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Inventory and Statistical Characterization of Inorganic Soil Constituents in Illinois: Appendices

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16. Abstract
This report presents detailed histograms of data from the Regulated Substances Library (RSL) developed by the Illinois Department of Transportation (IDOT). RSL data are provided for state and IDOT region, IDOT district, and county spatial subsets to examine the spatial variability and its relationship to thresholds defining natural background concentrations. The RSL is comprised of surficial soil chemistry data obtained from rights-of-way (ROW) subsurface soil sampling conducted for routine preliminary site investigations. A selection of 22 inorganic soil analytes are examined in this report: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Na, Tl, V, and Zn. RSL database summary statistics, mean, median, minimum, maximum, 5th percentile, and 95th percentile, are determined for Illinois counties and for recognized environmental concern, non-recognized environmental concern, and de minimis site contamination classifications.

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APPENDICES

The figures in this document support the analysis and discussion presented in the ICT report *Inventory and Statistical Characterization of Inorganic Soil Constituents in Illinois* (Anderson & Yacucci, 2021a). The appendices should not be reviewed independently of the main report and are presently separately due to their length. The appendices contain figures for the 22 inorganic soil analytes, including the six priority analytes presented in the main report.

Statistical analysis results are presented for the IDOT Regulated Substances Library (RSL) for selected Illinois inorganic soil analytes and are presented for various spatial data subsets including Illinois Department of Transportation (IDOT) region, IDOT district, and county in separate figures. Spatial subsets are shown in Figure 1 and listed in Table 1. The RSL is comprised of surficial soil chemistry data obtained from rights-of-way (ROW) sampling conducted for routine preliminary site investigations in preparation for potential road construction activities. The report is a statistical analysis of RSL data and, as such, makes no determination as to the validity of the RSL as a source of natural background soil data. Were RSL data to be applied as the natural background, additional supporting justification would need to be provided, the source of which is beyond the scope of this study. Samples may be composed of natural soils, disturbed soils, or placed materials and may contain elevated concentrations of soil analytes if anthropogenic contamination is present. A selection of 22 soil analytes are examined in the present study: aluminum (Al), antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), calcium (Ca), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), lead (Pb), magnesium (Mg), manganese (Mn), mercury (Hg), nickel (Ni), potassium (K), selenium (Se), sodium (Na), thallium (Tl), vanadium (V), and zinc (Zn). The RSL database at a 95% confidence level is compared with current standards defined by the 1994 IEPA Tiered Approach to Corrective Action Objectives (TACO) standards and proposed thresholds suggested in Circular 590 for defining naturally occurring soil concentrations for the selected analytes. Refer to the main report for further discussion and analysis of the RSL database. The main report presents tabular results for 22 inorganic soil analytes (mean, median, min, max, 5th percentile, 95th percentile) and detailed discussion of six priority analytes.

The 95% confidence level was defined in this study as the 95th percentile of a ranked list of RSL soil concentration data for a given analyte. This approach did not assume a data distribution, and specifically, it did not assume the data were normality distributed. The 95% confidence level was uniformly applied to the analysis of all analytes in the RSL database to provide consistency with the findings of Cahill (2017). The 95th percentile was calculated in this report by using the "NumPy" Python library and the percentile function. The 95% confidence level is labeled on all histogram plots as "*95th percentile*" and shown with a black dashed line.

Current natural background concentration levels of soil constituents, as determined by the Illinois Environmental Protection Agency (IEPA) Office of Chemical Safety in 1994, applied a 50th percentile confidence level (median) to the data set of 275 data points, representing all 102 Illinois counties (IEPA, 1994). The current standard specifies separate values for metropolitan statistical area (MSA) and non-MSA counties: General, Section 742 APPENDIX A and General, Section 742 Table G of the Tiered Approach to Corrective Action Objectives (TACO) rules (Figure 2). MSA counties are denoted

with a dotted hatch pattern on all choropleth maps found in the main report (Anderson & Yacucci, 2021a) and appendices. The current background concentration levels on all figures in the main report and appendices are labeled as "*Background Curr*" and shown with a red dotted line on both histograms and boxplots

The RSL data were also compared with the 2019 IEPA-proposed revised standard for background concentration levels established at the 95th percentile confidence level for naturally occurring soils in Illinois. The 2019 IEPA-proposed revisions to this standard are based on previous studies of Illinois natural soils conducted by the United States Geological Survey (USGS) (Smith et al., 2013) and ISGS (Dreher & Follmer, 2004a, 2004b, 2004c, 2004d, 2005; Dreher, Follmer, & Zhang, 2002, 2003a, 2003b). The aforementioned studies and those conducted by Zhang and Frost (2002a, 2002b) are compiled and reviewed in an ISGS compendium on the inorganic chemical composition of Illinois soils, which includes 1,272 samples (Cahill, 2017). The proposed concentration levels on all figures in the main report and appendices are labeled as "*Background New*" and shown with a green dotted line on both histograms and boxplots.

The plotting conventions applied to boxplots are shown in Figure 3, indicating the statistical quartiles, and 95% confidence interval on the median. Note, the mean is not shown on boxplots presented in this analysis, as shown in Figure 3. The 95% confidence interval of the median is provided on all boxplots and is shown by an indented notch (see Figure 3). The confidence interval notch may extend beyond the interquartile range (IQR) for distributions with a greater uncertainty. The notch assists in making visual comparisons of distributions, as there is a strong likelihood that medians of the respective distributions are statistically different if the corresponding notches around the median do not overlap (Chambers et al., 1983). To clarify, the 95% confidence level discussed in reference to RSL database evaluation is not to be confused with the 95% confidence interval (defined range), as is commonly presented in association with a mean or median value.

A common threshold for potential outlier detection is the product of 1.5 and the IQR, as first proposed by Tukey (1977) to define "inner fences." The IQR is defined as the difference between the third quartile (Q3 = 75th percentile) and the first quartile (Q1 = 25th percentile). In all boxplots presented in this study, the extent of the whiskers is defined as 1.5 $\times$ IQR (the Tukey fence), and the points present beyond these limits are labeled as potential outliers and represented as open circles. The selection of this threshold has become an accepted method of potential outlier detection because it identifies potential outliers as those beyond 2.698 standard deviations, resulting in approximately 0.7% of data points being labeled as potential outliers (<1%) for a normal distribution. Note that this convention for labeling potential outliers is applied only for purposes of visualization. Further analysis is required to confirm a potential outlier as an outlier datapoint. For data distributions with highly skewed data (e.g., strong positive skewness, as observed in several analytes), the percentage of data points labeled as potential outliers will vary from those stated previously for a normal distribution.

The RSL database from which the analysis in the main report and appendix figures are based is provided as a comma delimited value file (.csv): Inventory and Statistical Characterization of Inorganic Soil Constituents in Illinois: Regulated Substances Library Data (Anderson & Yacucci, 2021b). Note the

RSL database exceeds the maximum number of rows that can be read by MS Excel. The database can be read using Python, as performed in this analysis, as well as any other software designed for analysis of larger datasets such as MS Access. The RSL database fields are listed in Table 2, and Table 3 lists values for database field “Flag” as associated descriptions.

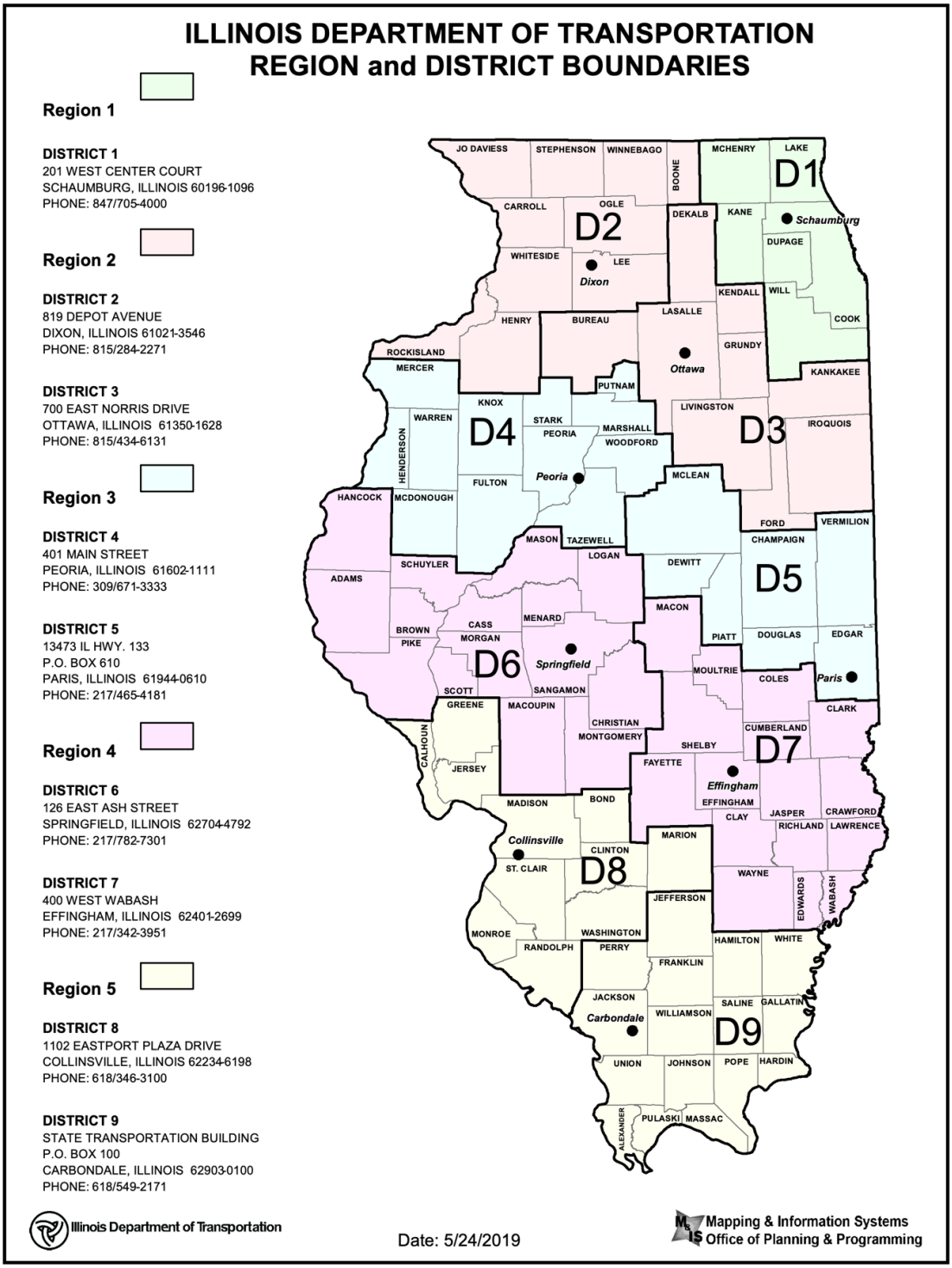


Figure 1. IDOT Region and District Map.

Table 1. IDOT Region and District Areas by Illinois County

IDOT Region	IDOT District	Illinois Counties
1	1	Cook, DuPage, Kane, Lake, McHenry, Will
2	2	Boone, Carroll, Henry, Jo Daviess, Lee, Ogle, Rock Island, Stephenson, Whiteside, Winnebago
	3	Bureau, Dekalb, Ford, Grundy, Iroquois, Kankakee, Kendall, LaSalle, Livingston
3	4	Fulton, Henderson, Knox, McDonough, Marshall, Mercer, Peoria, Putnam, Stark, Tazewell, Warren, Woodford
	5	Champaign, DeWitt, Douglas, Edgar, McLean, Piatt, Vermilion
4	6	Adams, Brown, Cass, Christian, Hancock, Logan, Macoupin, Mason, Menard, Montgomery, Morgan, Pike, Sangamon, Schuyler, Scott
	7	Clark, Clay, Coles, Crawford, Cumberland, Edwards, Effingham, Fayette, Jasper, Lawrence, Macon, Moultrie, Richland, Shelby, Wabash, Wayne
5	8	Bond, Calhoun, Clinton, Greene, Jersey, Madison, Marion, Monroe, Randolph, St. Clair, Washington
	9	Alexander, Franklin, Gallatin, Hamilton, Hardin, Jackson, Jefferson, Johnson, Massac, Perry, Pope, Pulaski, Saline, Union, White, Williamson

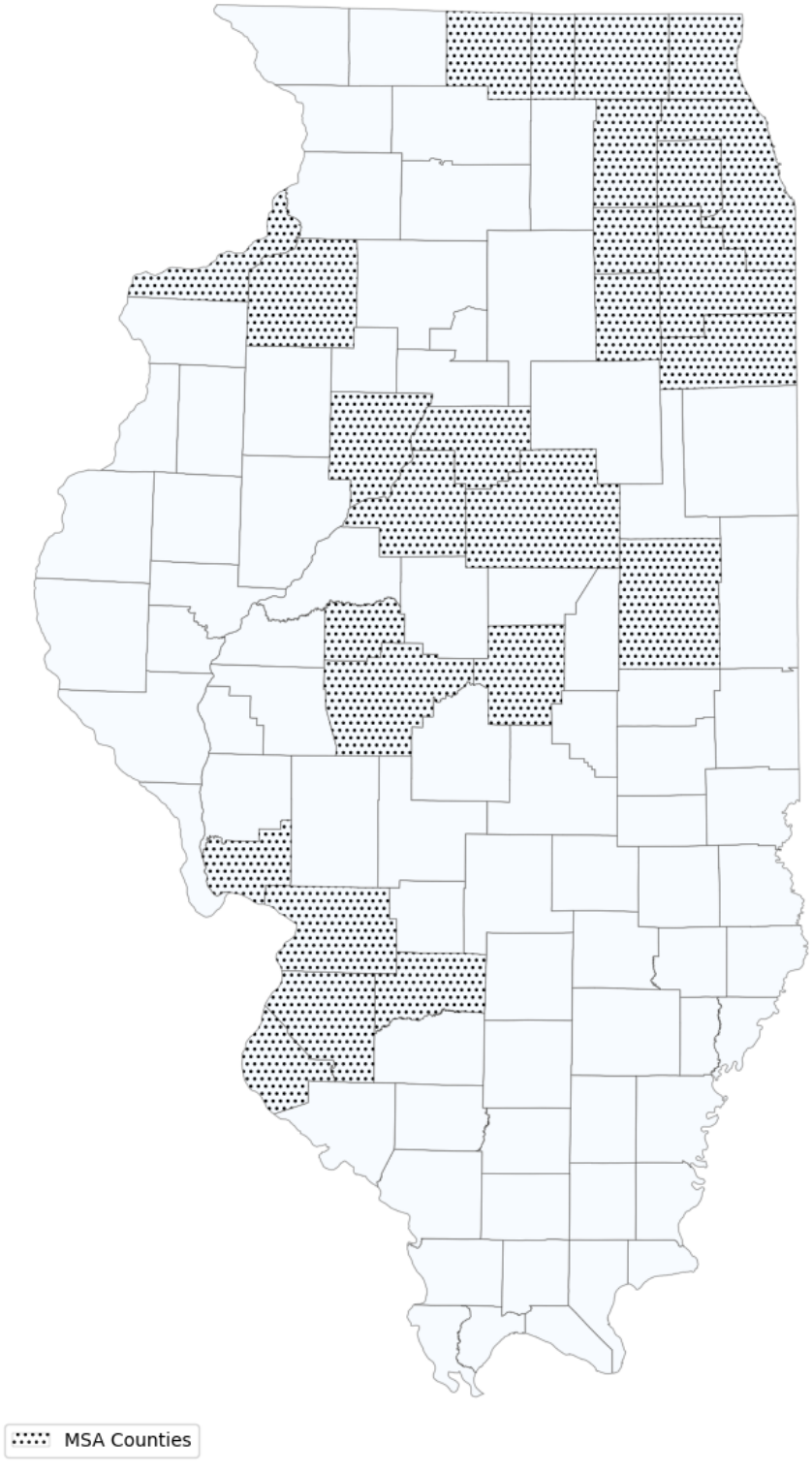


Figure 2. Metropolitan Statistical Areas (MSA) counties in Illinois shown with dotted hatching. All choropleth maps in the main report and appendix apply dotted hatching to indicate MSA counties.

Table 2. Regulated Substances Library Database Fields

Parameters	Analytical Parameter Name	Example	Values
CASNumber	CAS number for analytic parameter	7439-96-55	various
Parameter	soil analyte	Manganese, Total	various
LeachMethod	leaching method	TCLP	TCLP, SPLP, None
AnalyticalMethod	analysis method	6010B	various
Value	laboratory result value	3.45	various
ReportUnits	laboratory result units	mg/kg	mg/kg, mg/l, ug/kg, ug/l. pH unit: s.u., percent moisture: %
Flag	analytical data flags	B	See Table 2
ReportingLimit	laboratory reporting limit	1.3	various
MethodDetectionLimit	equipment detection limit	0.26	various
Detected	analyte detected	Y	Y, N
LabAnalysisDate	date analysis performed	2015-09-02	various
County	Illinois county for soil sample location	COOK	Illinois counties
DistrictNumber	IDOT district number for soil sample location	1	1, 2, 3, 4, 5, 6, 7, 8, 9
RECType	REC, Non-REC or de minimis property descriptor. If available, this information comes from Tables 1 through 3 of the PESA. Non-REC indicates the property is considered to contain no RECs and no de minimis conditions.	REC	REC, deMinimis, Non-REC, nan
SampleTop	top of sample interval	0	various
SampleBottom	bottom of sample interval	6	various
SampleDate	date sample collected	16-11-29	various
SampleMatrix	matrix type	soil	soil, sediment, sludge, groundwater, surface water, concrete

Table 3. Regulated Substances Library Database Field 'Flag' Values

Analytical Data Flags	Flag Definition
!	Laboratory is not accredited for this parameter.
*	LCS, LCSD, MS, MSD, SD or Surrogate is outside acceptance limits.
^	ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
+	MSA correlation coefficient is less than 0.995.
<	Not detected at or above the reporting limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
a	Benzo(a)anthracene and chrysene are unresolved due to matrix, result is reported as benzo(a)anthracene.
A	The tentatively identified compound is a suspected aldol-condensation product.
AP	Compounds have an altered pattern compared to the reference pattern within the expected retention time window. This may be due to interferences from non-target compounds, and/or due to different relative concentrations of the compounds.
B	Compound was found in the blank and sample.
b	Result Detected in the Unseeded Control blank (USB).
C	Pesticide identification was confirmed by GC/MS.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
cn	Refer to Case Narrative for further detail
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries were not obtained due to the dilution.
E	Result exceeded calibration range.
F	Duplicate RPD exceeds the control limit
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
FT	This analysis was performed in the field by the sampler whose name appears on the attached Chain of Custody form.
g	Result fails applicable drinking water standards
h	Alternate peak selection upon analytical review.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
I	Indicates the presence of an interference, recovery is not calculated.
ID	Analyte identified by RT & presence of single mass ion
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Analytical Data Flags	Flag Definition
K	Benzo (b&k) fluoranthene are unresolved due to matrix, result is reported as Benzo(b)fluoranthene.
L	A negative instrument reading had an absolute value greater than the reporting limit
N	This flag indicates the presumptive evidence of a compound.
ND	Compound not detected.
P	The %RPD between the primary and confirmation column/detector is >40%. The higher value has been reported
P1	The %Difference between the primary and confirmation column/detector is >40%. The higher value has been reported.
Q	Result was qualitatively confirmed, but not quantitated.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
R	The instrument was not calibrated for this compound. A non-detect indicates that the characteristic ions were not present and the compound was not qualitatively identified. No controls were present to determine either sample preparation efficiency or the instrument sensitivity for the compound. As a result, the limit of detection is not known and the reported concentrations are estimates.
S	Result was determined by the Method of Standard Additions
s	Seeded Control Blank (SCB) Recovery High or Low
T	Result is a tentatively identified compound (TIC) and an estimated value.
U	Indicates the analyte was analyzed for but not detected.
vs	Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications.
W	PS: Post-digestion spike was outside control limits
y	Benzo(a)anthracene and chrysene are unresolved due to matrix, result is reported as chrysene.
Y	The chromatographic response resembles a typical fuel pattern.
Z	The chromatographic response does not resemble a typical fuel pattern.

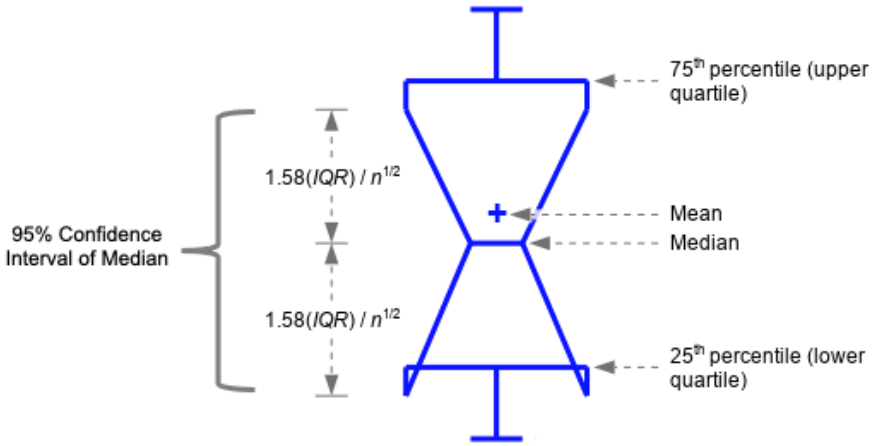


Figure 3. Diagram of the 95% confidence interval of the median, as shown by the notch. Figure 3 is modified from SAS® 9.4 Graph Template Language, Copyright © 2016, SAS Institute Inc., USA. All Rights Reserved. Reproduced with permission of SAS Institute Inc, Cary, NC.

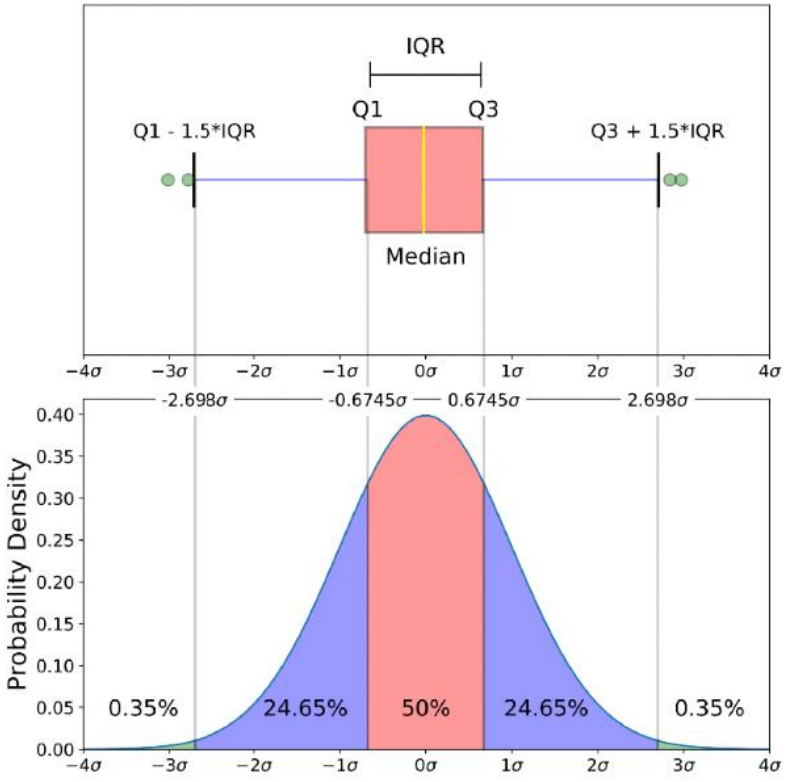


Figure 4. Boxplot diagram of a nearly normal distribution compared with the probability density function for a normal distribution. IQR is interquartile range, Q1 is first quartile, and Q3 is third quartile. From Galarnyk (2018). Used with permission of the author.

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APPENDIX A. ANALYTE ANALYSIS: ALUMINUM

A.1 ALUMINUM REC

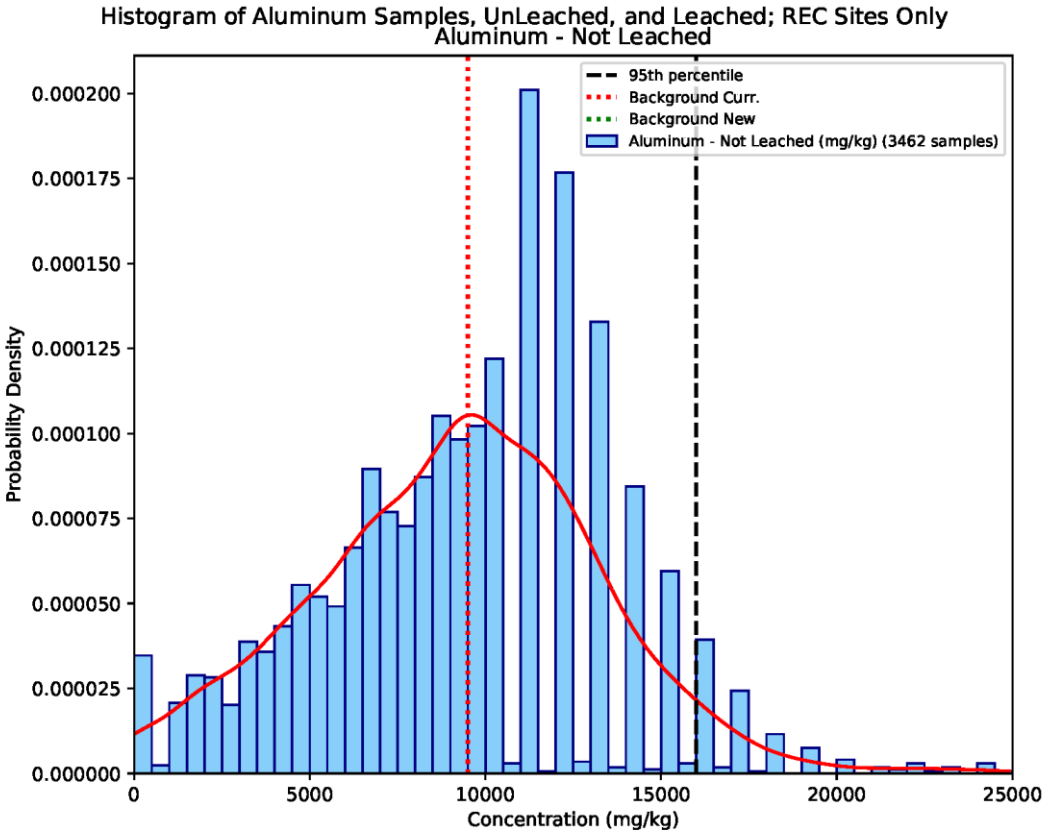


Figure 5. Histogram of RSL aluminum concentrations, REC (mg/kg)

Aluminum Unleached Concentration (mg/kg)

1) Region

2) District

3) County

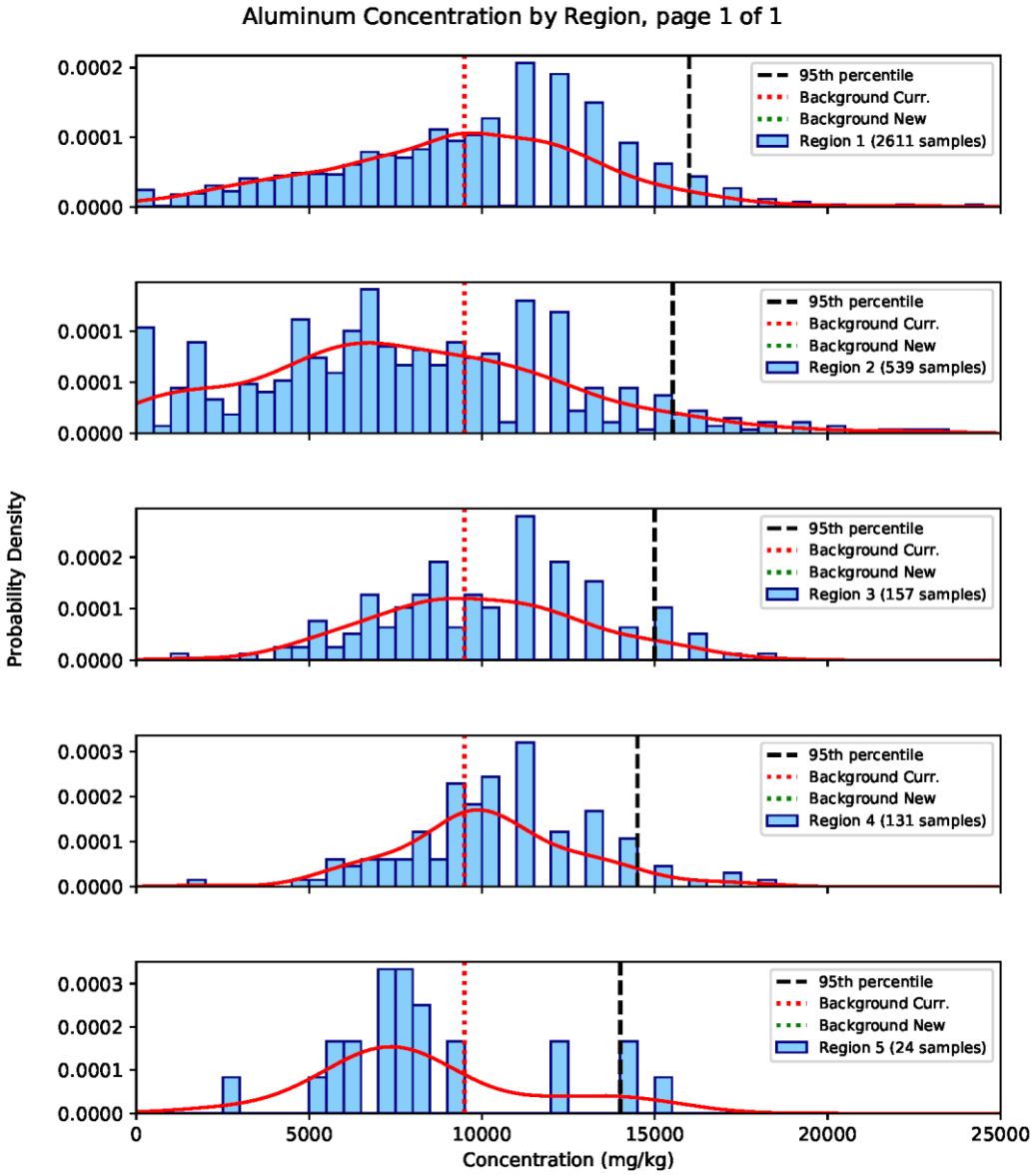


Figure 6. Histogram of RSL aluminum concentrations by IDOT Region, REC (mg/kg)

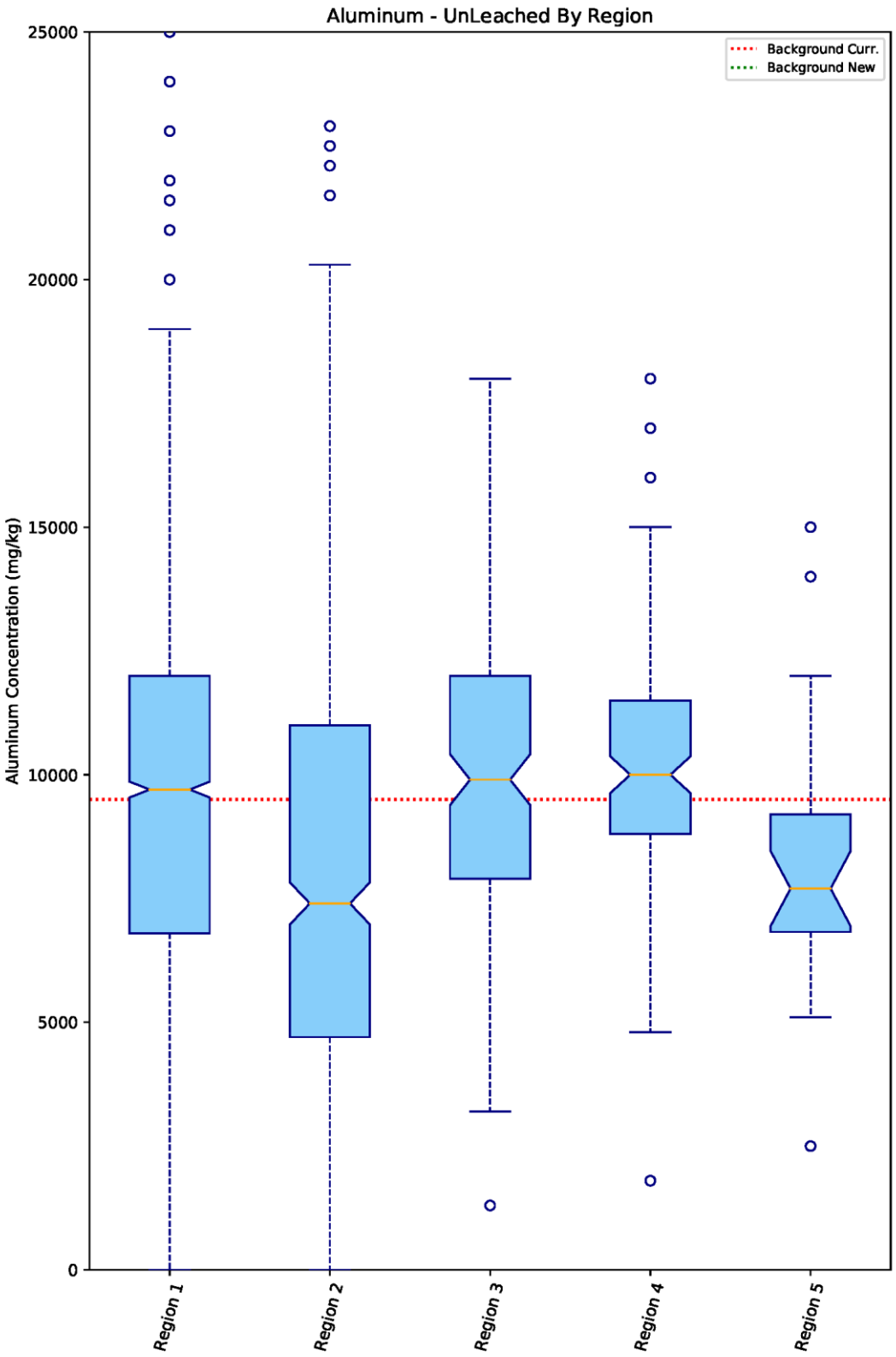


Figure 7. Boxplot of RSL aluminum concentrations by IDOT Region, REC (mg/kg)

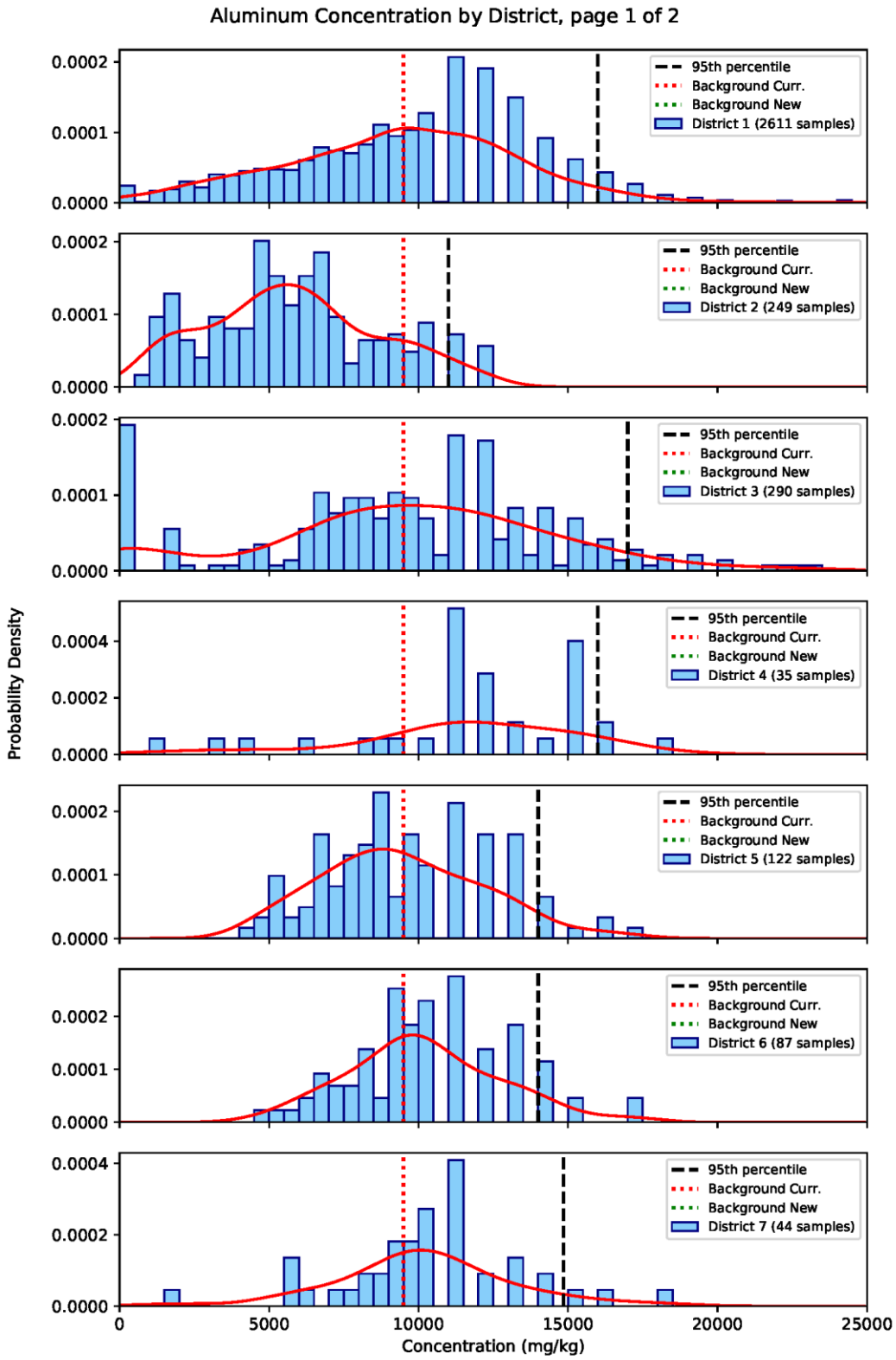


Figure 8. Histogram of RSL aluminum concentrations by IDOT District, REC (mg/kg), part 1

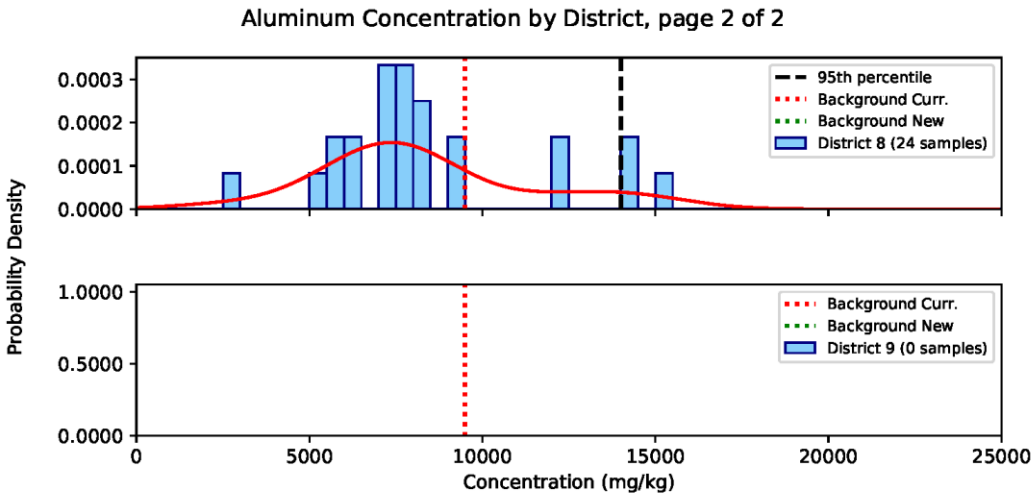


Figure 9. Histogram of RSL aluminum concentrations by IDOT District, REC (mg/kg), part 2

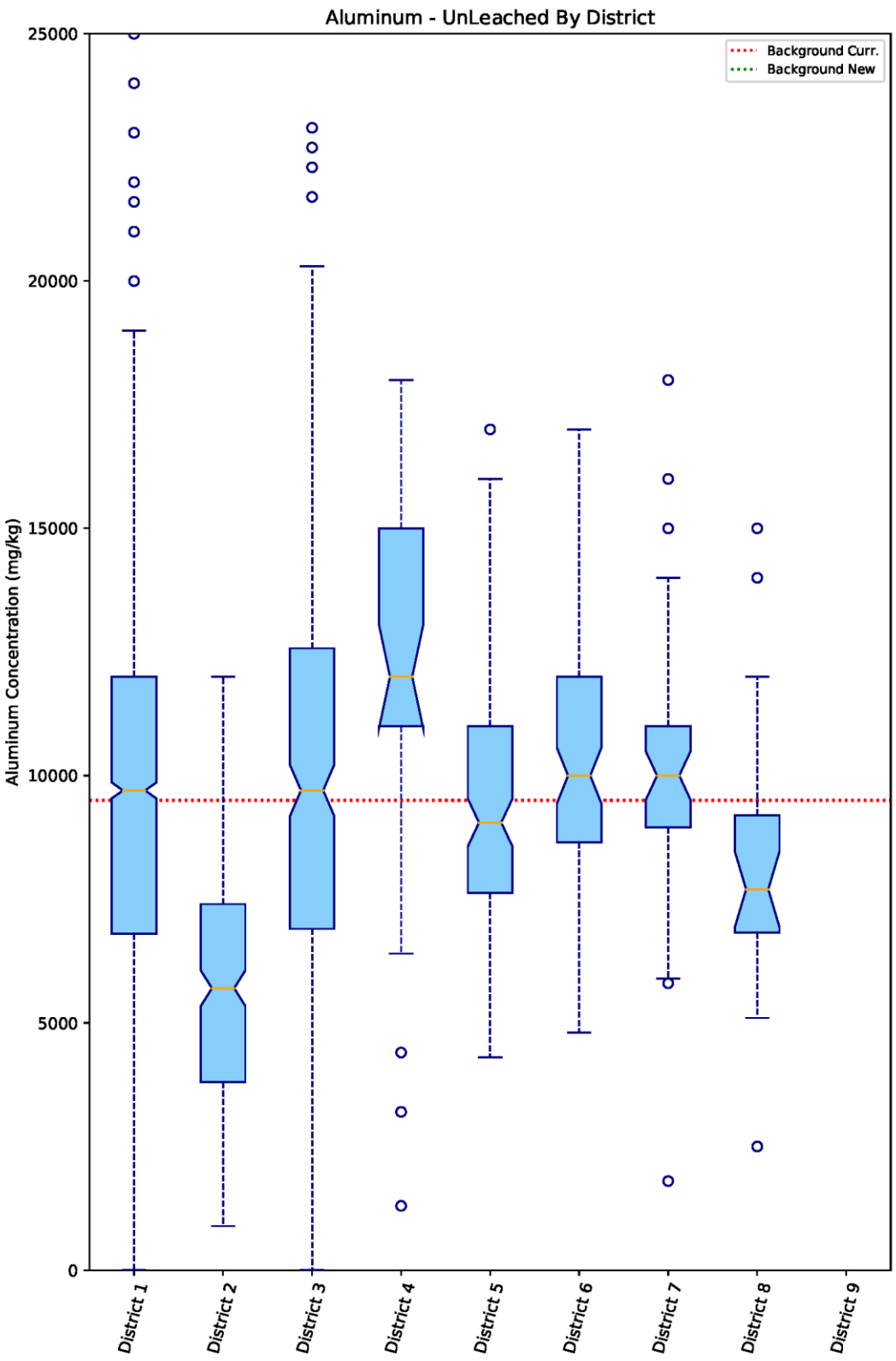


Figure 10. Boxplot of RSL aluminum concentrations by IDOT District, REC (mg/kg)

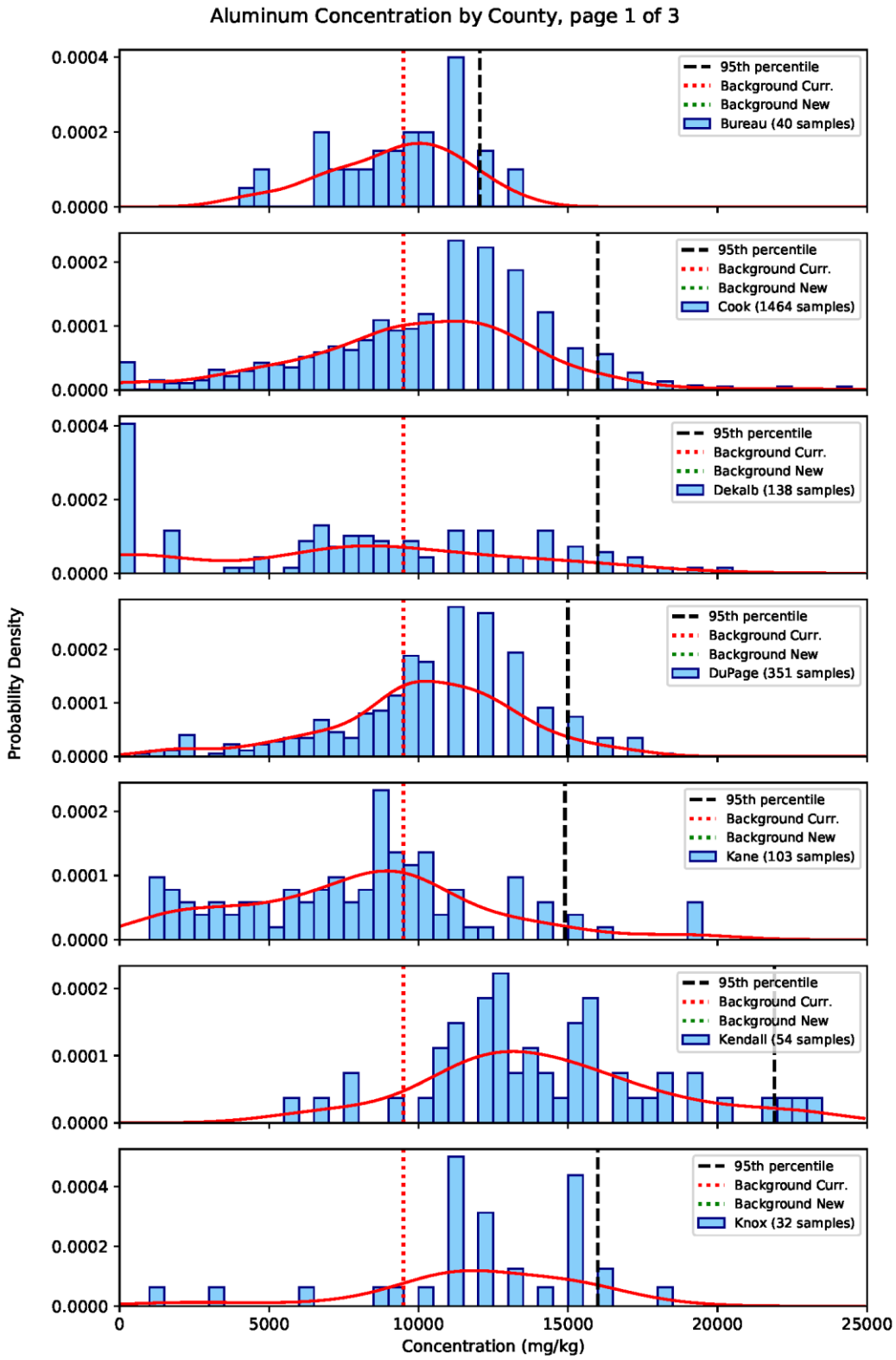


Figure 11. Histogram of RSL aluminum concentrations by Illinois county, REC (mg/kg), part 1

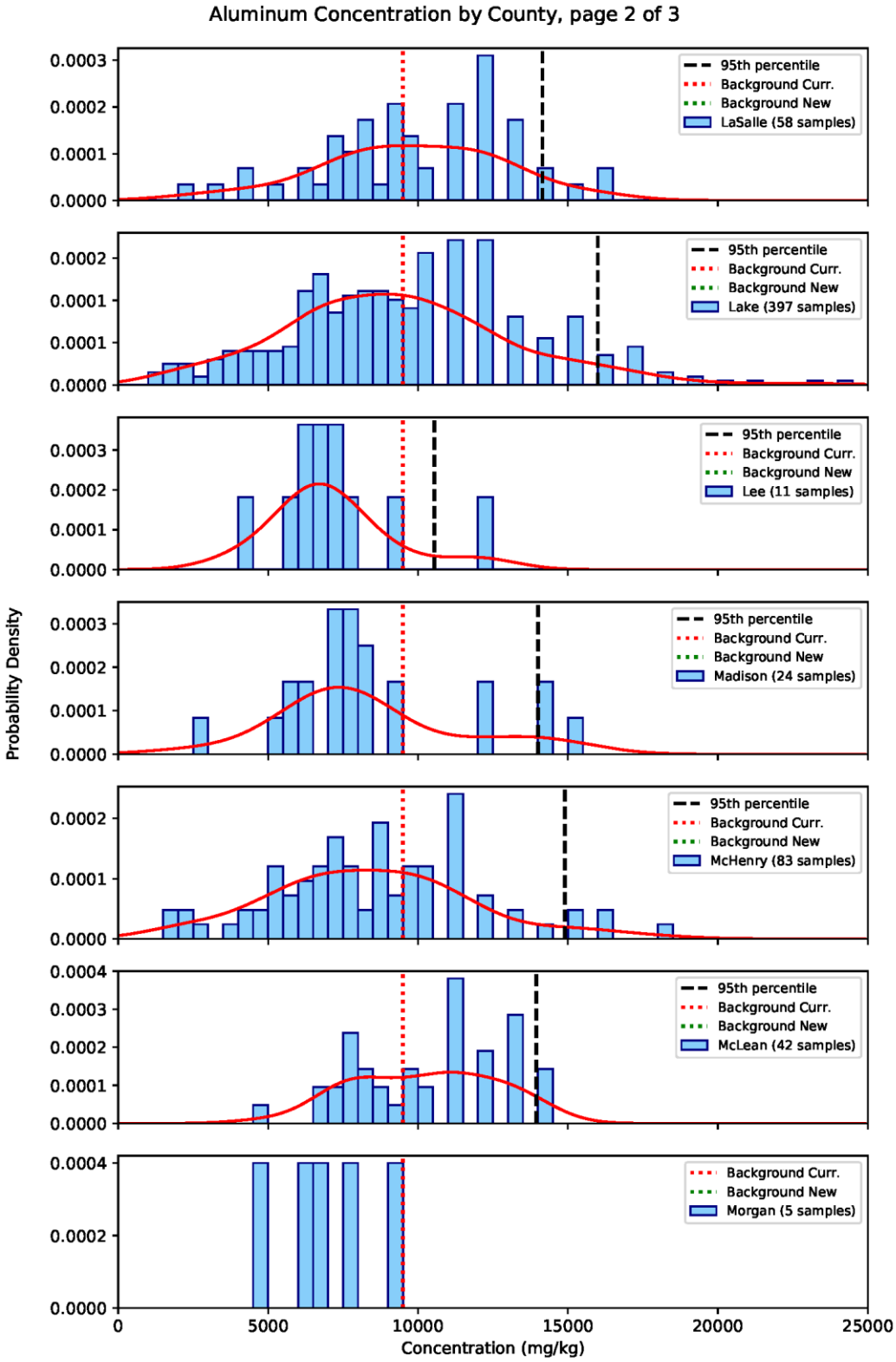


Figure 12. Histogram of RSL aluminum concentrations by Illinois county, REC (mg/kg), part 2

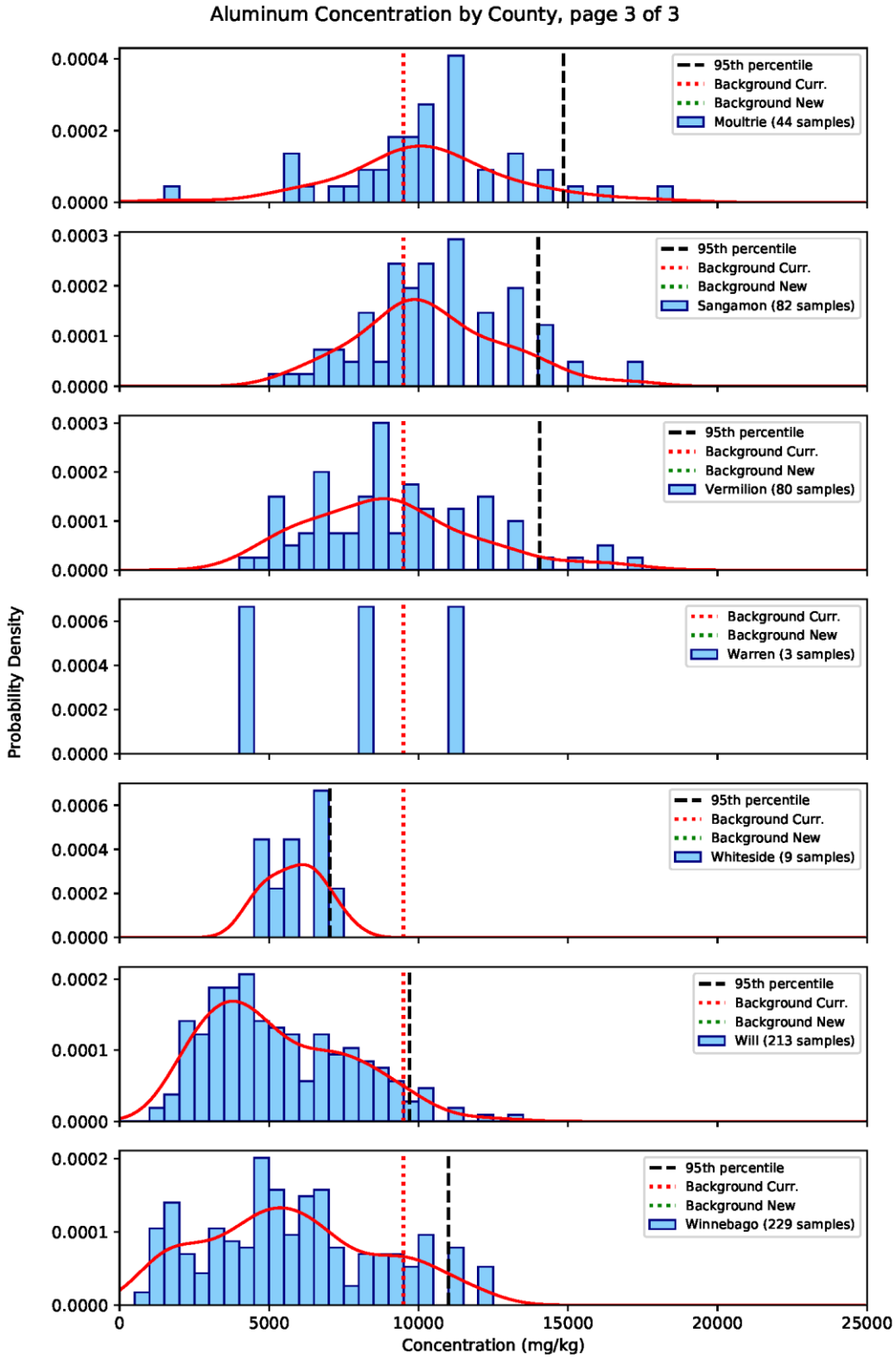


Figure 13. Histogram of RSL aluminum concentrations by Illinois county, REC (mg/kg), part 3

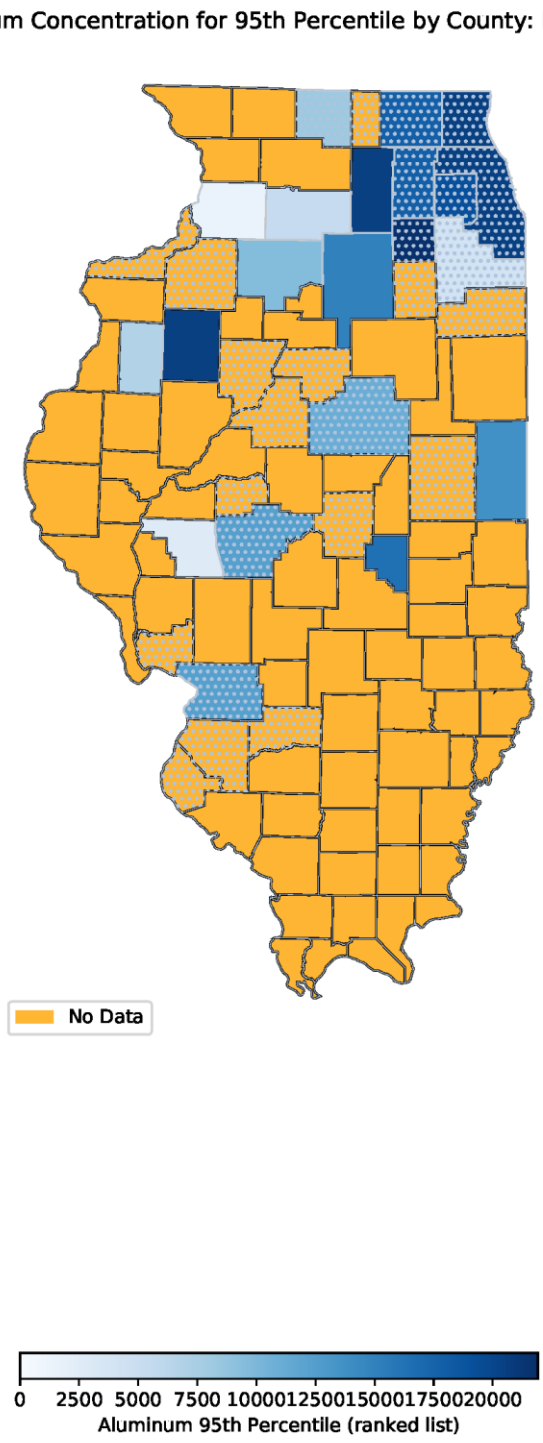


Figure 14. Map of RSL aluminum 95th percentile concentration by Illinois county, REC (mg/kg)

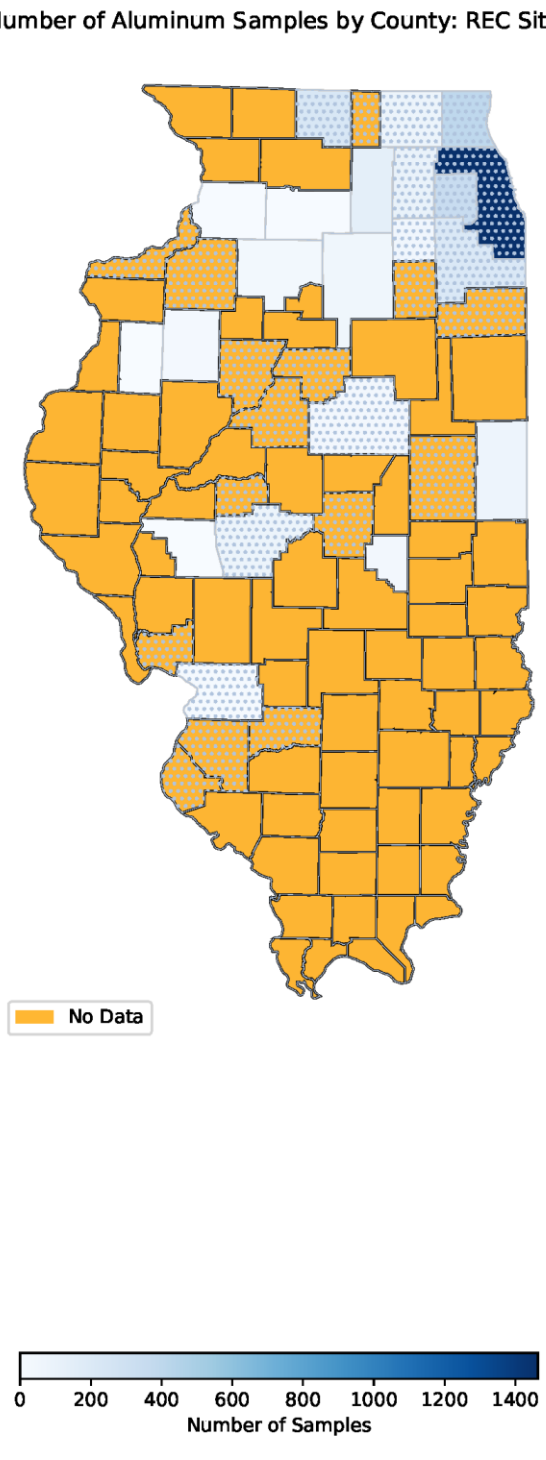


Figure 15. Map of RSL aluminum sample quantity by Illinois county, REC (mg/kg)

A.2 ALUMINUM NON-REC

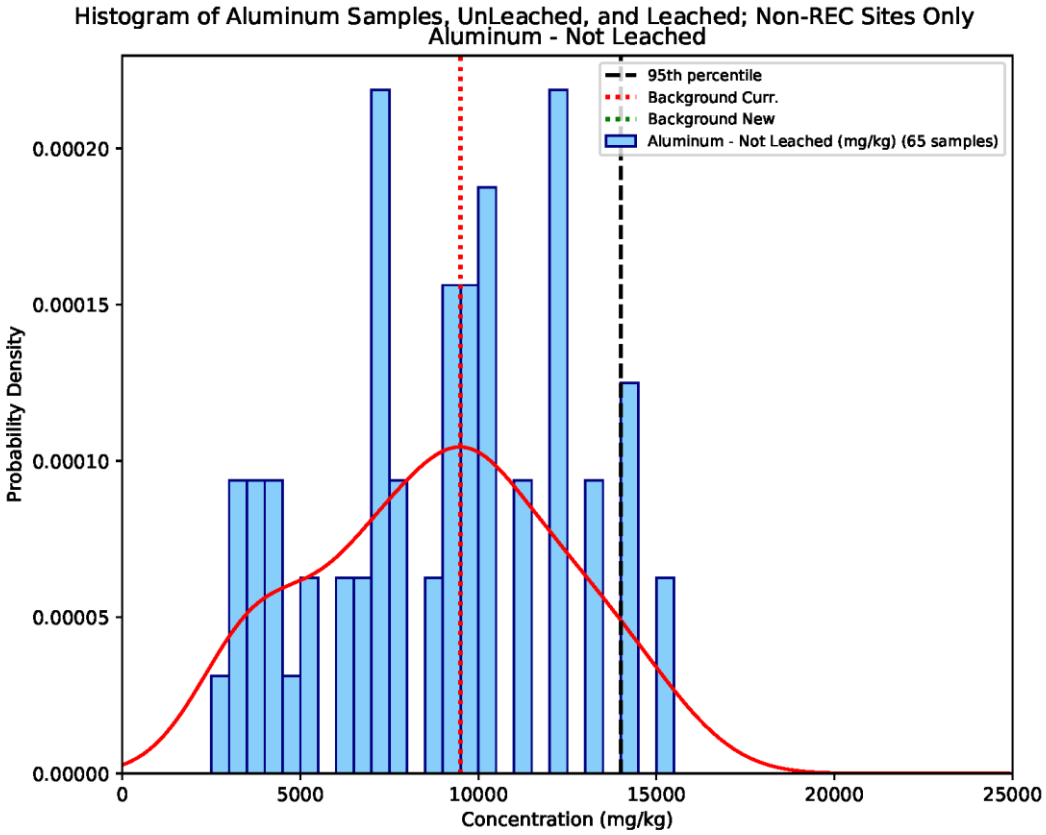


Figure 16. Histogram of RSL aluminum concentrations, Non-REC (mg/kg)

Aluminum Unleached Concentration (mg/kg)

1) Region

2) District

3) County

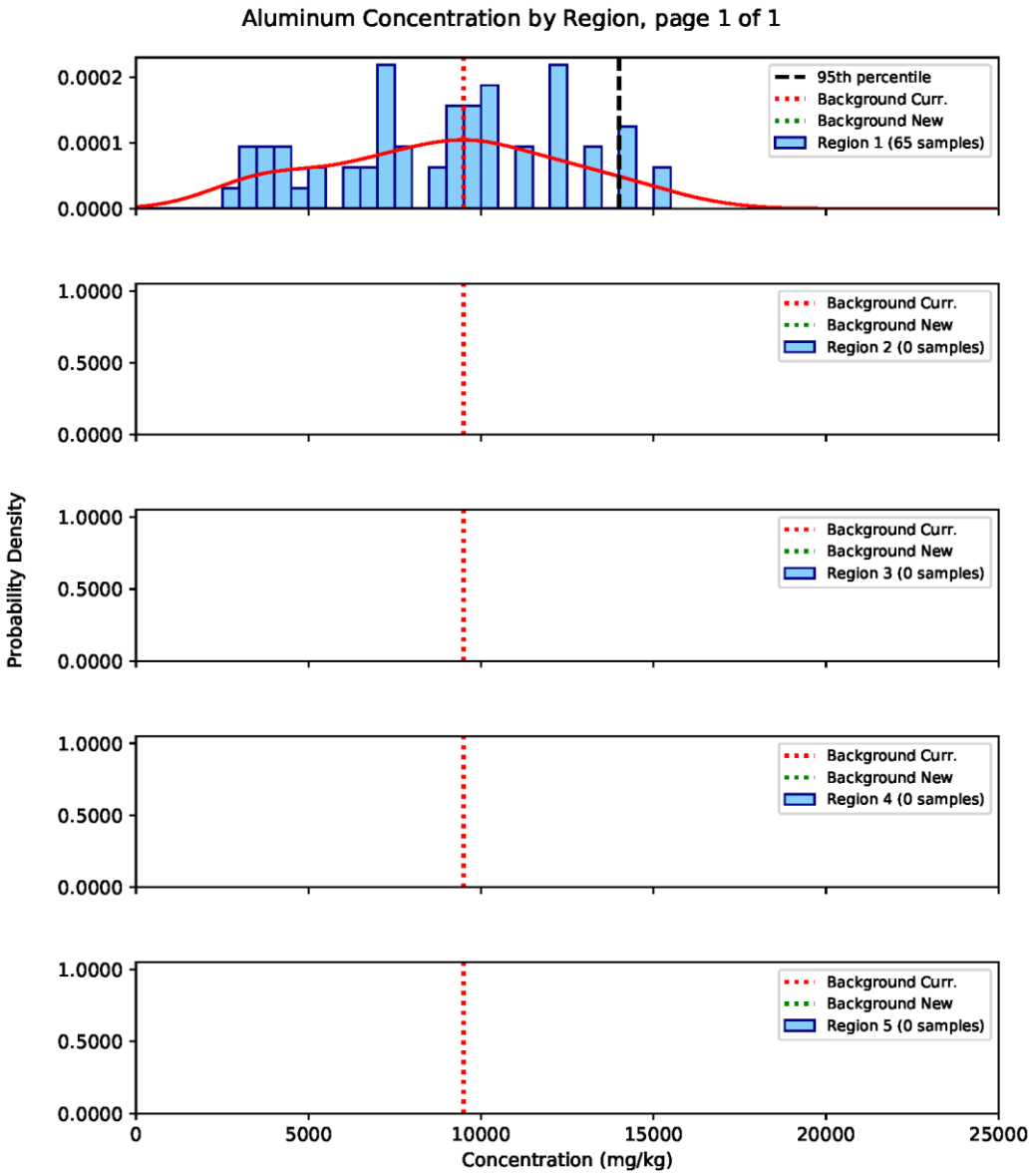


Figure 17. Histogram of RSL aluminum concentrations by IDOT Region, Non-REC (mg/kg)

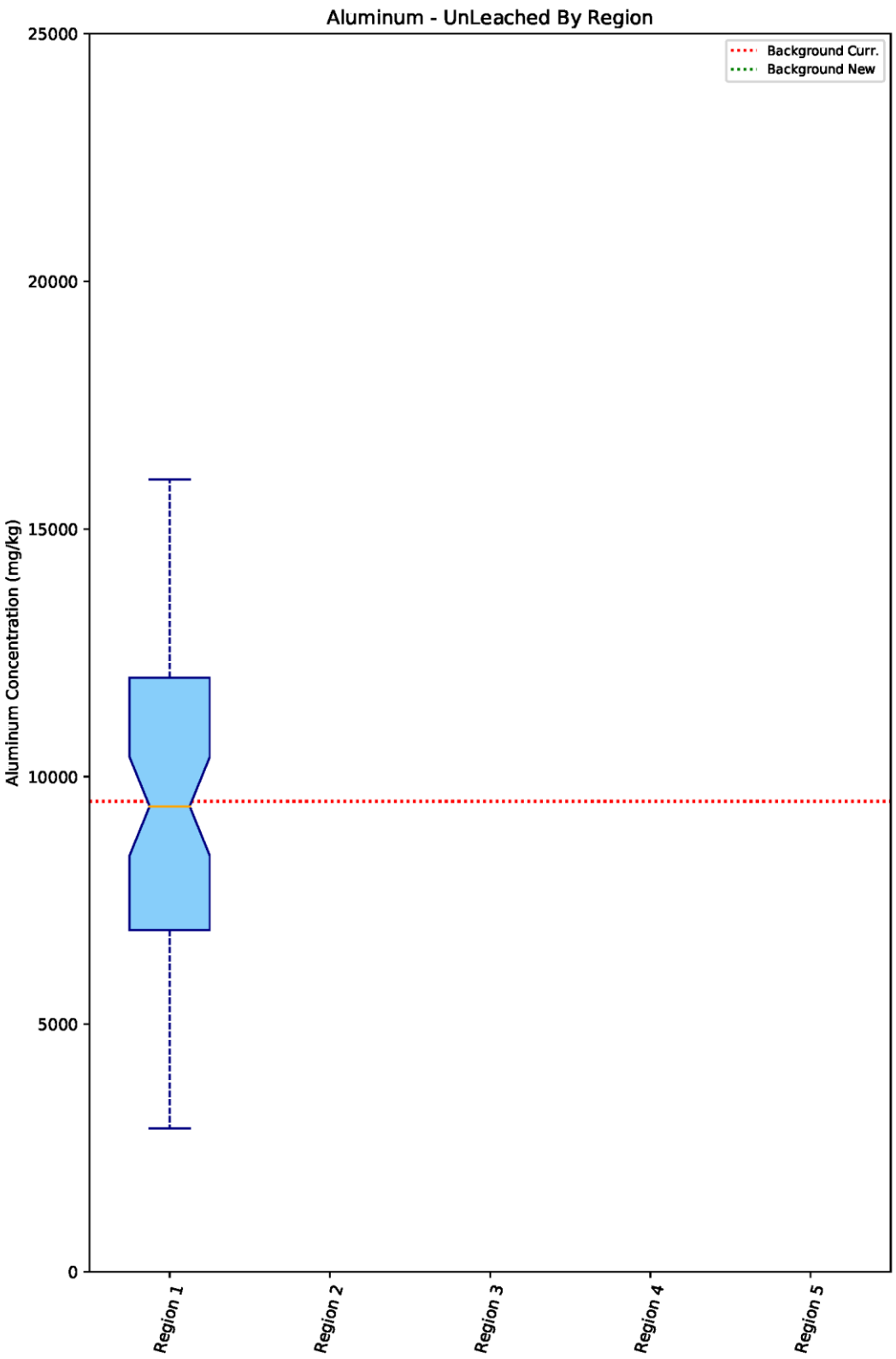


Figure 18. Boxplot of RSL aluminum concentrations by IDOT Region, Non-REC (mg/kg)

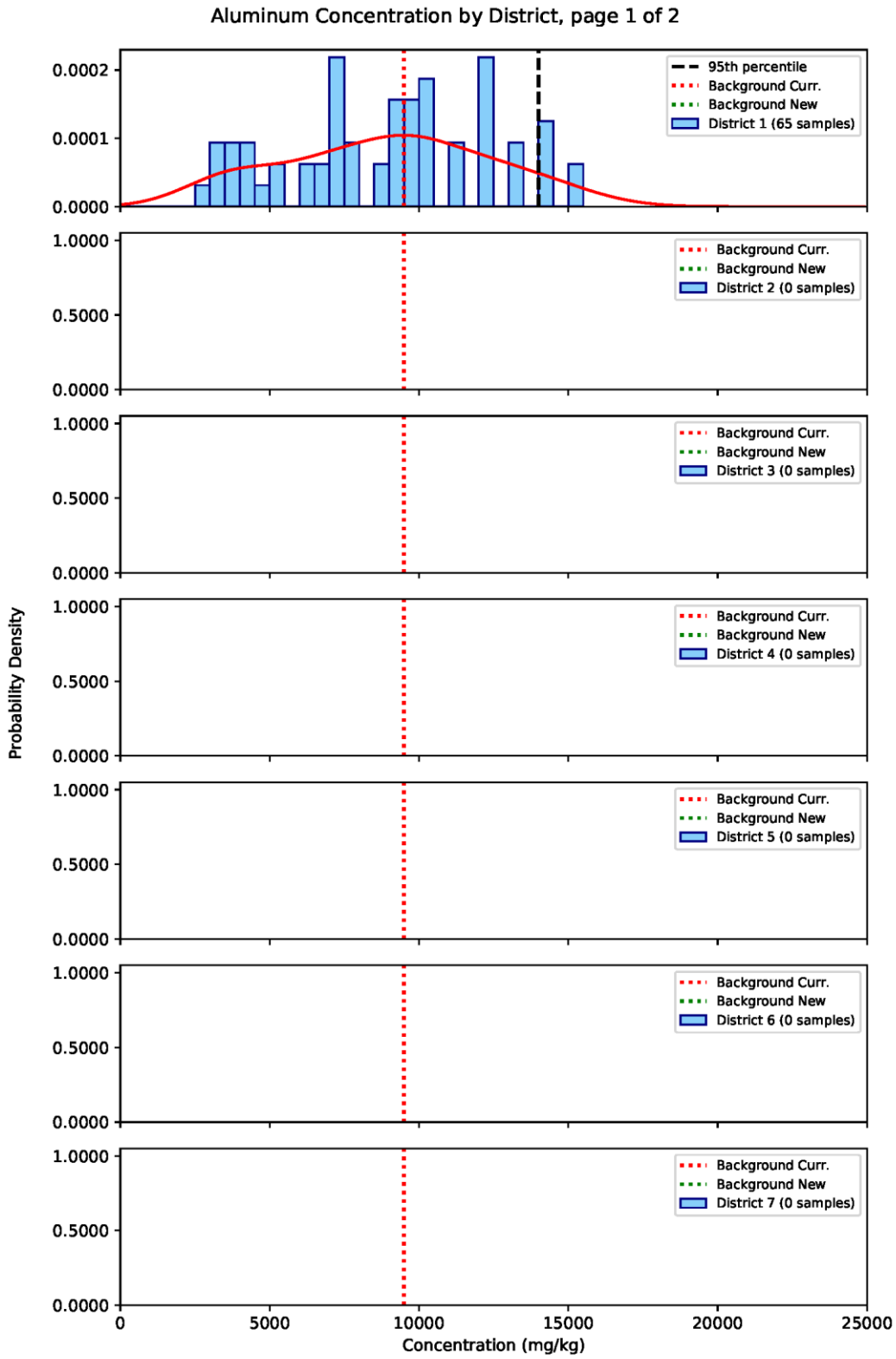


Figure 19. Histogram of RSL aluminum concentrations by IDOT District, Non-REC (mg/kg), part 1

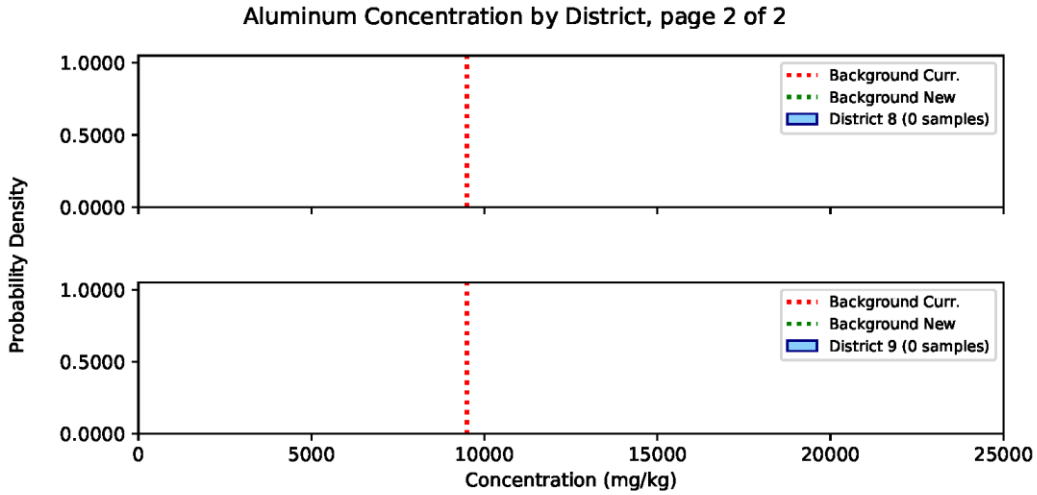


Figure 20. Histogram of RSL aluminum concentrations by IDOT District, Non-REC (mg/kg), part 2

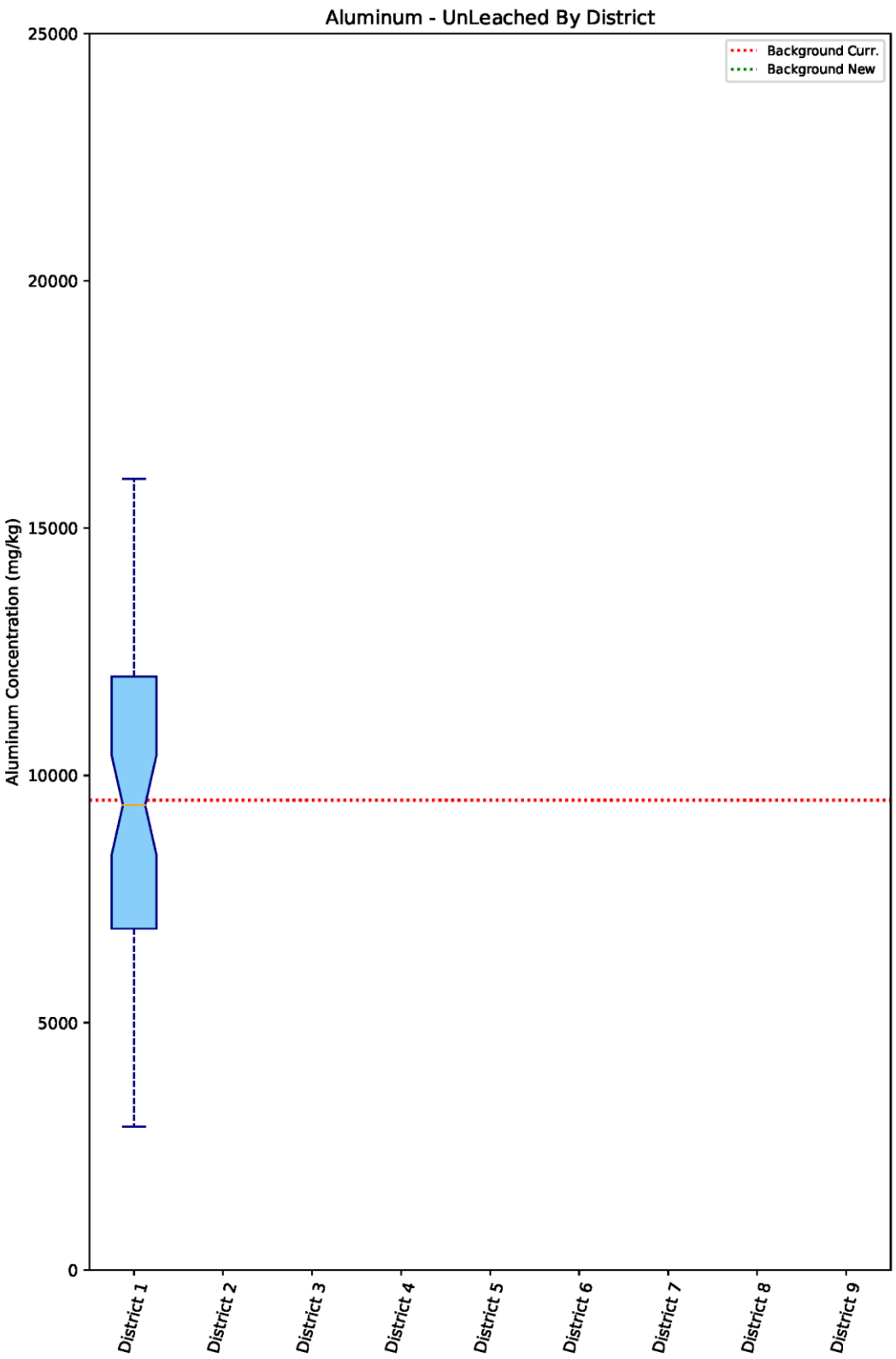


Figure 21. Boxplot of RSL aluminum concentrations by IDOT District, Non-REC (mg/kg)

