.56	32.8782	1.079762	0.0221	0.014131			0.01549
			17.5	23.89	32.8275	1.072507	0.0221	0.014798			0.01679
		1033	0.5	37.29	21.2295	1.290611	0.0141	0	0.00049726	0.0013035	0
			1.5	37.29	25.3175	1.29047	0.0141	0			0
			2.5	37.29	27.1208	1.289822	0.0141	0			0
			3.5	40.54	28.2067	1.290487	0.0141	0			0
			4.5	41.15	28.9023	1.29047	0.0141	0			0
			5.5	38.57	29.3257	1.288883	0.0141	0			0

			6.5	36.34	29.5301	1.282199	0.0141	0			0
			7.5	34.52	29.5467	1.268755	0.0141	0			0
			8.5	32.94	29.403	1.250389	0.0141	0			0.00125
			9.5	31.52	29.1321	1.230211	0.0141	0.000189			0.00231
			10.5	30.2	28.7758	1.209926	0.0141	0.000904			0.0033
			11.5	29.03	28.3815	1.191846	0.0141	0.001596			0.00433
			12.5	27.95	27.9954	1.174757	0.0141	0.002303			0.00539
			13.5	26.98	27.6549	1.158843	0.0141	0.003011			0.0065
			14.5	26.09	27.3833	1.14316	0.0141	0.003759			0.00762
			15.5	25.29	27.1898	1.128018	0.0141	0.004533			0.00875
			16.5	24.56	27.0723	1.113223	0.0141	0.005342			0.00989
			17.5	23.89	27.0216	1.098963	0.0141	0.006175			0.00905
5	Portland	475	0.5	37.29	18.1391	1.196712	0.0092	0	0.00014022	0.0005316	0
			1.5	37.29	22.2271	1.196712	0.0092	0			0
			2.5	37.29	24.0304	1.196686	0.0092	0			0
			3.5	40.54	25.1163	1.196711	0.0092	0			0
			4.5	41.15	25.8119	1.19671	0.0092	0			0
			5.5	38.57	26.2353	1.196613	0.0092	0			0
			6.5	36.34	26.4397	1.195831	0.0092	0			0
			7.5	34.52	26.4563	1.193338	0.0092	0			0
			8.5	32.94	26.3126	1.188467	0.0092	0			0
			9.5	31.52	26.0417	1.181352	0.0092	0			0
			10.5	30.2	25.6854	1.172347	0.0092	0			0.00182
			11.5	29.03	25.2911	1.162719	0.0092	9.8E-05			0.00123
			12.5	27.95	24.905	1.15217	0.0092	0.00048			0.00258
			13.5	26.98	24.5645	1.141023	0.0092	0.000904			0.00388
			14.5	26.09	24.2929	1.128712	0.0092	0.001399			0.00309
			15.5	25.29	24.0994	1.115518	0.0092	0.001961			0.00425
			16.5	24.56	23.9819	1.10133	0.0092	0.002605			0.00539
			17.5	23.89	23.9312	1.086406	0.0092	0.003331			0.00651
		2475	0.5	37.29	26.504	1.34336	0.0241	0.000597	0.00467667	0.0047642	0
			1.5	37.29	30.592	1.334364	0.0241	0.000891			0
			2.5	37.29	32.3953	1.319781	0.0241	0.001392			0.00148
			3.5	40.54	33.4812	1.335827	0.0241	0.000843			0
			4.5	41.15	34.1768	1.335355	0.0241	0.000858			0
			5.5	38.57	34.6002	1.307837	0.0241	0.001824			0.00276
			6.5	36.34	34.8045	1.263048	0.0241	0.00364			0.00424
			7.5	34.52	34.8212	1.220339	0.0241	0.005708			0.00606
			8.5	32.94	34.6775	1.186357	0.0241	0.007636			0.00833
			9.5	31.52	34.4066	1.160762	0.0241	0.00928			0.01088
			10.5	30.2	34.0503	1.140951	0.0241	0.010682			0.0115
			11.5	29.03	33.656	1.126137	0.0241	0.011811			0.01234
			12.5	27.95	33.2699	1.113755	0.0241	0.012812			0.01319
			13.5	26.98	32.9293	1.103238	0.0241	0.013706			0.01412
			14.5	26.09	32.6577	1.093631	0.0241	0.014559			0.01508
			15.5	25.29	32.4643	1.084899	0.0241	0.015367			0.01608
			16.5	24.56	32.3468	1.076753	0.0241	0.016149			0.0171
			17.5	23.89	32.296	1.069128	0.0241	0.016908			0.01815
		1033	0.5	37.29	22.5676	1.300415	0.0189	0	0.00172442	0.0023365	0
			1.5	37.29	26.6556	1.299886	0.0189	0			0
			2.5	37.29	28.4589	1.298133	0.0189	2.6E-05			0
			3.5	40.54	29.5448	1.299969	0.0189	0			0
			4.5	41.15	30.2404	1.299922	0.0189	0			0
			5.5	38.57	30.6638	1.295963	0.0189	9.44E-05			0
			6.5	36.34	30.8681	1.282882	0.0189	0.00052			0
			7.5	34.52	30.8848	1.26122	0.0189	0.001278			0.00281
			8.5	32.94	30.7411	1.235816	0.0189	0.002258			0.00335

			9.5	31.52	30.4702	1.210969	0.0189	0.003323			0.00588
			10.5	30.2	30.1139	1.188078	0.0189	0.004409			0.00641
			11.5	29.03	29.7196	1.16894	0.0189	0.005402			0.00706
			12.5	27.95	29.3335	1.151706	0.0189	0.006369			0.00796
			13.5	26.98	28.9929	1.136276	0.0189	0.007299			0.00906
			14.5	26.09	28.7213	1.121578	0.0189	0.008246			0.01008
			15.5	25.29	28.5279	1.107805	0.0189	0.009191			0.01123
			16.5	24.56	28.4104	1.094695	0.0189	0.010146			0.01236
			17.5	23.89	28.3596	1.082335	0.0189	0.011099			0.01352
5	SLC	475	0.5	37.29	16.2549	1.154773	0.0076	0	6.944E-05	0.0001592	0
			1.5	37.29	20.343	1.154773	0.0076	0			0
			2.5	37.29	22.1463	1.154773	0.0076	0			0
			3.5	40.54	23.2321	1.154773	0.0076	0			0
			4.5	41.15	23.9278	1.154773	0.0076	0			0
			5.5	38.57	24.3511	1.154766	0.0076	0			0
			6.5	36.34	24.5555	1.154632	0.0076	0			0
			7.5	34.52	24.5721	1.154025	0.0076	0			0
			8.5	32.94	24.4285	1.152526	0.0076	0			0
			9.5	31.52	24.1576	1.149907	0.0076	0			0
			10.5	30.2	23.8012	1.14607	0.0076	0			0
			11.5	29.03	23.4069	1.141445	0.0076	0			0
			12.5	27.95	23.0209	1.135829	0.0076	0.000168			0
			13.5	26.98	22.6803	1.129315	0.0076	0.000409			0.00181
			14.5	26.09	22.4087	1.12146	0.0076	0.00071			0.00138
			15.5	25.29	22.2152	1.112298	0.0076	0.001075			0.00296
			16.5	24.56	22.0977	1.101613	0.0076	0.001521			0.00237
			17.5	23.89	22.047	1.089467	0.0076	0.002056			0.00374
		2475	0.5	37.29	27.4815	1.353543	0.0245	0.000438	0.00508039	0.0046167	0
			1.5	37.29	31.5695	1.338417	0.0245	0.000928			0
			2.5	37.29	33.3728	1.317778	0.0245	0.001645			0.0013
			3.5	40.54	34.4587	1.340779	0.0245	0.000849			0
			4.5	41.15	35.1543	1.340069	0.0245	0.000873			0
			5.5	38.57	35.5777	1.302488	0.0245	0.002215			0.00274
			6.5	36.34	35.782	1.250965	0.0245	0.004415			0.00442
			7.5	34.52	35.7987	1.207335	0.0245	0.006675			0.00644
			8.5	32.94	35.655	1.175022	0.0245	0.008633			0.00895
			9.5	31.52	35.3841	1.15166	0.0245	0.010224			0.00977
			10.5	30.2	35.0278	1.133956	0.0245	0.011541			0.0106
			11.5	29.03	34.6335	1.120817	0.0245	0.012585			0.01171
			12.5	27.95	34.2474	1.109843	0.0245	0.013503			0.01275
			13.5	26.98	33.9068	1.100497	0.0245	0.014321			0.01384
			14.5	26.09	33.6352	1.091926	0.0245	0.015102			0.01494
			15.5	25.29	33.4418	1.084093	0.0245	0.015841			0.01417
			16.5	24.56	33.3242	1.076733	0.0245	0.016559			0.01525
			17.5	23.89	33.2735	1.069781	0.0245	0.01726			0.0164
		1033	0.5	37.29	21.8191	1.304786	0.0177	0	0.00108598	0.0017392	0
			1.5	37.29	25.9072	1.304523	0.0177	0			0
			2.5	37.29	27.7104	1.303491	0.0177	0			0
			3.5	40.54	28.7963	1.30456	0.0177	0			0
			4.5	41.15	29.492	1.304533	0.0177	0			0
			5.5	38.57	29.9153	1.3021	0.0177	0			0
			6.5	36.34	30.1197	1.292896	0.0177	0			0
			7.5	34.52	30.1363	1.275902	0.0177	0.000257			0.00154
			8.5	32.94	29.9926	1.254204	0.0177	0.001001			0.00254
			9.5	31.52	29.7218	1.231582	0.0177	0.001852			0.00347
			10.5	30.2	29.3654	1.20973	0.0177	0.002754			0.00437
			11.5	29.03	28.9711	1.190821	0.0177	0.003606			0.00537

			12.5	27.95	28.5851	1.17335	0.0177	0.004457			0.00641
			13.5	26.98	28.2445	1.15738	0.0177	0.005293			0.0075
			14.5	26.09	27.9729	1.141894	0.0177	0.006162			0.00856
			15.5	25.29	27.7794	1.127155	0.0177	0.007046			0.00967
			16.5	24.56	27.6619	1.112934	0.0177	0.007955			0.01071
			17.5	23.89	27.6112	1.099377	0.0177	0.008878			0.01005
5	San Fran	475	0.5	37.29	25.617	1.337314	0.0226	0.000256	0.003668	0.0035997	0
			1.5	37.29	29.705	1.33201	0.0226	0.000423			0
			2.5	37.29	31.5083	1.321972	0.0226	0.00075			0
			3.5	40.54	32.5942	1.332894	0.0226	0.000395			0
			4.5	41.15	33.2898	1.332586	0.0226	0.000405			0
			5.5	38.57	33.7132	1.312962	0.0226	0.001055			0.0019
			6.5	36.34	33.9176	1.275515	0.0226	0.002445			0.00221
			7.5	34.52	33.9342	1.235389	0.0226	0.004189			0.00425
			8.5	32.94	33.7905	1.200985	0.0226	0.005933			0.00645
			9.5	31.52	33.5196	1.173855	0.0226	0.007497			0.00713
			10.5	30.2	33.1633	1.152276	0.0226	0.008876			0.00991
			11.5	29.03	32.769	1.135906	0.0226	0.010011			0.01097
			12.5	27.95	32.3829	1.122125	0.0226	0.011031			0.01198
			13.5	26.98	32.0424	1.110384	0.0226	0.01195			0.01105
			14.5	26.09	31.7708	1.099643	0.0226	0.012833			0.01227
			15.5	25.29	31.5773	1.08989	0.0226	0.013672			0.01338
			16.5	24.56	31.4598	1.080818	0.0226	0.014486			0.0146
			17.5	23.89	31.4091	1.072374	0.0226	0.015274			0.01581
		2475	0.5	37.29	32.8755	1.354464	0.0333	0.003857	0.01348696	0.0093631	0.0017
			1.5	37.29	36.9635	1.273808	0.0333	0.007824			0.00408
			2.5	37.29	38.7668	1.231502	0.0333	0.010459			0.00634
			3.5	40.54	39.8527	1.282802	0.0333	0.007318			0.00473
			4.5	41.15	40.5483	1.280888	0.0333	0.007424			0.00464
			5.5	38.57	40.9717	1.212308	0.0333	0.011809			0.00779
			6.5	36.34	41.176	1.167562	0.0333	0.015396			0.00918
			7.5	34.52	41.1927	1.14222	0.0333	0.01774			0.01108
			8.5	32.94	41.049	1.126113	0.0333	0.019364			0.0132
			9.5	31.52	40.7781	1.114543	0.0333	0.0206			0.01566
			10.5	30.2	40.4218	1.105189	0.0333	0.021645			0.01615
			11.5	29.03	40.0275	1.097589	0.0333	0.022525			0.01703
			12.5	27.95	39.6414	1.090716	0.0333	0.023346			0.01978
			13.5	26.98	39.3008	1.08446	0.0333	0.024114			0.0206
			14.5	26.09	39.0292	1.078429	0.0333	0.024875			0.02156
			15.5	25.29	38.8358	1.072675	0.0333	0.02562			0.02251
			16.5	24.56	38.7182	1.067064	0.0333	0.026364			0.0235
			17.5	23.89	38.6675	1.06158	0.0333	0.027109			0.02464
		1033	0.5	37.29	29.0055	1.360366	0.0286	0.001737	0.00804798	0.0061015	0
			1.5	37.29	33.0935	1.330758	0.0286	0.002845			0.00133
			2.5	37.29	34.8968	1.300048	0.0286	0.004136			0.00201
			3.5	40.54	35.9827	1.335015	0.0286	0.002678			0.00155
			4.5	41.15	36.6783	1.333854	0.0286	0.002723			0.00147
			5.5	38.57	37.1017	1.280527	0.0286	0.005042			0.00305
			6.5	36.34	37.306	1.2237	0.0286	0.008117			0.00634
			7.5	34.52	37.3227	1.182706	0.0286	0.01082			0.00839
			8.5	32.94	37.179	1.1549	0.0286	0.012933			0.01072
			9.5	31.52	36.9081	1.135619	0.0286	0.01455			0.01127
			10.5	30.2	36.5518	1.121185	0.0286	0.01585			0.01201
			11.5	29.03	36.1575	1.1104	0.0286	0.016875			0.01485
			12.5	27.95	35.7714	1.101273	0.0286	0.017781			0.01564
			13.5	26.98	35.4308	1.093378	0.0286	0.018594			0.01663
			14.5	26.09	35.1592	1.086035	0.0286	0.019376			0.01767

			15.5	25.29	34.9658	1.079226	0.0286	0.020123			0.01874
			16.5	24.56	34.8482	1.072732	0.0286	0.020857			0.01983
			17.5	23.89	34.7975	1.066505	0.0286	0.021581			0.02094
5	San Jose	475	0.5	37.29	23.5872	1.325987	0.0213	0.000107	0.00236865	0.002676	0
			1.5	37.29	27.6753	1.324723	0.0213	0.000146			0
			2.5	37.29	29.4786	1.321287	0.0213	0.000254			0
			3.5	40.54	30.5645	1.324933	0.0213	0.00014			0
			4.5	41.15	31.2601	1.324838	0.0213	0.000142			0
			5.5	38.57	31.6834	1.31748	0.0213	0.000375			0
			6.5	36.34	31.8878	1.297236	0.0213	0.001052			0.00144
			7.5	34.52	31.9045	1.268334	0.0213	0.00212			0.00209
			8.5	32.94	31.7608	1.23804	0.0213	0.003383			0.00456
			9.5	31.52	31.4899	1.210717	0.0213	0.004667			0.00515
			10.5	30.2	31.1336	1.186959	0.0213	0.00591			0.00782
			11.5	29.03	30.7392	1.167882	0.0213	0.007002			0.00873
			12.5	27.95	30.3532	1.1512	0.0213	0.008033			0.00977
			13.5	26.98	30.0126	1.136604	0.0213	0.008999			0.01099
			14.5	26.09	29.741	1.122967	0.0213	0.009958			0.01011
			15.5	25.29	29.5475	1.110396	0.0213	0.010895			0.01132
			16.5	24.56	29.43	1.098591	0.0213	0.011823			0.01249
			17.5	23.89	29.3793	1.087576	0.0213	0.012734			0.01367
		2475	0.5	37.29	29.7975	1.362946	0.0338	0.003729	0.01170142	0.0074297	0
			1.5	37.29	33.8855	1.323528	0.0338	0.005486			0.00273
			2.5	37.29	35.6888	1.288125	0.0338	0.007306			0.00301
			3.5	40.54	36.7747	1.328918	0.0338	0.00523			0.00105
			4.5	41.15	37.4703	1.327515	0.0338	0.005296			0.00295
			5.5	38.57	37.8937	1.26727	0.0338	0.008501			0.00585
			6.5	36.34	38.098	1.210332	0.0338	0.012312			0.00715
			7.5	34.52	38.1147	1.172035	0.0338	0.015412			0.01093
			8.5	32.94	37.971	1.146909	0.0338	0.017727			0.01102
			9.5	31.52	37.7001	1.129656	0.0338	0.019462			0.01339
			10.5	30.2	37.3438	1.116682	0.0338	0.020853			0.01594
			11.5	29.03	36.9495	1.106872	0.0338	0.021956			0.01674
			12.5	27.95	36.5634	1.098467	0.0338	0.022938			0.01748
			13.5	26.98	36.2228	1.091113	0.0338	0.023827			0.01834
			14.5	26.09	35.9512	1.08421	0.0338	0.024687			0.01928
			15.5	25.29	35.7578	1.077755	0.0338	0.025515			0.02029
			16.5	24.56	35.6402	1.071556	0.0338	0.026332			0.02117
			17.5	23.89	35.5895	1.065571	0.0338	0.027142			0.02222
		1033	0.5	37.29	26.5235	1.349187	0.0272	0.001601	0.00607804	0.004808	0
			1.5	37.29	30.6115	1.340054	0.0272	0.001928			0
			2.5	37.29	32.4148	1.325298	0.0272	0.002482			0.00151
			3.5	40.54	33.5007	1.341538	0.0272	0.001874			0
			4.5	41.15	34.1963	1.341059	0.0272	0.001892			0
			5.5	38.57	34.6197	1.313236	0.0272	0.002959			0.00294
			6.5	36.34	34.824	1.268107	0.0272	0.004959			0.00448
			7.5	34.52	34.8407	1.22518	0.0272	0.007228			0.00622
			8.5	32.94	34.697	1.191076	0.0272	0.009336			0.00848
			9.5	31.52	34.4261	1.165414	0.0272	0.011131			0.00907
			10.5	30.2	34.0698	1.145561	0.0272	0.012658			0.01175
			11.5	29.03	33.6755	1.130719	0.0272	0.013887			0.01271
			12.5	27.95	33.2894	1.118315	0.0272	0.014976			0.01364
			13.5	26.98	32.9488	1.107779	0.0272	0.015948			0.01465
			14.5	26.09	32.6772	1.098154	0.0272	0.016875			0.01566
			15.5	25.29	32.4838	1.089406	0.0272	0.017752			0.0167
			16.5	24.56	32.3662	1.081244	0.0272	0.018602			0.01775
			17.5	23.89	32.3155	1.073602	0.0272	0.019425			0.0188

5	Santa Monica	475	0.5	37.29	22.0506	1.305076	0.0181	0	0.00124759	0.0019594	0
			1.5	37.29	26.1386	1.304747	0.0181	0			0
			2.5	37.29	27.9419	1.303523	0.0181	0			0
			3.5	40.54	29.0278	1.304795	0.0181	0			0
			4.5	41.15	29.7234	1.304763	0.0181	0			0
			5.5	38.57	30.1468	1.301918	0.0181	0			0
			6.5	36.34	30.3511	1.291598	0.0181	0			0
			7.5	34.52	30.3678	1.273175	0.0181	0.000527			0.00137
			8.5	32.94	30.2241	1.250266	0.0181	0.001337			0.00229
			9.5	31.52	29.9532	1.226855	0.0181	0.00225			0.00314
			10.5	30.2	29.5969	1.20458	0.0181	0.003206			0.00596
			11.5	29.03	29.2026	1.185516	0.0181	0.0041			0.00687
			12.5	27.95	28.8165	1.168048	0.0181	0.004985			0.00782
			13.5	26.98	28.4759	1.152189	0.0181	0.00585			0.00881
			14.5	26.09	28.2043	1.136899	0.0181	0.006742			0.00984
			15.5	25.29	28.0109	1.122421	0.0181	0.007644			0.01095
			16.5	24.56	27.8934	1.108516	0.0181	0.008567			0.01005
			17.5	23.89	27.8426	1.095309	0.0181	0.009499			0.01128
		2475	0.5	37.29	29.5545	1.361955	0.0301	0.002263	0.00924498	0.0065679	0
			1.5	37.29	33.6425	1.325695	0.0301	0.003698			0.00109
			2.5	37.29	35.4458	1.291657	0.0301	0.005242			0.00354
			3.5	40.54	36.5317	1.330732	0.0301	0.003487			0.00132
			4.5	41.15	37.2273	1.329402	0.0301	0.003542			0.00125
			5.5	38.57	37.6507	1.271139	0.0301	0.006276			0.00458
			6.5	36.34	37.855	1.214062	0.0301	0.009641			0.00603
			7.5	34.52	37.8717	1.174878	0.0301	0.012446			0.00998
			8.5	32.94	37.728	1.14893	0.0301	0.014571			0.01016
			9.5	31.52	37.4571	1.131077	0.0301	0.016173			0.01264
			10.5	30.2	37.1008	1.11768	0.0301	0.017457			0.01327
			11.5	29.03	36.7065	1.107593	0.0301	0.018474			0.01409
			12.5	27.95	36.3204	1.098985	0.0301	0.019377			0.01682
			13.5	26.98	35.9798	1.091481	0.0301	0.020192			0.01776
			14.5	26.09	35.7082	1.084458	0.0301	0.02098			0.01868
			15.5	25.29	35.5148	1.077907	0.0301	0.021736			0.01965
			16.5	24.56	35.3972	1.071628	0.0301	0.022482			0.02064
			17.5	23.89	35.3465	1.065578	0.0301	0.02322			0.02165
		1033	0.5	37.29	25.1965	1.340061	0.0258	0.001392	0.00490955	0.003941	0
			1.5	37.29	29.2845	1.335998	0.0258	0.001535			0
			2.5	37.29	31.0878	1.327723	0.0258	0.001832			0
			3.5	40.54	32.1737	1.336681	0.0258	0.001511			0
			4.5	41.15	32.8693	1.336432	0.0258	0.001519			0
			5.5	38.57	33.2927	1.319966	0.0258	0.002119			0.00167
			6.5	36.34	33.497	1.286068	0.0258	0.003484			0.00386
			7.5	34.52	33.5137	1.247589	0.0258	0.005275			0.00575
			8.5	32.94	33.37	1.213304	0.0258	0.007123			0.00789
			9.5	31.52	33.0991	1.185596	0.0258	0.008821			0.00855
			10.5	30.2	32.7428	1.163212	0.0258	0.010343			0.00926
			11.5	29.03	32.3485	1.146077	0.0258	0.011609			0.01024
			12.5	27.95	31.9624	1.131573	0.0258	0.012756			0.01117
			13.5	26.98	31.6218	1.119173	0.0258	0.013794			0.01216
			14.5	26.09	31.3502	1.107804	0.0258	0.014797			0.01319
			15.5	25.29	31.1568	1.097468	0.0258	0.015753			0.0143
			16.5	24.56	31.0392	1.087854	0.0258	0.016681			0.01529
			17.5	23.89	30.9885	1.078917	0.0258	0.01758			0.01638
5	Seattle	475	0.5	37.29	20.4397	1.27941	0.0151	0	0.00055446	0.0012932	0
			1.5	37.29	24.5277	1.279355	0.0151	0			0
			2.5	37.29	26.331	1.279024	0.0151	0			0

			3.5	40.54	27.4169	1.279358	0.0151	0			0
			4.5	41.15	28.1125	1.279349	0.0151	0			0
			5.5	38.57	28.5359	1.278489	0.0151	0			0
			6.5	36.34	28.7403	1.274286	0.0151	0			0
			7.5	34.52	28.7569	1.264805	0.0151	0			0
			8.5	32.94	28.6132	1.250618	0.0151	0			0.0015
			9.5	31.52	28.3423	1.233873	0.0151	0.000516			0.0027
			10.5	30.2	27.986	1.216064	0.0151	0.001159			0.00377
			11.5	29.03	27.5917	1.199495	0.0151	0.001803			0.00487
			12.5	27.95	27.2056	1.183298	0.0151	0.00248			0.00596
			13.5	26.98	26.8651	1.167789	0.0151	0.003174			0.00507
			14.5	26.09	26.5935	1.152126	0.0151	0.003924			0.00616
			15.5	25.29	26.4	1.136666	0.0151	0.004718			0.00723
			16.5	24.56	26.2825	1.121259	0.0151	0.005566			0.00828
			17.5	23.89	26.2318	1.106146	0.0151	0.006457			0.00932
		2475	0.5	37.29	28.5685	1.359625	0.0282	0.001618	0.00755818	0.0061035	0
			1.5	37.29	32.6565	1.334782	0.0282	0.00253			0.00132
			2.5	37.29	34.4598	1.30689	0.0282	0.003664			0.00201
			3.5	40.54	35.5457	1.338447	0.0282	0.002389			0.00155
			4.5	41.15	36.2413	1.337421	0.0282	0.002428			0.00147
			5.5	38.57	36.6647	1.288378	0.0282	0.004488			0.00304
			6.5	36.34	36.869	1.232344	0.0282	0.007385			0.00639
			7.5	34.52	36.8857	1.190161	0.0282	0.010044			0.00845
			8.5	32.94	36.742	1.160909	0.0282	0.01218			0.01078
			9.5	31.52	36.4711	1.140442	0.0282	0.013838			0.01132
			10.5	30.2	36.1148	1.125107	0.0282	0.015178			0.01201
			11.5	29.03	35.7205	1.113698	0.0282	0.016234			0.01483
			12.5	27.95	35.3344	1.104096	0.0282	0.017164			0.01558
			13.5	26.98	34.9938	1.095835	0.0282	0.017995			0.01656
			14.5	26.09	34.7222	1.088189	0.0282	0.018792			0.01757
			15.5	25.29	34.5288	1.08113	0.0282	0.019551			0.01859
			16.5	24.56	34.4112	1.074428	0.0282	0.020294			0.01963
			17.5	23.89	34.3605	1.068027	0.0282	0.021025			0.02069
		1033	0.5	37.29	24.2488	1.32926	0.0224	0.000437	0.00312358	0.0032622	0
			1.5	37.29	28.3369	1.327167	0.0224	0.000504			0
			2.5	37.29	30.1402	1.322128	0.0224	0.000669			0
			3.5	40.54	31.2261	1.32752	0.0224	0.000493			0
			4.5	41.15	31.9217	1.327376	0.0224	0.000498			0
			5.5	38.57	32.345	1.316918	0.0224	0.000842			0
			6.5	36.34	32.5494	1.291372	0.0224	0.001746			0.00263
			7.5	34.52	32.5661	1.258221	0.0224	0.003068			0.0048
			8.5	32.94	32.4224	1.225805	0.0224	0.004546			0.005
			9.5	31.52	32.1515	1.197939	0.0224	0.005985			0.0075
			10.5	30.2	31.7952	1.174495	0.0224	0.007333			0.00826
			11.5	29.03	31.4009	1.15608	0.0224	0.008491			0.00927
			12.5	27.95	31.0148	1.140226	0.0224	0.009564			0.01025
			13.5	26.98	30.6742	1.126511	0.0224	0.010553			0.0113
			14.5	26.09	30.4026	1.113821	0.0224	0.011522			0.01243
			15.5	25.29	30.2092	1.10221	0.0224	0.012458			0.01349
			16.5	24.56	30.0916	1.091368	0.0224	0.013376			0.01467
			17.5	23.89	30.0409	1.081287	0.0224	0.014271			0.01579

Table A. 7: Ishihara and Yoshimine Volumetric Strain Model Supplementary Validation Data

Soil Profile					Simplified Procedure					Full PBEE	
Profile	Location	T_R	Sample Depth [m]	$(N_1)_{60,CS}^{site}$	CSR^{site}	$\Delta\varepsilon$	ε_v^{ref}	ε_v^{site}	$\varepsilon_{v,equiv}$	$\varepsilon_{v,equiv}$	ε_v^{site}
1	Butte	475	2.5	11.53	0.0704	1	0	2.36E-18	2.3599E-18	0	0
			3.5	15.64	0.0798	1	0	2.36E-18			0
			4.5	18.75	0.086	1	0	2.36E-18			0
			5.5	18.45	0.0906	1	0	2.36E-18			0
			6.5	20.69	0.0933	1	0	2.36E-18			0
			7.5	20.8	0.0952	1	0	2.36E-18			0
			8.5	25.92	0.0962	1	0	2.36E-18			0
			9.5	24.26	0.0967	1	0	2.36E-18			0
			10.5	30.55	0.0976	1	0	2.36E-18			0
			11.5	33.75	0.0985	1	0	2.36E-18			0
		2475	2.5	11.53	0.12532	0.976904	0	0.000784	0.00016665	0.0002379	0.00169
			3.5	15.64	0.14204	0.991704	0	0.000267			0
			4.5	18.75	0.15304	1.000391	0	0			0
			5.5	18.45	0.1612	0.994223	0	0.000185			0
			6.5	20.69	0.1661	1.002122	0	0			0
			7.5	20.8	0.16946	1.001383	0	0			0
			8.5	25.92	0.17135	1.006927	0	0			0
			9.5	24.26	0.17223	1.006654	0	0			0
			10.5	30.55	0.17388	1.006927	0	0			0
			11.5	33.75	0.17558	1.006927	0	0			0
		1033	2.5	11.53	0.09577	0.998254	0	5.5E-05	1.2986E-05	0	0
			3.5	15.64	0.10853	0.999358	0	2.01E-05			0
			4.5	18.75	0.11692	0.999877	0	3.85E-06			0
			5.5	18.45	0.12314	0.999522	0	1.5E-05			0
			6.5	20.69	0.12685	0.999949	0	1.59E-06			0
			7.5	20.8	0.1294	0.999921	0	2.47E-06			0
			8.5	25.92	0.13082	1	0	2.36E-18			0
			9.5	24.26	0.13146	1	0	2.36E-18			0
			10.5	30.55	0.1327	1	0	2.36E-18			0
			11.5	33.75	0.13397	1	0	2.36E-18			0
1	Charleston	475	2.5	11.53	0.11133	0.991561	0	0.000272	6.983E-05	0	0
			3.5	15.64	0.12666	0.996394	0	0.000114			0
			4.5	18.75	0.13703	0.999366	0	1.99E-05			0
			5.5	18.45	0.14499	0.996844	0	9.99E-05			0
			6.5	20.69	0.15011	0.99977	0	7.22E-06			0
			7.5	20.8	0.15393	0.999379	0	1.95E-05			0
			8.5	25.92	0.15648	1.001177	0	0			0
			9.5	24.26	0.15815	1.00116	0	0			0
			10.5	30.55	0.16058	1.001177	0	0			0
			11.5	33.75	0.16309	1.001177	0	0			0
		2475	2.5	11.53	0.38562	0.930521	0.024	0.035168	0.02078472	0.020756	0.036
			3.5	15.64	0.43986	0.977171	0.024	0.027178			0.02797
			4.5	18.75	0.47725	1.007352	0.024	0.022798			0.02261
			5.5	18.45	0.50656	1.004339	0.024	0.023209			0.02333

			6.5	20.69	0.5262	1.024277	0.024	0.020591			0.0208
			7.5	20.8	0.5415	1.025069	0.024	0.020492			0.02061
			8.5	25.92	0.55253	1.076778	0.024	0.014768			0.01244
			9.5	24.26	0.56057	1.055126	0.024	0.016993			0.01566
			10.5	30.55	0.57142	1.300478	0.024	0.001672			0.00213
			11.5	33.75	0.58269	1.373545	0.024	0			0
		1033	2.5	11.53	0.21945	0.938813	0.0148	0.020255	0.00803964	0.0101237	0.02047
			3.5	15.64	0.2501	0.998241	0.0148	0.01334			0.0158
			4.5	18.75	0.2711	1.049711	0.0148	0.008899			0.0103
			5.5	18.45	0.28745	1.026647	0.0148	0.010735			0.01222
			6.5	20.69	0.29826	1.10785	0.0148	0.005191			0.00968
			7.5	20.8	0.30657	1.093532	0.0148	0.005996			0.00929
			8.5	25.92	0.31243	1.311244	0.0148	0			0.00294
			9.5	24.26	0.31657	1.248661	0.0148	0			0.00454
			10.5	30.55	0.32227	1.361041	0.0148	0			0
			11.5	33.75	0.32819	1.361289	0.0148	0			0
1	Eureka	475	2.5	11.53	0.3882	0.930517	0.0249	0.036504	0.0217792	0.0197741	0.03389
			3.5	15.64	0.4437	0.977154	0.0249	0.02834			0.02691
			4.5	18.75	0.4826	1.007294	0.0249	0.023852			0.02135
			5.5	18.45	0.5136	1.004309	0.0249	0.02427			0.02227
			6.5	20.69	0.535	1.02418	0.0249	0.021588			0.01947
			7.5	20.8	0.5522	1.024979	0.0249	0.021485			0.0193
			8.5	25.92	0.5653	1.075003	0.0249	0.015753			0.01257
			9.5	24.26	0.5754	1.054412	0.0249	0.01795			0.01401
			10.5	30.55	0.5885	1.290198	0.0249	0.002334			0.00374
			11.5	33.75	0.6021	1.372944	0.0249	0			0
		2475	2.5	11.53	0.9252	0.930467	0.0364	0.053701	0.0357747	0.0324897	0.05073
			3.5	15.64	1.0585	0.976992	0.0364	0.043864			0.04056
			4.5	18.75	1.1523	1.006857	0.0364	0.03819			0.03443
			5.5	18.45	1.2274	1.004139	0.0364	0.038684			0.03563
			6.5	20.69	1.28	1.0237	0.0364	0.035225			0.03134
			7.5	20.8	1.3226	1.024619	0.0364	0.035068			0.03142
			8.5	25.92	1.3553	1.065498	0.0364	0.028596			0.02324
			9.5	24.26	1.3811	1.051768	0.0364	0.030661			0.02659
			10.5	30.55	1.4143	1.192662	0.0364	0.014099			0.01482
			11.5	33.75	1.4489	1.267362	0.0364	0.008673			0.0063
		1033	2.5	11.53	0.62637	0.930467	0.0315	0.046436	0.02979371	0.0268497	0.0435
			3.5	15.64	0.71639	0.976992	0.0315	0.037177			0.03433
			4.5	18.75	0.77957	1.006857	0.0315	0.031965			0.02953
			5.5	18.45	0.83011	1.004139	0.0315	0.032416			0.02893
			6.5	20.69	0.86526	1.023701	0.0315	0.029275			0.02617
			7.5	20.8	0.89366	1.024619	0.0315	0.029133			0.02628
			8.5	25.92	0.91532	1.065563	0.0315	0.023331			0.01815
			9.5	24.26	0.93231	1.051775	0.0315	0.025176			0.02139
			10.5	30.55	0.95422	1.198528	0.0315	0.010306			0.00979
			11.5	33.75	0.97706	1.313213	0.0315	0.004042			0.00256
1	Memphis	475	2.5	11.53	0.12653	0.974325	0	0.000879	0.00021386	0	0
			3.5	15.64	0.14431	0.989517	0	0.00034			0
			4.5	18.75	0.15655	0.99885	0	3.62E-05			0
			5.5	18.45	0.16614	0.990467	0	0.000309			0
			6.5	20.69	0.17256	0.999926	0	2.31E-06			0
			7.5	20.8	0.17754	0.998219	0	5.61E-05			0
			8.5	25.92	0.18112	1.007062	0	0			0
			9.5	24.26	0.18372	1.006259	0	0			0
			10.5	30.55	0.18724	1.007078	0	0			0
			11.5	33.75	0.19089	1.007078	0	0			0
		2475	2.5	11.53	0.35136	0.930646	0.0252	0.036952	0.02171207	0.0215159	0.03676

			3.5	15.64	0.40142	0.977517	0.0252	0.028694			0.0285
			4.5	18.75	0.43631	1.008152	0.0252	0.024104			0.02353
			5.5	18.45	0.464	1.004695	0.0252	0.024592			0.02419
			6.5	20.69	0.48299	1.025125	0.0252	0.021816			0.02167
			7.5	20.8	0.49811	1.025728	0.0252	0.021738			0.02143
			8.5	25.92	0.50941	1.10447	0.0252	0.013224			0.0138
			9.5	24.26	0.51805	1.058364	0.0252	0.01782			0.01667
			10.5	30.55	0.52937	1.324315	0.0252	0.001354			0.00223
			11.5	33.75	0.54115	1.374282	0.0252	4.93E-05			0
		1033	2.5	11.53	0.2324	0.935179	0.0157	0.022059	0.00983784	0.0118566	0.02246
			3.5	15.64	0.26543	0.990969	0.0157	0.015109			0.01613
			4.5	18.75	0.2884	1.03447	0.0157	0.010941			0.01374
			5.5	18.45	0.30657	1.018441	0.0157	0.012365			0.01457
			6.5	20.69	0.31898	1.056179	0.0157	0.0092			0.01114
			7.5	20.8	0.32882	1.049023	0.0157	0.009751			0.01272
			8.5	25.92	0.33612	1.289401	0.0157	0			0.00382
			9.5	24.26	0.34165	1.213278	0.0157	0.001259			0.00665
			10.5	30.55	0.34894	1.363665	0.0157	0			0
			11.5	33.75	0.35652	1.364682	0.0157	0			0
1	Portland	475	2.5	11.53	0.18889	0.85374	0.0072	0.020261	0.0061792	0.0068744	0.01758
			3.5	15.64	0.21581	0.915694	0.0072	0.012503			0.01057
			4.5	18.75	0.23457	1.045697	0.0072	0.003169			0.00662
			5.5	18.45	0.24945	0.981705	0.0072	0.006851			0.0081
			6.5	20.69	0.25966	1.066047	0.0072	0.002271			0.00532
			7.5	20.8	0.26779	1.052836	0.0072	0.002841			0.00668
			8.5	25.92	0.27387	1.185236	0.0072	0			0
			9.5	24.26	0.27851	1.150365	0.0072	0			0.00101
			10.5	30.55	0.28459	1.202662	0.0072	0			0
			11.5	33.75	0.29093	1.202662	0.0072	0			0
		2475	2.5	11.53	0.33616	0.93075	0.0296	0.043514	0.02624585	0.0253137	0.0423
			3.5	15.64	0.38424	0.977815	0.0296	0.034453			0.03365
			4.5	18.75	0.41785	1.008822	0.0296	0.029282			0.02728
			5.5	18.45	0.44462	1.004998	0.0296	0.029886			0.02996
			6.5	20.69	0.46309	1.025828	0.0296	0.026706			0.02572
			7.5	20.8	0.4779	1.026279	0.0296	0.02664			0.02536
			8.5	25.92	0.48906	1.123313	0.0296	0.015101			0.0154
			9.5	24.26	0.4977	1.0608	0.0296	0.021956			0.01963
			10.5	30.55	0.50893	1.334644	0.0296	0.002515			0.00307
			11.5	33.75	0.52063	1.374416	0.0296	0.001281			0
		1033	2.5	11.53	0.25579	0.932084	0.0205	0.029554	0.01484601	0.0169453	0.03151
			3.5	15.64	0.29234	0.983728	0.0205	0.021694			0.02334
			4.5	18.75	0.31786	1.021843	0.0205	0.017006			0.01824
			5.5	18.45	0.33817	1.011006	0.0205	0.018251			0.0205
			6.5	20.69	0.35216	1.039562	0.0205	0.015109			0.01608
			7.5	20.8	0.36335	1.037402	0.0205	0.015332			0.01761
			8.5	25.92	0.37177	1.250932	0.0205	0.00196			0.0074
			9.5	24.26	0.37826	1.162135	0.0205	0.005804			0.01112
			10.5	30.55	0.38672	1.36537	0.0205	0			0
			11.5	33.75	0.39553	1.369222	0.0205	0			0
1	SLC	475	2.5	11.53	0.1656	0.817047	0.0049	0.021514	0.00488151	0.0033768	0.0091
			3.5	15.64	0.18858	0.970165	0.0049	0.005403			0.00582
			4.5	18.75	0.20423	1.030802	0.0049	0.002243			0.00225
			5.5	18.45	0.21634	0.994205	0.0049	0.004003			0.00469
			6.5	20.69	0.22424	1.041274	0.0049	0.00181			0.00273
			7.5	20.8	0.23024	1.034256	0.0049	0.002097			0.00243
			8.5	25.92	0.23437	1.098245	0.0049	0			0
			9.5	24.26	0.2372	1.086409	0.0049	0.000239			0

			10.5	30.55	0.24118	1.101812	0.0049	0			0
			11.5	33.75	0.2453	1.101812	0.0049	0			0
		2475	2.5	11.53	0.36081	0.930594	0.0271	0.03973	0.02376167	0.0236852	0.04072
			3.5	15.64	0.41129	0.97739	0.0271	0.03114			0.03171
			4.5	18.75	0.44591	1.007891	0.0271	0.026338			0.02552
			5.5	18.45	0.47292	1.004588	0.0271	0.026829			0.02797
			6.5	20.69	0.49084	1.02491	0.0271	0.023916			0.02387
			7.5	20.8	0.50465	1.025588	0.0271	0.023824			0.02359
			8.5	25.92	0.51444	1.099995	0.0271	0.015193			0.01337
			9.5	24.26	0.52141	1.058027	0.0271	0.019697			0.01792
			10.5	30.55	0.53097	1.323466	0.0271	0.002			0.0025
			11.5	33.75	0.54088	1.374288	0.0271	0.00055			0
		1033	2.5	11.53	0.24226	0.935731	0.0184	0.025879	0.01213972	0.0143017	0.02723
			3.5	15.64	0.27604	0.989942	0.0184	0.018366			0.02037
			4.5	18.75	0.29915	1.031667	0.0184	0.013817			0.01505
			5.5	18.45	0.31711	1.018096	0.0184	0.015192			0.01727
			6.5	20.69	0.32896	1.05101	0.0184	0.012019			0.01458
			7.5	20.8	0.33803	1.048279	0.0184	0.012262			0.01449
			8.5	25.92	0.34439	1.284986	0.0184	0.000208			0.00466
			9.5	24.26	0.34885	1.207038	0.0184	0.002653			0.00854
			10.5	30.55	0.35503	1.368828	0.0184	0			0
			11.5	33.75	0.36144	1.370141	0.0184	0			0
1	San Fran	475	2.5	11.53	0.30901	0.931174	0.0255	0.037295	0.02130471	0.0206609	0.0359
			3.5	15.64	0.3532	0.978902	0.0255	0.02886			0.02752
			4.5	18.75	0.3841	1.01109	0.0255	0.024043			0.02232
			5.5	18.45	0.40871	1.006119	0.0255	0.024744			0.025
			6.5	20.69	0.42569	1.028238	0.0255	0.021742			0.02049
			7.5	20.8	0.4393	1.028236	0.0255	0.021743			0.02025
			8.5	25.92	0.44956	1.16349	0.0255	0.008862			0.01138
			9.5	24.26	0.4575	1.068369	0.0255	0.017017			0.0158
			10.5	30.55	0.46782	1.351905	0.0255	0.00068			0.00171
			11.5	33.75	0.47858	1.374398	0.0255	0.000125			0
		2475	2.5	11.53	0.51425	0.930467	0.0379	0.05589	0.03719463	0.0316771	0.05031
			3.5	15.64	0.58832	0.976995	0.0379	0.045924			0.04014
			4.5	18.75	0.6404	1.006868	0.0379	0.040128			0.03407
			5.5	18.45	0.68213	1.004142	0.0379	0.040635			0.03521
			6.5	20.69	0.71126	1.023712	0.0379	0.037087			0.03109
			7.5	20.8	0.73487	1.024627	0.0379	0.036927			0.03104
			8.5	25.92	0.75297	1.066179	0.0379	0.03016			0.02382
			9.5	24.26	0.76725	1.05188	0.0379	0.032376			0.02661
			10.5	30.55	0.78559	1.214645	0.0379	0.013321			0.01031
			11.5	33.75	0.80473	1.347954	0.0379	0.005182			0.00143
		1033	2.5	11.53	0.39147	0.930511	0.0325	0.048043	0.03041742	0.0273664	0.04444
			3.5	15.64	0.44767	0.977137	0.0325	0.038619			0.03553
			4.5	18.75	0.48708	1.00725	0.0325	0.033257			0.03085
			5.5	18.45	0.51857	1.004289	0.0325	0.033759			0.03175
			6.5	20.69	0.54044	1.024127	0.0325	0.030502			0.02751
			7.5	20.8	0.55808	1.024937	0.0325	0.030374			0.02771
			8.5	25.92	0.5715	1.074241	0.0325	0.023327			0.01696
			9.5	24.26	0.58199	1.054145	0.0325	0.026029			0.02138
			10.5	30.55	0.59555	1.285906	0.0325	0.005733			0.00571
			11.5	33.75	0.60967	1.372653	0.0325	0.002273			0
1	San Jose	475	2.5	11.53	0.27563	0.932687	0.0257	0.037223	0.0200339	0.0194827	0.0346
			3.5	15.64	0.31368	0.982523	0.0257	0.028475			0.02639
			4.5	18.75	0.33949	1.018251	0.0257	0.023229			0.02133
			5.5	18.45	0.35936	1.010345	0.0257	0.02432			0.02383
			6.5	20.69	0.37221	1.036765	0.0257	0.020821			0.01966