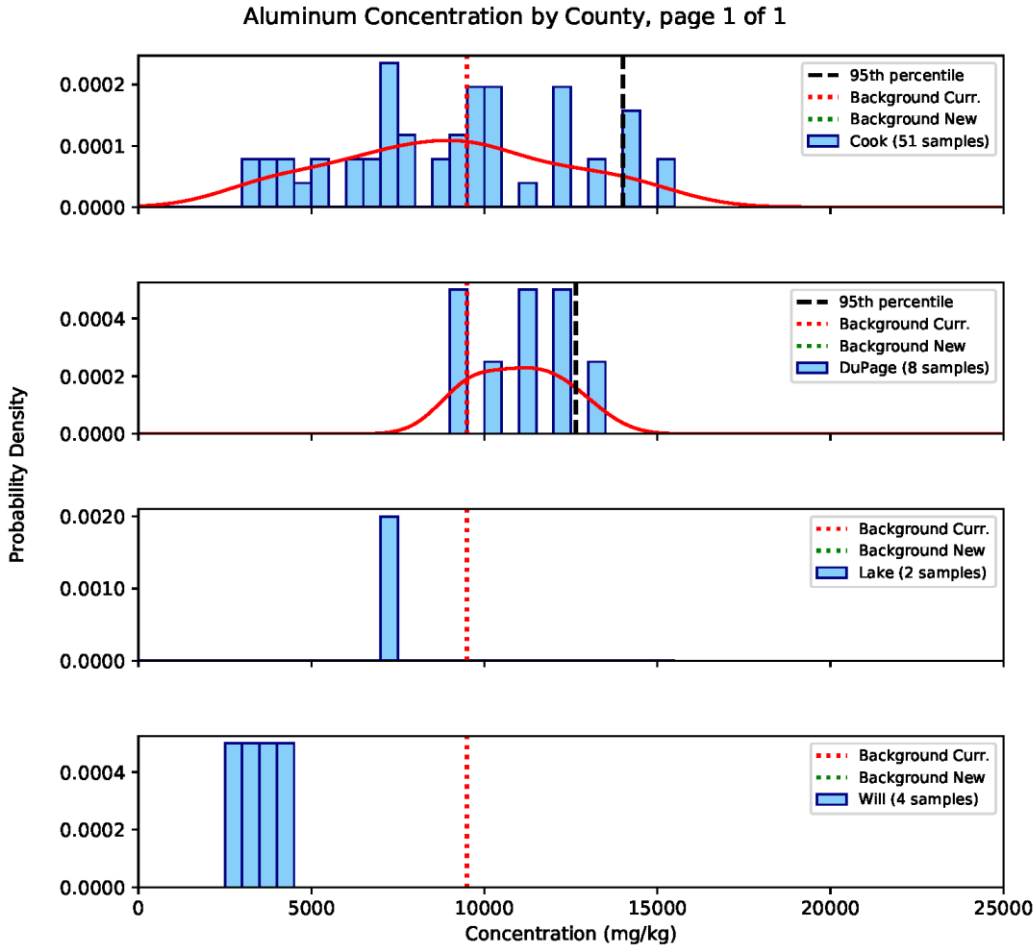


Figure 22. Histogram of RSL aluminum concentrations by Illinois county, Non-REC (mg/kg)

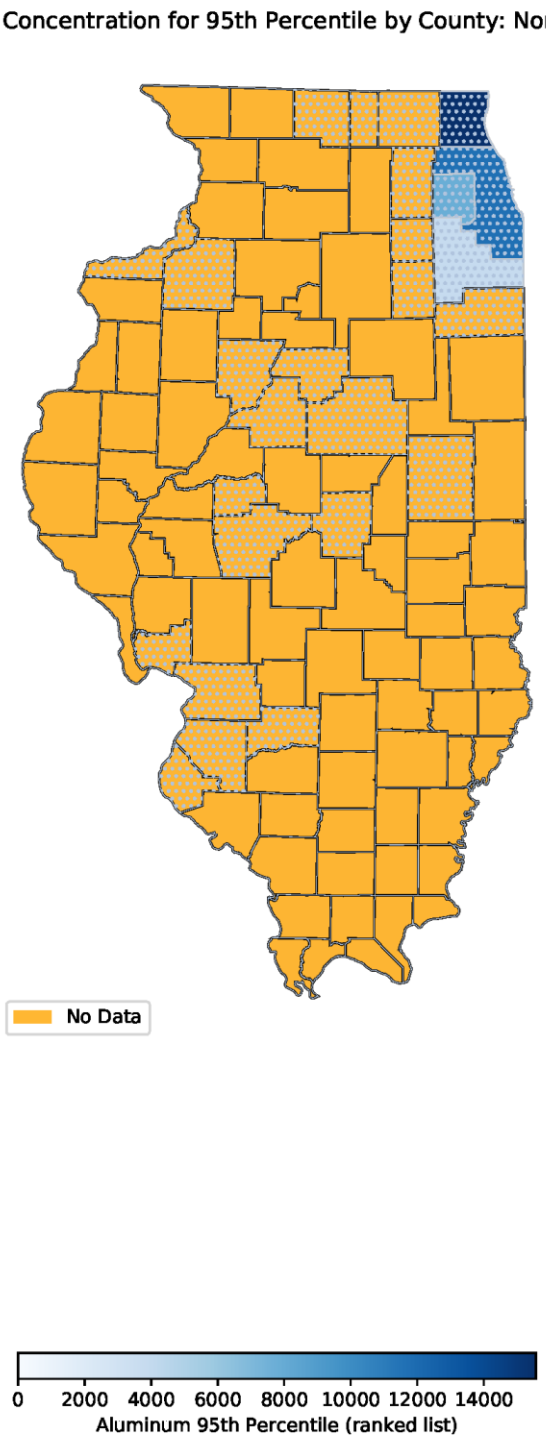


Figure 23. Map of RSL aluminum 95th percentile concentration by Illinois county, Non-REC (mg/kg)

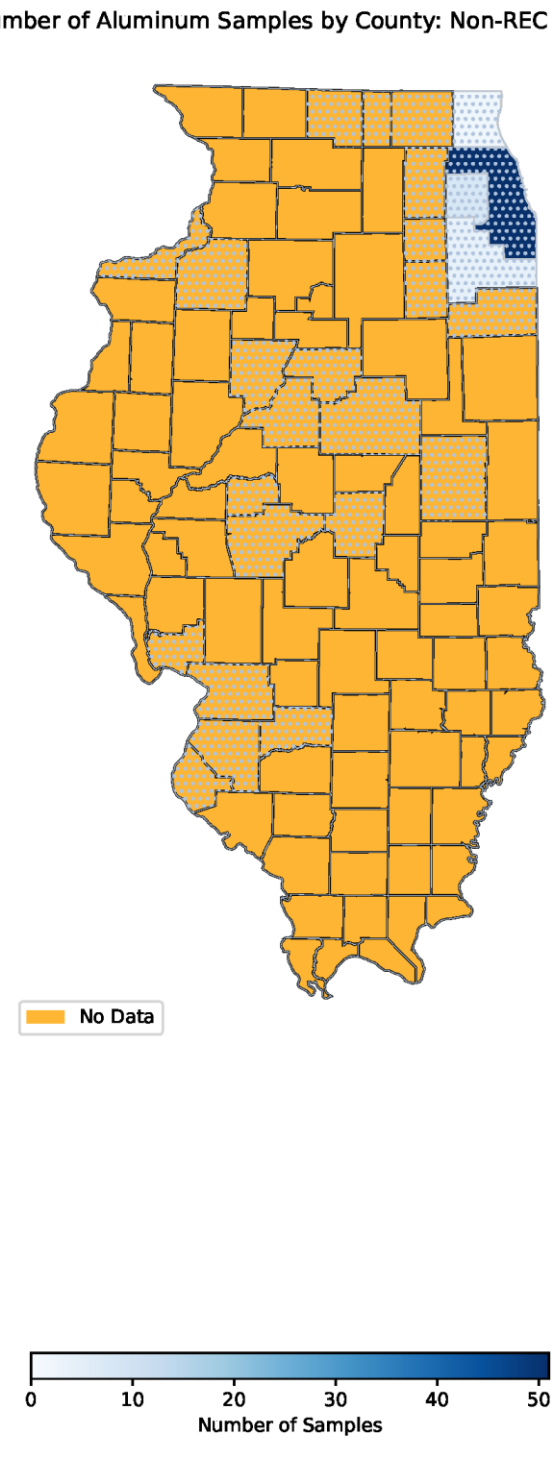


Figure 24. Map of RSL aluminum sample quantity by Illinois county, Non-REC (mg/kg)

A.3 ALUMINUM DE MINIMIS

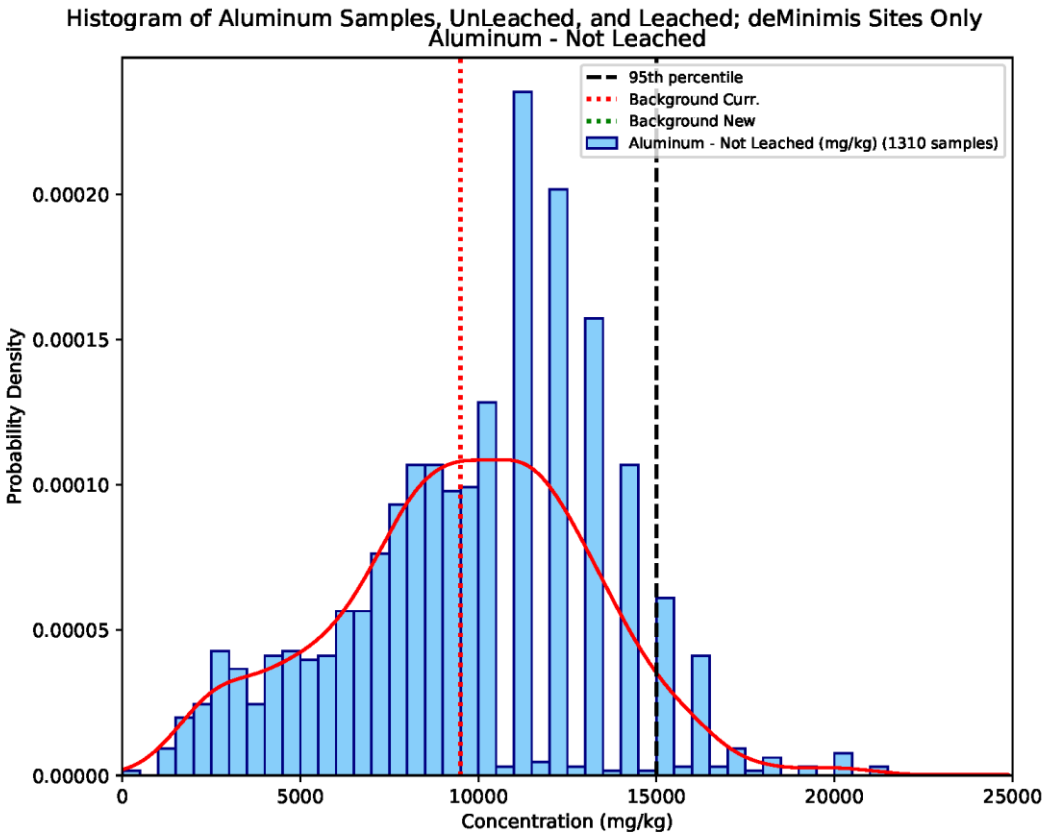


Figure 25. Histogram of RSL aluminum concentrations, de minimis (mg/kg)

Aluminum Unleached Concentration (mg/kg)

1) Region

2) District

3) County

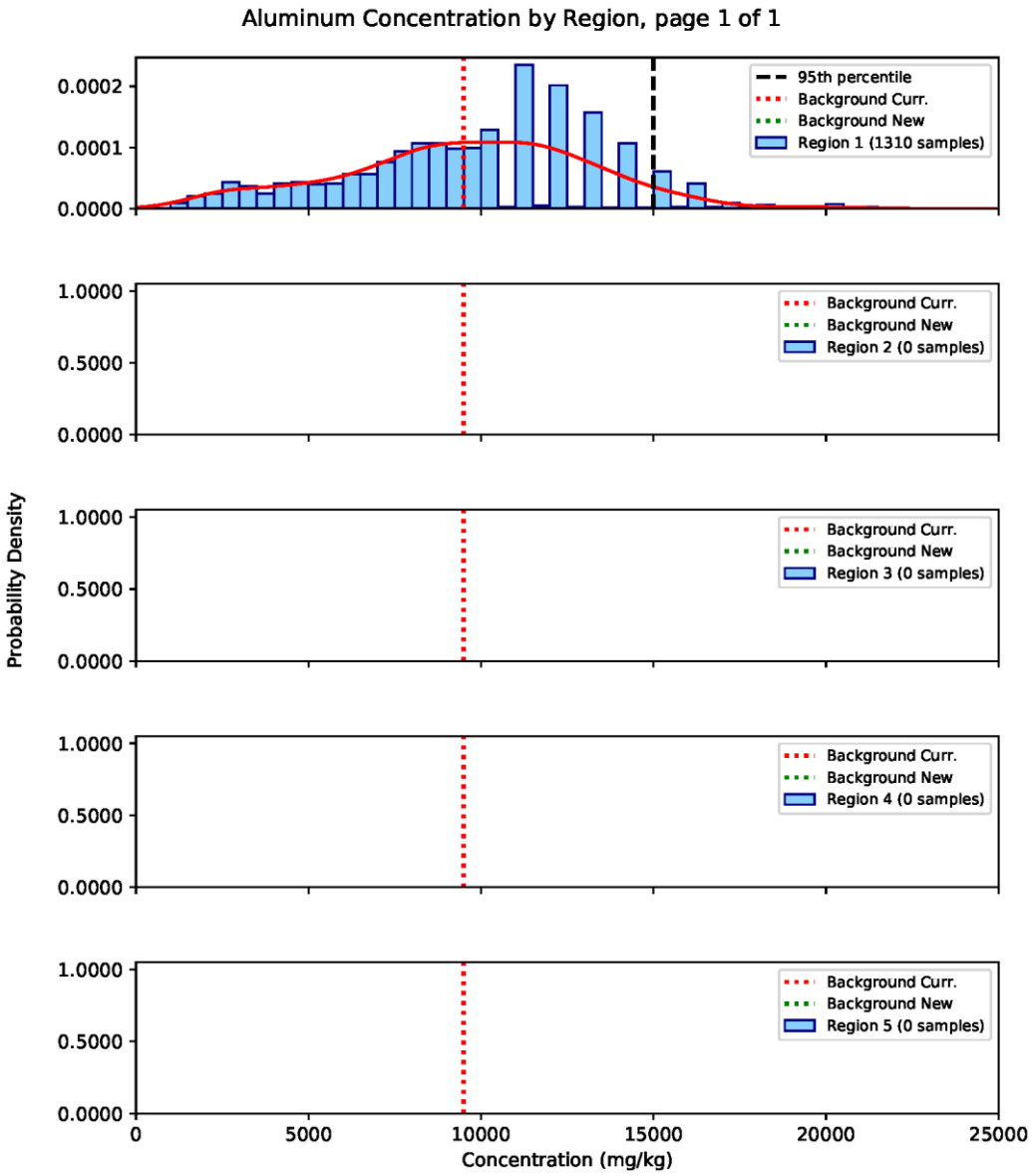


Figure 26. Histogram of RSL aluminum concentrations by IDOT Region, de minimis (mg/kg)

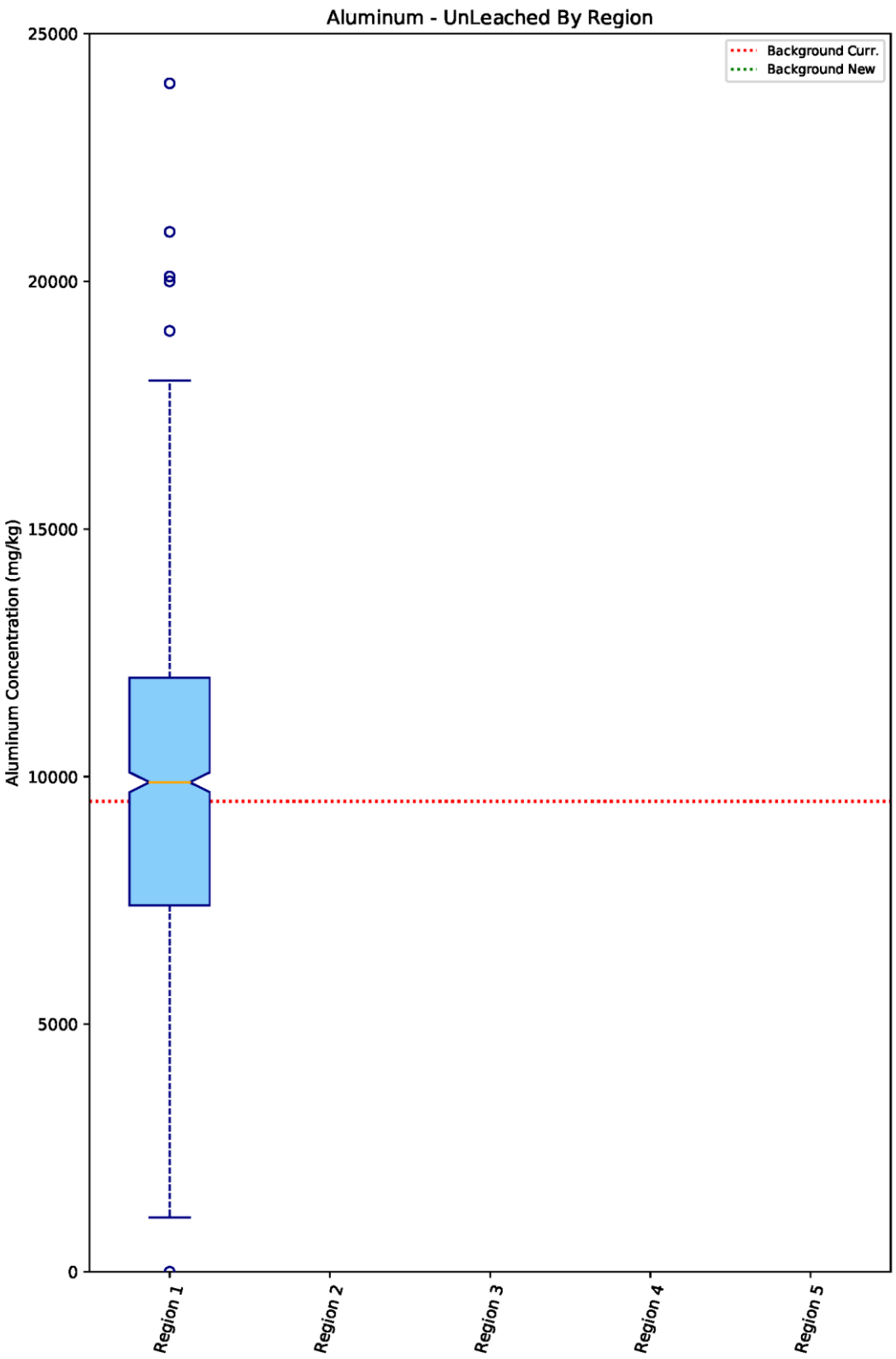


Figure 27. Boxplot of RSL aluminum concentrations by IDOT Region, de minimis (mg/kg)

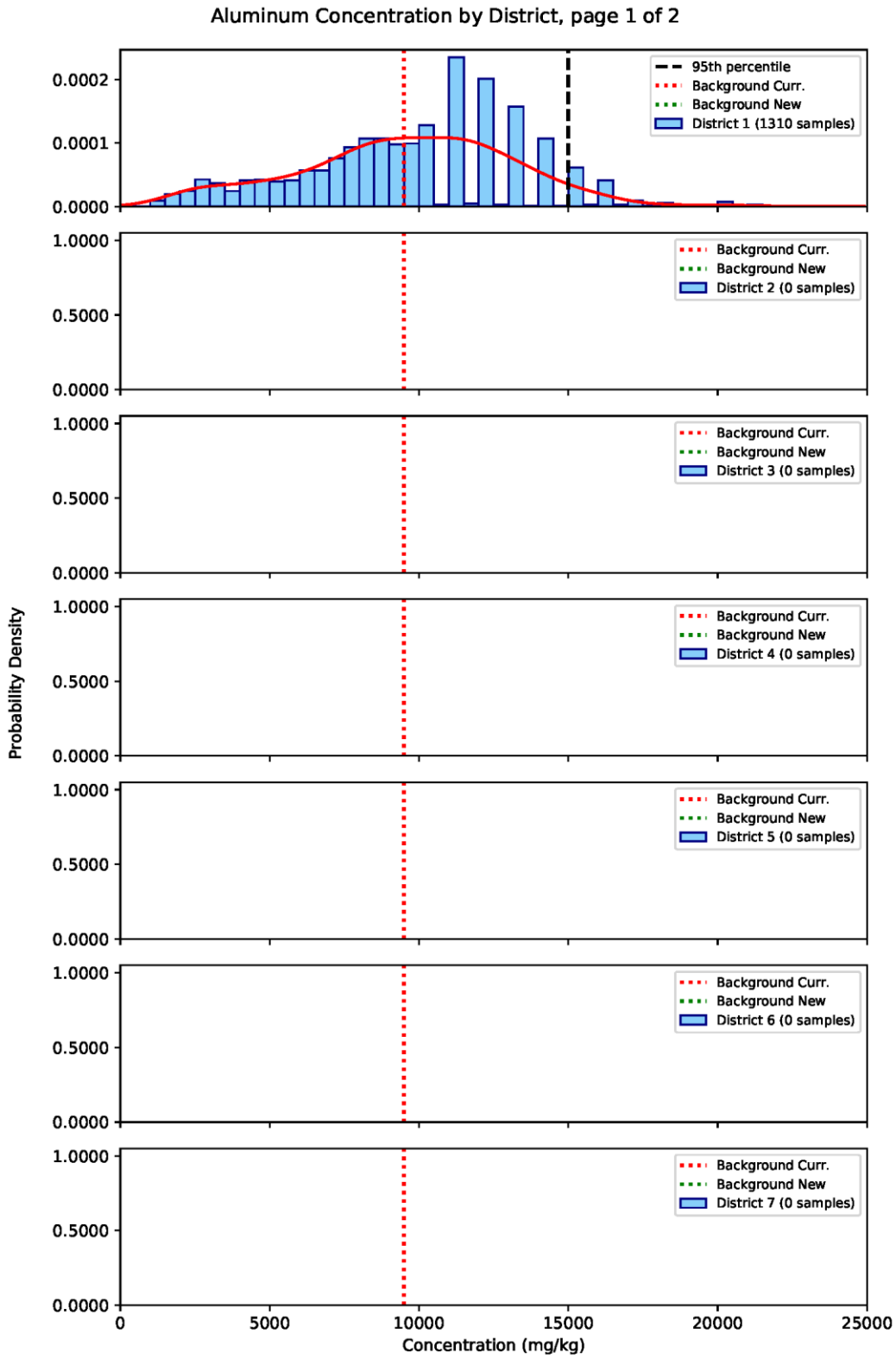


Figure 28. Histogram of RSL aluminum concentrations by IDOT District, de minimis (mg/kg), part 1

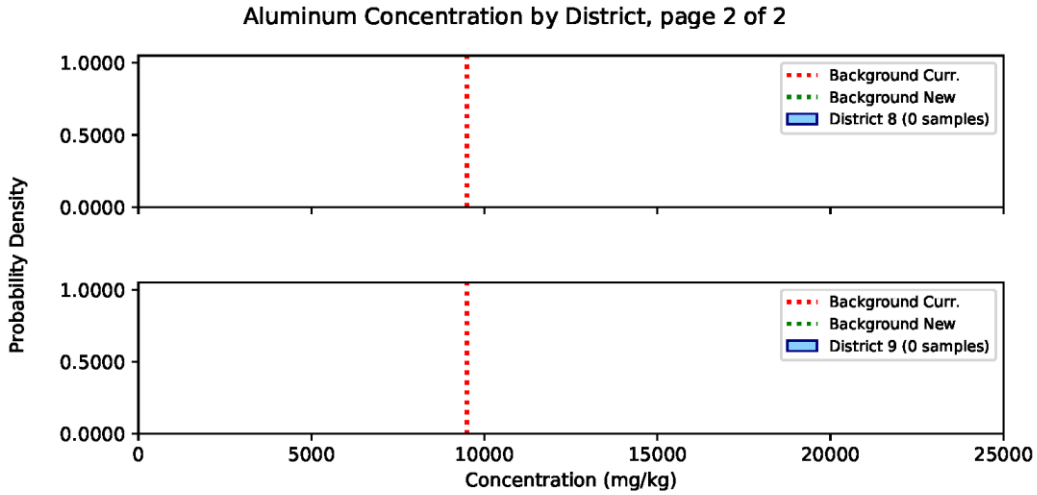


Figure 29. Histogram of RSL aluminum concentrations by IDOT District, de minimis (mg/kg), part 2

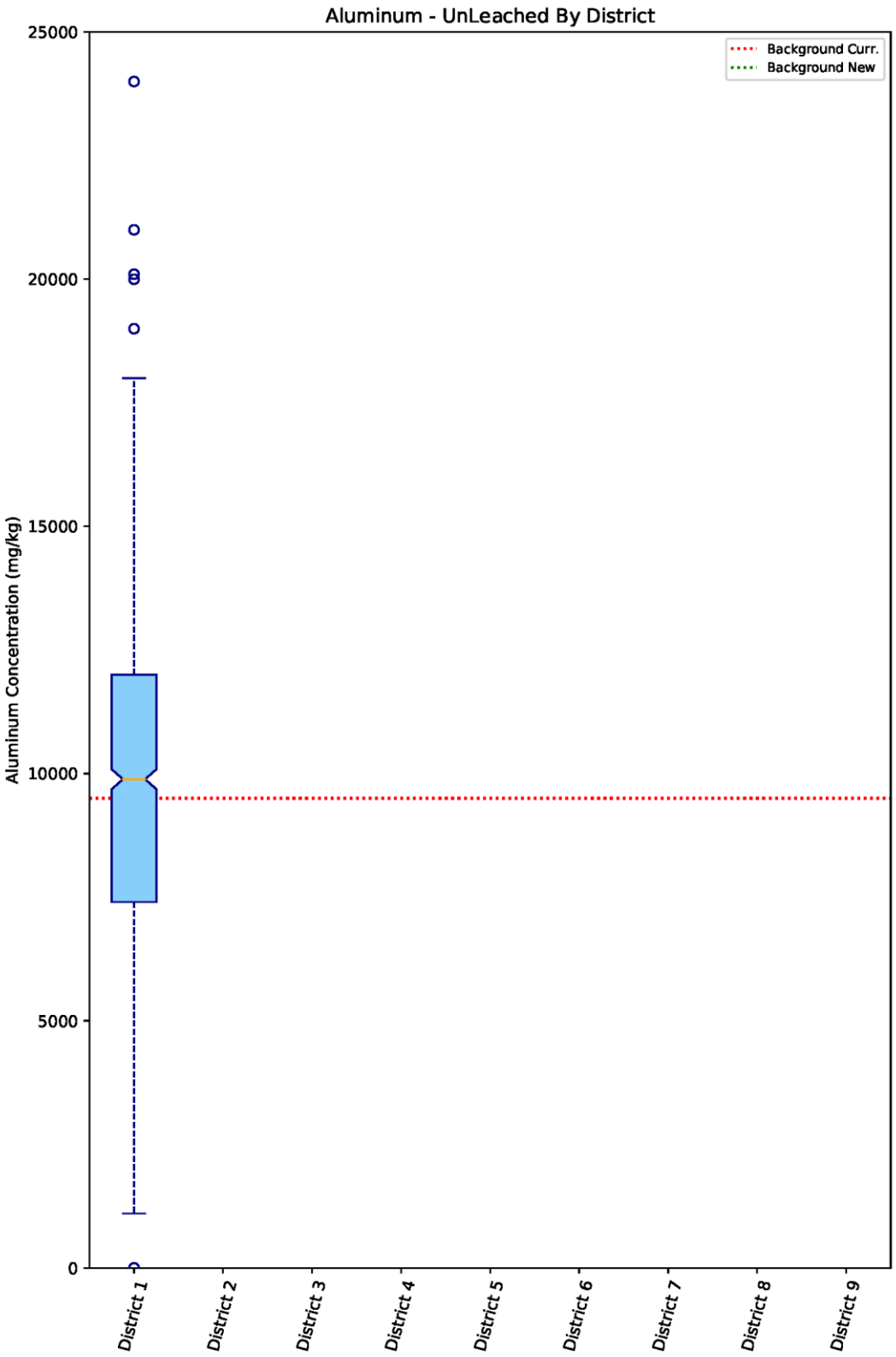


Figure 30. Boxplot of RSL aluminum concentrations by IDOT District, de minimis (mg/kg)

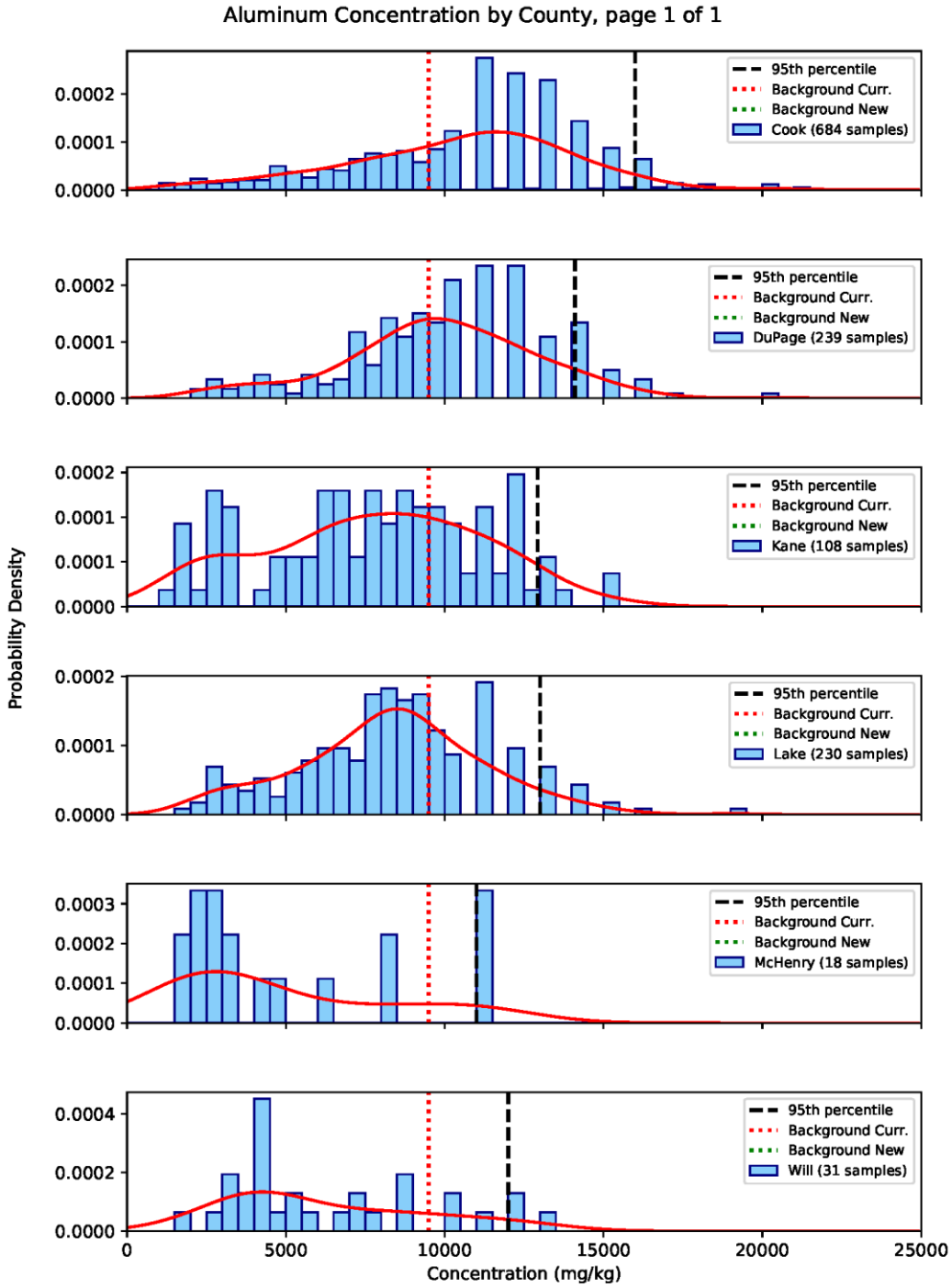


Figure 31. Histogram of RSL aluminum concentrations by Illinois county, de minimis (mg/kg)

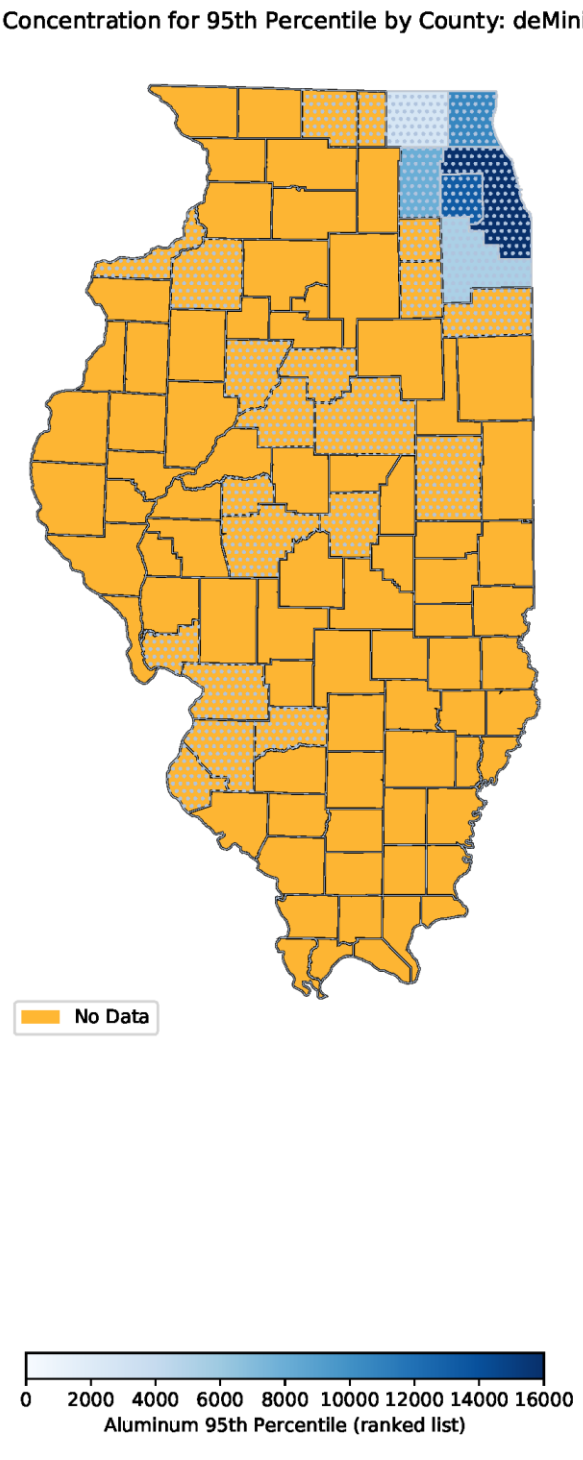


Figure 32. Map of RSL aluminum 95th percentile concentration by Illinois county, de minimis (mg/kg)

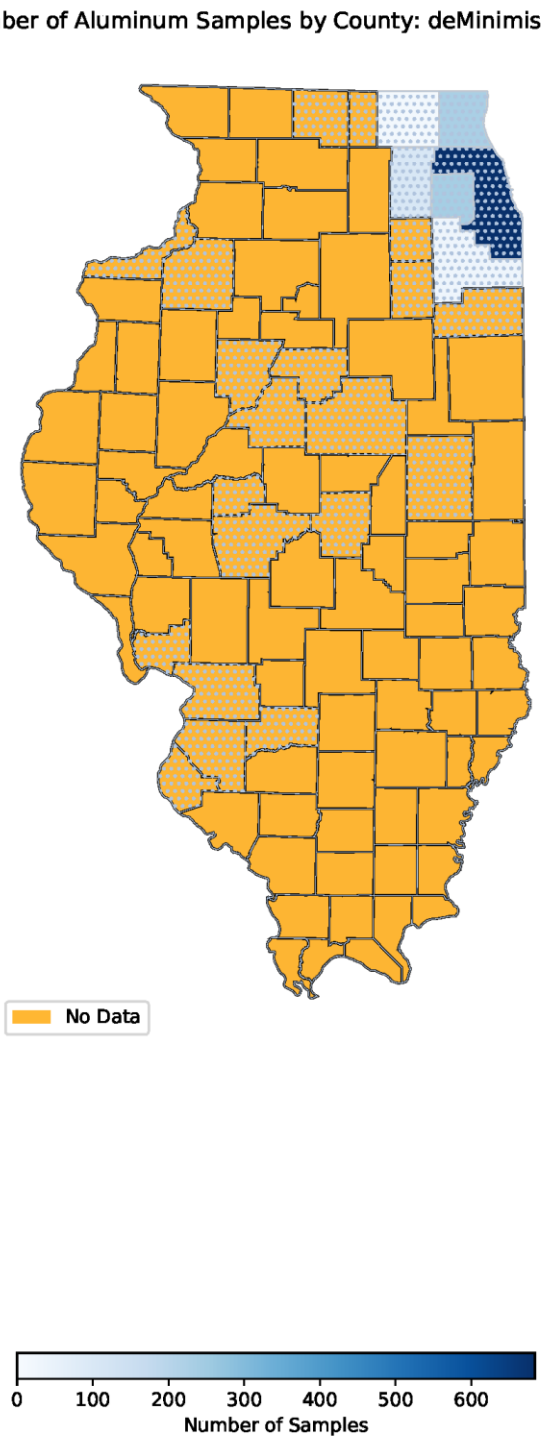


Figure 33. Map of RSL aluminum sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX B. ANALYTE ANALYSIS: ANTIMONY

B.1 ANTIMONY REC

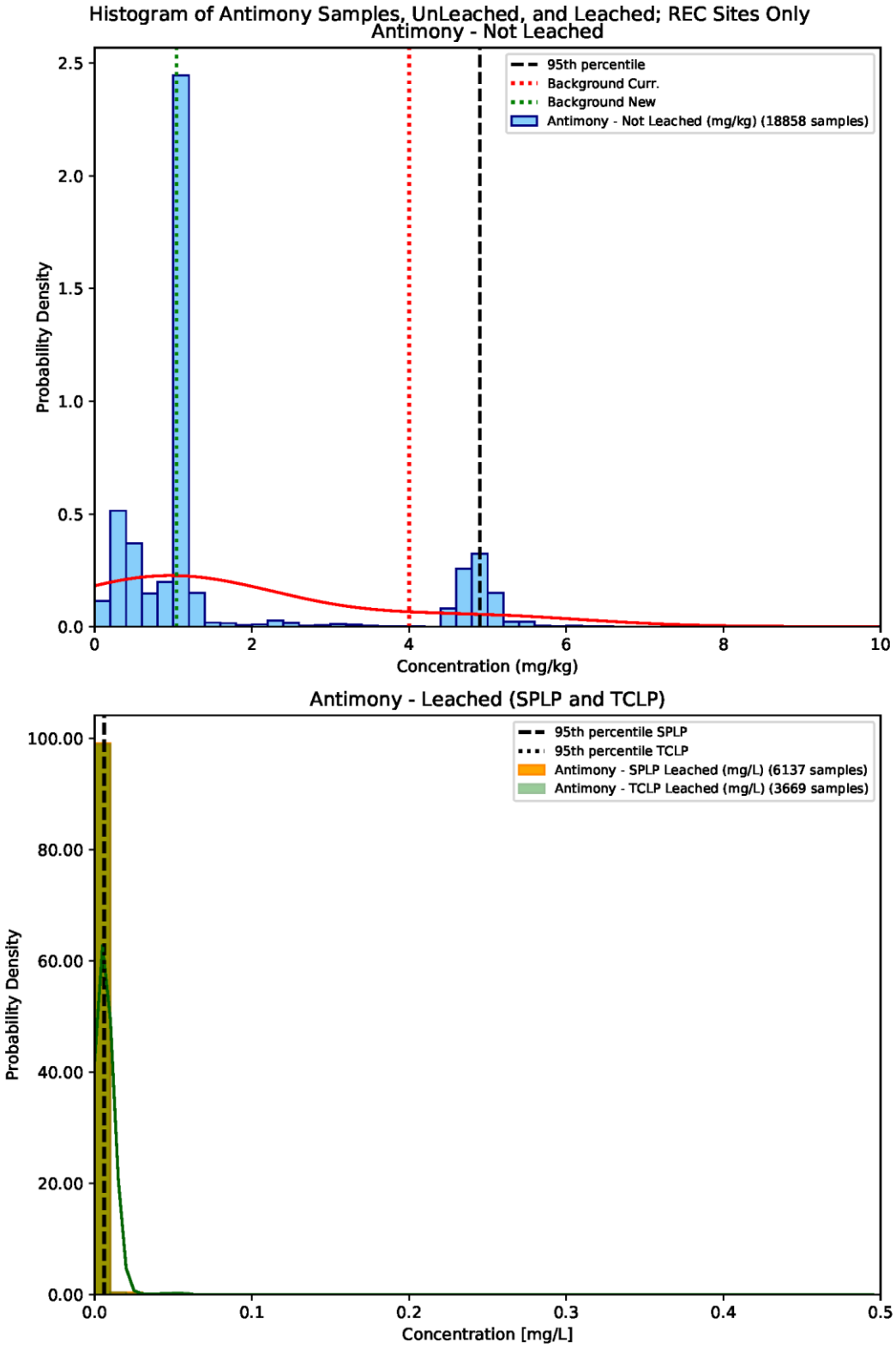


Figure 34. Histogram of RSL antimony concentrations, REC (mg/kg)

Antimony Unleached Concentration (mg/kg)

1) Region

2) District

3) County

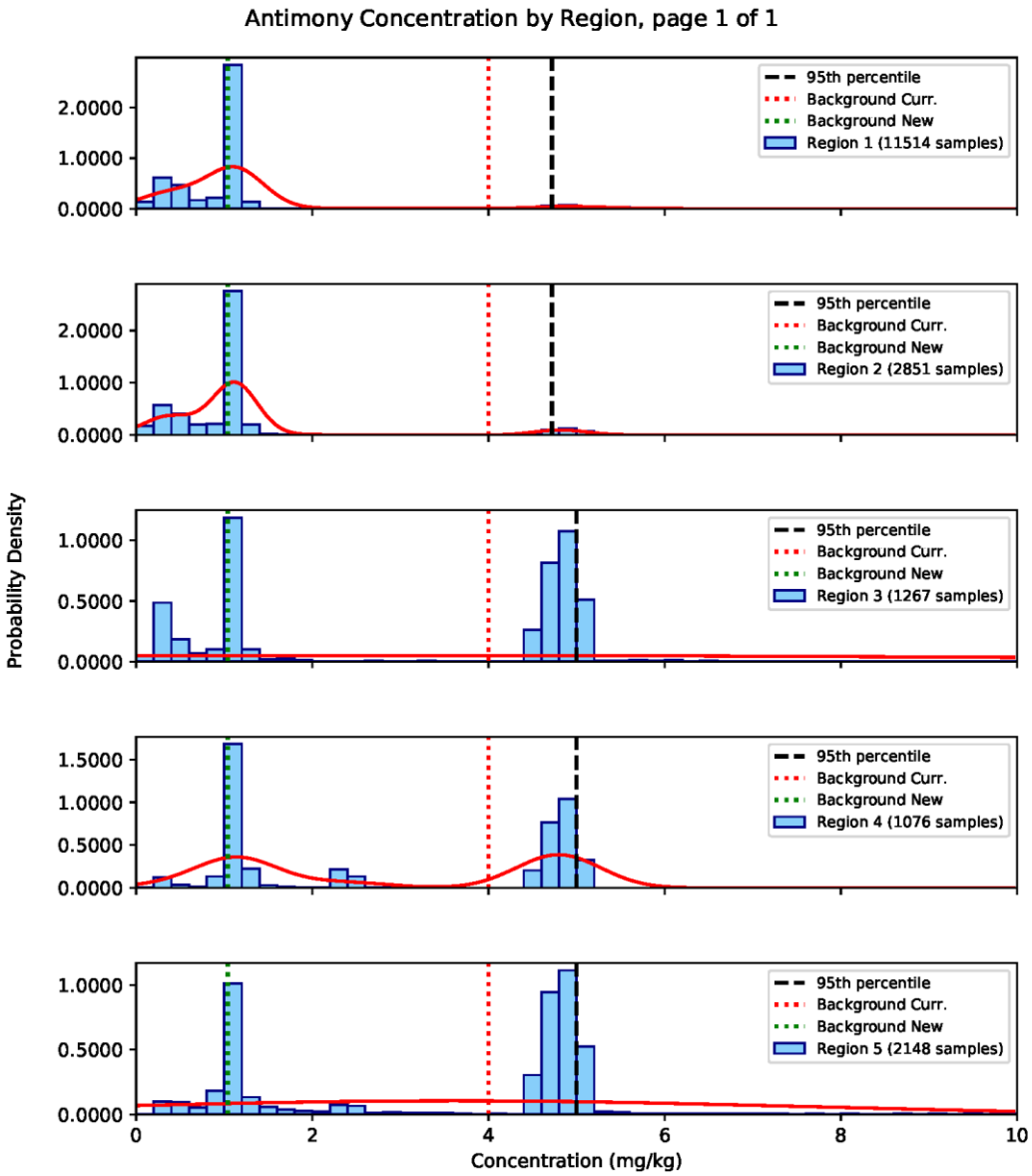


Figure 35. Histogram of RSL antimony concentrations by IDOT Region, REC (mg/kg)

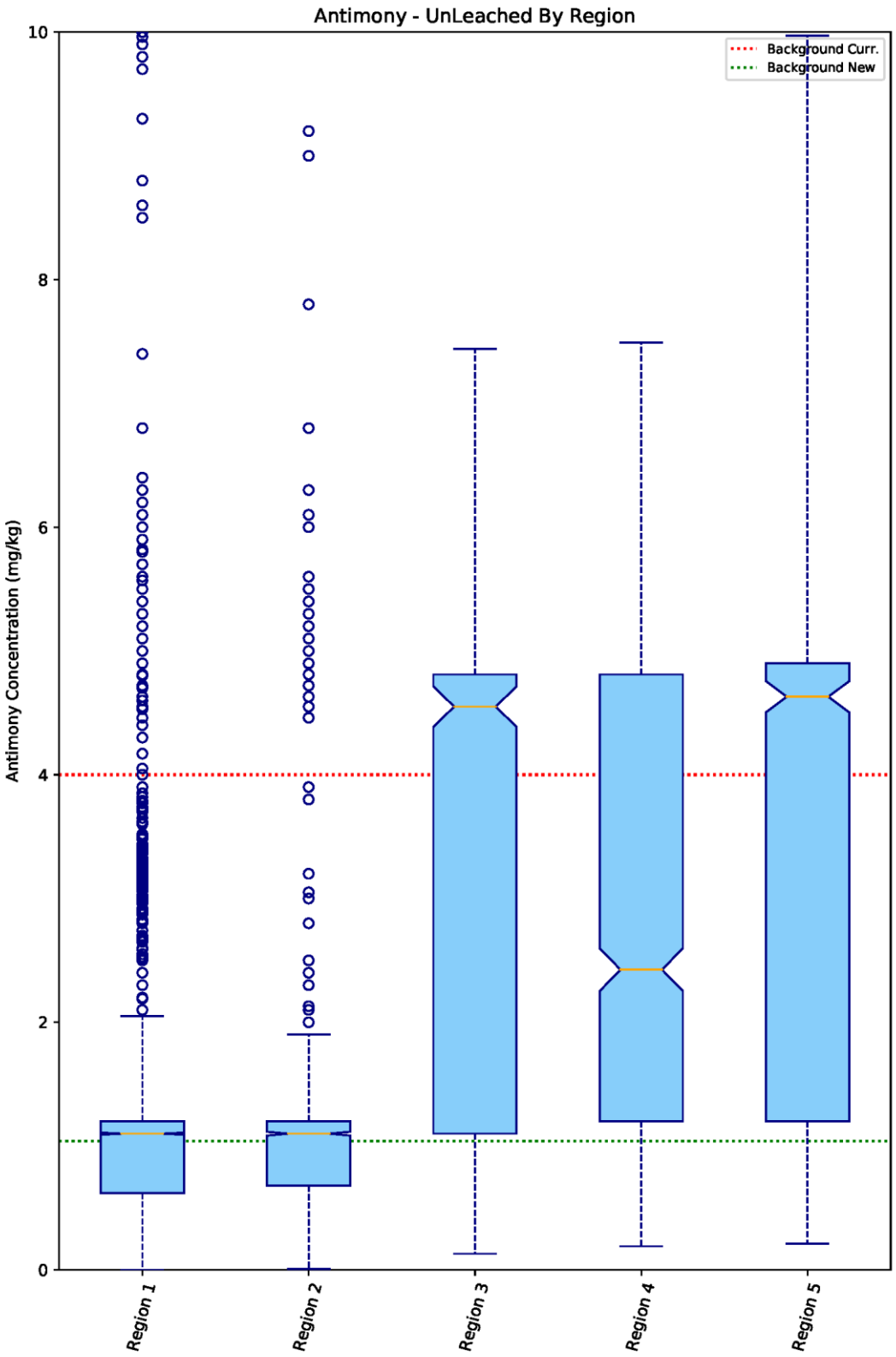


Figure 36. Boxplot of RSL antimony concentrations by IDOT Region, REC (mg/kg)

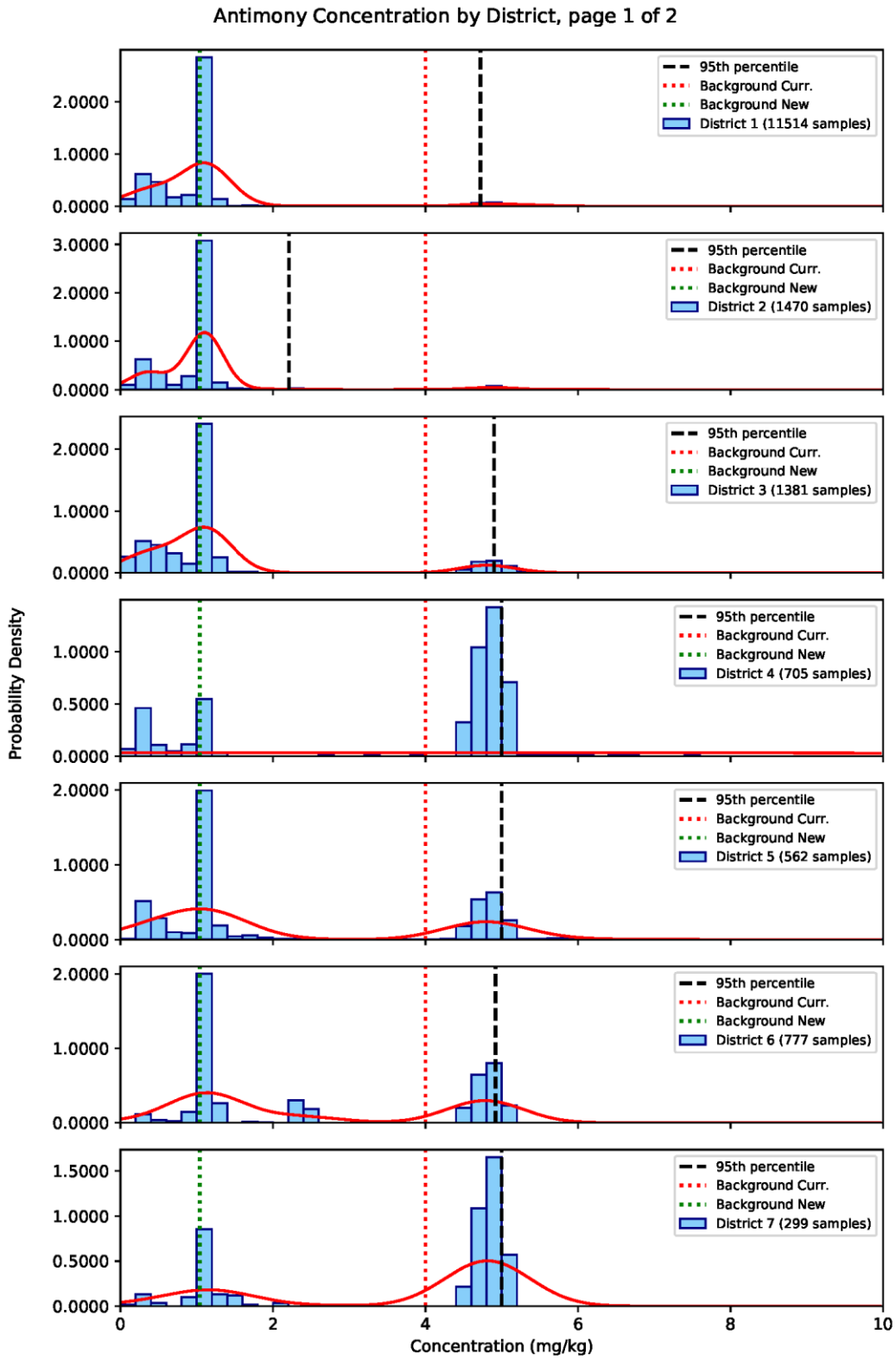


Figure 37. Histogram of RSL antimony concentrations by IDOT District, REC (mg/kg), part 1

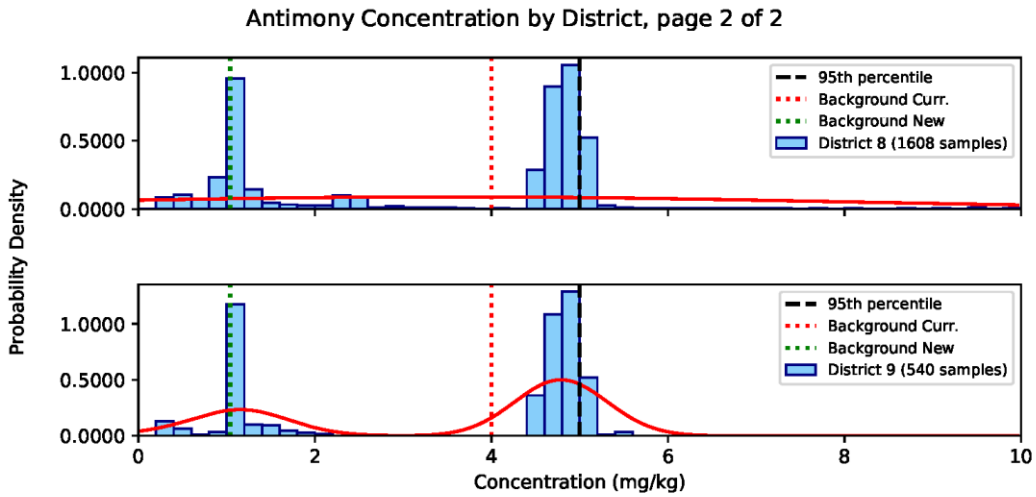


Figure 38. Histogram of RSL antimony concentrations by IDOT District, REC (mg/kg), part 2

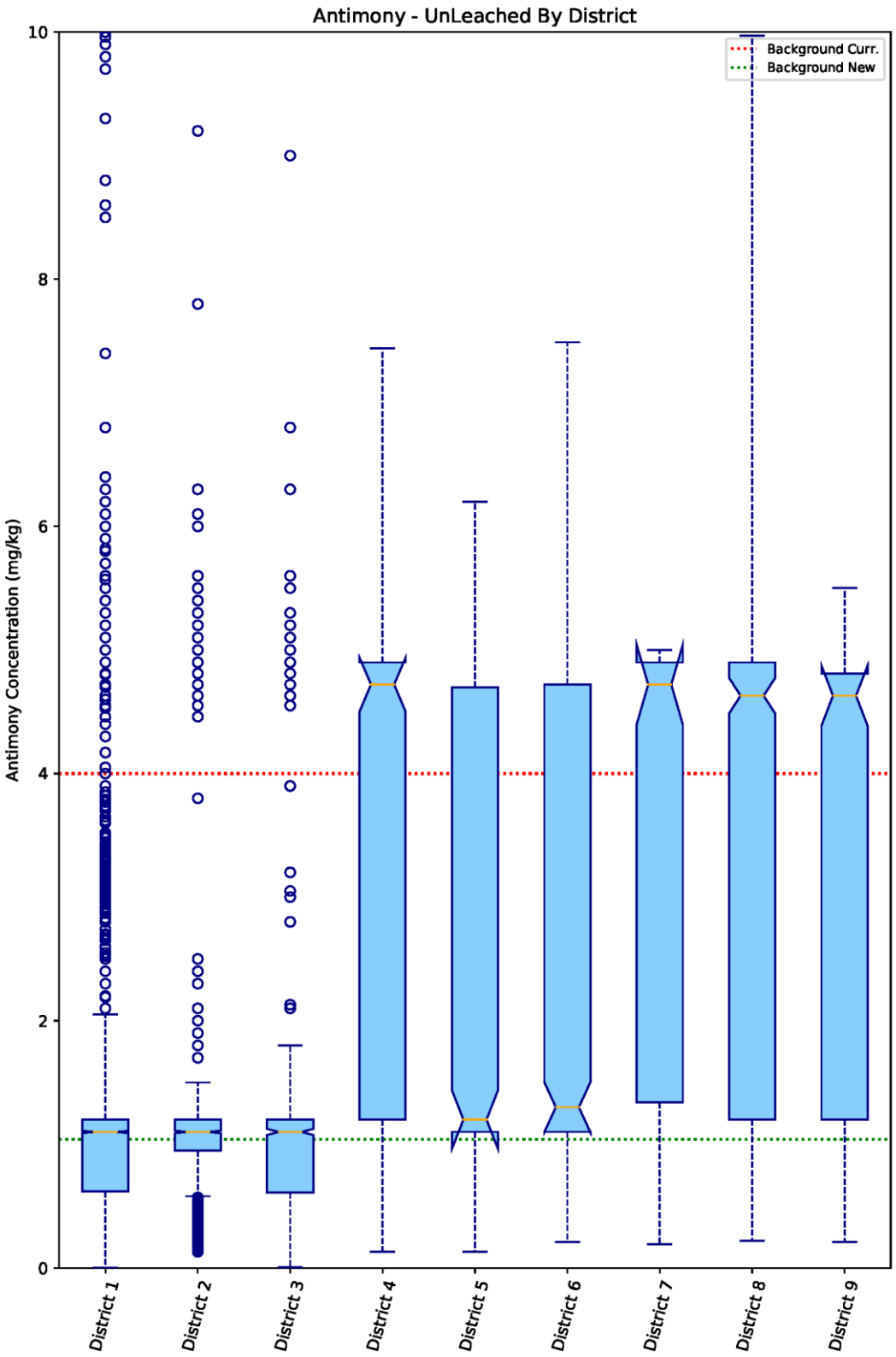


Figure 39. Boxplot of RSL antimony concentrations by IDOT District, REC (mg/kg)