			7.5	20.8	0.38185	1.035918	0.0257	0.020927			0.0194
			8.5	25.92	0.38837	1.234667	0.0257	0.004912			0.00975
			9.5	24.26	0.3927	1.1454	0.0257	0.010237			0.01365
			10.5	30.55	0.39893	1.368489	0.0257	0.000306			0
			11.5	33.75	0.40538	1.373918	0.0257	0.000176			0
		2475	2.5	11.53	0.42143	0.930482	0.0379	0.055973	0.0367947	0.0313626	0.05048
			3.5	15.64	0.47961	0.977051	0.0379	0.045995			0.04042
			4.5	18.75	0.51907	1.007041	0.0379	0.040173			0.0345
			5.5	18.45	0.54945	1.004211	0.0379	0.040701			0.03555
			6.5	20.69	0.5691	1.023934	0.0379	0.037123			0.03146
			7.5	20.8	0.58384	1.024804	0.0379	0.036971			0.03154
			8.5	25.92	0.5938	1.071952	0.0379	0.029365			0.02146
			9.5	24.26	0.60043	1.053529	0.0379	0.032184			0.02565
			10.5	30.55	0.60996	1.277081	0.0379	0.008929			0.00752
			11.5	33.75	0.61981	1.37221	0.0379	0.004187			0
		1033	2.5	11.53	0.33715	0.930758	0.0326	0.048149	0.02951814	0.026139	0.04474
			3.5	15.64	0.38373	0.977848	0.0326	0.038631			0.03404
			4.5	18.75	0.41533	1.008965	0.0326	0.033103			0.02961
			5.5	18.45	0.43967	1.005133	0.0326	0.033751			0.03062
			6.5	20.69	0.45543	1.026223	0.0326	0.0303			0.02641
			7.5	20.8	0.46727	1.026719	0.0326	0.030222			0.0264
			8.5	25.92	0.47529	1.136821	0.0326	0.016356			0.0152
			9.5	24.26	0.48065	1.063548	0.0326	0.024851			0.01903
			10.5	30.55	0.48832	1.34403	0.0326	0.0033			0.00249
			11.5	33.75	0.49626	1.374556	0.0326	0.002247			0
1	Santa Monica	475	2.5	11.53	0.24619	0.934663	0.0213	0.030356	0.01486946	0.016896	0.03181
			3.5	15.64	0.28033	0.988205	0.0213	0.022124			0.02352
			4.5	18.75	0.30358	1.029142	0.0213	0.017081			0.01869
			5.5	18.45	0.32155	1.016448	0.0213	0.018539			0.02091
			6.5	20.69	0.33328	1.04862	0.0213	0.015013			0.01673
			7.5	20.8	0.34216	1.046248	0.0213	0.015255			0.01636
			8.5	25.92	0.34826	1.280341	0.0213	0.001331			0.00587
			9.5	24.26	0.35243	1.2015	0.0213	0.004297			0.01071
			10.5	30.55	0.35831	1.368576	0.0213	0			0
			11.5	33.75	0.36439	1.370068	0.0213	0			0
		2475	2.5	11.53	0.41621	0.930485	0.0355	0.052374	0.03388735	0.0303704	0.04966
			3.5	15.64	0.47424	0.977061	0.0355	0.042617			0.03956
			4.5	18.75	0.51394	1.007065	0.0355	0.036997			0.03395
			5.5	18.45	0.5448	1.004219	0.0355	0.037506			0.03474
			6.5	20.69	0.56515	1.023954	0.0355	0.034073			0.03072
			7.5	20.8	0.58074	1.024817	0.0355	0.033929			0.03094
			8.5	25.92	0.59166	1.072144	0.0355	0.026668			0.01964
			9.5	24.26	0.59933	1.053561	0.0355	0.029363			0.02353
			10.5	30.55	0.60995	1.277086	0.0355	0.007625			0.00536
			11.5	33.75	0.62095	1.372155	0.0355	0.003286			0
		1033	2.5	11.53	0.30594	0.931317	0.0291	0.04265	0.0247921	0.0240348	0.04121
			3.5	15.64	0.34848	0.979237	0.0291	0.033538			0.03243
			4.5	18.75	0.37752	1.01185	0.0291	0.028207			0.0264
			5.5	18.45	0.40003	1.006653	0.0291	0.02901			0.02877
			6.5	20.69	0.41479	1.029447	0.0291	0.025611			0.02483
			7.5	20.8	0.42604	1.029447	0.0291	0.025611			0.02452
			8.5	25.92	0.43385	1.180968	0.0291	0.009994			0.01194
			9.5	24.26	0.43925	1.084288	0.0291	0.018678			0.0177
			10.5	30.55	0.44681	1.358796	0.0291	0.00158			0.00161
			11.5	33.75	0.45463	1.374469	0.0291	0.001132			0
1	Seattle	475	2.5	11.53	0.22259	0.934767	0.0177	0.025043	0.01067121	0.013356	0.0266
			3.5	15.64	0.25347	0.993271	0.0177	0.017178			0.01996

			4.5	18.75	0.27451	1.040434	0.0177	0.012332			0.01452
			5.5	18.45	0.29078	1.021877	0.0177	0.014098			0.01659
			6.5	20.69	0.30141	1.09684	0.0177	0.007915			0.01208
			7.5	20.8	0.30947	1.083348	0.0177	0.008853			0.01376
			8.5	25.92	0.31502	1.305374	0.0177	0			0.00231
			9.5	24.26	0.31882	1.242087	0.0177	0.001165			0.00691
			10.5	30.55	0.32418	1.357554	0.0177	0			0
			11.5	33.75	0.32972	1.357834	0.0177	0			0
		2475	2.5	11.53	0.39313	0.930509	0.0336	0.049589	0.03155366	0.0286644	0.04774
			3.5	15.64	0.44806	0.977135	0.0336	0.040033			0.03773
			4.5	18.75	0.48571	1.007263	0.0336	0.034566			0.03188
			5.5	18.45	0.51505	1.004303	0.0336	0.035078			0.0325
			6.5	20.69	0.53447	1.024185	0.0336	0.031744			0.02866
			7.5	20.8	0.54941	1.025	0.0336	0.031612			0.02882
			8.5	25.92	0.55996	1.07571	0.0336	0.024206			0.01883
			9.5	24.26	0.56744	1.054775	0.0336	0.027083			0.02118
			10.5	30.55	0.57773	1.29671	0.0336	0.005688			0.00511
			11.5	33.75	0.58839	1.37339	0.0336	0.002594			0
		1033	2.5	11.53	0.28969	0.931822	0.0265	0.038709	0.02153649	0.0216914	0.03861
			3.5	15.64	0.33003	0.980551	0.0265	0.029936			0.0297
			4.5	18.75	0.35761	1.014502	0.0265	0.024768			0.02343
			5.5	18.45	0.37902	1.008081	0.0265	0.025689			0.02564
			6.5	20.69	0.39312	1.032384	0.0265	0.022337			0.0218
			7.5	20.8	0.40388	1.031958	0.0265	0.022393			0.02148
			8.5	25.92	0.4114	1.206849	0.0265	0.006808			0.01171
			9.5	24.26	0.41665	1.112949	0.0265	0.013551			0.014
			10.5	30.55	0.42395	1.364264	0.0265	0.000658			0.00184
			11.5	33.75	0.43151	1.374162	0.0265	0.000409			0
2	Butte	475	2.5	13.78	0.074	1	0	2.36E-18	2.3599E-18	0	0
			3.5	15.62	0.077	1	0	2.36E-18			0
			4.5	16.95	0.084	1	0	2.36E-18			0
			5.5	19.87	0.088	1	0	2.36E-18			0
			6.5	21.47	0.09	1	0	2.36E-18			0
			7.5	23.12	0.092	1	0	2.36E-18			0
			8.5	24.83	0.093	1	0	2.36E-18			0
			9.5	27.79	0.094	1	0	2.36E-18			0
			10.5	29.76	0.094	1	0	2.36E-18			0
			11.5	31.81	0.095	1	0	2.36E-18			0
		2475	2.5	13.78	0.123	0.997796	0	6.96E-05	7.0678E-05	0	0
			3.5	15.62	0.14	0.993482	0	0.000209			0
			4.5	16.95	0.152	0.991571	0	0.000272			0
			5.5	19.87	0.159	1.001881	0	0			0
			6.5	21.47	0.164	1.004534	0	0			0
			7.5	23.12	0.167	1.006244	0	0			0
			8.5	24.83	0.169	1.006874	0	0			0
			9.5	27.79	0.17	1.006927	0	0			0
			10.5	29.76	0.171	1.006927	0	0			0
			11.5	31.81	0.172	1.006927	0	0			0
		1033	2.5	13.78	0.093	0.999782	0	6.83E-06	5.1158E-06	0	0
			3.5	15.62	0.106	0.999555	0	1.4E-05			0
			4.5	16.95	0.115	0.999435	0	1.77E-05			0
			5.5	19.87	0.12	0.999962	0	1.2E-06			0
			6.5	21.47	0.124	1	0	2.36E-18			0
			7.5	23.12	0.126	1	0	2.36E-18			0
			8.5	24.83	0.128	1	0	2.36E-18			0
			9.5	27.79	0.129	1	0	2.36E-18			0
			10.5	29.76	0.129	1	0	2.36E-18			0

			11.5	31.81	0.13	1	0	2.36E-18			0
2	Charleston	475	2.5	13.78	0.109	0.998818	0	3.72E-05	3.017E-05	0	0
			3.5	15.62	0.124	0.99737	0	8.31E-05			0
			4.5	16.95	0.135	0.99649	0	0.000111			0
			5.5	19.87	0.142	0.99991	0	2.81E-06			0
			6.5	21.47	0.147	1.000673	0	0			0
			7.5	23.12	0.151	1.001089	0	0			0
			8.5	24.83	0.154	1.001177	0	0			0
			9.5	27.79	0.156	1.001177	0	0			0
			10.5	29.76	0.158	1.001177	0	0			0
			11.5	31.81	0.159	1.001177	0	0			0
		2475	2.5	13.78	0.401	0.957261	0.024	0.030401	0.01965701	0.019439	0.02986
			3.5	15.62	0.461	0.976884	0.024	0.027223			0.02791
			4.5	16.95	0.502	0.990124	0.024	0.025226			0.02542
			5.5	19.87	0.529	1.017043	0.024	0.021513			0.02179
			6.5	21.47	0.551	1.030724	0.024	0.019795			0.01998
			7.5	23.12	0.567	1.044549	0.024	0.018168			0.01633
			8.5	24.83	0.579	1.059668	0.024	0.016507			0.0147
			9.5	27.79	0.589	1.14267	0.024	0.009288			0.00804
			10.5	29.76	0.598	1.241567	0.024	0.003831			0.00464
			11.5	31.81	0.606	1.337602	0.024	0.000609			0.00173
		1033	2.5	13.78	0.223	0.982116	0.0148	0.015006	0.0068497	0.0086592	0.01553
			3.5	15.62	0.255	0.994368	0.0148	0.013727			0.01576
			4.5	16.95	0.278	1.004678	0.0148	0.012714			0.01464
			5.5	19.87	0.293	1.065489	0.0148	0.007772			0.00911
			6.5	21.47	0.304	1.140414	0.0148	0.003583			0.00713
			7.5	23.12	0.313	1.205384	0.0148	0.001129			0.00534
			8.5	24.83	0.319	1.267475	0.0148	0			0.00356
			9.5	27.79	0.324	1.343862	0.0148	0			0
			10.5	29.76	0.328	1.359461	0.0148	0			0
			11.5	31.81	0.333	1.361289	0.0148	0			0
2	Eureka	475	2.5	13.78	0.404	0.957247	0.0249	0.031638	0.02067058	0.0186401	0.02711
			3.5	15.62	0.465	0.976874	0.0249	0.028385			0.02687
			4.5	16.95	0.508	0.990113	0.0249	0.026338			0.02434
			5.5	19.87	0.537	1.016993	0.0249	0.02253			0.02049
			6.5	21.47	0.56	1.030628	0.0249	0.020769			0.01856
			7.5	23.12	0.578	1.044305	0.0249	0.019109			0.01668
			8.5	24.83	0.592	1.058993	0.0249	0.017442			0.01492
			9.5	27.79	0.605	1.139264	0.0249	0.010155			0.00994
			10.5	29.76	0.616	1.229563	0.0249	0.004784			0.00427
			11.5	31.81	0.627	1.329255	0.0249	0.00111			0.00135
		2475	2.5	13.78	0.993	0.957095	0.0364	0.047931	0.03439393	0.0310811	0.04316
			3.5	15.62	1.143	0.976787	0.0364	0.043905			0.04055
			4.5	16.95	1.249	0.990045	0.0364	0.041319			0.03703
			5.5	19.87	1.323	1.016731	0.0364	0.036431			0.03201
			6.5	21.47	1.381	1.030137	0.0364	0.034137			0.03072
			7.5	23.12	1.426	1.04318	0.0364	0.032008			0.02715
			8.5	24.83	1.463	1.05594	0.0364	0.030022			0.02573
			9.5	27.79	1.495	1.120822	0.0364	0.021329			0.02082
			10.5	29.76	1.525	1.173313	0.0364	0.015829			0.01691
			11.5	31.81	1.554	1.221286	0.0364	0.0118			0.01161
		1033	2.5	13.78	0.663	0.957095	0.0315	0.040969	0.02861684	0.0257079	0.03749
			3.5	15.62	0.763	0.976787	0.0315	0.037215			0.03431
			4.5	16.95	0.834	0.990045	0.0315	0.034829			0.03228
			5.5	19.87	0.883	1.016731	0.0315	0.030366			0.02712
			6.5	21.47	0.921	1.030138	0.0315	0.028293			0.02553
			7.5	23.12	0.951	1.043181	0.0315	0.026381			0.02383

			8.5	24.83	0.975	1.055948	0.0315	0.024606			0.02047
			9.5	27.79	0.996	1.121013	0.0315	0.016934			0.01401
			10.5	29.76	1.015	1.174845	0.0315	0.012084			0.01011
			11.5	31.81	1.034	1.231915	0.0315	0.008116			0.00635
2	Memphis	475	2.5	13.78	0.124	0.997173	0	8.94E-05	9.221E-05	0	0
			3.5	15.62	0.142	0.991754	0	0.000266			0
			4.5	16.95	0.155	0.988839	0	0.000363			0
			5.5	19.87	0.164	1.000103	0	0			0
			6.5	21.47	0.17	1.003423	0	0			0
			7.5	23.12	0.175	1.00573	0	0			0
			8.5	24.83	0.179	1.006837	0	0			0
			9.5	27.79	0.182	1.007078	0	0			0
			10.5	29.76	0.185	1.007078	0	0			0
			11.5	31.81	0.187	1.007078	0	0			0
		2475	2.5	13.78	0.365	0.9576	0.0252	0.032015	0.02053796	0.0202722	0.03061
			3.5	15.62	0.419	0.977099	0.0252	0.028761			0.02846
			4.5	16.95	0.457	0.9903	0.0252	0.026704			0.02629
			5.5	19.87	0.484	1.017573	0.0252	0.022812			0.02269
			6.5	21.47	0.504	1.031635	0.0252	0.020984			0.02089
			7.5	23.12	0.52	1.046317	0.0252	0.019198			0.0174
			8.5	24.83	0.532	1.063526	0.0252	0.017254			0.016
			9.5	27.79	0.542	1.176242	0.0252	0.007849			0.00971
			10.5	29.76	0.552	1.273413	0.0252	0.003066			0.00461
			11.5	31.81	0.561	1.35272	0.0252	0.000573			0.00189
		1033	2.5	13.78	0.236	0.974286	0.0157	0.016982	0.0083923	0.0101623	0.01736
			3.5	15.62	0.271	0.987869	0.0157	0.015445			0.01608
			4.5	16.95	0.296	0.998794	0.0157	0.014286			0.01493
			5.5	19.87	0.313	1.040368	0.0157	0.010448			0.01263
			6.5	21.47	0.326	1.093373	0.0157	0.006658			0.01082
			7.5	23.12	0.336	1.167282	0.0157	0.002922			0.0074
			8.5	24.83	0.343	1.236932	0.0157	0.000554			0.00407
			9.5	27.79	0.35	1.333308	0.0157	0			0.00183
			10.5	29.76	0.356	1.359812	0.0157	0			0
			11.5	31.81	0.362	1.364657	0.0157	0			0
2	Portland	475	2.5	13.78	0.189	0.910193	0.0072	0.013084	0.00545391	0.0054327	0.00941
			3.5	15.62	0.217	0.913603	0.0072	0.012722			0.01048
			4.5	16.95	0.237	0.9196	0.0072	0.012102			0.01061
			5.5	19.87	0.25	1.054338	0.0072	0.002774			0.00503
			6.5	21.47	0.261	1.092705	0.0072	0.001251			0.00465
			7.5	23.12	0.269	1.131906	0.0072	2.18E-05			0.00231
			8.5	24.83	0.275	1.166606	0.0072	0			0.00167
			9.5	27.79	0.281	1.198747	0.0072	0			0
			10.5	29.76	0.286	1.202511	0.0072	0			0
			11.5	31.81	0.291	1.202662	0.0072	0			0
		2475	2.5	13.78	0.348	0.957925	0.0296	0.038103	0.02494455	0.0235875	0.03531
			3.5	15.62	0.4	0.977295	0.0296	0.034545			0.03358
			4.5	16.95	0.436	0.990462	0.0296	0.032268			0.03136
			5.5	19.87	0.462	1.018072	0.0296	0.027859			0.02672
			6.5	21.47	0.481	1.032472	0.0296	0.025749			0.02342
			7.5	23.12	0.497	1.047834	0.0296	0.023634			0.02018
			8.5	24.83	0.509	1.066574	0.0296	0.021239			0.01706
			9.5	27.79	0.519	1.195063	0.0296	0.009339			0.01184
			10.5	29.76	0.529	1.28942	0.0296	0.004242			0.00683
			11.5	31.81	0.538	1.358756	0.0296	0.001739			0.00121
		1033	2.5	13.78	0.26	0.965616	0.0205	0.024241	0.01342025	0.0153228	0.02415
			3.5	15.62	0.3	0.981524	0.0205	0.021992			0.02329
			4.5	16.95	0.327	0.993672	0.0205	0.020386			0.02256

			5.5	19.87	0.346	1.028962	0.0205	0.016224			0.0172
			6.5	21.47	0.361	1.049081	0.0205	0.014158			0.01556
			7.5	23.12	0.372	1.109401	0.0205	0.009097			0.01382
			8.5	24.83	0.381	1.187243	0.0205	0.004529			0.01054
			9.5	27.79	0.389	1.308862	0.0205	0.000263			0.00351
			10.5	29.76	0.396	1.355545	0.0205	0			0
			11.5	31.81	0.403	1.368673	0.0205	0			0
2	SLC	475	2.5	13.78	0.165	0.986699	0.0049	0.004417	0.00243443	0.0025551	0.00476
			3.5	15.62	0.189	0.967474	0.0049	0.005573			0.00577
			4.5	16.95	0.205	0.969148	0.0049	0.005467			0.0057
			5.5	19.87	0.216	1.035855	0.0049	0.00203			0.00248
			6.5	21.47	0.224	1.057849	0.0049	0.00118			0.00137
			7.5	23.12	0.23	1.077964	0.0049	0.0005			0
			8.5	24.83	0.234	1.092692	0.0049	5.34E-05			0
			9.5	27.79	0.238	1.101467	0.0049	0			0
			10.5	29.76	0.241	1.101812	0.0049	0			0
			11.5	31.81	0.244	1.101812	0.0049	0			0
		2475	2.5	13.78	0.375	0.957465	0.0271	0.034613	0.02251435	0.021717	0.03361
			3.5	15.62	0.43	0.977016	0.0271	0.031203			0.03166
			4.5	16.95	0.468	0.990235	0.0271	0.029044			0.02955
			5.5	19.87	0.493	1.017422	0.0271	0.02496			0.02479
			6.5	21.47	0.512	1.031416	0.0271	0.023037			0.02144
			7.5	23.12	0.527	1.045955	0.0271	0.021162			0.01815
			8.5	24.83	0.537	1.062981	0.0271	0.019118			0.01518
			9.5	27.79	0.546	1.173092	0.0271	0.009214			0.00964
			10.5	29.76	0.554	1.272014	0.0271	0.003891			0.0049
			11.5	31.81	0.561	1.352723	0.0271	0.001121			0
		1033	2.5	13.78	0.247	0.971776	0.0184	0.020667	0.01071251	0.0125916	0.02139
			3.5	15.62	0.283	0.986989	0.0184	0.018726			0.02031
			4.5	16.95	0.308	0.998789	0.0184	0.01732			0.01948
			5.5	19.87	0.325	1.038064	0.0184	0.013202			0.01391
			6.5	21.47	0.337	1.072955	0.0184	0.010187			0.01203
			7.5	23.12	0.346	1.154354	0.0184	0.004989			0.01067
			8.5	24.83	0.353	1.227552	0.0184	0.001908			0.00633
			9.5	27.79	0.359	1.332745	0.0184	0			0.00136
			10.5	29.76	0.364	1.363958	0.0184	0			0
			11.5	31.81	0.368	1.370081	0.0184	0			0
2	San Fran	475	2.5	13.78	0.318	0.959149	0.0255	0.032159	0.0200483	0.0187199	0.02956
			3.5	15.62	0.366	0.978071	0.0255	0.028994			0.02746
			4.5	16.95	0.4	0.991079	0.0255	0.026959			0.02512
			5.5	19.87	0.423	1.019825	0.0255	0.022849			0.02149
			6.5	21.47	0.441	1.035183	0.0255	0.02086			0.01976
			7.5	23.12	0.455	1.05266	0.0255	0.018762			0.01635
			8.5	24.83	0.466	1.08636	0.0255	0.015172			0.01314
			9.5	27.79	0.476	1.233243	0.0255	0.004908			0.00613
			10.5	29.76	0.485	1.318484	0.0255	0.001629			0.00256
			11.5	31.81	0.493	1.36719	0.0255	0.000297			0
		2475	2.5	13.78	0.541	0.957097	0.0379	0.050058	0.03596443	0.030759	0.04456
			3.5	15.62	0.623	0.976788	0.0379	0.045966			0.04013
			4.5	16.95	0.68	0.990046	0.0379	0.043329			0.03826
			5.5	19.87	0.72	1.016736	0.0379	0.038326			0.03364
			6.5	21.47	0.752	1.030148	0.0379	0.03597			0.03044
			7.5	23.12	0.777	1.043211	0.0379	0.033776			0.02706
			8.5	24.83	0.797	1.056061	0.0379	0.031716			0.02402
			9.5	27.79	0.814	1.122533	0.0379	0.022527			0.01834
			10.5	29.76	0.83	1.181755	0.0379	0.016197			0.01383
			11.5	31.81	0.846	1.254968	0.0379	0.010323			0.00799

		1033	2.5	13.78	0.408	0.957229	0.0325	0.042479	0.0291332	0.025915	0.03861
			3.5	15.62	0.469	0.976865	0.0325	0.03867			0.03523
			4.5	16.95	0.513	0.990104	0.0325	0.036239			0.03347
			5.5	19.87	0.543	1.01696	0.0325	0.03165			0.02845
			6.5	21.47	0.566	1.030572	0.0325	0.029496			0.02503
			7.5	23.12	0.584	1.04419	0.0325	0.027453			0.02367
			8.5	24.83	0.599	1.058681	0.0325	0.025399			0.02074
			9.5	27.79	0.612	1.137933	0.0325	0.016159			0.01372
			10.5	29.76	0.623	1.224997	0.0325	0.009174			0.00889
			11.5	31.81	0.635	1.325895	0.0325	0.00396			0.00263
2	San Jose	475	2.5	13.78	0.283	0.962903	0.0257	0.031713	0.01868768	0.0175121	0.02852
			3.5	15.62	0.324	0.980817	0.0257	0.028746			0.02634
			4.5	16.95	0.352	0.99358	0.0257	0.026764			0.02583
			5.5	19.87	0.37	1.026181	0.0257	0.022173			0.02059
			6.5	21.47	0.384	1.04483	0.0257	0.019834			0.01712
			7.5	23.12	0.394	1.077577	0.0257	0.016188			0.01594
			8.5	24.83	0.401	1.164253	0.0257	0.008907			0.01115
			9.5	27.79	0.407	1.297609	0.0257	0.002361			0.00305
			10.5	29.76	0.411	1.355251	0.0257	0.000637			0
			11.5	31.81	0.416	1.372996	0.0257	0.000198			0
		2475	2.5	13.78	0.44	0.957145	0.0379	0.050132	0.03546239	0.0297578	0.04306
			3.5	15.62	0.504	0.976816	0.0379	0.046043			0.0404
			4.5	16.95	0.547	0.99007	0.0379	0.043405			0.03878
			5.5	19.87	0.576	1.016841	0.0379	0.038383			0.03213
			6.5	21.47	0.597	1.03037	0.0379	0.036005			0.02906
			7.5	23.12	0.613	1.043781	0.0379	0.033754			0.02799
			8.5	24.83	0.624	1.057801	0.0379	0.031513			0.02306
			9.5	27.79	0.632	1.134604	0.0379	0.021159			0.01669
			10.5	29.76	0.64	1.214175	0.0379	0.0134			0.0109
			11.5	31.81	0.647	1.320694	0.0379	0.006498			0.00372
		1033	2.5	13.78	0.349	0.957919	0.0326	0.042493	0.02813201	0.0240106	0.03728
			3.5	15.62	0.4	0.977316	0.0326	0.038731			0.034
			4.5	16.95	0.434	0.990507	0.0326	0.036308			0.03201
			5.5	19.87	0.457	1.018254	0.0326	0.031571			0.02729
			6.5	21.47	0.474	1.032845	0.0326	0.029272			0.02408
			7.5	23.12	0.486	1.048839	0.0326	0.0269			0.02108
			8.5	24.83	0.495	1.06902	0.0326	0.02412			0.01854
			9.5	27.79	0.502	1.209797	0.0326	0.010266			0.01041
			10.5	29.76	0.508	1.303757	0.0326	0.004946			0.00454
			11.5	31.81	0.514	1.363889	0.0326	0.002598			0
2	Santa Monica	475	2.5	13.78	0.251	0.969819	0.0213	0.024729	0.01329842	0.0147203	0.02419
			3.5	15.62	0.288	0.985306	0.0213	0.02252			0.02346
			4.5	16.95	0.313	0.997367	0.0213	0.020908			0.02284
			5.5	19.87	0.329	1.036146	0.0213	0.016314			0.01772
			6.5	21.47	0.342	1.061681	0.0213	0.013735			0.01428
			7.5	23.12	0.351	1.145609	0.0213	0.007276			0.01105
			8.5	24.83	0.357	1.221765	0.0213	0.003414			0.00889
			9.5	27.79	0.363	1.329891	0.0213	9.39E-07			0.00113
			10.5	29.76	0.367	1.363344	0.0213	0			0
			11.5	31.81	0.371	1.369986	0.0213	0			0
		2475	2.5	13.78	0.434	0.957155	0.0355	0.046641	0.03259001	0.028555	0.04258
			3.5	15.62	0.498	0.976822	0.0355	0.042664			0.03953
			4.5	16.95	0.542	0.990073	0.0355	0.040113			0.03798
			5.5	19.87	0.571	1.016854	0.0355	0.035281			0.0316
			6.5	21.47	0.593	1.03039	0.0355	0.033005			0.02834
			7.5	23.12	0.609	1.043826	0.0355	0.030854			0.02555
			8.5	24.83	0.621	1.057889	0.0355	0.028718			0.02102

			9.5	27.79	0.631	1.134755	0.0355	0.018956			0.01482
			10.5	29.76	0.64	1.214175	0.0355	0.01175			0.00848
			11.5	31.81	0.648	1.320252	0.0355	0.005416			0.00258
		1033	2.5	13.78	0.316	0.959336	0.0291	0.037136	0.02341361	0.0219754	0.03391
			3.5	15.62	0.362	0.978288	0.0291	0.033703			0.03238
			4.5	16.95	0.394	0.991327	0.0291	0.031481			0.03032
			5.5	19.87	0.415	1.020486	0.0291	0.026909			0.02571
			6.5	21.47	0.43	1.036458	0.0291	0.024629			0.0227
			7.5	23.12	0.442	1.055052	0.0291	0.022165			0.01971
			8.5	24.83	0.451	1.103188	0.0291	0.016657			0.01532
			9.5	27.79	0.457	1.251159	0.0291	0.005786			0.00708
			10.5	29.76	0.463	1.331602	0.0291	0.002443			0.00235
			11.5	31.81	0.469	1.370177	0.0291	0.001251			0
2	Seattle	475	2.5	13.78	0.225	0.977825	0.0177	0.019038	0.00919409	0.0114473	0.01914
			3.5	15.62	0.258	0.989907	0.0177	0.017571			0.01987
			4.5	16.95	0.281	1.000499	0.0177	0.016356			0.01885
			5.5	19.87	0.296	1.053433	0.0177	0.011193			0.01338
			6.5	21.47	0.307	1.130719	0.0177	0.005838			0.01176
			7.5	23.12	0.315	1.198748	0.0177	0.002659			0.00717
			8.5	24.83	0.321	1.261529	0.0177	0.0006			0.00443
			9.5	27.79	0.326	1.339553	0.0177	0			0
			10.5	29.76	0.33	1.35586	0.0177	0			0
			11.5	31.81	0.334	1.357834	0.0177	0			0
		2475	2.5	13.78	0.409	0.957225	0.0336	0.043956	0.03020297	0.0265271	0.03903
			3.5	15.62	0.47	0.976862	0.0336	0.040086			0.03769
			4.5	16.95	0.511	0.990108	0.0336	0.03761			0.03411
			5.5	19.87	0.539	1.016982	0.0336	0.032924			0.02954
			6.5	21.47	0.56	1.030628	0.0336	0.030716			0.02633
			7.5	23.12	0.575	1.044367	0.0336	0.028606			0.02338
			8.5	24.83	0.587	1.059238	0.0336	0.026449			0.02059
			9.5	27.79	0.596	1.141116	0.0336	0.016703			0.01355
			10.5	29.76	0.605	1.236858	0.0336	0.009016			0.00849
			11.5	31.81	0.613	1.334902	0.0336	0.004007			0.00214
		1033	2.5	13.78	0.298	0.960807	0.0265	0.033293	0.02022742	0.0197525	0.03172
			3.5	15.62	0.341	0.979318	0.0265	0.030138			0.02964
			4.5	16.95	0.371	0.992214	0.0265	0.028077			0.02729
			5.5	19.87	0.391	1.022825	0.0265	0.023613			0.02271
			6.5	21.47	0.406	1.03992	0.0265	0.021369			0.01937
			7.5	23.12	0.417	1.060894	0.0265	0.018844			0.01633
			8.5	24.83	0.425	1.133809	0.0265	0.011774			0.01345
			9.5	27.79	0.432	1.274629	0.0265	0.003564			0.00662
			10.5	29.76	0.438	1.344239	0.0265	0.0012			0.00277
			11.5	31.81	0.443	1.371968	0.0265	0.000464			0
3	Butte	475	2.5	31.55	0.0644	1	0	2.36E-18	6.1054E-05	0.000101	0
			3.5	33.24	0.0743	1	0	2.36E-18			0
			4.5	26.77	0.0842	1	0	2.36E-18			0
			5.5	23.88	0.0898	1	0	2.36E-18			0
			6.5	23.83	0.093	1	0	2.36E-18			0
			7.5	19.78	0.0952	1	0	2.36E-18			0
			8.5	14.01	0.0961	0.999677	0	1.01E-05			0
			9.5	16.11	0.0963	0.999982	0	5.75E-07			0
			10.5	11.6	0.0955	0.998385	0	5.09E-05			0
			11.5	6.53	0.0941	0.972204	0	0.000959			0.00171
		2475	2.5	31.55	0.1146	1.006927	0	0	0.00500985	0.0048723	0
			3.5	33.24	0.1322	1.006927	0	0			0
			4.5	26.77	0.1499	1.006927	0	0			0
			5.5	23.88	0.1597	1.006835	0	0			0

			6.5	23.83	0.1655	1.006692	0	0			0
			7.5	19.78	0.1695	0.996795	0	0.000102			0
			8.5	14.01	0.1712	0.883621	0	0.005593			0.00885
			9.5	16.11	0.1714	0.951212	0	0.001815			0.00382
			10.5	11.6	0.1702	0.740508	0	0.022587			0.018
			11.5	6.53	0.1677	0.63808	0	0.048009			0.04375
		1033	2.5	31.55	0.0875	1	0	2.36E-18	0.00229371	0.0014078	0
			3.5	33.24	0.101	1	0	2.36E-18			0
			4.5	26.77	0.1145	1	0	2.36E-18			0
			5.5	23.88	0.122	1	0	2.36E-18			0
			6.5	23.83	0.1264	1	0	2.36E-18			0
			7.5	19.78	0.1295	0.999683	0	9.96E-06			0
			8.5	14.01	0.1307	0.985296	0	0.000485			0
			9.5	16.11	0.1309	0.99469	0	0.000169			0
			10.5	11.6	0.1299	0.960154	0	0.001435			0.00155
			11.5	6.53	0.128	0.678925	0	0.036215			0.02204
3	Charleston	475	2.5	31.55	0.1018	1.001177	0	0	0.00421615	0.0013592	0
			3.5	33.24	0.1179	1.001177	0	0			0
			4.5	26.77	0.1342	1.001177	0	0			0
			5.5	23.88	0.1437	1.001177	0	0			0
			6.5	23.83	0.1496	1.001177	0	0			0
			7.5	19.78	0.154	0.997448	0	8.06E-05			0
			8.5	14.01	0.1563	0.936488	0	0.002494			0.00167
			9.5	16.11	0.1574	0.971605	0	0.000982			0
			10.5	11.6	0.1571	0.775642	0	0.016814			0.00324
			11.5	6.53	0.1558	0.641656	0	0.04689			0.01682
		2475	2.5	31.55	0.3525	1.374538	0.024	0	0.01660981	0.0174502	0
			3.5	33.24	0.4095	1.374589	0.024	0			0
			4.5	26.77	0.4674	1.189249	0.024	0.006375			0.00848
			5.5	23.88	0.502	1.055727	0.024	0.016928			0.01437
			6.5	23.83	0.5244	1.053133	0.024	0.01721			0.01577
			7.5	19.78	0.5417	1.016173	0.024	0.021626			0.02292
			8.5	14.01	0.5519	0.95965	0.024	0.03			0.03221
			9.5	16.11	0.558	0.981767	0.024	0.026473			0.02823
			10.5	11.6	0.5592	0.931341	0.024	0.035015			0.03848
			11.5	6.53	0.5566	0.856457	0.024	0.051045			0.05674
		1033	2.5	31.55	0.2006	1.361289	0.0148	0	0.00733153	0.0089121	0
			3.5	33.24	0.2328	1.361289	0.0148	0			0
			4.5	26.77	0.2655	1.354059	0.0148	0			0
			5.5	23.88	0.2849	1.28188	0.0148	0			0.00368
			6.5	23.83	0.2972	1.261621	0.0148	0			0.00297
			7.5	19.78	0.3067	1.039948	0.0148	0.009648			0.01129
			8.5	14.01	0.3121	0.953274	0.0148	0.018369			0.01998
			9.5	16.11	0.3151	0.979295	0.0148	0.015313			0.01752
			10.5	11.6	0.3154	0.923024	0.0148	0.022481			0.02531
			11.5	6.53	0.3135	0.848185	0.0148	0.035676			0.03892
3	Eureka	475	2.5	31.55	0.35481	1.374523	0.0249	0	0.01739166	0.0164205	0
			3.5	33.24	0.41311	1.374591	0.0249	0			0
			4.5	26.77	0.47264	1.184061	0.0249	0.007186			0.00837
			5.5	23.88	0.50898	1.055003	0.0249	0.017884			0.01468
			6.5	23.83	0.53321	1.052516	0.0249	0.018163			0.01407
			7.5	19.78	0.55249	1.016127	0.0249	0.022646			0.02172
			8.5	14.01	0.56466	0.95965	0.0249	0.031226			0.03023
			9.5	16.11	0.5727	0.981765	0.0249	0.027615			0.02784
			10.5	11.6	0.57585	0.931342	0.0249	0.036346			0.03536
			11.5	6.53	0.57515	0.856457	0.0249	0.0526			0.05092
		2475	2.5	31.55	0.8457	1.244254	0.0364	0.010159	0.03099781	0.0272772	0.00631

			3.5	33.24	0.98545	1.290586	0.0364	0.00733			0.00309
			4.5	26.77	1.12844	1.091282	0.0364	0.025006			0.02008
			5.5	23.88	1.21637	1.048942	0.0364	0.0311			0.02663
			6.5	23.83	1.2756	1.048567	0.0364	0.031158			0.02641
			7.5	19.78	1.32315	1.015953	0.0364	0.036568			0.03367
			8.5	14.01	1.35386	0.95965	0.0364	0.047397			0.04426
			9.5	16.11	1.37474	0.98176	0.0364	0.042923			0.04097
			10.5	11.6	1.384	0.931344	0.0364	0.053505			0.05011
			11.5	6.53	1.38403	0.856459	0.0364	0.070924			0.06956
		1033	2.5	31.55	0.57257	1.341271	0.0315	0.002966	0.02487968	0.0223397	0.00131
			3.5	33.24	0.66696	1.361627	0.0315	0.002272			0
			4.5	26.77	0.76346	1.092538	0.0315	0.020024			0.01572
			5.5	23.88	0.82262	1.048972	0.0315	0.025564			0.02171
			6.5	23.83	0.86231	1.048582	0.0315	0.025618			0.02132
			7.5	19.78	0.89404	1.015953	0.0315	0.03049			0.02854
			8.5	14.01	0.91436	0.95965	0.0315	0.040468			0.03975
			9.5	16.11	0.928	0.98176	0.0315	0.036307			0.03582
			10.5	11.6	0.93378	0.931344	0.0315	0.046249			0.04402
			11.5	6.53	0.93332	0.856459	0.0315	0.063584			0.06098
3	Memphis	475	2.5	31.55	0.11567	1.007078	0	0	0.00587889	0.0025415	0
			3.5	33.24	0.13436	1.007078	0	0			0
			4.5	26.77	0.15332	1.007078	0	0			0
			5.5	23.88	0.16464	1.006884	0	0			0
			6.5	23.83	0.17197	1.0066	0	0			0
			7.5	19.78	0.17762	0.991624	0	0.00027			0
			8.5	14.01	0.18093	0.827966	0	0.010351			0.00471
			9.5	16.11	0.18287	0.922326	0	0.003216			0.00298
			10.5	11.6	0.18323	0.722442	0	0.02609			0.00865
			11.5	6.53	0.18235	0.633028	0	0.049615			0.02225
		2475	2.5	31.55	0.32118	1.374578	0.0252	4.25E-05	0.01719662	0.0182215	0
			3.5	33.24	0.37373	1.374578	0.0252	4.25E-05			0
			4.5	26.77	0.42729	1.231185	0.0252	0.004861			0.00895
			5.5	23.88	0.45981	1.062209	0.0252	0.017397			0.01577
			6.5	23.83	0.48134	1.057749	0.0252	0.017889			0.01512
			7.5	19.78	0.49833	1.016529	0.0252	0.022953			0.02371
			8.5	14.01	0.50888	0.959647	0.0252	0.031661			0.03465
			9.5	16.11	0.51566	0.98178	0.0252	0.028018			0.029
			10.5	11.6	0.51803	0.931334	0.0252	0.036819			0.04071
			11.5	6.53	0.51692	0.85645	0.0252	0.053148			0.05885
		1033	2.5	31.55	0.21244	1.364682	0.0157	0	0.00790512	0.0101061	0
			3.5	33.24	0.24712	1.364682	0.0157	0			0
			4.5	26.77	0.28243	1.35161	0.0157	0			0
			5.5	23.88	0.30381	1.256335	0.0157	4.05E-05			0.00444
			6.5	23.83	0.31789	1.231673	0.0157	0.000703			0.00544
			7.5	19.78	0.32896	1.030576	0.0157	0.011276			0.01332
			8.5	14.01	0.33577	0.954162	0.0157	0.019468			0.02203
			9.5	16.11	0.34008	0.978341	0.0157	0.016512			0.01957
			10.5	11.6	0.34147	0.924908	0.0157	0.023567			0.02724
			11.5	6.53	0.34056	0.850288	0.0157	0.037004			0.04211
3	Portland	475	2.5	31.55	0.17267	1.202662	0.0072	0	0.00789272	0.0085573	0
			3.5	33.24	0.20092	1.202662	0.0072	0			0
			4.5	26.77	0.22972	1.201548	0.0072	0			0
			5.5	23.88	0.2472	1.173484	0.0072	0			0.002
			6.5	23.83	0.25877	1.161669	0.0072	0			0.00146
			7.5	19.78	0.26791	1.003867	0.0072	0.005409			0.00861
			8.5	14.01	0.27358	0.847611	0.0072	0.02119			0.02027
			9.5	16.11	0.27722	0.875245	0.0072	0.017247			0.0162

			10.5	11.6	0.2785	0.817057	0.0072	0.026316			0.02672
			11.5	6.53	0.2779	0.749409	0.0072	0.040943			0.04284
		2475	2.5	31.55	0.30729	1.374533	0.0296	0.001278	0.02087671	0.0209683	0
			3.5	33.24	0.35773	1.374533	0.0296	0.001278			0
			4.5	26.77	0.40921	1.250943	0.0296	0.006043			0.00958
			5.5	23.88	0.44061	1.066775	0.0296	0.021214			0.01714
			6.5	23.83	0.46151	1.061116	0.0296	0.021916			0.01824
			7.5	19.78	0.4781	1.016829	0.0296	0.028047			0.02746
			8.5	14.01	0.48855	0.959622	0.0296	0.037782			0.04058
			9.5	16.11	0.4954	0.981771	0.0296	0.033758			0.03544
			10.5	11.6	0.49803	0.931304	0.0296	0.043399			0.04613
			11.5	6.53	0.49733	0.856422	0.0296	0.060531			0.06647
		1033	2.5	31.55	0.23382	1.369222	0.0205	0	0.01119608	0.0148217	0
			3.5	33.24	0.27217	1.369222	0.0205	0			0
			4.5	26.77	0.31129	1.340454	0.0205	0			0.00117
			5.5	23.88	0.33512	1.209936	0.0205	0.003513			0.00939
			6.5	23.83	0.35096	1.181935	0.0205	0.004784			0.01005
			7.5	19.78	0.36351	1.022894	0.0205	0.016889			0.01956
			8.5	14.01	0.37138	0.956385	0.0205	0.025624			0.03119
			9.5	16.11	0.37652	0.979305	0.0205	0.022296			0.02781
			10.5	11.6	0.37844	0.927782	0.0205	0.030295			0.03699
			11.5	6.53	0.37782	0.853113	0.0205	0.045407			0.05633
3	SLC	475	2.5	31.55	0.15138	1.101812	0.0049	0	0.00944688	0.0064142	0
			3.5	33.24	0.17557	1.101812	0.0049	0			0
			4.5	26.77	0.2	1.101756	0.0049	0			0
			5.5	23.88	0.21438	1.093771	0.0049	2.22E-05			0
			6.5	23.83	0.22348	1.089559	0.0049	0.000145			0
			7.5	19.78	0.23034	1.005679	0.0049	0.003406			0.00318
			8.5	14.01	0.23413	0.79134	0.0049	0.025979			0.01619
			9.5	16.11	0.2361	0.826749	0.0049	0.019991			0.01141
			10.5	11.6	0.23601	0.75496	0.0049	0.033464			0.0228
			11.5	6.53	0.23432	0.687036	0.0049	0.051345			0.03851
		2475	2.5	31.55	0.32982	1.374581	0.0271	0.000542	0.0189301	0.0197306	0
			3.5	33.24	0.38291	1.374581	0.0271	0.000542			0
			4.5	26.77	0.43669	1.221054	0.0271	0.006307			0.00843
			5.5	23.88	0.46865	1.060491	0.0271	0.019407			0.01501
			6.5	23.83	0.48916	1.056667	0.0271	0.019858			0.01611
			7.5	19.78	0.50487	1.016452	0.0271	0.025097			0.02562
			8.5	14.01	0.5139	0.959648	0.0271	0.034219			0.03866
			9.5	16.11	0.519	0.98178	0.0271	0.030411			0.03374
			10.5	11.6	0.5196	0.931336	0.0271	0.039582			0.04594
			11.5	6.53	0.51667	0.856452	0.0271	0.056303			0.06401
		1033	2.5	31.55	0.22145	1.370141	0.0184	0	0.00944374	0.0127556	0
			3.5	33.24	0.257	1.370141	0.0184	0			0
			4.5	26.77	0.29296	1.35216	0.0184	0			0
			5.5	23.88	0.31425	1.244652	0.0184	0.001347			0.00656
			6.5	23.83	0.32784	1.220314	0.0184	0.002162			0.0073
			7.5	19.78	0.33818	1.030988	0.0184	0.013884			0.01647
			8.5	14.01	0.34403	0.95766	0.0184	0.022601			0.0282
			9.5	16.11	0.34724	0.981616	0.0184	0.019395			0.02306
			10.5	11.6	0.34743	0.928555	0.0184	0.027027			0.03411
			11.5	6.53	0.34526	0.853689	0.0184	0.041394			0.053
3	San Fran	475	2.5	31.55	0.28247	1.374398	0.0255	0.000125	0.01642643	0.0165228	0
			3.5	33.24	0.32884	1.374398	0.0255	0.000125			0
			4.5	26.77	0.37616	1.28691	0.0255	0.002683			0.006
			5.5	23.88	0.40502	1.107304	0.0255	0.013216			0.01314
			6.5	23.83	0.42423	1.077834	0.0255	0.016026			0.01418