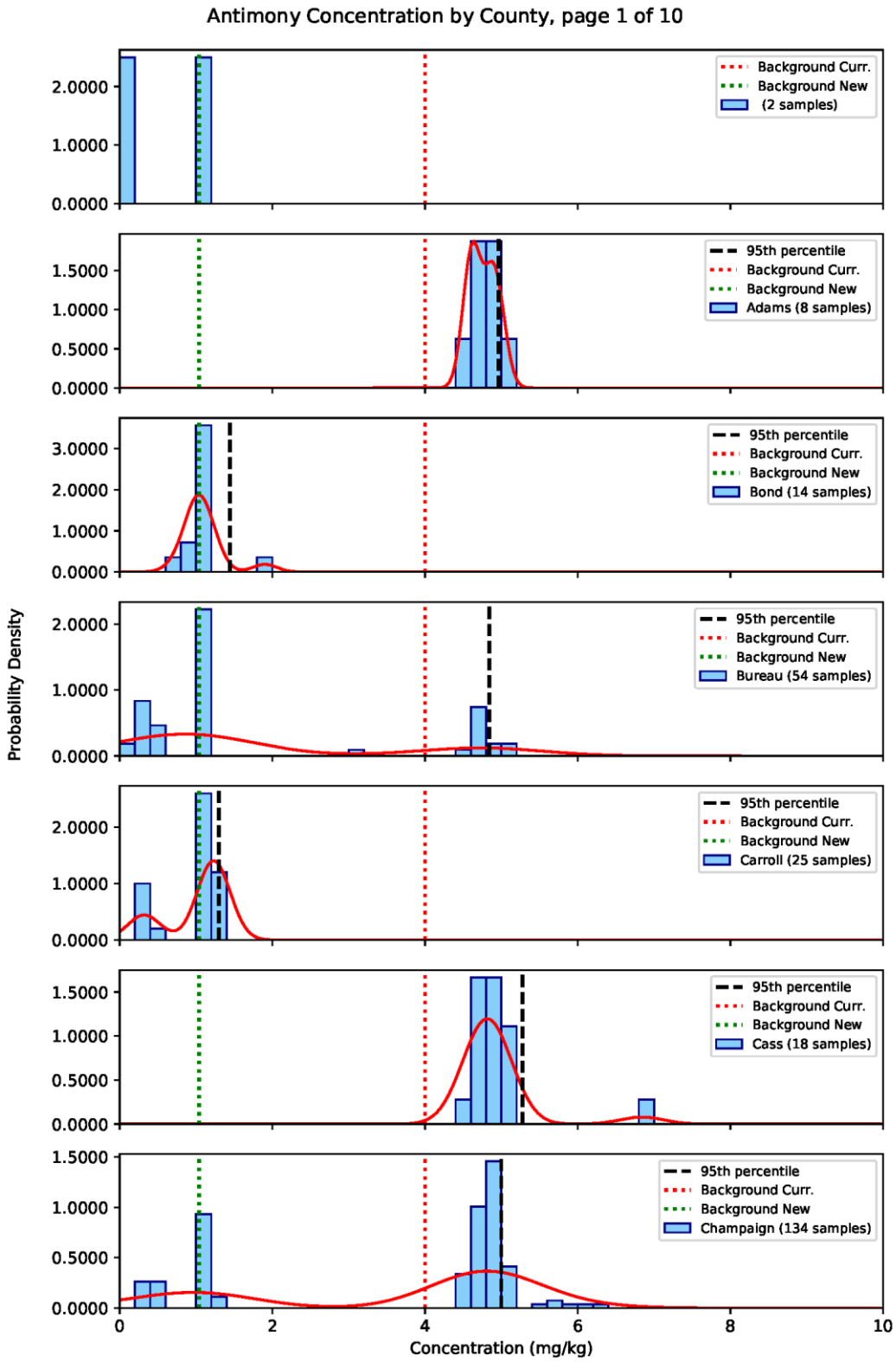


Figure 40. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 1

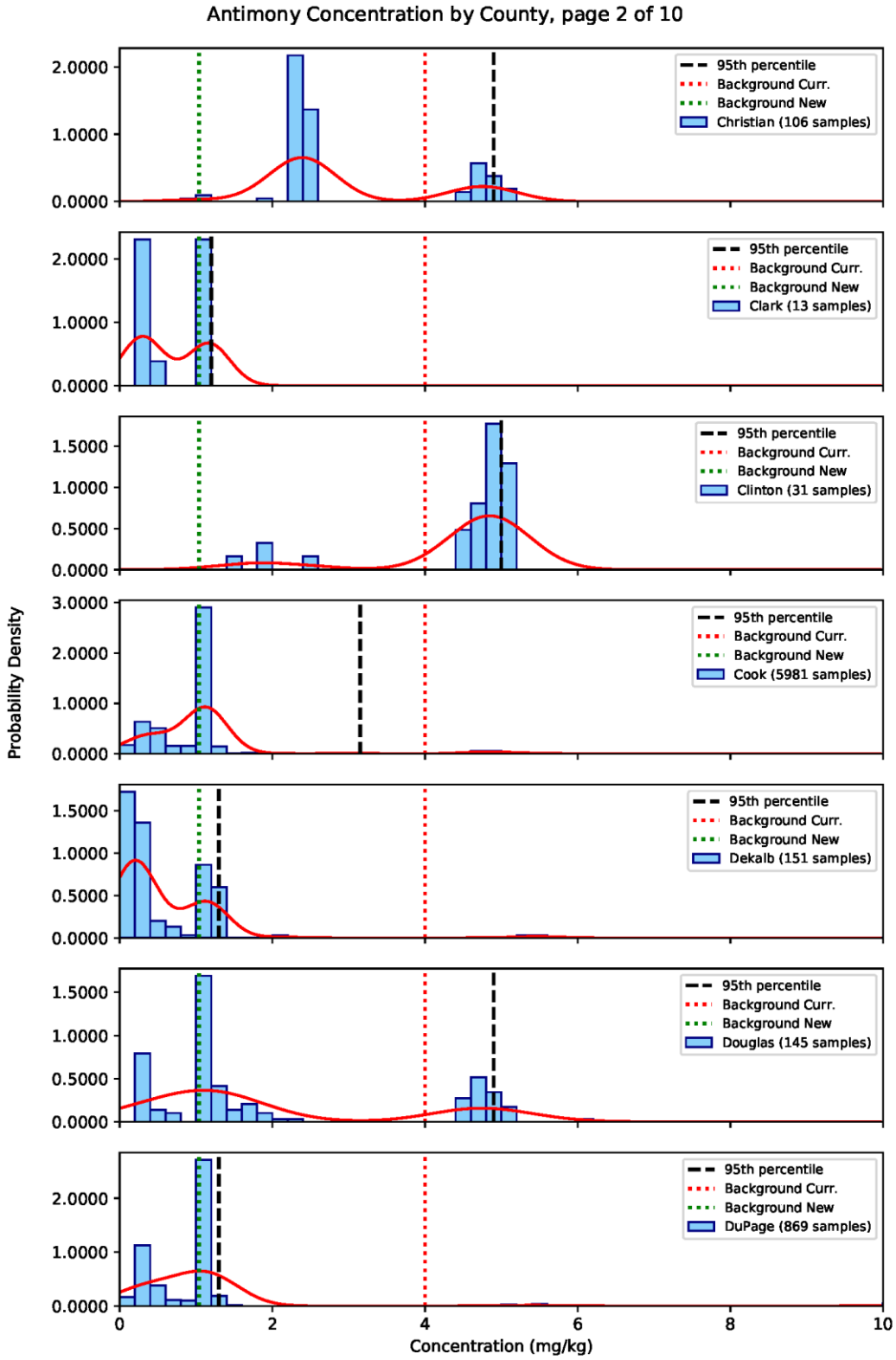


Figure 41. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 2

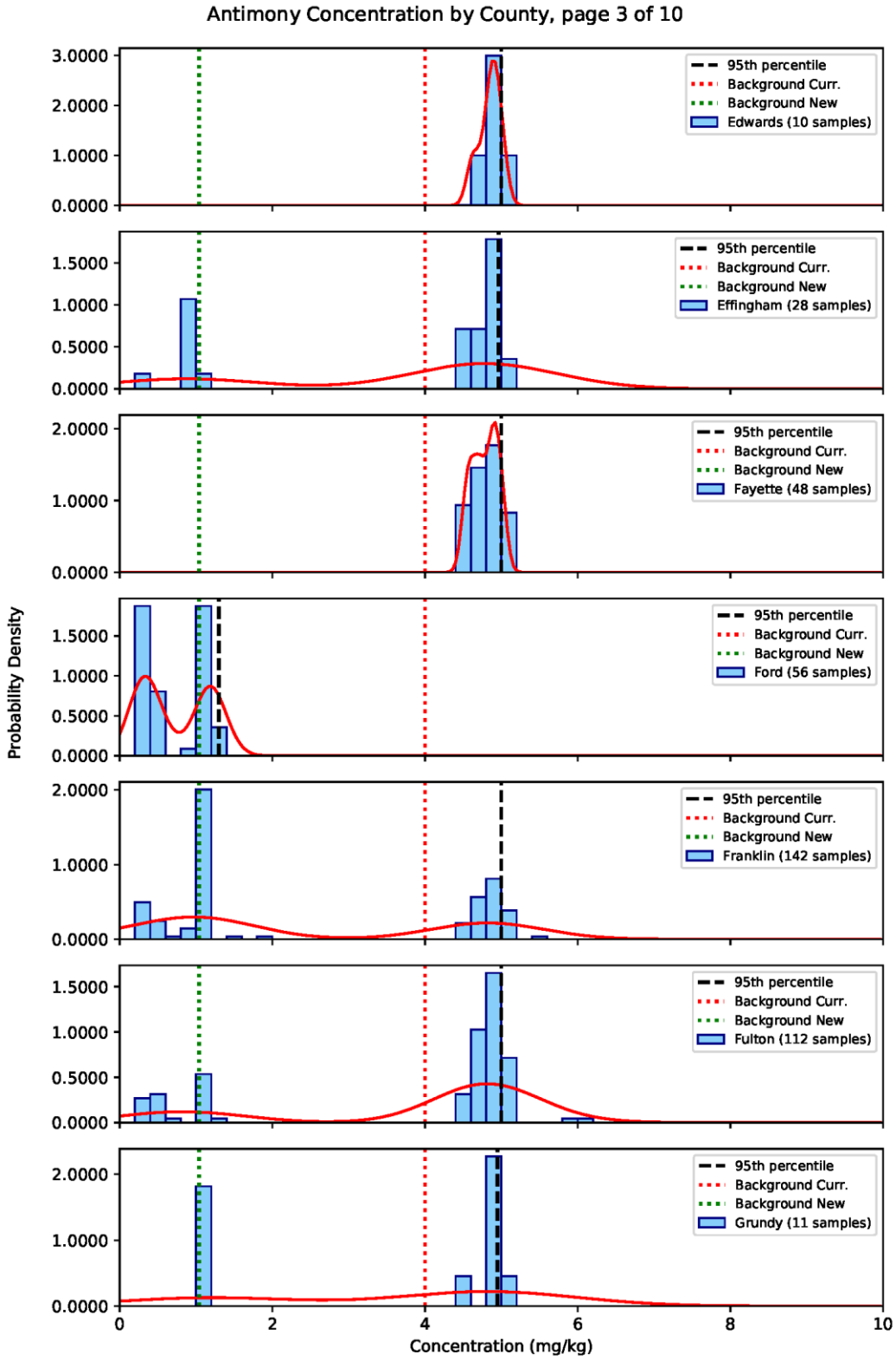


Figure 42. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 3

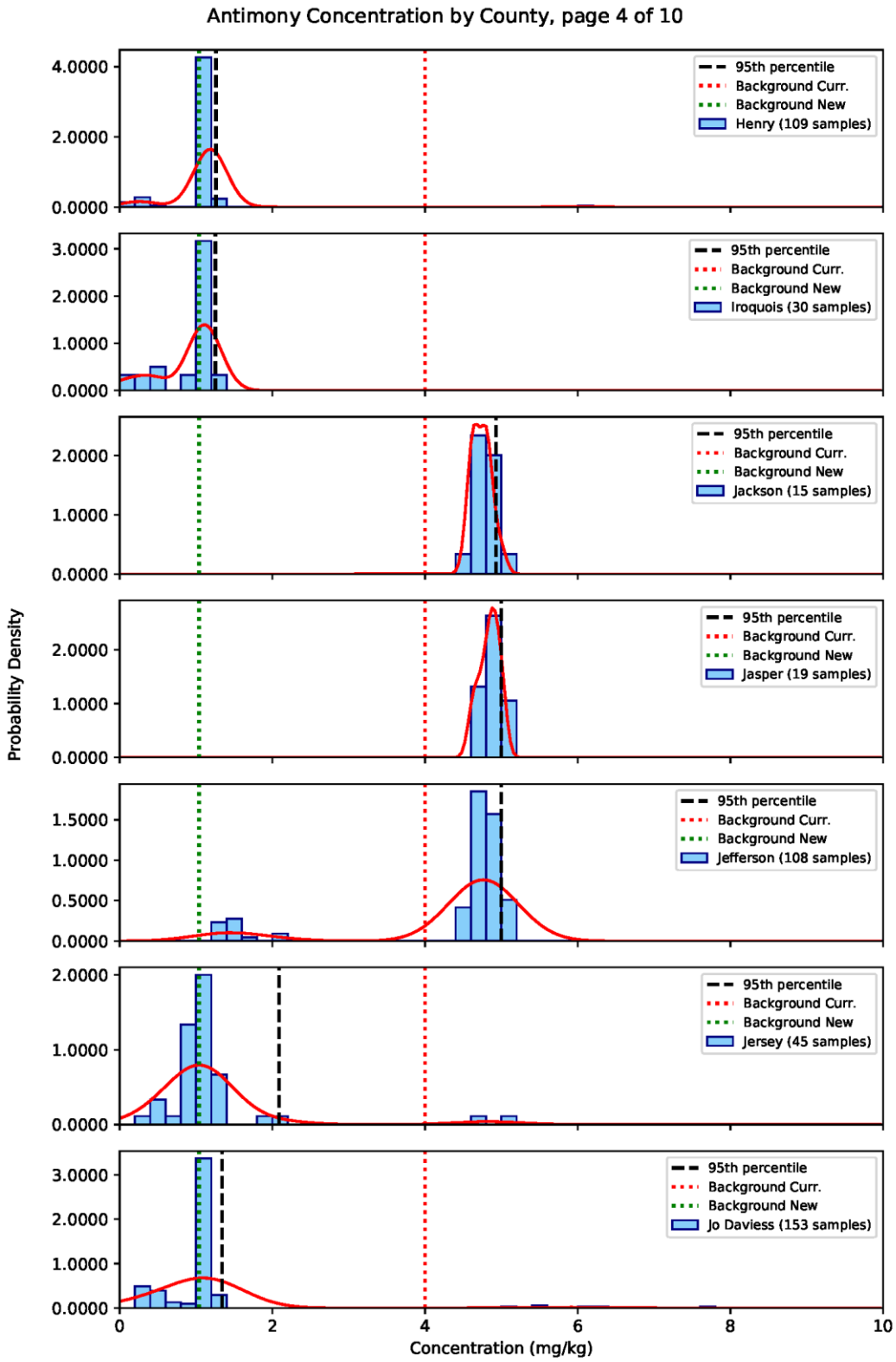


Figure 43. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 4

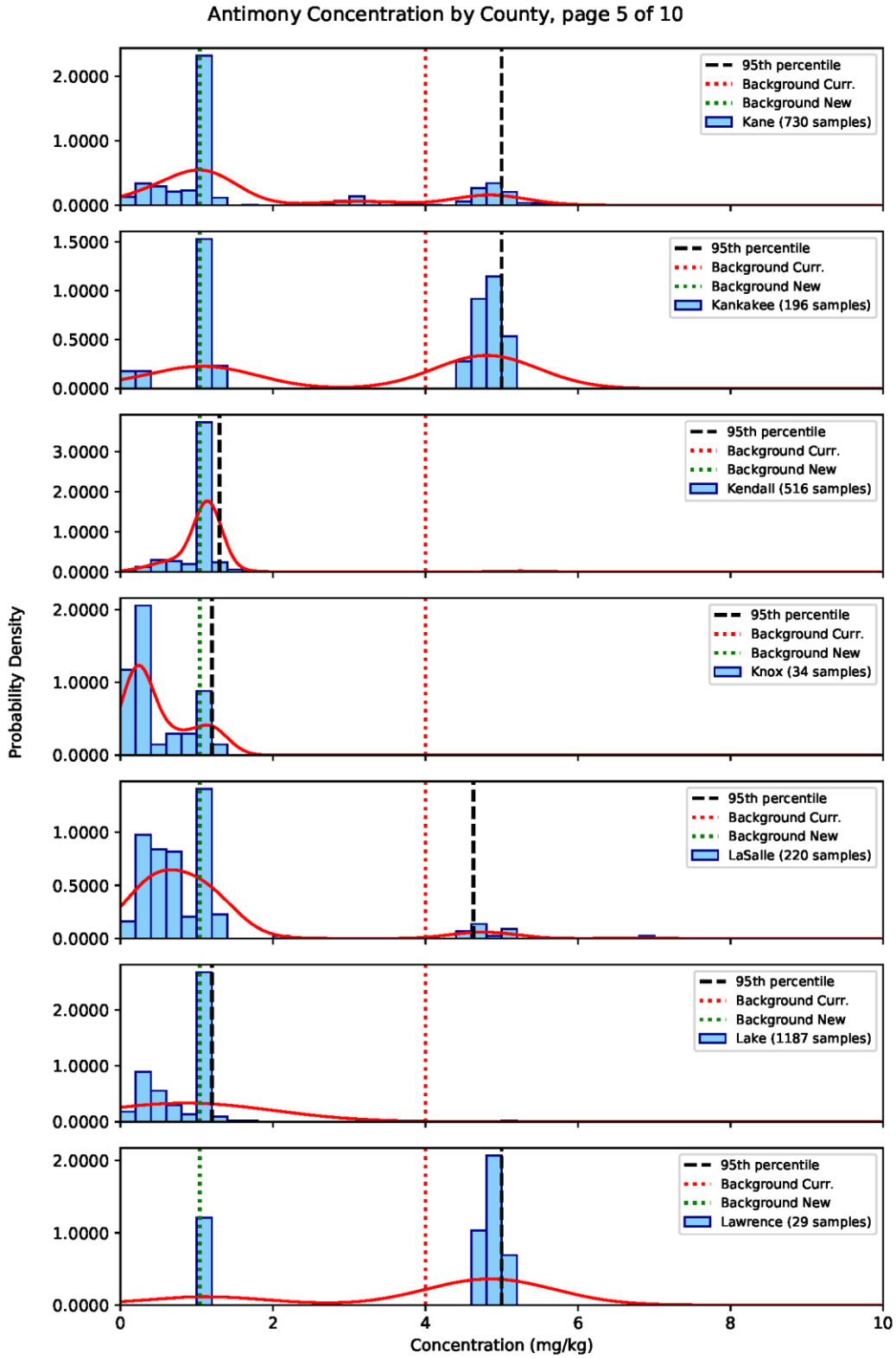


Figure 44. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 5

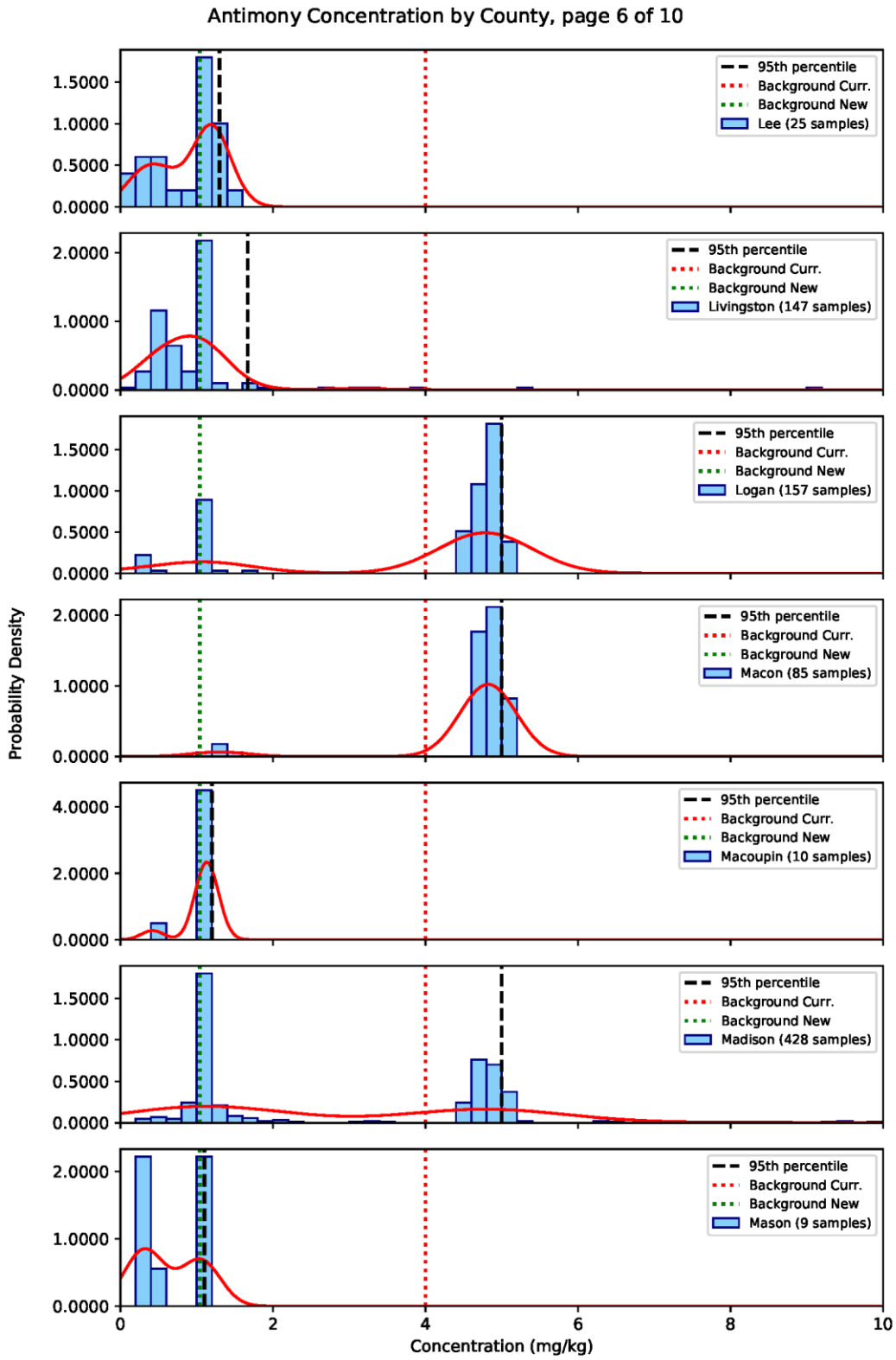


Figure 45. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 6

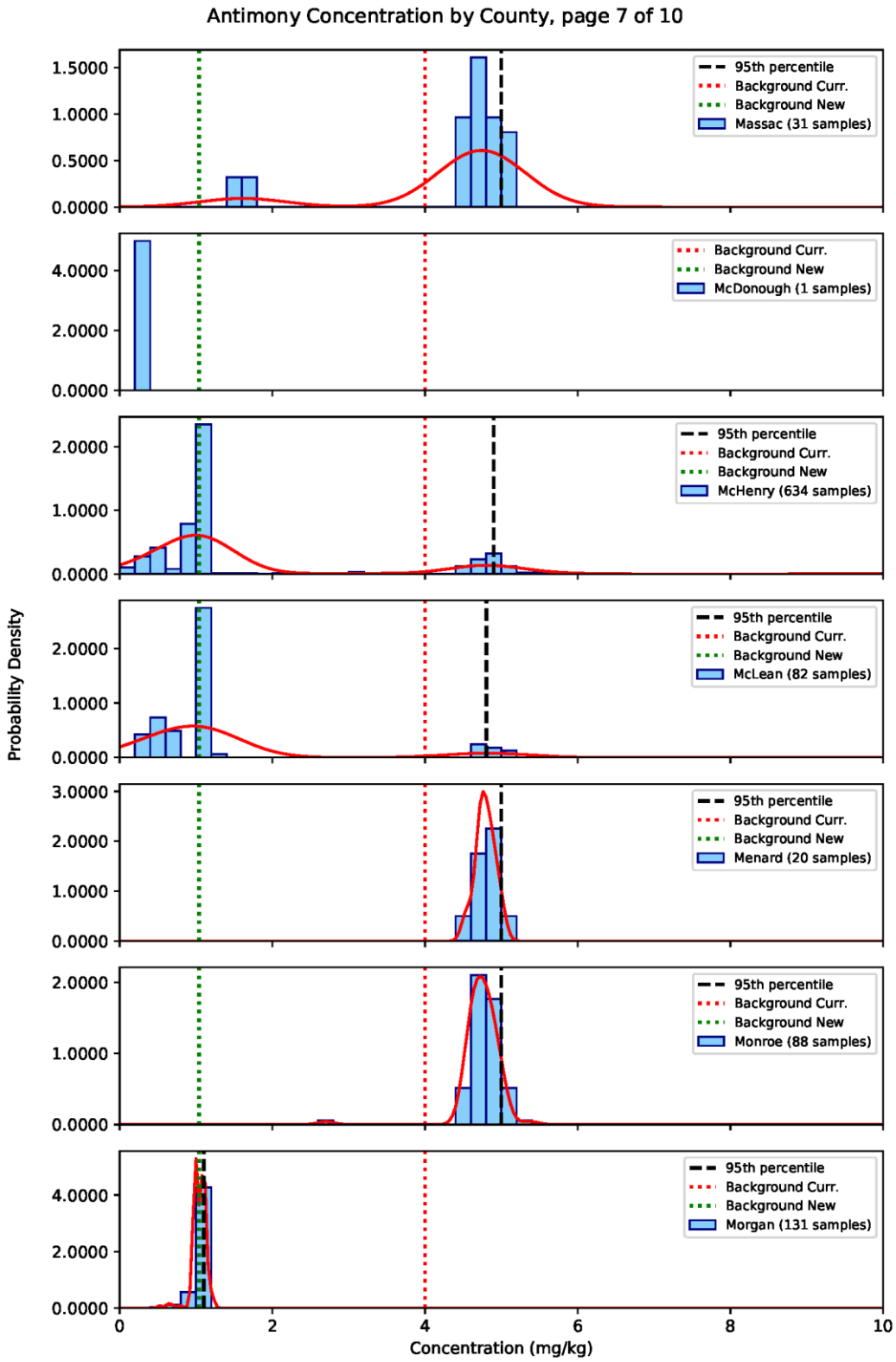


Figure 46. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 7

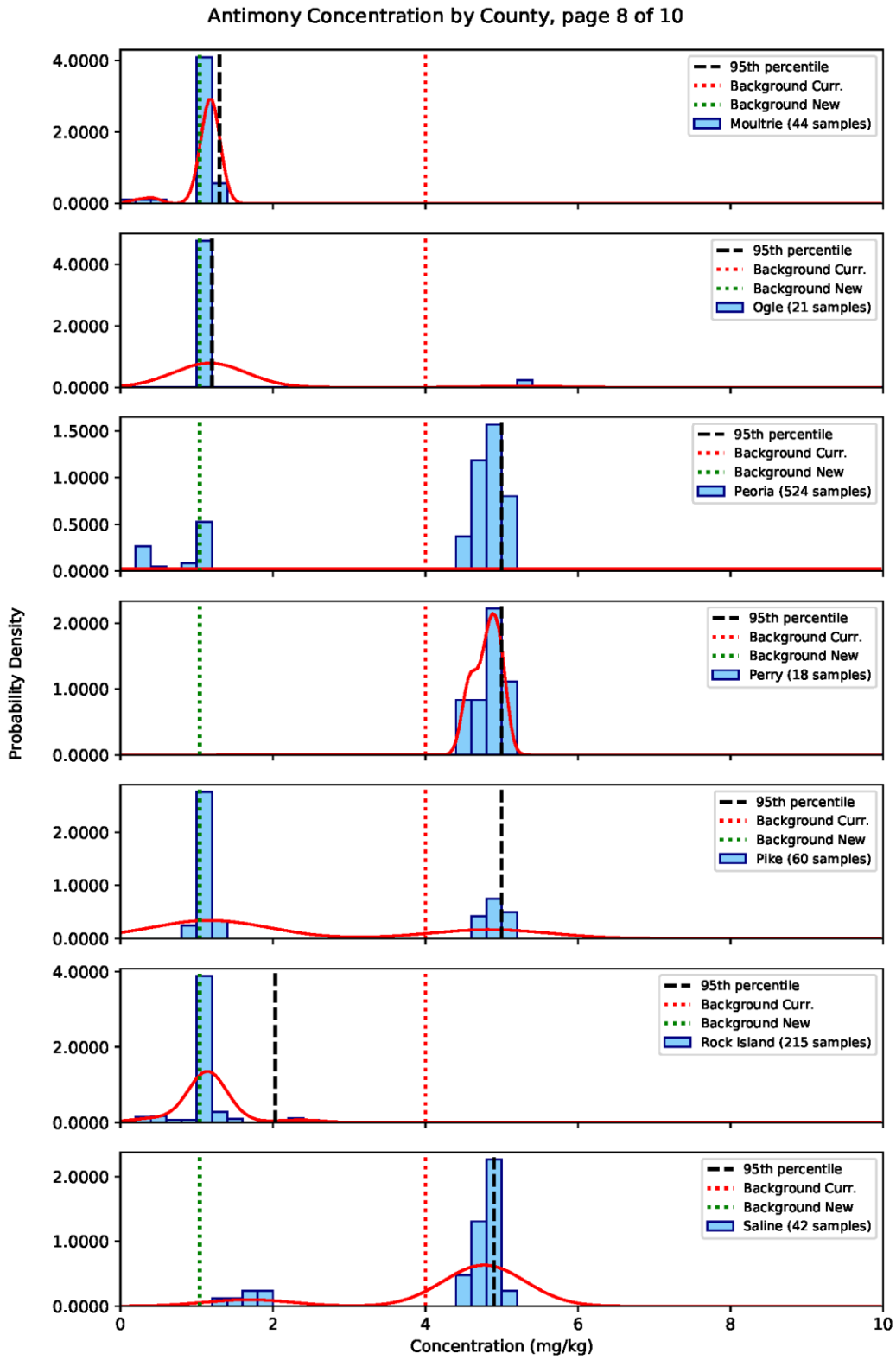


Figure 47. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 8

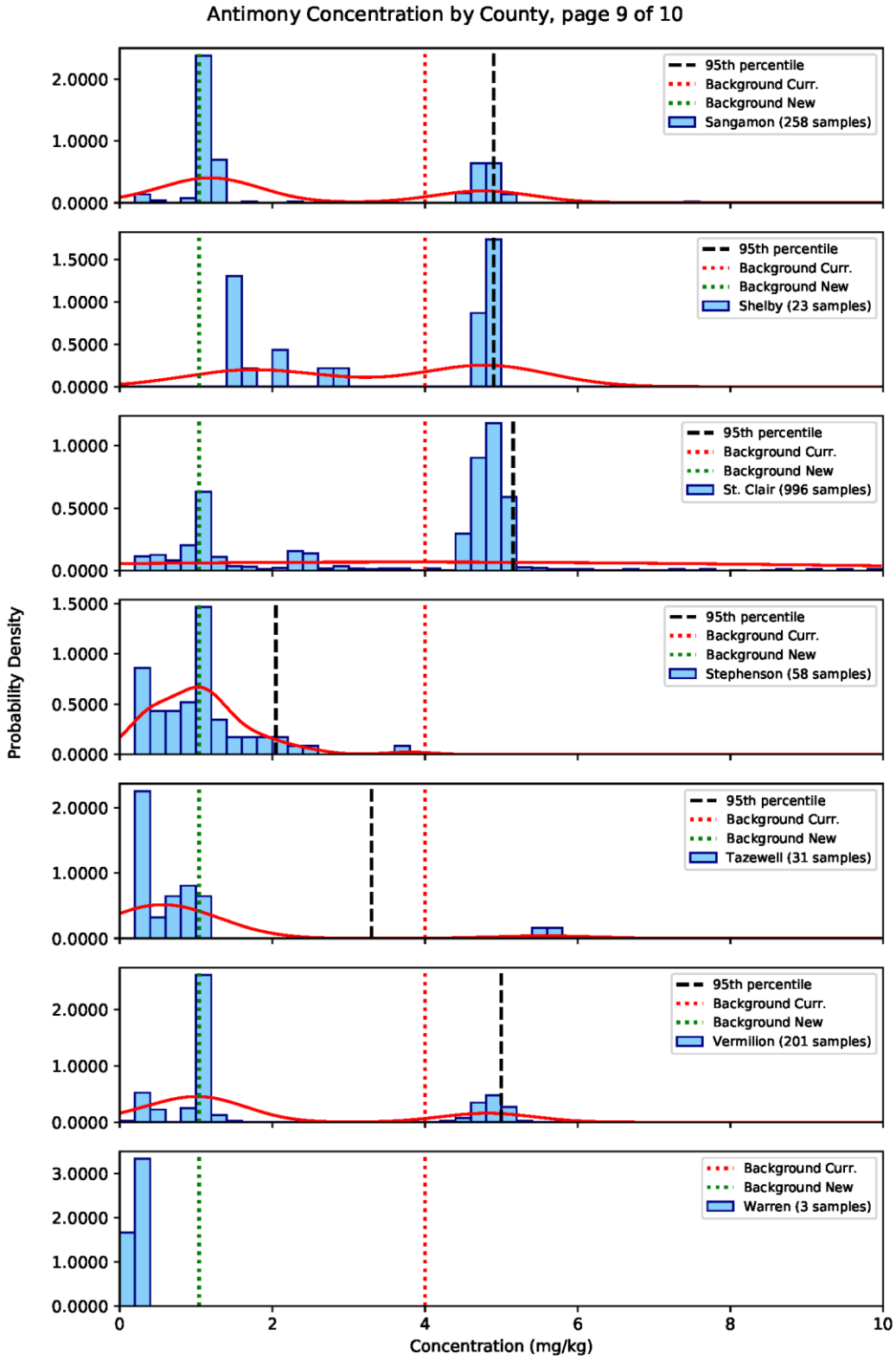


Figure 48. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 9

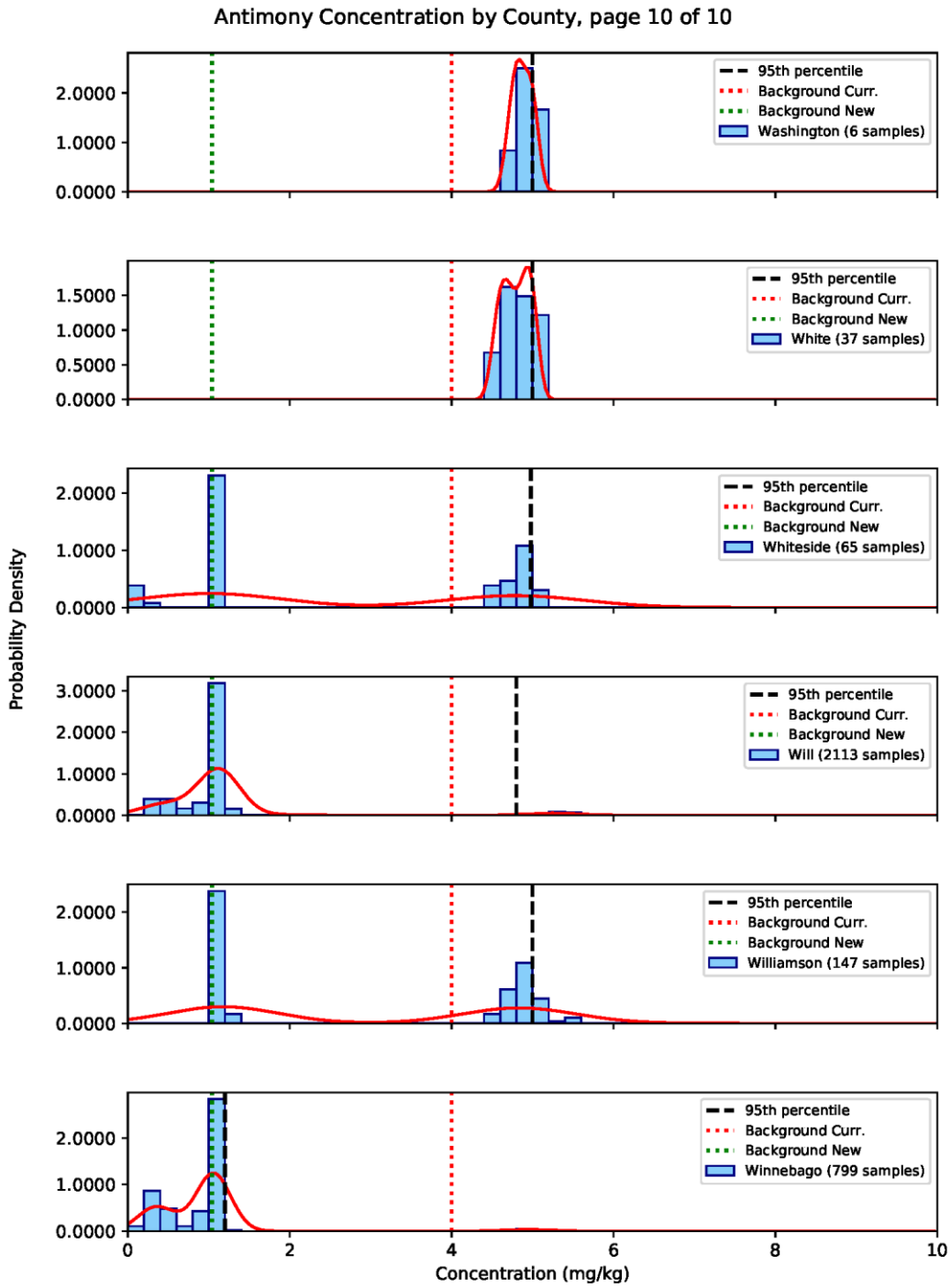


Figure 49. Histogram of RSL antimony concentrations by Illinois county, REC (mg/kg), part 10

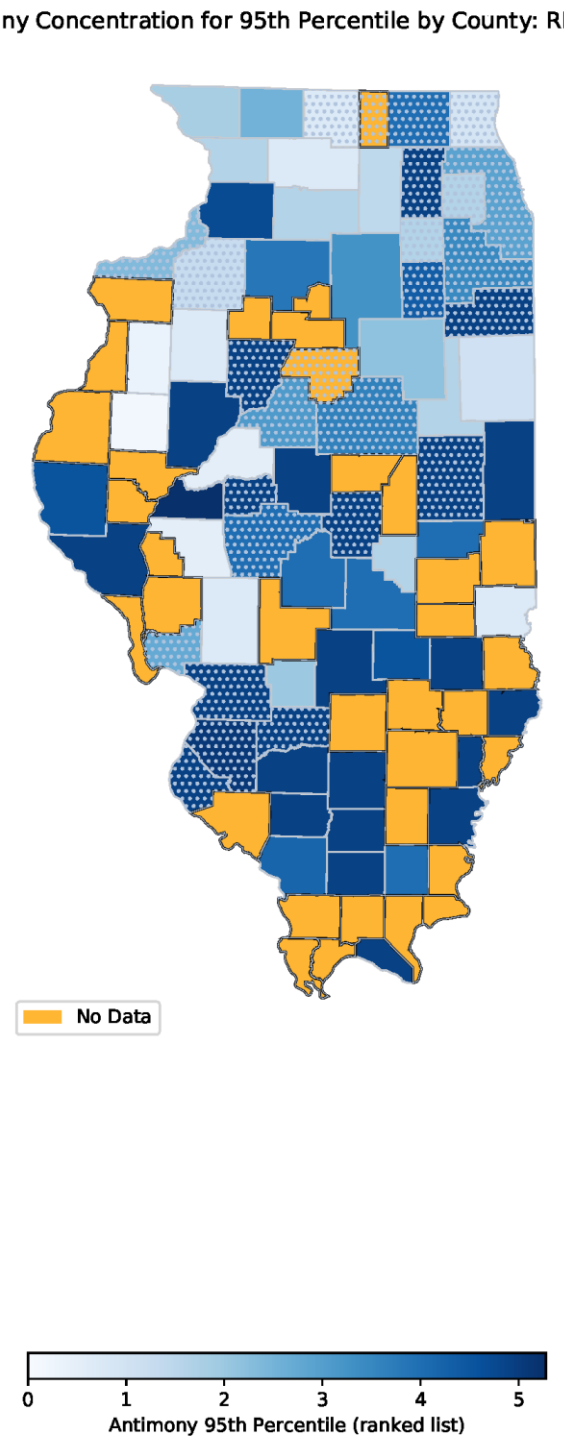


Figure 50. Map of RSL antimony 95th percentile concentration by Illinois county, REC (mg/kg)

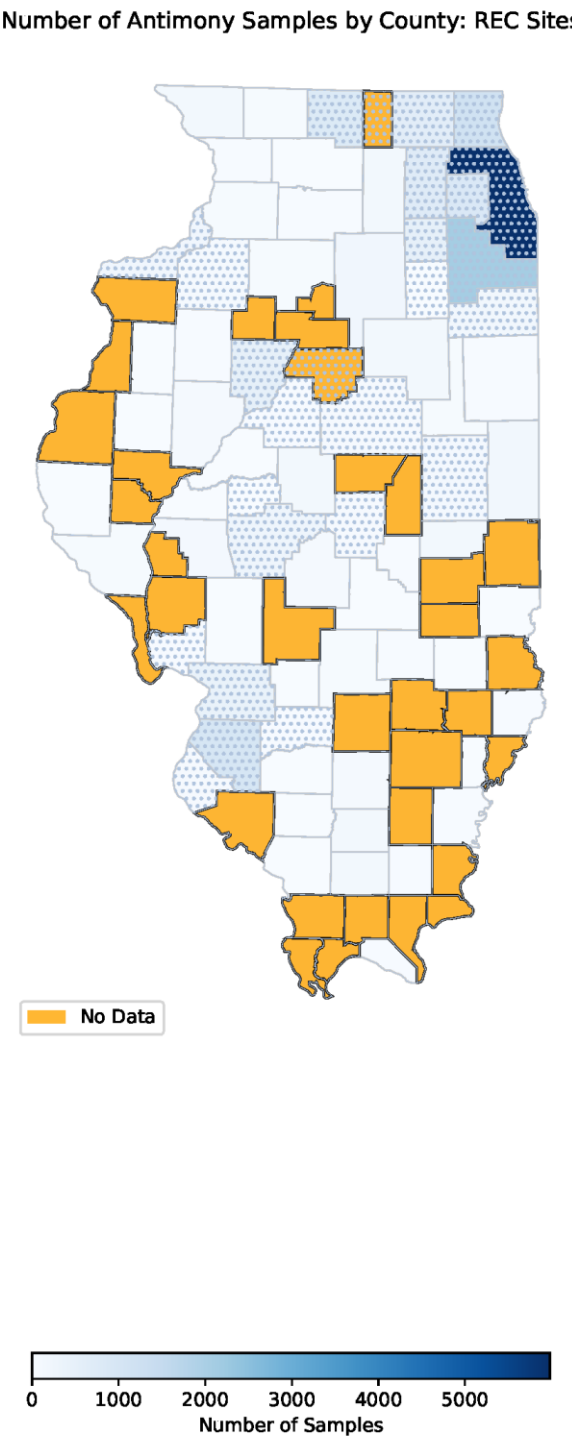


Figure 51. Map of RSL antimony sample quantity by Illinois county, REC (mg/kg)

B.2 ANTIMONY NON-REC

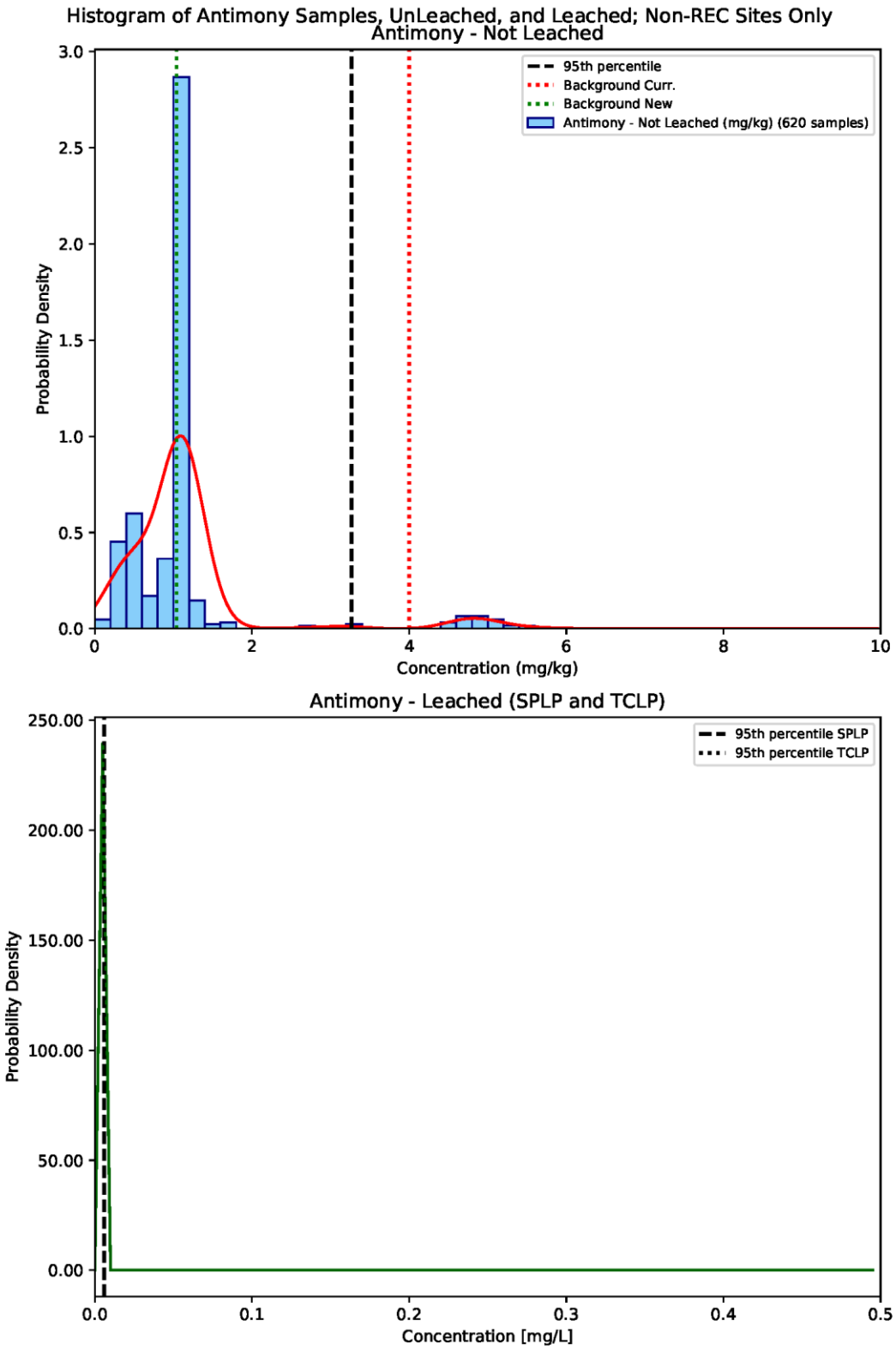


Figure 52. Histogram of RSL antimony concentrations, Non-REC (mg/kg)

Antimony Unleached Concentration (mg/kg)

1) Region

2) District

3) County

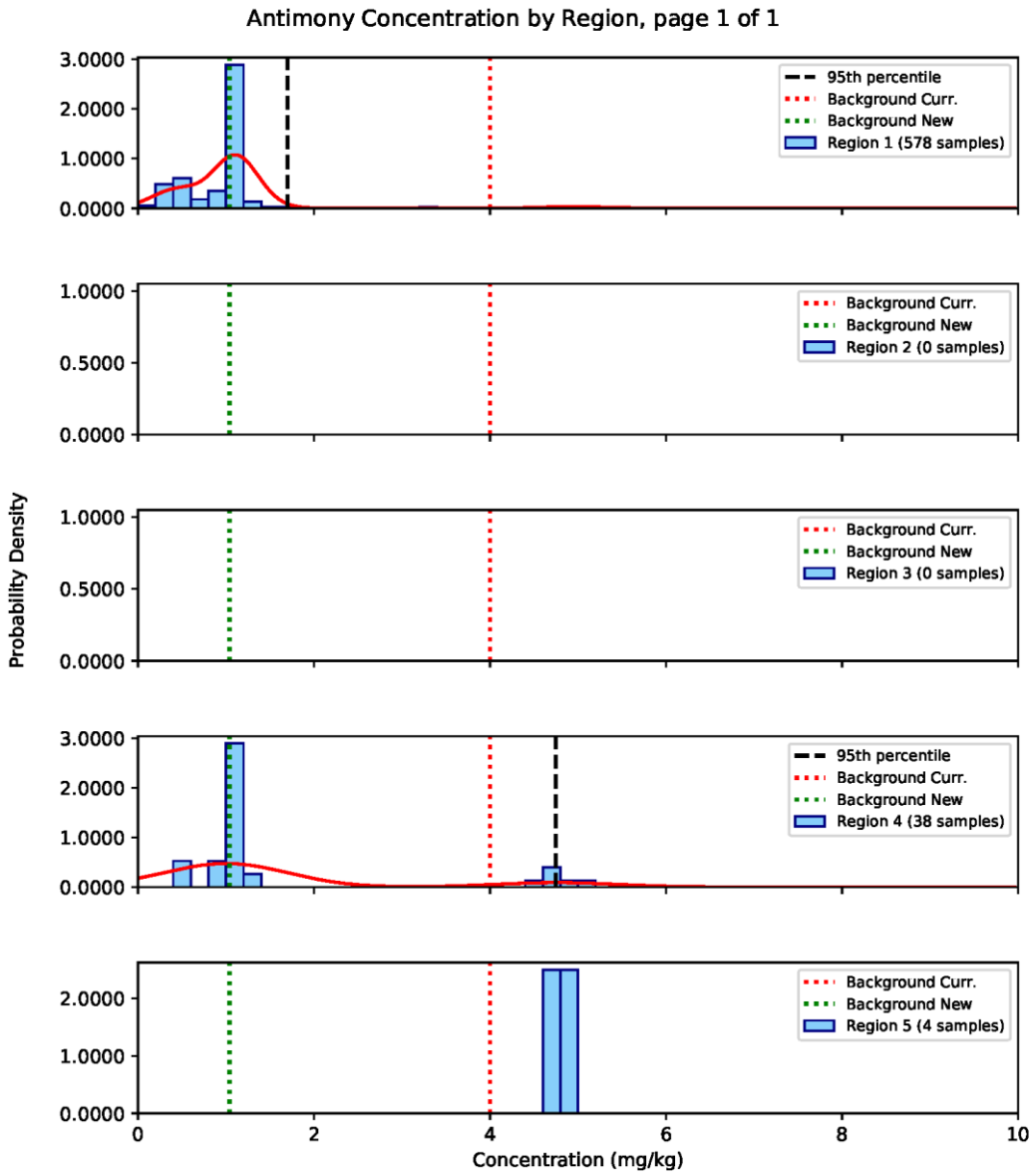


Figure 53. Histogram of RSL antimony concentrations by IDOT Region, Non-REC (mg/kg)

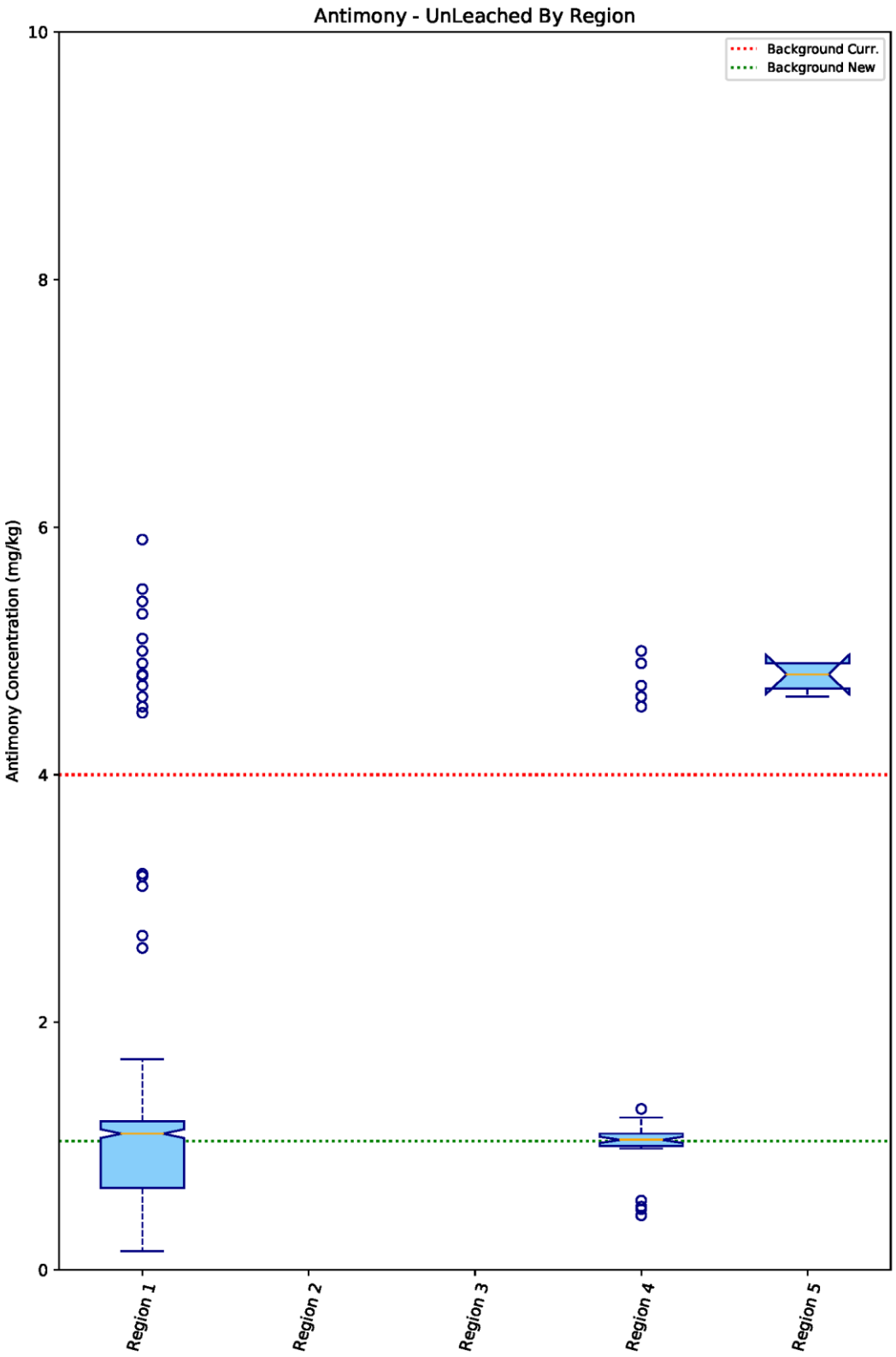


Figure 54. Boxplot of RSL antimony concentrations by IDOT Region, Non-REC (mg/kg)

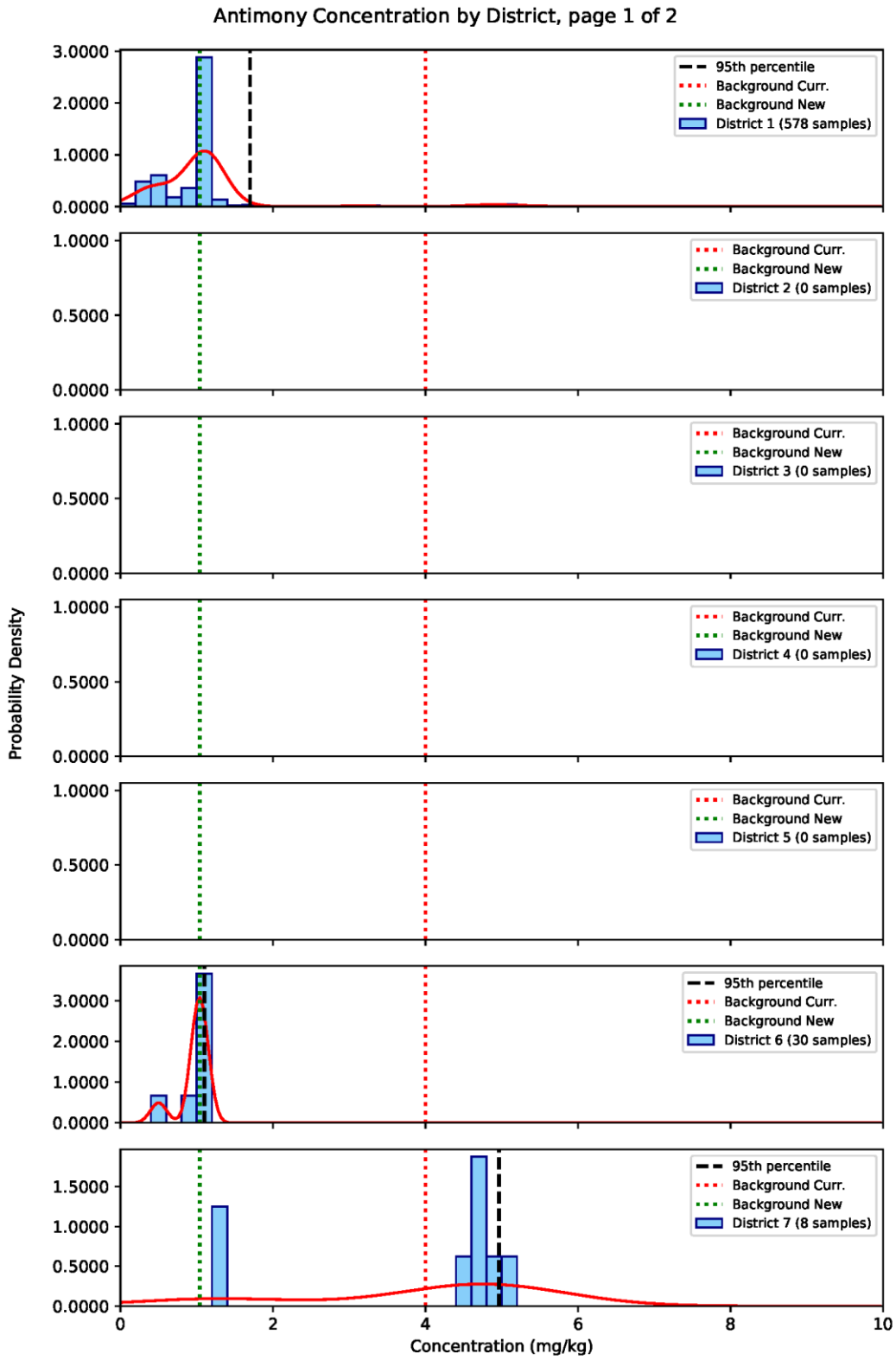


Figure 55. Histogram of RSL antimony concentrations by IDOT District, Non-REC (mg/kg), part 1

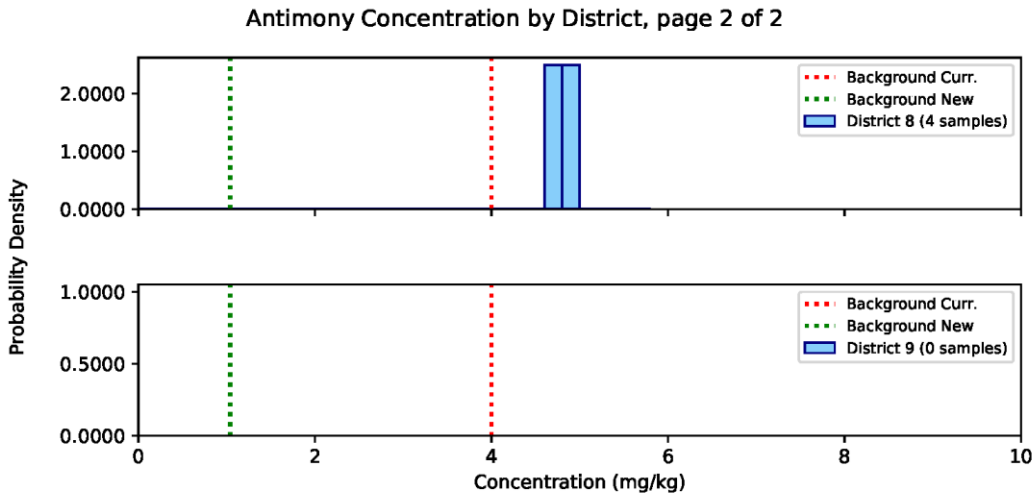


Figure 56. Histogram of RSL antimony concentrations by IDOT District, Non-REC (mg/kg), part 2

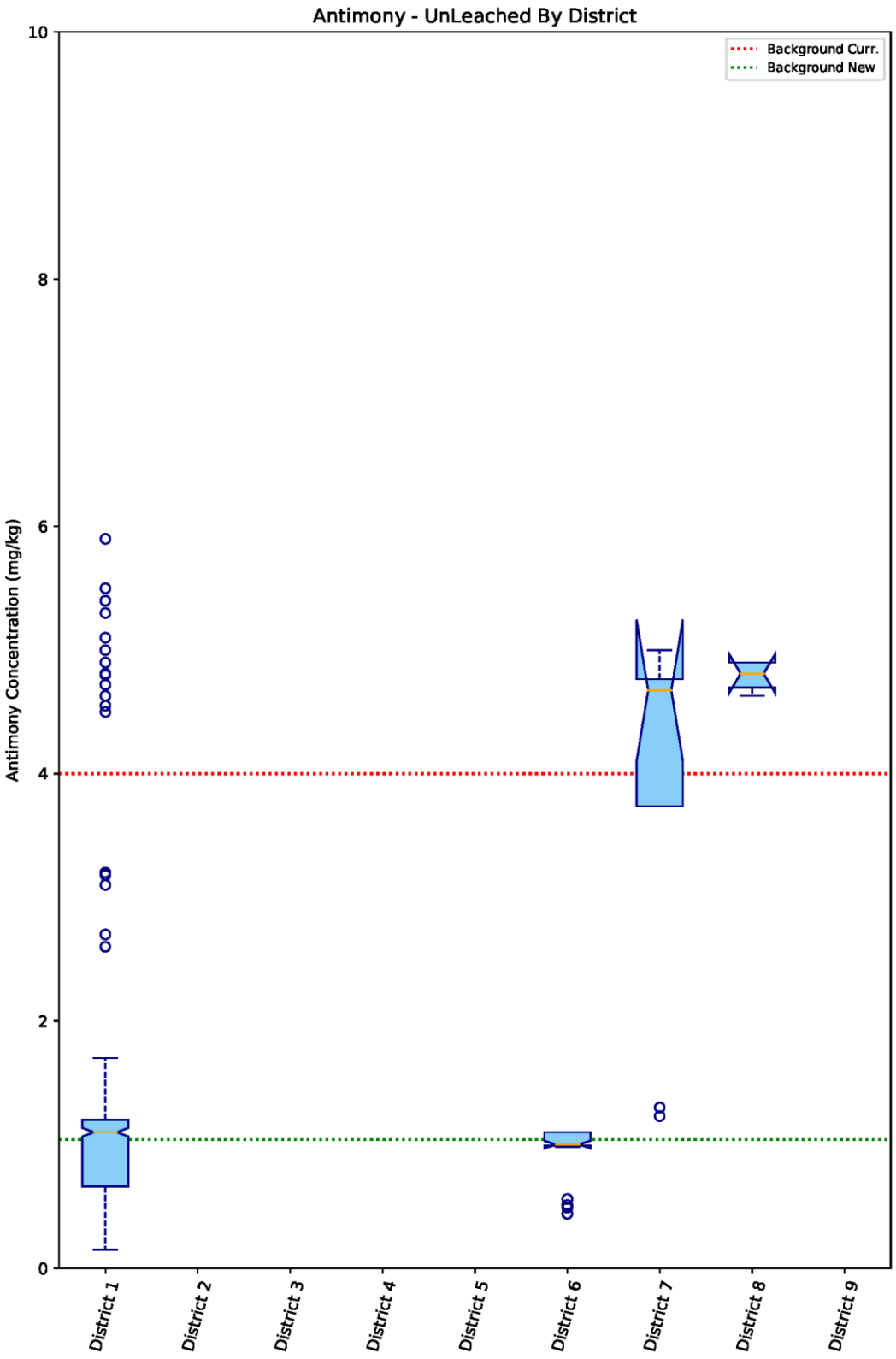


Figure 57. Boxplot of RSL antimony concentrations by IDOT District, Non-REC (mg/kg)

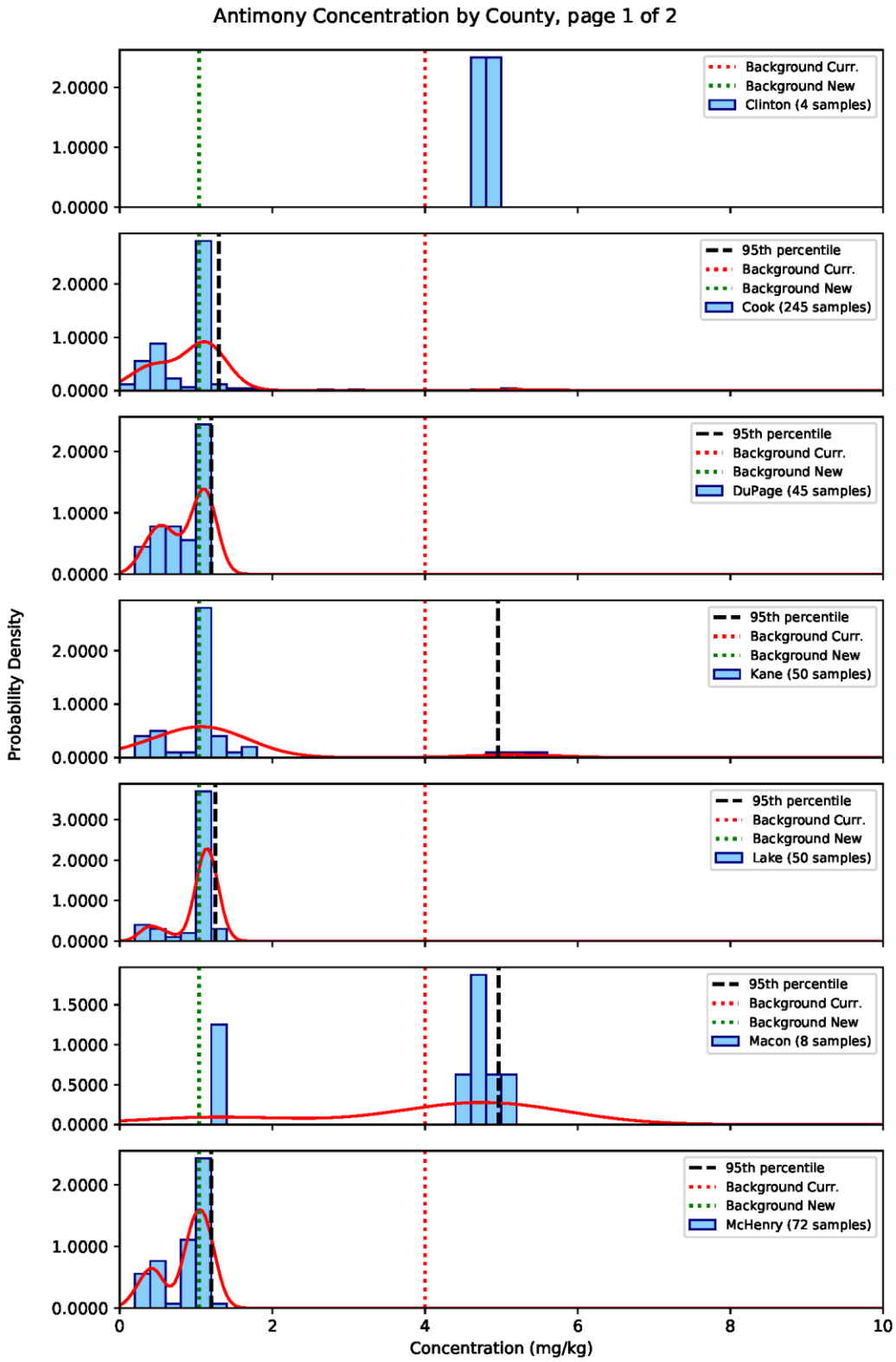


Figure 58. Histogram of RSL antimony concentrations by Illinois county, Non-REC (mg/kg), part 1

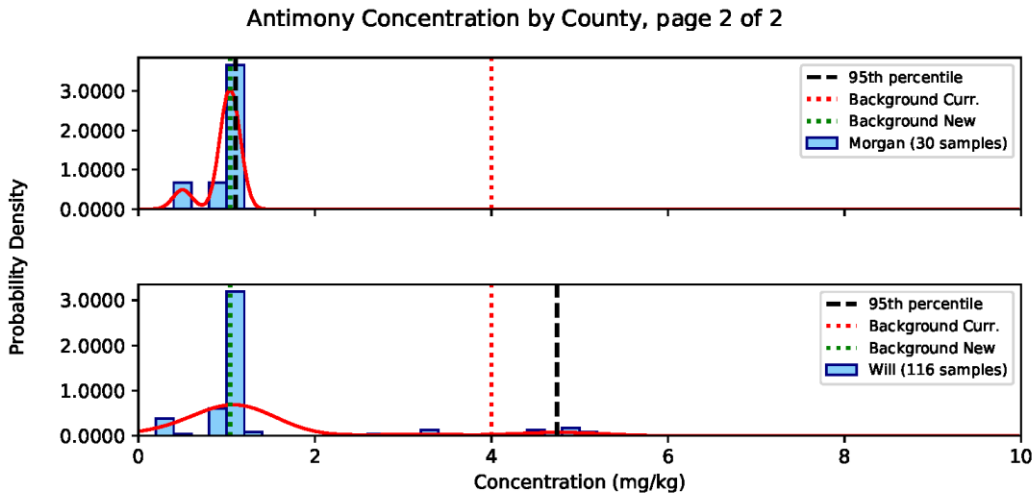


Figure 59. Histogram of RSL antimony concentrations by Illinois county, Non-REC (mg/kg), part 2

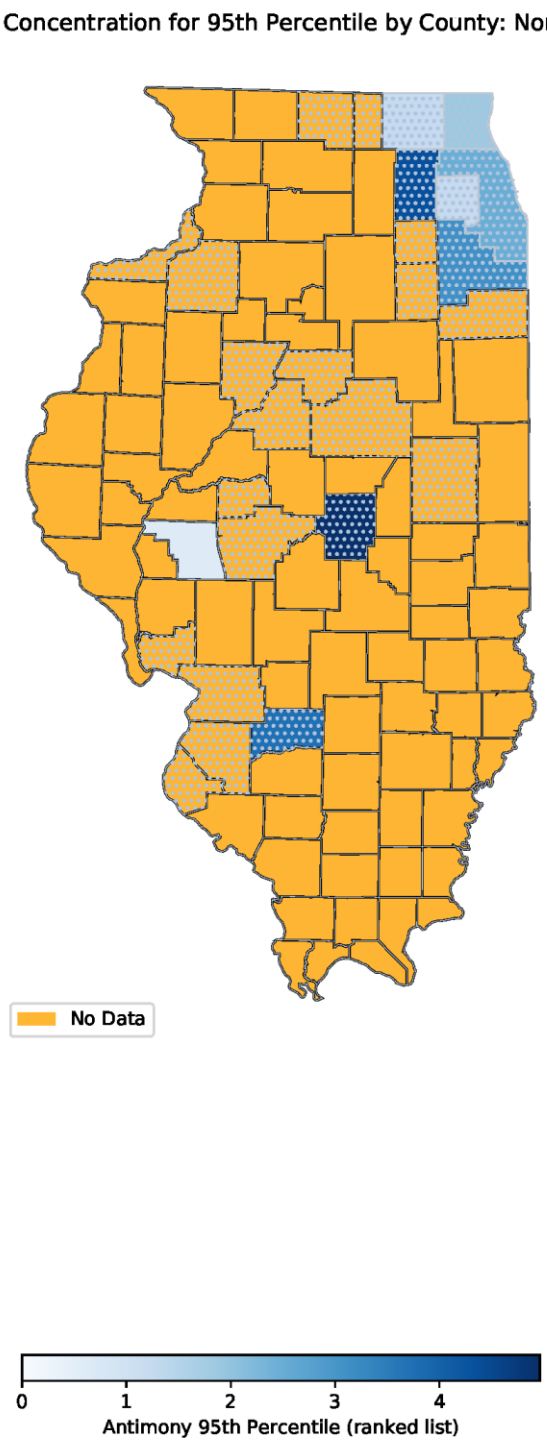


Figure 60. Map of RSL antimony 95th percentile concentration by Illinois county, Non-REC (mg/kg)

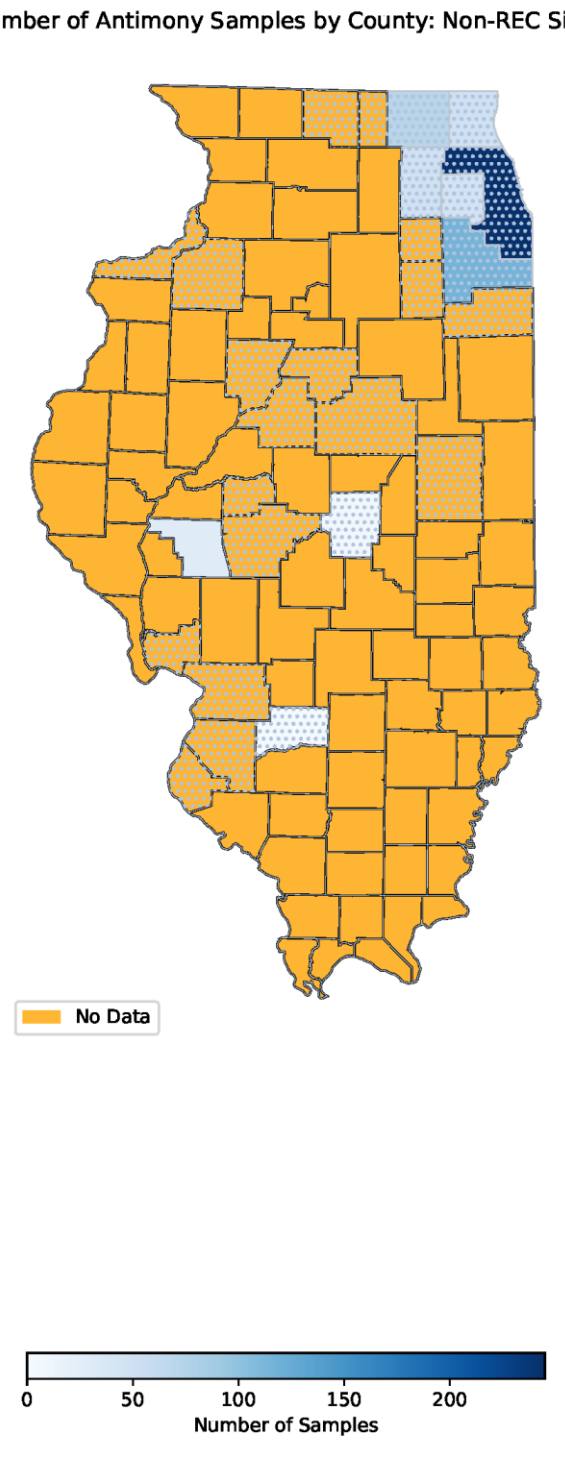


Figure 61. Map of RSL antimony sample quantity by Illinois county, Non-REC (mg/kg)

B.3 ANTIMONY DE MINIMIS

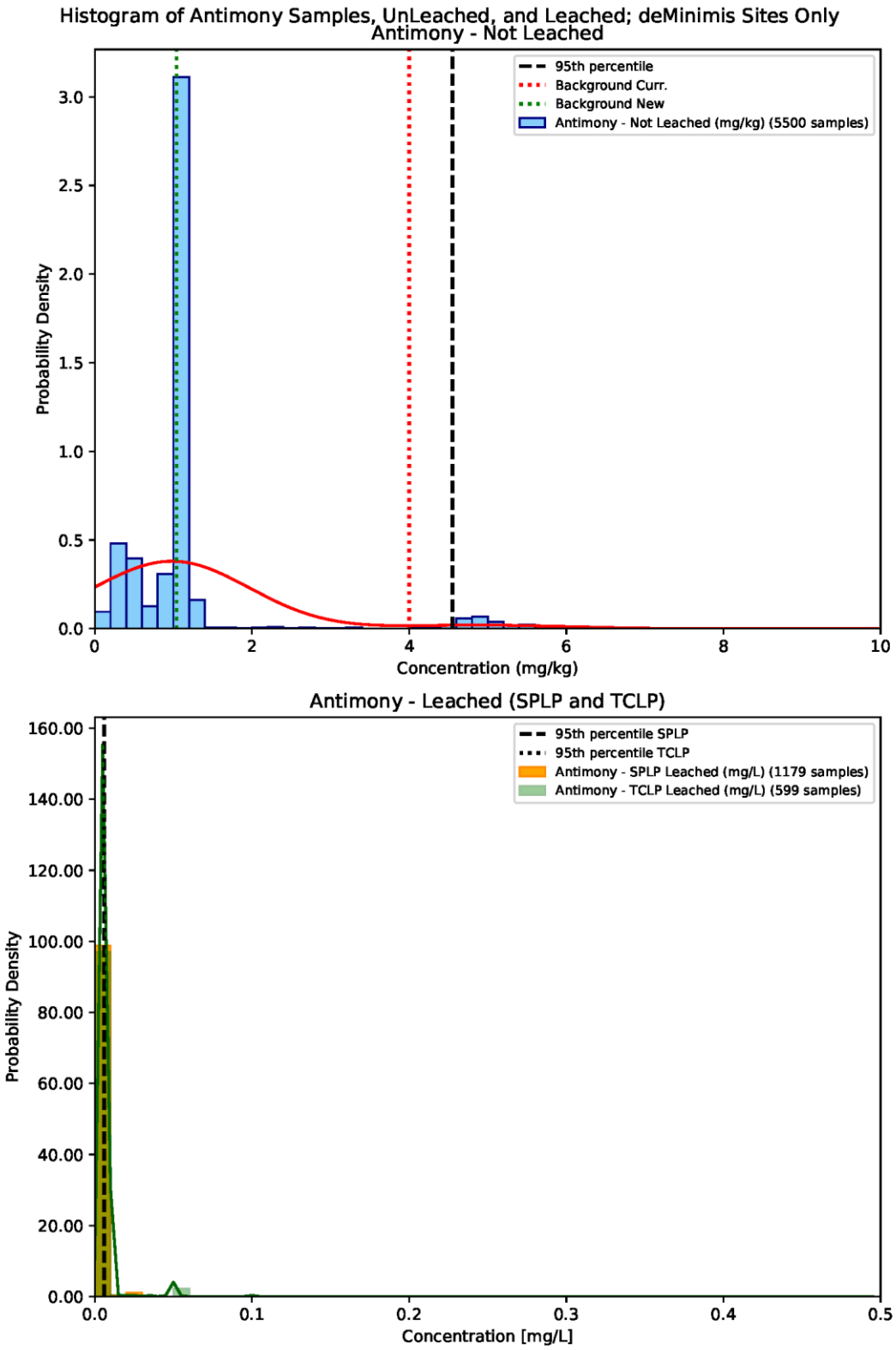


Figure 62. Histogram of RSL antimony concentrations, de minimis (mg/kg)

Antimony Unleached Concentration (mg/kg)

1) Region

2) District

3) County

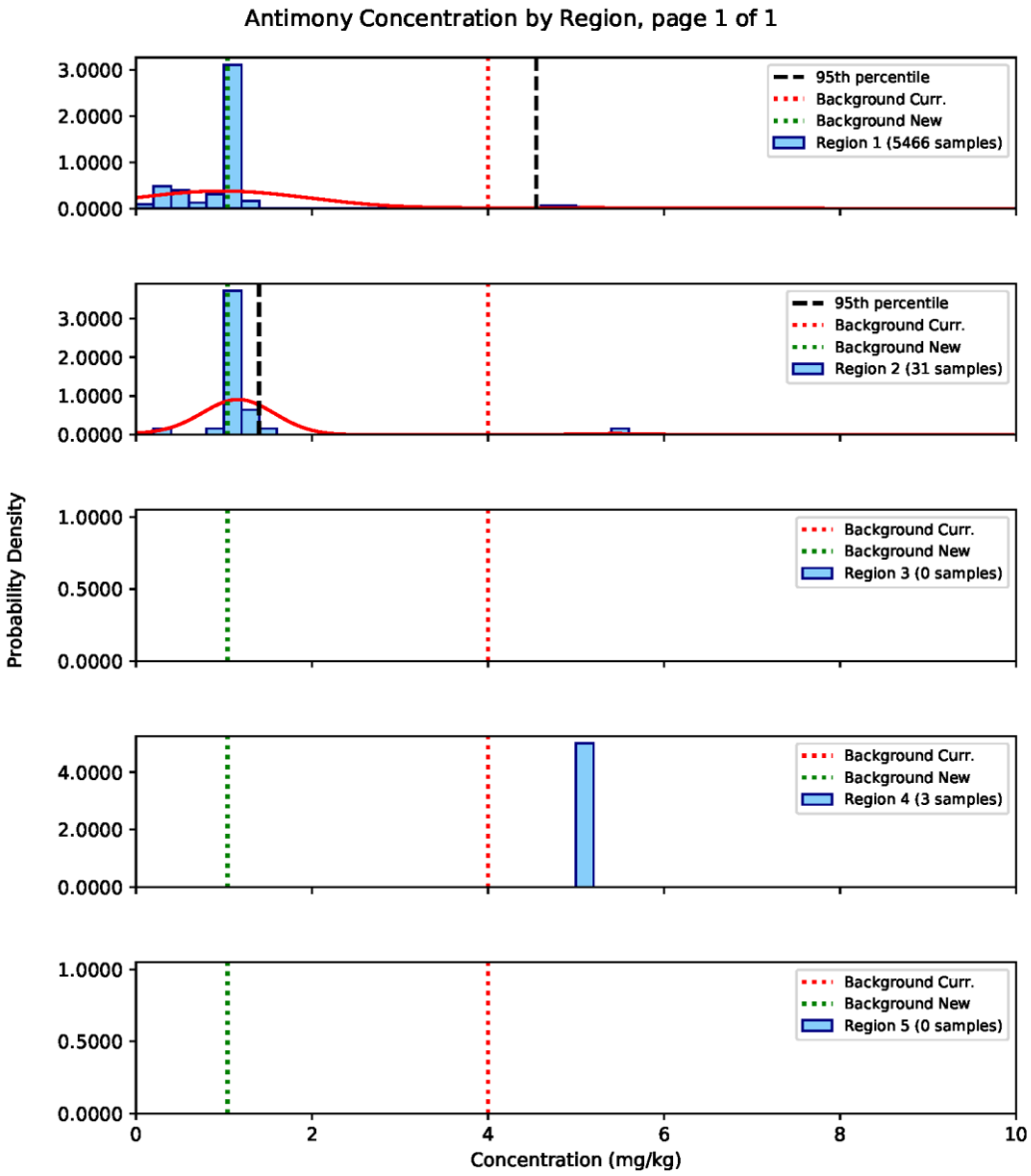


Figure 63. Histogram of RSL antimony concentrations by IDOT Region, de minimis (mg/kg)

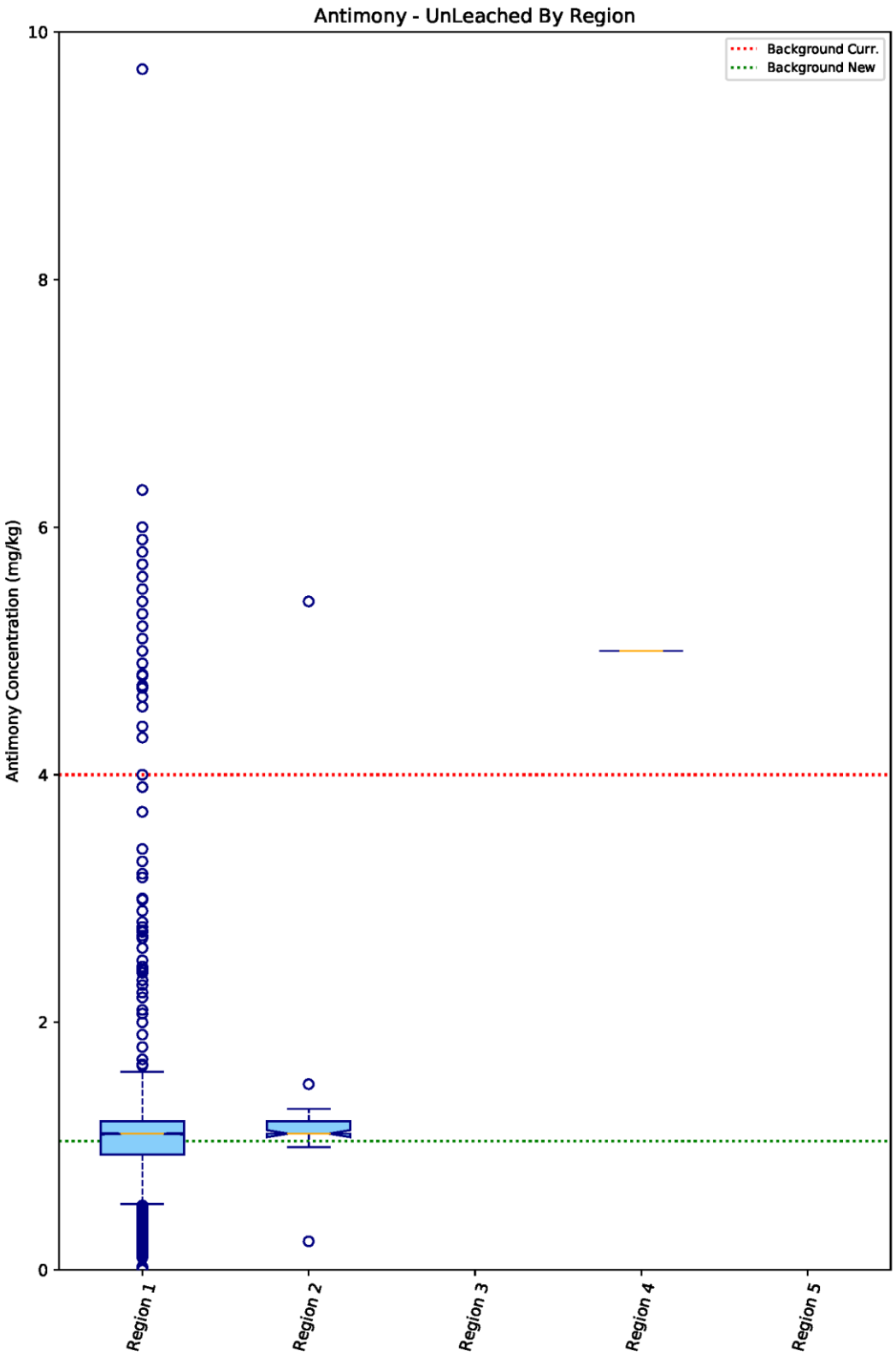


Figure 64. Boxplot of RSL antimony concentrations by IDOT Region, de minimis (mg/kg)

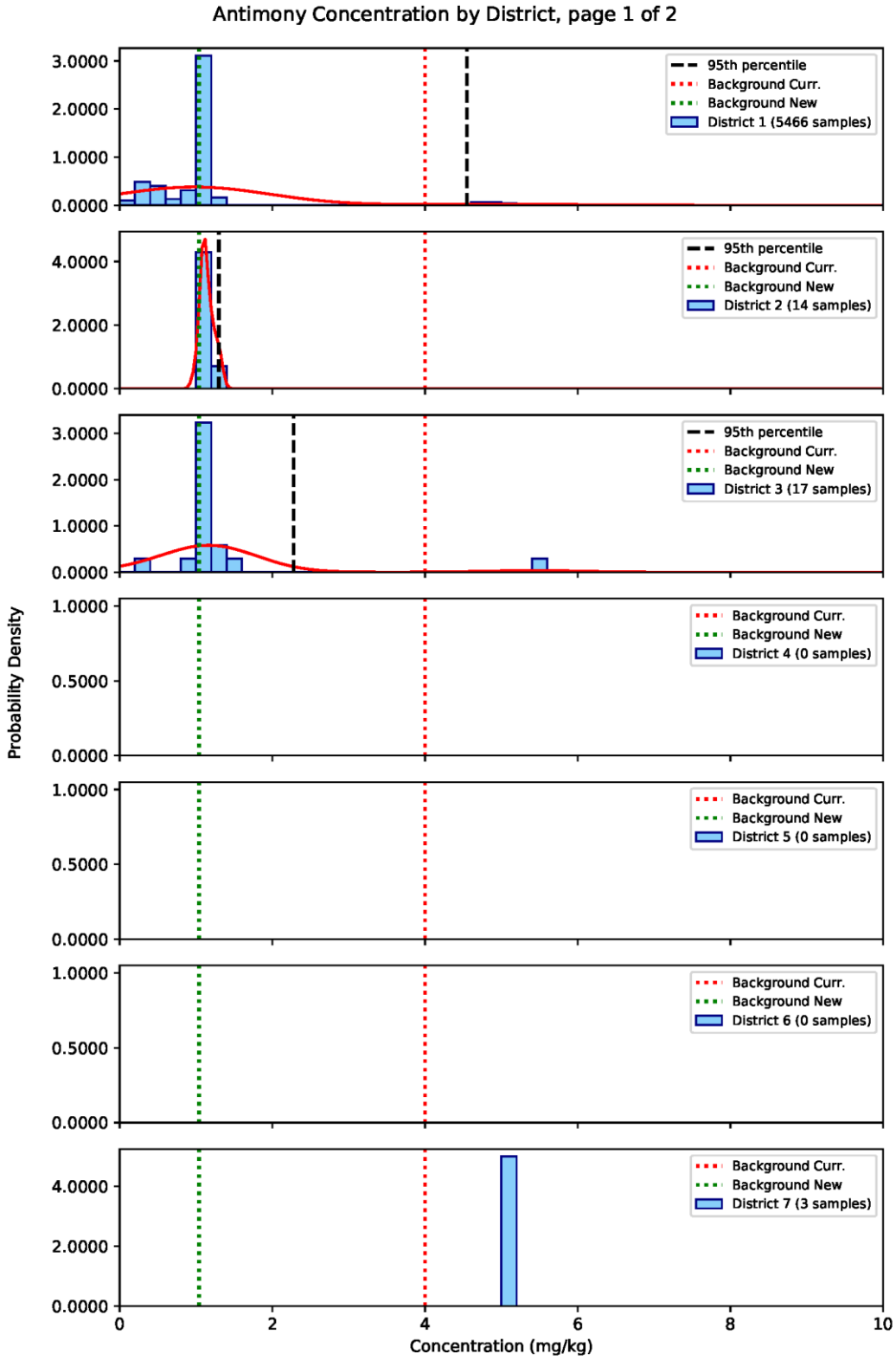


Figure 65. Histogram of RSL antimony concentrations by IDOT District, de minimis (mg/kg), part 1

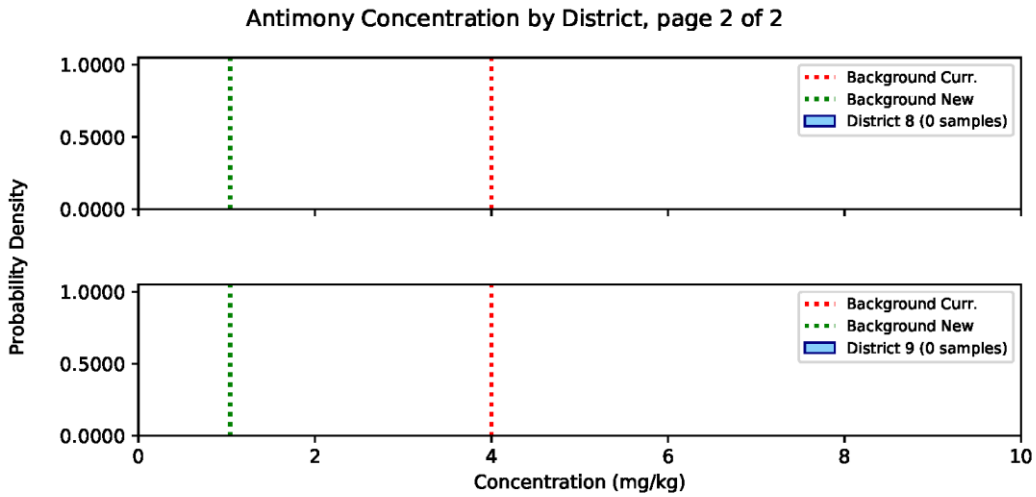


Figure 66. Histogram of RSL antimony concentrations by IDOT District, de minimis (mg/kg), part 2

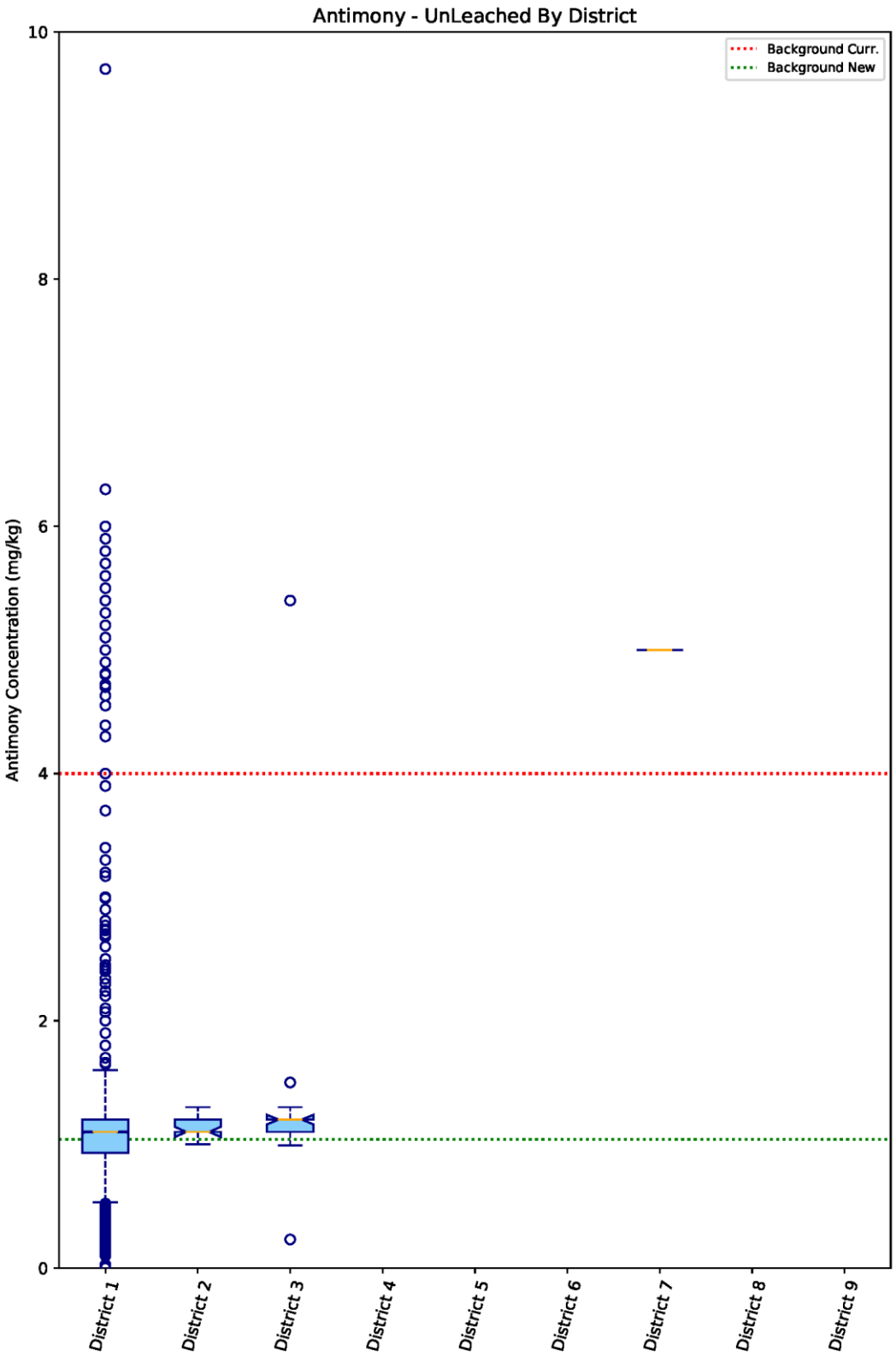


Figure 67. Boxplot of RSL antimony concentrations by IDOT District, de minimis (mg/kg)

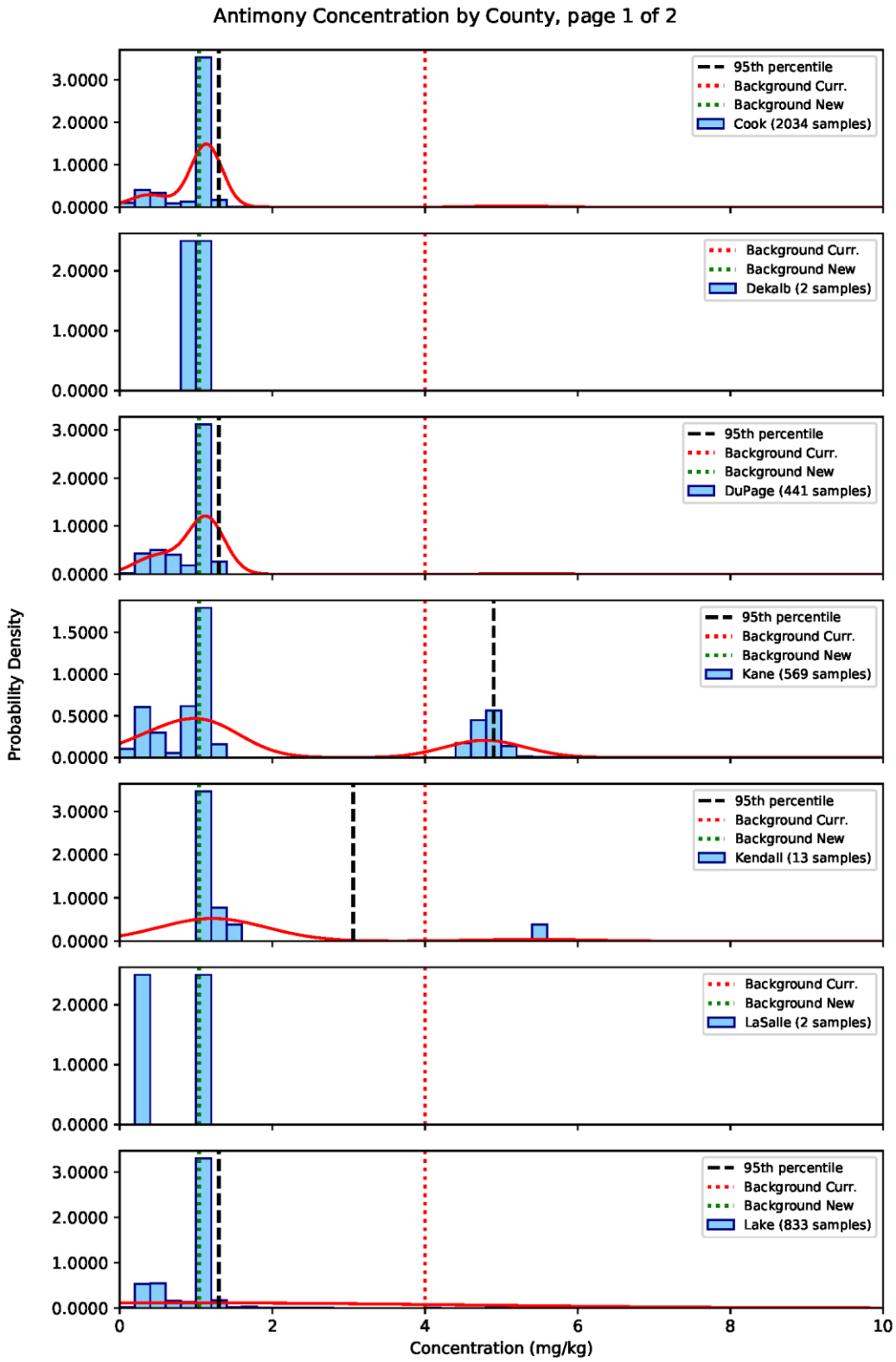


Figure 68. Histogram of RSL antimony concentrations by Illinois county, de minimis (mg/kg), part 1