			7.5	19.78	0.43949	1.017965	0.0255	0.023099			0.02253
			8.5	14.01	0.44909	0.959559	0.0255	0.032087			0.03275
			9.5	16.11	0.45539	0.981782	0.0255	0.028402			0.02829
			10.5	11.6	0.4578	0.931216	0.0255	0.037287			0.03788
			11.5	6.53	0.45715	0.856337	0.0255	0.053689			0.05186
		2475	2.5	31.55	0.47009	1.36792	0.0379	0.004336	0.03098842	0.0259753	0
			3.5	33.24	0.54773	1.372993	0.0379	0.004133			0
			4.5	26.77	0.62716	1.098655	0.0379	0.025554			0.0187
			5.5	23.88	0.67597	1.04931	0.0379	0.032786			0.02697
			6.5	23.83	0.70883	1.048768	0.0379	0.032874			0.02656
			7.5	19.78	0.73519	1.015956	0.0379	0.038467			0.03324
			8.5	14.01	0.75218	0.95965	0.0379	0.049516			0.04581
			9.5	16.11	0.7637	0.98176	0.0379	0.044966			0.04018
			10.5	11.6	0.76877	0.931344	0.0379	0.055693			0.05154
			11.5	6.53	0.76871	0.856459	0.0379	0.073003			0.06921
		1033	2.5	31.55	0.35785	1.374499	0.0325	0.002214	0.02453254	0.0219274	0
			3.5	33.24	0.41679	1.374591	0.0325	0.002211			0
			4.5	26.77	0.47701	1.179781	0.0325	0.01245			0.01279
			5.5	23.88	0.51389	1.054537	0.0325	0.025974			0.02025
			6.5	23.83	0.5386	1.052179	0.0325	0.026306			0.02151
			7.5	19.78	0.55832	1.016105	0.0325	0.031789			0.02974
			8.5	14.01	0.5709	0.95965	0.0325	0.041997			0.0407
			9.5	16.11	0.5793	0.981764	0.0325	0.037758			0.03502
			10.5	11.6	0.58279	0.931342	0.0325	0.047863			0.04498
			11.5	6.53	0.58238	0.856457	0.0325	0.065272			0.06229
3	San Jose	475	2.5	31.55	0.25196	1.373918	0.0257	0.000176	0.01501628	0.0154595	0
			3.5	33.24	0.29204	1.373918	0.0257	0.000176			0
			4.5	26.77	0.33247	1.32893	0.0257	0.001363			0.00216
			5.5	23.88	0.35612	1.180275	0.0257	0.00787			0.01103
			6.5	23.83	0.37094	1.154472	0.0257	0.009581			0.01395
			7.5	19.78	0.38202	1.022886	0.0257	0.022607			0.02147
			8.5	14.01	0.38796	0.959471	0.0257	0.032307			0.03104
			9.5	16.11	0.39089	0.982216	0.0257	0.028523			0.02873
			10.5	11.6	0.39039	0.930937	0.0257	0.037562			0.03608
			11.5	6.53	0.38723	0.856039	0.0257	0.054015			0.052
		2475	2.5	31.55	0.38523	1.374092	0.0379	0.004112	0.03014823	0.0252533	0
			3.5	33.24	0.44652	1.374592	0.0379	0.004093			0
			4.5	26.77	0.50834	1.150734	0.0379	0.019365			0.0154
			5.5	23.88	0.54449	1.052328	0.0379	0.032374			0.02433
			6.5	23.83	0.56715	1.050812	0.0379	0.032616			0.02559
			7.5	19.78	0.58409	1.016039	0.0379	0.038528			0.03363
			8.5	14.01	0.59318	0.95965	0.0379	0.0496			0.04599
			9.5	16.11	0.59766	0.981763	0.0379	0.045047			0.04048
			10.5	11.6	0.59689	0.931343	0.0379	0.05578			0.05165
			11.5	6.53	0.59206	0.856459	0.0379	0.073084			0.06925
		1033	2.5	31.55	0.3082	1.374562	0.0326	0.002247	0.02363531	0.0209747	0
			3.5	33.24	0.35725	1.374562	0.0326	0.002247			0
			4.5	26.77	0.40674	1.253697	0.0326	0.007485			0.00953
			5.5	23.88	0.4357	1.068192	0.0326	0.024229			0.01814
			6.5	23.83	0.45387	1.062741	0.0326	0.02496			0.01919
			7.5	19.78	0.46747	1.017095	0.0326	0.03176			0.02843
			8.5	14.01	0.47479	0.959649	0.0326	0.042148			0.04086
			9.5	16.11	0.47843	0.981824	0.0326	0.037891			0.03532
			10.5	11.6	0.47786	0.931325	0.0326	0.048026			0.04515
			11.5	6.53	0.47404	0.85644	0.0326	0.065442			0.06238
3	Santa Monica	475	2.5	31.55	0.22505	1.370068	0.0213	0	0.01133013	0.0139291	0
			3.5	33.24	0.26099	1.370068	0.0213	0			0

			4.5	26.77	0.2973	1.349803	0.0213	0			0.00178
			5.5	23.88	0.31865	1.237473	0.0213	0.002791			0.00719
			6.5	23.83	0.33214	1.213205	0.0213	0.003775			0.00954
			7.5	19.78	0.3423	1.029469	0.0213	0.017044			0.01819
			8.5	14.01	0.3479	0.957485	0.0213	0.026604			0.03074
			9.5	16.11	0.3508	0.981289	0.0213	0.023078			0.02681
			10.5	11.6	0.35063	0.928481	0.0213	0.031438			0.03565
			11.5	6.53	0.34808	0.853643	0.0213	0.046824			0.05081
		2475	2.5	31.55	0.38046	1.374194	0.0355	0.003213	0.02766615	0.0242404	0
			3.5	33.24	0.44152	1.374592	0.0355	0.003198			0
			4.5	26.77	0.50331	1.155207	0.0355	0.016851			0.01363
			5.5	23.88	0.53989	1.052596	0.0355	0.029508			0.02244
			6.5	23.83	0.56322	1.050964	0.0355	0.029755			0.02364
			7.5	19.78	0.58099	1.016045	0.0355	0.035421			0.03283
			8.5	14.01	0.59104	0.95965	0.0355	0.046124			0.04445
			9.5	16.11	0.59656	0.981763	0.0355	0.0417			0.03934
			10.5	11.6	0.59688	0.931343	0.0355	0.052184			0.05025
			11.5	6.53	0.59316	0.856458	0.0355	0.069637			0.06952
		1033	2.5	31.55	0.27966	1.374469	0.0291	0.001132	0.01913499	0.0193853	0
			3.5	33.24	0.32444	1.374469	0.0291	0.001132			0
			4.5	26.77	0.36971	1.29379	0.0291	0.003851			0.00689
			5.5	23.88	0.39642	1.119625	0.0291	0.015039			0.01517
			6.5	23.83	0.41338	1.092747	0.0291	0.017752			0.01608
			7.5	19.78	0.42622	1.018741	0.0291	0.027167			0.02646
			8.5	14.01	0.43339	0.959636	0.0291	0.037079			0.03819
			9.5	16.11	0.43723	0.981936	0.0291	0.03307			0.03488
			10.5	11.6	0.43724	0.931269	0.0291	0.042659			0.04425
			11.5	6.53	0.43428	0.856381	0.0291	0.059726			0.06091
3	Seattle	475	2.5	31.55	0.20347	1.357834	0.0177	0	0.00911403	0.0118192	0
			3.5	33.24	0.23598	1.357834	0.0177	0			0
			4.5	26.77	0.26883	1.349661	0.0177	0			0
			5.5	23.88	0.28816	1.273877	0.0177	0.000271			0.00473
			6.5	23.83	0.30038	1.253465	0.0177	0.000827			0.00562
			7.5	19.78	0.30961	1.035475	0.0177	0.012787			0.01584
			8.5	14.01	0.31469	0.950637	0.0177	0.022682			0.02773
			9.5	16.11	0.31735	0.97641	0.0177	0.019216			0.02229
			10.5	11.6	0.31723	0.920638	0.0177	0.027299			0.03234
			11.5	6.53	0.31496	0.846031	0.0177	0.04182			0.04841
		2475	2.5	31.55	0.35936	1.374486	0.0336	0.002557	0.02549798	0.0231295	0
			3.5	33.24	0.41715	1.374591	0.0336	0.002554			0
			4.5	26.77	0.47567	1.181087	0.0336	0.013079			0.01262
			5.5	23.88	0.5104	1.054864	0.0336	0.02707			0.02006
			6.5	23.83	0.53265	1.052553	0.0336	0.027403			0.02134
			7.5	19.78	0.54965	1.016138	0.0336	0.033064			0.0306
			8.5	14.01	0.55937	0.95965	0.0336	0.043465			0.04379
			9.5	16.11	0.56482	0.981767	0.0336	0.039156			0.0386
			10.5	11.6	0.56535	0.931342	0.0336	0.049407			0.0493
			11.5	6.53	0.56205	0.856457	0.0336	0.066858			0.06809
		1033	2.5	31.55	0.26481	1.374162	0.0265	0.000409	0.01629799	0.0178859	0
			3.5	33.24	0.30726	1.374162	0.0265	0.000409			0
			4.5	26.77	0.35021	1.313116	0.0265	0.002157			0.00447
			5.5	23.88	0.3756	1.150203	0.0265	0.010499			0.01339
			6.5	23.83	0.39177	1.12331	0.0265	0.012646			0.01442
			7.5	19.78	0.40406	1.020284	0.0265	0.023961			0.02335
			8.5	14.01	0.41097	0.959494	0.0265	0.033526			0.03638
			9.5	16.11	0.41473	0.981942	0.0265	0.02971			0.03111
			10.5	11.6	0.41487	0.931073	0.0265	0.038857			0.04385

			11.5	6.53	0.41219	0.85619	0.0265	0.055488			0.05997
4	Butte	475	0.5	10.52	0.11026	0.986073	0	0.000458	0.00116087	0.0006681	0
			1.5	10.52	0.11808	0.972956	0	0.000931			0
			2.5	11.15	0.12062	0.975157	0	0.000848			0
			3.5	11.77	0.12148	0.979843	0	0.000677			0
			4.5	10.86	0.12186	0.968882	0	0.001086			0
			5.5	10.9	0.12117	0.971012	0	0.001004			0
			6.5	10.11	0.1201	0.96148	0	0.001381			0
			7.5	9.46	0.1185	0.95298	0	0.001738			0.00165
			8.5	8.92	0.11651	0.946469	0	0.002026			0.0013
			9.5	8.84	0.11422	0.954515	0	0.001672			0.00152
			10.5	8.43	0.11174	0.953957	0	0.001696			0.00136
			11.5	8.06	0.10912	0.955009	0	0.001651			0.00128
			12.5	7.74	0.10639	0.95776	0	0.001534			0.00125
			13.5	7.45	0.10361	0.961286	0	0.001389			0.00129
			14.5	7.19	0.10082	0.965249	0	0.001229			0.00137
			15.5	6.95	0.09805	0.969144	0	0.001076			0.00148
			16.5	6.73	0.09533	0.972839	0	0.000935			0.00162
			17.5	6.54	0.09268	0.976456	0	0.0008			0.00179
		2475	0.5	10.52	0.19609	0.69085	0	0.033192	0.03704523	0.0351966	0.0299
			1.5	10.52	0.21004	0.683781	0	0.034961			0.03291
			2.5	11.15	0.21458	0.691028	0	0.033149			0.03084
			3.5	11.77	0.21613	0.6994	0	0.031142			0.02879
			4.5	10.86	0.21685	0.686021	0	0.034393			0.03125
			5.5	10.9	0.21565	0.687025	0	0.034141			0.03154
			6.5	10.11	0.21378	0.676662	0	0.03681			0.03447
			7.5	9.46	0.21097	0.668543	0	0.039003			0.03776
			8.5	8.92	0.20747	0.66201	0	0.040832			0.03826
			9.5	8.84	0.20343	0.66195	0	0.040849			0.03843
			10.5	8.43	0.19906	0.657281	0	0.042191			0.03903
			11.5	8.06	0.19442	0.653163	0	0.043399			0.04029
			12.5	7.74	0.1896	0.649767	0	0.044412			0.0414
			13.5	7.45	0.18469	0.646826	0	0.045301			0.04233
			14.5	7.19	0.17975	0.644372	0	0.046051			0.04203
			15.5	6.95	0.17485	0.642275	0	0.046698			0.04235
			16.5	6.73	0.17003	0.640561	0	0.047231			0.042
			17.5	6.54	0.16533	0.639439	0	0.047582			0.04357
		1033	0.5	10.52	0.14989	0.746346	0	0.021536	0.02783855	0.0182477	0.00934
			1.5	10.52	0.16053	0.725185	0	0.025533			0.0143
			2.5	11.15	0.16398	0.734915	0	0.02363			0.01212
			3.5	11.77	0.16515	0.748451	0	0.021166			0.01033
			4.5	10.86	0.16567	0.724966	0	0.025577			0.01576
			5.5	10.9	0.16473	0.727468	0	0.025076			0.01426
			6.5	10.11	0.16327	0.710801	0	0.028558			0.01839
			7.5	9.46	0.1611	0.698731	0	0.031299			0.0216
			8.5	8.92	0.15839	0.689929	0	0.033419			0.0222
			9.5	8.84	0.15528	0.692402	0	0.032813			0.02273
			10.5	8.43	0.15191	0.68744	0	0.034037			0.02343
			11.5	8.06	0.14834	0.683697	0	0.034982			0.02321
			12.5	7.74	0.14463	0.681413	0	0.035568			0.02457
			13.5	7.45	0.14086	0.680106	0	0.035907			0.02417
			14.5	7.19	0.13707	0.679801	0	0.035986			0.02462
			15.5	6.95	0.1333	0.680251	0	0.03587			0.02458
			16.5	6.73	0.1296	0.681465	0	0.035555			0.02314
			17.5	6.54	0.12599	0.683762	0	0.034966			0.02375
4	Charleston	475	0.5	10.52	0.17312	0.707521	0	0.029284	0.03523838	0.0132427	0.01079
			1.5	10.52	0.18597	0.694294	0	0.032355			0.0127

			2.5	11.15	0.19063	0.70194	0	0.030552			0.0117
			3.5	11.77	0.19273	0.711591	0	0.028385			0.01089
			4.5	10.86	0.19417	0.693957	0	0.032436			0.0128
			5.5	10.9	0.19397	0.694799	0	0.032234			0.0111
			6.5	10.11	0.19321	0.681882	0	0.035448			0.01345
			7.5	9.46	0.19164	0.672118	0	0.038026			0.014
			8.5	8.92	0.18946	0.664509	0	0.040125			0.01524
			9.5	8.84	0.1868	0.664519	0	0.040123			0.01567
			10.5	8.43	0.18383	0.65926	0	0.041619			0.01502
			11.5	8.06	0.18058	0.654699	0	0.042946			0.0169
			12.5	7.74	0.17714	0.650988	0	0.044046			0.01671
			13.5	7.45	0.17357	0.647794	0	0.045007			0.01654
			14.5	7.19	0.16991	0.645131	0	0.045818			0.01682
			15.5	6.95	0.16623	0.642834	0	0.046525			0.0151
			16.5	6.73	0.16256	0.640919	0	0.04712			0.01536
			17.5	6.54	0.15894	0.639596	0	0.047533			0.01562
		2475	0.5	10.52	0.59703	0.917411	0.024	0.037695	0.03962546	0.0453767	0.04398
			1.5	10.52	0.64265	0.917411	0.024	0.037695			0.04311
			2.5	11.15	0.66028	0.925642	0.024	0.036094			0.04111
			3.5	11.77	0.6693	0.933457	0.024	0.03462			0.04066
			4.5	10.86	0.67624	0.92189	0.024	0.036818			0.04398
			5.5	10.9	0.67766	0.922412	0.024	0.036716			0.04209
			6.5	10.11	0.67727	0.911886	0.024	0.038797			0.0458
			7.5	9.46	0.67416	0.902833	0.024	0.040651			0.04611
			8.5	8.92	0.66897	0.895016	0.024	0.042299			0.04815
			9.5	8.84	0.66211	0.893834	0.024	0.042552			0.04826
			10.5	8.43	0.65415	0.887669	0.024	0.043888			0.04907
			11.5	8.06	0.64519	0.881947	0.024	0.045151			0.05011
			12.5	7.74	0.63547	0.876871	0.024	0.046291			0.05115
			13.5	7.45	0.62519	0.87216	0.024	0.047364			0.05216
			14.5	7.19	0.61452	0.867844	0.024	0.04836			0.05335
			15.5	6.95	0.60362	0.863777	0.024	0.04931			0.05455
			16.5	6.73	0.59261	0.859976	0.024	0.050207			0.05575
			17.5	6.54	0.58162	0.856634	0.024	0.051003			0.05694
		1033	0.5	10.52	0.34025	0.908671	0.0148	0.024663	0.02625172	0.0319565	0.02914
			1.5	10.52	0.36601	0.908587	0.0148	0.024676			0.03016
			2.5	11.15	0.37575	0.916745	0.0148	0.023416			0.0295
			3.5	11.77	0.38056	0.924506	0.0148	0.022265			0.02857
			4.5	10.86	0.38413	0.913006	0.0148	0.023988			0.03049
			5.5	10.9	0.38454	0.913522	0.0148	0.023908			0.03058
			6.5	10.11	0.38389	0.903082	0.0148	0.025555			0.03269
			7.5	9.46	0.38167	0.89411	0.0148	0.027039			0.03309
			8.5	8.92	0.37827	0.886365	0.0148	0.028372			0.03394
			9.5	8.84	0.37391	0.885194	0.0148	0.028577			0.03411
			10.5	8.43	0.36893	0.879087	0.0148	0.029669			0.03497
			11.5	8.06	0.36339	0.873421	0.0148	0.030709			0.03617
			12.5	7.74	0.35743	0.868393	0.0148	0.031655			0.03589
			13.5	7.45	0.35117	0.863728	0.0148	0.032552			0.03706
			14.5	7.19	0.34471	0.859454	0.0148	0.03339			0.03844
			15.5	6.95	0.33814	0.855427	0.0148	0.034194			0.03844
			16.5	6.73	0.33154	0.851663	0.0148	0.034959			0.03785
			17.5	6.54	0.32498	0.848354	0.0148	0.035641			0.0392
4	Eureka	475	0.5	10.52	0.59874	0.917412	0.0249	0.039076	0.04103425	0.0408315	0.03835
			1.5	10.52	0.64559	0.917412	0.0249	0.039076			0.03808
			2.5	11.15	0.66461	0.925642	0.0249	0.037446			0.03724
			3.5	11.77	0.67518	0.933458	0.0249	0.035944			0.03665
			4.5	10.86	0.68385	0.921891	0.0249	0.038183			0.03894

			5.5	10.9	0.68709	0.922412	0.0249	0.03808			0.03899
			6.5	10.11	0.68864	0.911887	0.0249	0.040198			0.04096
			7.5	9.46	0.68753	0.902834	0.0249	0.042082			0.04171
			8.5	8.92	0.68439	0.895017	0.0249	0.043755			0.04393
			9.5	8.84	0.67957	0.893834	0.0249	0.044012			0.04385
			10.5	8.43	0.67365	0.887669	0.0249	0.045366			0.04479
			11.5	8.06	0.66668	0.881948	0.0249	0.046646			0.04579
			12.5	7.74	0.65891	0.876871	0.0249	0.0478			0.04681
			13.5	7.45	0.65049	0.872161	0.0249	0.048885			0.04785
			14.5	7.19	0.64159	0.867845	0.0249	0.049891			0.04765
			15.5	6.95	0.63235	0.863778	0.0249	0.05085			0.04875
			16.5	6.73	0.62288	0.859977	0.0249	0.051755			0.04988
			17.5	6.54	0.61329	0.856635	0.0249	0.052557			0.04901
		2475	0.5	10.52	1.4252	0.917413	0.0364	0.056647	0.05875164	0.0565891	0.05476
			1.5	10.52	1.53767	0.917413	0.0364	0.056647			0.05465
			2.5	11.15	1.5841	0.925644	0.0364	0.054781			0.05265
			3.5	11.77	1.61059	0.93346	0.0364	0.053035			0.05035
			4.5	10.86	1.63272	0.921893	0.0364	0.055628			0.05363
			5.5	10.9	1.64204	0.922414	0.0364	0.05551			0.05365
			6.5	10.11	1.64744	0.911889	0.0364	0.057913			0.05557
			7.5	9.46	1.64658	0.902836	0.0364	0.060009			0.05752
			8.5	8.92	1.64091	0.895019	0.0364	0.061836			0.05952
			9.5	8.84	1.6313	0.893836	0.0364	0.062114			0.05951
			10.5	8.43	1.61903	0.887671	0.0364	0.063564			0.06154
			11.5	8.06	1.60428	0.88195	0.0364	0.064915			0.0625
			12.5	7.74	1.58755	0.876873	0.0364	0.066115			0.06348
			13.5	7.45	1.56924	0.872163	0.0364	0.067229			0.06576
			14.5	7.19	1.5497	0.867847	0.0364	0.068248			0.06655
			15.5	6.95	1.52926	0.86378	0.0364	0.069206			0.06755
			16.5	6.73	1.50818	0.859978	0.0364	0.0701			0.06857
			17.5	6.54	1.48672	0.856637	0.0364	0.070882			0.06958
		1033	0.5	10.52	0.96545	0.917413	0.0315	0.049272	0.0513641	0.0500851	0.04862
			1.5	10.52	1.04137	0.917413	0.0315	0.049272			0.04851
			2.5	11.15	1.07249	0.925644	0.0315	0.047472			0.04619
			3.5	11.77	1.09007	0.93346	0.0315	0.0458			0.04406
			4.5	10.86	1.10463	0.921893	0.0315	0.048288			0.0475
			5.5	10.9	1.11049	0.922414	0.0315	0.048174			0.04752
			6.5	10.11	1.11367	0.911889	0.0315	0.050502			0.04946
			7.5	9.46	1.11258	0.902836	0.0315	0.052551			0.05186
			8.5	8.92	1.10823	0.895019	0.0315	0.054353			0.05192
			9.5	8.84	1.10119	0.893836	0.0315	0.054628			0.05387
			10.5	8.43	1.09235	0.887671	0.0315	0.056072			0.05439
			11.5	8.06	1.08185	0.88195	0.0315	0.057427			0.05493
			12.5	7.74	1.07001	0.876873	0.0315	0.058638			0.05591
			13.5	7.45	1.05711	0.872163	0.0315	0.05977			0.05888
			14.5	7.19	1.04341	0.867847	0.0315	0.060813			0.0579
			15.5	6.95	1.02911	0.86378	0.0315	0.0618			0.05894
			16.5	6.73	1.01442	0.859978	0.0315	0.062725			0.05998
			17.5	6.54	0.9995	0.856637	0.0315	0.063541			0.06101
4	Memphis	475	0.5	10.52	0.19595	0.691044	0	0.033145	0.0375847	0.0179467	0.01432
			1.5	10.52	0.2109	0.683543	0	0.035022			0.01608
			2.5	11.15	0.21666	0.690276	0	0.033334			0.01524
			3.5	11.77	0.21959	0.697899	0	0.031495			0.0146
			4.5	10.86	0.22183	0.68446	0	0.034788			0.01614
			5.5	10.9	0.22226	0.684863	0	0.034686			0.01641
			6.5	10.11	0.22209	0.674526	0	0.037378			0.01843
			7.5	9.46	0.22103	0.666377	0	0.039603			0.02083