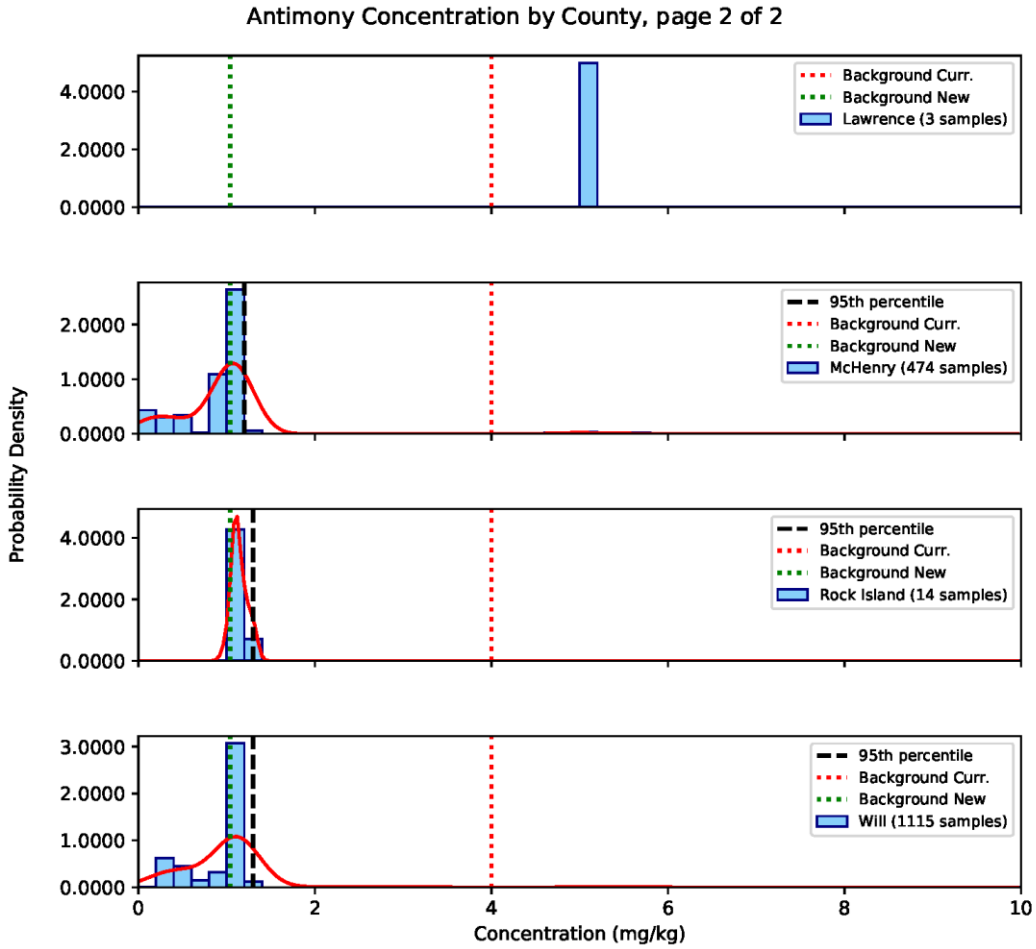


Figure 69. Histogram of RSL antimony concentrations by Illinois county, de minimis (mg/kg), part 2

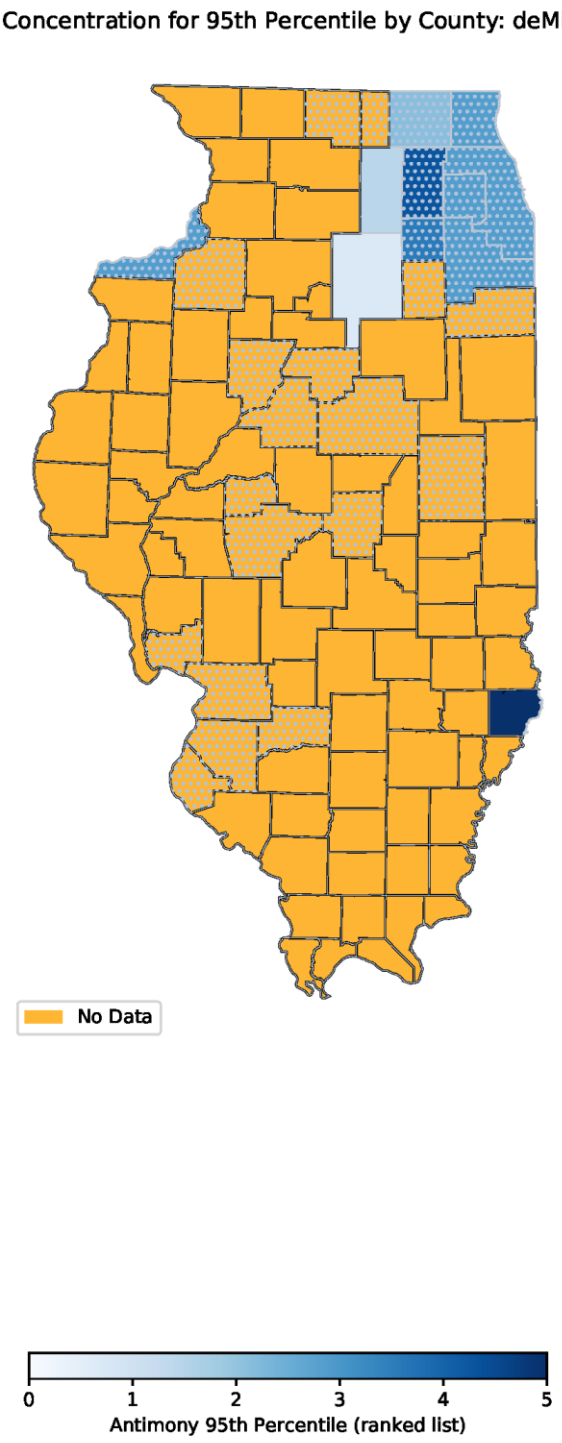


Figure 70. Map of RSL antimony 95th percentile concentration by Illinois county, de minimis (mg/kg)

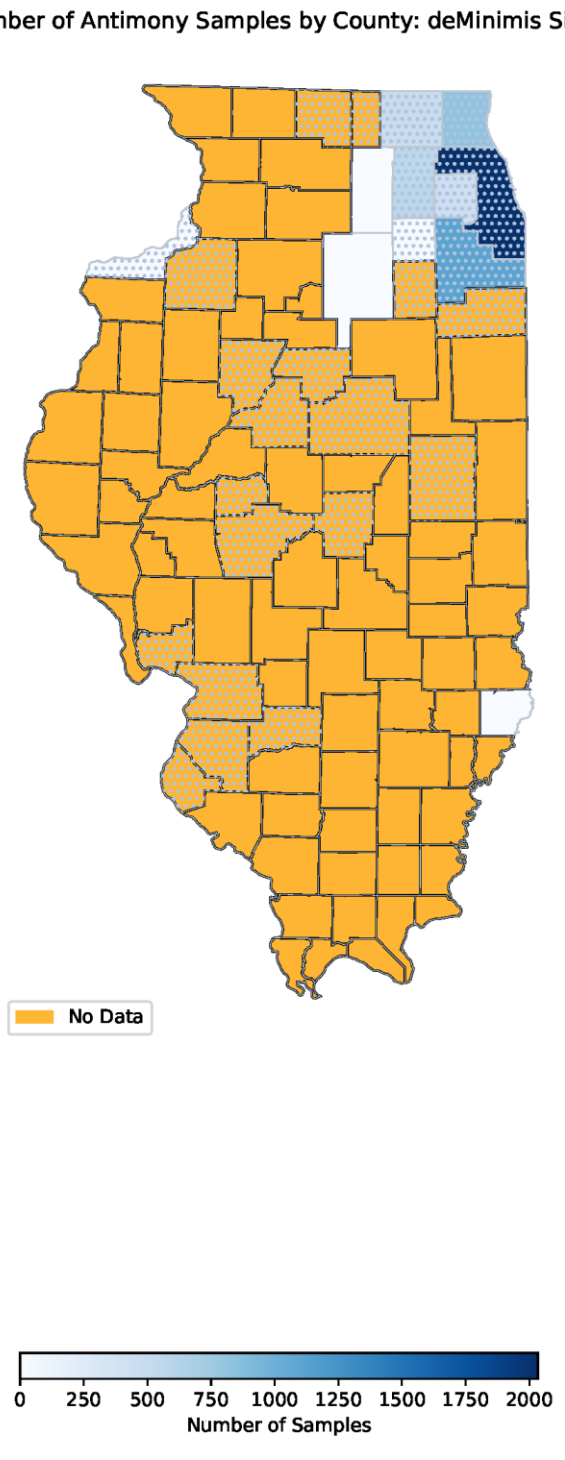


Figure 71. Map of RSL antimony sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX C. ANALYTE ANALYSIS: ARSENIC

C.1 ARSENIC REC

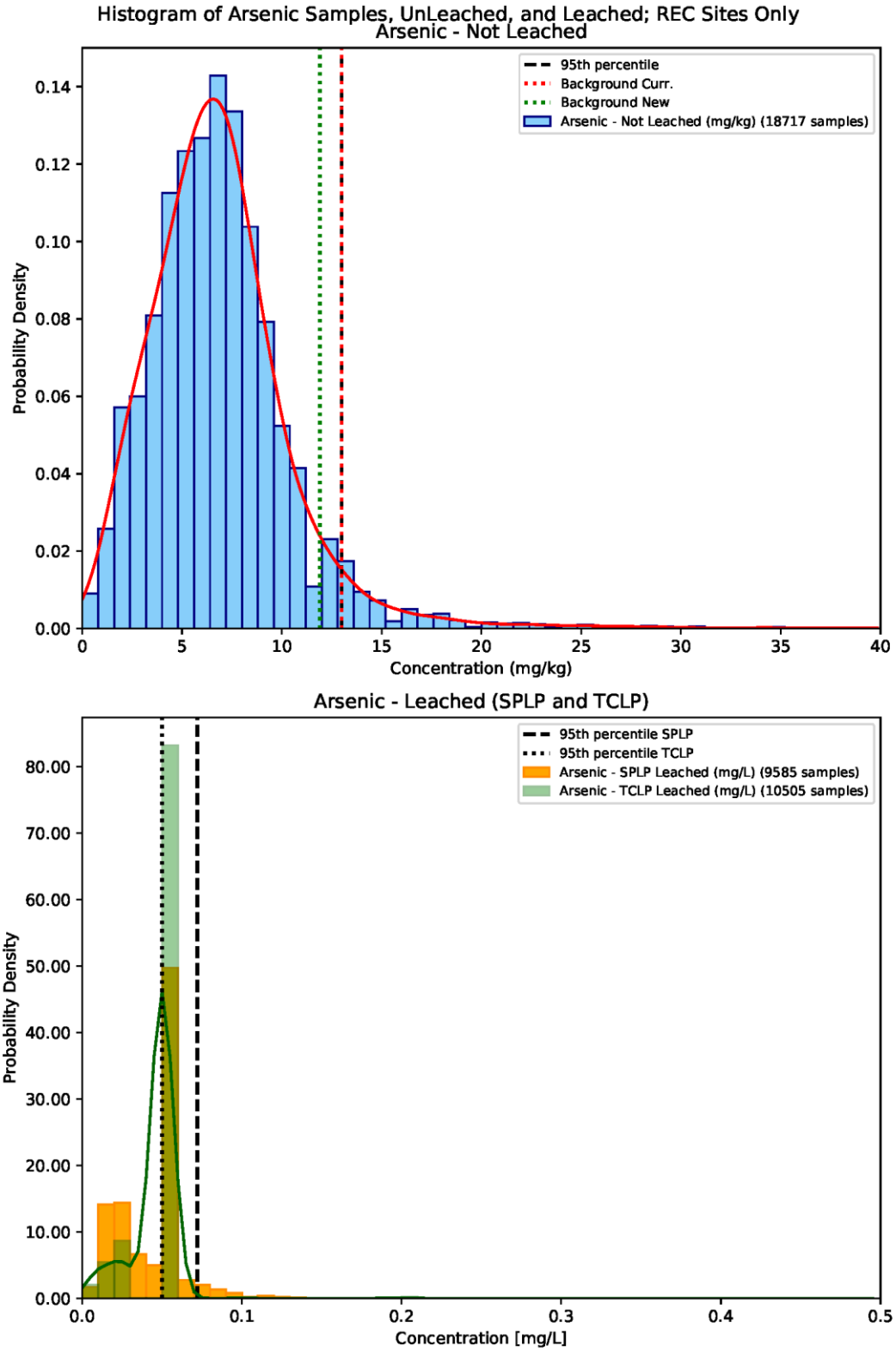


Figure 72. Histogram of RSL arsenic concentrations, REC (mg/kg)

Arsenic Unleached Concentration (mg/kg)

1) Region

2) District

3) County

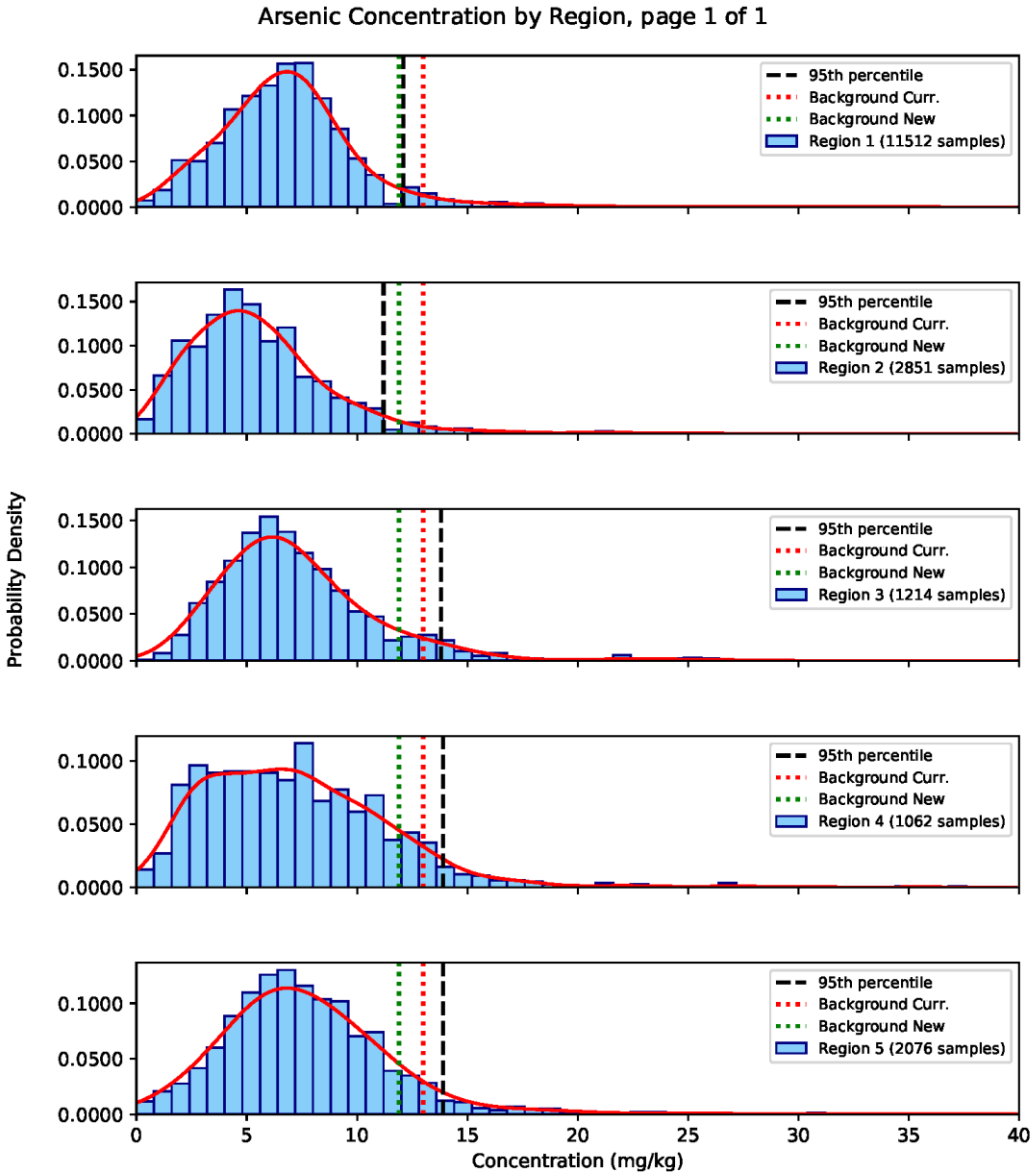


Figure 73. Histogram of RSL arsenic concentrations by IDOT Region, REC (mg/kg)

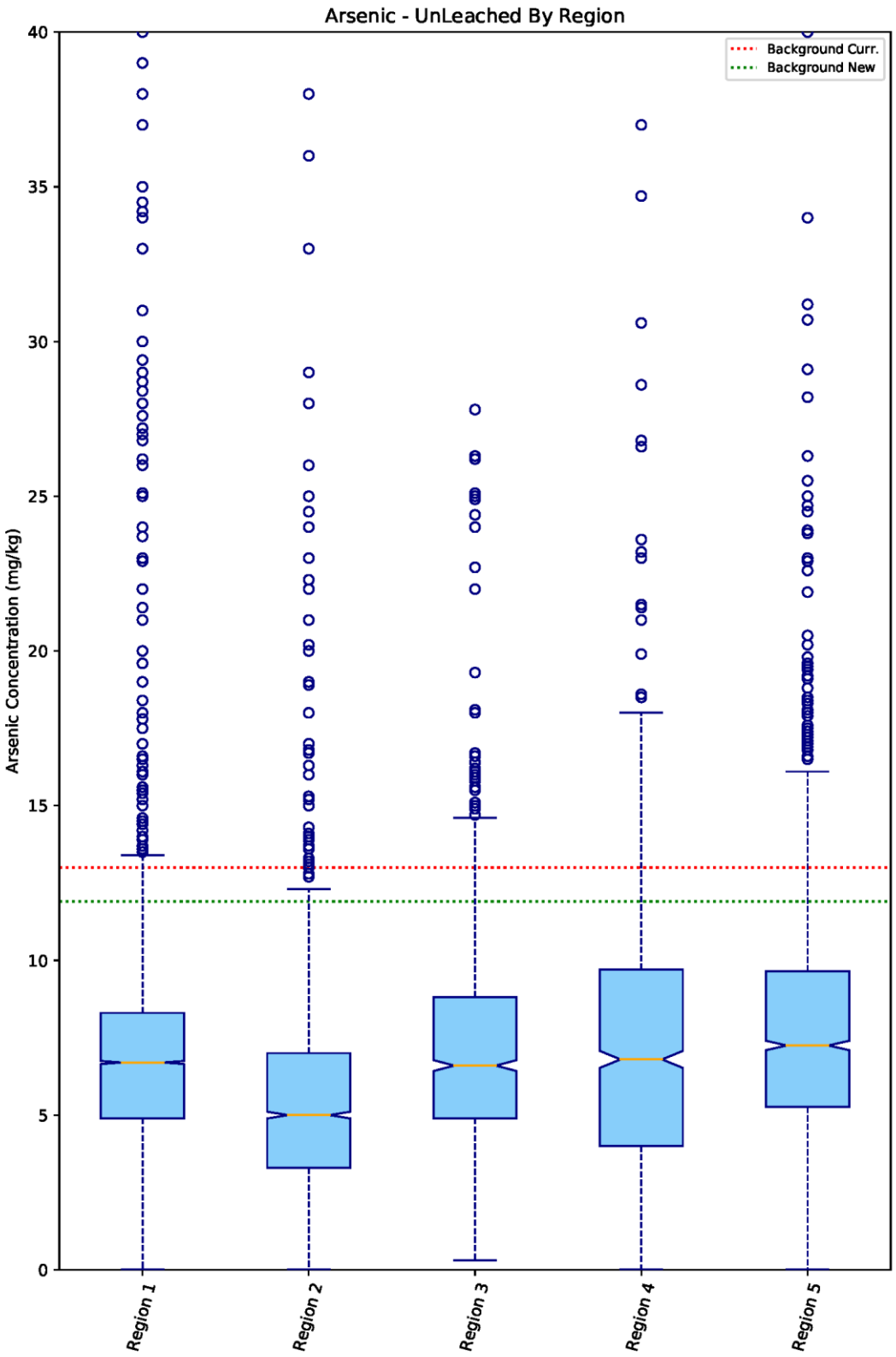


Figure 74. Boxplot of RSL arsenic concentrations by IDOT Region, REC (mg/kg)

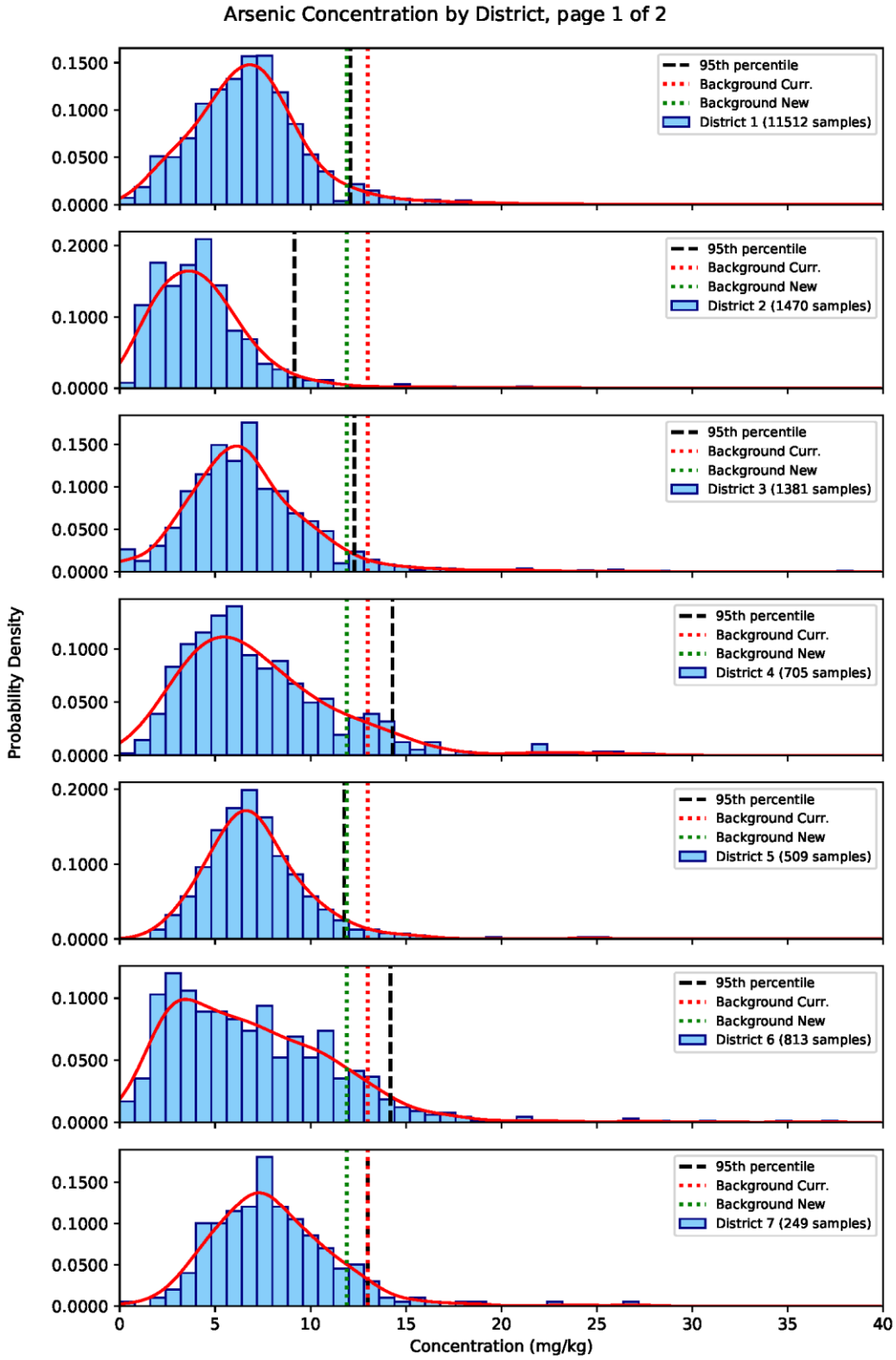


Figure 75. Histogram of RSL arsenic concentrations by IDOT District, REC (mg/kg), part 1

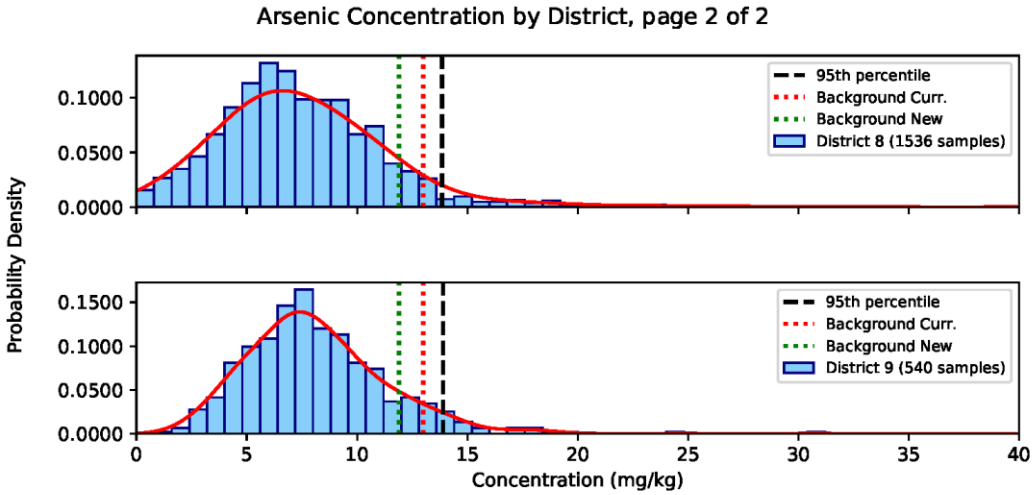


Figure 76. Histogram of RSL arsenic concentrations by IDOT District, REC (mg/kg), part 2

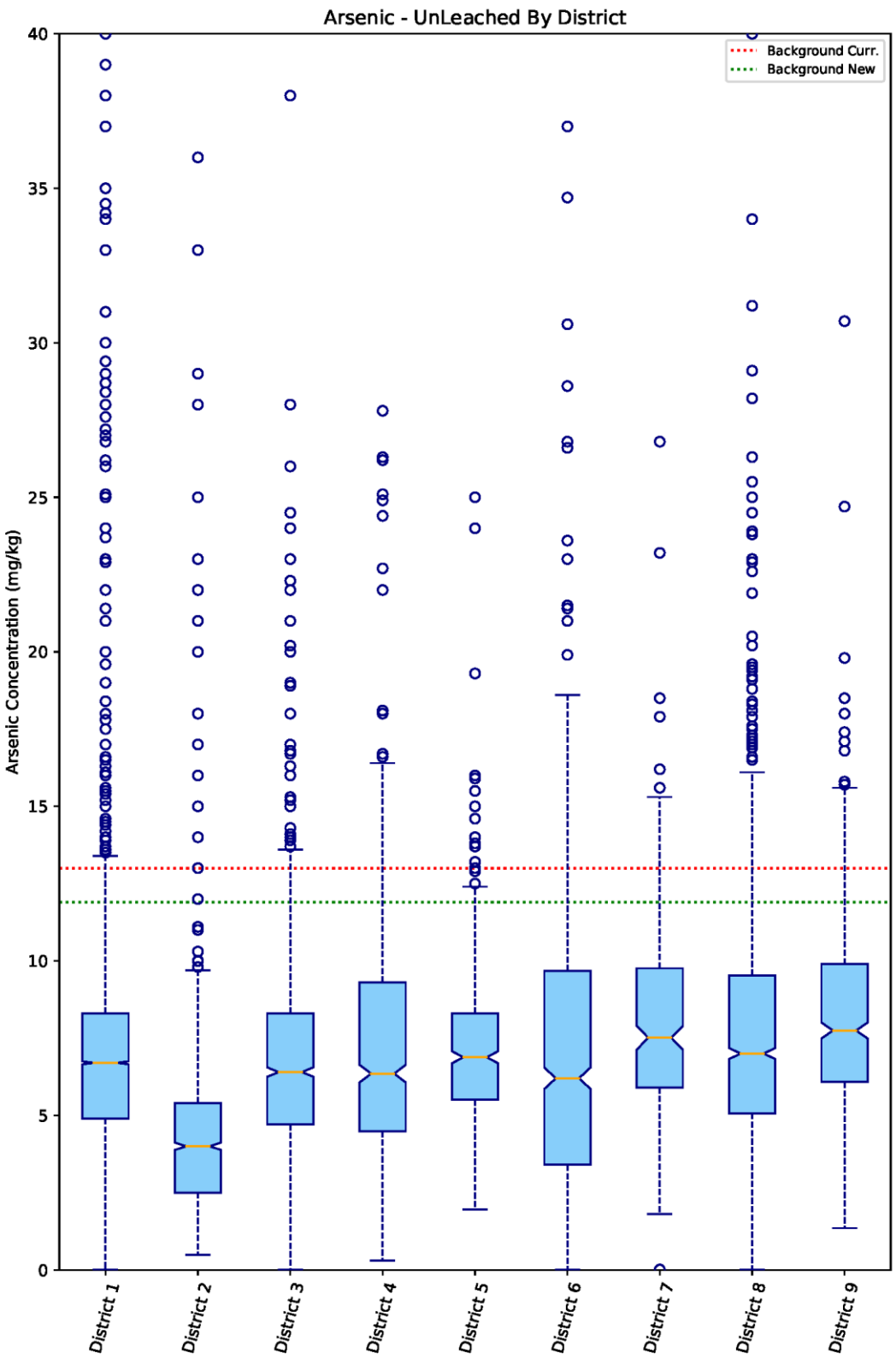


Figure 77. Boxplot of RSL arsenic concentrations by IDOT District, REC (mg/kg)

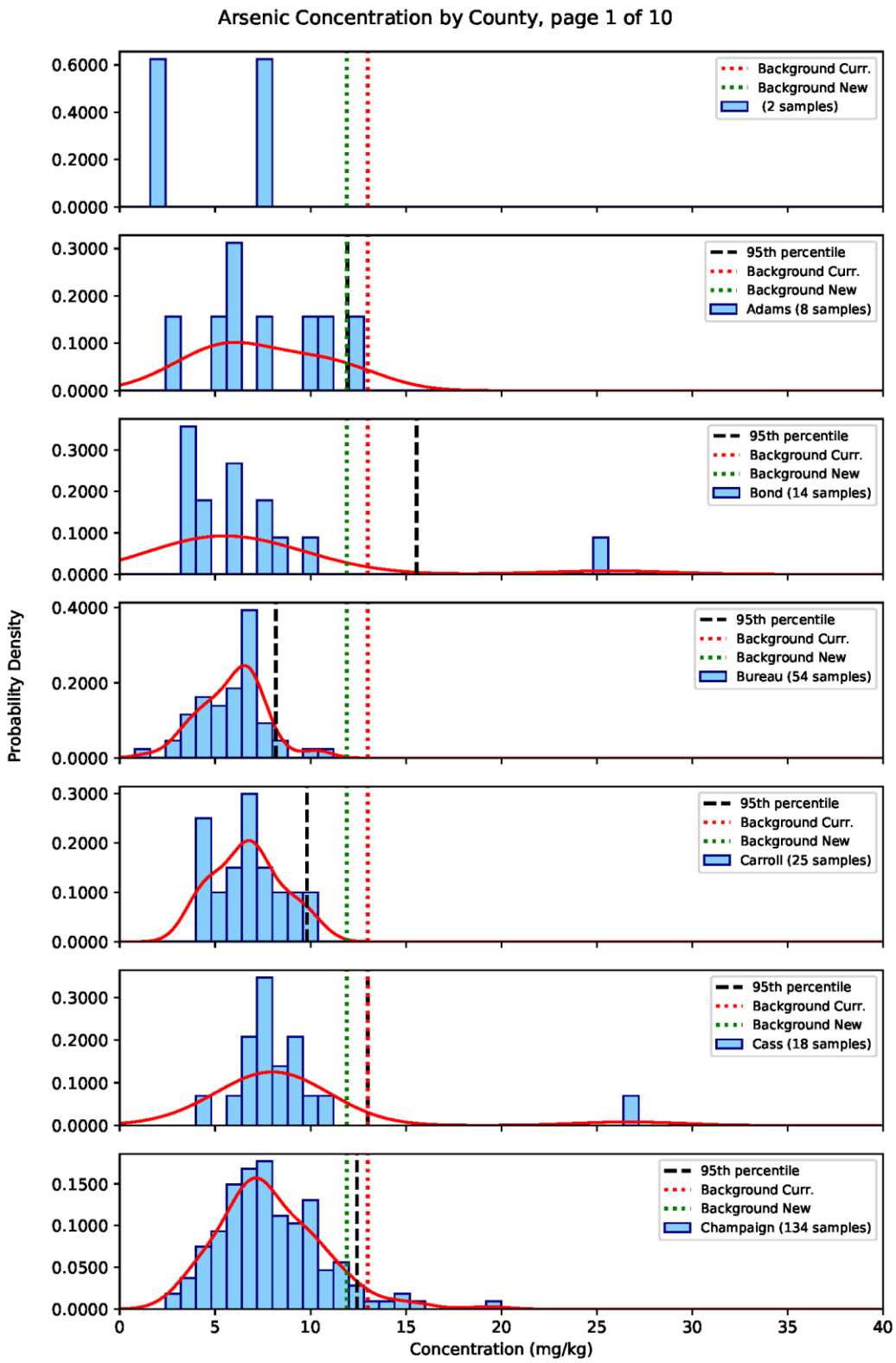


Figure 78. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 1

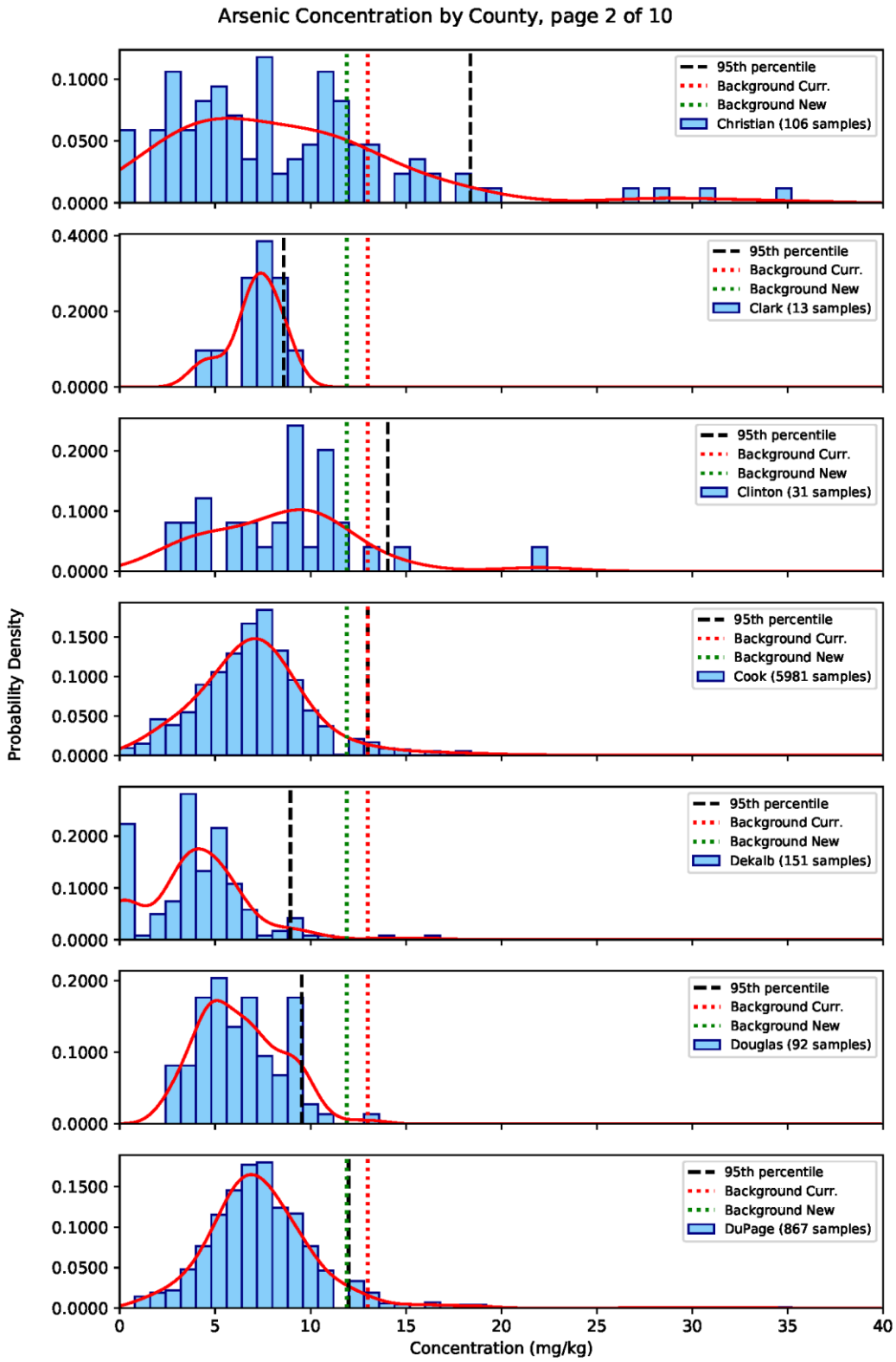


Figure 79. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 2

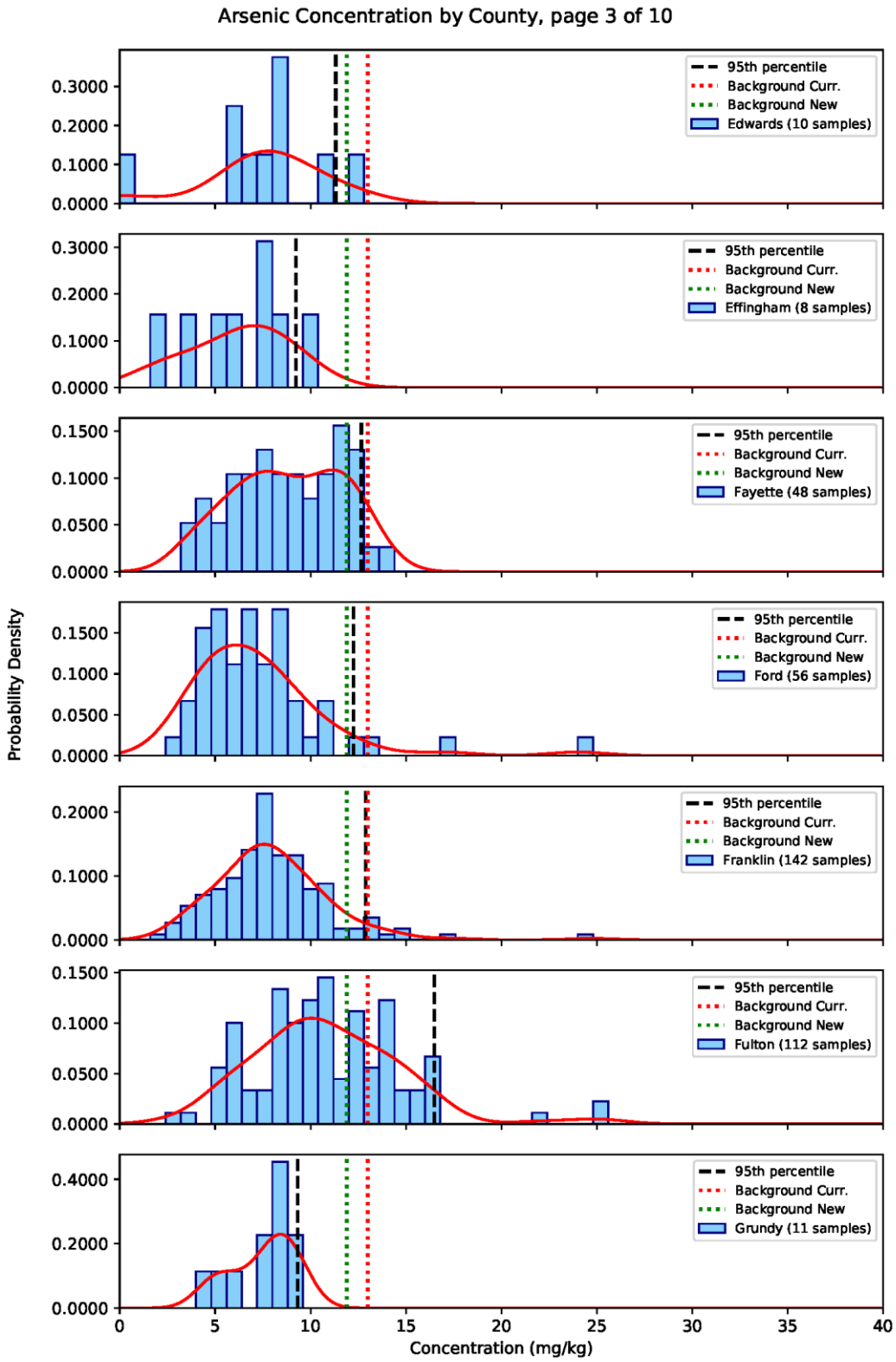


Figure 80. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 3

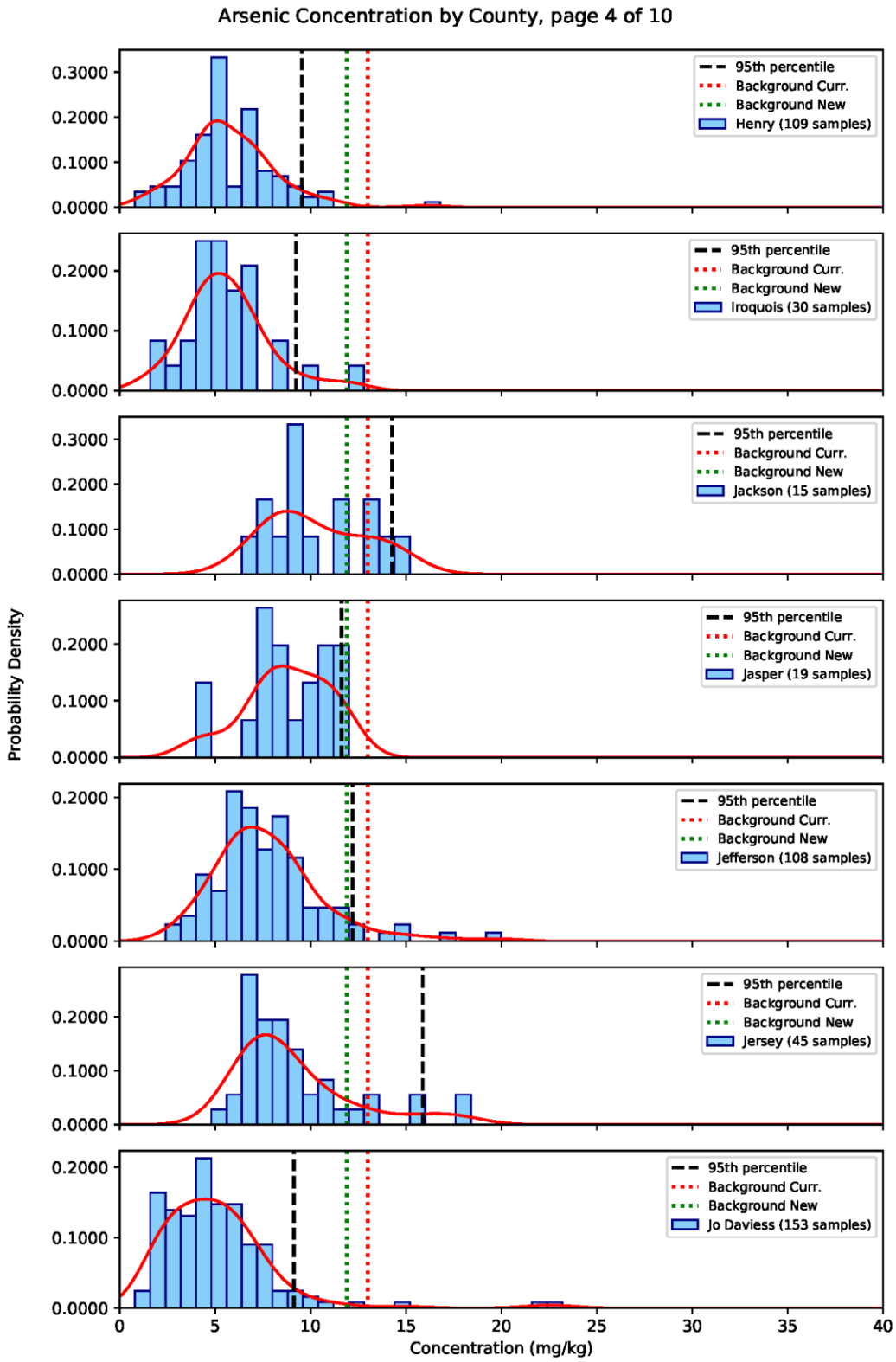


Figure 81. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 4

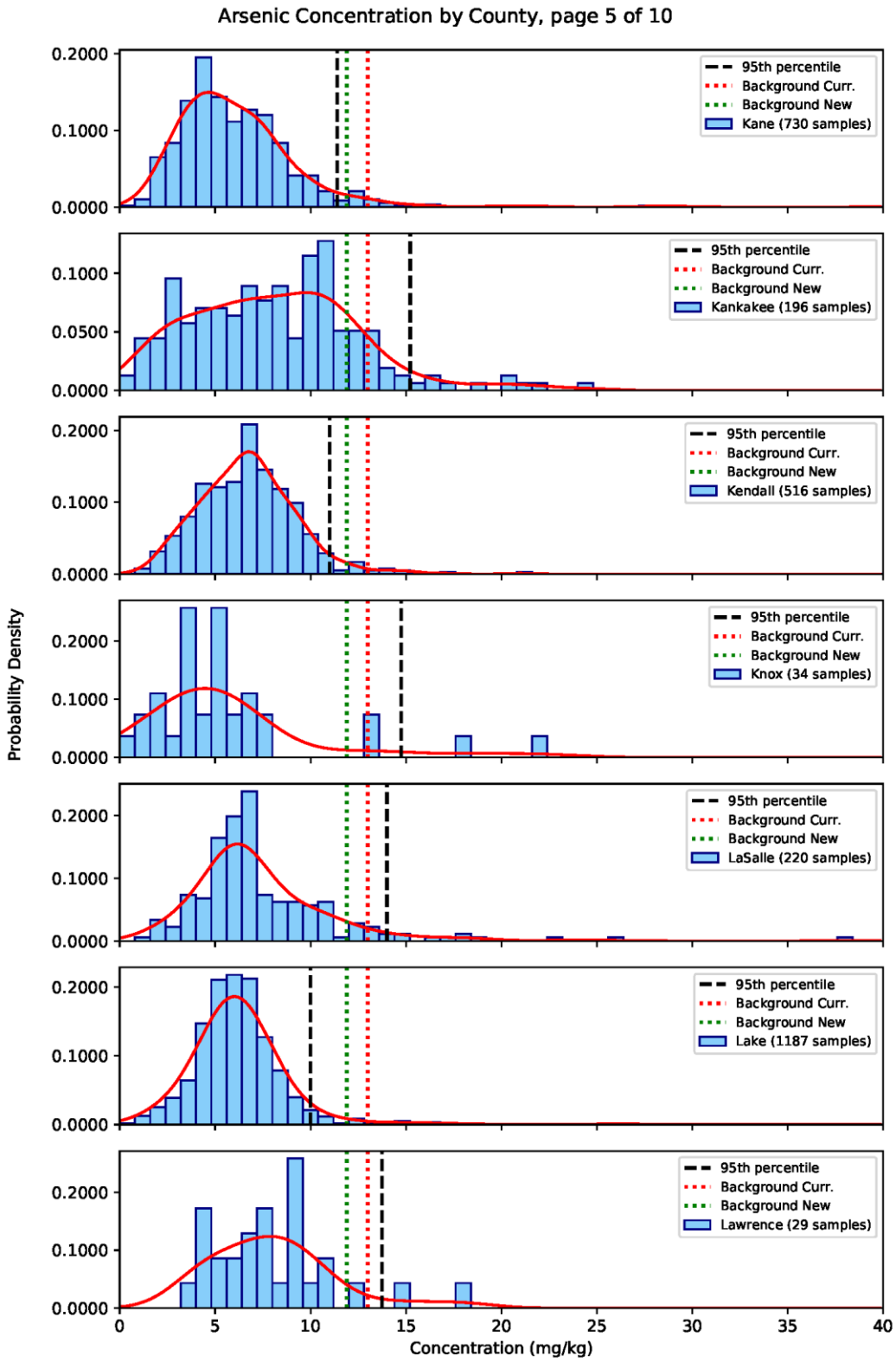


Figure 82. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 5

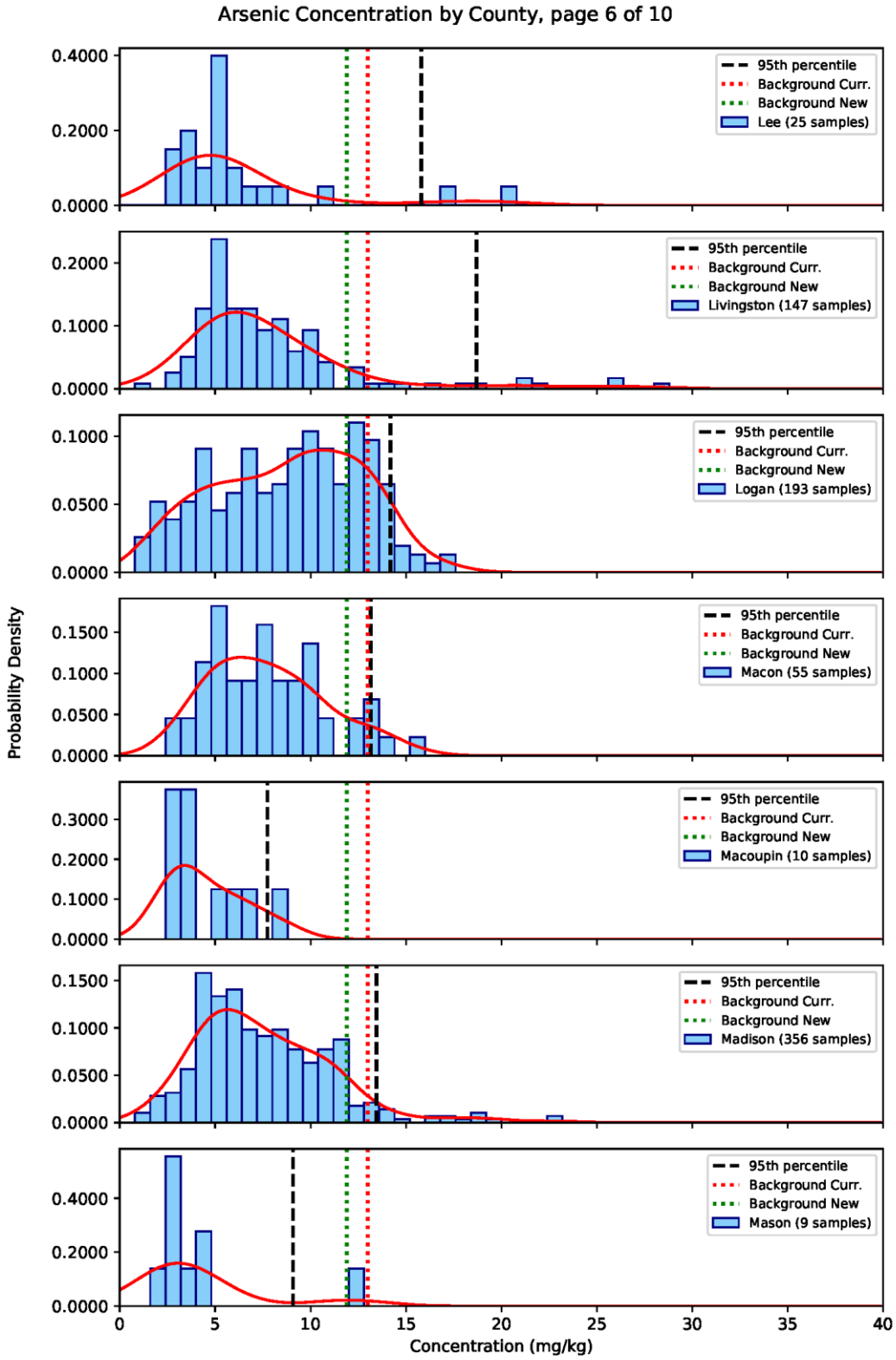


Figure 83. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 6

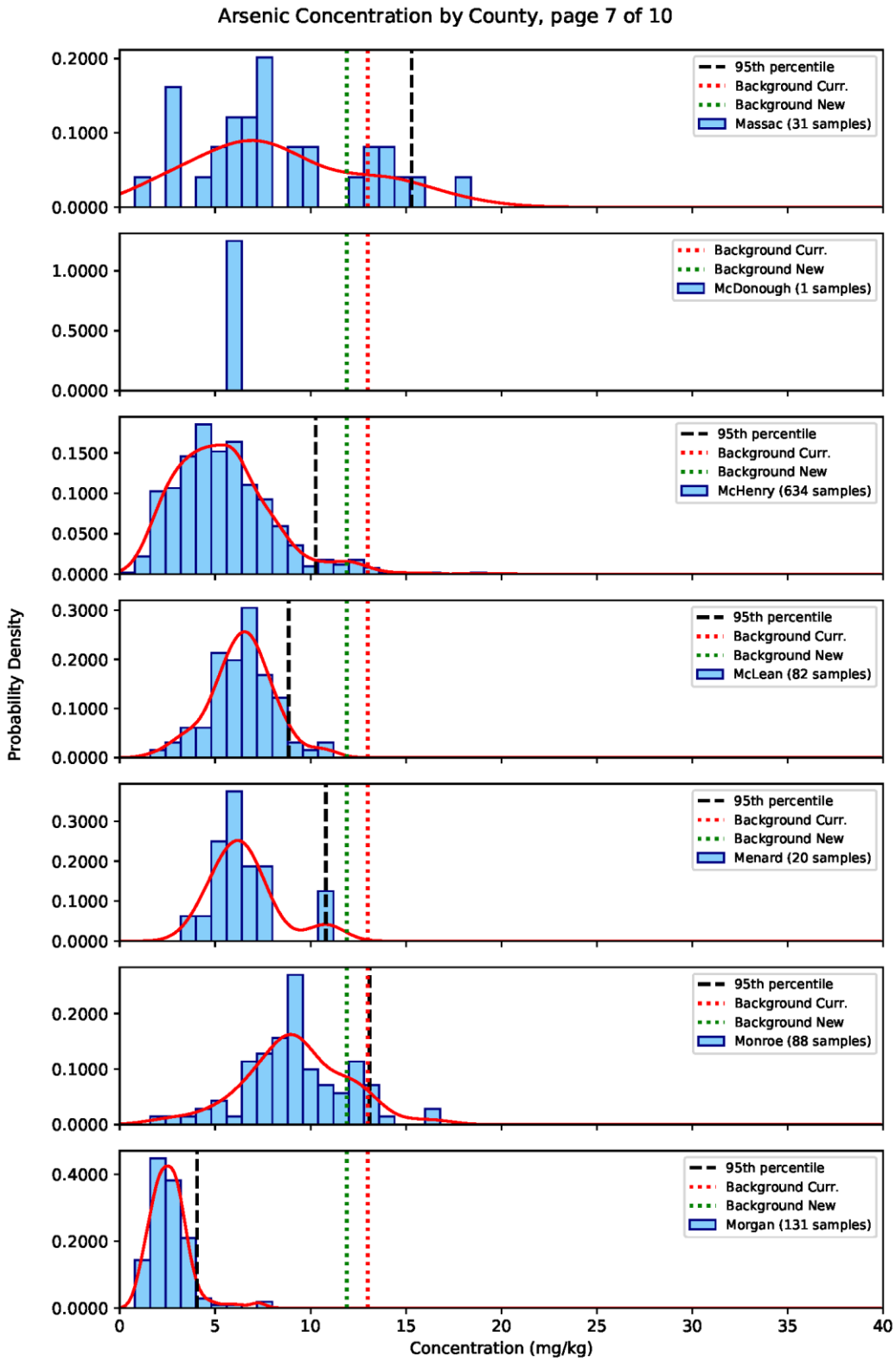


Figure 84. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 7

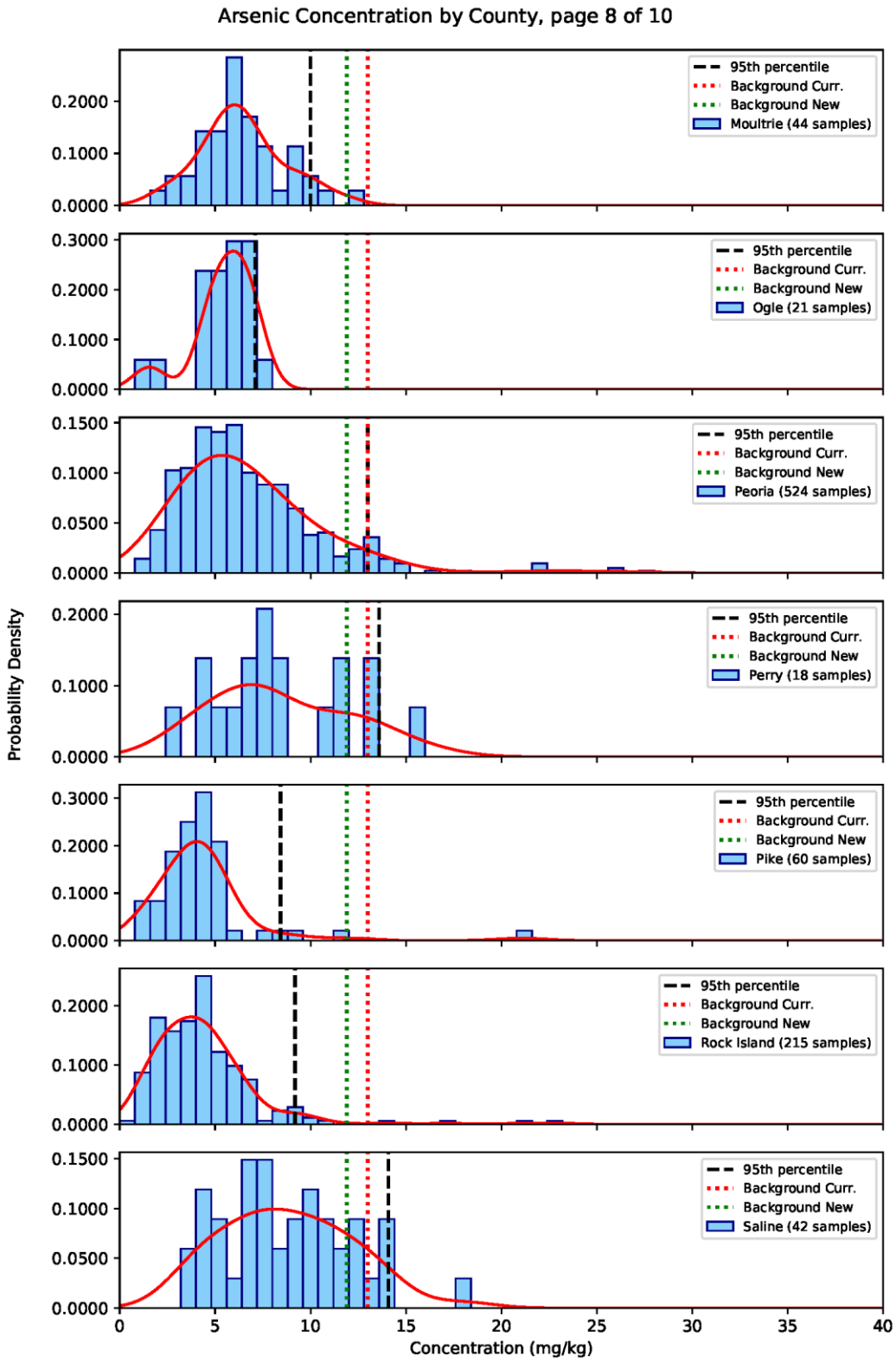


Figure 85. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 8

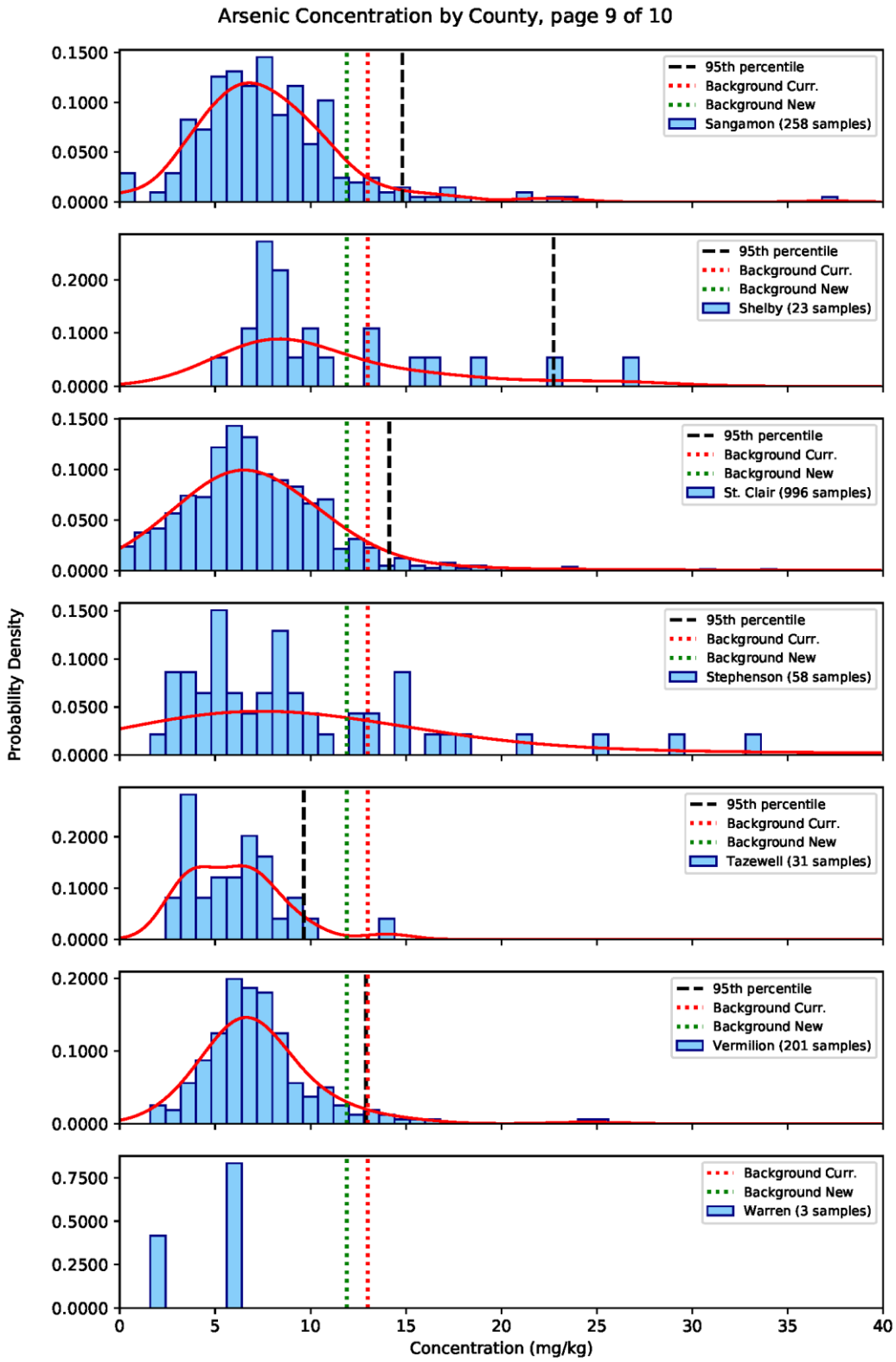


Figure 86. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 9

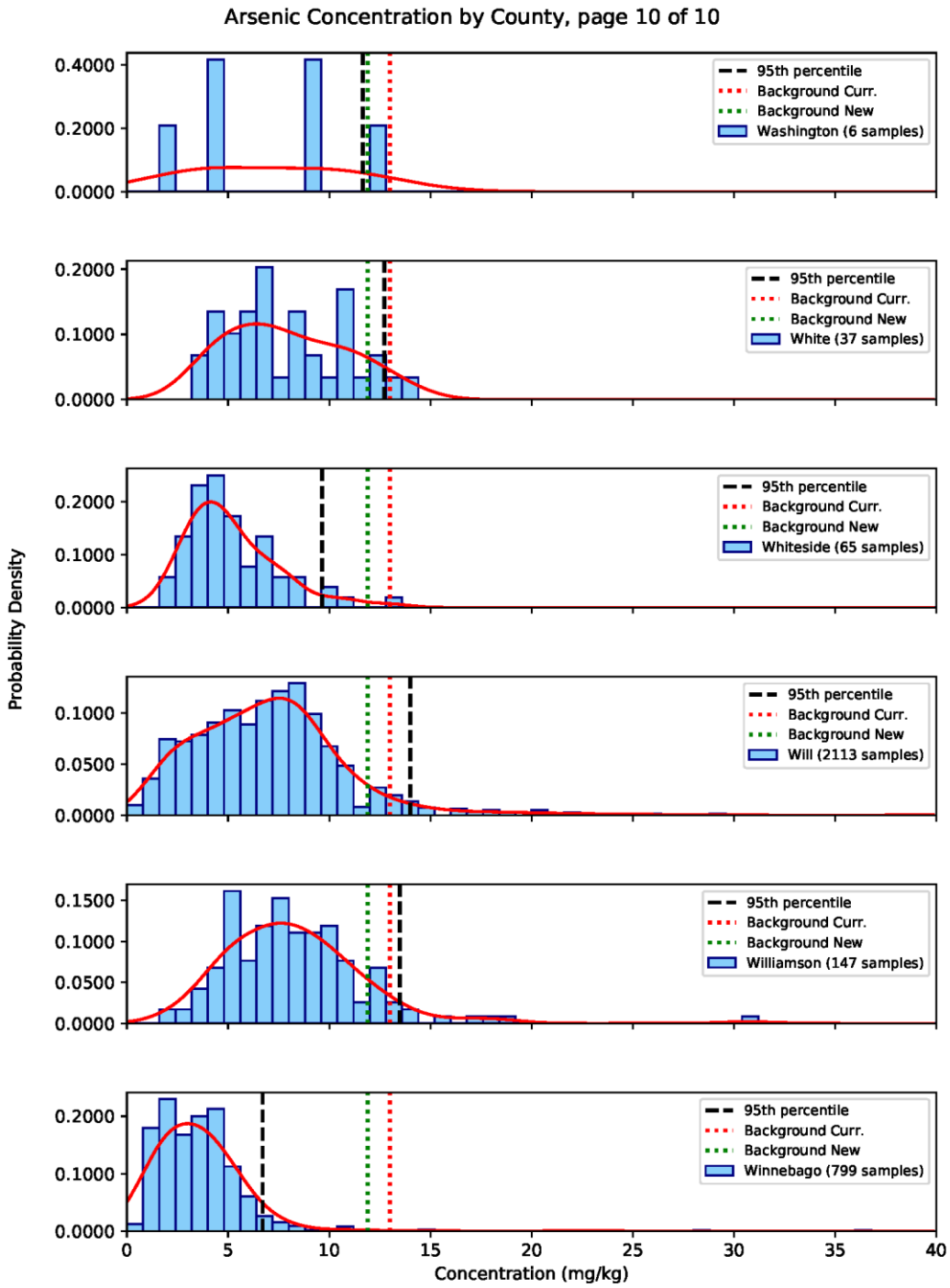


Figure 87. Histogram of RSL arsenic concentrations by Illinois county, REC (mg/kg), part 10

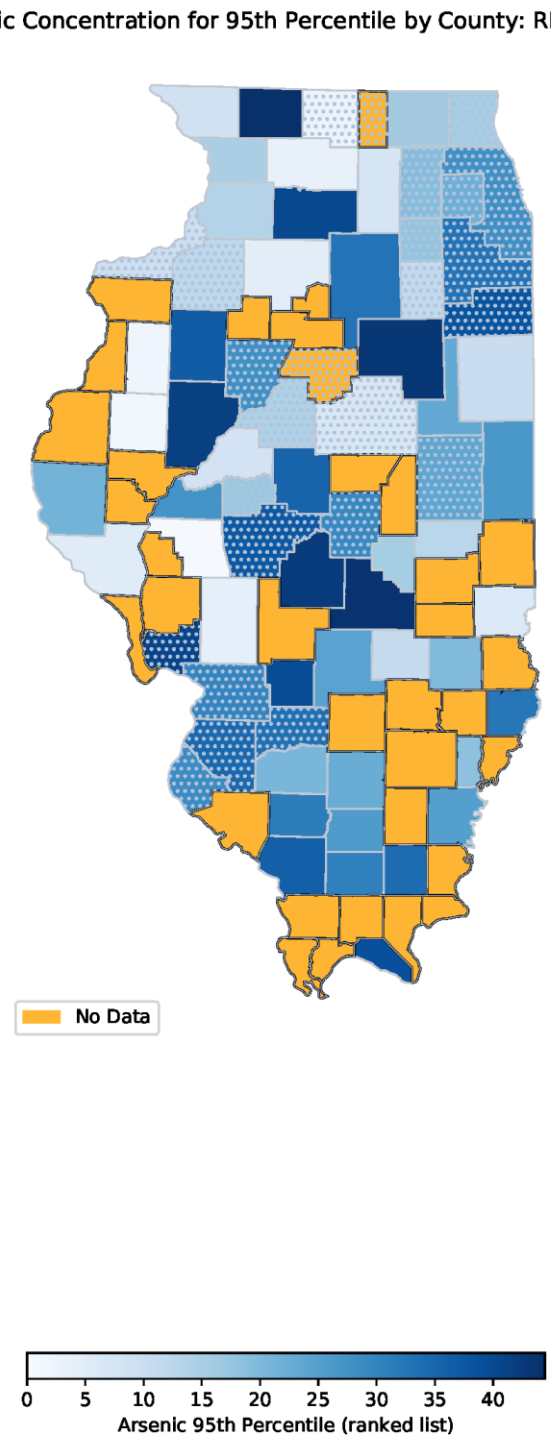


Figure 88. Map of RSL arsenic 95th percentile concentration by Illinois county, REC (mg/kg)

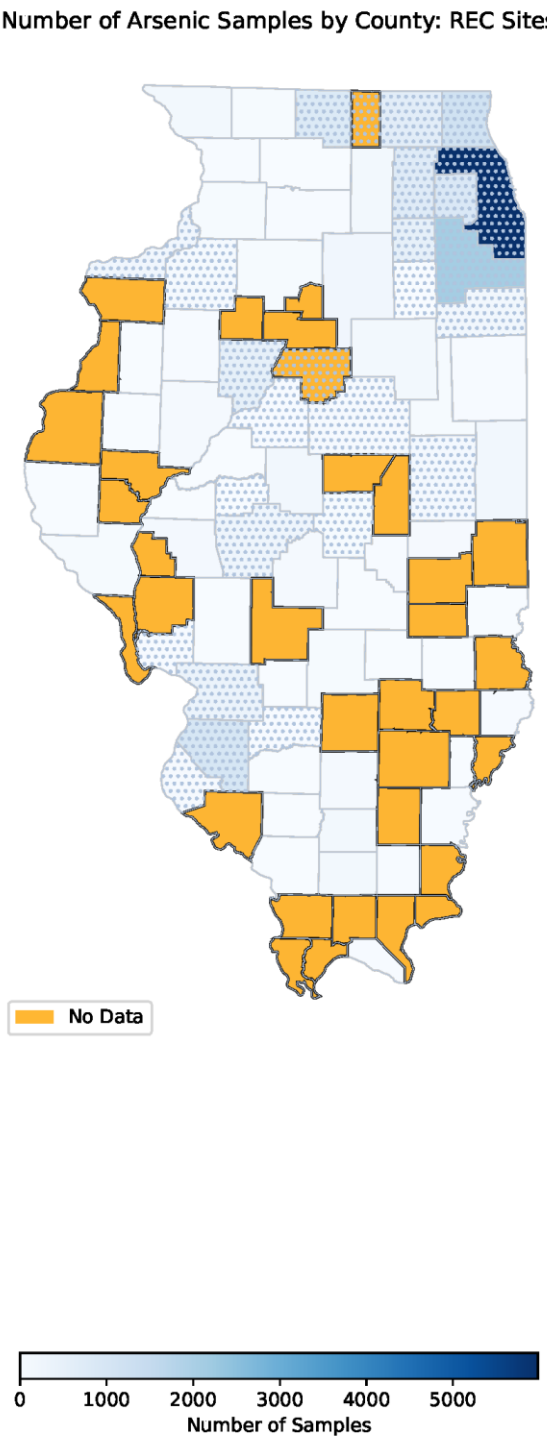


Figure 89. Map of RSL arsenic sample quantity by Illinois county, REC (mg/kg)

C.2 ARSENIC NON-REC

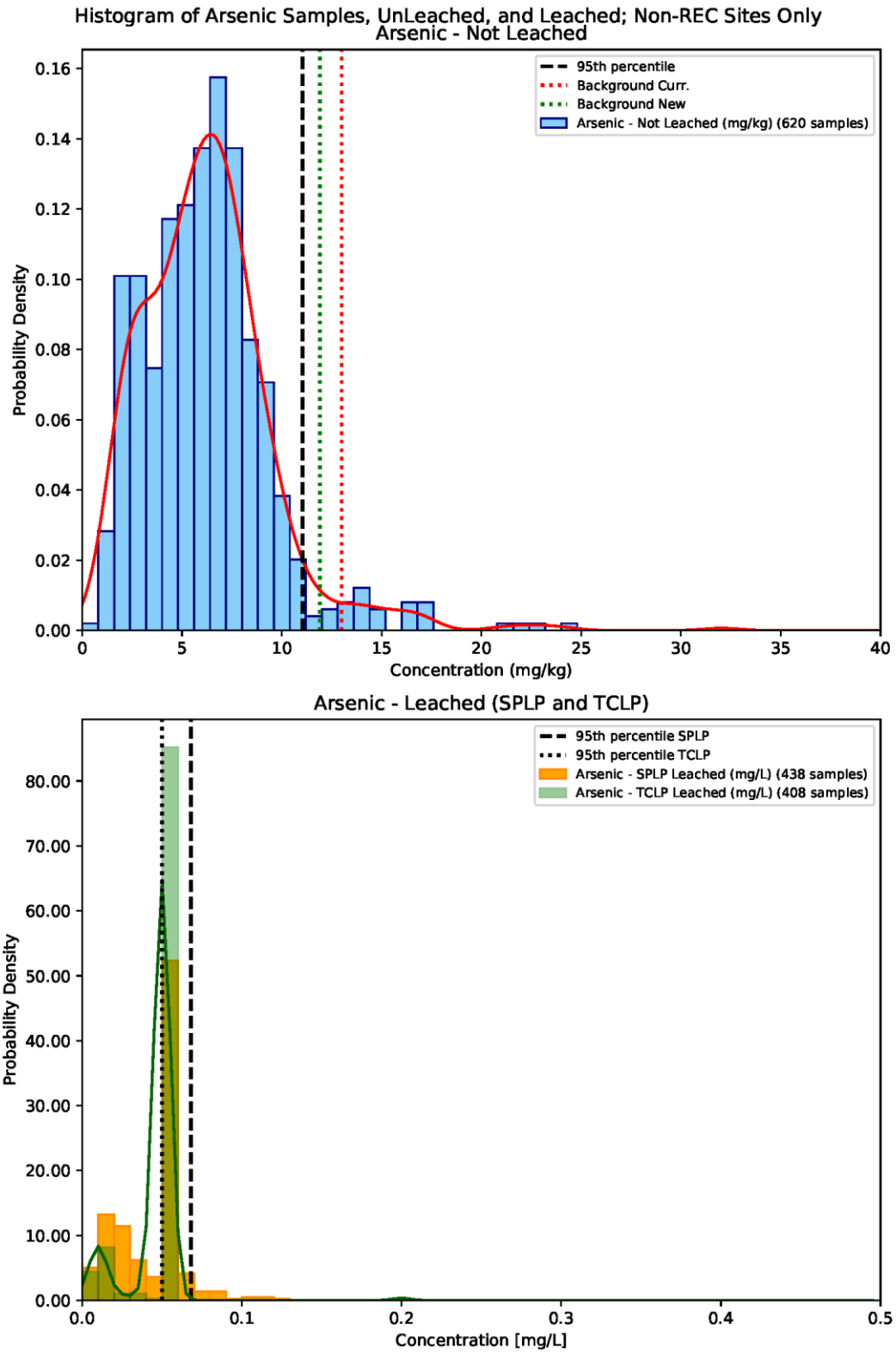


Figure 90. Histogram of RSL arsenic concentrations, Non-REC (mg/kg)

Arsenic Unleached Concentration (mg/kg)

1) Region

2) District

3) County

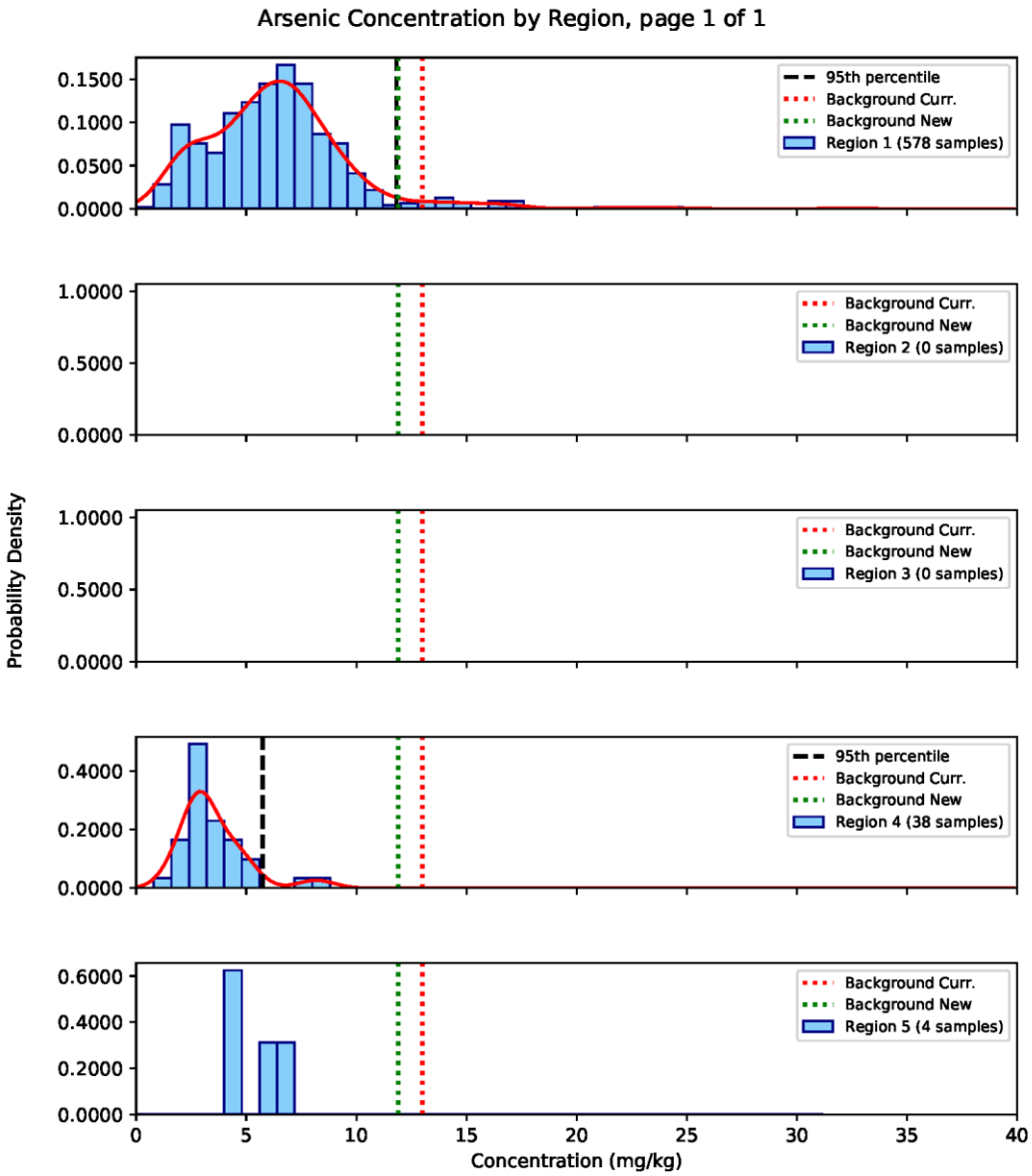


Figure 91. Histogram of RSL arsenic concentrations by IDOT Region, Non-REC (mg/kg)

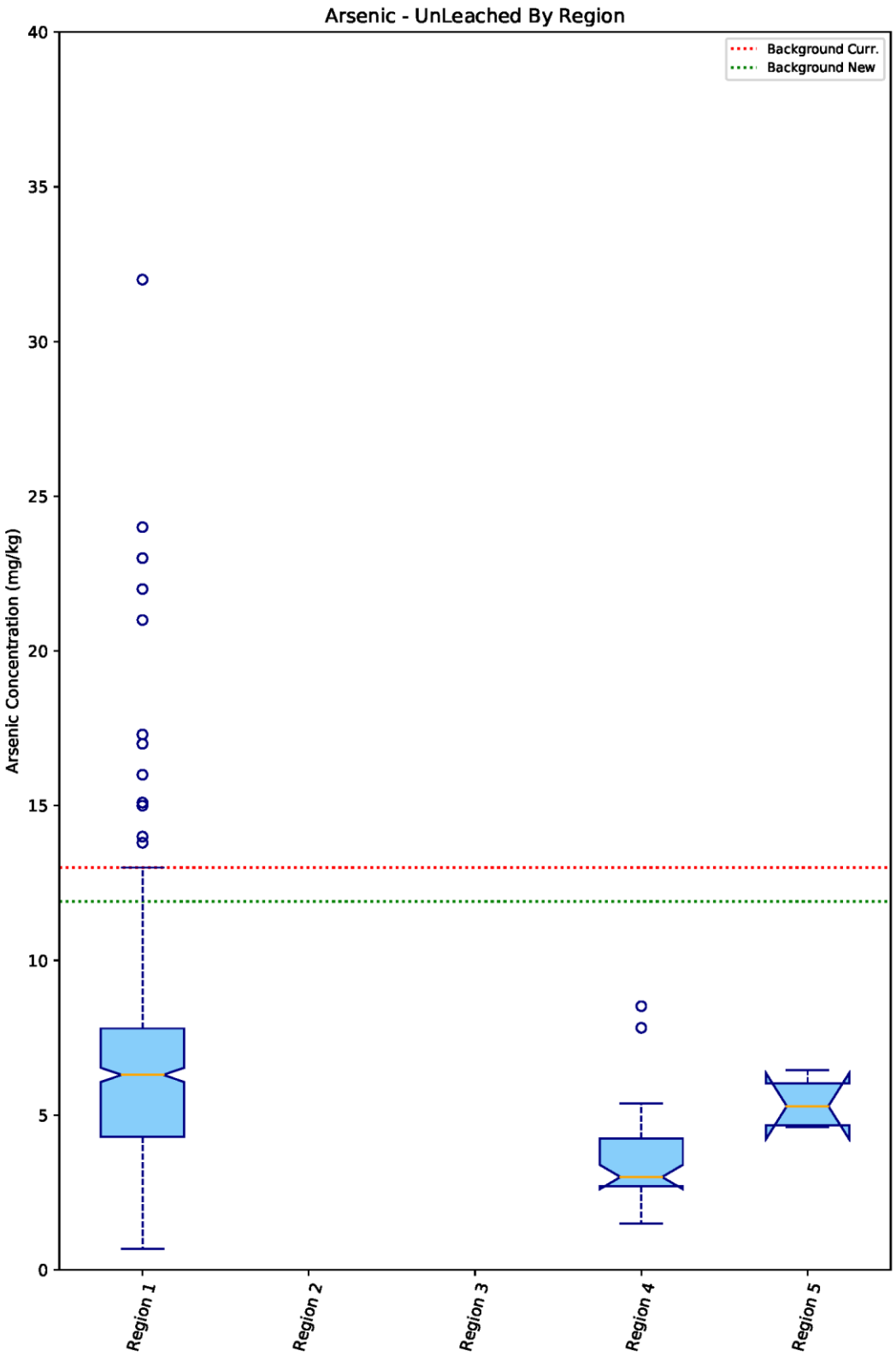


Figure 92. Boxplot of RSL arsenic concentrations by IDOT Region, Non-REC (mg/kg)

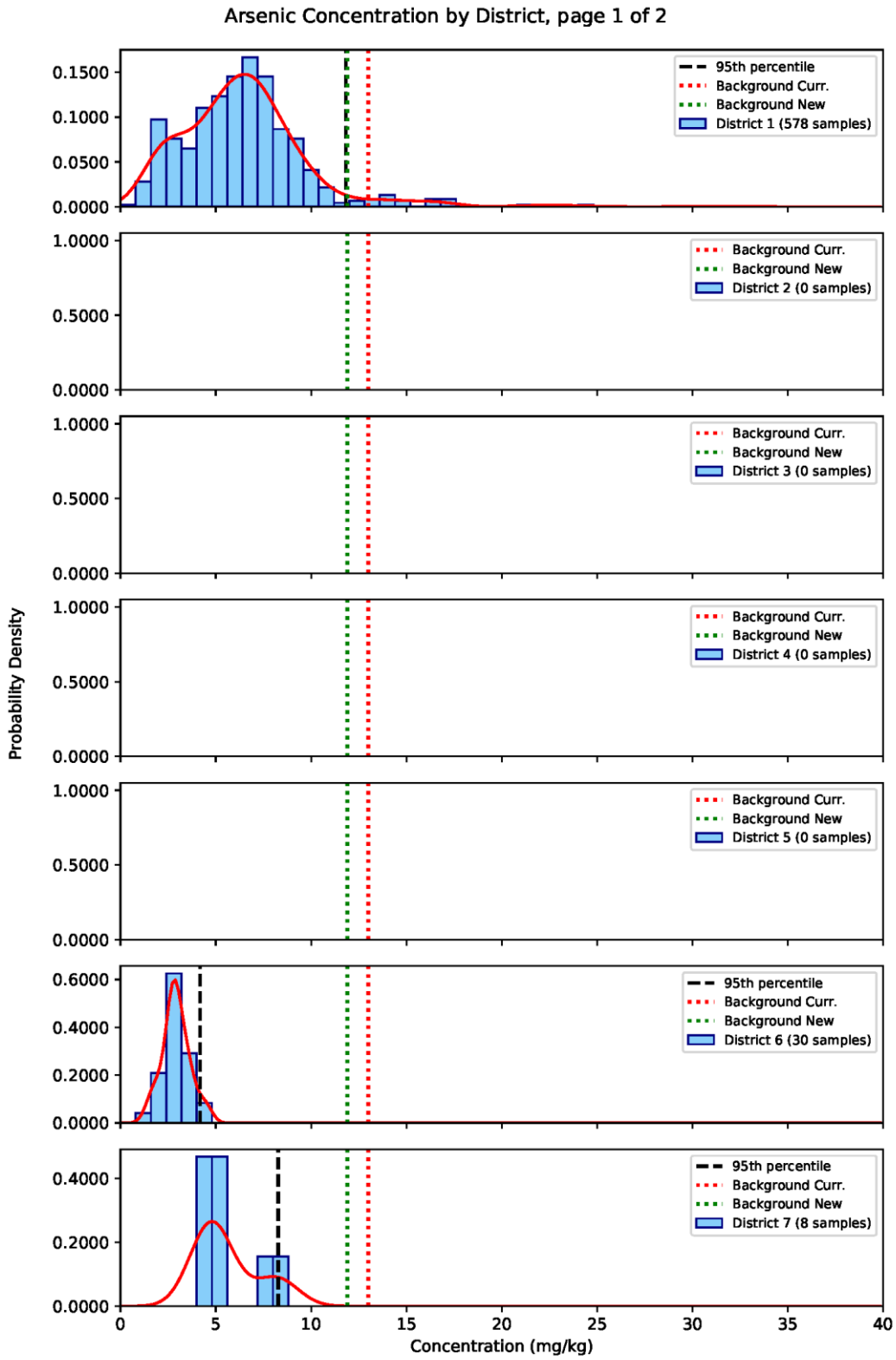


Figure 93. Histogram of RSL arsenic concentrations by IDOT District, Non-REC (mg/kg), part 1

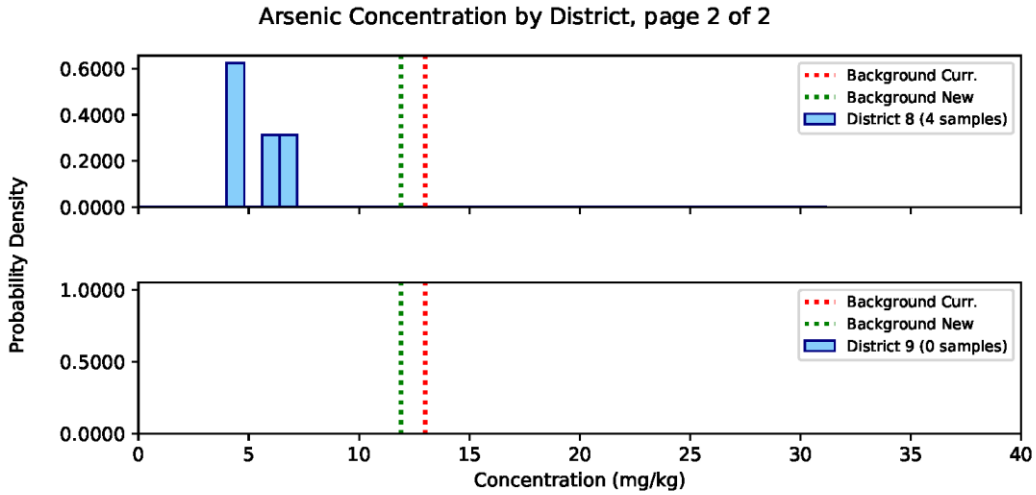


Figure 94. Histogram of RSL arsenic concentrations by IDOT District, Non-REC (mg/kg), part 2

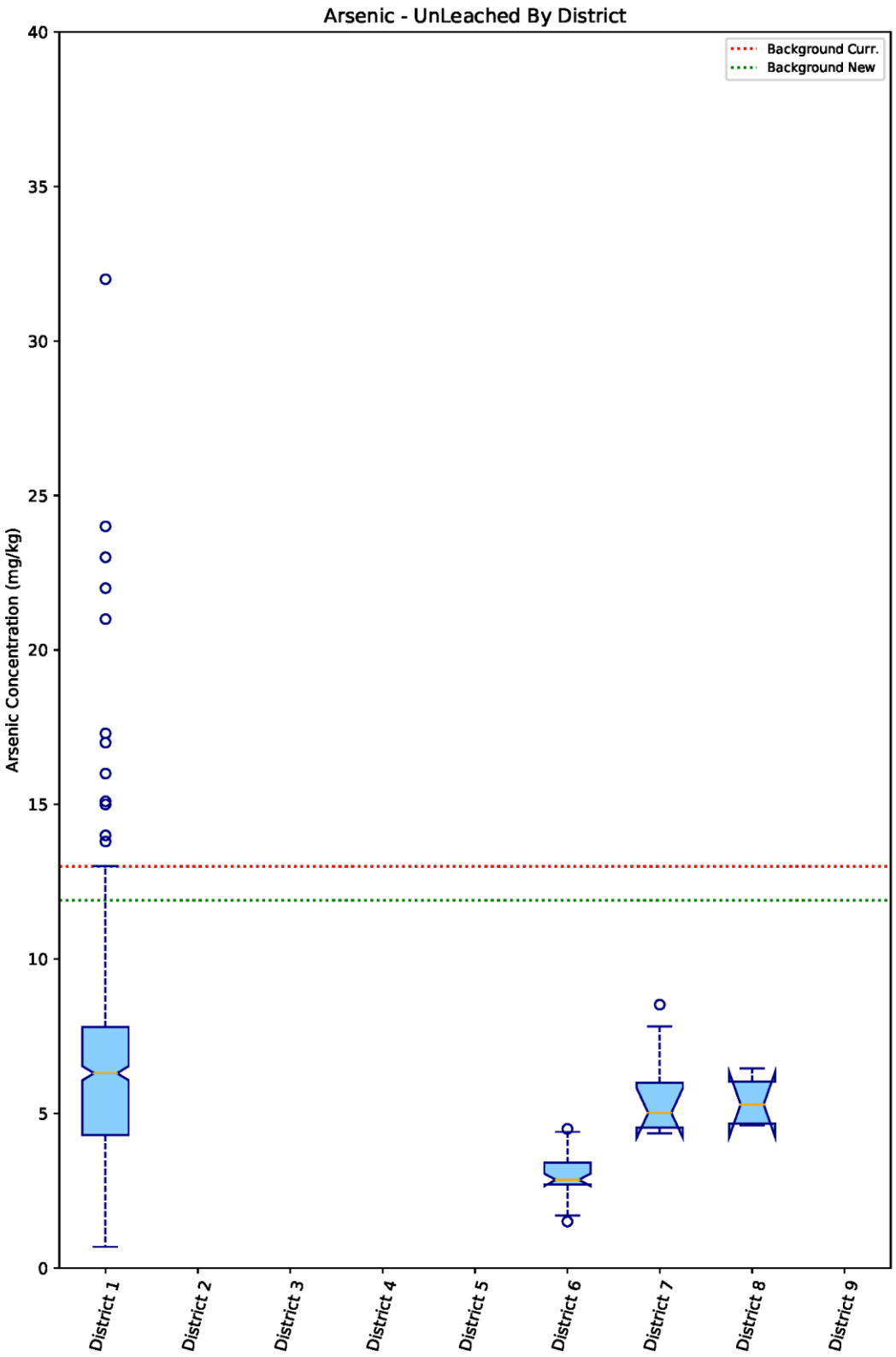


Figure 95. Boxplot of RSL arsenic concentrations by IDOT District, Non-REC (mg/kg)

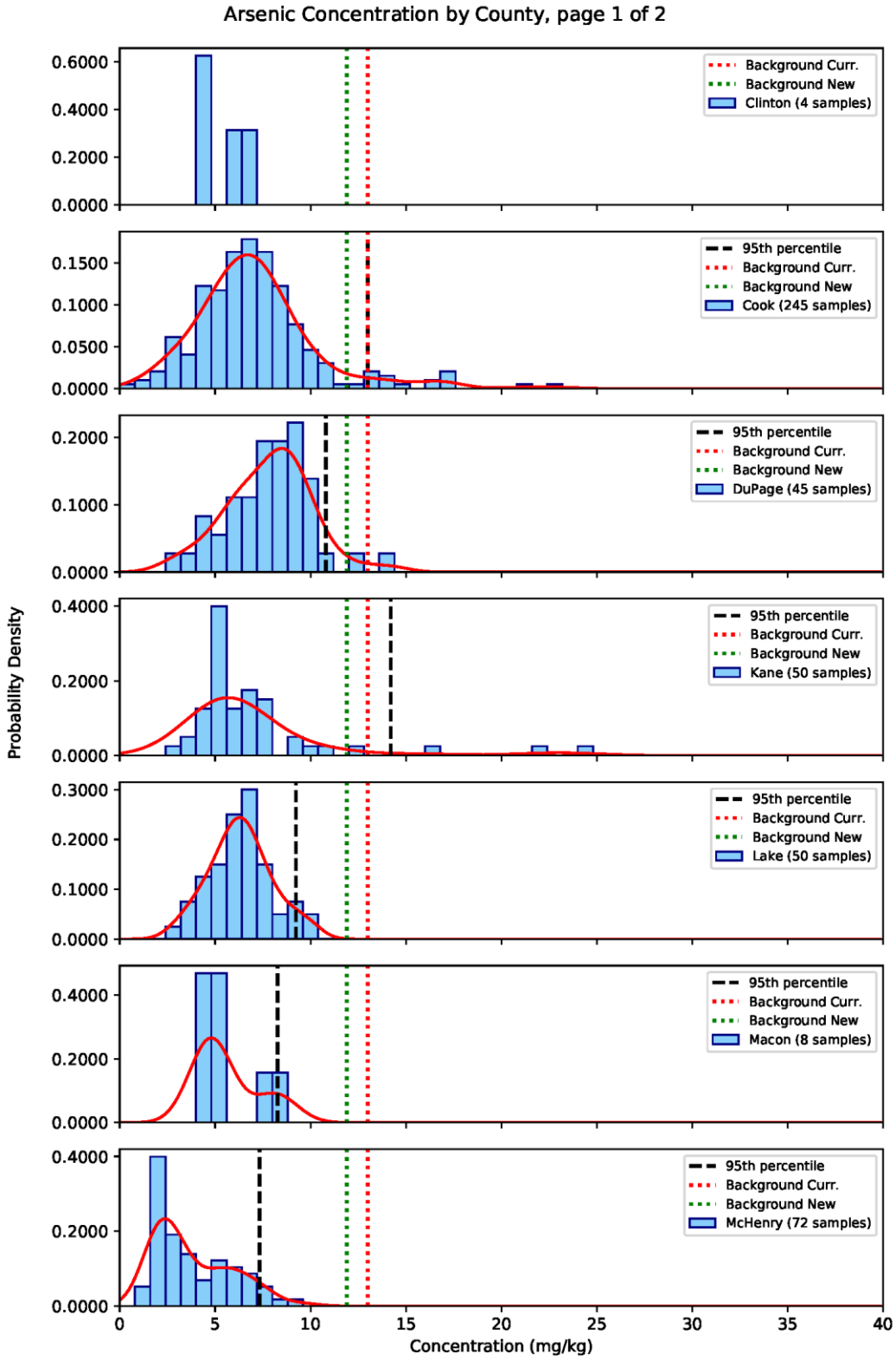


Figure 96. Histogram of RSL arsenic concentrations by Illinois county, Non-REC (mg/kg), part 1

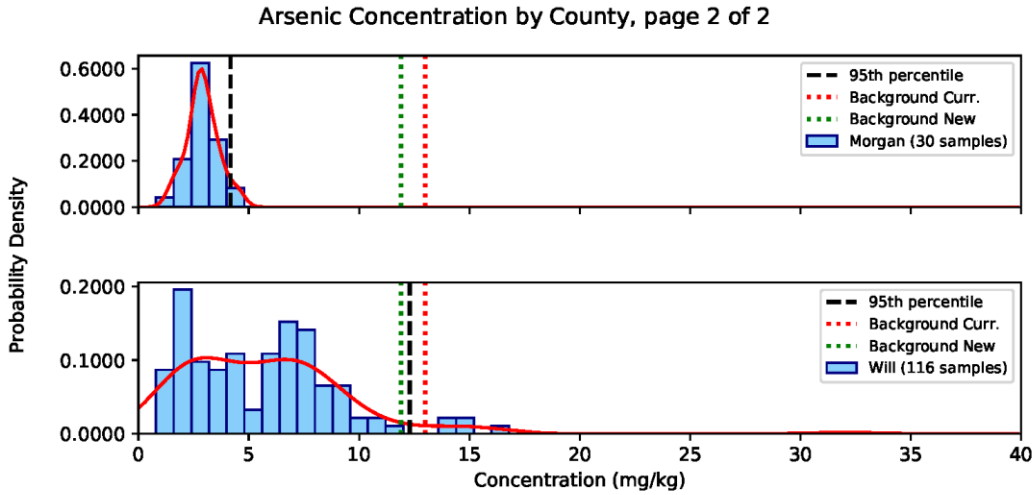


Figure 97. Histogram of RSL arsenic concentrations by Illinois county, Non-REC (mg/kg), part 2

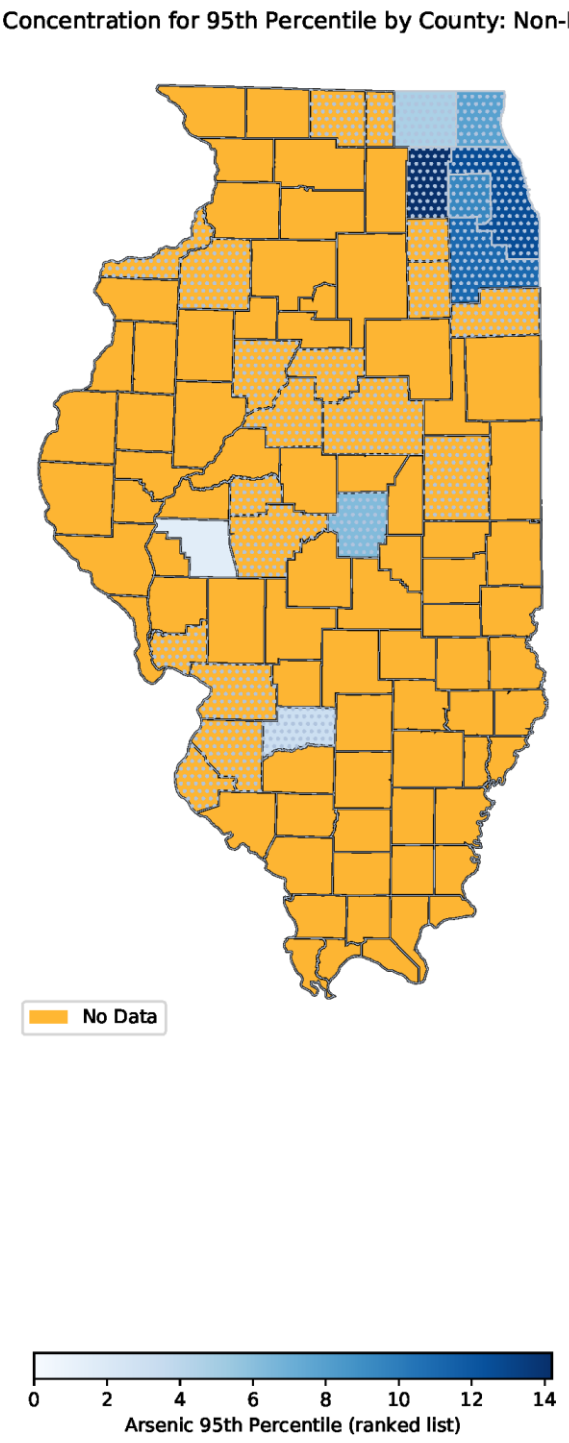


Figure 98. Map of RSL arsenic 95th percentile concentration by Illinois county, Non-REC (mg/kg)

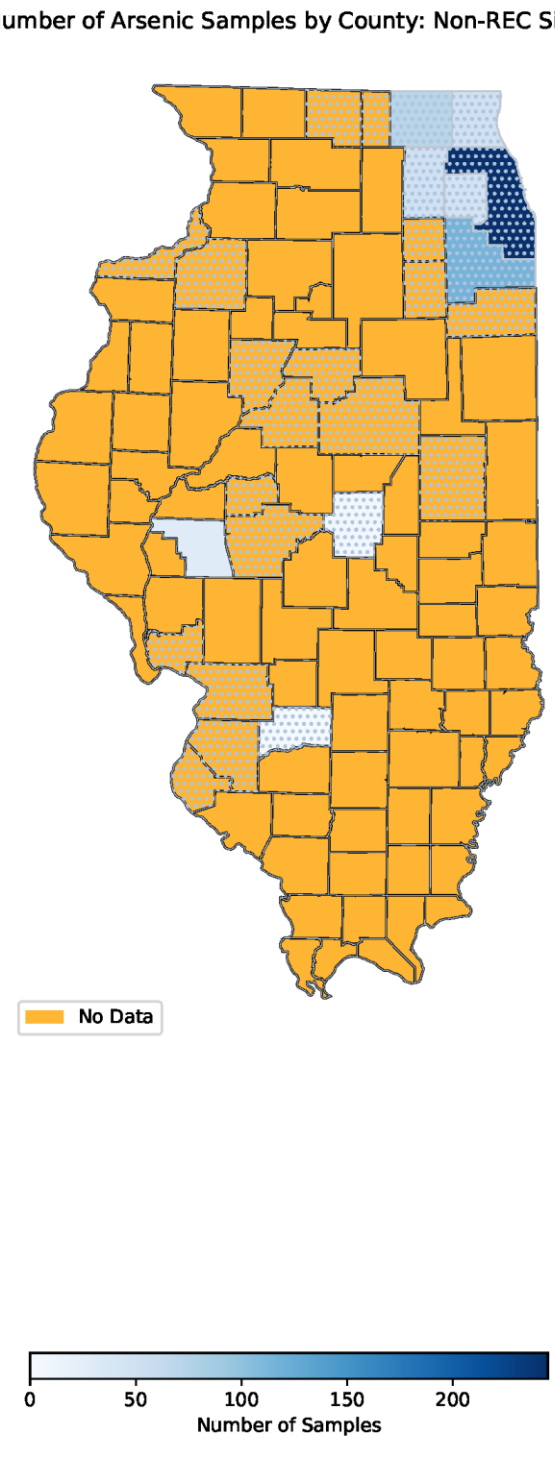


Figure 99. Map of RSL arsenic sample quantity by Illinois county, Non-REC (mg/kg)

C.3 ARSENIC DE MINIMIS

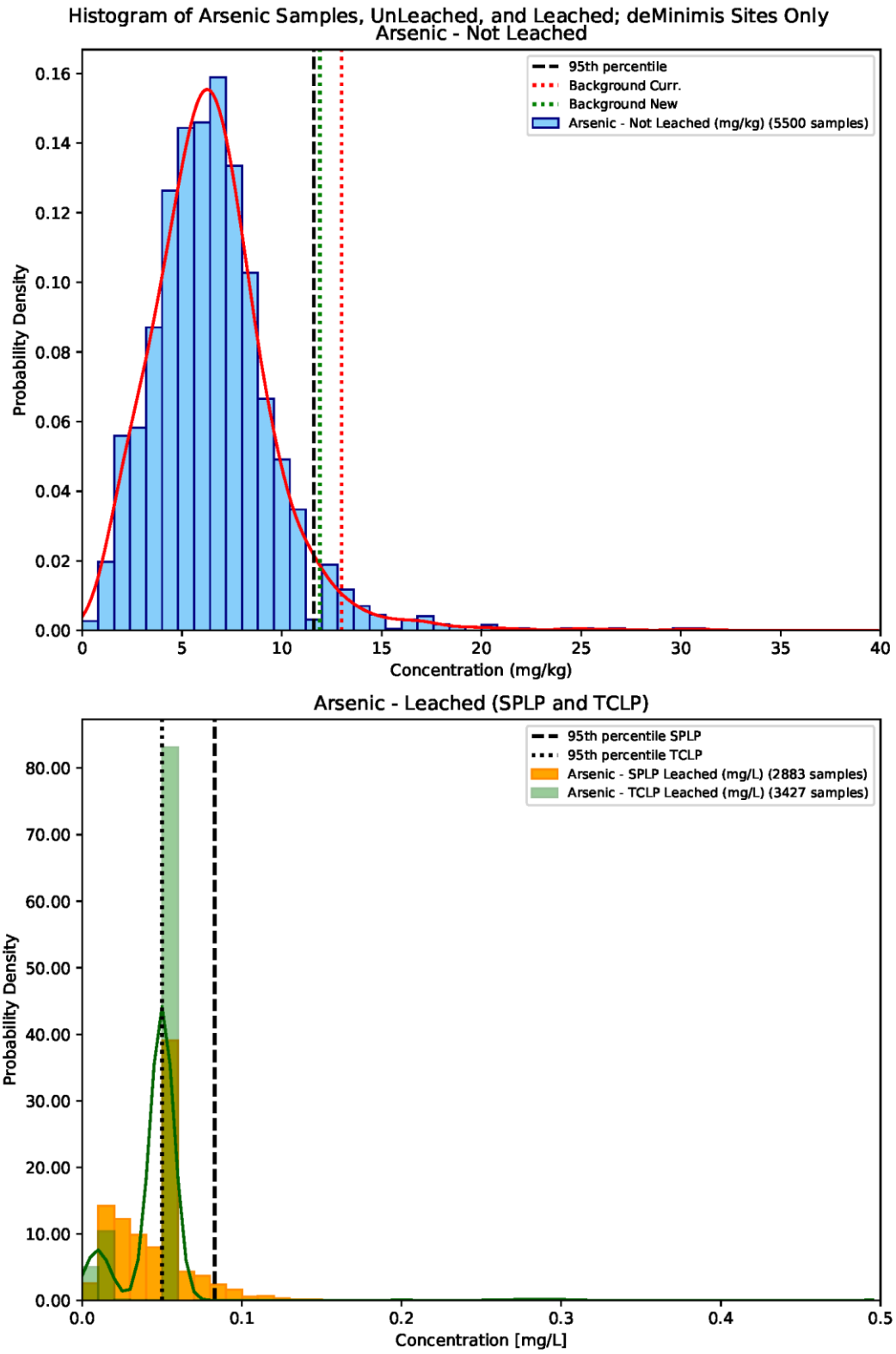


Figure 100. Histogram of RSL arsenic concentrations, de minimis (mg/kg)

Arsenic Unleached Concentration (mg/kg)

1) Region

2) District

3) County

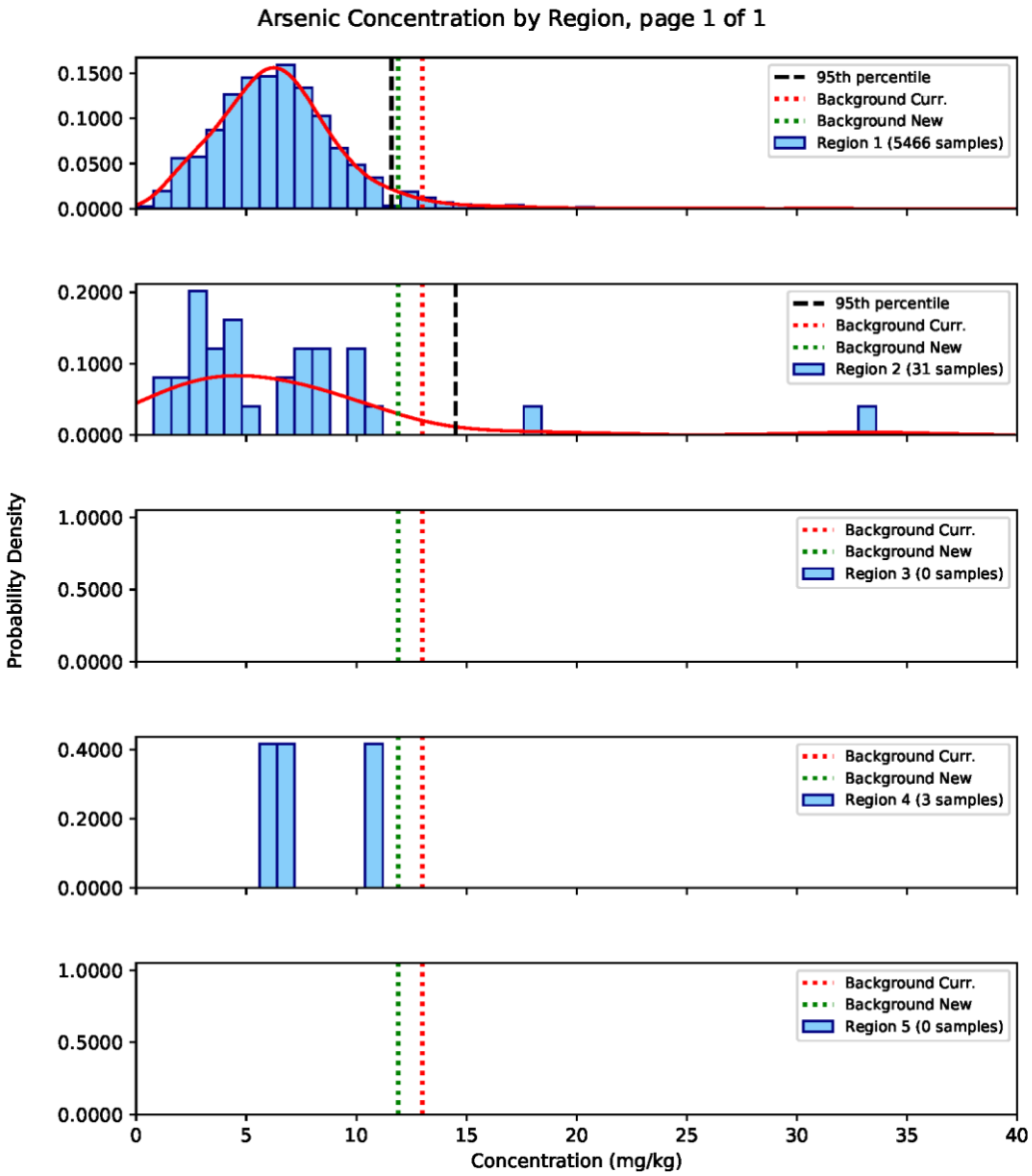


Figure 101. Histogram of RSL arsenic concentrations by IDOT Region, de minimis (mg/kg)

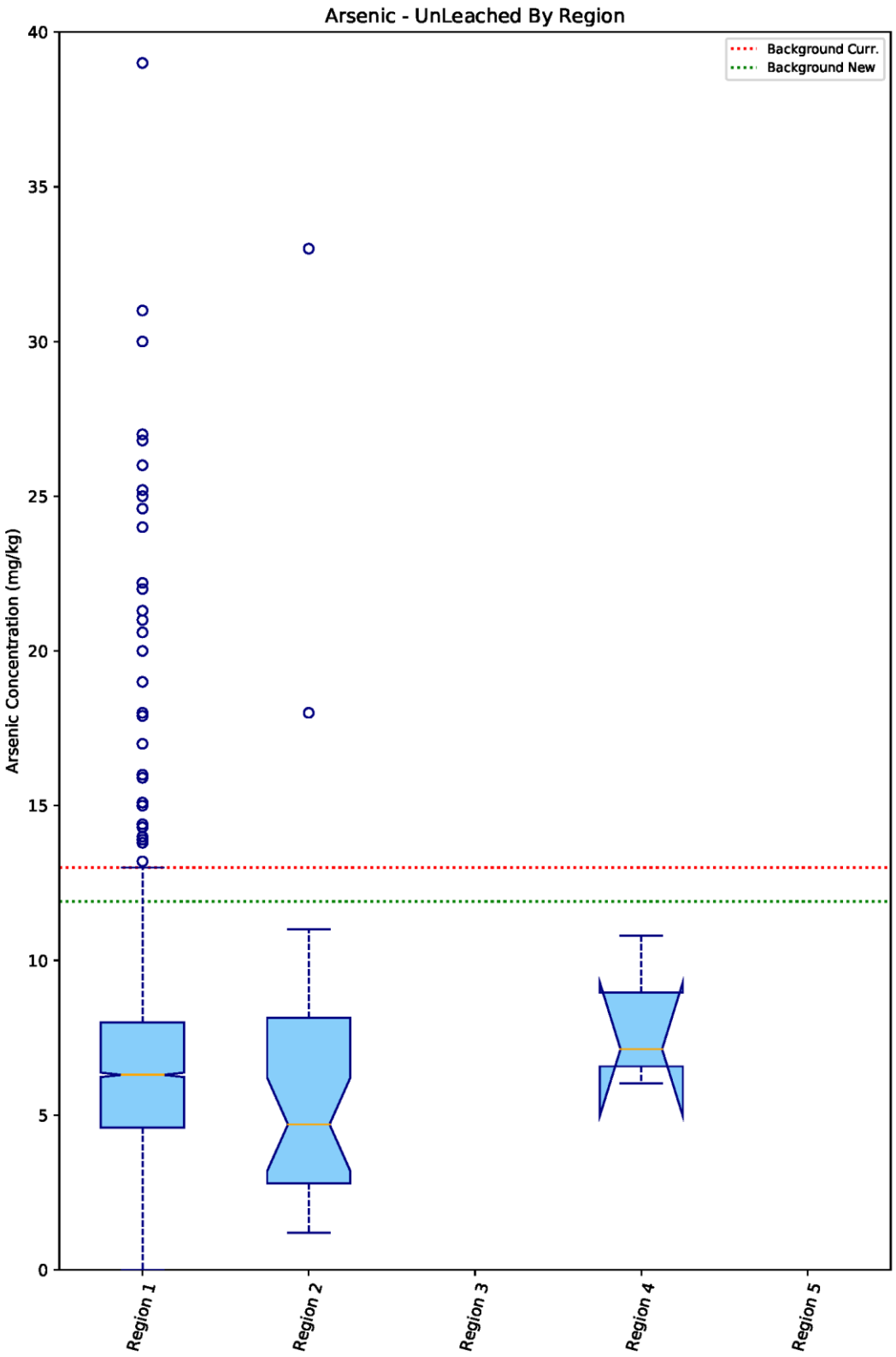


Figure 102. Boxplot of RSL arsenic concentrations by IDOT Region, de minimis (mg/kg)

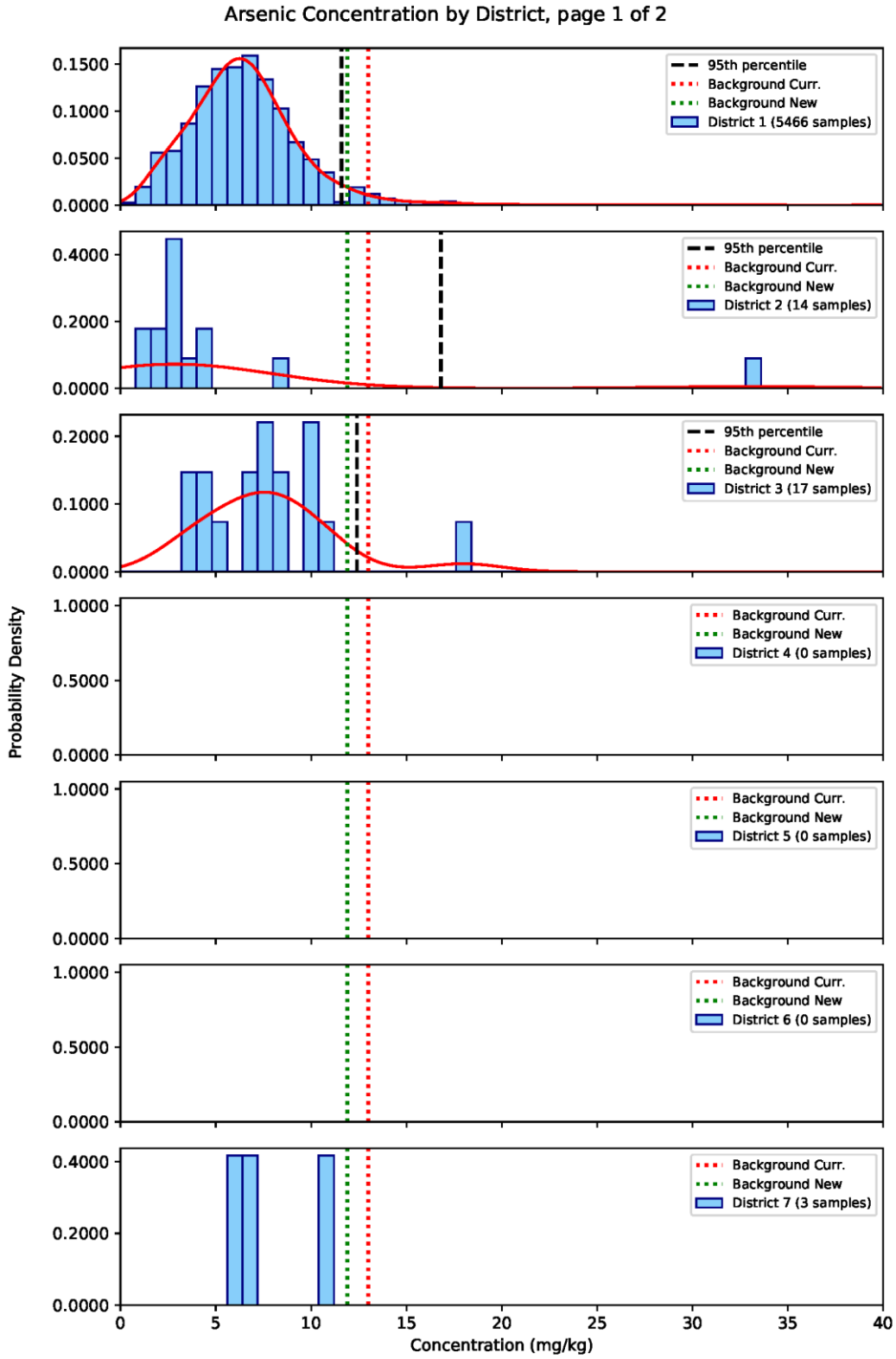


Figure 103. Histogram of RSL arsenic concentrations by IDOT District, de minimis (mg/kg), part 1

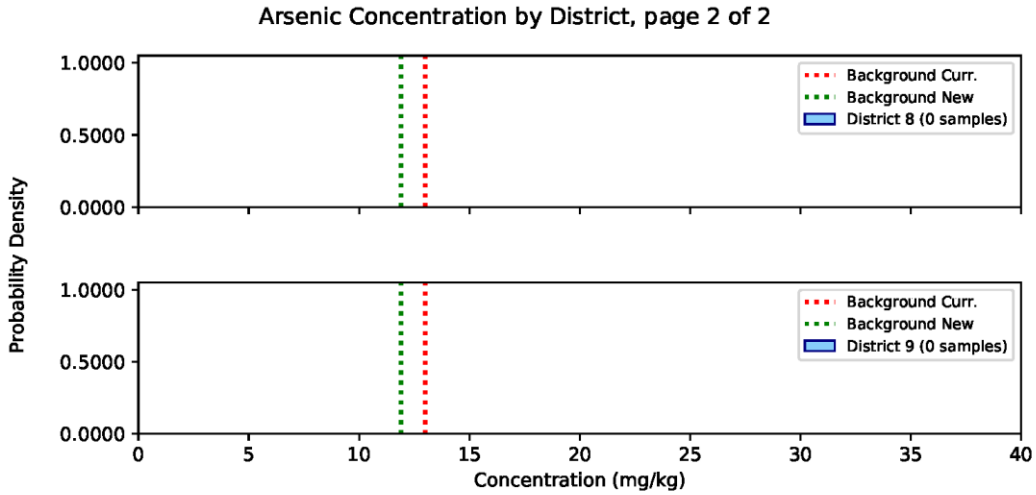


Figure 104. Histogram of RSL arsenic concentrations by IDOT District, de minimis (mg/kg), part 2

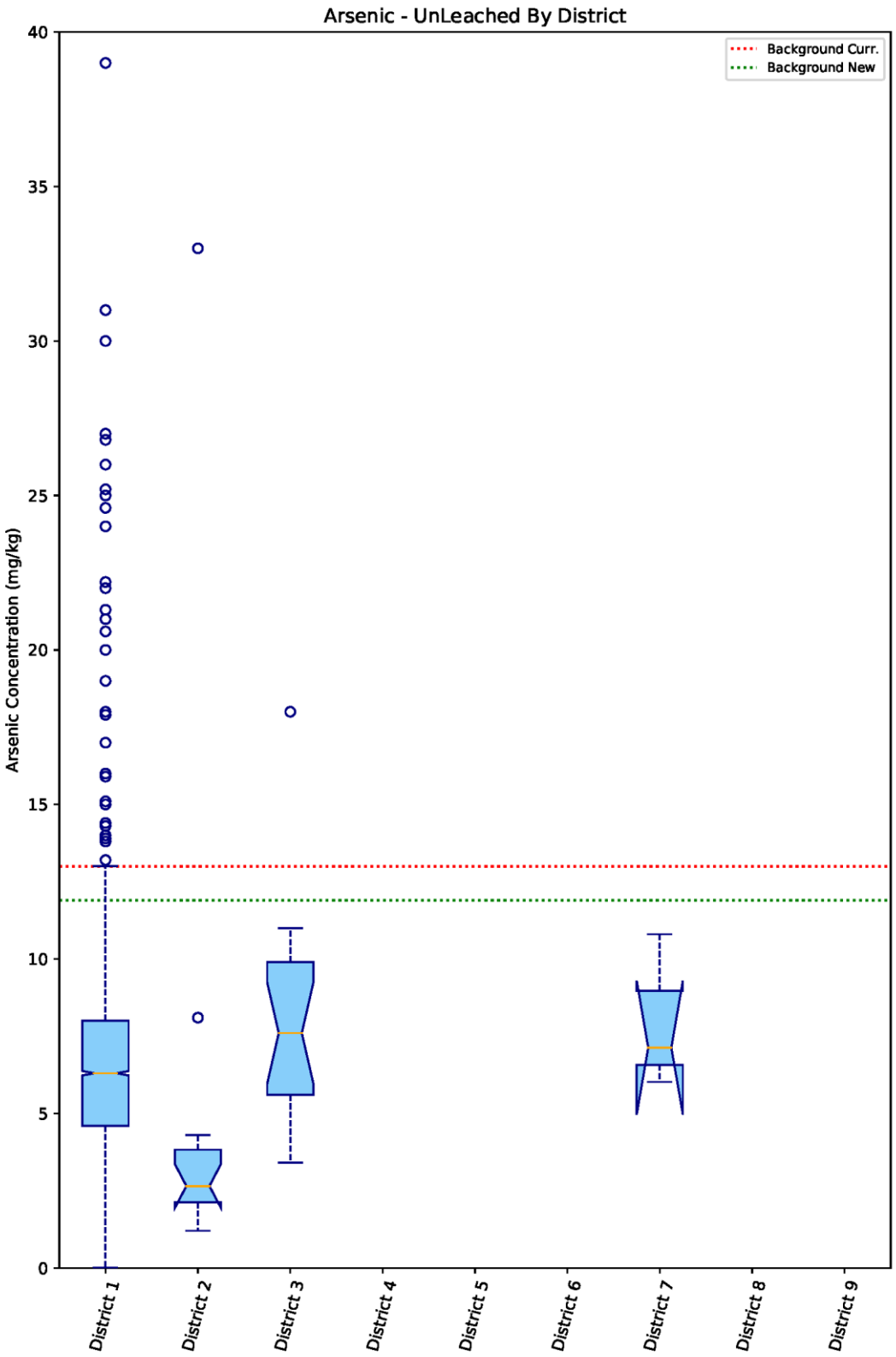


Figure 105. Boxplot of RSL arsenic concentrations by IDOT District, de minimis (mg/kg)

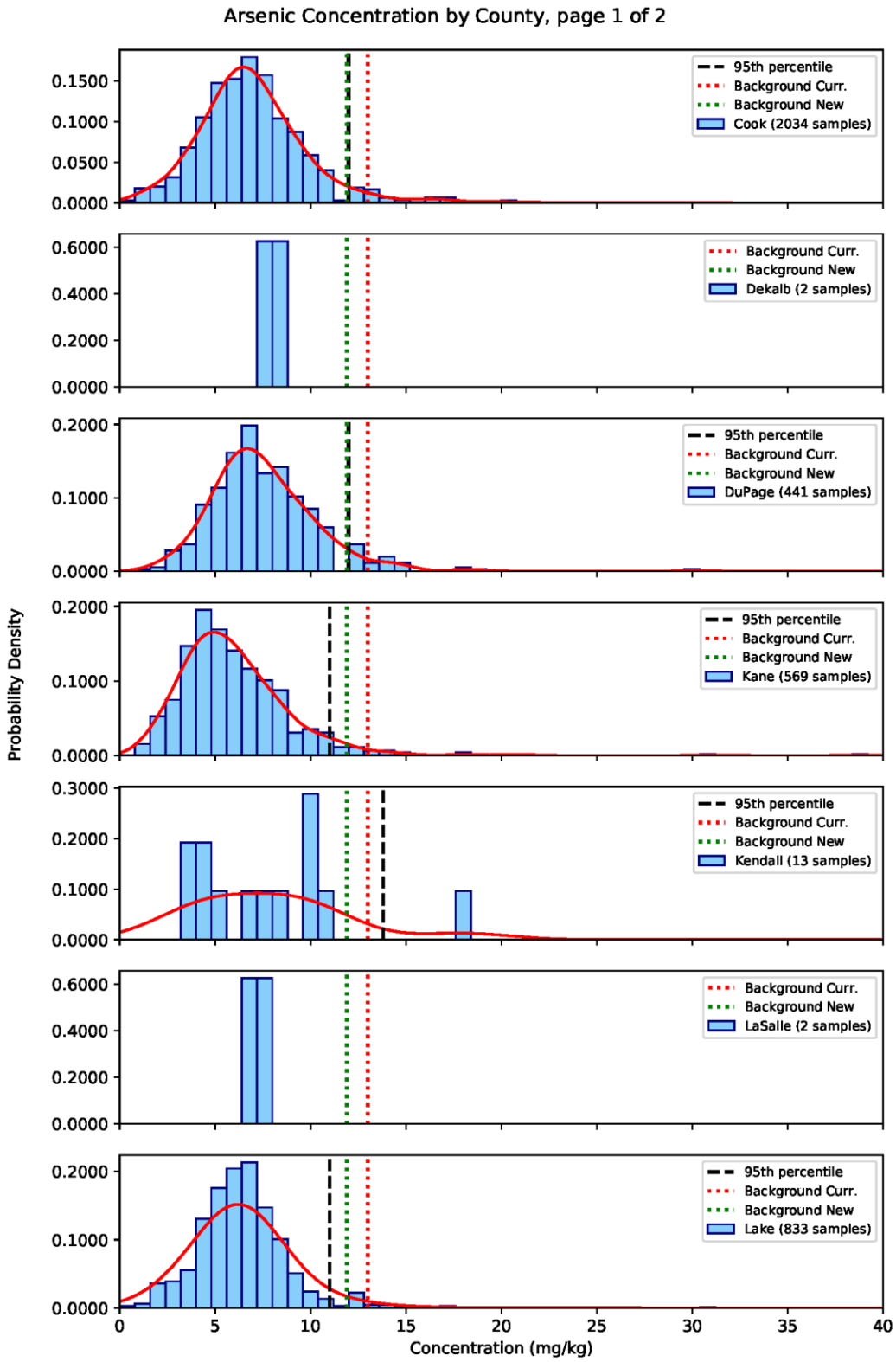


Figure 106. Histogram of RSL arsenic concentrations by Illinois county, de minimis (mg/kg), part 1

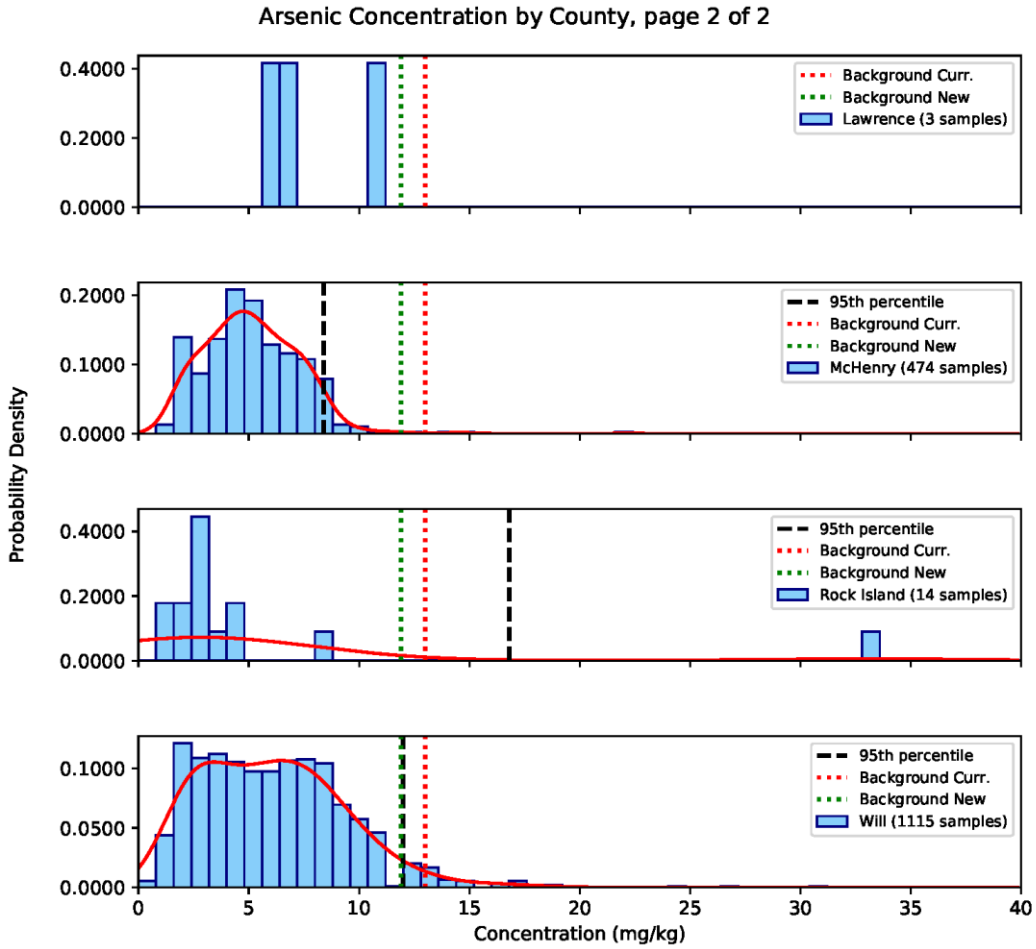


Figure 107. Histogram of RSL arsenic concentrations by Illinois county, de minimis (mg/kg), part 2

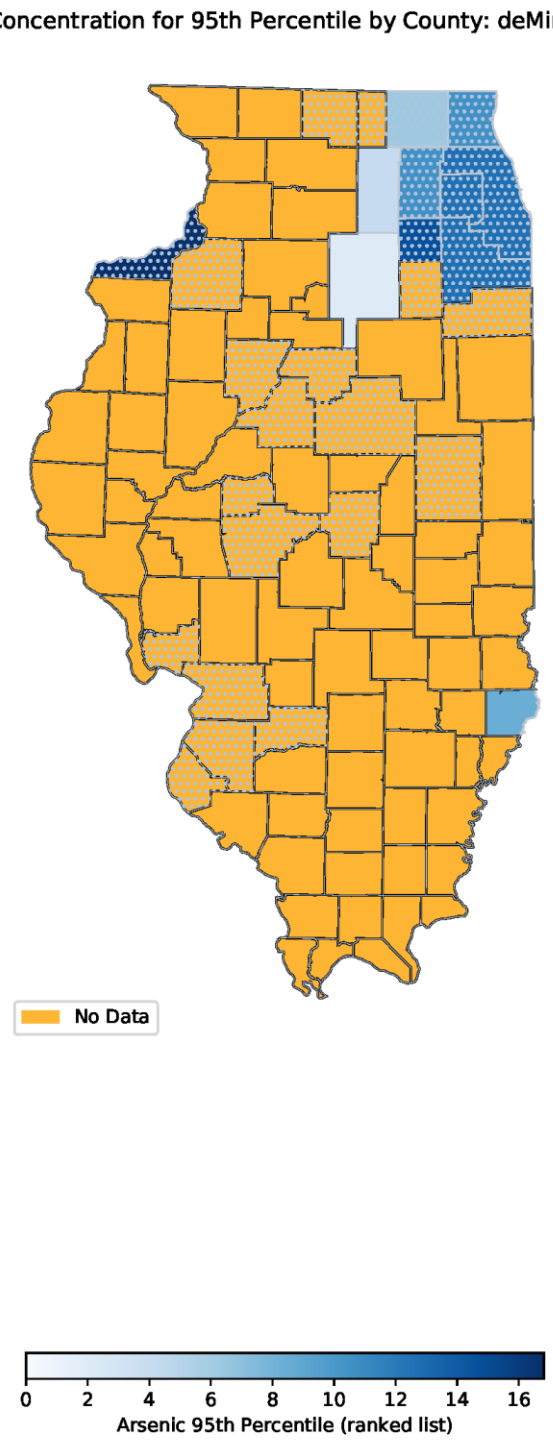


Figure 108. Map of RSL arsenic 95th percentile concentration by Illinois county, de minimis (mg/kg)

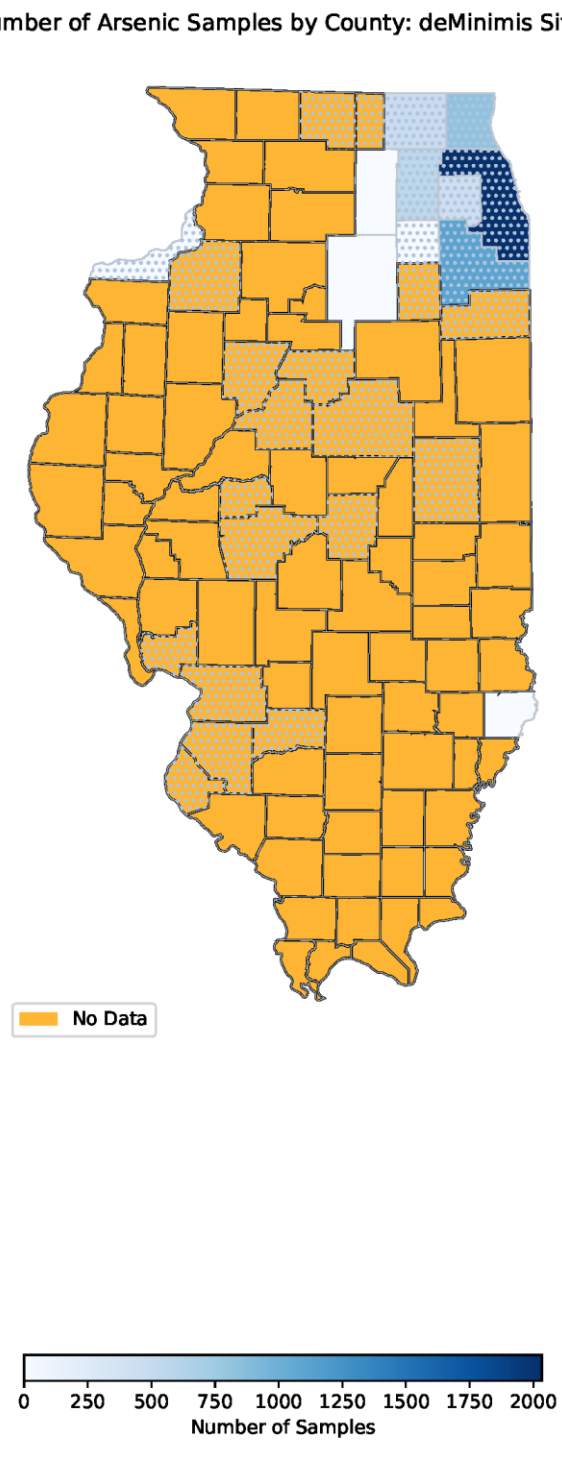


Figure 109. Map of RSL arsenic sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX D. ANALYTE ANALYSIS: BARIUM

D.1 BARIUM REC

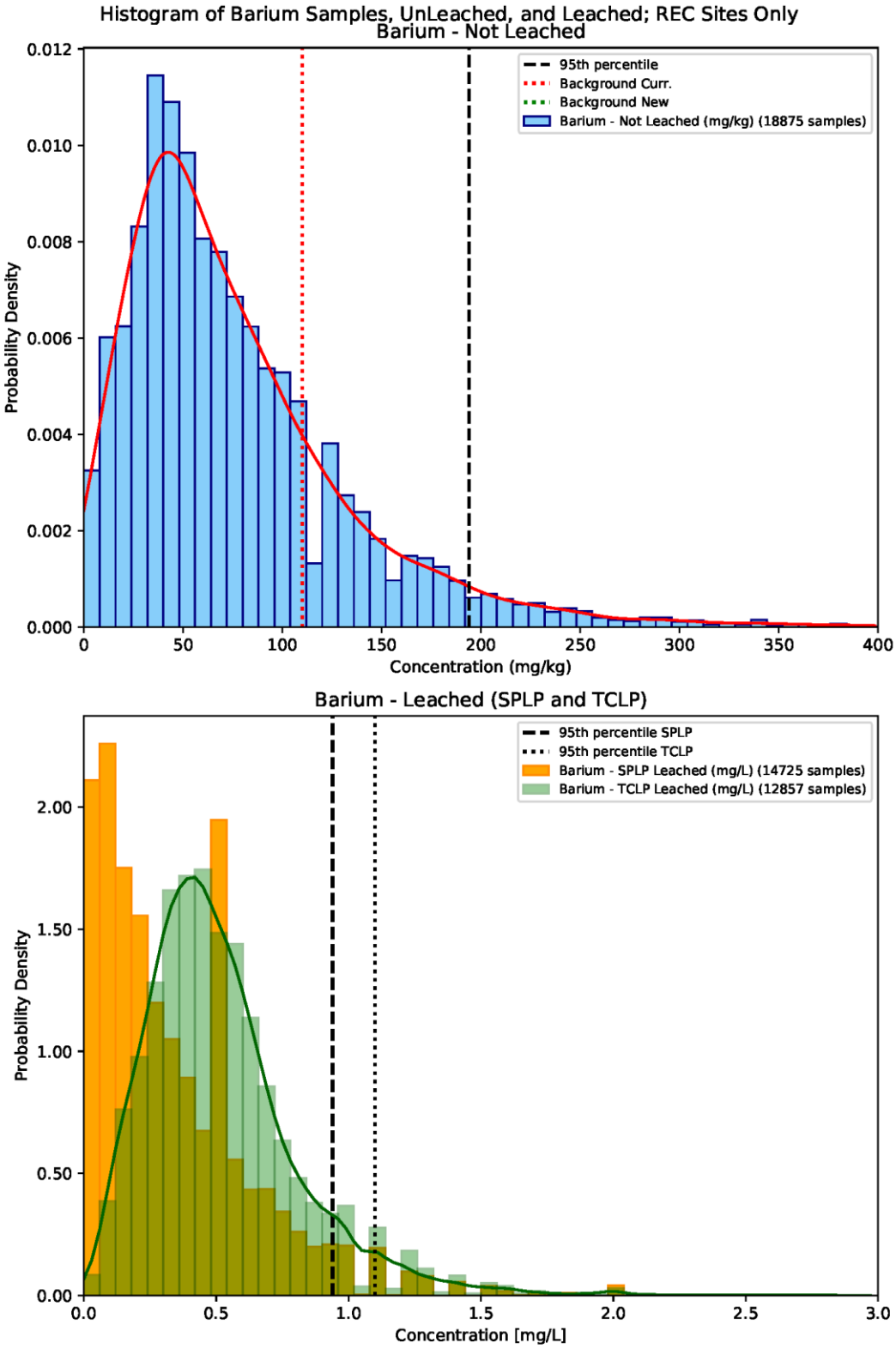


Figure 110. Histogram of RSL barium concentrations, REC (mg/kg)

Barium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

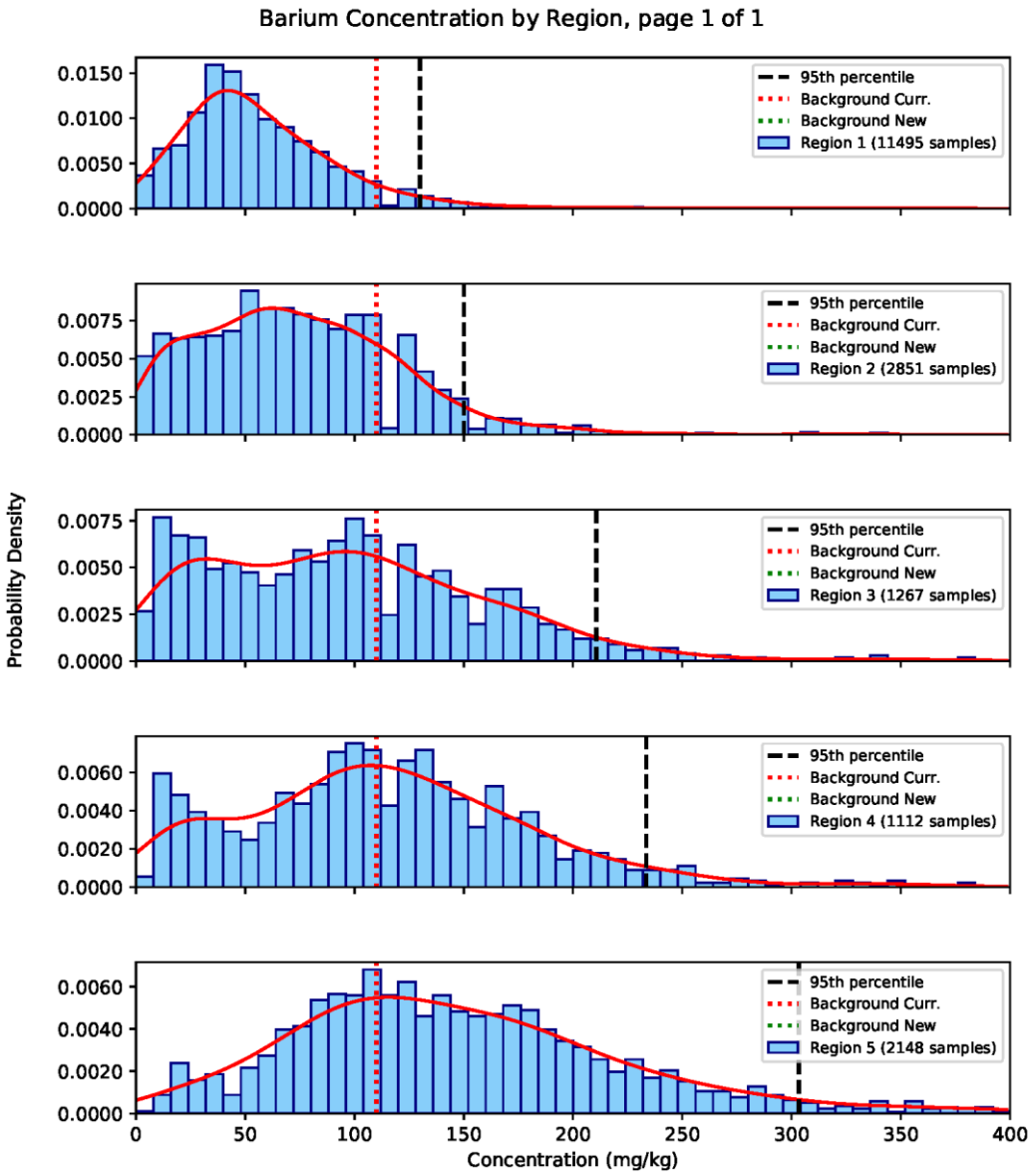


Figure 111. Histogram of RSL barium concentrations by IDOT Region, REC (mg/kg)

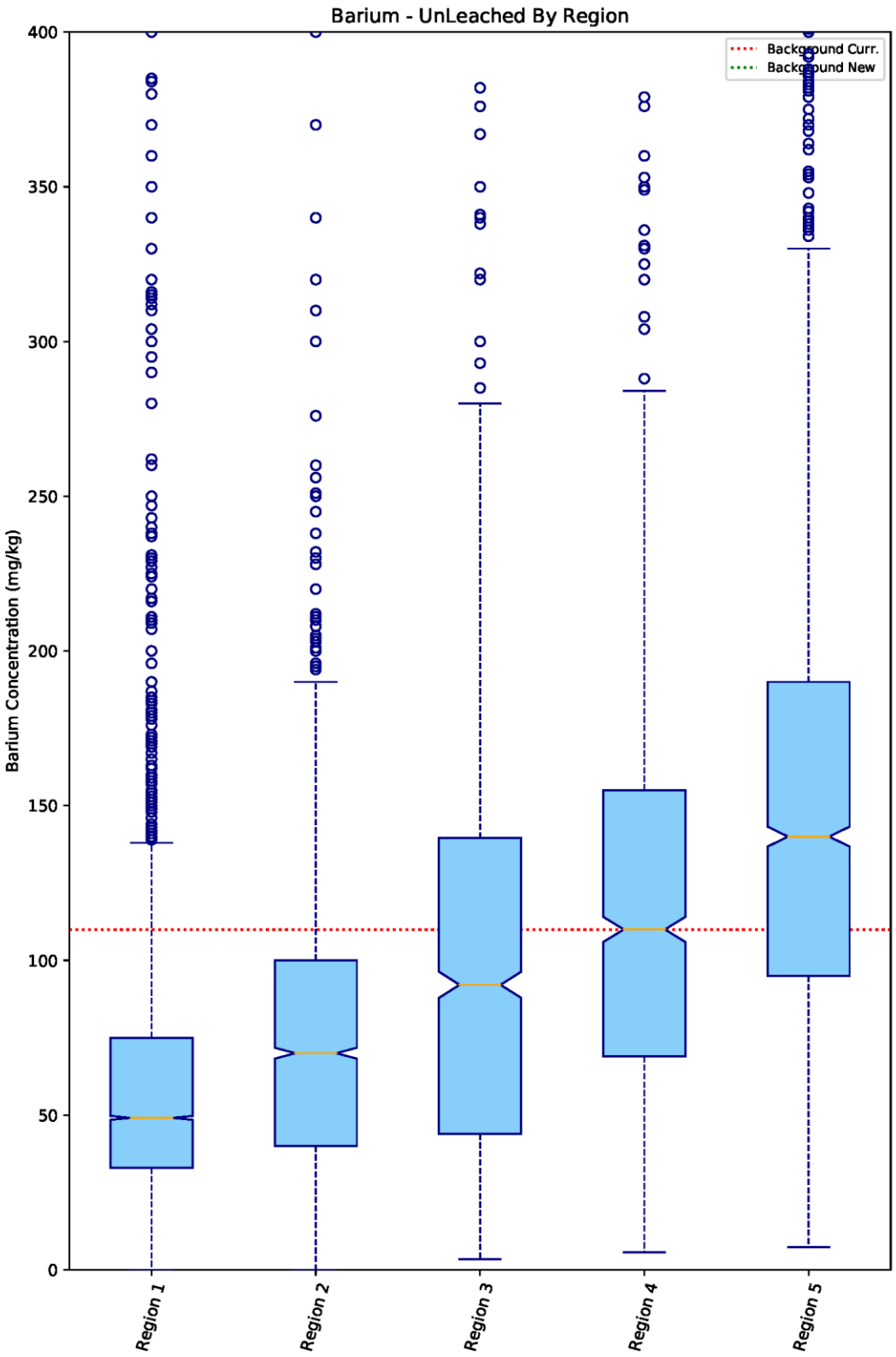


Figure 112. Boxplot of RSL barium concentrations by IDOT Region, REC (mg/kg)

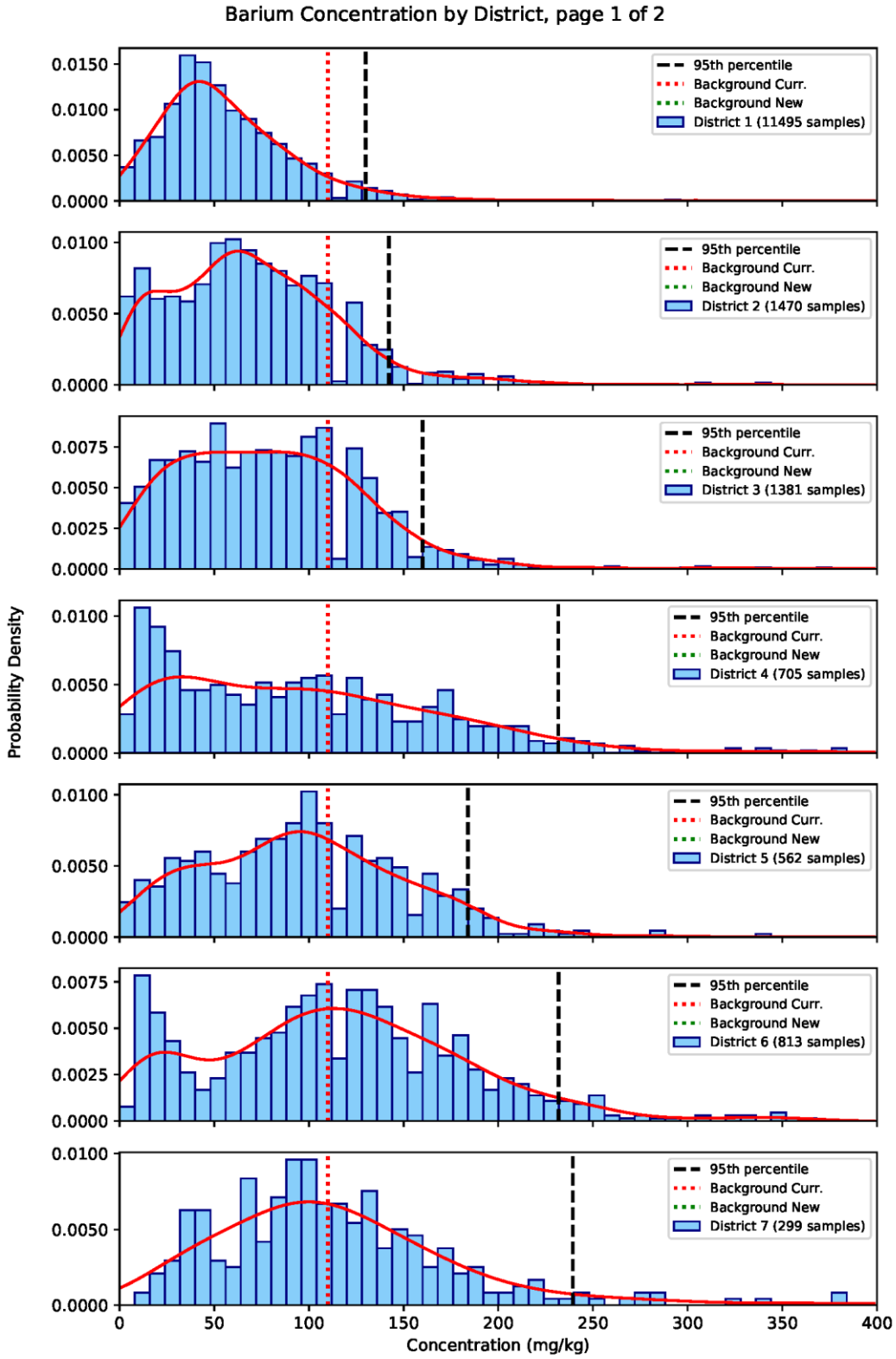


Figure 113. Histogram of RSL barium concentrations by IDOT District, REC (mg/kg), part 1

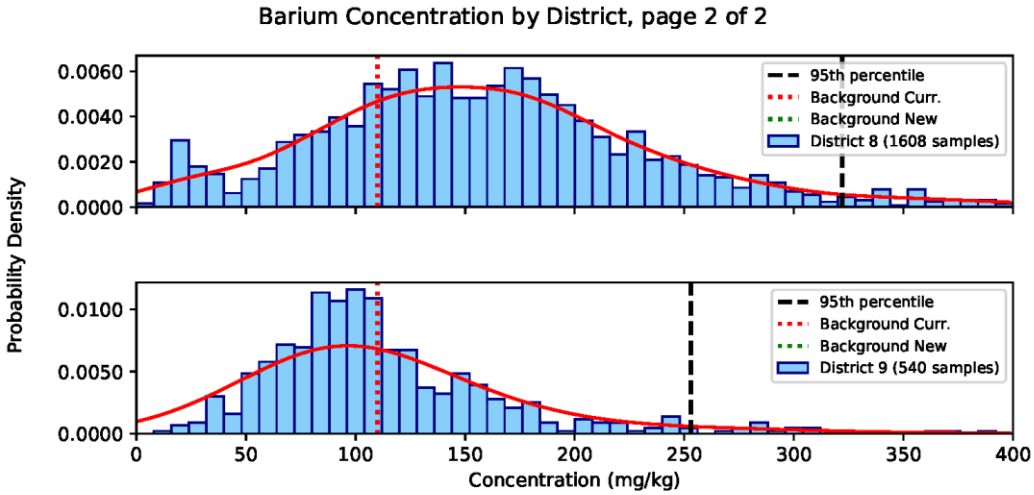


Figure 114. Histogram of RSL barium concentrations by IDOT District, REC (mg/kg), part 2

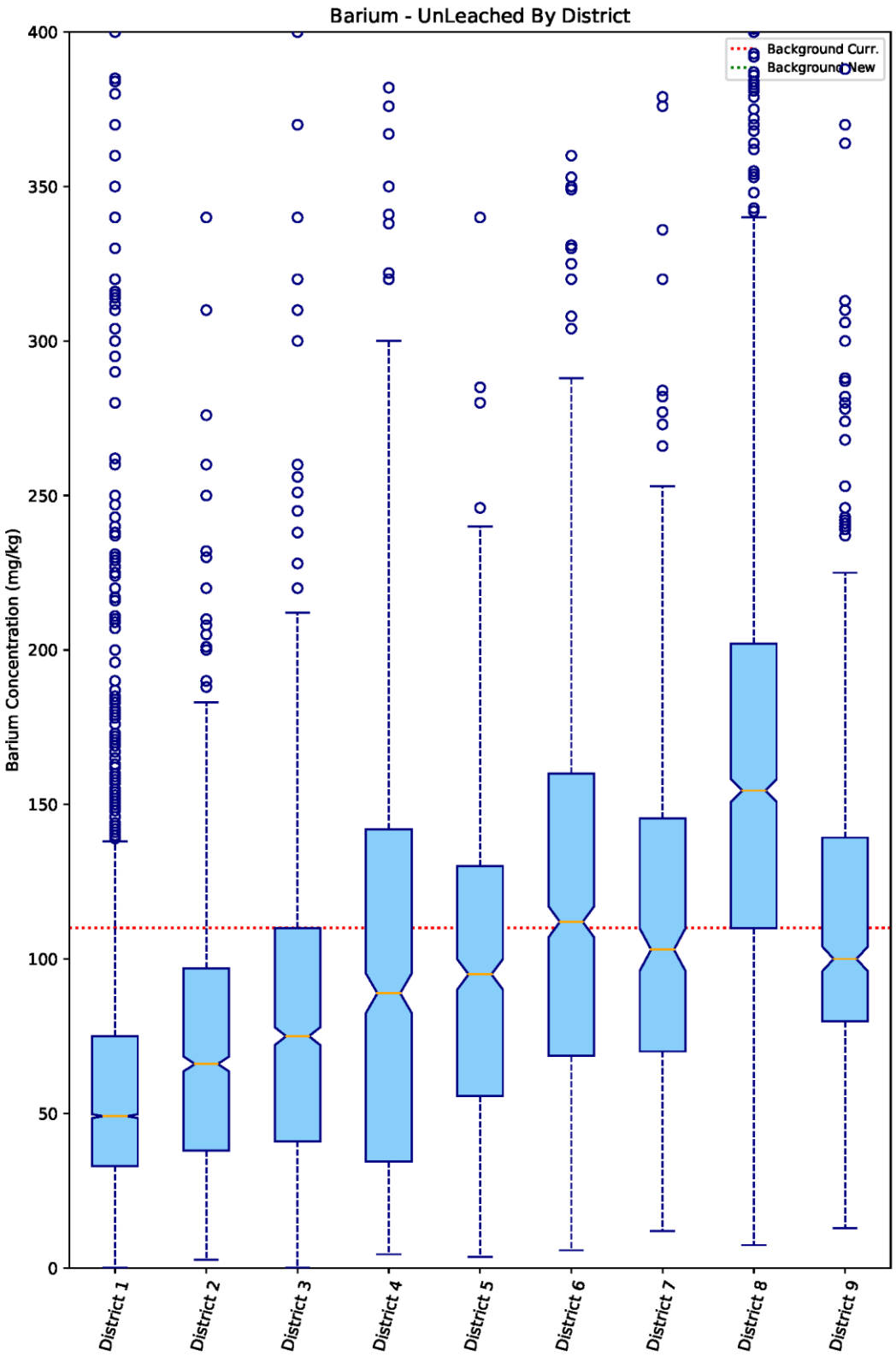


Figure 115. Boxplot of RSL barium concentrations by IDOT District, REC (mg/kg)