			8.5	8.92	0.21929	0.659745	0	0.041479			0.02185
			9.5	8.84	0.217	0.659083	0	0.04167			0.02008
			10.5	8.43	0.21435	0.654144	0	0.043109			0.02119
			11.5	8.06	0.21137	0.649683	0	0.044437			0.02295
			12.5	7.74	0.20814	0.645837	0	0.045602			0.02256
			13.5	7.45	0.20473	0.642347	0	0.046676			0.02219
			14.5	7.19	0.2012	0.639224	0	0.047649			0.02233
			15.5	6.95	0.19759	0.63634	0	0.048559			0.02249
			16.5	6.73	0.19394	0.633707	0	0.049398			0.02263
			17.5	6.54	0.19031	0.631488	0	0.050111			0.02275
		2475	0.5	10.52	0.54253	0.917403	0.0252	0.039567	0.04153387	0.0469255	0.04459
			1.5	10.52	0.58471	0.917403	0.0252	0.039567			0.04411
			2.5	11.15	0.60161	0.925634	0.0252	0.037927			0.04353
			3.5	11.77	0.61081	0.93345	0.0252	0.036414			0.043
			4.5	10.86	0.61824	0.921883	0.0252	0.038668			0.04459
			5.5	10.9	0.62073	0.922404	0.0252	0.038565			0.04307
			6.5	10.11	0.62165	0.911878	0.0252	0.040694			0.0467
			7.5	9.46	0.62014	0.902826	0.0252	0.042589			0.0484
			8.5	8.92	0.61678	0.895009	0.0252	0.044271			0.0491
			9.5	8.84	0.61189	0.893826	0.0252	0.044529			0.05049
			10.5	8.43	0.606	0.887661	0.0252	0.045889			0.05129
			11.5	8.06	0.59919	0.88194	0.0252	0.047175			0.05231
			12.5	7.74	0.59164	0.876863	0.0252	0.048333			0.05333
			13.5	7.45	0.58353	0.872153	0.0252	0.049422			0.05431
			14.5	7.19	0.57501	0.867837	0.0252	0.050432			0.05546
			15.5	6.95	0.5662	0.86377	0.0252	0.051394			0.05663
			16.5	6.73	0.55722	0.859969	0.0252	0.052301			0.05779
			17.5	6.54	0.54816	0.856627	0.0252	0.053105			0.05895
		1033	0.5	10.52	0.35906	0.910867	0.0157	0.025755	0.02737298	0.0341593	0.031
			1.5	10.52	0.38687	0.910823	0.0157	0.025762			0.03183
			2.5	11.15	0.39793	0.918997	0.0157	0.02447			0.03141
			3.5	11.77	0.40388	0.926766	0.0157	0.023288			0.03072
			4.5	10.86	0.40865	0.915261	0.0157	0.025054			0.03251
			5.5	10.9	0.41012	0.915778	0.0157	0.024972			0.03264
			6.5	10.11	0.41056	0.905321	0.0157	0.02666			0.03285
			7.5	9.46	0.40938	0.896331	0.0157	0.02818			0.03509
			8.5	8.92	0.40696	0.888568	0.0157	0.029544			0.03757
			9.5	8.84	0.40354	0.887394	0.0157	0.029755			0.03753
			10.5	8.43	0.39945	0.881273	0.0157	0.030871			0.03836
			11.5	8.06	0.39476	0.875593	0.0157	0.031935			0.03803
			12.5	7.74	0.38958	0.870552	0.0157	0.032901			0.03926
			13.5	7.45	0.38404	0.865876	0.0157	0.033817			0.04032
			14.5	7.19	0.37824	0.861591	0.0157	0.034673			0.04165
			15.5	6.95	0.37225	0.857553	0.0157	0.035493			0.04163
			16.5	6.73	0.36616	0.853779	0.0157	0.036272			0.04097
			17.5	6.54	0.36004	0.850462	0.0157	0.036968			0.04228
4	Portland	475	0.5	10.52	0.29167	0.803407	0.0072	0.02889	0.03070156	0.0336771	0.03059
			1.5	10.52	0.31435	0.802984	0.0072	0.028973			0.03109
			2.5	11.15	0.32343	0.810213	0.0072	0.027584			0.03044
			3.5	11.77	0.32838	0.817138	0.0072	0.026301			0.02996
			4.5	10.86	0.33237	0.806791	0.0072	0.028235			0.03158
			5.5	10.9	0.33371	0.807243	0.0072	0.028148			0.03167
			6.5	10.11	0.3342	0.797944	0.0072	0.029973			0.03345
			7.5	9.46	0.33339	0.789982	0.0072	0.031604			0.03561
			8.5	8.92	0.33159	0.783122	0.0072	0.033062			0.03612
			9.5	8.84	0.32896	0.782089	0.0072	0.033286			0.03623
			10.5	8.43	0.32579	0.776685	0.0072	0.034474			0.03899

			11.5	8.06	0.32213	0.771674	0.0072	0.035604			0.03844
			12.5	7.74	0.31807	0.767229	0.0072	0.036628			0.0398
			13.5	7.45	0.31371	0.763106	0.0072	0.037597			0.04084
			14.5	7.19	0.30913	0.759329	0.0072	0.0385			0.04015
			15.5	6.95	0.3044	0.75577	0.0072	0.039365			0.04011
			16.5	6.73	0.29957	0.752446	0.0072	0.040184			0.04143
			17.5	6.54	0.2947	0.749524	0.0072	0.040914			0.04273
		2475	0.5	10.52	0.51866	0.917373	0.0296	0.046352	0.04841854	0.0537913	0.05189
			1.5	10.52	0.55919	0.917373	0.0296	0.046352			0.05151
			2.5	11.15	0.57559	0.925604	0.0296	0.044593			0.0492
			3.5	11.77	0.58467	0.933419	0.0296	0.042961			0.0472
			4.5	10.86	0.59209	0.921853	0.0296	0.045389			0.05197
			5.5	10.9	0.5948	0.922374	0.0296	0.045278			0.05044
			6.5	10.11	0.59604	0.911849	0.0296	0.047557			0.05378
			7.5	9.46	0.59497	0.902796	0.0296	0.04957			0.05563
			8.5	8.92	0.59214	0.89498	0.0296	0.051346			0.05612
			9.5	8.84	0.58786	0.893797	0.0296	0.051617			0.05762
			10.5	8.43	0.58261	0.887632	0.0296	0.053045			0.05812
			11.5	8.06	0.57647	0.881911	0.0296	0.054386			0.05909
			12.5	7.74	0.56962	0.876835	0.0296	0.055589			0.06156
			13.5	7.45	0.56223	0.872125	0.0296	0.056716			0.06214
			14.5	7.19	0.55442	0.867809	0.0296	0.057756			0.0632
			15.5	6.95	0.54632	0.863742	0.0296	0.058742			0.06428
			16.5	6.73	0.53803	0.859941	0.0296	0.059669			0.06535
			17.5	6.54	0.52965	0.856599	0.0296	0.060487			0.06642
		1033	0.5	10.52	0.39475	0.913847	0.0205	0.032789	0.0346091	0.0452415	0.04252
			1.5	10.52	0.42555	0.913835	0.0205	0.032792			0.04336
			2.5	11.15	0.43798	0.922034	0.0205	0.031306			0.04121
			3.5	11.77	0.44482	0.929822	0.0205	0.029942			0.03894
			4.5	10.86	0.4504	0.918294	0.0205	0.031977			0.04206
			5.5	10.9	0.45239	0.918813	0.0205	0.031883			0.04213
			6.5	10.11	0.45326	0.908327	0.0205	0.033819			0.04567
			7.5	9.46	0.45236	0.899309	0.0205	0.035551			0.0459
			8.5	8.92	0.45012	0.891522	0.0205	0.037097			0.04984
			9.5	8.84	0.44678	0.890344	0.0205	0.037335			0.04793
			10.5	8.43	0.4427	0.884203	0.0205	0.038593			0.05067
			11.5	8.06	0.43795	0.878504	0.0205	0.039787			0.05165
			12.5	7.74	0.43266	0.873447	0.0205	0.040867			0.05265
			13.5	7.45	0.42695	0.868755	0.0205	0.041887			0.0536
			14.5	7.19	0.42094	0.864456	0.0205	0.042837			0.05474
			15.5	6.95	0.4147	0.860405	0.0205	0.043744			0.05392
			16.5	6.73	0.40833	0.856618	0.0205	0.044603			0.05508
			17.5	6.54	0.40189	0.85329	0.0205	0.045367			0.05624
4	SLC	475	0.5	10.52	0.2571	0.737781	0.0049	0.037505	0.03980131	0.0304979	0.02799
			1.5	10.52	0.27639	0.736553	0.0049	0.037807			0.02819
			2.5	11.15	0.28355	0.743278	0.0049	0.036176			0.02758
			3.5	11.77	0.28694	0.749876	0.0049	0.034625			0.02511
			4.5	10.86	0.28938	0.739855	0.0049	0.037			0.02859
			5.5	10.9	0.28941	0.740294	0.0049	0.036893			0.0287
			6.5	10.11	0.28862	0.731518	0.0049	0.039061			0.03058
			7.5	9.46	0.28664	0.72409	0.0049	0.040964			0.03268
			8.5	8.92	0.28377	0.717731	0.0049	0.042642			0.03338
			9.5	8.84	0.28017	0.716815	0.0049	0.042888			0.03353
			10.5	8.43	0.2761	0.711834	0.0049	0.044238			0.03423
			11.5	8.06	0.27161	0.707226	0.0049	0.045511			0.03536
			12.5	7.74	0.26683	0.703151	0.0049	0.046655			0.03665
			13.5	7.45	0.26182	0.699378	0.0049	0.04773			0.03607

			14.5	7.19	0.25669	0.695931	0.0049	0.048725			0.03745
			15.5	6.95	0.25149	0.692691	0.0049	0.04967			0.03745
			16.5	6.73	0.24628	0.689672	0.0049	0.050561			0.03883
			17.5	6.54	0.24112	0.687032	0.0049	0.051346			0.03818
		2475	0.5	10.52	0.55924	0.917405	0.0271	0.042423	0.04443844	0.052626	0.04969
			1.5	10.52	0.60166	0.917405	0.0271	0.042423			0.05079
			2.5	11.15	0.6178	0.925636	0.0271	0.040728			0.04892
			3.5	11.77	0.62582	0.933452	0.0271	0.039162			0.04636
			4.5	10.86	0.63184	0.921885	0.0271	0.041495			0.04958
			5.5	10.9	0.63266	0.922406	0.0271	0.041388			0.04964
			6.5	10.11	0.63175	0.911881	0.0271	0.043586			0.05112
			7.5	9.46	0.62828	0.902828	0.0271	0.045536			0.05475
			8.5	8.92	0.62286	0.895011	0.0271	0.047263			0.05527
			9.5	8.84	0.61586	0.893828	0.0271	0.047528			0.05671
			10.5	8.43	0.60784	0.887663	0.0271	0.048921			0.05748
			11.5	8.06	0.59889	0.881942	0.0271	0.050234			0.05824
			12.5	7.74	0.58926	0.876865	0.0271	0.051416			0.06056
			13.5	7.45	0.57912	0.872155	0.0271	0.052524			0.06148
			14.5	7.19	0.56865	0.867839	0.0271	0.053551			0.06257
			15.5	6.95	0.55798	0.863772	0.0271	0.054527			0.06367
			16.5	6.73	0.54726	0.859971	0.0271	0.055446			0.06477
			17.5	6.54	0.53658	0.856629	0.0271	0.05626			0.06585
		1033	0.5	10.52	0.37575	0.914479	0.0184	0.029391	0.03111954	0.0427113	0.03893
			1.5	10.52	0.40412	0.914455	0.0184	0.029395			0.04004
			2.5	11.15	0.41481	0.922661	0.0184	0.027999			0.03958
			3.5	11.77	0.42003	0.930457	0.0184	0.026719			0.03719
			4.5	10.86	0.42388	0.918915	0.0184	0.02863			0.0404
			5.5	10.9	0.42423	0.919435	0.0184	0.028542			0.04045
			6.5	10.11	0.4234	0.908939	0.0184	0.030363			0.04213
			7.5	9.46	0.42084	0.899914	0.0184	0.031998			0.0457
			8.5	8.92	0.41697	0.892122	0.0184	0.033462			0.04625
			9.5	8.84	0.41205	0.890943	0.0184	0.033687			0.04635
			10.5	8.43	0.40643	0.884798	0.0184	0.034881			0.04702
			11.5	8.06	0.4002	0.879095	0.0184	0.036017			0.04796
			12.5	7.74	0.39352	0.874034	0.0184	0.037046			0.04896
			13.5	7.45	0.38651	0.869339	0.0184	0.03802			0.04993
			14.5	7.19	0.37928	0.865037	0.0184	0.038928			0.05113
			15.5	6.95	0.37194	0.860983	0.0184	0.039797			0.05234
			16.5	6.73	0.36457	0.857195	0.0184	0.040621			0.05355
			17.5	6.54	0.35725	0.853864	0.0184	0.041355			0.05472
4	San Fran	475	0.5	10.52	0.47677	0.917284	0.0255	0.040052	0.04202804	0.041346	0.03925
			1.5	10.52	0.51402	0.917283	0.0255	0.040052			0.03909
			2.5	11.15	0.5291	0.925513	0.0255	0.038402			0.03854
			3.5	11.77	0.53744	0.933328	0.0255	0.03688			0.03602
			4.5	10.86	0.54426	0.921762	0.0255	0.039148			0.03997
			5.5	10.9	0.54675	0.922283	0.0255	0.039044			0.038
			6.5	10.11	0.5479	0.911759	0.0255	0.041186			0.04001
			7.5	9.46	0.54691	0.902708	0.0255	0.043091			0.0428
			8.5	8.92	0.54431	0.894892	0.0255	0.044781			0.04338
			9.5	8.84	0.54037	0.893709	0.0255	0.04504			0.04495
			10.5	8.43	0.53555	0.887545	0.0255	0.046406			0.04585
			11.5	8.06	0.52991	0.881825	0.0255	0.047697			0.04683
			12.5	7.74	0.52361	0.876749	0.0255	0.048859			0.04784
			13.5	7.45	0.51682	0.872039	0.0255	0.049952			0.04892
			14.5	7.19	0.50964	0.867723	0.0255	0.050965			0.04864
			15.5	6.95	0.50219	0.863657	0.0255	0.05193			0.04971
			16.5	6.73	0.49458	0.859856	0.0255	0.05284			0.05079

			17.5	6.54	0.48687	0.856515	0.0255	0.053646			0.05189
		2475	0.5	10.52	0.79229	0.917413	0.0379	0.058852	0.06094475	0.0562647	0.05437
			1.5	10.52	0.85477	0.917413	0.0379	0.058852			0.0543
			2.5	11.15	0.88053	0.925644	0.0379	0.056977			0.0523
			3.5	11.77	0.8952	0.93346	0.0379	0.055219			0.05015
			4.5	10.86	0.90743	0.921893	0.0379	0.057829			0.05329
			5.5	10.9	0.91253	0.922414	0.0379	0.05771			0.0533
			6.5	10.11	0.91546	0.911889	0.0379	0.060121			0.05524
			7.5	9.46	0.91489	0.902836	0.0379	0.062217			0.05721
			8.5	8.92	0.91166	0.895019	0.0379	0.064039			0.05921
			9.5	8.84	0.90623	0.893836	0.0379	0.064315			0.05919
			10.5	8.43	0.89932	0.887671	0.0379	0.065757			0.06122
			11.5	8.06	0.89104	0.88195	0.0379	0.067095			0.06218
			12.5	7.74	0.88165	0.876873	0.0379	0.068282			0.06316
			13.5	7.45	0.87139	0.872163	0.0379	0.06938			0.06559
			14.5	7.19	0.86046	0.867847	0.0379	0.070382			0.06621
			15.5	6.95	0.84902	0.86378	0.0379	0.071323			0.06721
			16.5	6.73	0.83723	0.859978	0.0379	0.072198			0.06821
			17.5	6.54	0.82524	0.856637	0.0379	0.072962			0.06922
		1033	0.5	10.52	0.60352	0.917412	0.0325	0.05092	0.05302163	0.0503382	0.04823
			1.5	10.52	0.65092	0.917412	0.0325	0.05092			0.04816
			2.5	11.15	0.67029	0.925642	0.0325	0.049101			0.04769
			3.5	11.77	0.68118	0.933458	0.0325	0.047408			0.04546
			4.5	10.86	0.69018	0.921891	0.0325	0.049926			0.04715
			5.5	10.9	0.69373	0.922412	0.0325	0.049811			0.04715
			6.5	10.11	0.6956	0.911887	0.0325	0.052161			0.04911
			7.5	9.46	0.69479	0.902834	0.0325	0.054227			0.05127
			8.5	8.92	0.69194	0.895017	0.0325	0.05604			0.0533
			9.5	8.84	0.68741	0.893835	0.0325	0.056316			0.05328
			10.5	8.43	0.68176	0.887669	0.0325	0.057767			0.05407
			11.5	8.06	0.67506	0.881948	0.0325	0.059125			0.05631
			12.5	7.74	0.66753	0.876871	0.0325	0.060338			0.05727
			13.5	7.45	0.65935	0.872161	0.0325	0.06147			0.05825
			14.5	7.19	0.65067	0.867845	0.0325	0.062511			0.05924
			15.5	6.95	0.64162	0.863778	0.0325	0.063496			0.06026
			16.5	6.73	0.63233	0.859977	0.0325	0.064418			0.06128
			17.5	6.54	0.62291	0.856635	0.0325	0.065229			0.06231
4	San Jose	475	0.5	10.52	0.42836	0.916968	0.0257	0.040345	0.04232681	0.04118	0.03939
			1.5	10.52	0.46028	0.916964	0.0257	0.040346			0.03922
			2.5	11.15	0.47194	0.925191	0.0257	0.03869			0.03861
			3.5	11.77	0.4773	0.933004	0.0257	0.037162			0.0361
			4.5	10.86	0.48105	0.921441	0.0257	0.039439			0.03809
			5.5	10.9	0.48074	0.921962	0.0257	0.039334			0.03813
			6.5	10.11	0.47906	0.911441	0.0257	0.041484			0.04014
			7.5	9.46	0.47539	0.902392	0.0257	0.043394			0.04292
			8.5	8.92	0.47022	0.894579	0.0257	0.045089			0.04346
			9.5	8.84	0.46384	0.893397	0.0257	0.045349			0.04303
			10.5	8.43	0.45669	0.887235	0.0257	0.046719			0.04598
			11.5	8.06	0.44885	0.881516	0.0257	0.048013			0.04696
			12.5	7.74	0.44053	0.876442	0.0257	0.049178			0.04797
			13.5	7.45	0.43187	0.871734	0.0257	0.050273			0.049
			14.5	7.19	0.423	0.86742	0.0257	0.051288			0.04877
			15.5	6.95	0.41404	0.863355	0.0257	0.052254			0.04984
			16.5	6.73	0.4051	0.859556	0.0257	0.053165			0.05093
			17.5	6.54	0.39627	0.856216	0.0257	0.053972			0.05004
		2475	0.5	10.52	0.65495	0.917413	0.0379	0.058939	0.06103151	0.0563062	0.05442
			1.5	10.52	0.70375	0.917413	0.0379	0.058939			0.05435

			2.5	11.15	0.72159	0.925644	0.0379	0.057065			0.05234
			3.5	11.77	0.72978	0.933459	0.0379	0.055306			0.05018
			4.5	10.86	0.73551	0.921892	0.0379	0.057916			0.05333
			5.5	10.9	0.73504	0.922414	0.0379	0.057798			0.05335
			6.5	10.11	0.73248	0.911888	0.0379	0.060209			0.05528
			7.5	9.46	0.72686	0.902835	0.0379	0.062304			0.05725
			8.5	8.92	0.71895	0.895018	0.0379	0.064126			0.05925
			9.5	8.84	0.7092	0.893836	0.0379	0.064402			0.05923
			10.5	8.43	0.69826	0.887671	0.0379	0.065843			0.06126
			11.5	8.06	0.68628	0.881949	0.0379	0.067181			0.06223
			12.5	7.74	0.67356	0.876873	0.0379	0.068367			0.0632
			13.5	7.45	0.66031	0.872162	0.0379	0.069464			0.06561
			14.5	7.19	0.64675	0.867846	0.0379	0.070466			0.06625
			15.5	6.95	0.63306	0.863779	0.0379	0.071406			0.06725
			16.5	6.73	0.61939	0.859978	0.0379	0.07228			0.06826
			17.5	6.54	0.60589	0.856636	0.0379	0.073043			0.06926
		1033	0.5	10.52	0.52392	0.917393	0.0326	0.051087	0.05318939	0.0503977	0.04828
			1.5	10.52	0.56298	0.917393	0.0326	0.051087			0.04821
			2.5	11.15	0.57729	0.925623	0.0326	0.049266			0.04773
			3.5	11.77	0.58388	0.933439	0.0326	0.047571			0.04554
			4.5	10.86	0.5885	0.921872	0.0326	0.050092			0.04718
			5.5	10.9	0.58818	0.922393	0.0326	0.049977			0.04719
			6.5	10.11	0.58618	0.911868	0.0326	0.052329			0.04915
			7.5	9.46	0.58174	0.902816	0.0326	0.054396			0.05135
			8.5	8.92	0.57546	0.894999	0.0326	0.05621			0.05338
			9.5	8.84	0.56771	0.893816	0.0326	0.056487			0.05333
			10.5	8.43	0.55901	0.887651	0.0326	0.057938			0.05411
			11.5	8.06	0.54948	0.88193	0.0326	0.059296			0.05639
			12.5	7.74	0.53935	0.876853	0.0326	0.060509			0.05735
			13.5	7.45	0.52879	0.872143	0.0326	0.061641			0.05834
			14.5	7.19	0.51799	0.867827	0.0326	0.062682			0.05933
			15.5	6.95	0.50708	0.86376	0.0326	0.063666			0.06034
			16.5	6.73	0.49618	0.859959	0.0326	0.064588			0.06137
			17.5	6.54	0.48541	0.856617	0.0326	0.065399			0.06238
4	Santa Monica	475	0.5	10.52	0.38227	0.914422	0.0213	0.034004	0.03585593	0.0407945	0.03846
			1.5	10.52	0.41093	0.914403	0.0213	0.034008			0.03808
			2.5	11.15	0.42154	0.922609	0.0213	0.032492			0.03725
			3.5	11.77	0.42656	0.930403	0.0213	0.031098			0.03666
			4.5	10.86	0.43016	0.918865	0.0213	0.033177			0.0389
			5.5	10.9	0.43016	0.919384	0.0213	0.033081			0.03894
			6.5	10.11	0.42895	0.90889	0.0213	0.035055			0.04088
			7.5	9.46	0.42598	0.899866	0.0213	0.03682			0.04161
			8.5	8.92	0.42166	0.892074	0.0213	0.038393			0.04386
			9.5	8.84	0.41627	0.890895	0.0213	0.038635			0.04374
			10.5	8.43	0.41018	0.88475	0.0213	0.039915			0.04466
			11.5	8.06	0.40348	0.879048	0.0213	0.041127			0.04566
			12.5	7.74	0.39632	0.873988	0.0213	0.042224			0.04668
			13.5	7.45	0.38885	0.869293	0.0213	0.043259			0.04771
			14.5	7.19	0.38119	0.864991	0.0213	0.044221			0.04751
			15.5	6.95	0.37342	0.860937	0.0213	0.04514			0.04861
			16.5	6.73	0.36566	0.857149	0.0213	0.04601			0.04973
			17.5	6.54	0.35796	0.853818	0.0213	0.046783			0.05087
		2475	0.5	10.52	0.64553	0.917413	0.0355	0.055311	0.05741962	0.0565826	0.05481
			1.5	10.52	0.69428	0.917413	0.0355	0.055311			0.05466
			2.5	11.15	0.71264	0.925643	0.0355	0.053453			0.05266
			3.5	11.77	0.72161	0.933459	0.0355	0.051717			0.05036
			4.5	10.86	0.72823	0.921892	0.0355	0.054296			0.05363