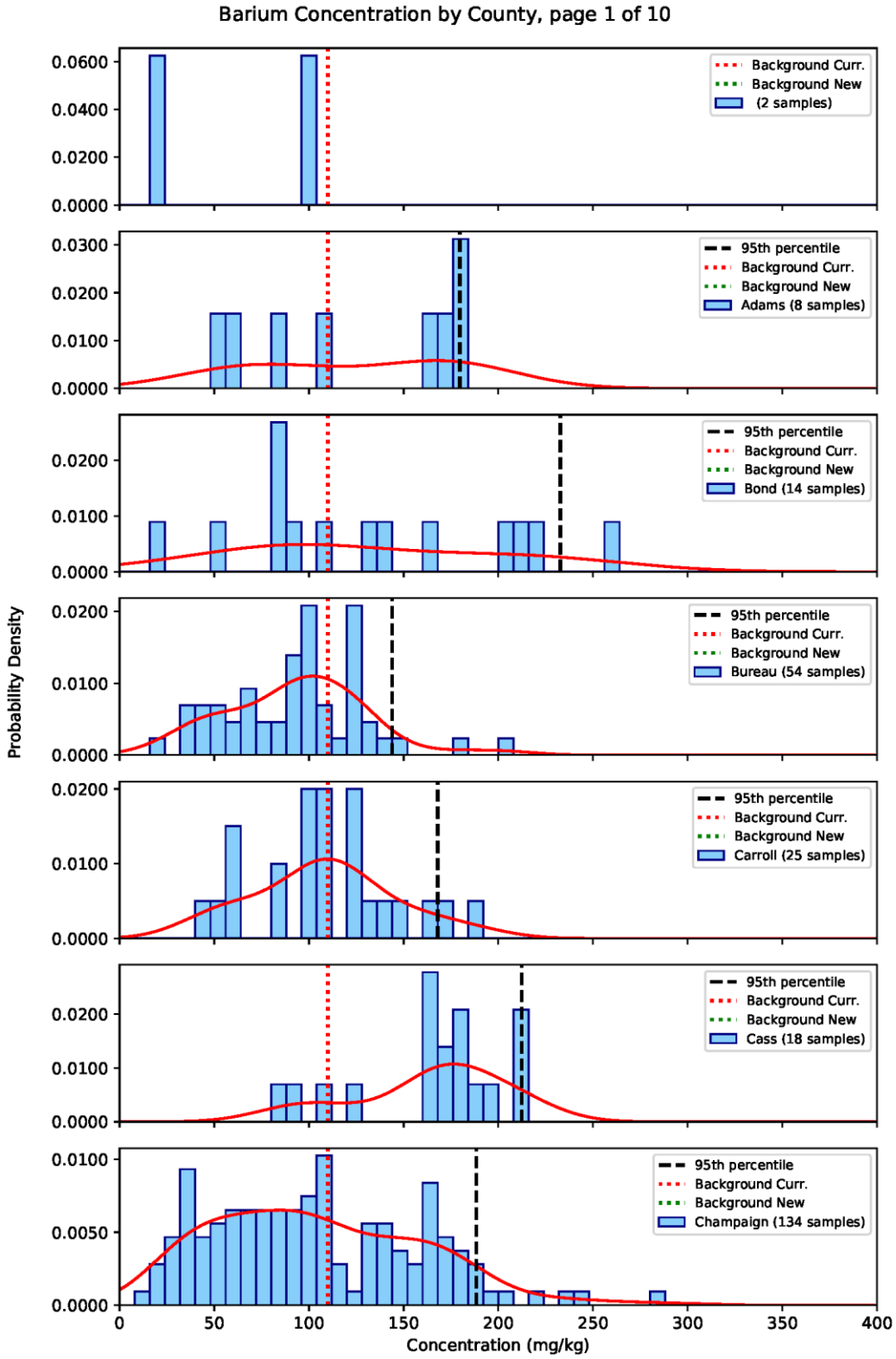


Figure 116. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 1

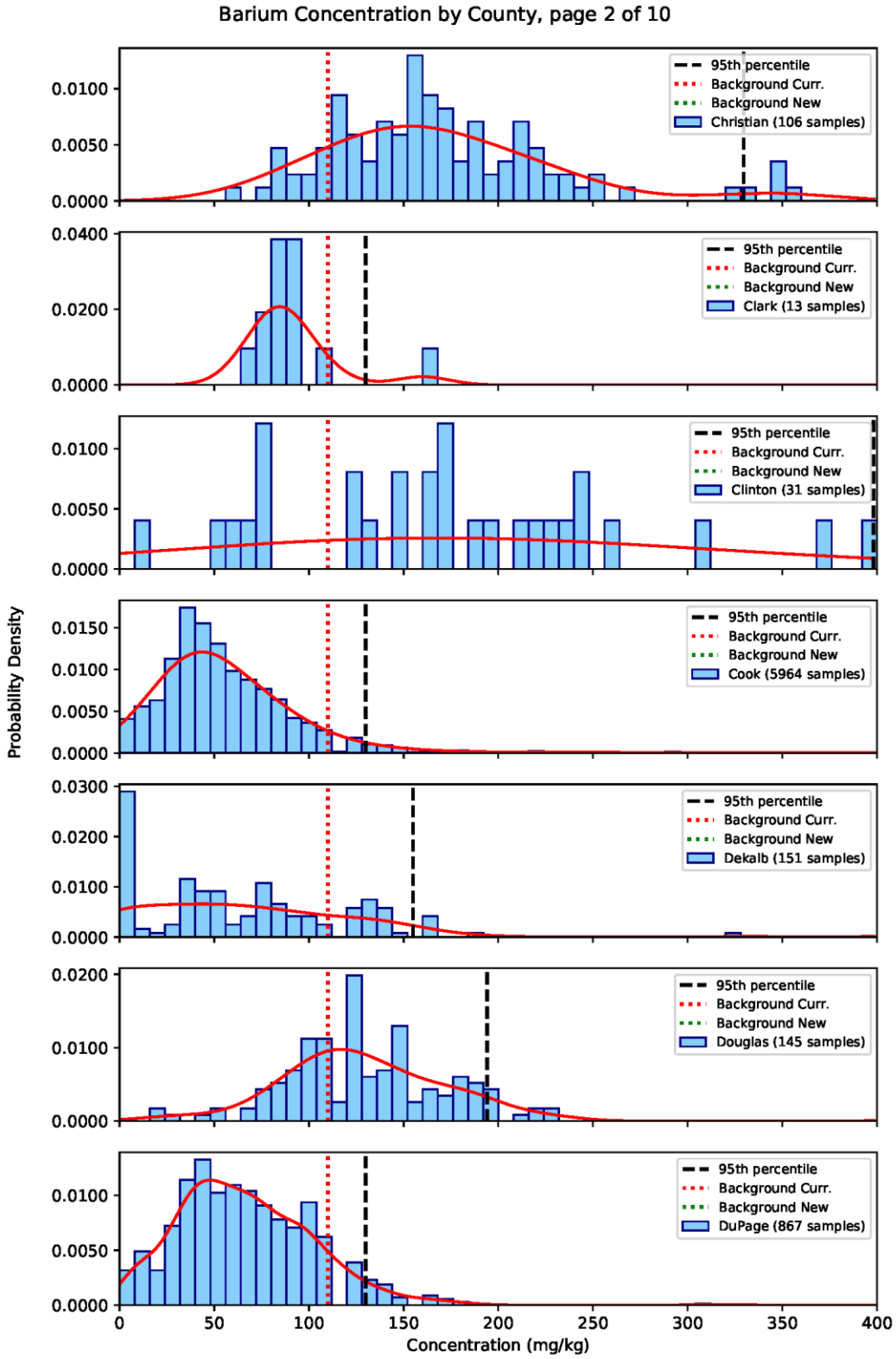


Figure 117. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 2

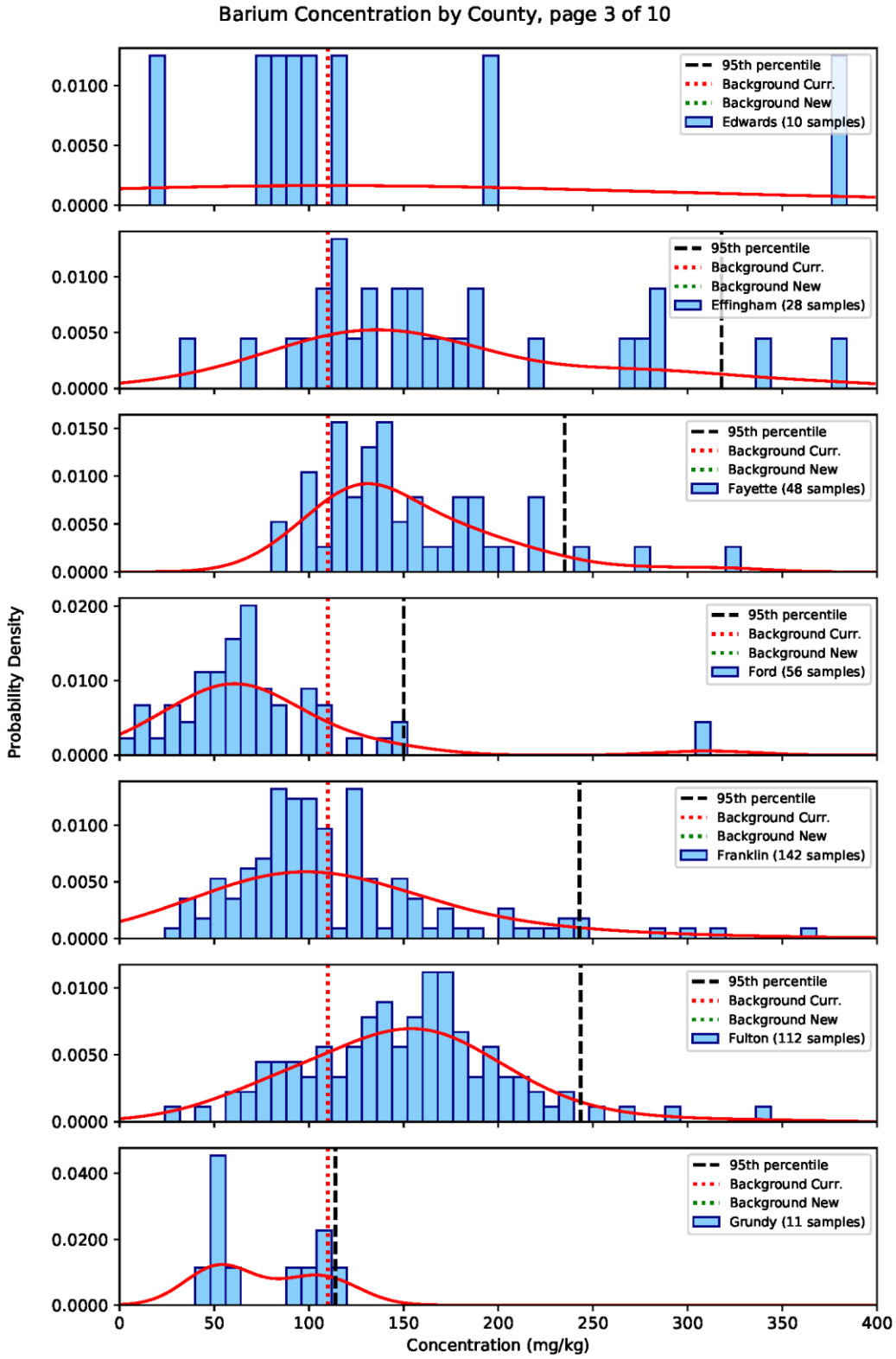


Figure 118. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 3

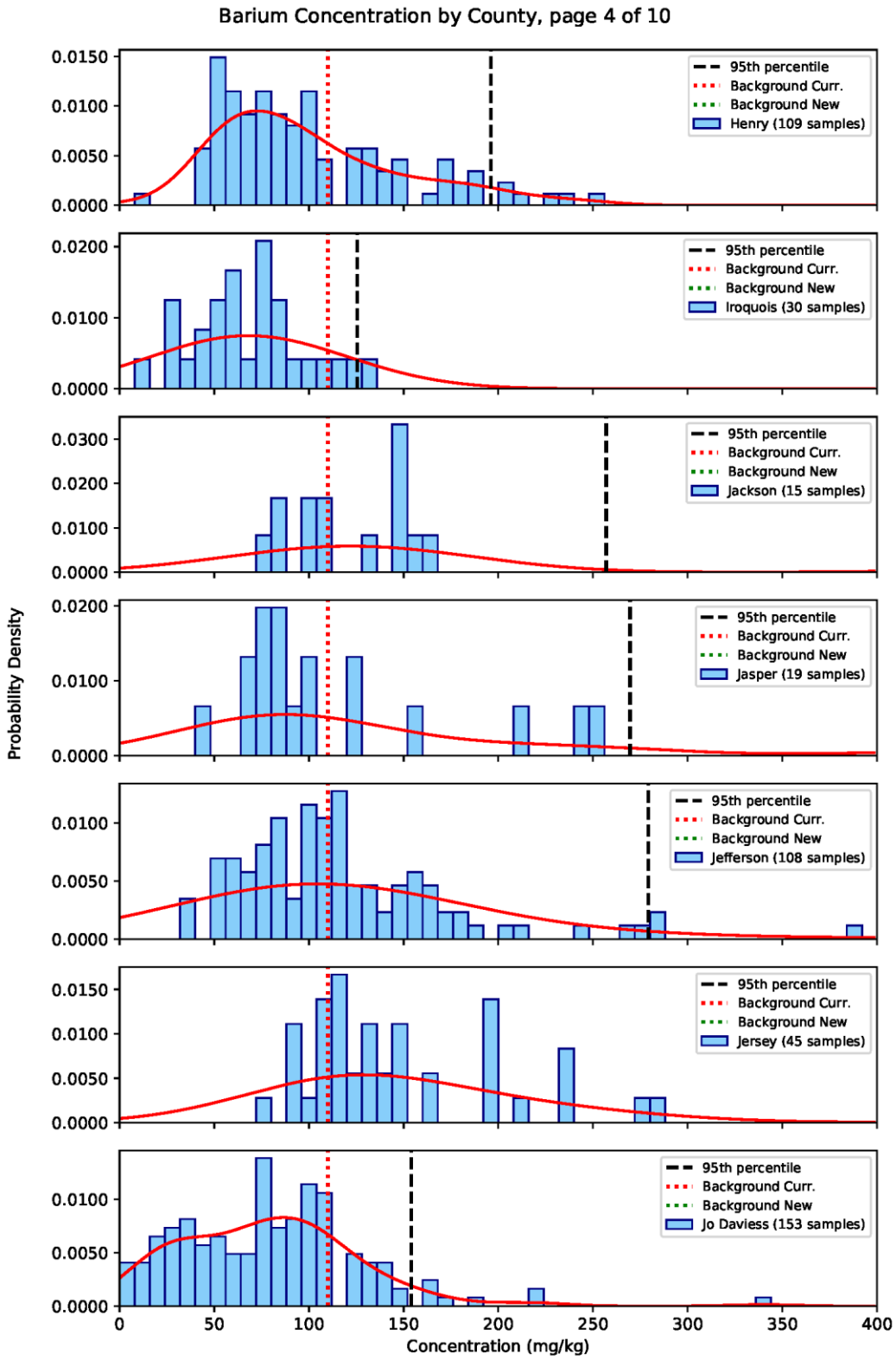


Figure 119. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 4

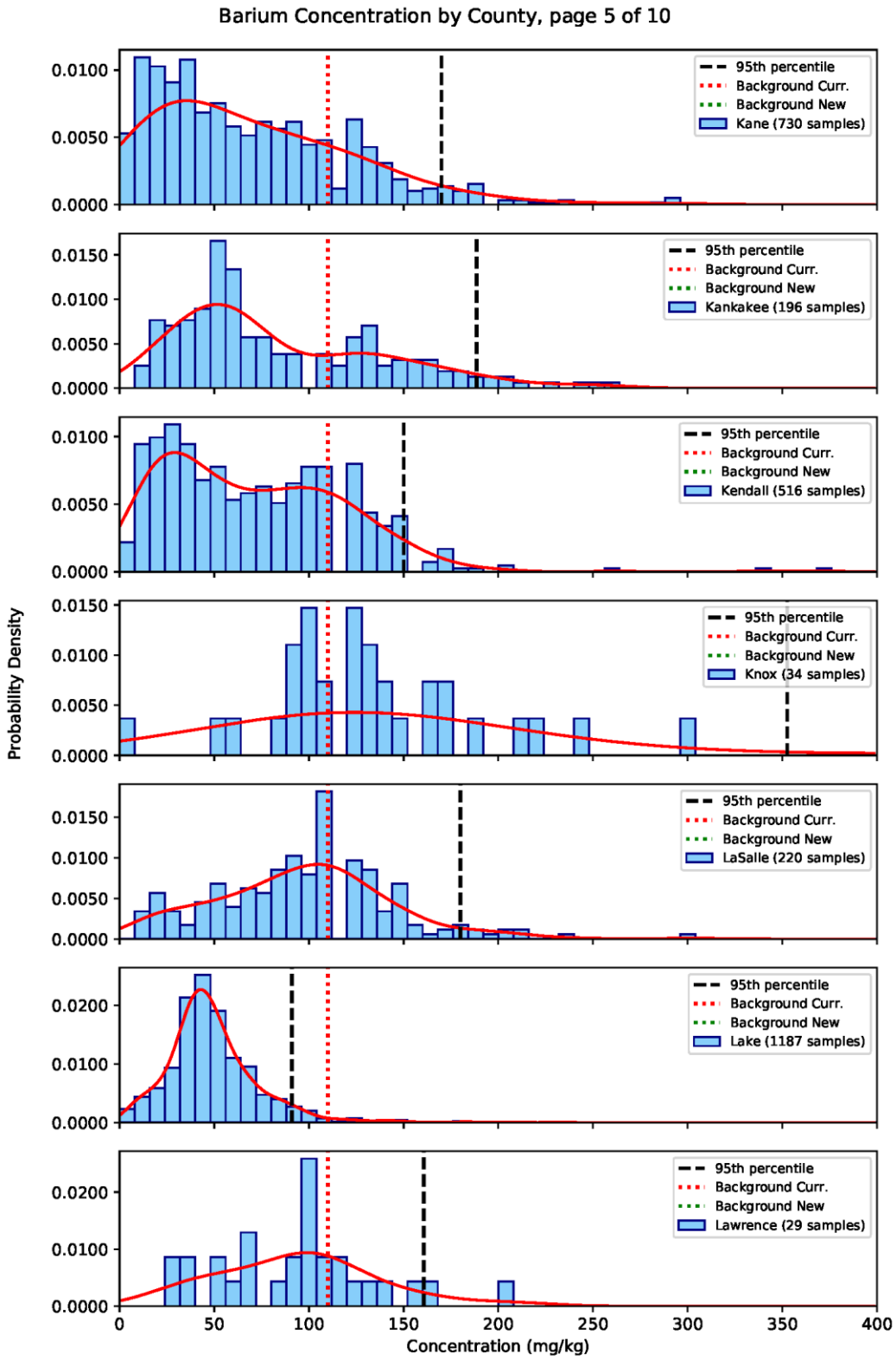


Figure 120. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 5

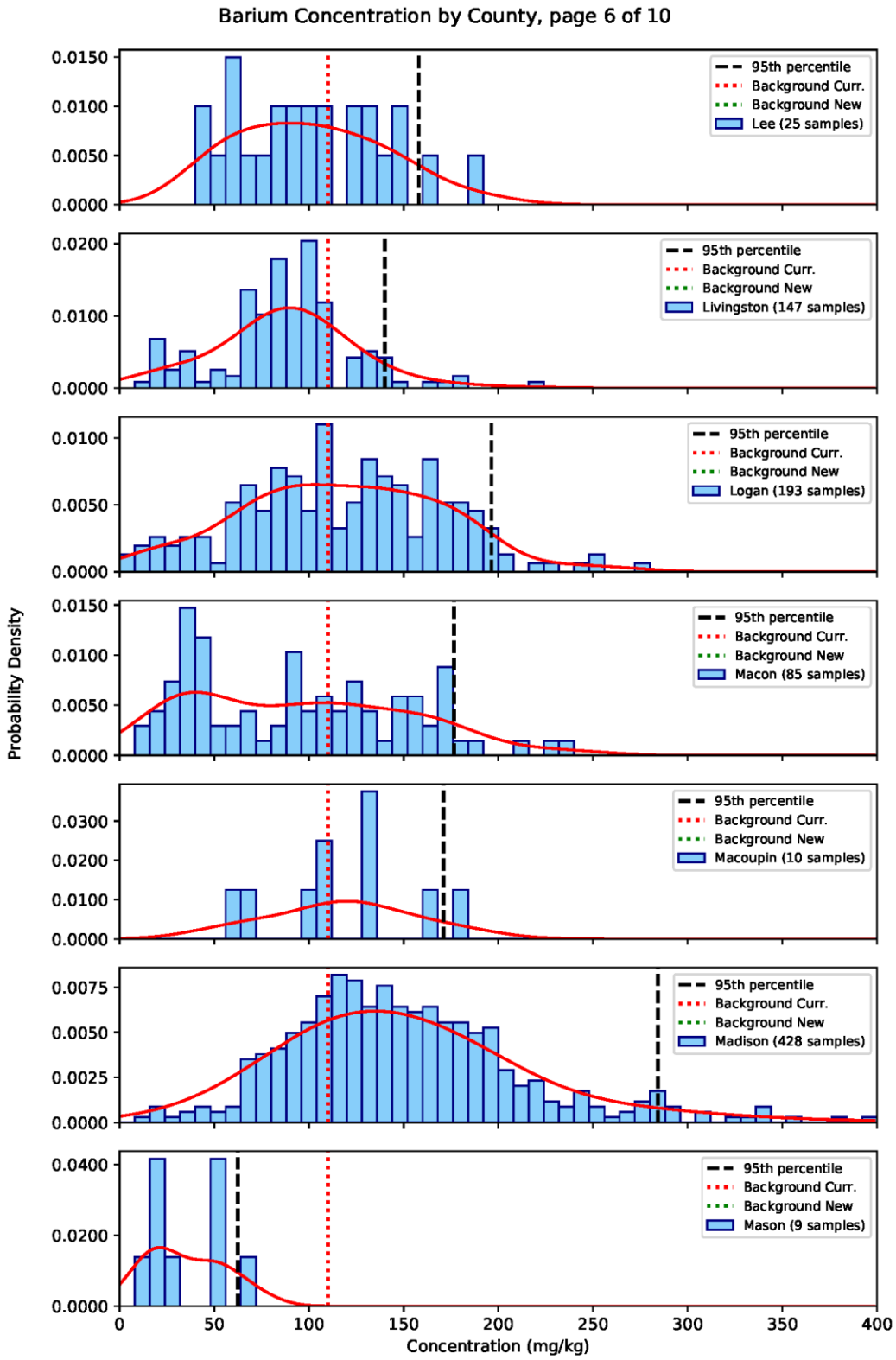


Figure 121. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 6

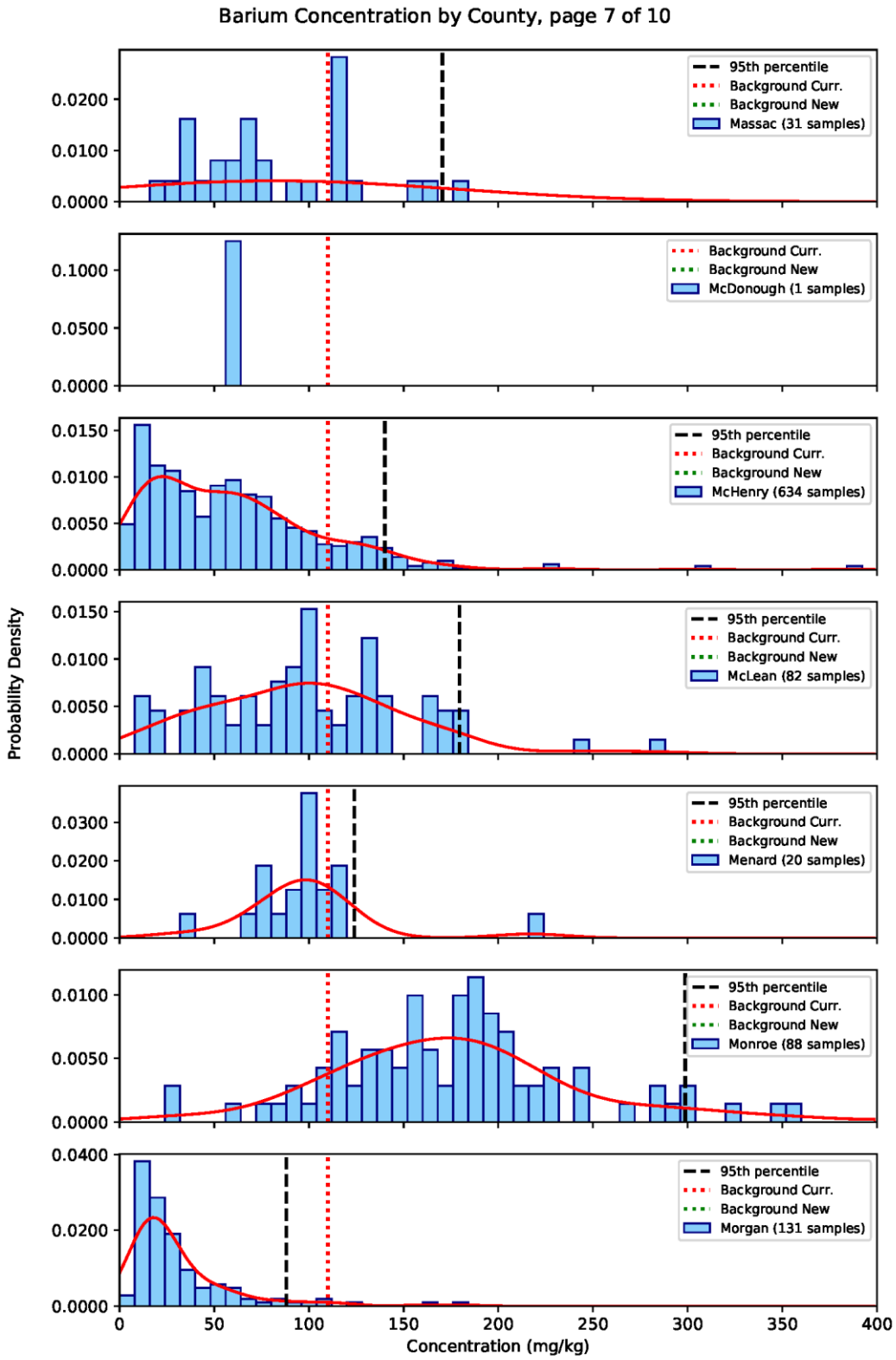


Figure 122. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 7

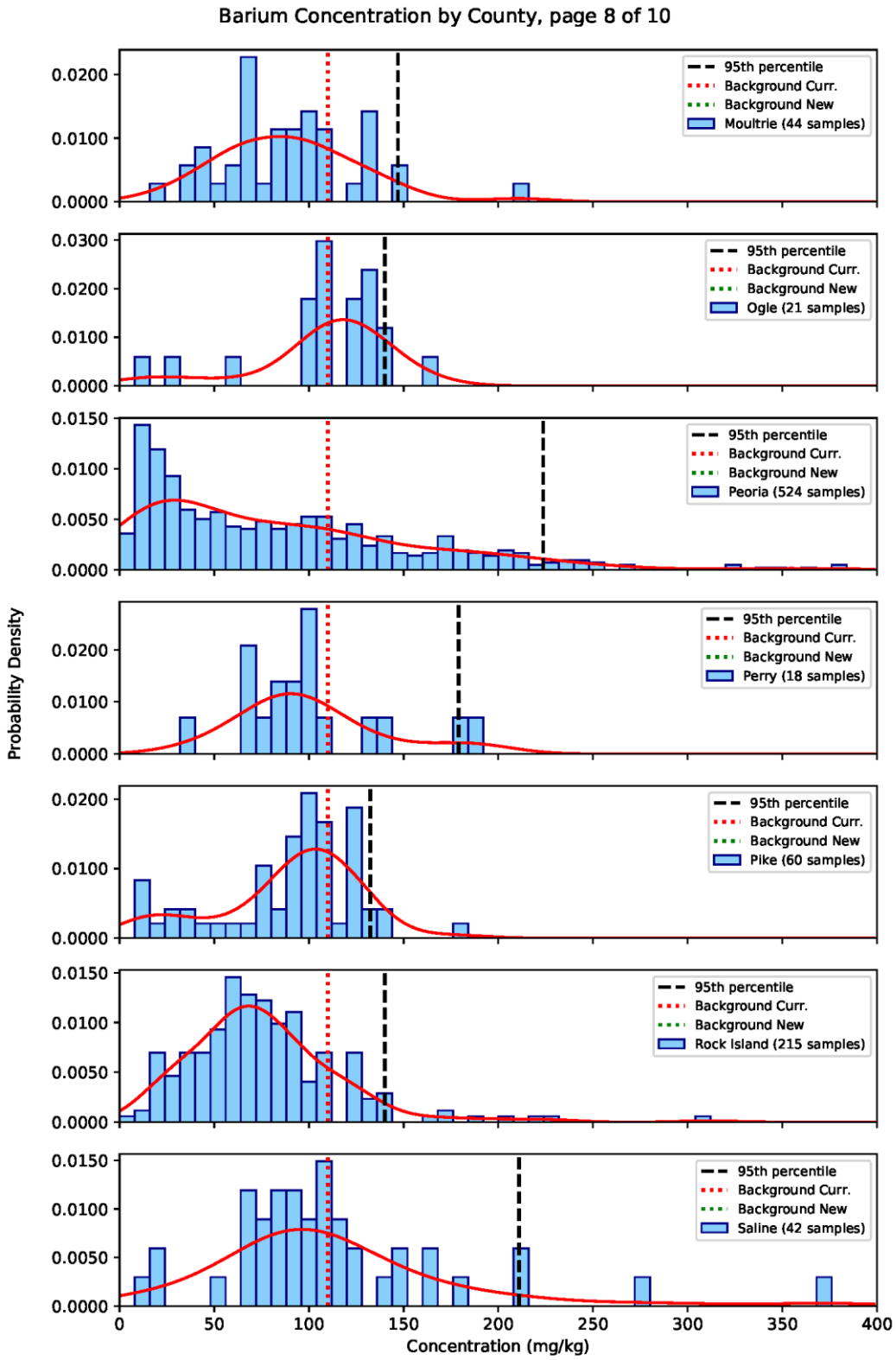


Figure 123. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 8

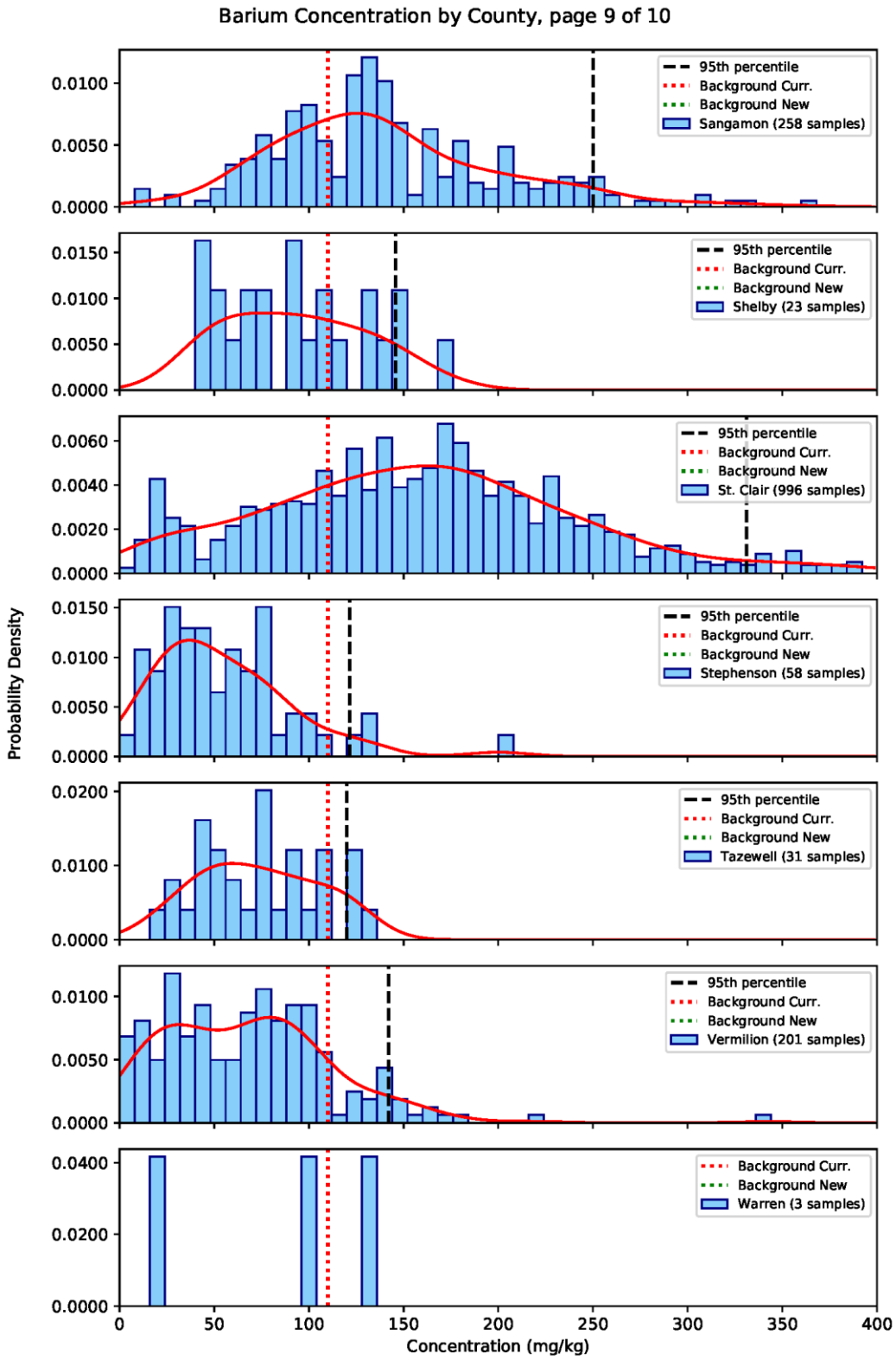


Figure 124. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 9

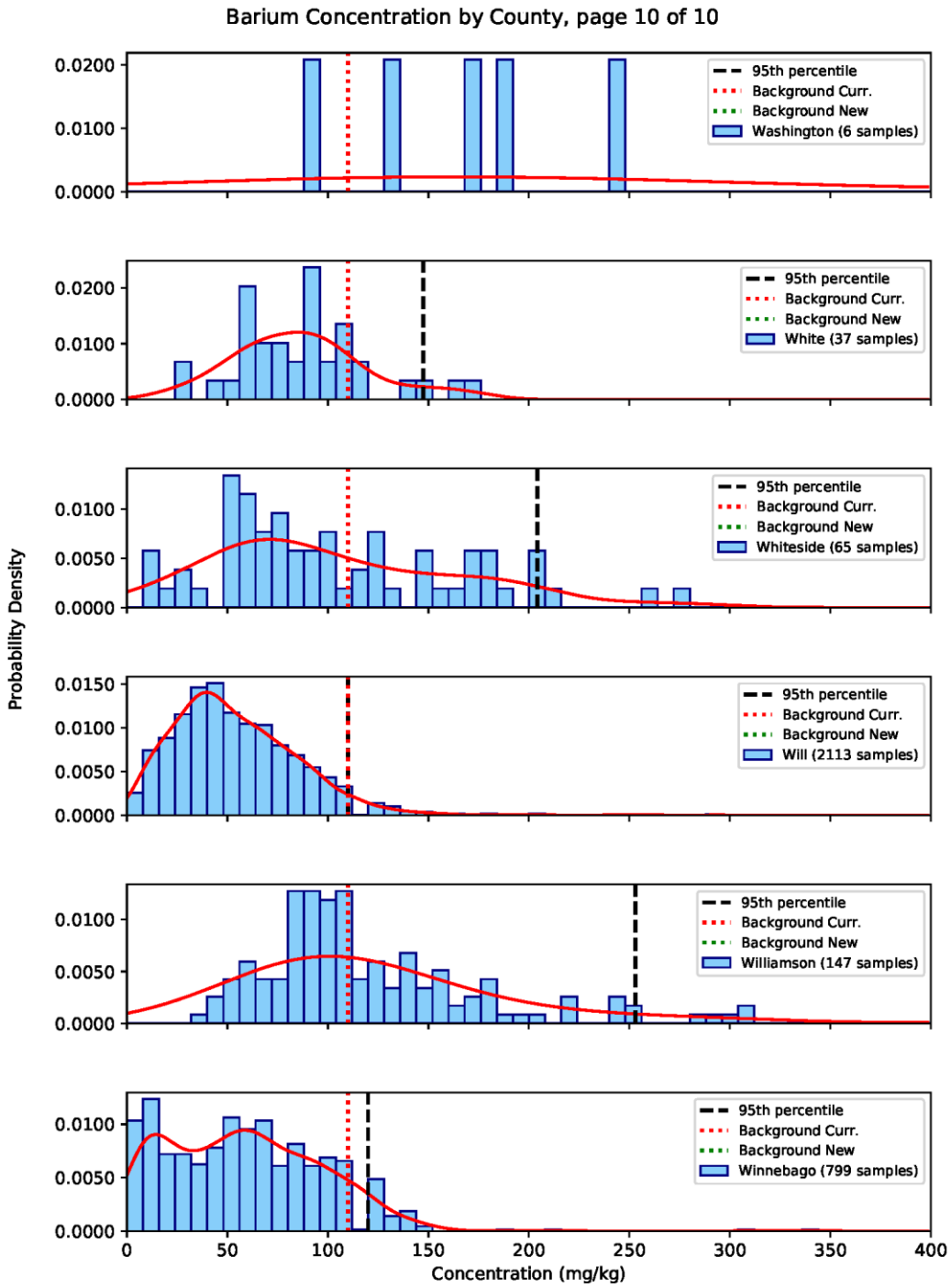


Figure 125. Histogram of RSL barium concentrations by Illinois county, REC (mg/kg), part 10

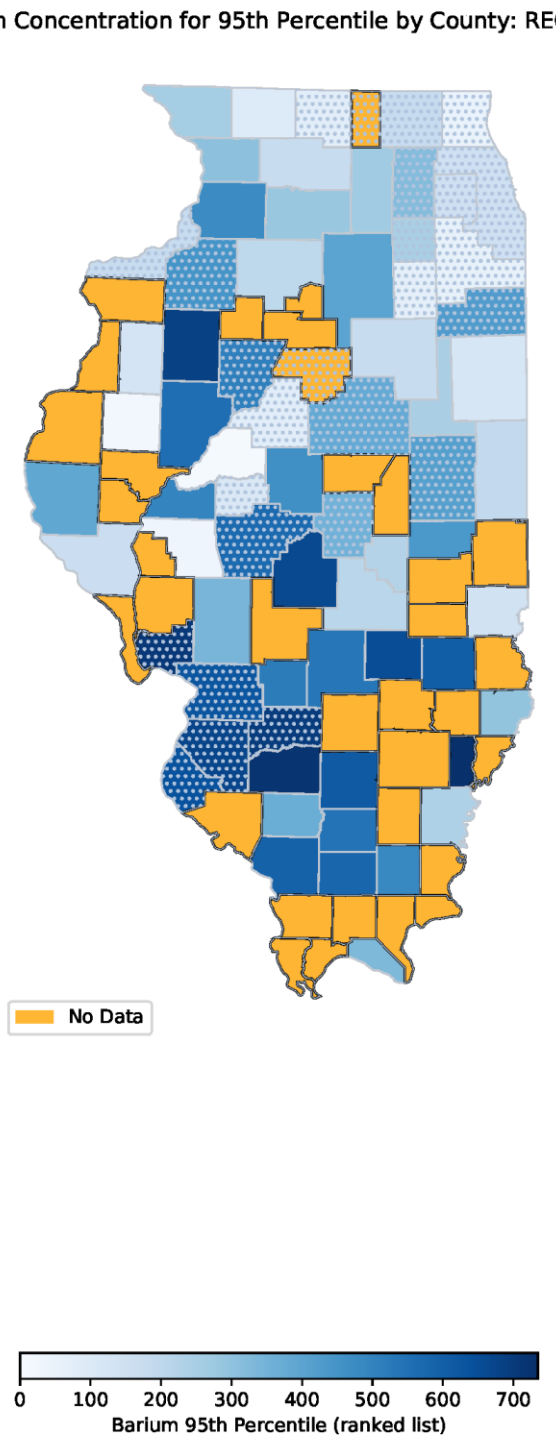


Figure 126. Map of RSL barium 95th percentile concentration by Illinois county, REC (mg/kg)

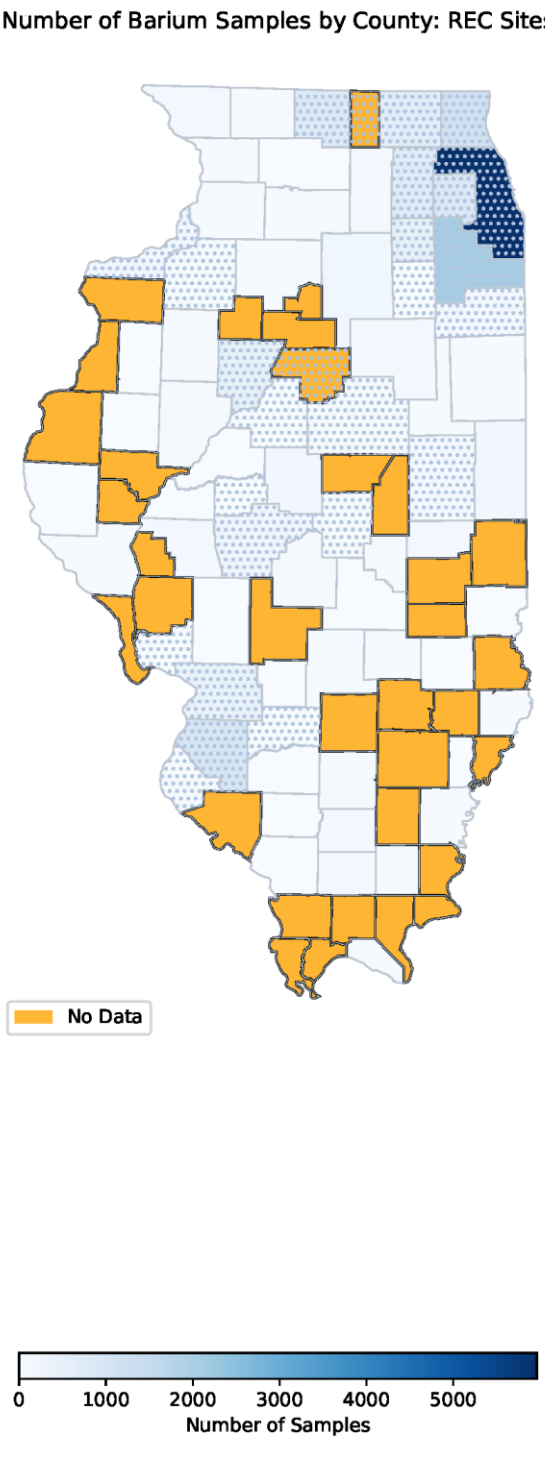


Figure 127. Map of RSL barium sample quantity by Illinois county, REC (mg/kg)

D.2 BARIUM NON-REC

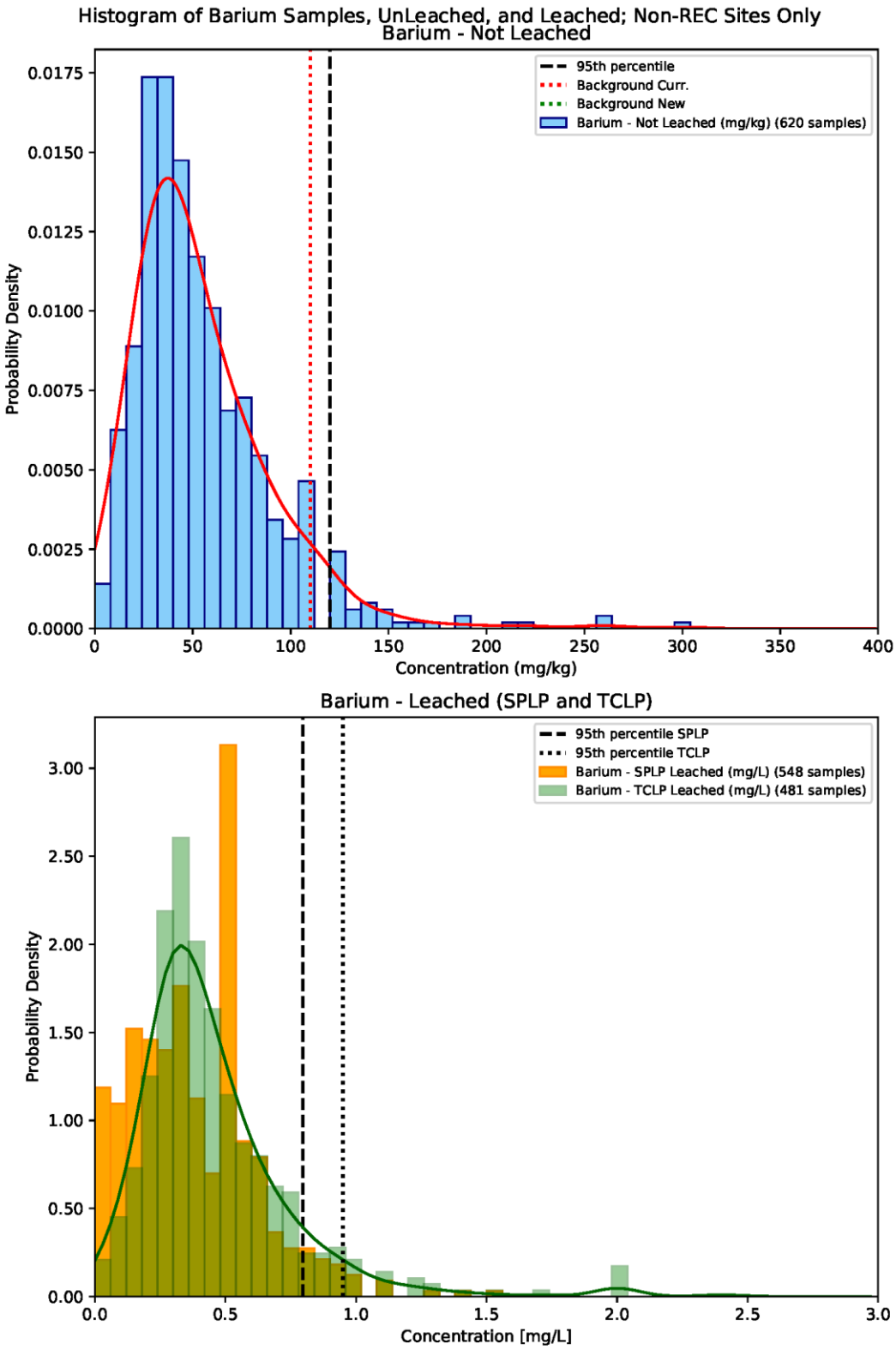


Figure 128. Histogram of RSL barium concentrations, Non-REC (mg/kg)

Barium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

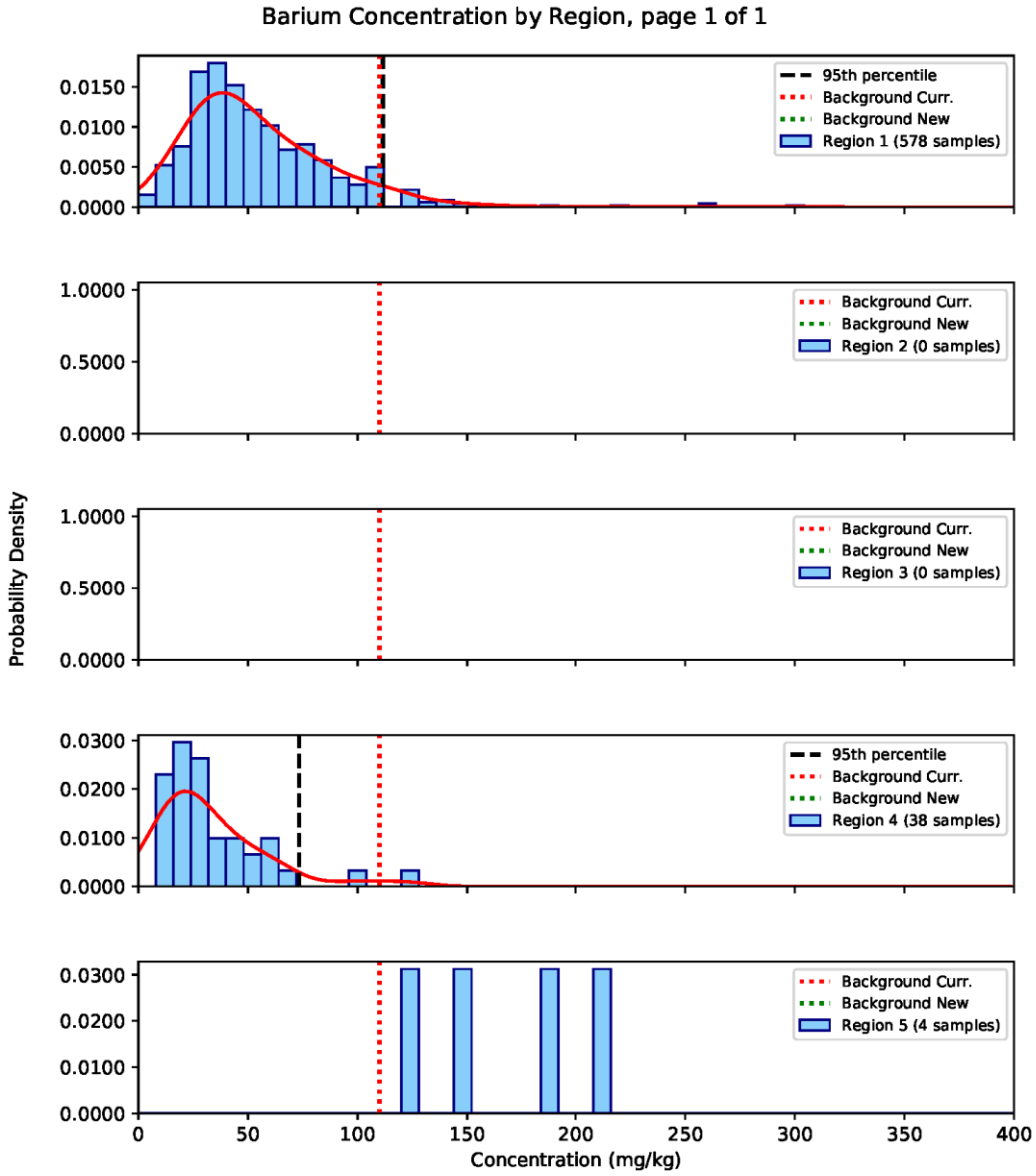


Figure 129. Histogram of RSL barium concentrations by IDOT Region, Non-REC (mg/kg)

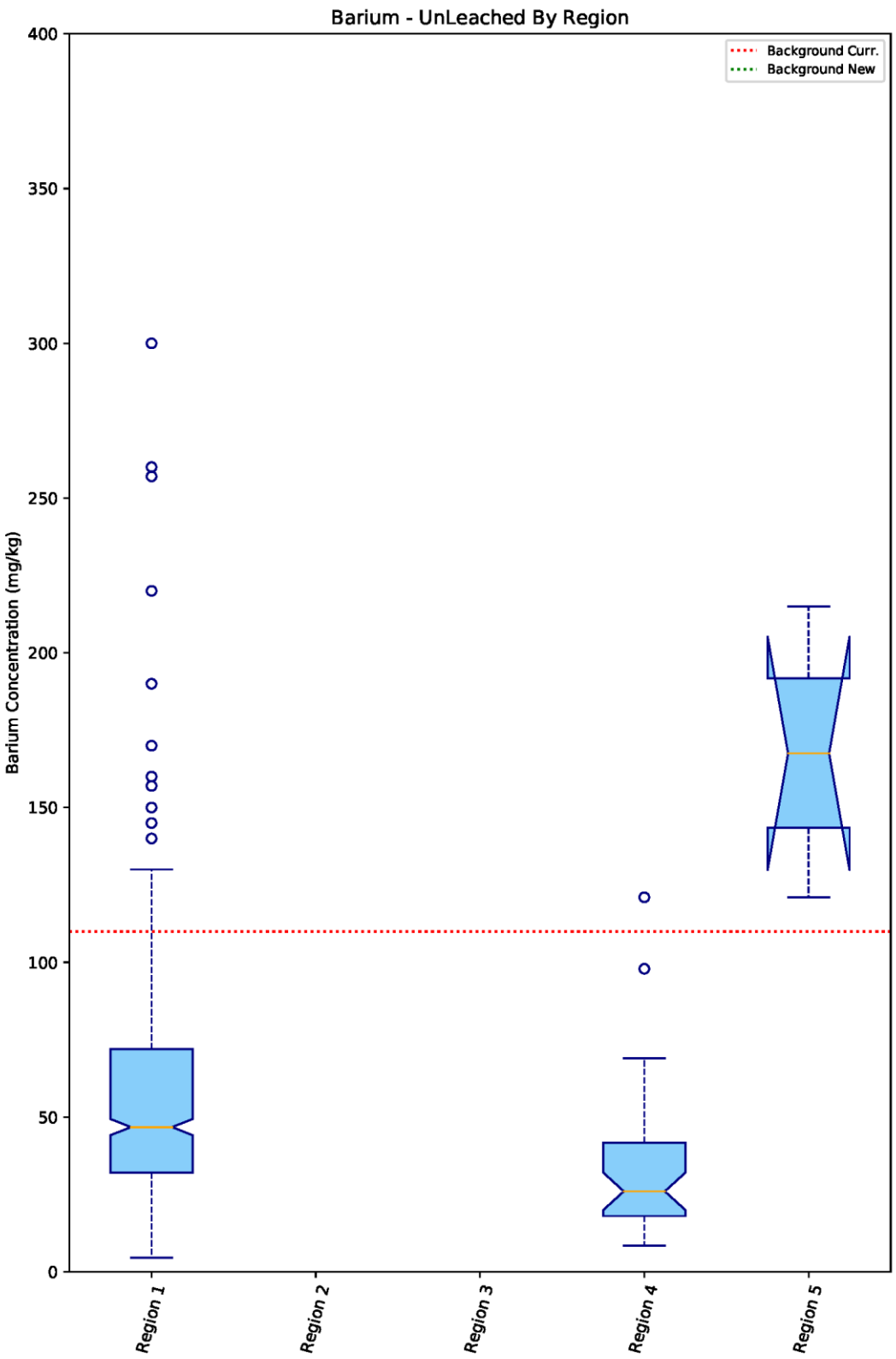


Figure 130. Boxplot of RSL barium concentrations by IDOT Region, Non-REC (mg/kg)

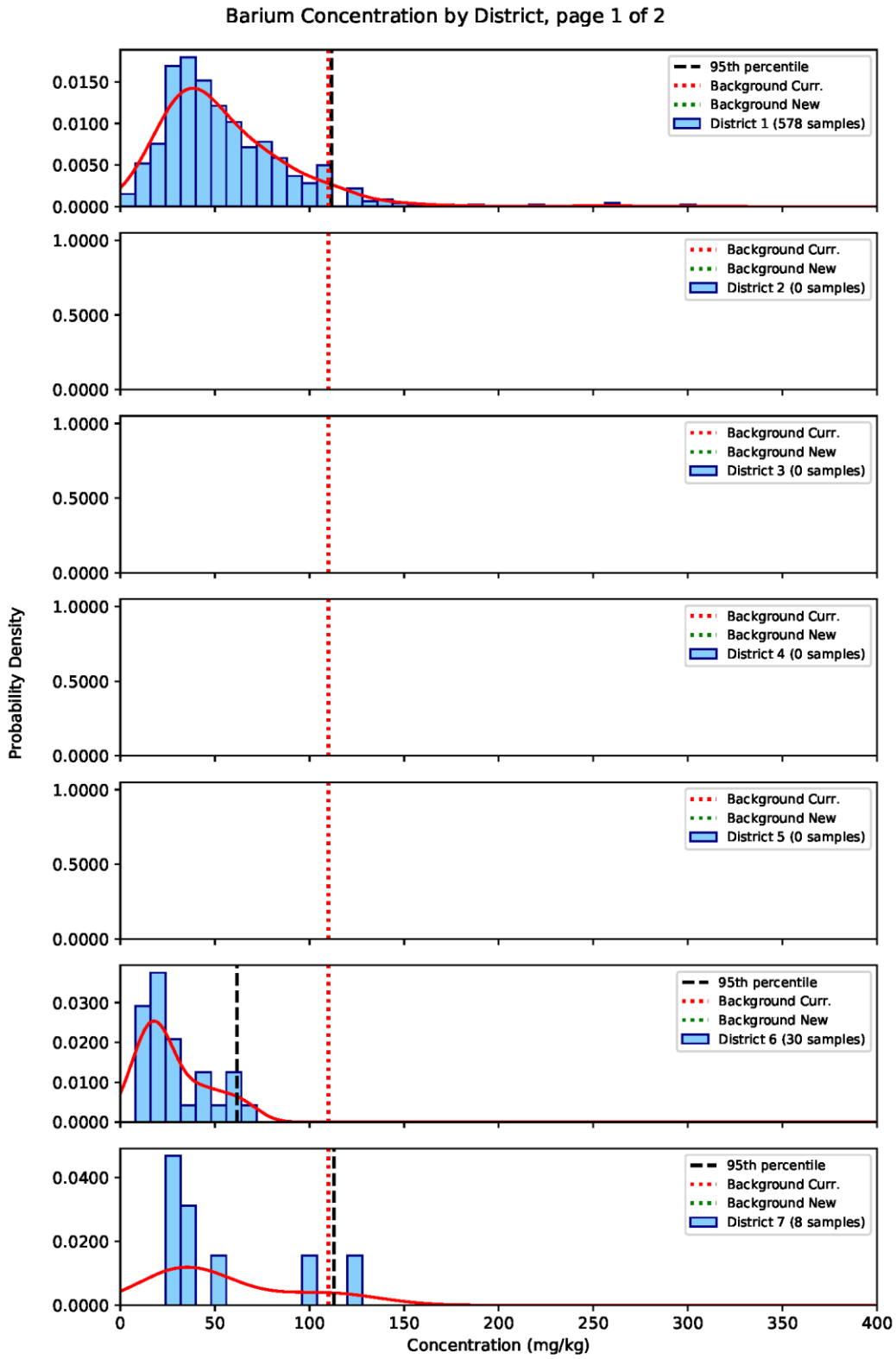


Figure 131. Histogram of RSL barium concentrations by IDOT District, Non-REC (mg/kg), part 1

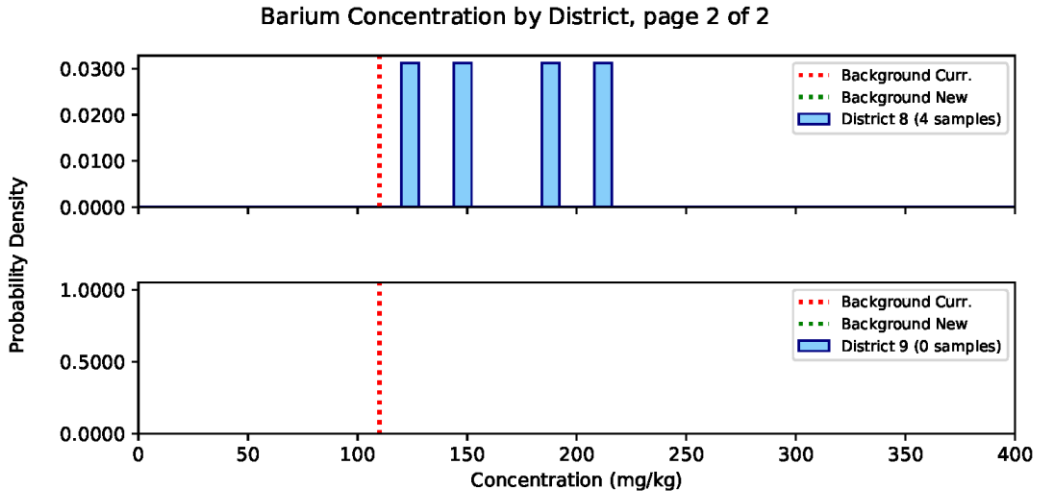


Figure 132. Histogram of RSL barium concentrations by IDOT District, Non-REC (mg/kg), part 2

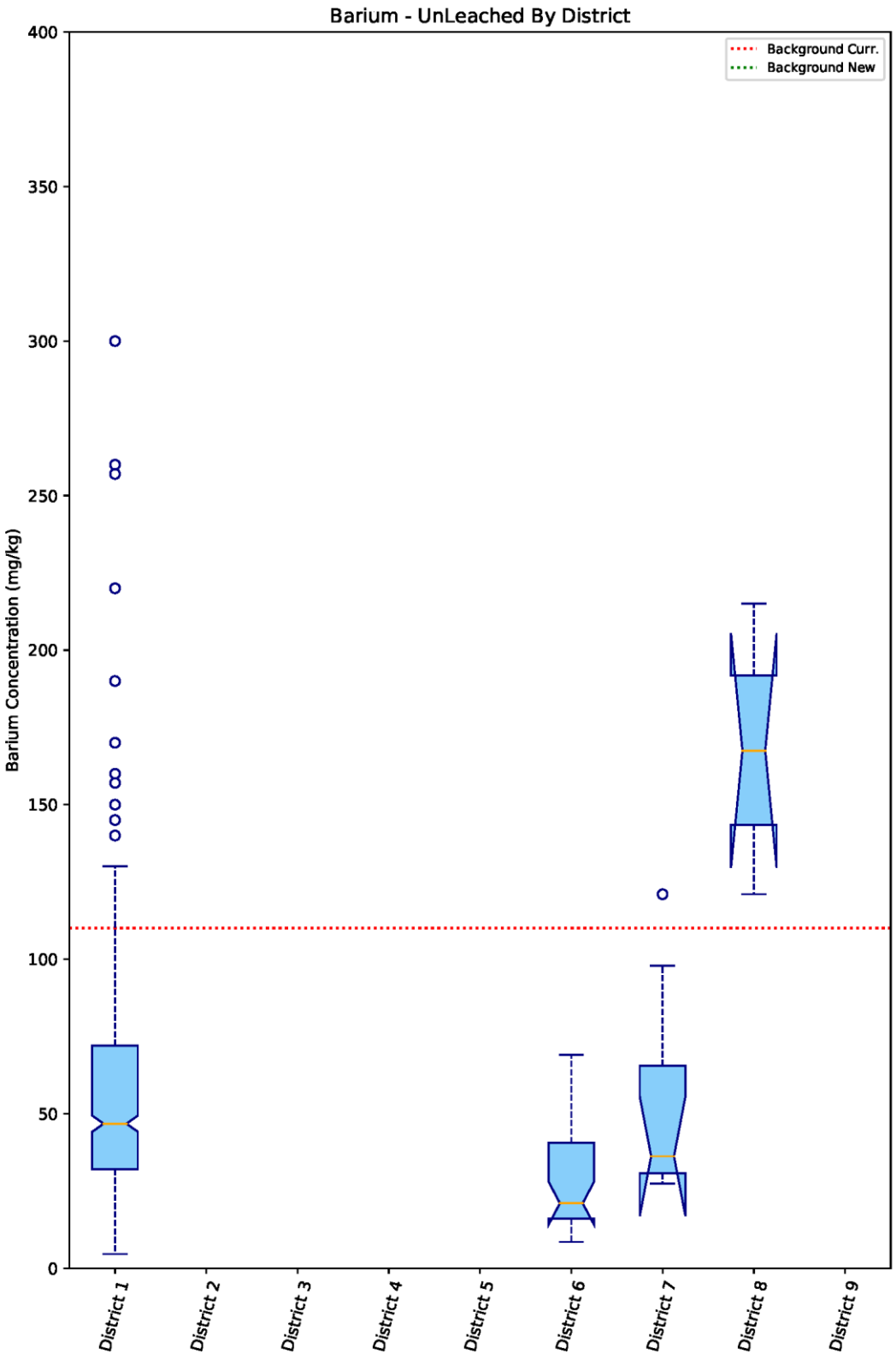


Figure 133. Boxplot of RSL barium concentrations by IDOT District, Non-REC (mg/kg)

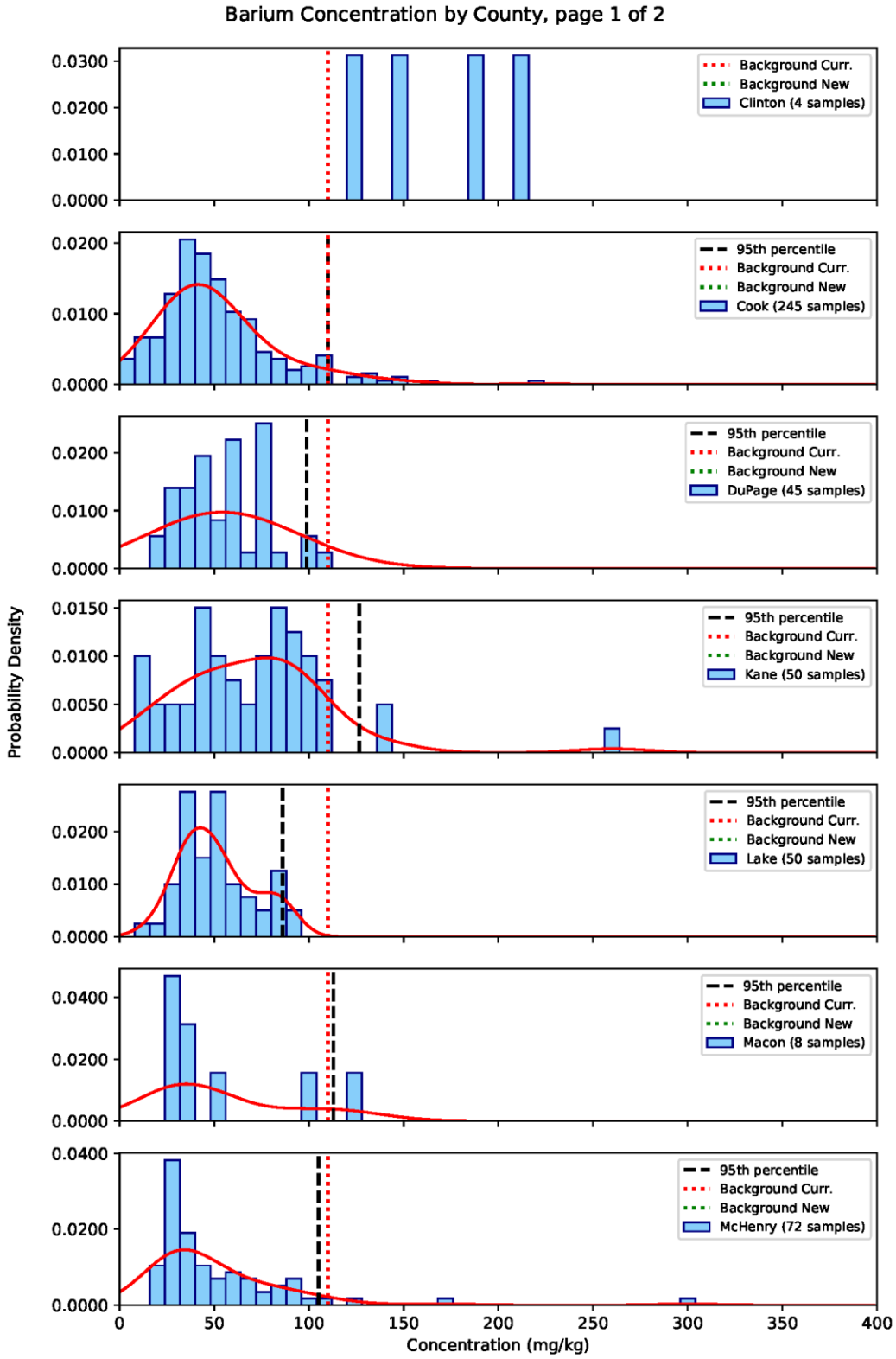


Figure 134. Histogram of RSL barium concentrations by Illinois county, Non-REC (mg/kg), part 1

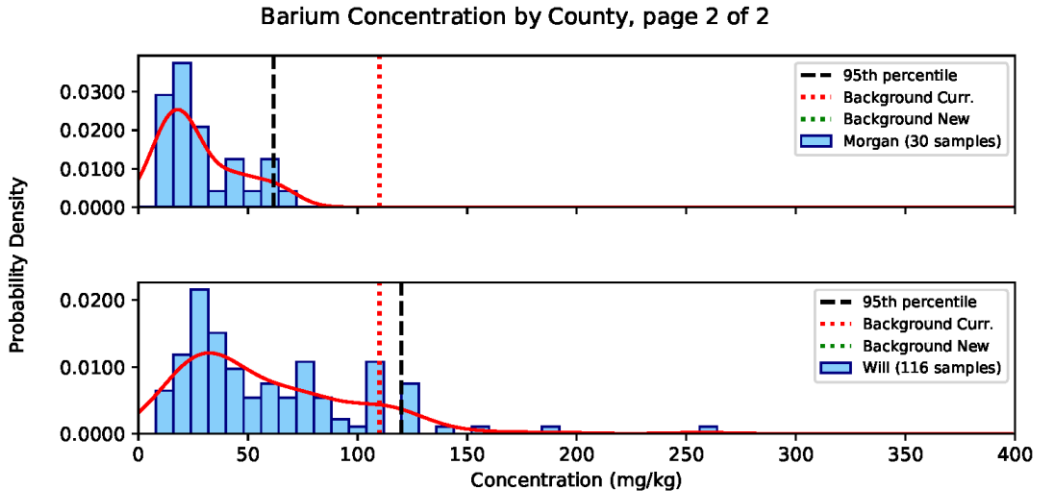


Figure 135. Histogram of RSL barium concentrations by Illinois county, Non-REC (mg/kg), part 2

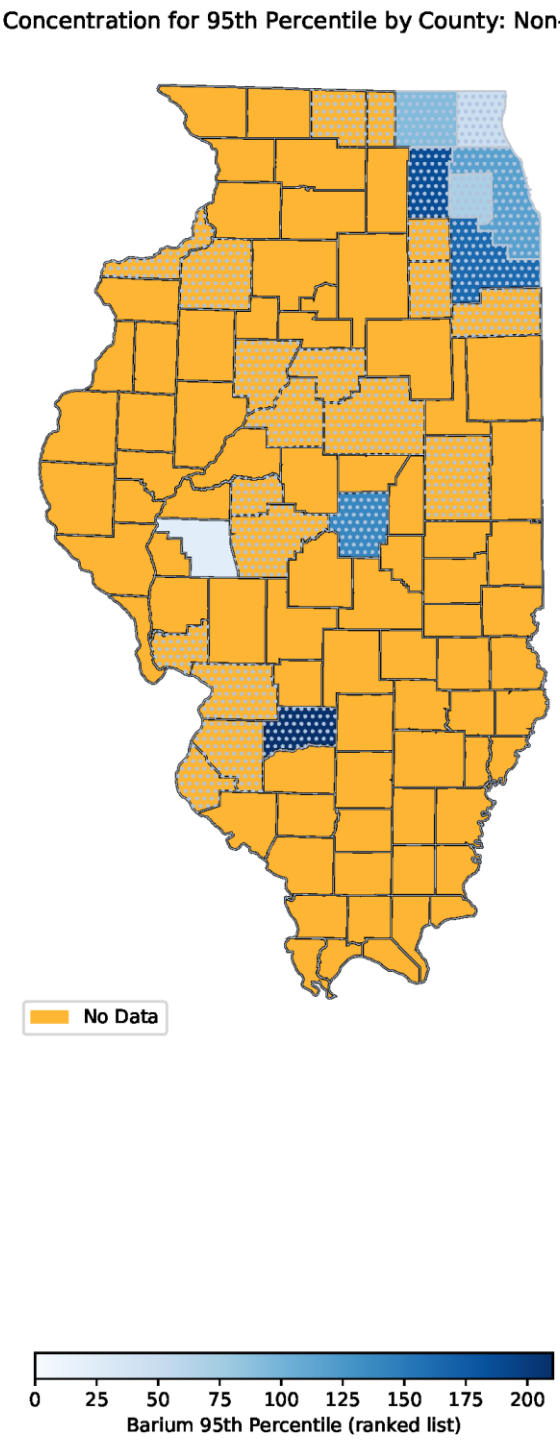


Figure 136. Map of RSL barium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

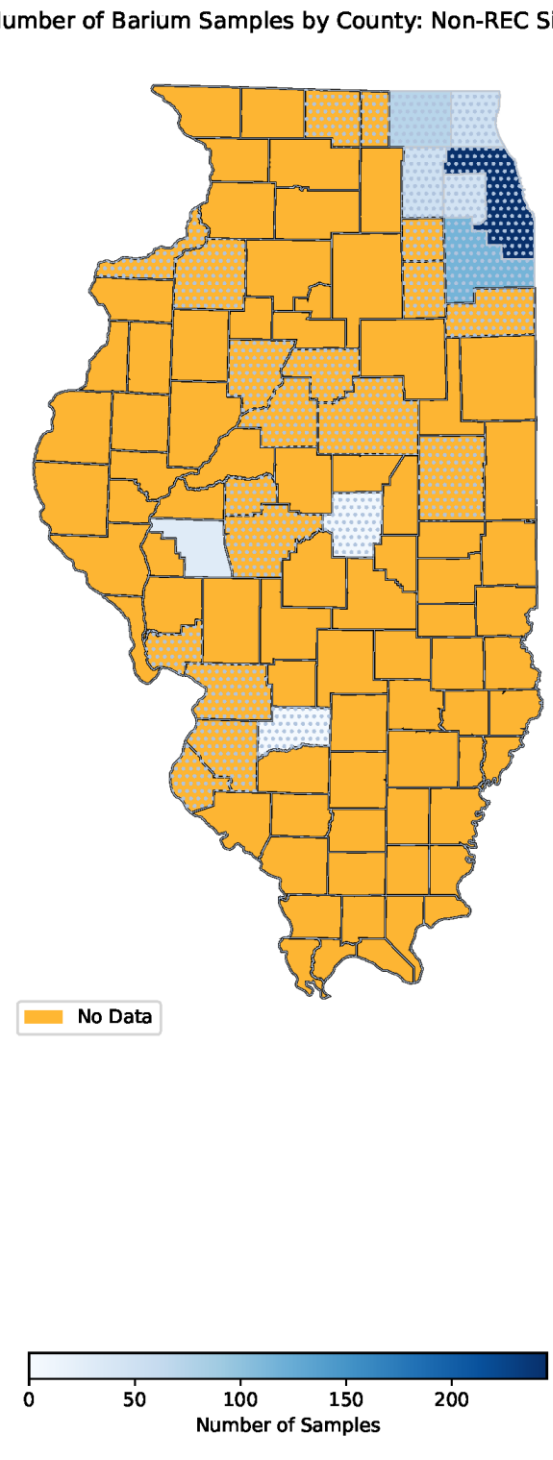


Figure 137. Map of RSL barium sample quantity by Illinois county, Non-REC (mg/kg)

D.3 BARIUM DE MINIMIS

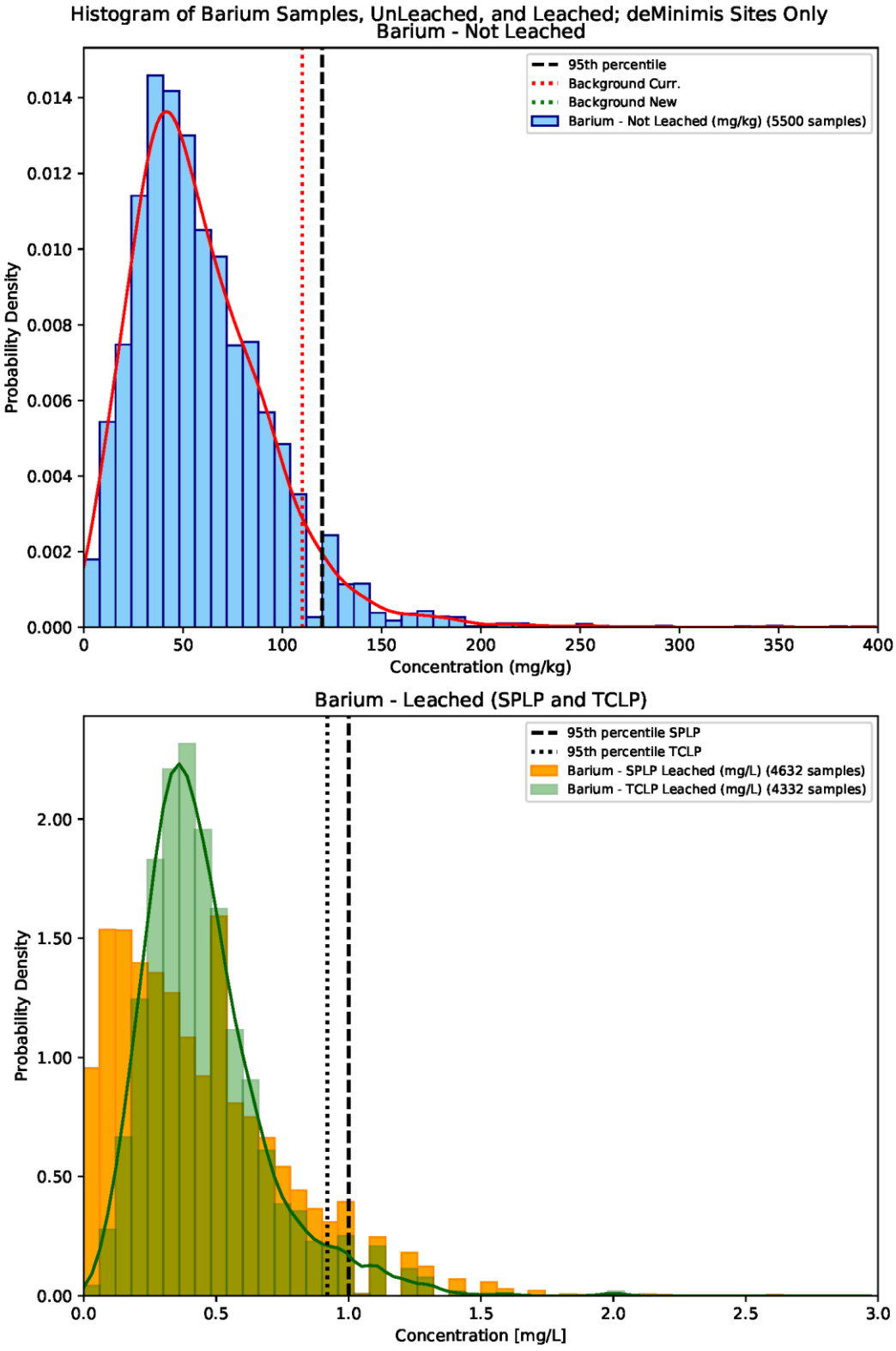


Figure 138. Histogram of RSL barium concentrations, de minimis (mg/kg)

Barium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

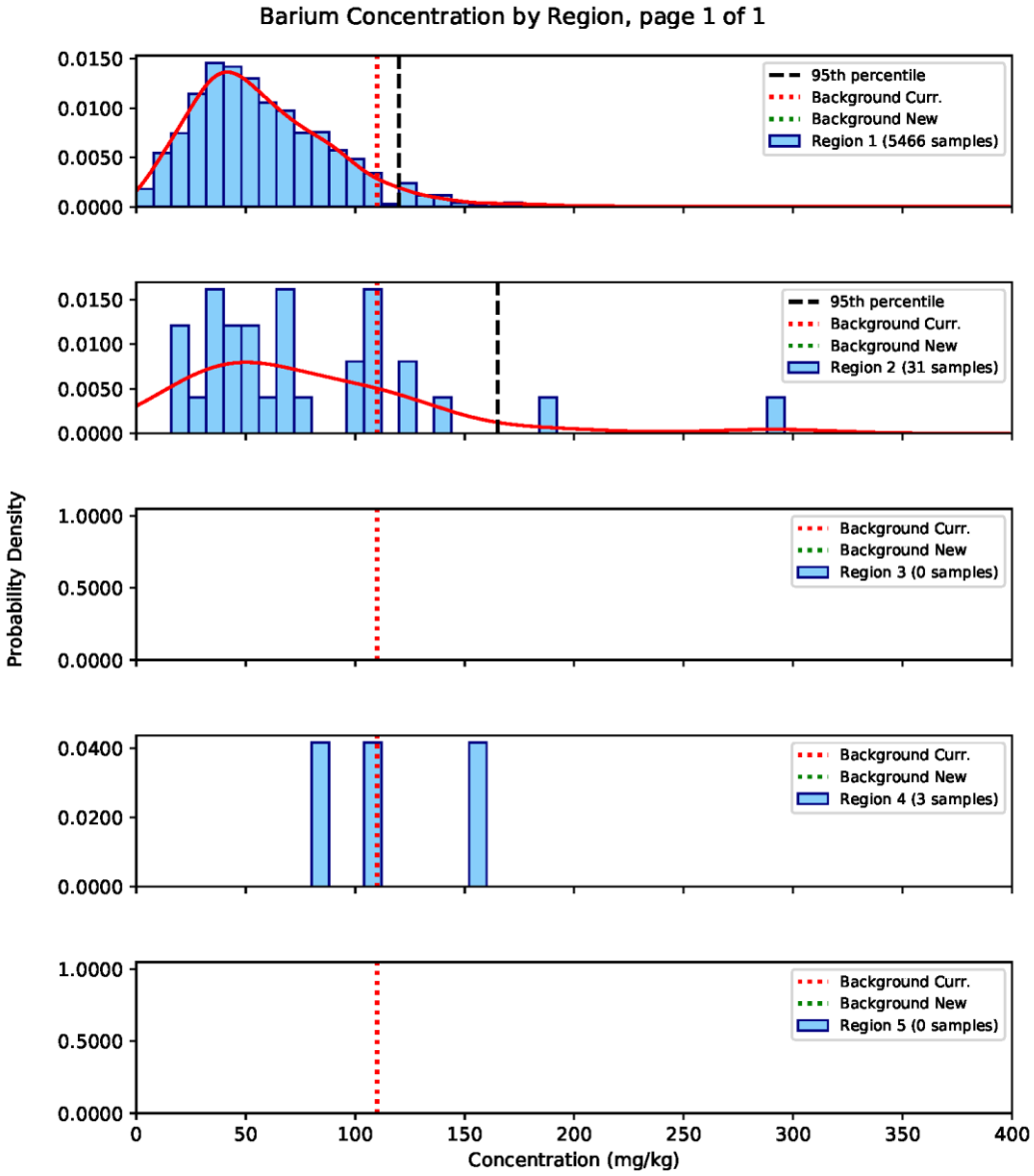


Figure 139. Histogram of RSL barium concentrations by IDOT Region, de minimis (mg/kg)

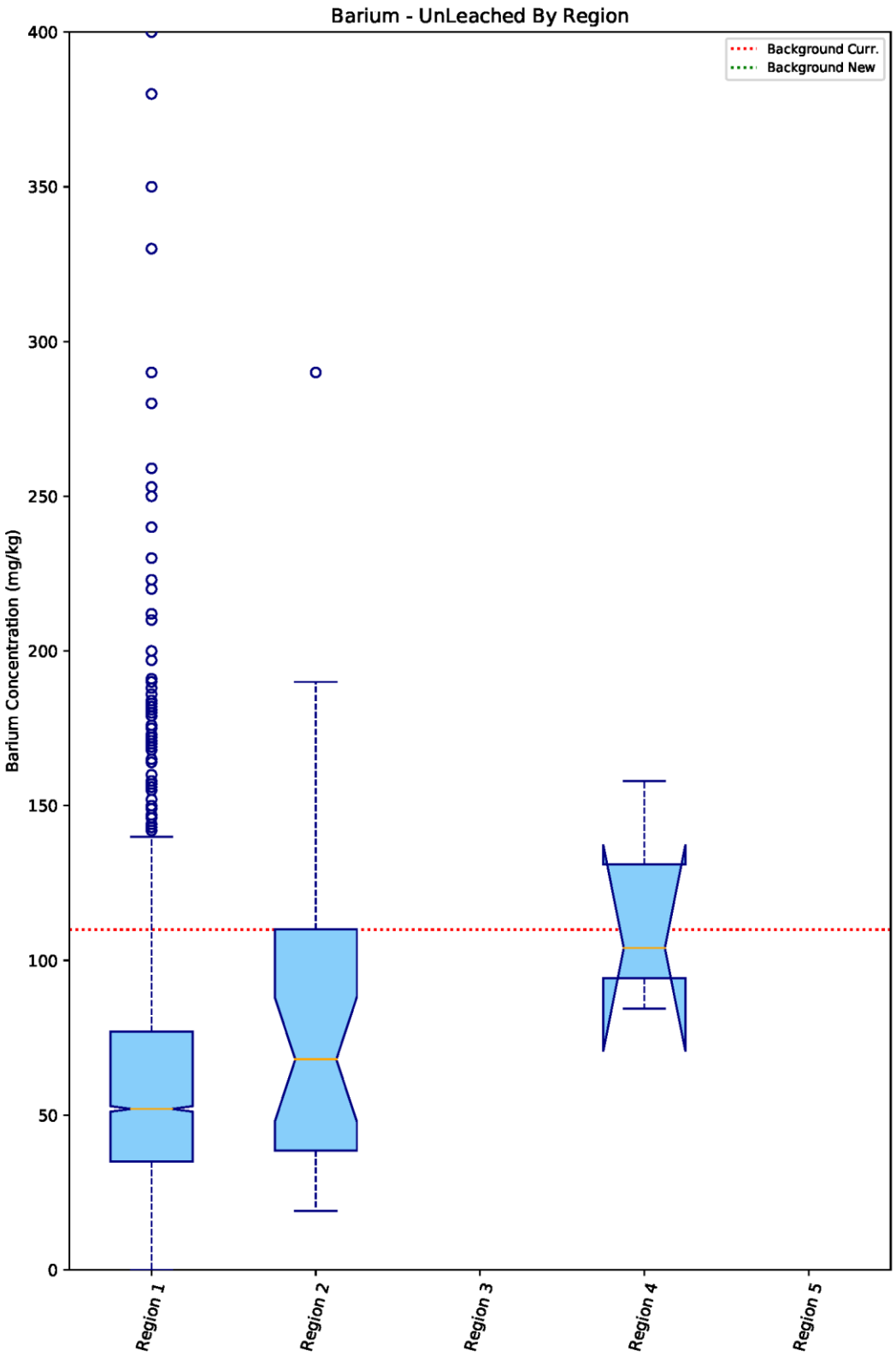


Figure 140. Boxplot of RSL barium concentrations by IDOT Region, de minimis (mg/kg)

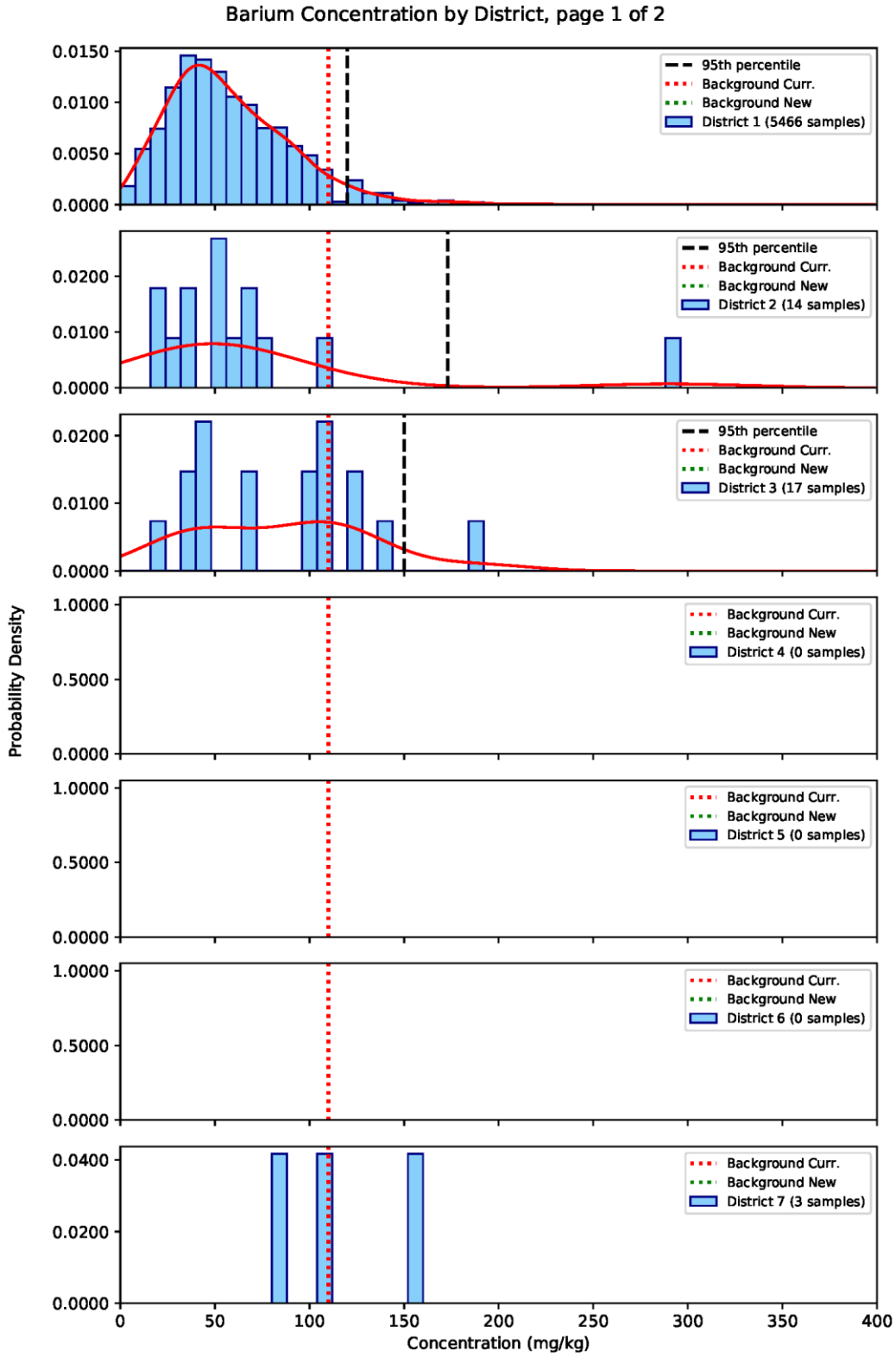


Figure 141. Histogram of RSL barium concentrations by IDOT District, de minimis (mg/kg), part 1

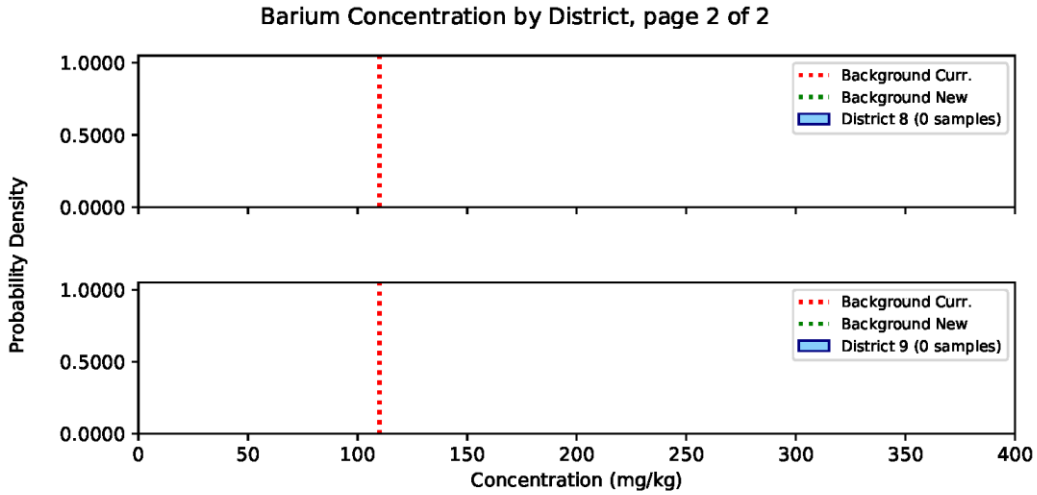


Figure 142. Histogram of RSL barium concentrations by IDOT District, de minimis (mg/kg), part 2

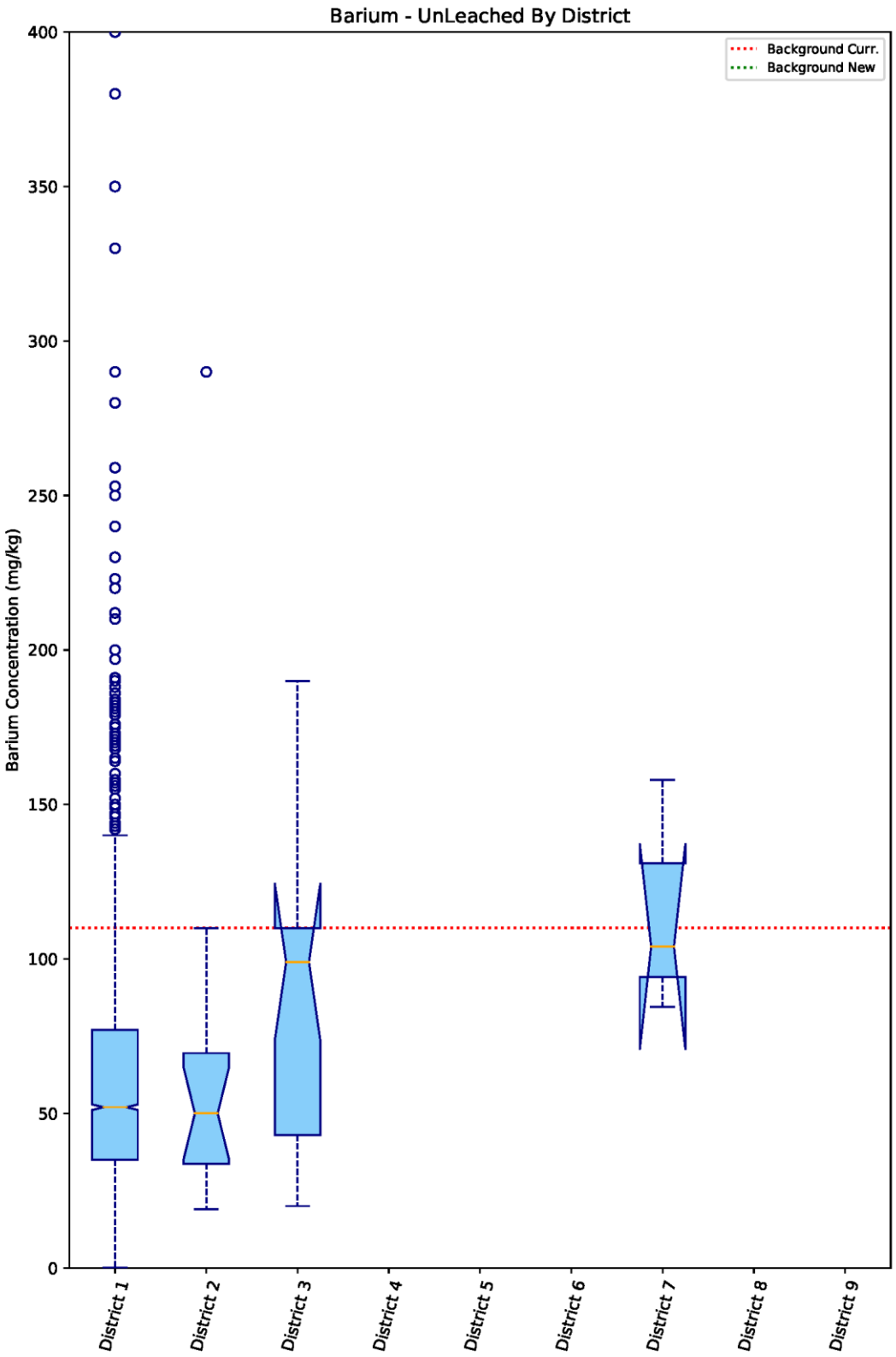


Figure 143. Boxplot of RSL barium concentrations by IDOT District, de minimis (mg/kg)

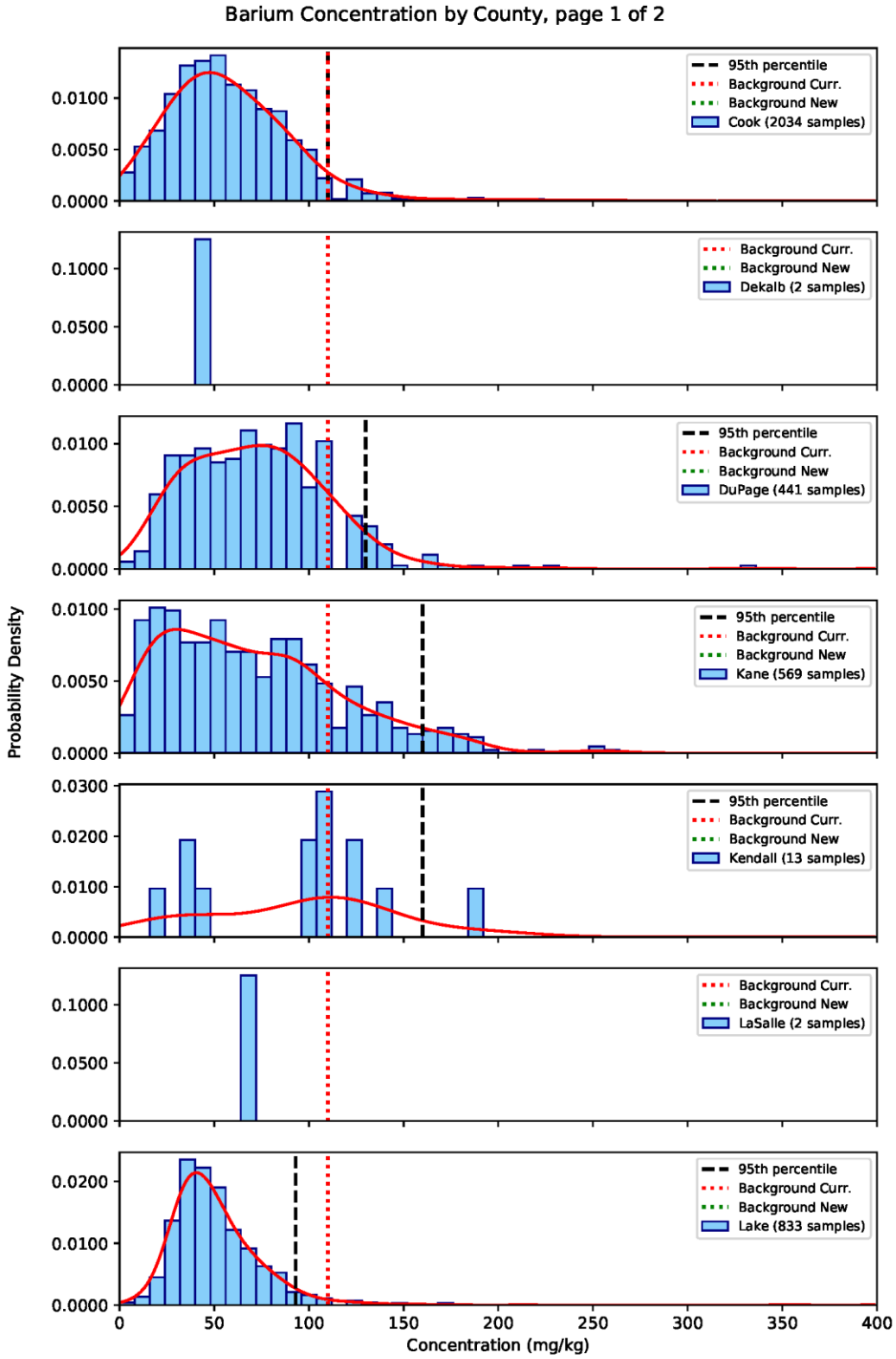


Figure 144. Histogram of RSL barium concentrations by Illinois county, de minimis (mg/kg), part 1

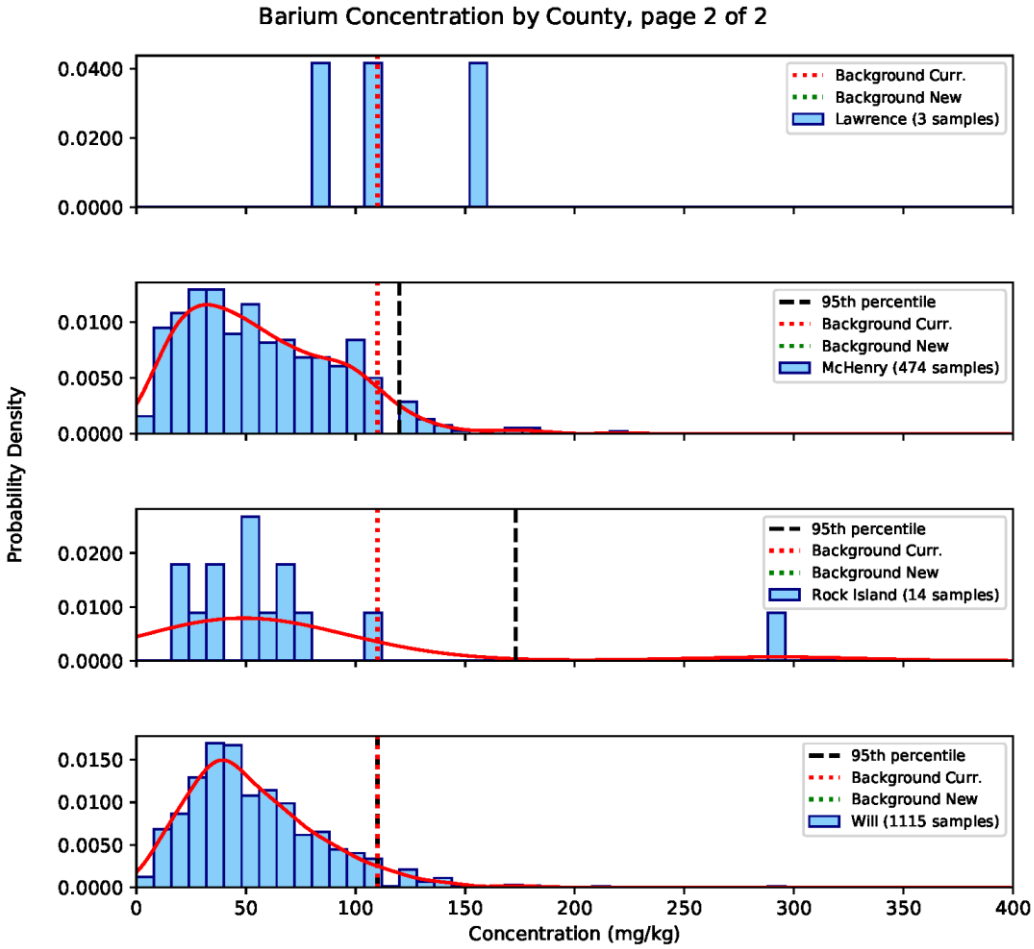


Figure 145. Histogram of RSL barium concentrations by Illinois county, de minimis (mg/kg), part 2

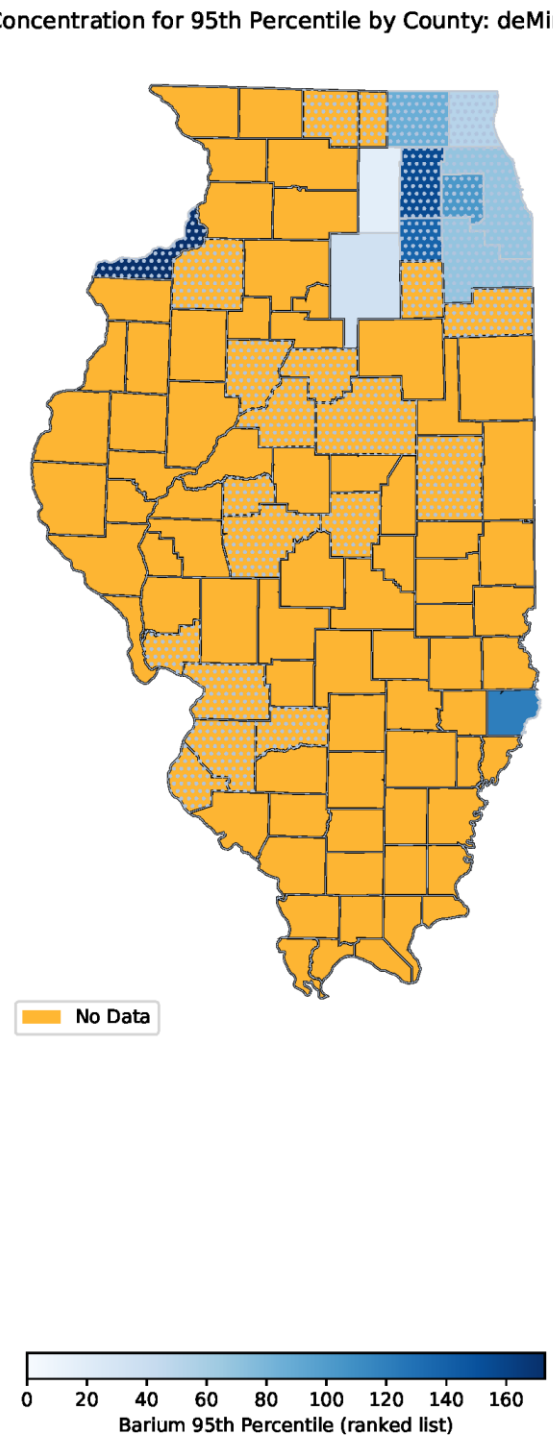


Figure 146. Map of RSL barium 95th percentile concentration by Illinois county, de minimis (mg/kg)

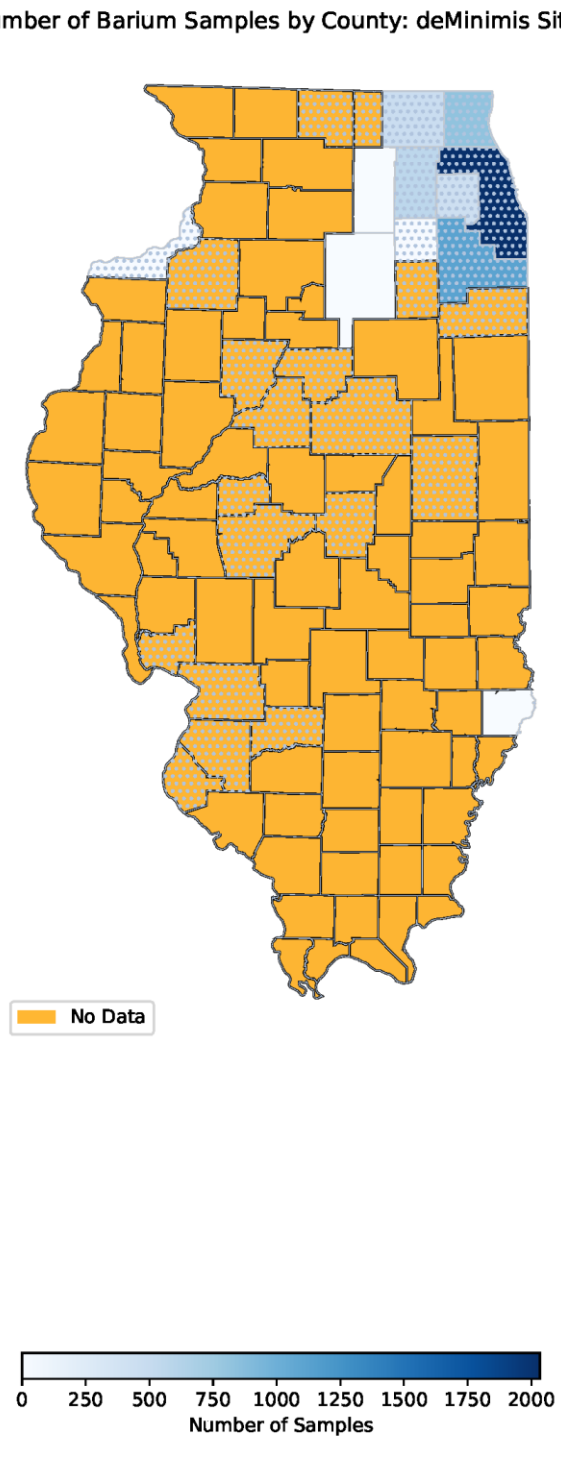


Figure 147. Map of RSL barium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX E. ANALYTE ANALYSIS: BERYLLIUM

E.1 BERYLLIUM REC

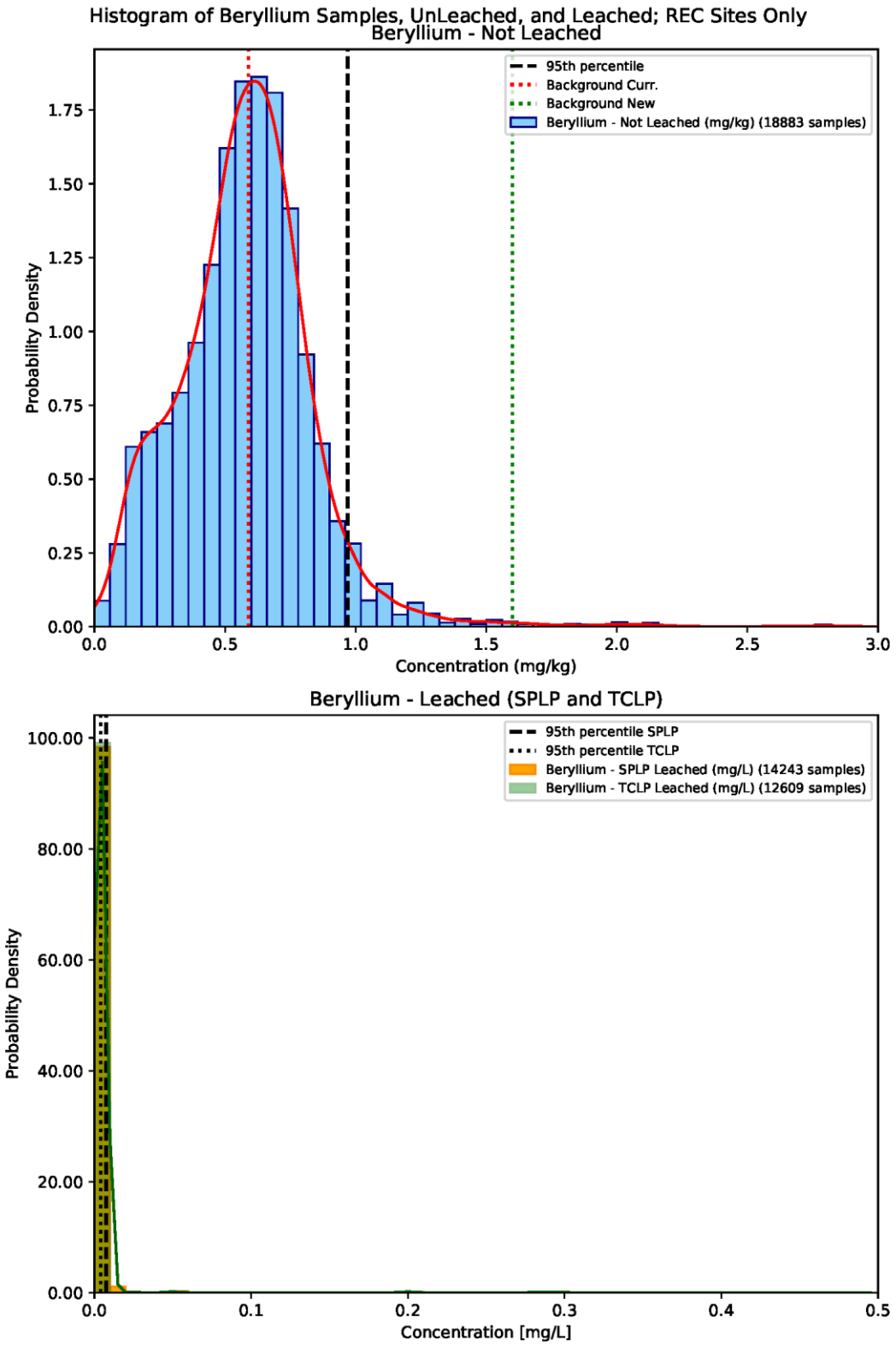


Figure 148. Histogram of RSL beryllium concentrations, REC (mg/kg)

Beryllium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

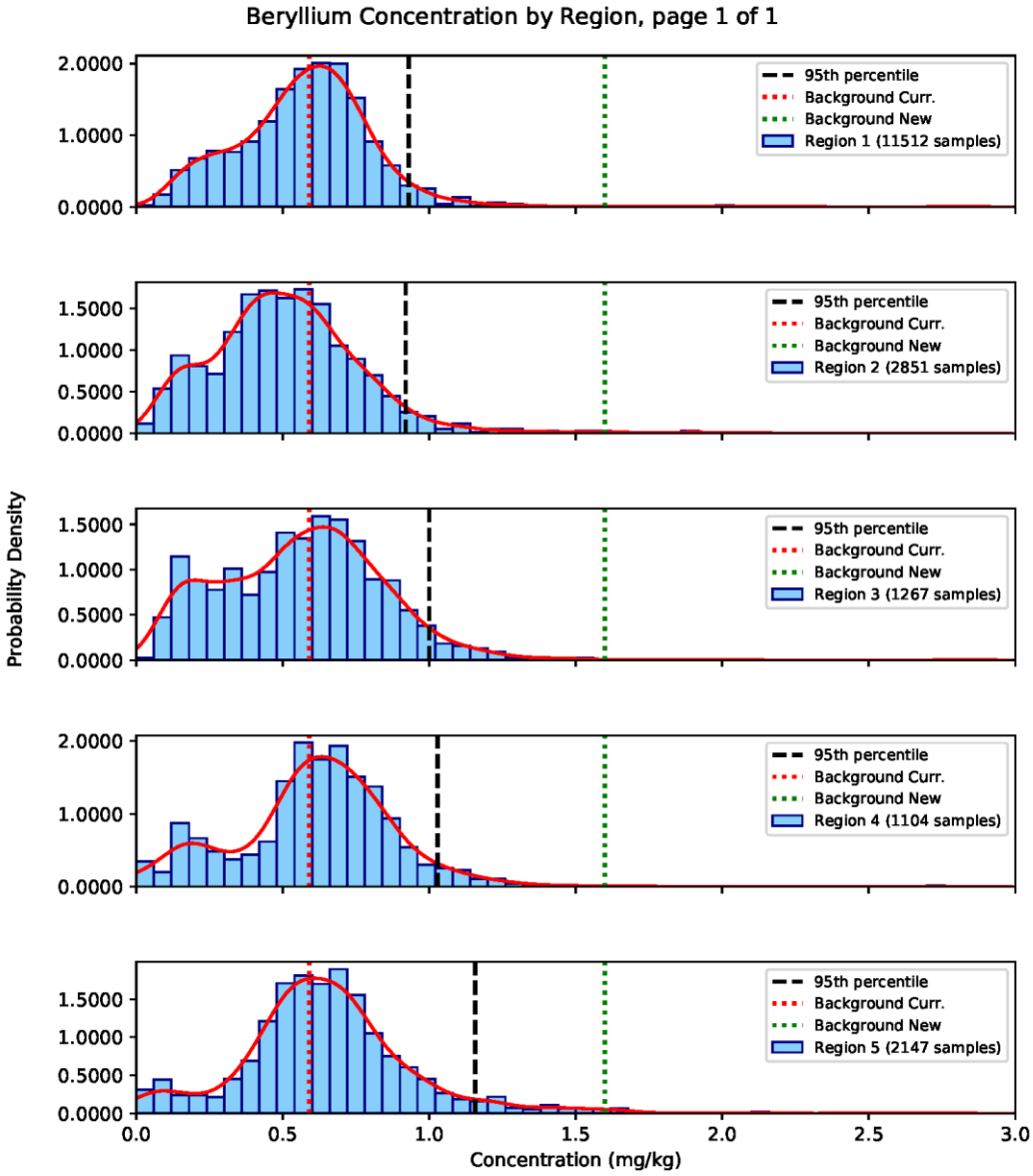


Figure 149. Histogram of RSL beryllium concentrations by IDOT Region, REC (mg/kg)

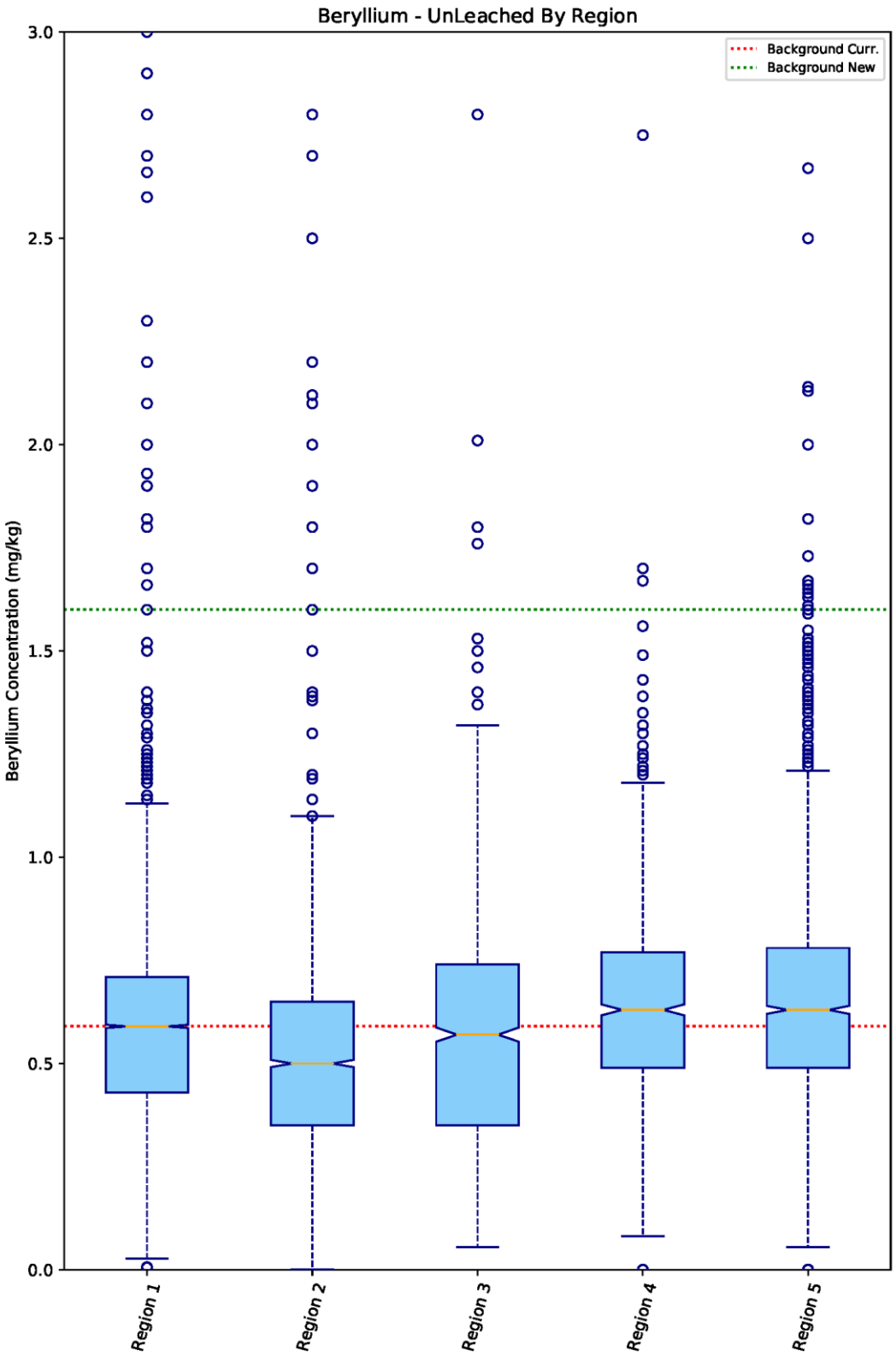


Figure 150. Boxplot of RSL beryllium concentrations by IDOT Region, REC (mg/kg)

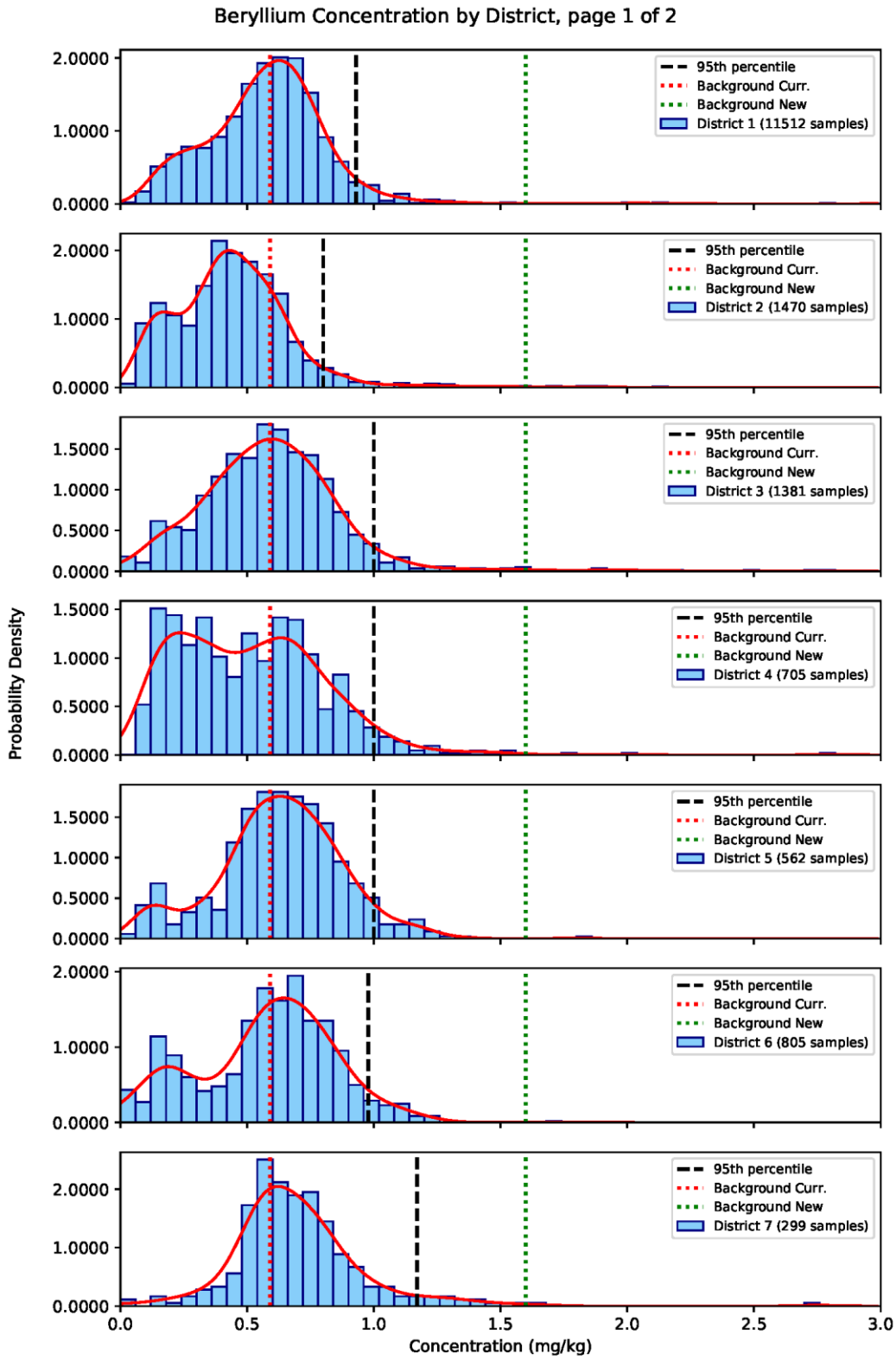


Figure 151. Histogram of RSL beryllium concentrations by IDOT District, REC (mg/kg), part 1

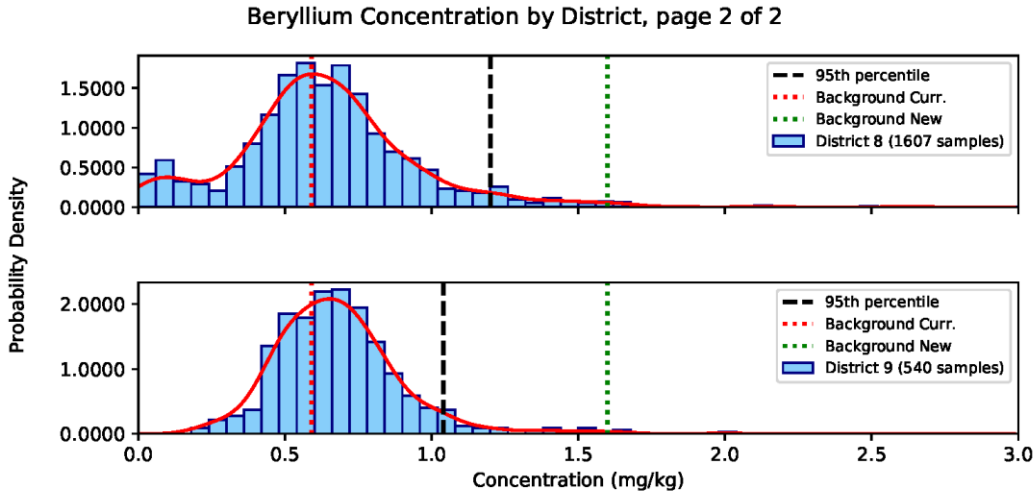


Figure 152. Histogram of RSL beryllium concentrations by IDOT District, REC (mg/kg), part 2

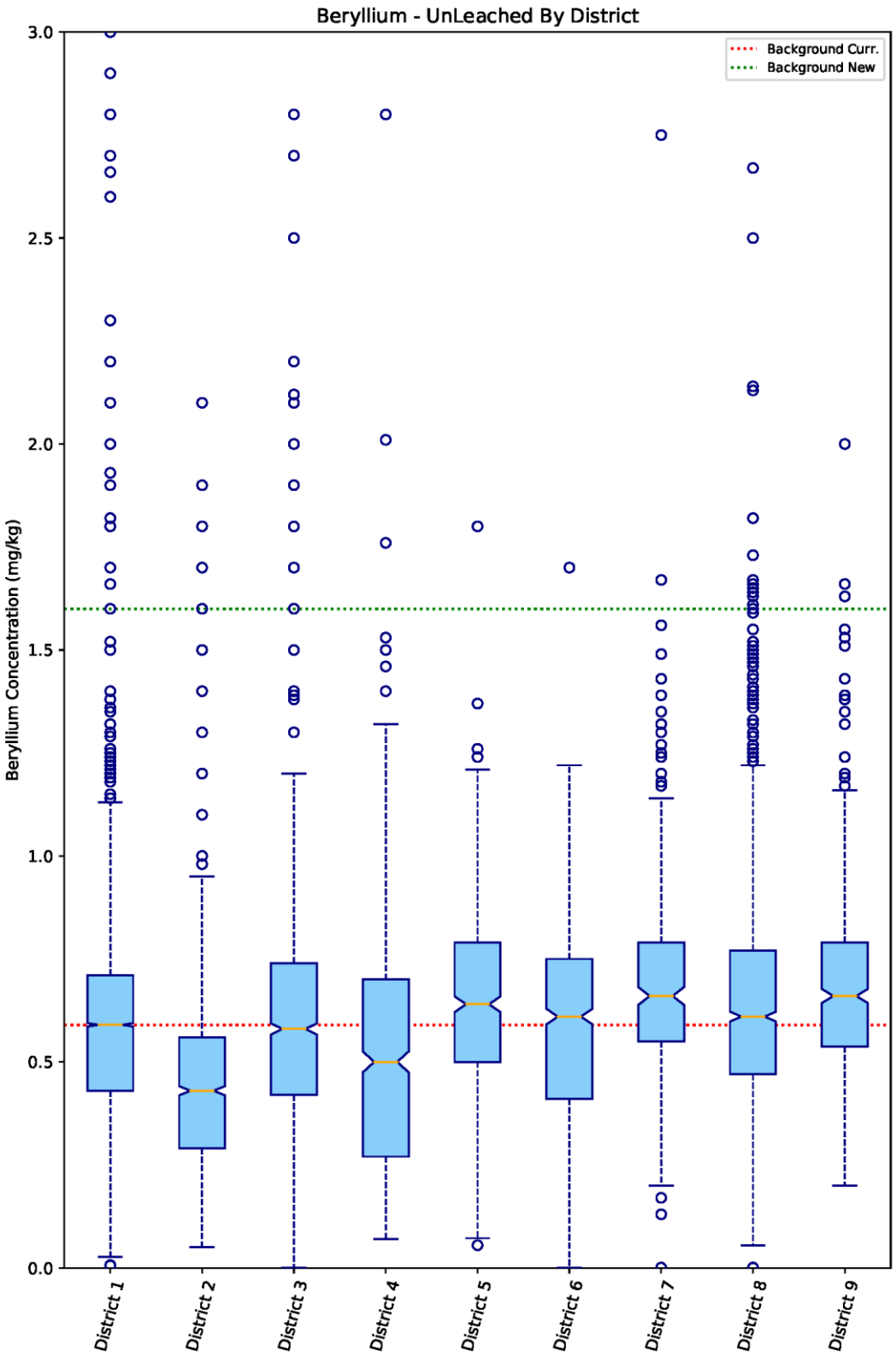


Figure 153. Boxplot of RSL beryllium concentrations by IDOT District, REC (mg/kg)

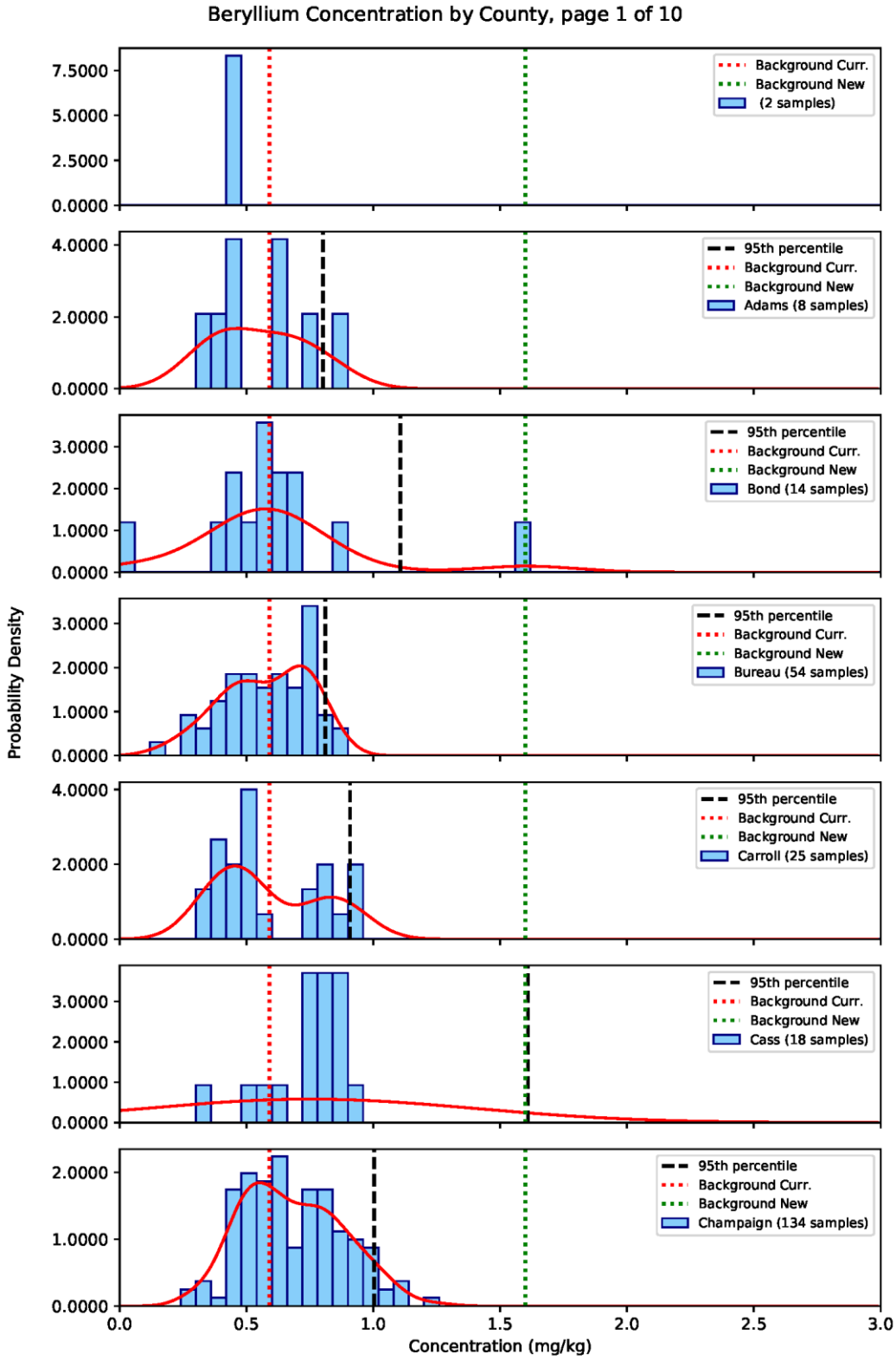


Figure 154. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 1

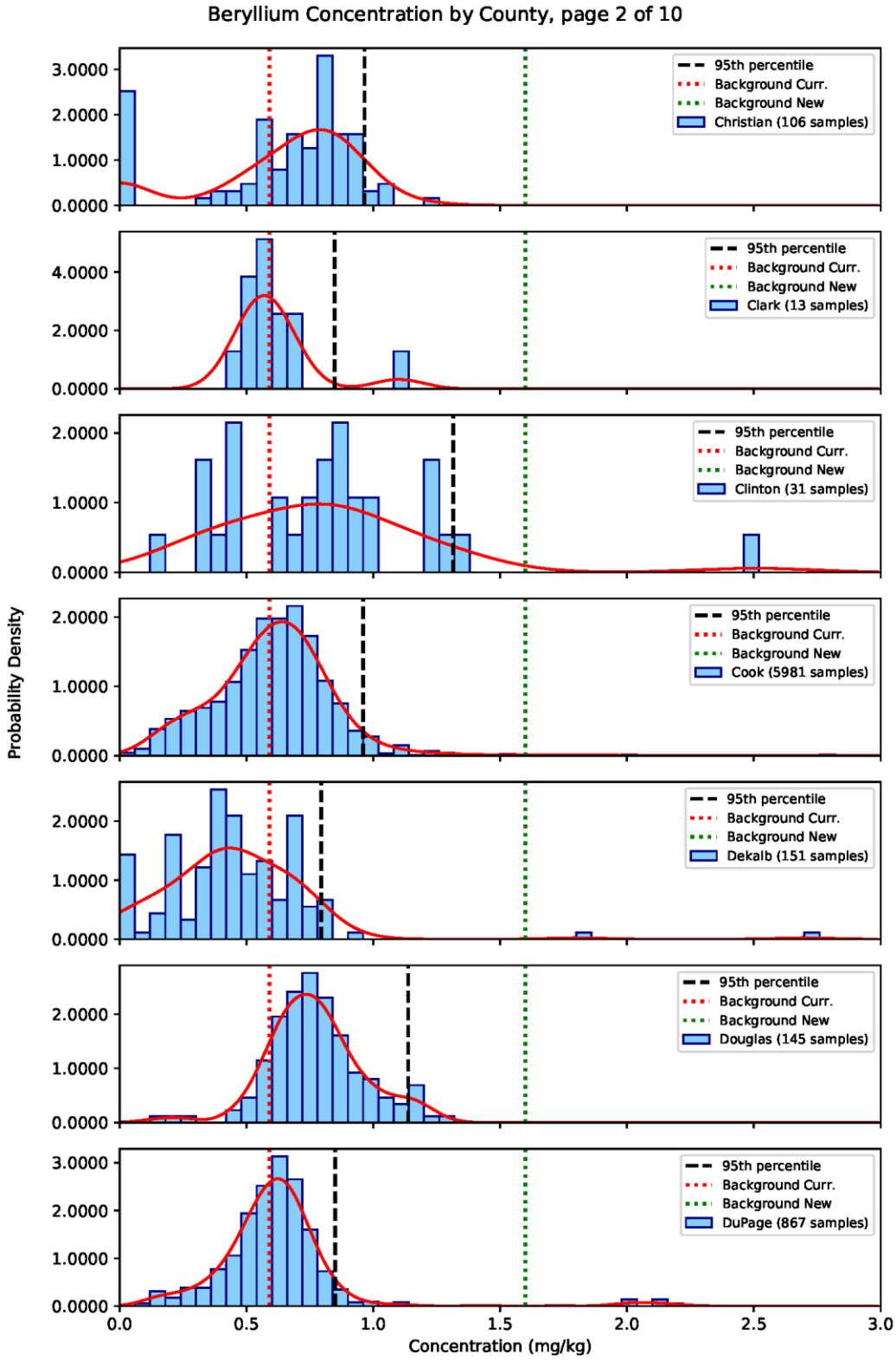


Figure 155. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 2

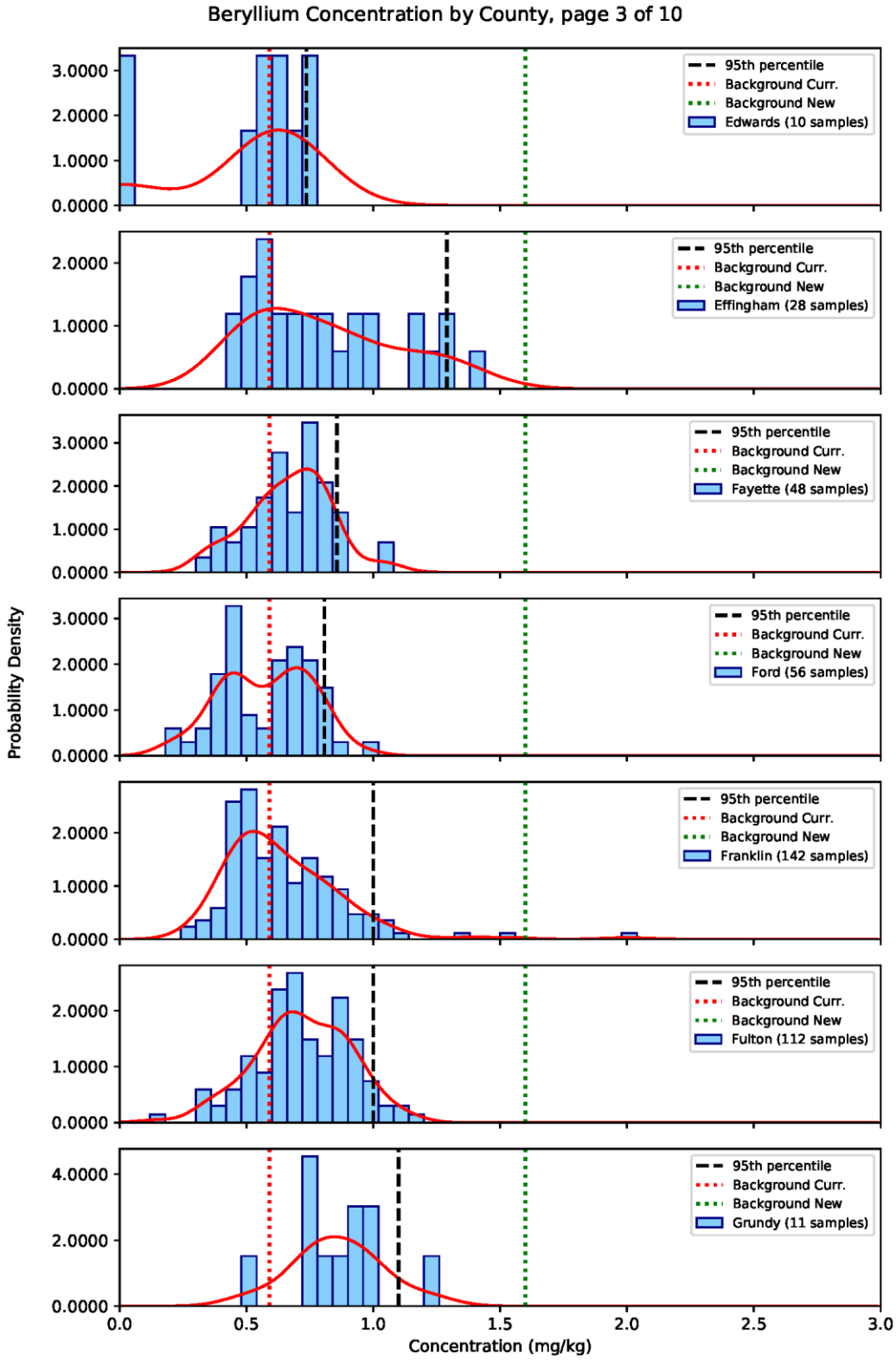


Figure 156. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 3

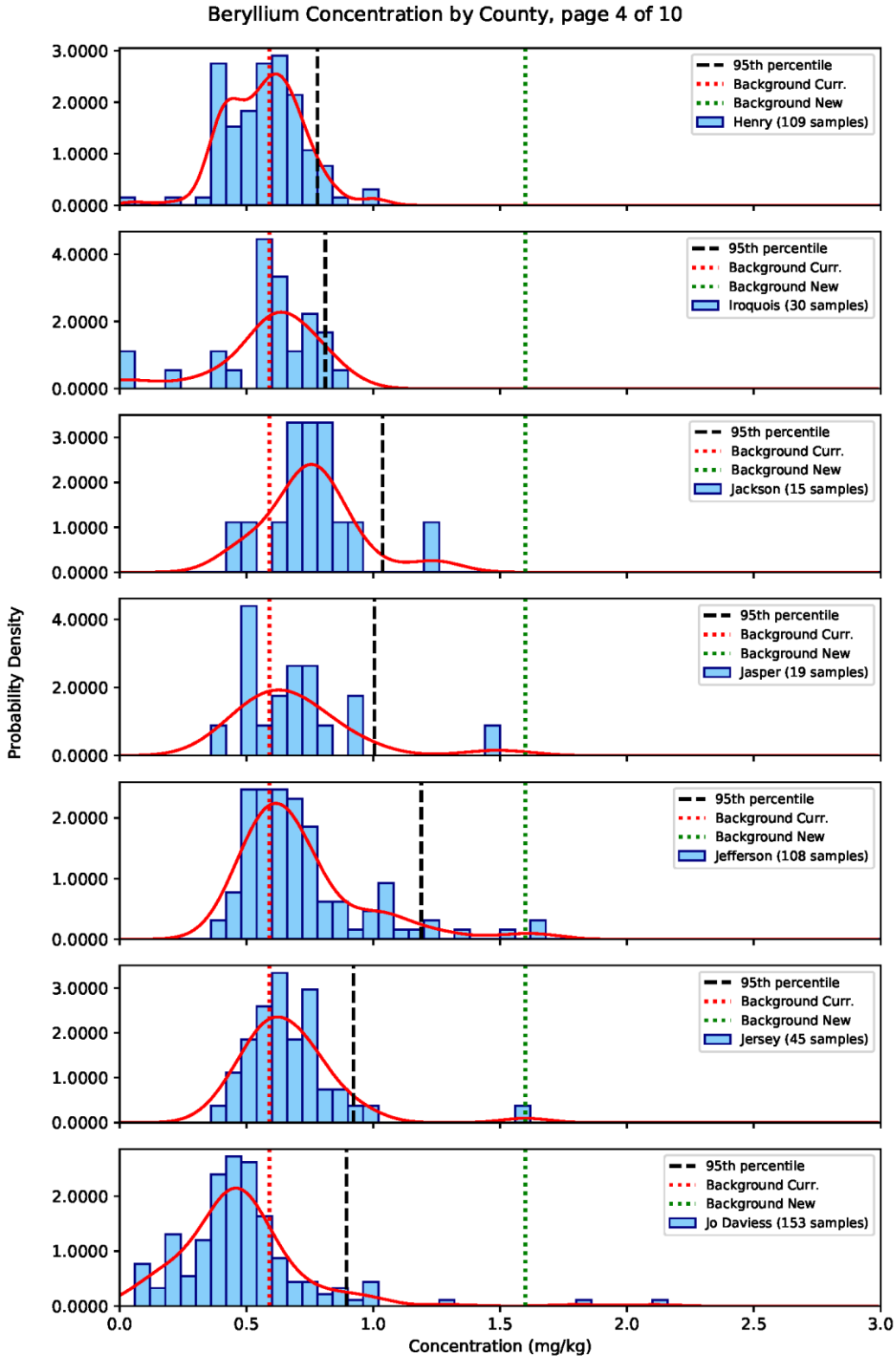


Figure 157. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 4

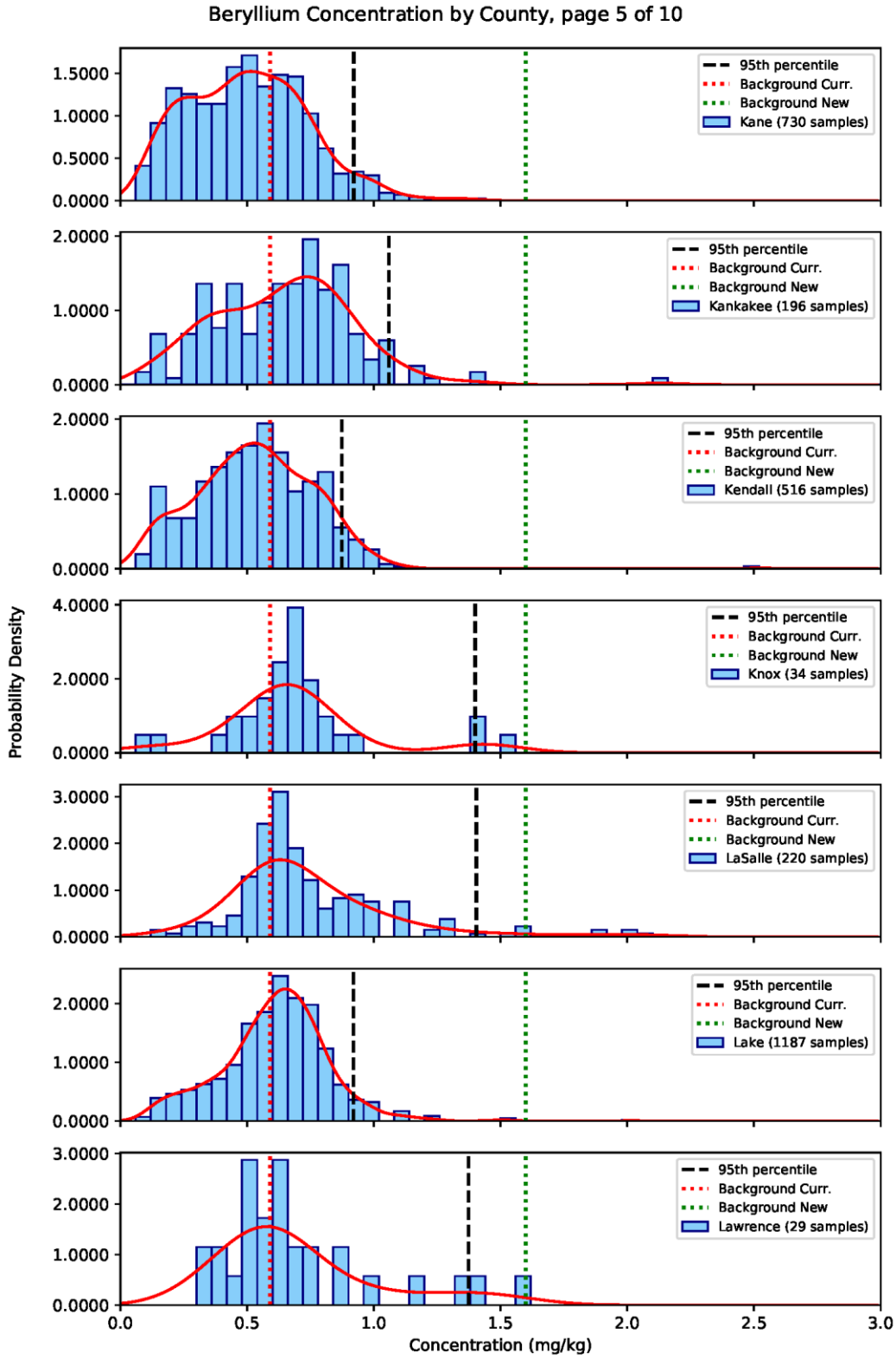


Figure 158. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 5

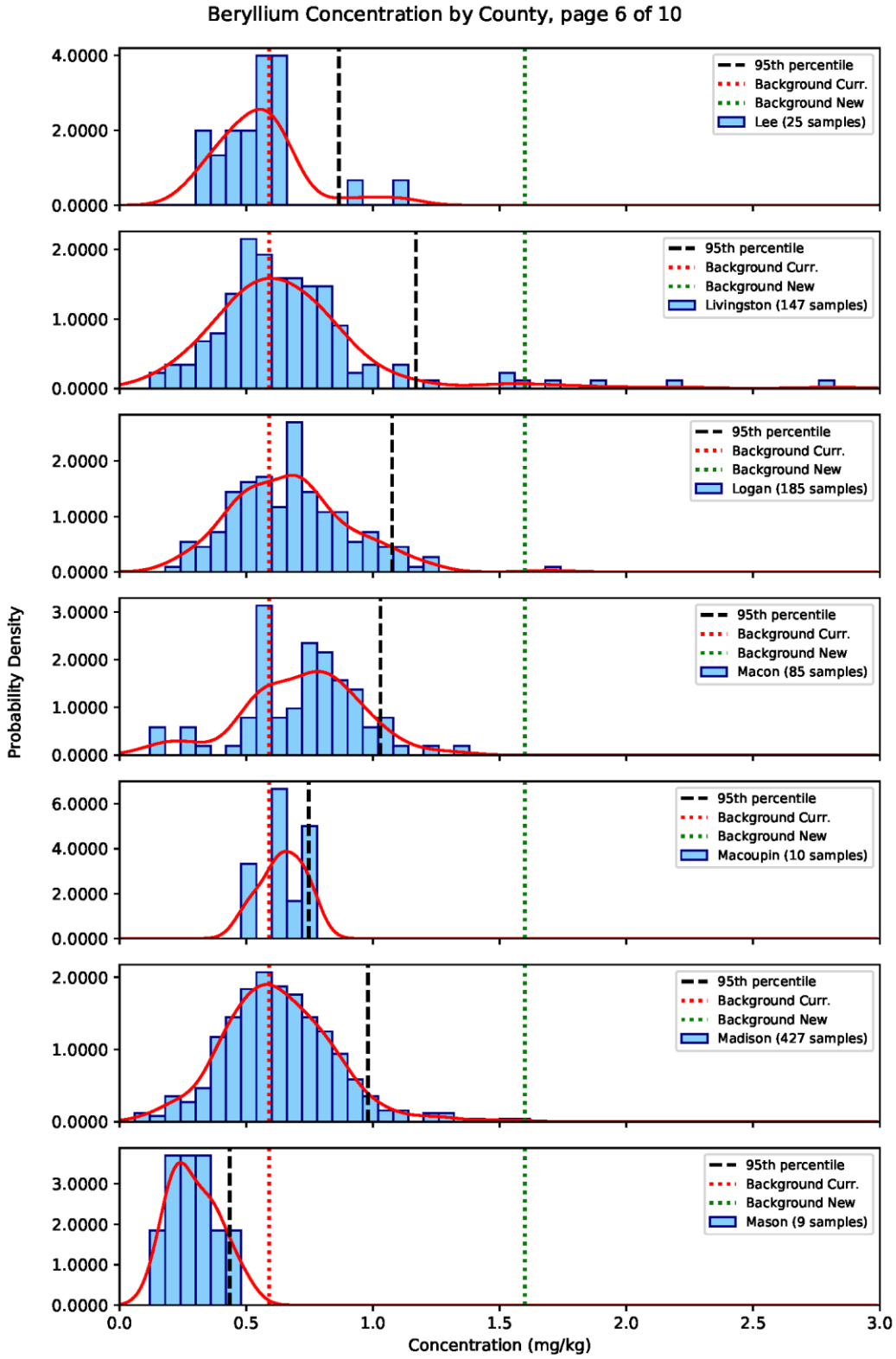


Figure 159. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 6

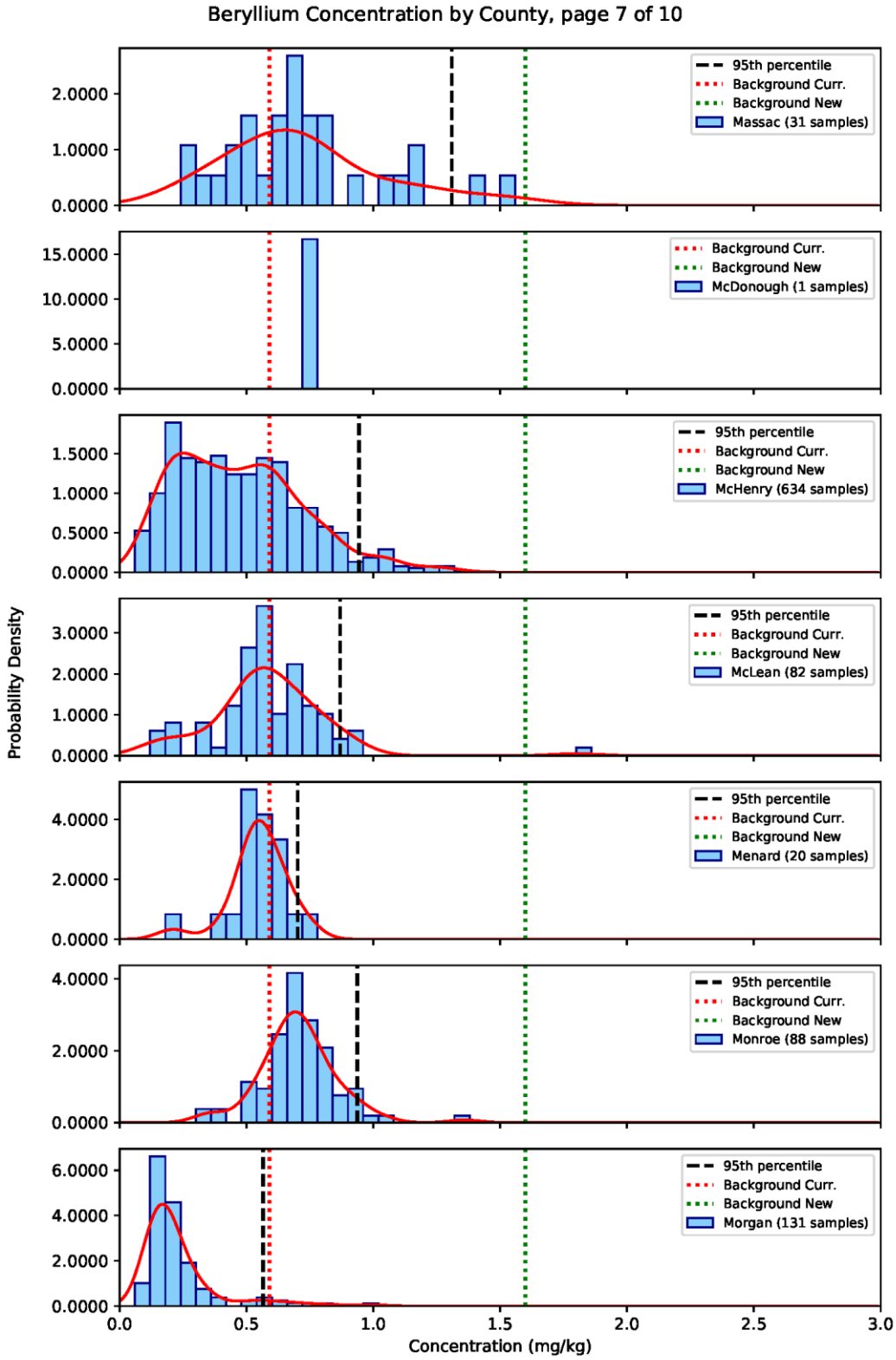


Figure 160. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 7

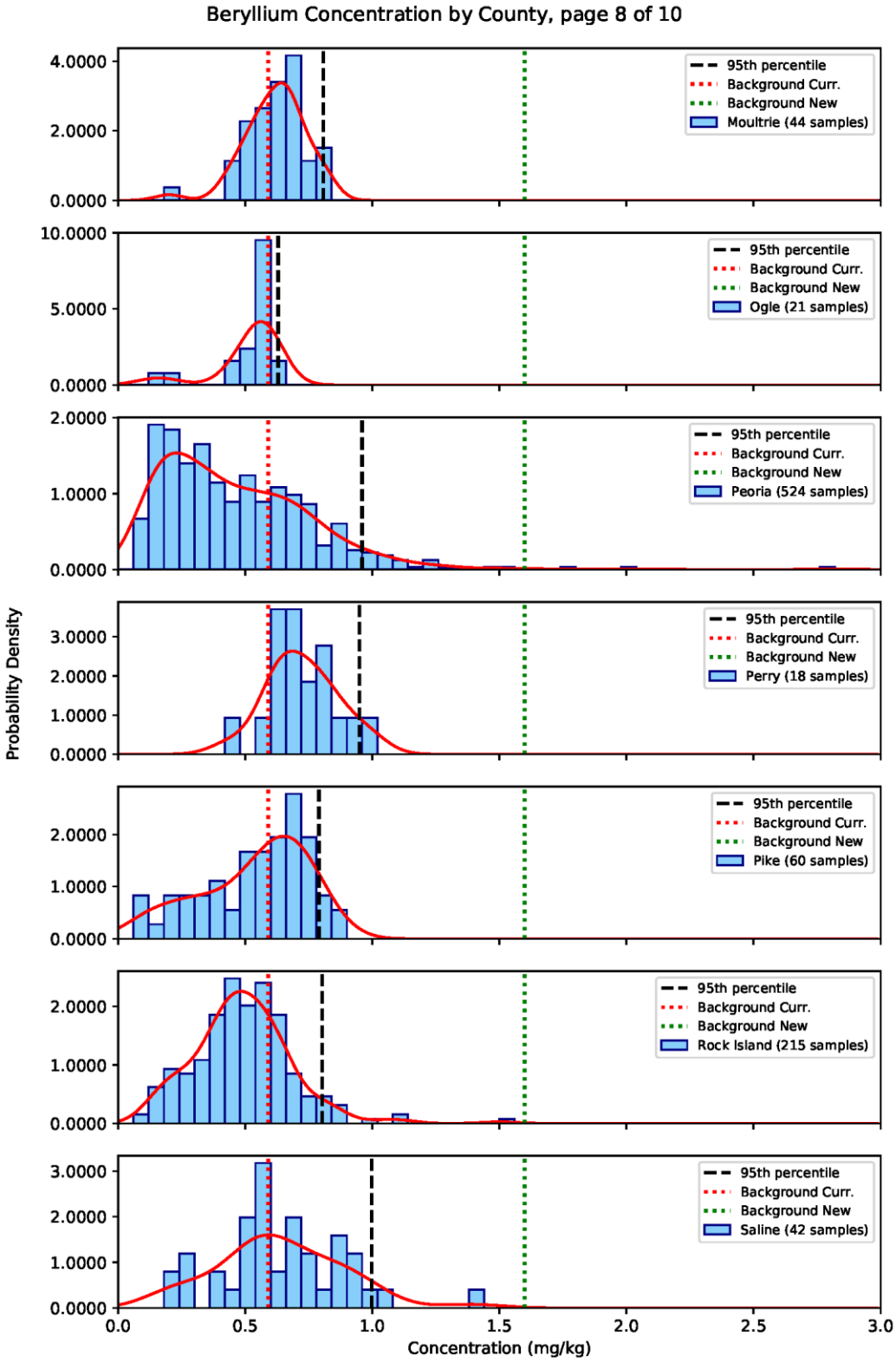


Figure 161. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 8

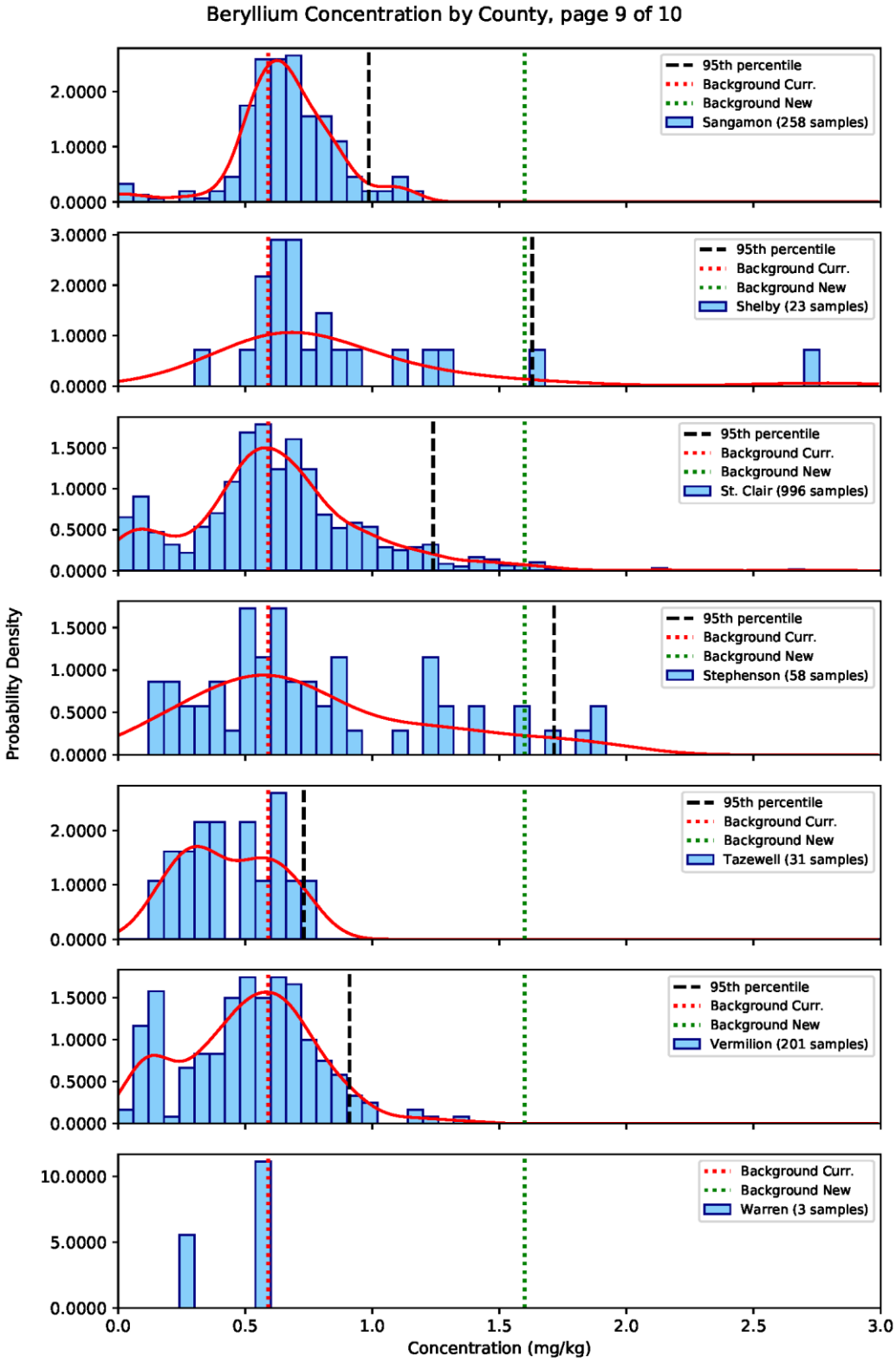


Figure 162. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 9

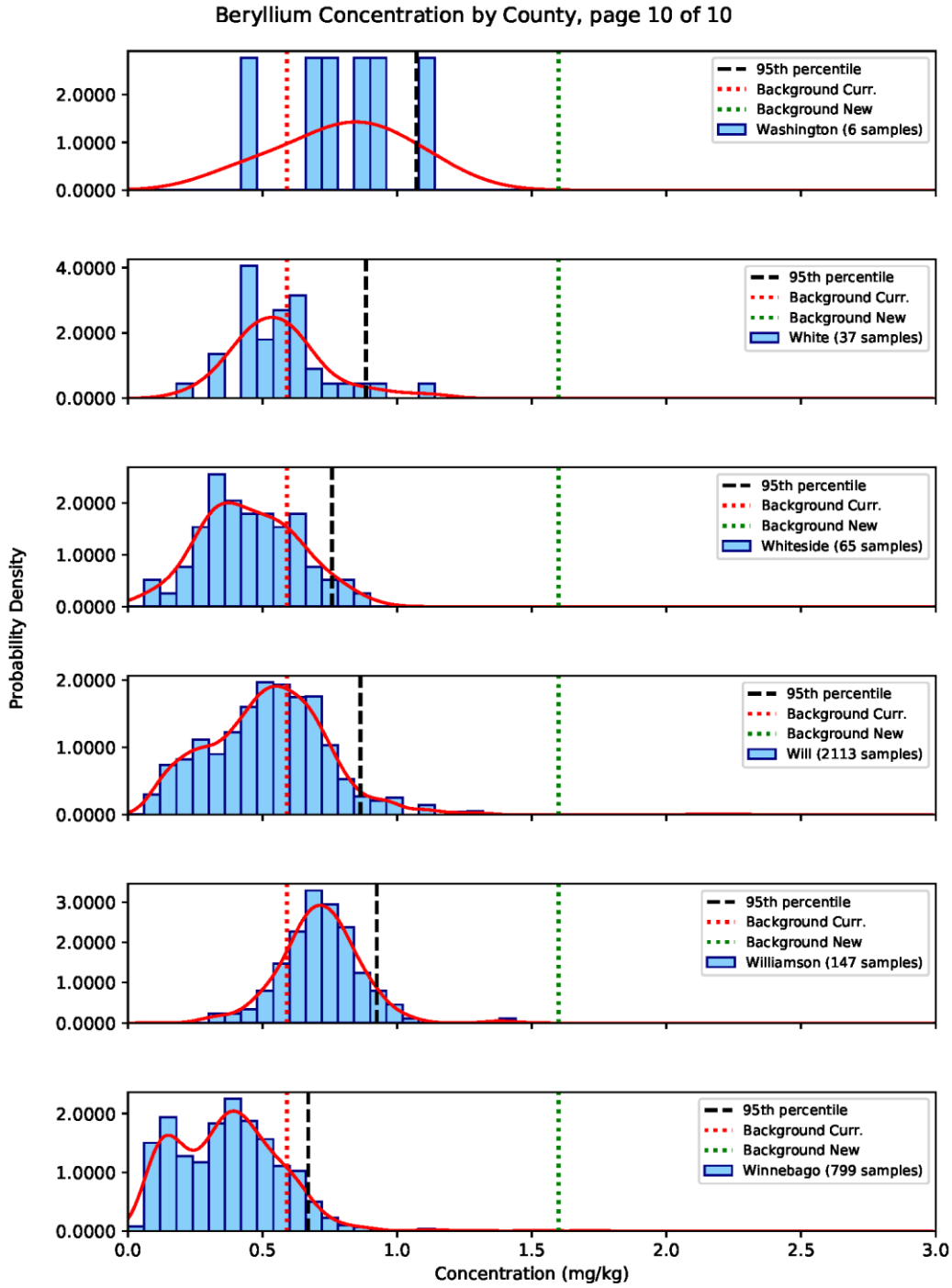


Figure 163. Histogram of RSL beryllium concentrations by Illinois county, REC (mg/kg), part 10