			5.5	10.9	0.72882	0.922413	0.0355	0.054179			0.05364
			6.5	10.11	0.7274	0.911888	0.0355	0.056574			0.05554
			7.5	9.46	0.72301	0.902835	0.0355	0.058666			0.05749
			8.5	8.92	0.71636	0.895018	0.0355	0.060494			0.05949
			9.5	8.84	0.7079	0.893835	0.0355	0.060772			0.05947
			10.5	8.43	0.69825	0.88767	0.0355	0.062225			0.0615
			11.5	8.06	0.68755	0.881949	0.0355	0.063581			0.06246
			12.5	7.74	0.67607	0.876872	0.0355	0.064787			0.06344
			13.5	7.45	0.66402	0.872162	0.0355	0.065907			0.06574
			14.5	7.19	0.6516	0.867846	0.0355	0.066934			0.0665
			15.5	6.95	0.63899	0.863779	0.0355	0.067901			0.06751
			16.5	6.73	0.62633	0.859978	0.0355	0.068804			0.06853
			17.5	6.54	0.61375	0.856636	0.0355	0.069595			0.06954
		1033	0.5	10.52	0.47478	0.917331	0.0291	0.045595	0.04765275	0.0504007	0.04867
			1.5	10.52	0.5105	0.91733	0.0291	0.045595			0.04852
			2.5	11.15	0.52385	0.925561	0.0291	0.043847			0.04621
			3.5	11.77	0.53026	0.933376	0.0291	0.042227			0.04408
			4.5	10.86	0.53493	0.921809	0.0291	0.044638			0.04749
			5.5	10.9	0.53514	0.922331	0.0291	0.044528			0.04751
			6.5	10.11	0.53387	0.911806	0.0291	0.046792			0.04943
			7.5	9.46	0.53041	0.902754	0.0291	0.048794			0.0518
			8.5	8.92	0.52528	0.894938	0.0291	0.050562			0.05383
			9.5	8.84	0.51882	0.893755	0.0291	0.050832			0.0538
			10.5	8.43	0.51149	0.887591	0.0291	0.052254			0.05434
			11.5	8.06	0.50339	0.88187	0.0291	0.053591			0.05683
			12.5	7.74	0.49473	0.876794	0.0291	0.054791			0.05781
			13.5	7.45	0.48566	0.872084	0.0291	0.055915			0.05879
			14.5	7.19	0.47633	0.867768	0.0291	0.056953			0.0598
			15.5	6.95	0.46687	0.863701	0.0291	0.057938			0.06083
			16.5	6.73	0.45739	0.8599	0.0291	0.058865			0.0599
			17.5	6.54	0.44798	0.856559	0.0291	0.059683			0.06095
4	Seattle	475	0.5	10.52	0.34558	0.906341	0.0177	0.029736	0.03148406	0.0393701	0.03785
			1.5	10.52	0.3715	0.906271	0.0177	0.029749			0.03738
			2.5	11.15	0.38112	0.914408	0.0177	0.028342			0.03688
			3.5	11.77	0.38568	0.922146	0.0177	0.027051			0.03424
			4.5	10.86	0.38897	0.910683	0.0177	0.028979			0.03785
			5.5	10.9	0.389	0.911198	0.0177	0.028891			0.0379
			6.5	10.11	0.38794	0.900787	0.0177	0.030726			0.03826
			7.5	9.46	0.38528	0.891839	0.0177	0.032373			0.04051
			8.5	8.92	0.38141	0.884114	0.0177	0.033846			0.04101
			9.5	8.84	0.37657	0.882947	0.0177	0.034072			0.04104
			10.5	8.43	0.3711	0.876856	0.0177	0.035274			0.04394
			11.5	8.06	0.36508	0.871204	0.0177	0.036416			0.04498
			12.5	7.74	0.35864	0.866188	0.0177	0.037451			0.04404
			13.5	7.45	0.35192	0.861536	0.0177	0.03843			0.0451
			14.5	7.19	0.34502	0.857272	0.0177	0.039343			0.04696
			15.5	6.95	0.33803	0.853256	0.0177	0.040216			0.04616
			16.5	6.73	0.33103	0.849502	0.0177	0.041044			0.04738
			17.5	6.54	0.3241	0.846202	0.0177	0.041781			0.04859
		2475	0.5	10.52	0.60947	0.917412	0.0336	0.052492	0.05459946	0.055878	0.05356
			1.5	10.52	0.65563	0.917412	0.0336	0.052492			0.05325
			2.5	11.15	0.67313	0.925642	0.0336	0.050657			0.05115
			3.5	11.77	0.68178	0.933458	0.0336	0.048947			0.05073
			4.5	10.86	0.68824	0.921891	0.0336	0.051489			0.0522
			5.5	10.9	0.68902	0.922412	0.0336	0.051373			0.05223
			6.5	10.11	0.68791	0.911887	0.0336	0.053742			0.05406
			7.5	9.46	0.68401	0.902834	0.0336	0.05582			0.05796

			8.5	8.92	0.67797	0.895017	0.0336	0.057641			0.05994
			9.5	8.84	0.67023	0.893835	0.0336	0.057919			0.05995
			10.5	8.43	0.66136	0.88767	0.0336	0.059373			0.06197
			11.5	8.06	0.6515	0.881948	0.0336	0.060732			0.06294
			12.5	7.74	0.64088	0.876871	0.0336	0.061944			0.06392
			13.5	7.45	0.62972	0.872161	0.0336	0.063074			0.064
			14.5	7.19	0.61821	0.867845	0.0336	0.064112			0.06503
			15.5	6.95	0.60649	0.863778	0.0336	0.065092			0.06606
			16.5	6.73	0.59471	0.859977	0.0336	0.066009			0.06711
			17.5	6.54	0.58299	0.856635	0.0336	0.066815			0.06815
		1033	0.5	10.52	0.4494	0.917128	0.0265	0.041679	0.04368263	0.0495047	0.04788
			1.5	10.52	0.48329	0.917126	0.0265	0.041679			0.04732
			2.5	11.15	0.49601	0.925355	0.0265	0.039998			0.04535
			3.5	11.77	0.50218	0.933168	0.0265	0.038445			0.04476
			4.5	10.86	0.50672	0.921604	0.0265	0.040758			0.04622
			5.5	10.9	0.50705	0.922125	0.0265	0.040652			0.04628
			6.5	10.11	0.50597	0.911603	0.0265	0.042834			0.048
			7.5	9.46	0.50283	0.902553	0.0265	0.04477			0.05031
			8.5	8.92	0.49811	0.894738	0.0265	0.046486			0.05265
			9.5	8.84	0.49213	0.893556	0.0265	0.046748			0.05267
			10.5	8.43	0.48532	0.887393	0.0265	0.048134			0.05481
			11.5	8.06	0.47779	0.881673	0.0265	0.049441			0.05573
			12.5	7.74	0.46971	0.876598	0.0265	0.050616			0.0567
			13.5	7.45	0.46124	0.871889	0.0265	0.051721			0.05769
			14.5	7.19	0.45252	0.867574	0.0265	0.052743			0.05878
			15.5	6.95	0.44367	0.863509	0.0265	0.053716			0.05985
			16.5	6.73	0.43479	0.859709	0.0265	0.054633			0.05898
			17.5	6.54	0.42598	0.856368	0.0265	0.055444			0.06008
5	Butte	475	0.5	38.63	0.07424	1	0	2.36E-18	2.3599E-18	0	0
			1.5	38.63	0.08837	1	0	2.36E-18			0
			2.5	37.76	0.09618	1	0	2.36E-18			0
			3.5	36.48	0.10234	1	0	2.36E-18			0
			4.5	34.15	0.10873	1	0	2.36E-18			0
			5.5	35.45	0.10972	1	0	2.36E-18			0
			6.5	33.79	0.11242	1	0	2.36E-18			0
			7.5	32.35	0.11364	1	0	2.36E-18			0
			8.5	31.07	0.11379	1	0	2.36E-18			0
			9.5	31.42	0.11302	1	0	2.36E-18			0
			10.5	30.36	0.11197	1	0	2.36E-18			0
			11.5	29.4	0.11045	1	0	2.36E-18			0
			12.5	28.51	0.10859	1	0	2.36E-18			0
			13.5	27.7	0.10649	1	0	2.36E-18			0
			14.5	26.94	0.10422	1	0	2.36E-18			0
			15.5	26.23	0.10185	1	0	2.36E-18			0
			16.5	25.57	0.09943	1	0	2.36E-18			0
			17.5	24.94	0.097	1	0	2.36E-18			0
		2475	0.5	38.63	0.13203	1.006927	0	0	0	0	0
			1.5	38.63	0.15719	1.006927	0	0			0
			2.5	37.76	0.17109	1.006927	0	0			0
			3.5	36.48	0.18208	1.006927	0	0			0
			4.5	34.15	0.19347	1.006927	0	0			0
			5.5	35.45	0.19528	1.006927	0	0			0
			6.5	33.79	0.20011	1.006927	0	0			0
			7.5	32.35	0.20231	1.006927	0	0			0
			8.5	31.07	0.20262	1.006927	0	0			0
			9.5	31.42	0.20129	1.006927	0	0			0
			10.5	30.36	0.19946	1.006927	0	0			0

			11.5	29.4	0.1968	1.006927	0	0			0
			12.5	28.51	0.19353	1.006927	0	0			0
			13.5	27.7	0.18982	1.006927	0	0			0
			14.5	26.94	0.18581	1.006927	0	0			0
			15.5	26.23	0.18161	1.006927	0	0			0
			16.5	25.57	0.17733	1.006897	0	0			0
			17.5	24.94	0.17304	1.00684	0	0			0
		1033	0.5	38.63	0.14275	1	0	2.36E-18	1.9649E-07	0	0
			1.5	38.63	0.16994	1	0	2.36E-18			0
			2.5	37.76	0.18494	1	0	2.36E-18			0
			3.5	36.48	0.19679	1	0	2.36E-18			0
			4.5	34.15	0.20908	1	0	2.36E-18			0
			5.5	35.45	0.21099	1	0	2.36E-18			0
			6.5	33.79	0.21618	1	0	2.36E-18			0
			7.5	32.35	0.21852	1	0	2.36E-18			0
			8.5	31.07	0.21881	1	0	2.36E-18			0
			9.5	31.42	0.21733	1	0	2.36E-18			0
			10.5	30.36	0.21531	1	0	2.36E-18			0
			11.5	29.4	0.2124	1	0	2.36E-18			0
			12.5	28.51	0.20882	1	0	2.36E-18			0
			13.5	27.7	0.20477	1	0	2.36E-18			0
			14.5	26.94	0.2004	0.999974	0	8.2E-07			0
			15.5	26.23	0.19584	0.999876	0	3.87E-06			0
			16.5	25.57	0.19119	0.999737	0	8.26E-06			0
			17.5	24.94	0.18653	0.999561	0	1.38E-05			0
5	Charleston	475	0.5	38.63	0.11656	1.001177	0	0	0	0	0
			1.5	38.63	0.13918	1.001177	0	0			0
			2.5	37.76	0.15199	1.001177	0	0			0
			3.5	36.48	0.16236	1.001177	0	0			0
			4.5	34.15	0.17324	1.001177	0	0			0
			5.5	35.45	0.17564	1.001177	0	0			0
			6.5	33.79	0.18086	1.001177	0	0			0
			7.5	32.35	0.18378	1.001177	0	0			0
			8.5	31.07	0.18504	1.001177	0	0			0
			9.5	31.42	0.18483	1.001177	0	0			0
			10.5	30.36	0.1842	1.001177	0	0			0
			11.5	29.4	0.1828	1.001177	0	0			0
			12.5	28.51	0.18081	1.001177	0	0			0
			13.5	27.7	0.17838	1.001177	0	0			0
			14.5	26.94	0.17563	1.001177	0	0			0
			15.5	26.23	0.17266	1.001177	0	0			0
			16.5	25.57	0.16954	1.001177	0	0			0
			17.5	24.94	0.16635	1.001164	0	0			0
		2475	0.5	38.63	0.40199	1.374589	0.024	0	0.00193855	0.0022484	0
			1.5	38.63	0.48096	1.374589	0.024	0			0
			2.5	37.76	0.52646	1.374589	0.024	0			0
			3.5	36.48	0.56385	1.374589	0.024	0			0
			4.5	34.15	0.60336	1.37404	0.024	0			0
			5.5	35.45	0.61363	1.374589	0.024	0			0
			6.5	33.79	0.63398	1.37173	0.024	0			0
			7.5	32.35	0.64649	1.342499	0.024	0.000483			0.00156
			8.5	31.07	0.65334	1.279918	0.024	0.002353			0.00366
			9.5	31.42	0.65514	1.297725	0.024	0.001759			0.00223
			10.5	30.36	0.65548	1.238585	0.024	0.003959			0.00421
			11.5	29.4	0.6531	1.194404	0.024	0.006094			0.00794
			12.5	28.51	0.64863	1.159122	0.024	0.00818			0.00993
			13.5	27.7	0.64254	1.12984	0.024	0.010218			0.01047

			14.5	26.94	0.63521	1.103809	0.024	0.012301			0.01293
			15.5	26.23	0.62697	1.080097	0.024	0.014447			0.01372
			16.5	25.57	0.61807	1.064808	0.024	0.015969			0.01452
			17.5	24.94	0.60874	1.059294	0.024	0.016546			0.0158
		1033	0.5	38.63	0.22909	1.361289	0.0148	0	2.2431E-07	0.000198	0
			1.5	38.63	0.27392	1.361289	0.0148	0			0
			2.5	37.76	0.2996	1.361289	0.0148	0			0
			3.5	36.48	0.3206	1.361289	0.0148	0			0
			4.5	34.15	0.34273	1.361289	0.0148	0			0
			5.5	35.45	0.34821	1.361289	0.0148	0			0
			6.5	33.79	0.35935	1.361289	0.0148	0			0
			7.5	32.35	0.36601	1.361289	0.0148	0			0
			8.5	31.07	0.36943	1.360491	0.0148	0			0
			9.5	31.42	0.36998	1.360954	0.0148	0			0
			10.5	30.36	0.36968	1.358225	0.0148	0			0
			11.5	29.4	0.36785	1.350737	0.0148	0			0
			12.5	28.51	0.36483	1.337558	0.0148	0			0
			13.5	27.7	0.36091	1.320361	0.0148	0			0.00139
			14.5	26.94	0.35632	1.30075	0.0148	0			0.00266
			15.5	26.23	0.35122	1.28061	0.0148	0			0.00388
			16.5	25.57	0.34579	1.261267	0.0148	0			0.00309
			17.5	24.94	0.34014	1.242636	0.0148	7.27E-05			0.0044
5	Eureka	475	0.5	38.63	0.40314	1.374591	0.0249	0	0.00220309	0.0023434	0
			1.5	38.63	0.48316	1.374591	0.0249	0			0
			2.5	37.76	0.52991	1.374591	0.0249	0			0
			3.5	36.48	0.5688	1.374591	0.0249	0			0
			4.5	34.15	0.61014	1.373929	0.0249	0			0
			5.5	35.45	0.62218	1.374591	0.0249	0			0
			6.5	33.79	0.64463	1.371124	0.0249	3.85E-05			0
			7.5	32.35	0.65932	1.338226	0.0249	0.000861			0.00135
			8.5	31.07	0.6684	1.271497	0.0249	0.003011			0.00342
			9.5	31.42	0.67242	1.288739	0.0249	0.002384			0.00398
			10.5	30.36	0.67502	1.231172	0.0249	0.004709			0.00597
			11.5	29.4	0.67486	1.189357	0.0249	0.006877			0.00774
			12.5	28.51	0.67255	1.15524	0.0249	0.009019			0.00989
			13.5	27.7	0.66854	1.126911	0.0249	0.011098			0.0105
			14.5	26.94	0.66319	1.101603	0.0249	0.01322			0.01103
			15.5	26.23	0.65681	1.078409	0.0249	0.01541			0.01388
			16.5	25.57	0.64964	1.063498	0.0249	0.016954			0.01474
			17.5	24.94	0.6419	1.05827	0.0249	0.017522			0.01411
		2475	0.5	38.63	0.95959	1.374593	0.0364	0.003519	0.00921434	0.0071795	0
			1.5	38.63	1.15079	1.374593	0.0364	0.003519			0
			2.5	37.76	1.26304	1.374517	0.0364	0.003522			0
			3.5	36.48	1.35684	1.360403	0.0364	0.004063			0
			4.5	34.15	1.45673	1.278297	0.0364	0.008023			0.00544
			5.5	35.45	1.4869	1.319439	0.0364	0.005851			0.00235
			6.5	33.79	1.54214	1.265463	0.0364	0.008789			0.00795
			7.5	32.35	1.57902	1.232909	0.0364	0.010948			0.01025
			8.5	31.07	1.60257	1.204681	0.0364	0.013098			0.01313
			9.5	31.42	1.61413	1.212584	0.0364	0.012468			0.01382
			10.5	30.36	1.62232	1.188027	0.0364	0.0145			0.01543
			11.5	29.4	1.62397	1.164186	0.0364	0.016697			0.0173
			12.5	28.51	1.62043	1.140725	0.0364	0.019095			0.01938
			13.5	27.7	1.61278	1.118277	0.0364	0.021628			0.02192
			14.5	26.94	1.60188	1.096304	0.0364	0.024349			0.02246
			15.5	26.23	1.58842	1.075015	0.0364	0.027228			0.02319
			16.5	25.57	1.57298	1.061242	0.0364	0.029225			0.02422

			17.5	24.94	1.55606	1.056736	0.0364	0.029901			0.0252
		1033	0.5	38.63	0.65004	1.374593	0.0315	0.001864	0.00608929	0.0045623	0
			1.5	38.63	0.77936	1.374593	0.0315	0.001864			0
			2.5	37.76	0.85512	1.374593	0.0315	0.001864			0
			3.5	36.48	0.91832	1.374502	0.0315	0.001867			0
			4.5	34.15	0.98557	1.327639	0.0315	0.003471			0.00114
			5.5	35.45	1.00558	1.36433	0.0315	0.002185			0
			6.5	33.79	1.04249	1.304391	0.0315	0.004411			0.00221
			7.5	32.35	1.06693	1.246793	0.0315	0.007247			0.00685
			8.5	31.07	1.08233	1.208323	0.0315	0.009628			0.0098
			9.5	31.42	1.0896	1.217585	0.0315	0.009014			0.00848
			10.5	30.36	1.09458	1.189507	0.0315	0.01096			0.01026
			11.5	29.4	1.09512	1.164644	0.0315	0.012913			0.01213
			12.5	28.51	1.09217	1.140877	0.0315	0.015003			0.01437
			13.5	27.7	1.08644	1.118334	0.0315	0.017208			0.01669
			14.5	26.94	1.07854	1.096328	0.0315	0.019589			0.01715
			15.5	26.23	1.06893	1.075026	0.0315	0.022126			0.01978
			16.5	25.57	1.05801	1.061247	0.0315	0.023897			0.0206
			17.5	24.94	1.04611	1.056739	0.0315	0.024499			0.0218
5	Memphis	475	0.5	38.63	0.13193	1.007078	0	0	0	0	0
			1.5	38.63	0.15784	1.007078	0	0			0
			2.5	37.76	0.17275	1.007078	0	0			0
			3.5	36.48	0.18499	1.007078	0	0			0
			4.5	34.15	0.19792	1.007078	0	0			0
			5.5	35.45	0.20126	1.007078	0	0			0
			6.5	33.79	0.2079	1.007078	0	0			0
			7.5	32.35	0.21196	1.007078	0	0			0
			8.5	31.07	0.21417	1.007078	0	0			0
			9.5	31.42	0.21472	1.007078	0	0			0
			10.5	30.36	0.21478	1.007078	0	0			0
			11.5	29.4	0.21396	1.007078	0	0			0
			12.5	28.51	0.21245	1.007078	0	0			0
			13.5	27.7	0.21041	1.007078	0	0			0
			14.5	26.94	0.20797	1.006973	0	0			0
			15.5	26.23	0.20523	1.00674	0	0			0
			16.5	25.57	0.20228	1.006374	0	0			0
			17.5	24.94	0.19918	1.005868	0	0			0
		2475	0.5	38.63	0.36529	1.374578	0.0252	4.25E-05	0.00191431	0.0022974	0
			1.5	38.63	0.4376	1.374578	0.0252	4.25E-05			0
			2.5	37.76	0.47968	1.374578	0.0252	4.25E-05			0
			3.5	36.48	0.51458	1.374578	0.0252	4.25E-05			0
			4.5	34.15	0.55161	1.374513	0.0252	4.4E-05			0
			5.5	35.45	0.56208	1.374578	0.0252	4.25E-05			0
			6.5	33.79	0.58192	1.373662	0.0252	6.36E-05			0
			7.5	32.35	0.5947	1.356954	0.0252	0.000465			0.00183
			8.5	31.07	0.60236	1.307971	0.0252	0.001857			0.00377
			9.5	31.42	0.60545	1.322329	0.0252	0.001413			0.00232
			10.5	30.36	0.60724	1.268489	0.0252	0.003256			0.00403
			11.5	29.4	0.60654	1.21587	0.0252	0.005612			0.00732
			12.5	28.51	0.60389	1.169408	0.0252	0.008282			0.00929
			13.5	27.7	0.59972	1.136758	0.0252	0.010568			0.01158
			14.5	26.94	0.59437	1.108643	0.0252	0.012857			0.01395
			15.5	26.23	0.58811	1.083528	0.0252	0.015186			0.01454
			16.5	25.57	0.58116	1.06728	0.0252	0.016851			0.01535
			17.5	24.94	0.57373	1.061088	0.0252	0.01752			0.01638
		1033	0.5	38.63	0.24175	1.364682	0.0157	0	2.2209E-05	0.000345	0
			1.5	38.63	0.28953	1.364682	0.0157	0			0

			2.5	37.76	0.31728	1.364682	0.0157	0			0
			3.5	36.48	0.34025	1.364682	0.0157	0			0
			4.5	34.15	0.3646	1.364682	0.0157	0			0
			5.5	35.45	0.37138	1.364682	0.0157	0			0
			6.5	33.79	0.38432	1.364682	0.0157	0			0
			7.5	32.35	0.39258	1.364664	0.0157	0			0
			8.5	31.07	0.39745	1.362454	0.0157	0			0
			9.5	31.42	0.39929	1.363489	0.0157	0			0
			10.5	30.36	0.40027	1.357417	0.0157	0			0
			11.5	29.4	0.3996	1.343458	0.0157	0			0
			12.5	28.51	0.39765	1.321867	0.0157	0			0.00122
			13.5	27.7	0.3947	1.296319	0.0157	0			0.00223
			14.5	26.94	0.39097	1.269232	0.0157	0			0.00308
			15.5	26.23	0.38665	1.242751	0.0157	0.000395			0.00584
			16.5	25.57	0.38189	1.218003	0.0157	0.001111			0.00663
			17.5	24.94	0.37683	1.19446	0.0157	0.001889			0.00766
5	Portland	475	0.5	38.63	0.19638	1.202662	0.0072	0	0	0	0
			1.5	38.63	0.23526	1.202662	0.0072	0			0
			2.5	37.76	0.25788	1.202662	0.0072	0			0
			3.5	36.48	0.27664	1.202662	0.0072	0			0
			4.5	34.15	0.29655	1.202662	0.0072	0			0
			5.5	35.45	0.30218	1.202662	0.0072	0			0
			6.5	33.79	0.31284	1.202662	0.0072	0			0
			7.5	32.35	0.31971	1.202662	0.0072	0			0
			8.5	31.07	0.32384	1.202643	0.0072	0			0
			9.5	31.42	0.3255	1.202662	0.0072	0			0
			10.5	30.36	0.32646	1.202199	0.0072	0			0
			11.5	29.4	0.32608	1.200027	0.0072	0			0
			12.5	28.51	0.32466	1.194915	0.0072	0			0
			13.5	27.7	0.32242	1.186667	0.0072	0			0
			14.5	26.94	0.31954	1.175631	0.0072	0			0.0019
			15.5	26.23	0.31617	1.162833	0.0072	0			0.00126
			16.5	25.57	0.31244	1.149379	0.0072	0			0.00259
			17.5	24.94	0.30844	1.135571	0.0072	0			0.0039
		2475	0.5	38.63	0.34922	1.374533	0.0296	0.001278	0.00332269	0.0029214	0
			1.5	38.63	0.41849	1.374533	0.0296	0.001278			0
			2.5	37.76	0.45893	1.374533	0.0296	0.001278			0
			3.5	36.48	0.49255	1.374533	0.0296	0.001278			0
			4.5	34.15	0.52827	1.374533	0.0296	0.001278			0
			5.5	35.45	0.5386	1.374533	0.0296	0.001278			0
			6.5	33.79	0.55794	1.374073	0.0296	0.001291			0
			7.5	32.35	0.57056	1.362003	0.0296	0.001641			0.00146
			8.5	31.07	0.5783	1.320395	0.0296	0.003019			0.00471
			9.5	31.42	0.58167	1.33294	0.0296	0.002574			0.00334
			10.5	30.36	0.58379	1.283292	0.0296	0.004507			0.00602
			11.5	29.4	0.58354	1.231688	0.0296	0.007079			0.00926
			12.5	28.51	0.58142	1.184863	0.0296	0.010043			0.01293
			13.5	27.7	0.57783	1.144581	0.0296	0.013184			0.0148
			14.5	26.94	0.57309	1.112174	0.0296	0.016183			0.01683
			15.5	26.23	0.56746	1.086131	0.0296	0.018942			0.01716
			16.5	25.57	0.56115	1.069214	0.0296	0.020917			0.01973
			17.5	24.94	0.55436	1.062529	0.0296	0.021739			0.02066
		1033	0.5	38.63	0.26578	1.369222	0.0205	0	0.0002674	0.0010288	0
			1.5	38.63	0.31848	1.369222	0.0205	0			0
			2.5	37.76	0.34921	1.369222	0.0205	0			0
			3.5	36.48	0.37474	1.369222	0.0205	0			0
			4.5	34.15	0.40185	1.369222	0.0205	0			0

			5.5	35.45	0.40965	1.369222	0.0205	0			0
			6.5	33.79	0.42429	1.369222	0.0205	0			0
			7.5	32.35	0.4338	1.368775	0.0205	0			0
			8.5	31.07	0.43961	1.362312	0.0205	0			0
			9.5	31.42	0.44208	1.364942	0.0205	0			0
			10.5	30.36	0.4436	1.351037	0.0205	0			0.0015
			11.5	29.4	0.44332	1.325862	0.0205	0			0.00204
			12.5	28.51	0.44162	1.293295	0.0205	0.00067			0.00405
			13.5	27.7	0.4388	1.259401	0.0205	0.001679			0.0078
			14.5	26.94	0.43511	1.226401	0.0205	0.002849			0.00956
			15.5	26.23	0.43074	1.195713	0.0205	0.004136			0.01014
			16.5	25.57	0.42587	1.167654	0.0205	0.005509			0.01272
			17.5	24.94	0.42063	1.141012	0.0205	0.007015			0.0138
5	SLC	475	0.5	38.63	0.17311	1.101812	0.0049	0	2.5378E-06	0	0
			1.5	38.63	0.20685	1.101812	0.0049	0			0
			2.5	37.76	0.22608	1.101812	0.0049	0			0
			3.5	36.48	0.24173	1.101812	0.0049	0			0
			4.5	34.15	0.25819	1.101812	0.0049	0			0
			5.5	35.45	0.26207	1.101812	0.0049	0			0
			6.5	33.79	0.27017	1.101812	0.0049	0			0
			7.5	32.35	0.27488	1.101812	0.0049	0			0
			8.5	31.07	0.27714	1.101812	0.0049	0			0
			9.5	31.42	0.27722	1.101812	0.0049	0			0
			10.5	30.36	0.27666	1.101812	0.0049	0			0
			11.5	29.4	0.27495	1.101655	0.0049	0			0
			12.5	28.51	0.27235	1.100928	0.0049	0			0
			13.5	27.7	0.26909	1.099392	0.0049	0			0
			14.5	26.94	0.26533	1.09691	0.0049	0			0
			15.5	26.23	0.26122	1.093598	0.0049	2.72E-05			0
			16.5	25.57	0.25686	1.089741	0.0049	0.00014			0
			17.5	24.94	0.25237	1.085462	0.0049	0.000267			0
		2475	0.5	38.63	0.37654	1.374581	0.0271	0.000542	0.00257252	0.002316	0
			1.5	38.63	0.45028	1.374581	0.0271	0.000542			0
			2.5	37.76	0.49258	1.374581	0.0271	0.000542			0
			3.5	36.48	0.52722	1.374581	0.0271	0.000542			0
			4.5	34.15	0.56374	1.37445	0.0271	0.000546			0
			5.5	35.45	0.57289	1.374581	0.0271	0.000542			0
			6.5	33.79	0.59137	1.37342	0.0271	0.000572			0
			7.5	32.35	0.6025	1.355082	0.0271	0.001055			0.00191
			8.5	31.07	0.6083	1.304792	0.0271	0.002631			0.00385
			9.5	31.42	0.60938	1.320489	0.0271	0.002096			0.00247
			10.5	30.36	0.60907	1.267332	0.0271	0.004088			0.00418
			11.5	29.4	0.60624	1.216072	0.0271	0.006578			0.00743
			12.5	28.51	0.60146	1.171037	0.0271	0.009355			0.00928
			13.5	27.7	0.59519	1.137685	0.0271	0.011847			0.01146
			14.5	26.94	0.58779	1.109659	0.0271	0.014277			0.01376
			15.5	26.23	0.57957	1.08454	0.0271	0.01675			0.01422
			16.5	25.57	0.57077	1.068239	0.0271	0.018518			0.01501
			17.5	24.94	0.56161	1.061965	0.0271	0.019236			0.01796
		1033	0.5	38.63	0.25299	1.370141	0.0184	0	5.7409E-05	0.0005548	0
			1.5	38.63	0.30244	1.370141	0.0184	0			0
			2.5	37.76	0.33074	1.370141	0.0184	0			0
			3.5	36.48	0.35385	1.370141	0.0184	0			0
			4.5	34.15	0.3782	1.370141	0.0184	0			0
			5.5	35.45	0.38415	1.370141	0.0184	0			0
			6.5	33.79	0.39634	1.370141	0.0184	0			0
			7.5	32.35	0.40358	1.370062	0.0184	0			0

			8.5	31.07	0.40723	1.36713	0.0184	0			0
			9.5	31.42	0.40771	1.36854	0.0184	0			0
			10.5	30.36	0.40726	1.361509	0.0184	0			0
			11.5	29.4	0.40511	1.346503	0.0184	0			0.00177
			12.5	28.51	0.40167	1.324439	0.0184	0			0.00279
			13.5	27.7	0.39723	1.29925	0.0184	0			0.00359
			14.5	26.94	0.39205	1.273168	0.0184	0.000517			0.00423
			15.5	26.23	0.38633	1.248106	0.0184	0.001239			0.00678
			16.5	25.57	0.38023	1.225015	0.0184	0.001996			0.00733
			17.5	24.94	0.37391	1.20327	0.0184	0.002799			0.00815
5	San Fran	475	0.5	38.63	0.32101	1.374398	0.0255	0.000125	0.00143916	0.0017461	0
			1.5	38.63	0.38469	1.374398	0.0255	0.000125			0
			2.5	37.76	0.42186	1.374398	0.0255	0.000125			0
			3.5	36.48	0.45277	1.374398	0.0255	0.000125			0
			4.5	34.15	0.4856	1.374398	0.0255	0.000125			0
			5.5	35.45	0.4951	1.374398	0.0255	0.000125			0
			6.5	33.79	0.51288	1.374344	0.0255	0.000127			0
			7.5	32.35	0.52447	1.368739	0.0255	0.000259			0
			8.5	31.07	0.53159	1.341603	0.0255	0.000956			0.0012
			9.5	31.42	0.53468	1.350565	0.0255	0.000715			0.00162
			10.5	30.36	0.53664	1.312166	0.0255	0.001826			0.00389
			11.5	29.4	0.53641	1.265865	0.0255	0.003484			0.00557
			12.5	28.51	0.53446	1.220362	0.0255	0.005537			0.00886
			13.5	27.7	0.53116	1.180074	0.0255	0.007793			0.009
			14.5	26.94	0.5268	1.143701	0.0255	0.01026			0.01122
			15.5	26.23	0.52162	1.110395	0.0255	0.012944			0.0138
			16.5	25.57	0.51583	1.079176	0.0255	0.01589			0.01443
			17.5	24.94	0.50958	1.067883	0.0255	0.017069			0.01552
		2475	0.5	38.63	0.53345	1.374593	0.0379	0.00407	0.00881507	0.005572	0
			1.5	38.63	0.63971	1.374593	0.0379	0.00407			0
			2.5	37.76	0.70206	1.374593	0.0379	0.00407			0
			3.5	36.48	0.75415	1.374593	0.0379	0.00407			0
			4.5	34.15	0.80962	1.35876	0.0379	0.004715			0.00194
			5.5	35.45	0.82632	1.373437	0.0379	0.004116			0
			6.5	33.79	0.85694	1.336629	0.0379	0.005698			0.00295
			7.5	32.35	0.87735	1.271977	0.0379	0.009213			0.00627
			8.5	31.07	0.89036	1.219911	0.0379	0.012898			0.01003
			9.5	31.42	0.89669	1.231677	0.0379	0.011988			0.01099
			10.5	30.36	0.90115	1.195755	0.0379	0.014922			0.0135
			11.5	29.4	0.90197	1.167306	0.0379	0.017597			0.01662
			12.5	28.51	0.89991	1.142027	0.0379	0.020266			0.01824
			13.5	27.7	0.89557	1.118864	0.0379	0.022973			0.0204
			14.5	26.94	0.88943	1.096587	0.0379	0.025831			0.02277
			15.5	26.23	0.88186	1.075162	0.0379	0.028828			0.02326
			16.5	25.57	0.8732	1.061324	0.0379	0.0309			0.02416
			17.5	24.94	0.86372	1.056784	0.0379	0.031603			0.02501
		1033	0.5	38.63	0.40636	1.374591	0.0325	0.002211	0.00528458	0.0033442	0
			1.5	38.63	0.48715	1.374591	0.0325	0.002211			0
			2.5	37.76	0.53444	1.374591	0.0325	0.002211			0
			3.5	36.48	0.57386	1.374591	0.0325	0.002211			0
			4.5	34.15	0.61579	1.373824	0.0325	0.002235			0
			5.5	35.45	0.62819	1.374591	0.0325	0.002211			0
			6.5	33.79	0.65114	1.370711	0.0325	0.002336			0
			7.5	32.35	0.66628	1.335805	0.0325	0.00357			0.00256
			8.5	31.07	0.67577	1.267384	0.0325	0.006676			0.00498
			9.5	31.42	0.68018	1.284675	0.0325	0.005793			0.004
			10.5	30.36	0.68315	1.228839	0.0325	0.008926			0.00838

			11.5	29.4	0.68334	1.187601	0.0325	0.011833			0.01174
			12.5	28.51	0.68136	1.154013	0.0325	0.014649			0.01339
			13.5	27.7	0.67765	1.126062	0.0325	0.017347			0.0153
			14.5	26.94	0.67258	1.101014	0.0325	0.020069			0.01742
			15.5	26.23	0.66645	1.077991	0.0325	0.022848			0.01984
			16.5	25.57	0.6595	1.063195	0.0325	0.024784			0.02041
			17.5	24.94	0.65196	1.058048	0.0325	0.025486			0.02144
5	San Jose	475	0.5	38.63	0.28842	1.373918	0.0257	0.000176	0.00077732	0.0010293	0
			1.5	38.63	0.34447	1.373918	0.0257	0.000176			0
			2.5	37.76	0.37629	1.373918	0.0257	0.000176			0
			3.5	36.48	0.4021	1.373918	0.0257	0.000176			0
			4.5	34.15	0.4292	1.373918	0.0257	0.000176			0
			5.5	35.45	0.43532	1.373918	0.0257	0.000176			0
			6.5	33.79	0.44844	1.373918	0.0257	0.000176			0
			7.5	32.35	0.45589	1.372907	0.0257	0.0002			0
			8.5	31.07	0.45923	1.36341	0.0257	0.00043			0
			9.5	31.42	0.45896	1.367538	0.0257	0.000329			0
			10.5	30.36	0.45761	1.350747	0.0257	0.000754			0.00145
			11.5	29.4	0.45436	1.323642	0.0257	0.001521			0.00201
			12.5	28.51	0.44965	1.291104	0.0257	0.002589			0.00403
			13.5	27.7	0.44385	1.258853	0.0257	0.003835			0.00782
			14.5	26.94	0.43724	1.228358	0.0257	0.005215			0.00961
			15.5	26.23	0.43006	1.20058	0.0257	0.00667			0.01022
			16.5	25.57	0.42251	1.175638	0.0257	0.008161			0.01283
			17.5	24.94	0.41475	1.15228	0.0257	0.009737			0.01393
		2475	0.5	38.63	0.44098	1.374592	0.0379	0.004093	0.00793152	0.0043398	0
			1.5	38.63	0.52668	1.374592	0.0379	0.004093			0
			2.5	37.76	0.57534	1.374592	0.0379	0.004093			0
			3.5	36.48	0.6148	1.374592	0.0379	0.004093			0
			4.5	34.15	0.65623	1.372708	0.0379	0.004167			0
			5.5	35.45	0.66559	1.374592	0.0379	0.004093			0
			6.5	33.79	0.68566	1.367933	0.0379	0.004359			0
			7.5	32.35	0.69704	1.324342	0.0379	0.006316			0.0034
			8.5	31.07	0.70215	1.256242	0.0379	0.010272			0.00861
			9.5	31.42	0.70173	1.273362	0.0379	0.009159			0.00778
			10.5	30.36	0.69968	1.224413	0.0379	0.012584			0.01017
			11.5	29.4	0.6947	1.185422	0.0379	0.015901			0.01499
			12.5	28.51	0.6875	1.153216	0.0379	0.0191			0.01623
			13.5	27.7	0.67863	1.125977	0.0379	0.022169			0.01811
			14.5	26.94	0.66853	1.101262	0.0379	0.02527			0.02026
			15.5	26.23	0.65755	1.078377	0.0379	0.028427			0.02272
			16.5	25.57	0.64601	1.063622	0.0379	0.030615			0.02337
			17.5	24.94	0.63414	1.058467	0.0379	0.031409			0.02431
		1033	0.5	38.63	0.35275	1.374562	0.0326	0.002247	0.00419619	0.0025296	0
			1.5	38.63	0.42134	1.374562	0.0326	0.002247			0
			2.5	37.76	0.46029	1.374562	0.0326	0.002247			0
			3.5	36.48	0.49189	1.374562	0.0326	0.002247			0
			4.5	34.15	0.52507	1.374562	0.0326	0.002247			0
			5.5	35.45	0.53261	1.374562	0.0326	0.002247			0
			6.5	33.79	0.54871	1.374226	0.0326	0.002258			0
			7.5	32.35	0.55787	1.364286	0.0326	0.002584			0
			8.5	31.07	0.56201	1.328362	0.0326	0.003903			0.00358
			9.5	31.42	0.56173	1.341093	0.0326	0.00341			0.00237
			10.5	30.36	0.56015	1.298122	0.0326	0.005202			0.00545
			11.5	29.4	0.55622	1.251385	0.0326	0.007618			0.0082
			12.5	28.51	0.55052	1.207859	0.0326	0.010402			0.01174
			13.5	27.7	0.54347	1.170319	0.0326	0.013306			0.01354

			14.5	26.94	0.53543	1.136767	0.0326	0.016362			0.0155
			15.5	26.23	0.52669	1.106225	0.0326	0.019576			0.01778
			16.5	25.57	0.5175	1.077804	0.0326	0.022981			0.01846
			17.5	24.94	0.50805	1.068264	0.0326	0.02422			0.01935
5	Santa Monica	475	0.5	38.63	0.25738	1.370068	0.0213	0	0.00014683	0.0006315	0
			1.5	38.63	0.30754	1.370068	0.0213	0			0
			2.5	37.76	0.33611	1.370068	0.0213	0			0
			3.5	36.48	0.35935	1.370068	0.0213	0			0
			4.5	34.15	0.38379	1.370068	0.0213	0			0
			5.5	35.45	0.38952	1.370068	0.0213	0			0
			6.5	33.79	0.40154	1.370068	0.0213	0			0
			7.5	32.35	0.4085	1.369951	0.0213	0			0
			8.5	31.07	0.41181	1.366637	0.0213	0			0
			9.5	31.42	0.41188	1.368234	0.0213	0			0
			10.5	30.36	0.41101	1.360654	0.0213	0			0
			11.5	29.4	0.40843	1.344966	0.0213	0			0.00155
			12.5	28.51	0.40453	1.322391	0.0213	0.000181			0.00239
			13.5	27.7	0.39964	1.297014	0.0213	0.000845			0.00497
			14.5	26.94	0.39402	1.271012	0.0213	0.001621			0.00525
			15.5	26.23	0.38787	1.246211	0.0213	0.002467			0.00743
			16.5	25.57	0.38137	1.223487	0.0213	0.003343			0.00967
			17.5	24.94	0.37466	1.202167	0.0213	0.004266			0.01051
		2475	0.5	38.63	0.43464	1.374592	0.0355	0.003198	0.00673394	0.003634	0
			1.5	38.63	0.5196	1.374592	0.0355	0.003198			0
			2.5	37.76	0.56821	1.374592	0.0355	0.003198			0
			3.5	36.48	0.60792	1.374592	0.0355	0.003198			0
			4.5	34.15	0.64974	1.372936	0.0355	0.003258			0
			5.5	35.45	0.65996	1.374592	0.0355	0.003198			0
			6.5	33.79	0.68091	1.368377	0.0355	0.003424			0
			7.5	32.35	0.69334	1.325779	0.0355	0.005164			0.00227
			8.5	31.07	0.69962	1.257	0.0355	0.008814			0.00628
			9.5	31.42	0.70045	1.274036	0.0355	0.007798			0.00551
			10.5	30.36	0.69967	1.224415	0.0355	0.010994			0.00987
			11.5	29.4	0.69599	1.185188	0.0355	0.014089			0.01101
			12.5	28.51	0.69007	1.152896	0.0355	0.017079			0.01444
			13.5	27.7	0.68244	1.125649	0.0355	0.019955			0.01622
			14.5	26.94	0.67354	1.100958	0.0355	0.022868			0.01801
			15.5	26.23	0.66371	1.078106	0.0355	0.025845			0.02035
			16.5	25.57	0.65324	1.063384	0.0355	0.027914			0.02296
			17.5	24.94	0.64237	1.05826	0.0355	0.028663			0.02387
		1033	0.5	38.63	0.31967	1.374469	0.0291	0.001132	0.00233599	0.0018191	0
			1.5	38.63	0.38206	1.374469	0.0291	0.001132			0
			2.5	37.76	0.41767	1.374469	0.0291	0.001132			0
			3.5	36.48	0.44671	1.374469	0.0291	0.001132			0
			4.5	34.15	0.47727	1.374469	0.0291	0.001132			0
			5.5	35.45	0.48459	1.374469	0.0291	0.001132			0
			6.5	33.79	0.49975	1.374463	0.0291	0.001132			0
			7.5	32.35	0.50865	1.370389	0.0291	0.001245			0
			8.5	31.07	0.51301	1.348764	0.0291	0.001885			0.00101
			9.5	31.42	0.51336	1.356983	0.0291	0.001634			0.00146
			10.5	30.36	0.51253	1.325859	0.0291	0.002641			0.00351
			11.5	29.4	0.50957	1.285821	0.0291	0.004183			0.0069
			12.5	28.51	0.50497	1.244693	0.0291	0.006116			0.00804
			13.5	27.7	0.49913	1.20755	0.0291	0.008229			0.01005
			14.5	26.94	0.49237	1.173984	0.0291	0.010496			0.012
			15.5	26.23	0.48493	1.143728	0.0291	0.012879			0.01431
			16.5	25.57	0.47704	1.116168	0.0291	0.015369			0.0169

			17.5	24.94	0.46888	1.089607	0.0291	0.018091			0.01766
5	Seattle	475	0.5	38.63	0.23268	1.357834	0.0177	0	1.2747E-05	0.0003611	0
			1.5	38.63	0.27803	1.357834	0.0177	0			0
			2.5	37.76	0.30388	1.357834	0.0177	0			0
			3.5	36.48	0.32492	1.357834	0.0177	0			0
			4.5	34.15	0.34704	1.357834	0.0177	0			0
			5.5	35.45	0.35225	1.357834	0.0177	0			0
			6.5	33.79	0.36315	1.357834	0.0177	0			0
			7.5	32.35	0.36948	1.357834	0.0177	0			0
			8.5	31.07	0.3725	1.356929	0.0177	0			0
			9.5	31.42	0.37261	1.357451	0.0177	0			0
			10.5	30.36	0.37186	1.354559	0.0177	0			0
			11.5	29.4	0.36956	1.346853	0.0177	0			0
			12.5	28.51	0.36607	1.333555	0.0177	0			0.00167
			13.5	27.7	0.36169	1.316453	0.0177	0			0.00284
			14.5	26.94	0.35664	1.297153	0.0177	0			0.0038
			15.5	26.23	0.3511	1.277493	0.0177	0.000178			0.00467
			16.5	25.57	0.34525	1.258739	0.0177	0.000678			0.00551
			17.5	24.94	0.33921	1.240769	0.0177	0.001206			0.00651
		2475	0.5	38.63	0.41036	1.374591	0.0336	0.002554	0.00561538	0.0034591	0
			1.5	38.63	0.49067	1.374591	0.0336	0.002554			0
			2.5	37.76	0.5367	1.374591	0.0336	0.002554			0
			3.5	36.48	0.57436	1.374591	0.0336	0.002554			0
			4.5	34.15	0.61406	1.373858	0.0336	0.002578			0
			5.5	35.45	0.62392	1.374591	0.0336	0.002554			0
			6.5	33.79	0.64394	1.371165	0.0336	0.002669			0
			7.5	32.35	0.65594	1.339378	0.0336	0.003829			0.00228
			8.5	31.07	0.66213	1.275	0.0336	0.006788			0.00654
			9.5	31.42	0.66317	1.293564	0.0336	0.00584			0.00552
			10.5	30.36	0.66271	1.234904	0.0336	0.009141			0.00811
			11.5	29.4	0.65949	1.192839	0.0336	0.012134			0.01152
			12.5	28.51	0.65415	1.158151	0.0336	0.015078			0.01323
			13.5	27.7	0.6472	1.129255	0.0336	0.017909			0.01517
			14.5	26.94	0.63902	1.103465	0.0336	0.020761			0.01731
			15.5	26.23	0.62995	1.079898	0.0336	0.02366			0.01966
			16.5	25.57	0.62026	1.064698	0.0336	0.025688			0.02023
			17.5	24.94	0.61018	1.059239	0.0336	0.026449			0.02122
		1033	0.5	38.63	0.30258	1.374162	0.0265	0.000409	0.00126859	0.0015597	0
			1.5	38.63	0.36169	1.374162	0.0265	0.000409			0
			2.5	37.76	0.39548	1.374162	0.0265	0.000409			0
			3.5	36.48	0.42306	1.374162	0.0265	0.000409			0
			4.5	34.15	0.4521	1.374162	0.0265	0.000409			0
			5.5	35.45	0.45914	1.374162	0.0265	0.000409			0
			6.5	33.79	0.47363	1.374162	0.0265	0.000409			0
			7.5	32.35	0.48219	1.37199	0.0265	0.000463			0
			8.5	31.07	0.48647	1.356971	0.0265	0.000849			0.00135
			9.5	31.42	0.48695	1.362961	0.0265	0.000692			0.00176
			10.5	30.36	0.48631	1.338832	0.0265	0.001356			0.00212
			11.5	29.4	0.48365	1.304247	0.0265	0.002458			0.00397
			12.5	28.51	0.47943	1.266114	0.0265	0.003914			0.00733
			13.5	27.7	0.47404	1.230269	0.0265	0.005561			0.00931
			14.5	26.94	0.46776	1.197305	0.0265	0.00736			0.01163
			15.5	26.23	0.46084	1.167523	0.0265	0.009259			0.0121
			16.5	25.57	0.45347	1.140598	0.0265	0.011233			0.0147
			17.5	24.94	0.44584	1.11499	0.0265	0.013369			0.01583