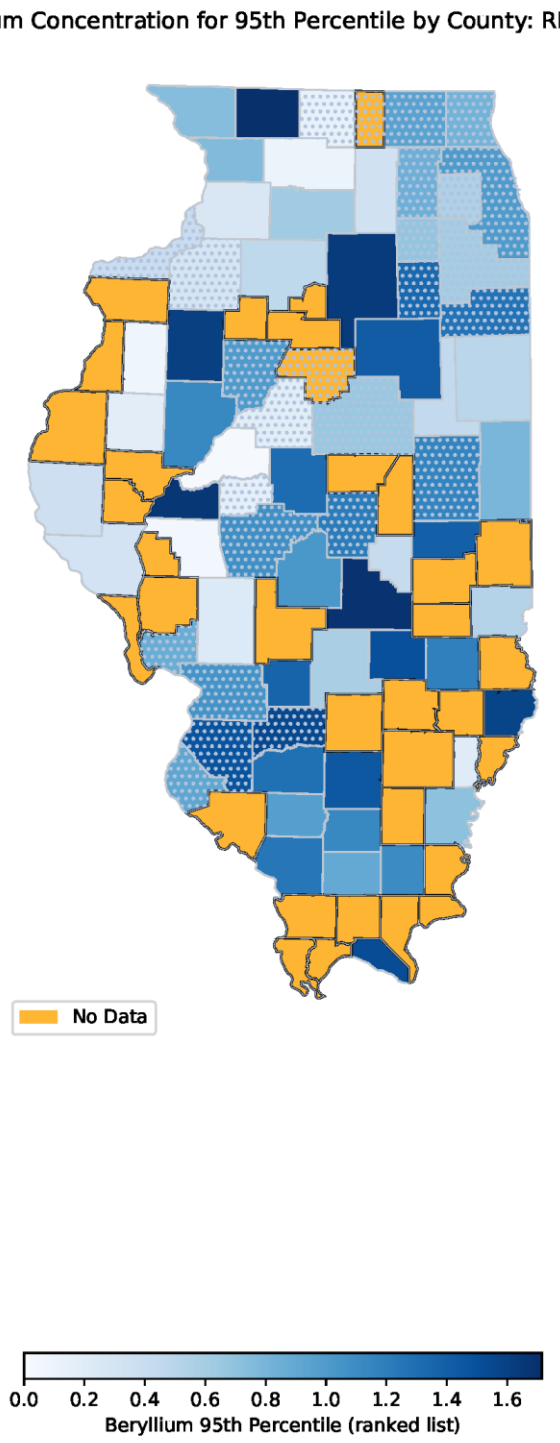


Figure 164. Map of RSL beryllium 95th percentile concentration by Illinois county, REC (mg/kg)

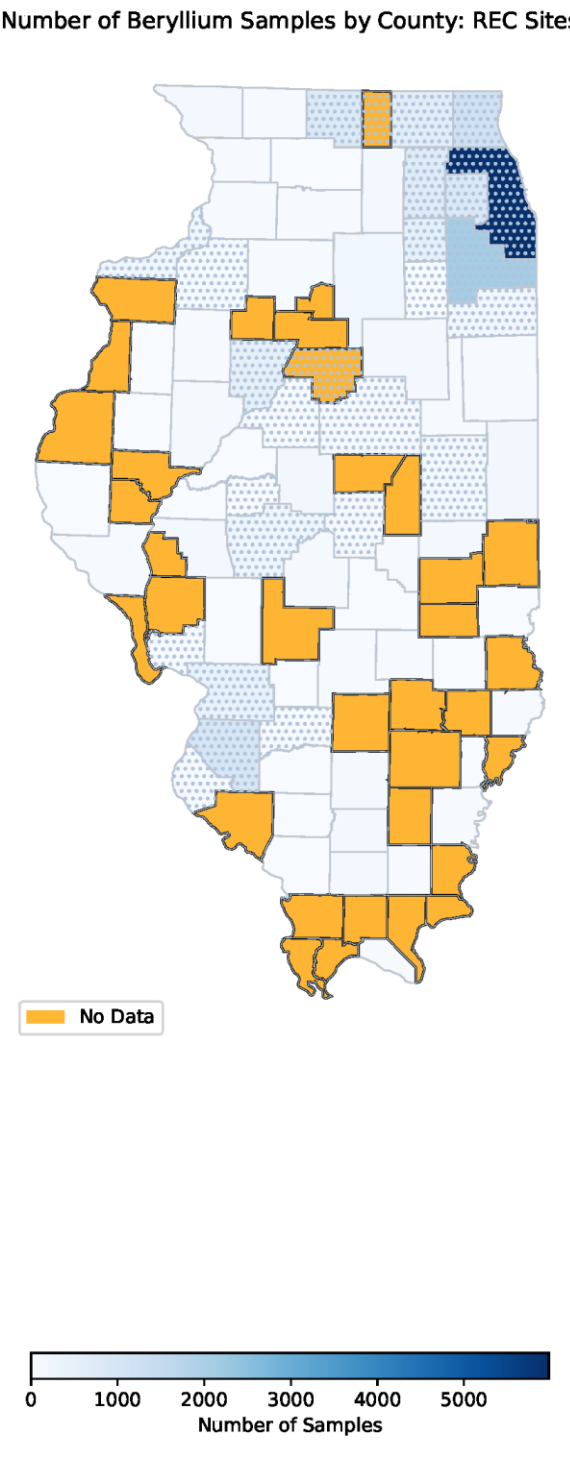


Figure 165. Map of RSL beryllium sample quantity by Illinois county, REC (mg/kg)

E.2 BERYLLIUM NON-REC

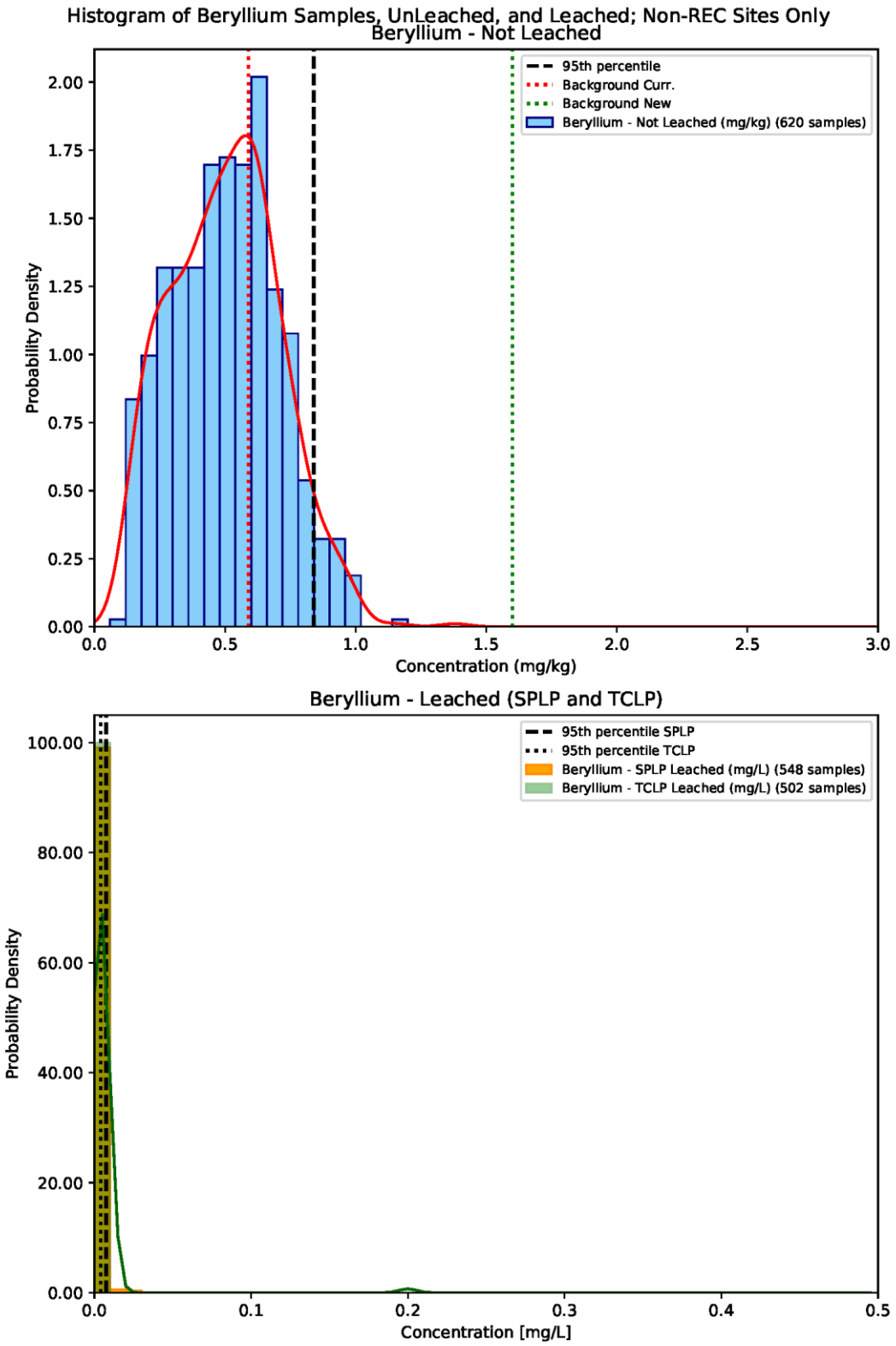


Figure 166. Histogram of RSL beryllium concentrations, Non-REC (mg/kg)

Beryllium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

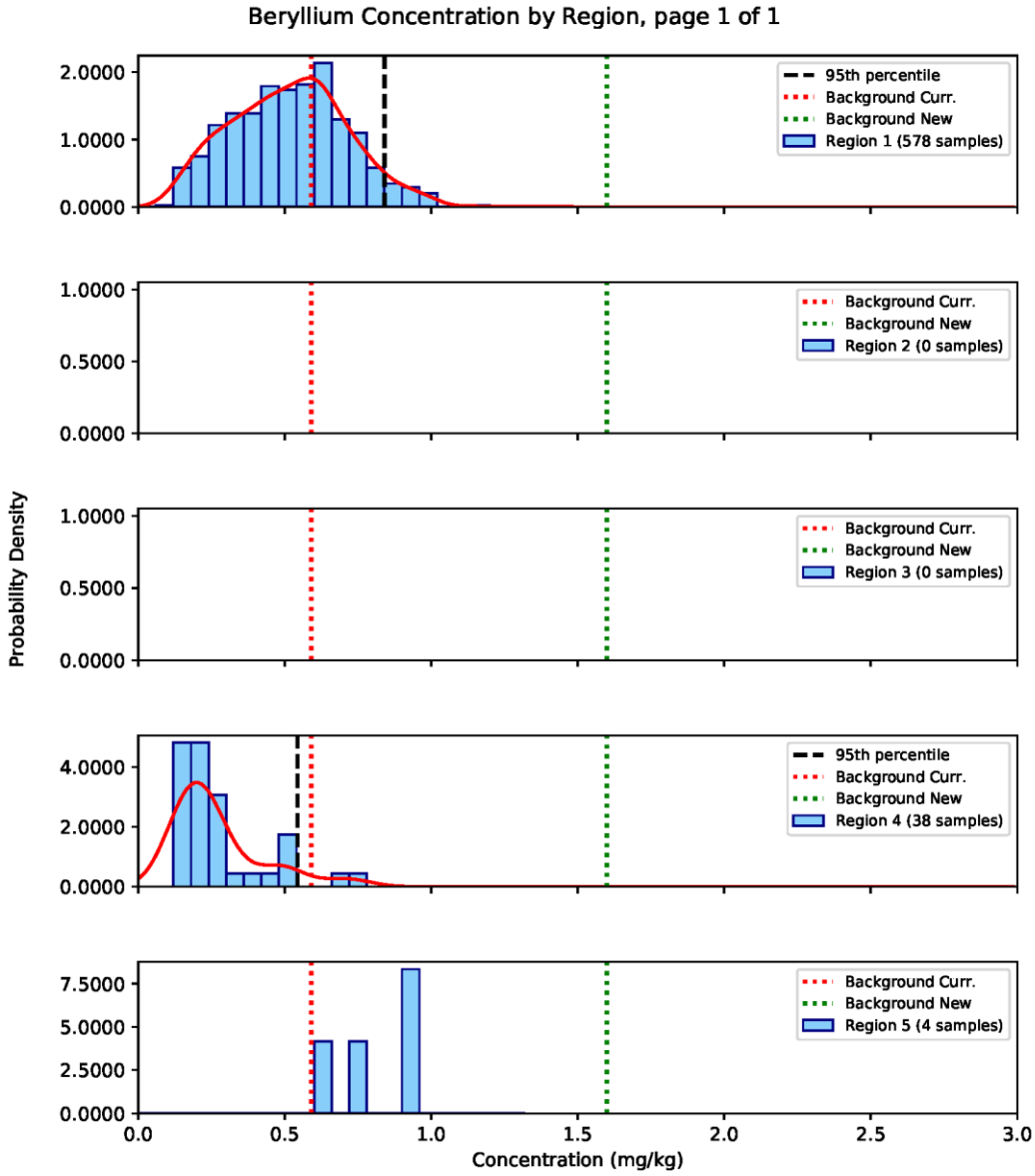


Figure 167. Histogram of RSL beryllium concentrations by IDOT Region, Non-REC (mg/kg)

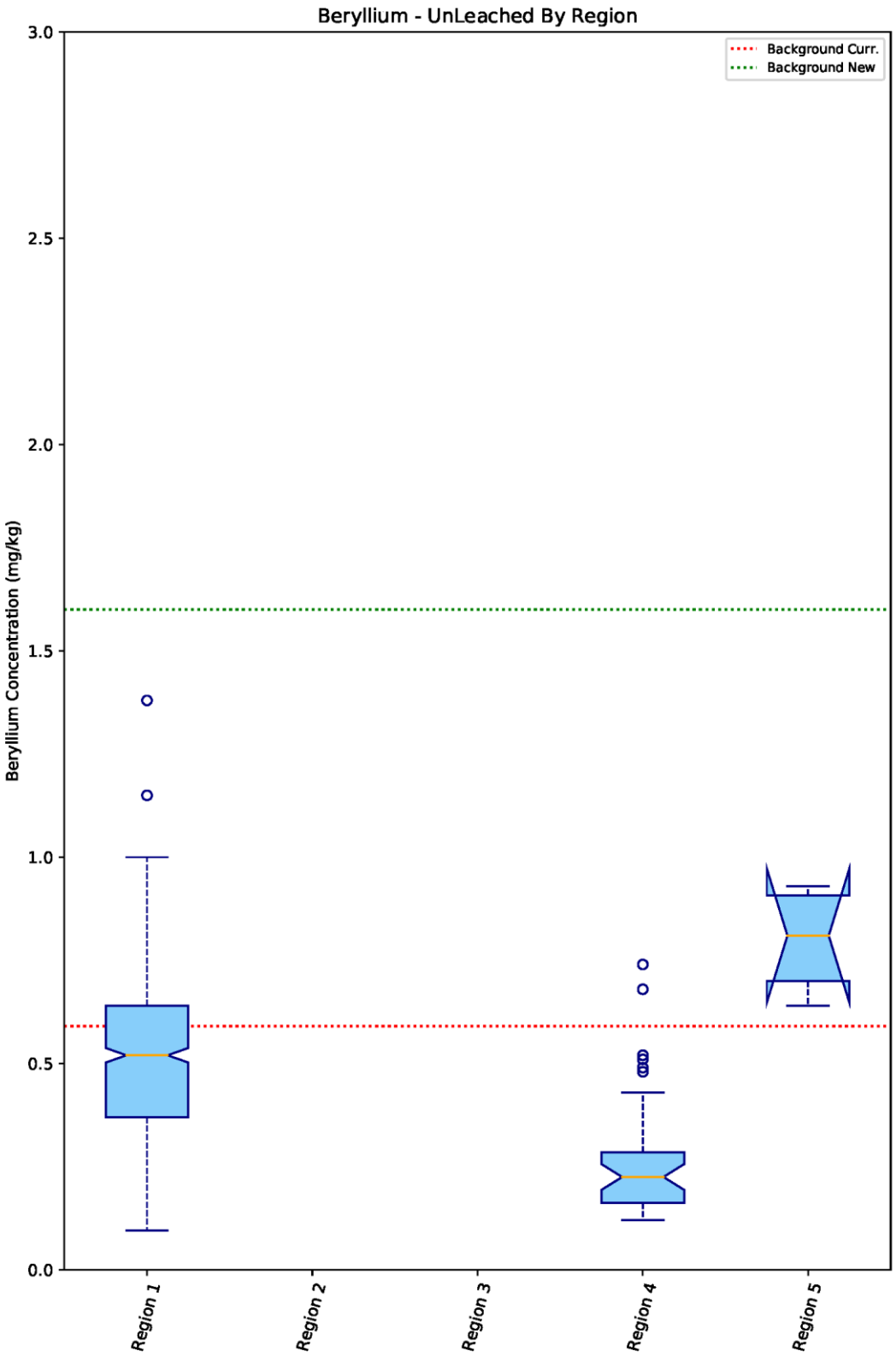


Figure 168. Boxplot of RSL beryllium concentrations by IDOT Region, Non-REC (mg/kg)

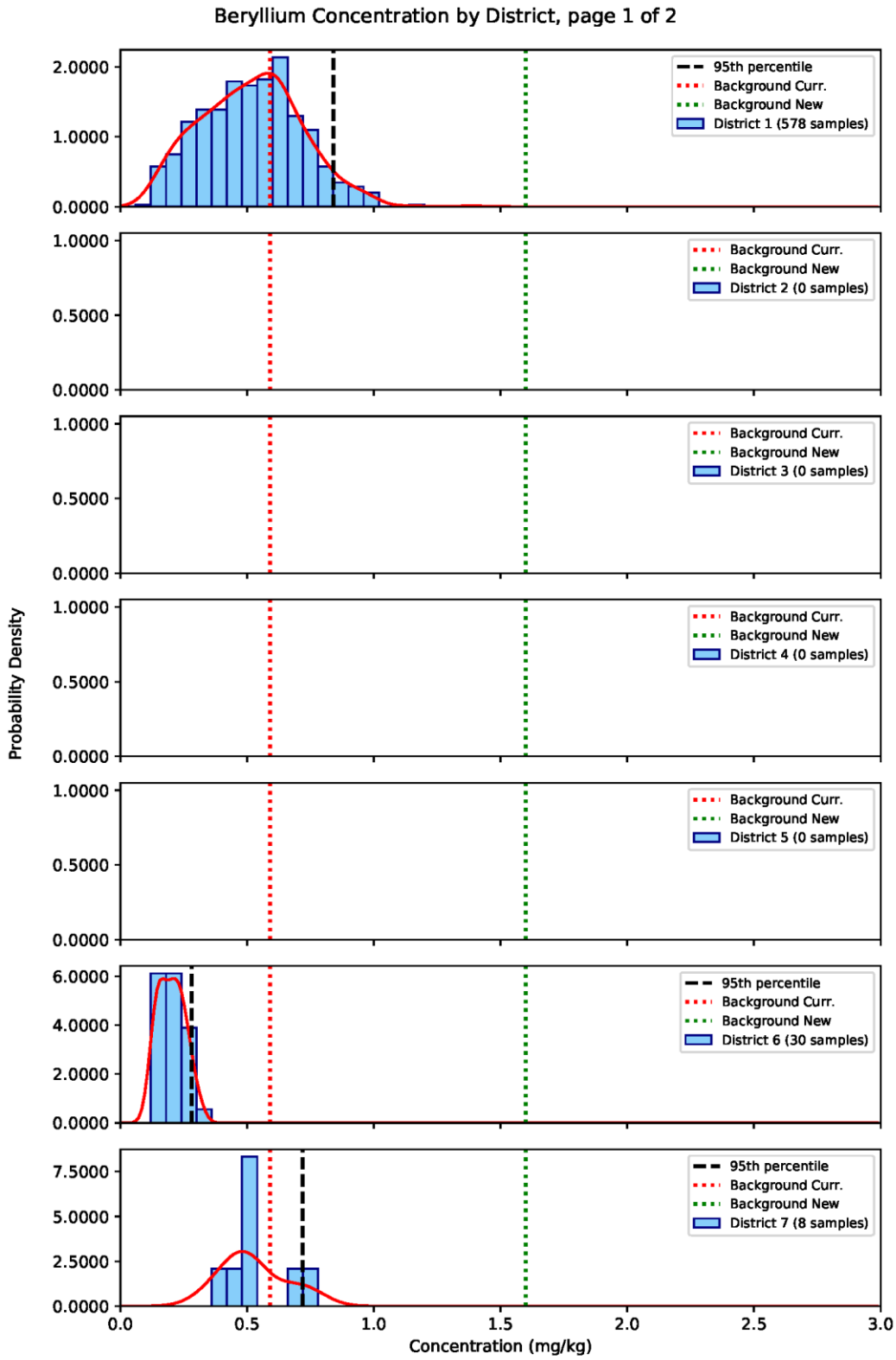


Figure 169. Histogram of RSL beryllium concentrations by IDOT District, Non-REC (mg/kg), part 1

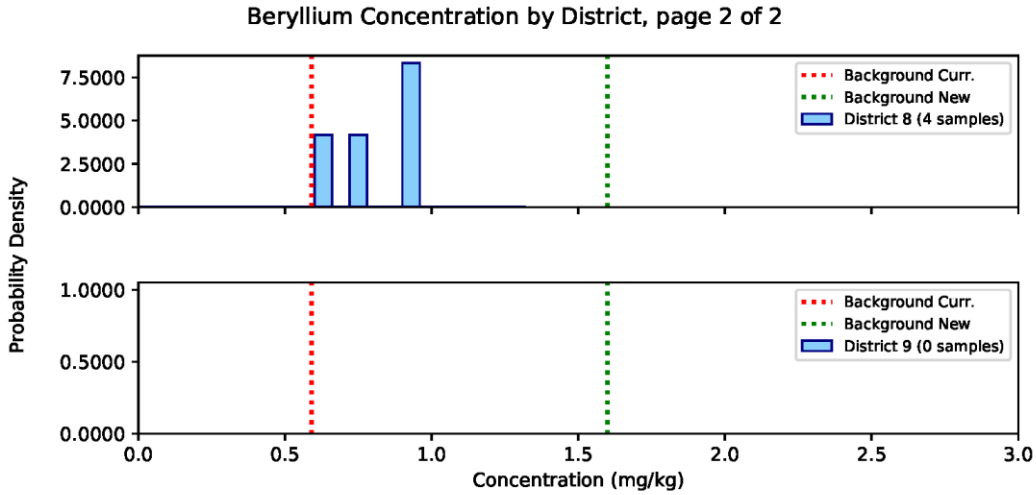


Figure 170. Histogram of RSL beryllium concentrations by IDOT District, Non-REC (mg/kg), part 2

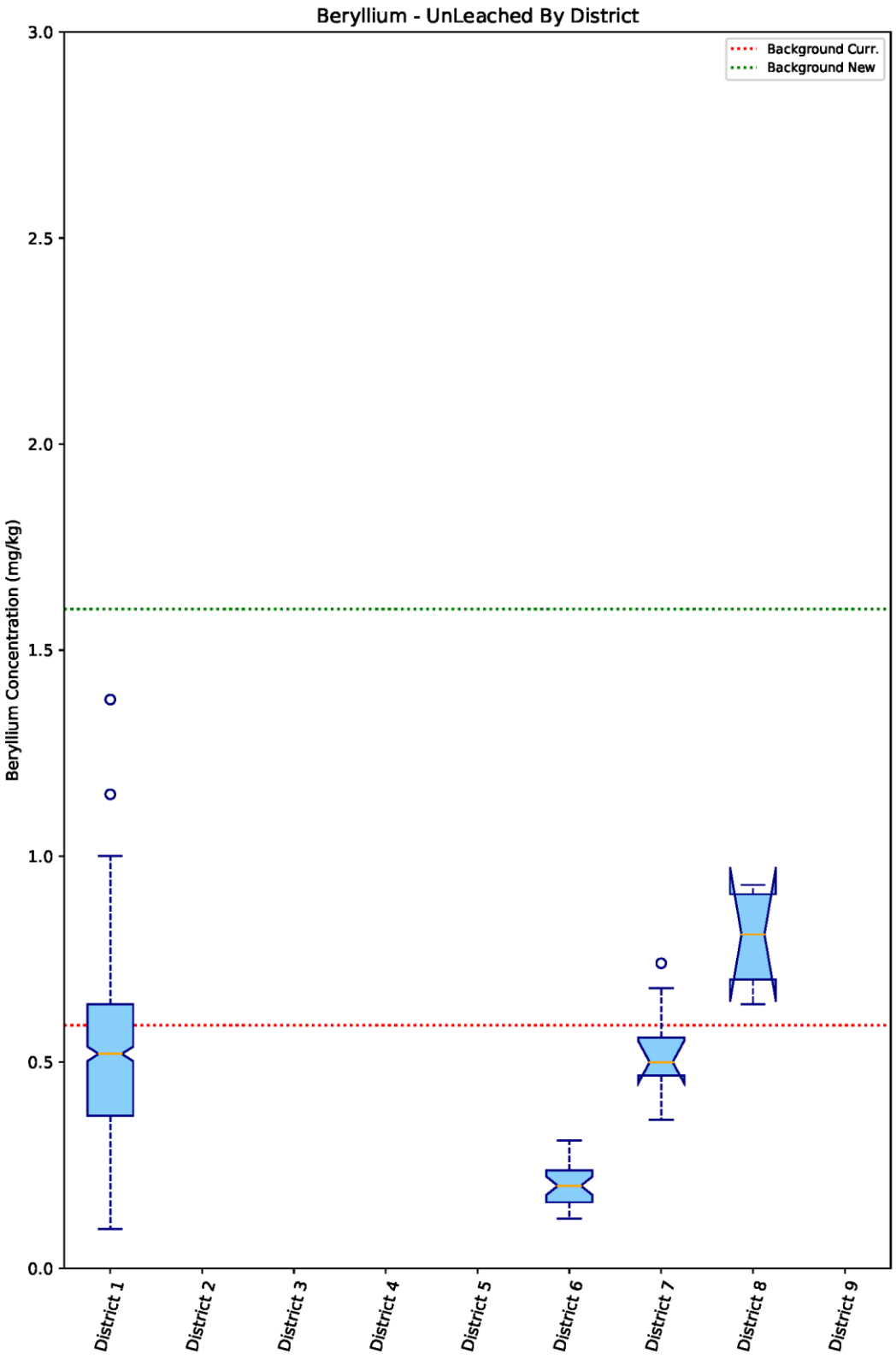


Figure 171. Boxplot of RSL beryllium concentrations by IDOT District, Non-REC (mg/kg)

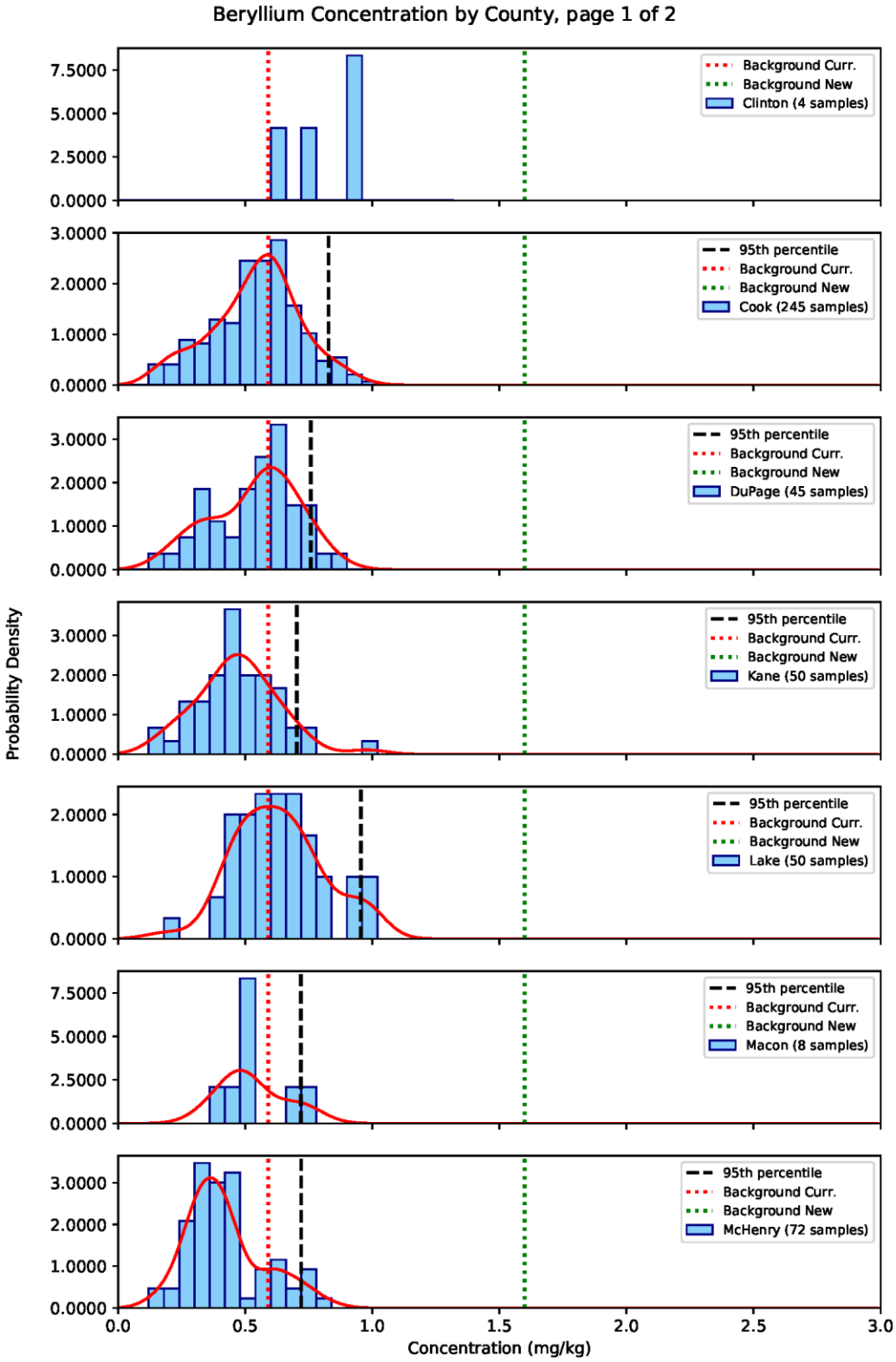


Figure 172. Histogram of RSL beryllium concentrations by Illinois county, Non-REC (mg/kg), part 1

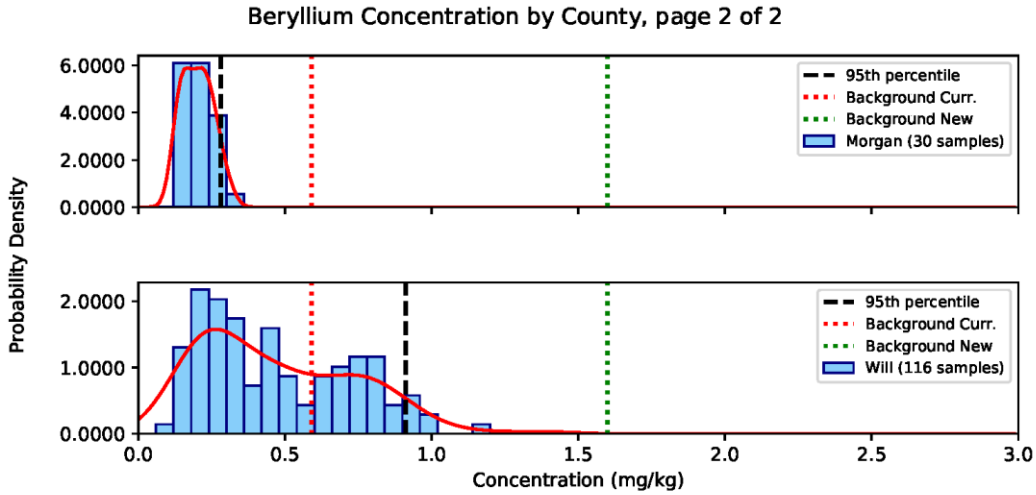


Figure 173. Histogram of RSL beryllium concentrations by Illinois county, Non-REC (mg/kg), part 2

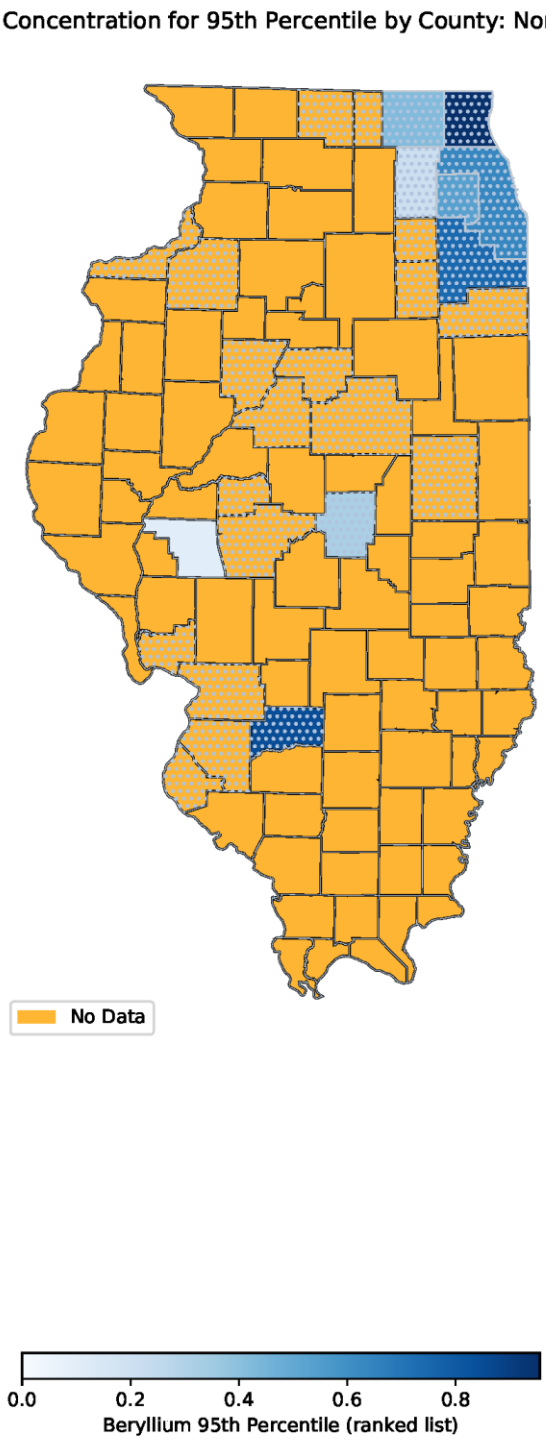


Figure 174. Map of RSL beryllium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

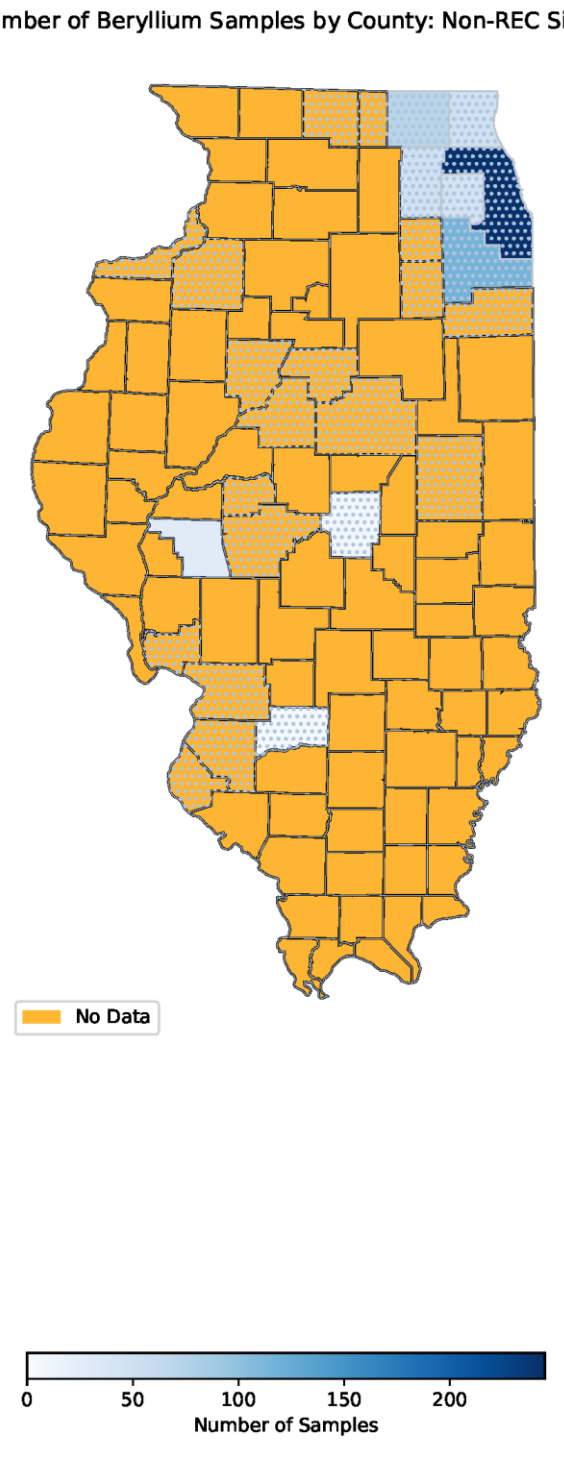


Figure 175. Map of RSL beryllium sample quantity by Illinois county, Non-REC (mg/kg)

E.3 BERYLLIUM DE MINIMIS

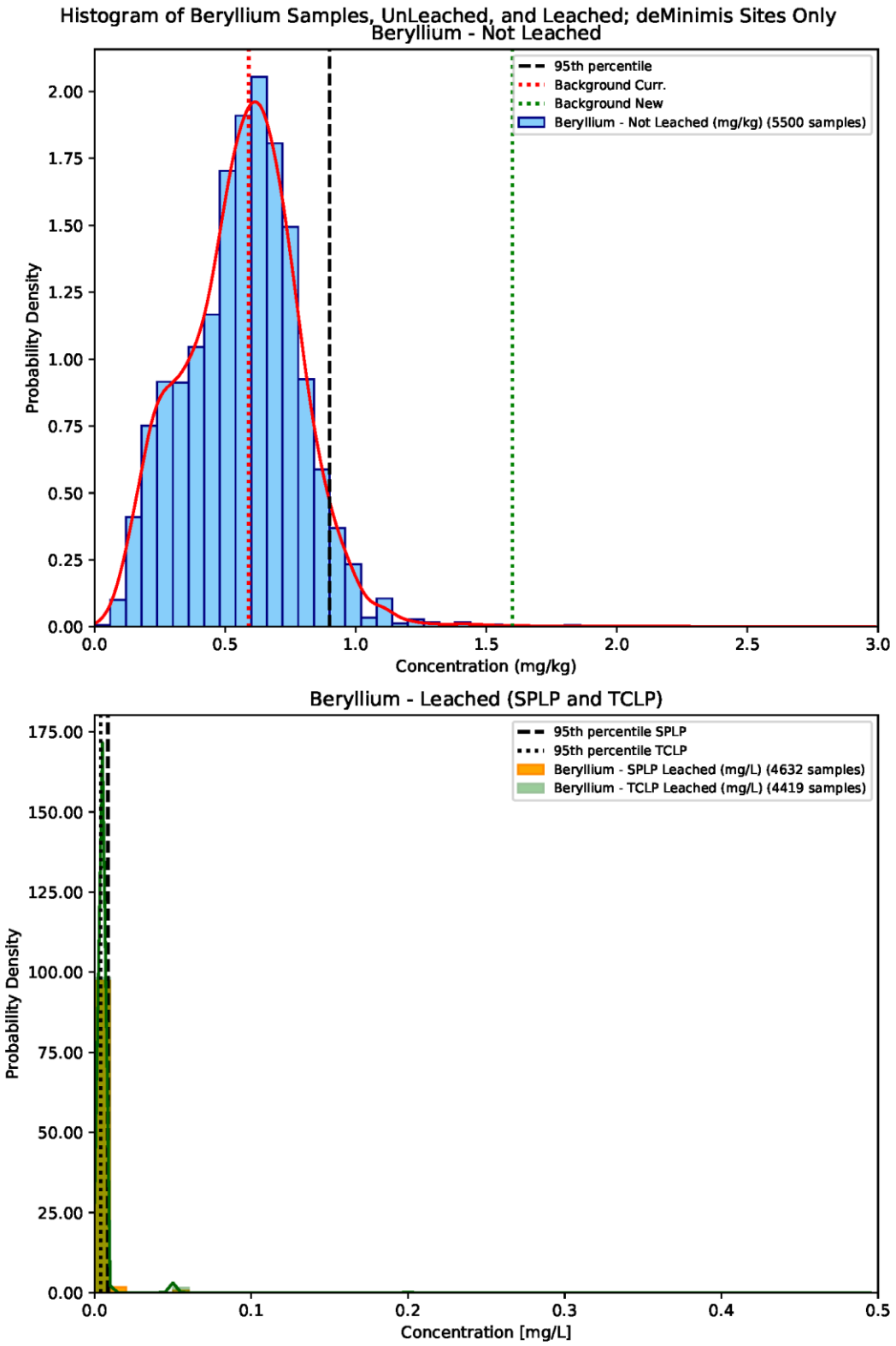


Figure 176. Histogram of RSL beryllium concentrations, de minimis (mg/kg)

Beryllium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

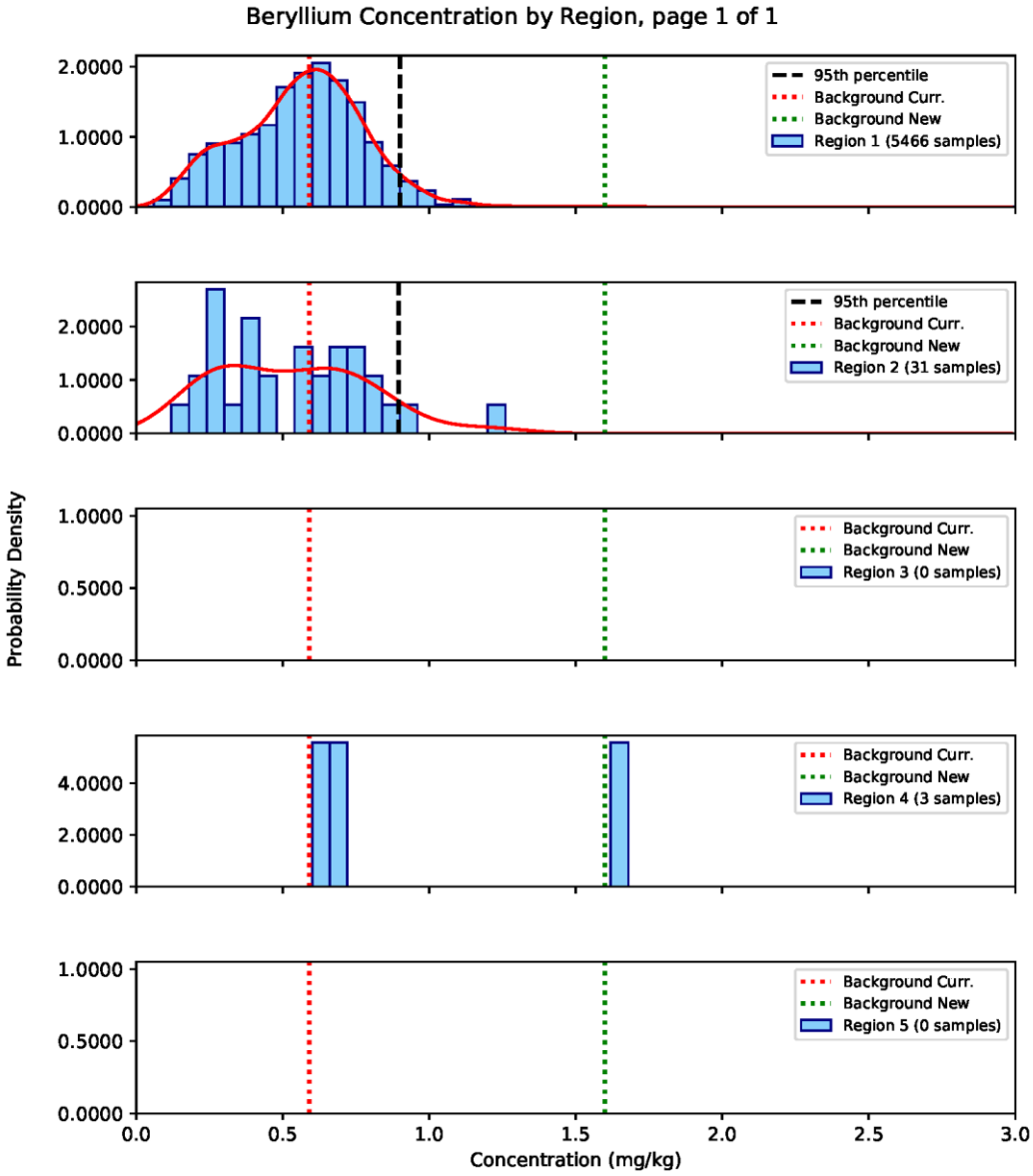


Figure 177. Histogram of RSL beryllium concentrations by IDOT Region, de minimis (mg/kg)

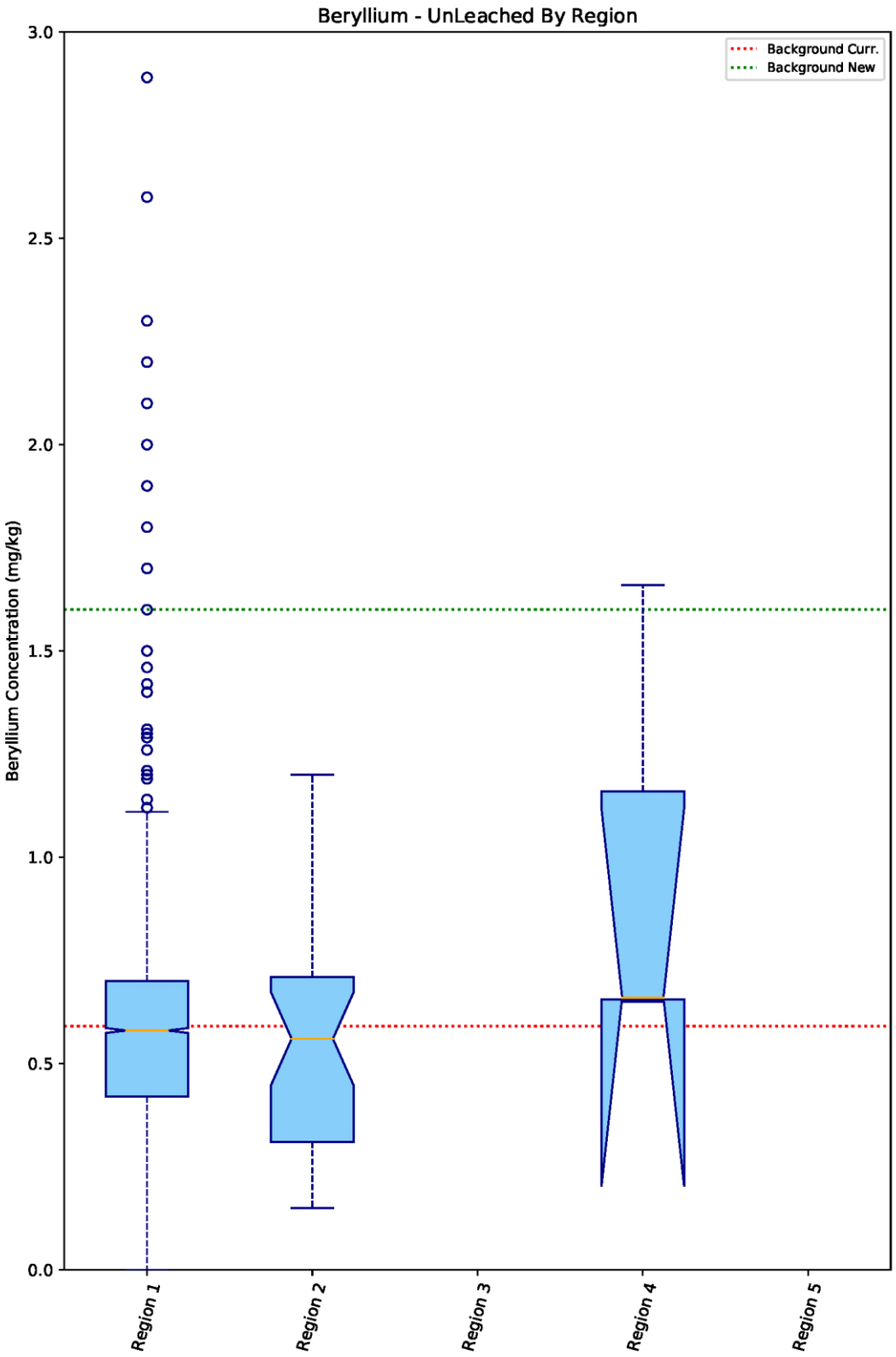


Figure 178. Boxplot of RSL beryllium concentrations by IDOT Region, de minimis (mg/kg)

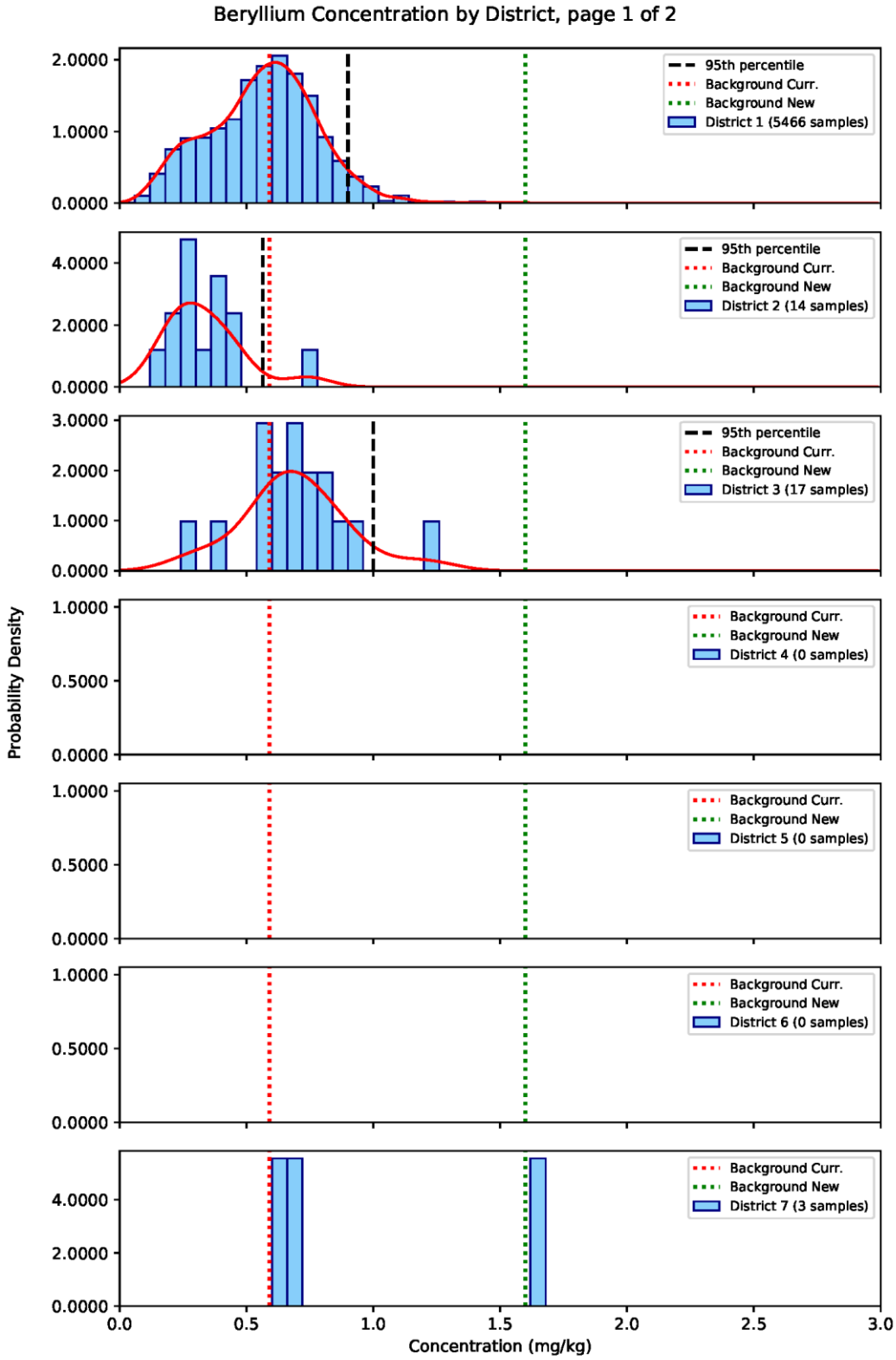


Figure 179. Histogram of RSL beryllium concentrations by IDOT District, de minimis (mg/kg), part 1

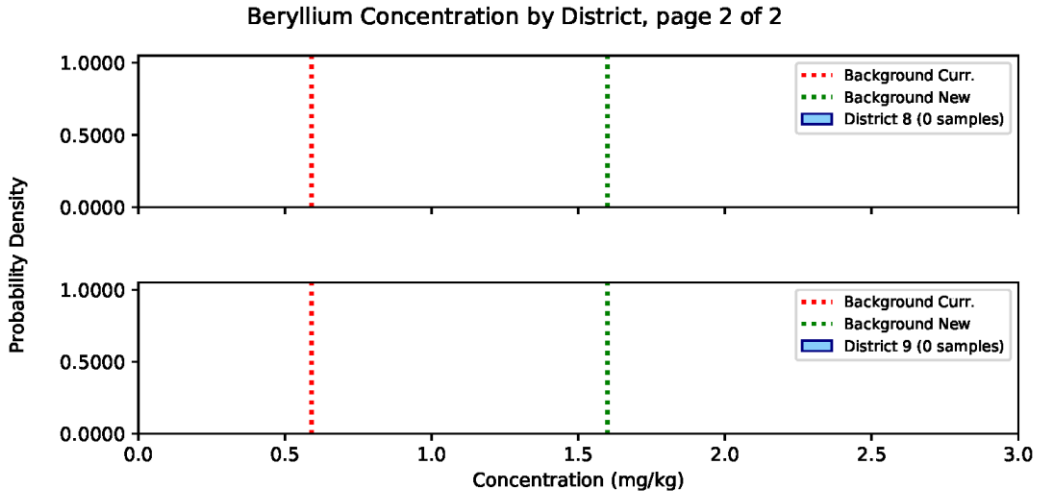


Figure 180. Histogram of RSL beryllium concentrations by IDOT District, de minimis (mg/kg), part 2

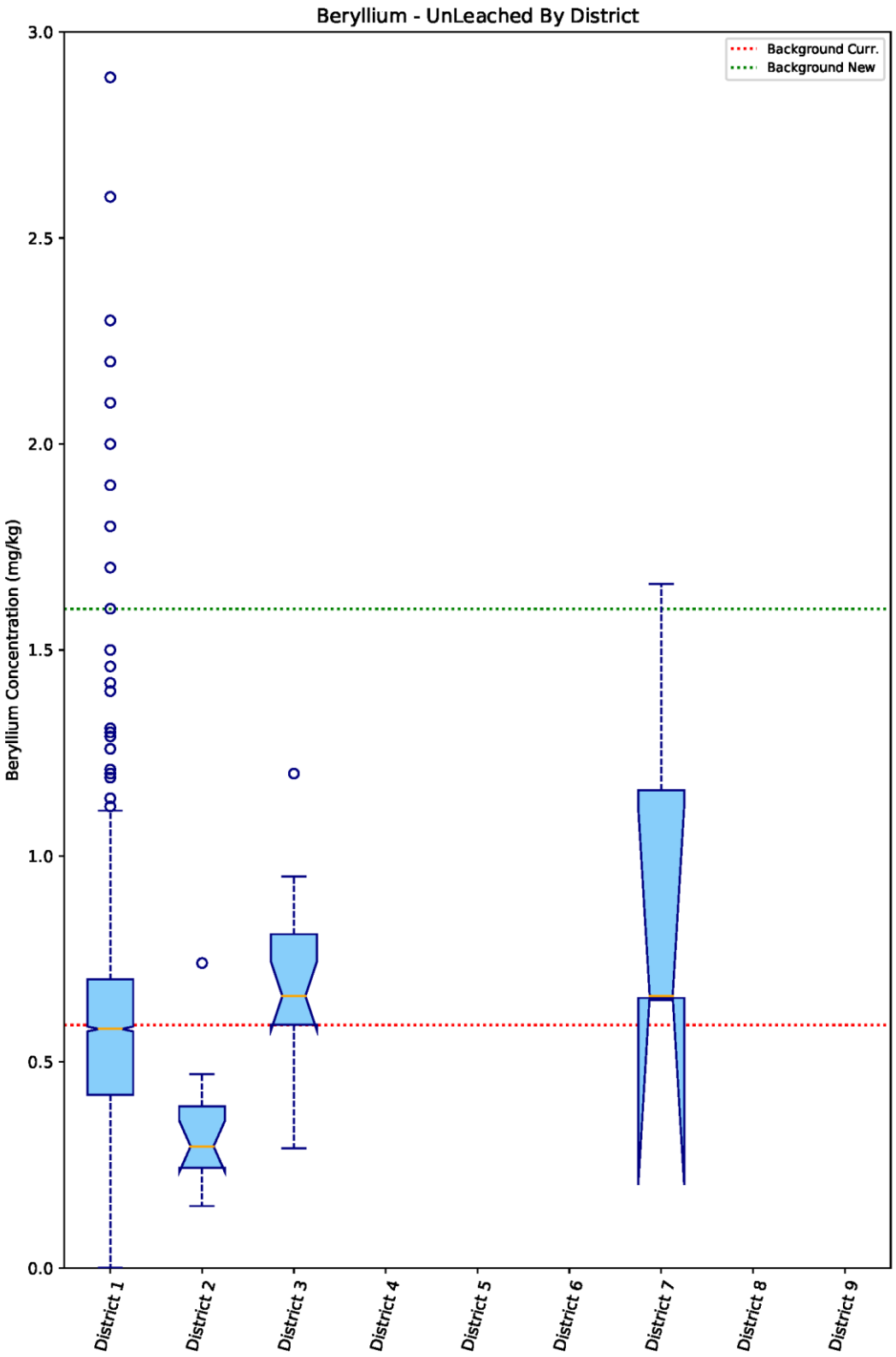


Figure 181. Boxplot of RSL beryllium concentrations by IDOT District, de minimis (mg/kg)

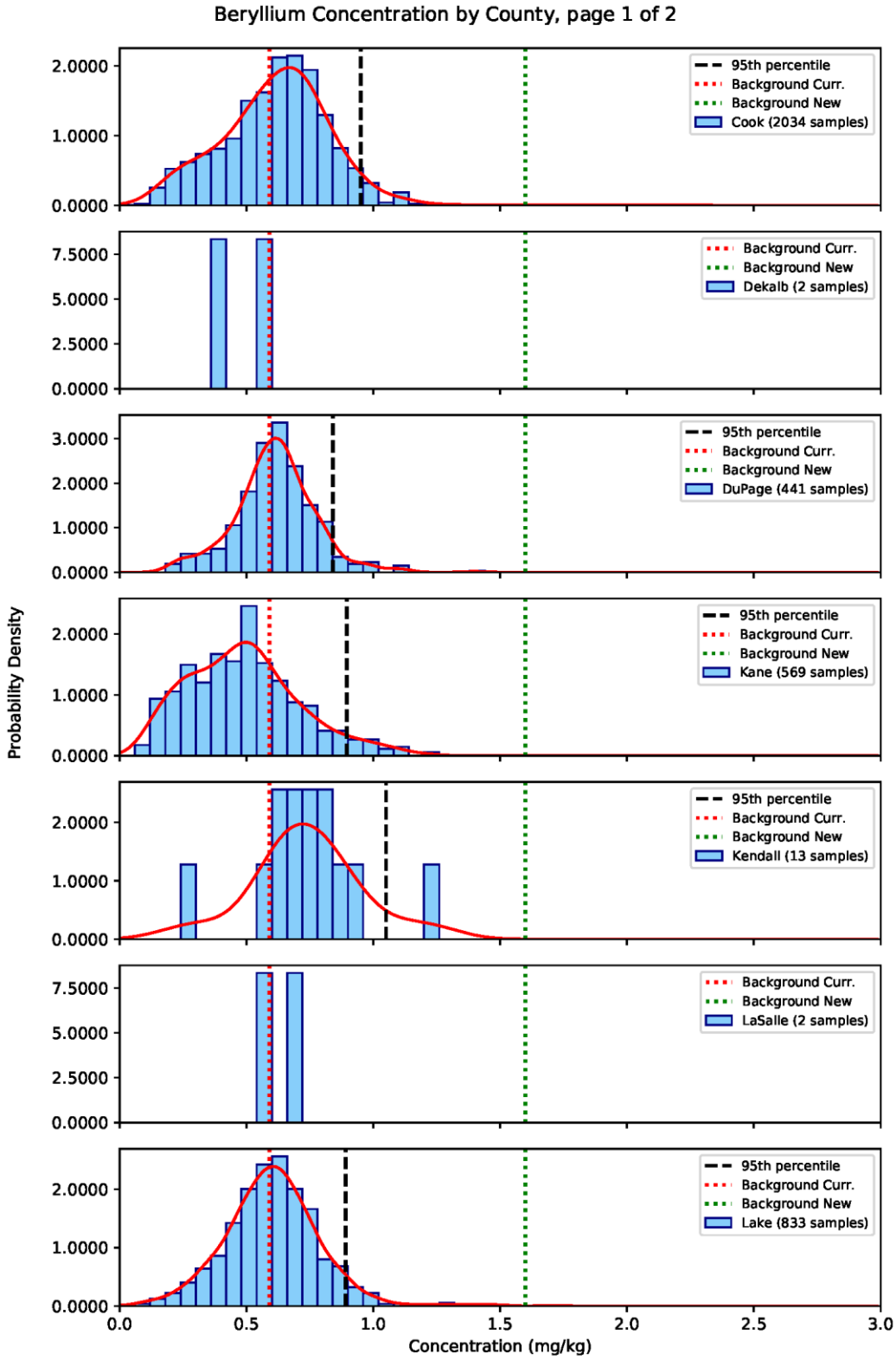


Figure 182. Histogram of RSL beryllium concentrations by Illinois county, de minimis (mg/kg), part 1

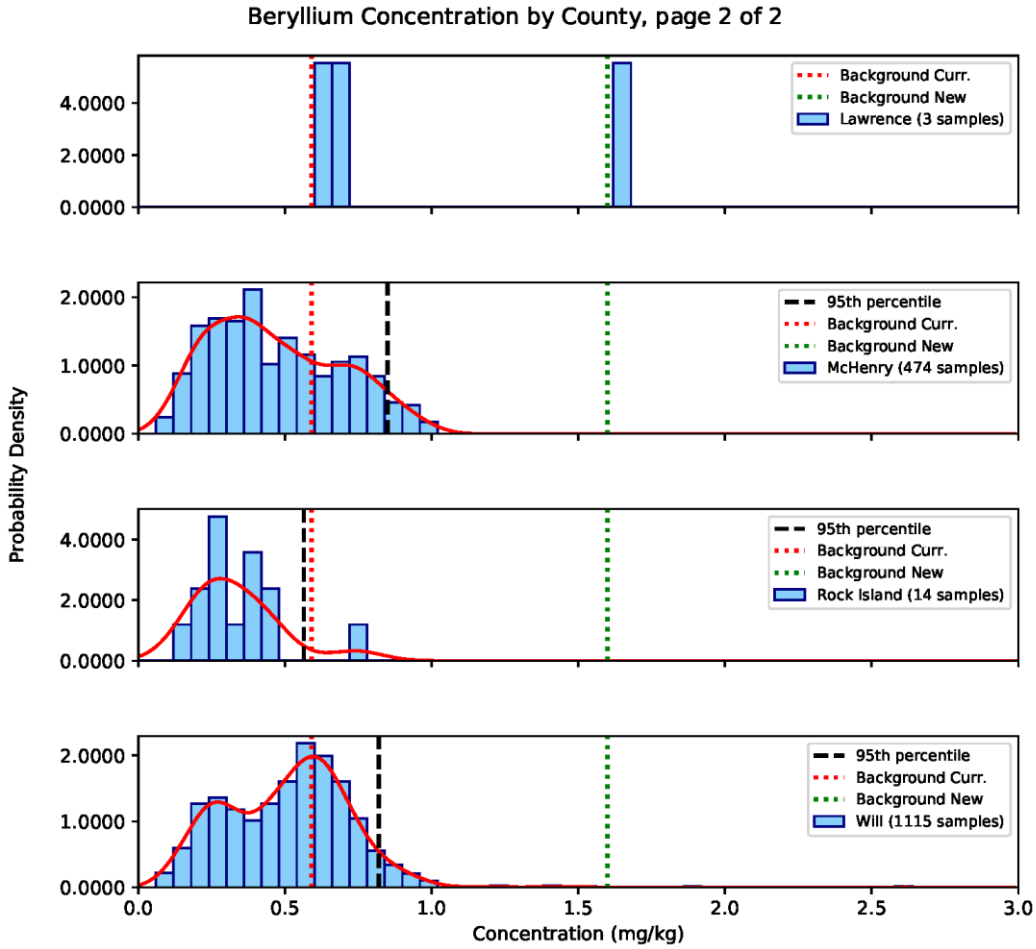


Figure 183. Histogram of RSL beryllium concentrations by Illinois county, de minimis (mg/kg), part 2

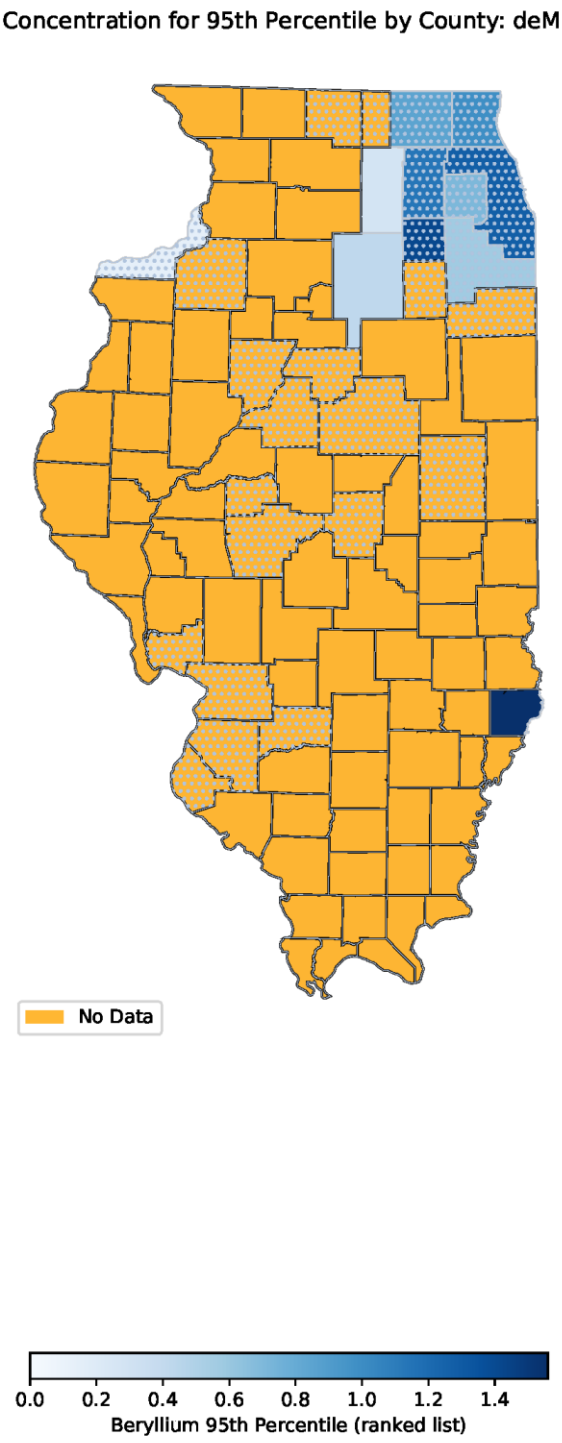


Figure 184. Map of RSL beryllium 95th percentile concentration by Illinois county, de minimis (mg/kg)

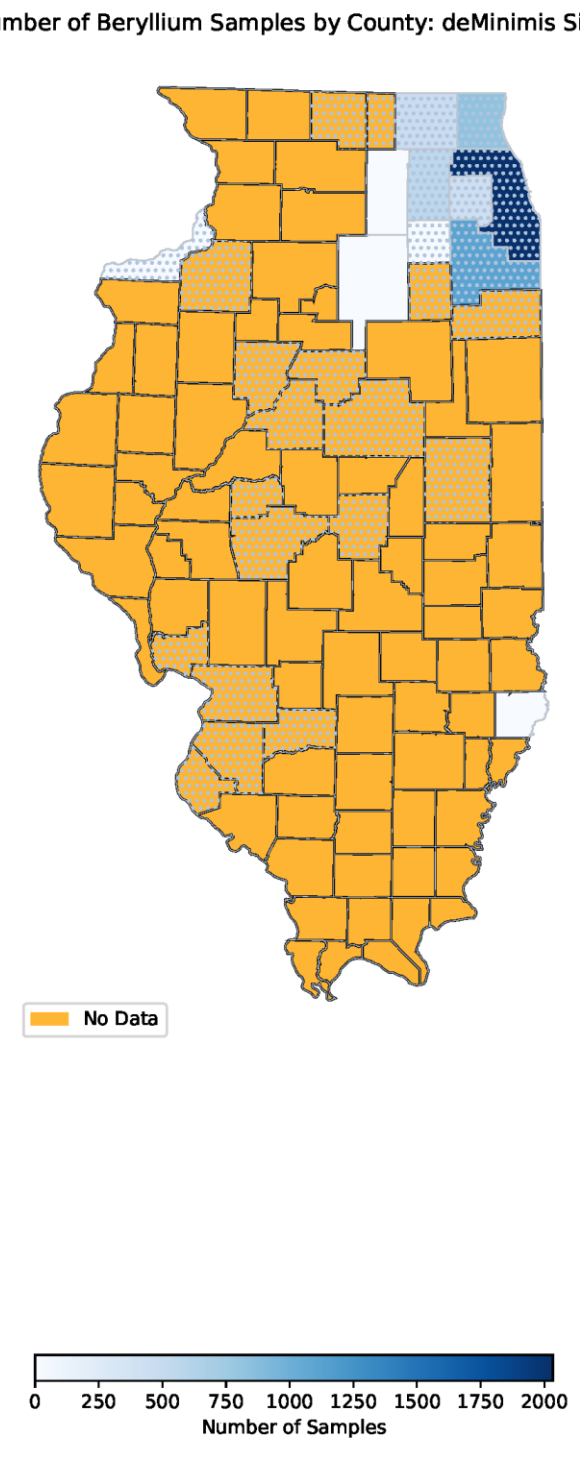


Figure 185. Map of RSL beryllium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX F. ANALYTE ANALYSIS: CADMIUM

F.1 CADMIUM REC

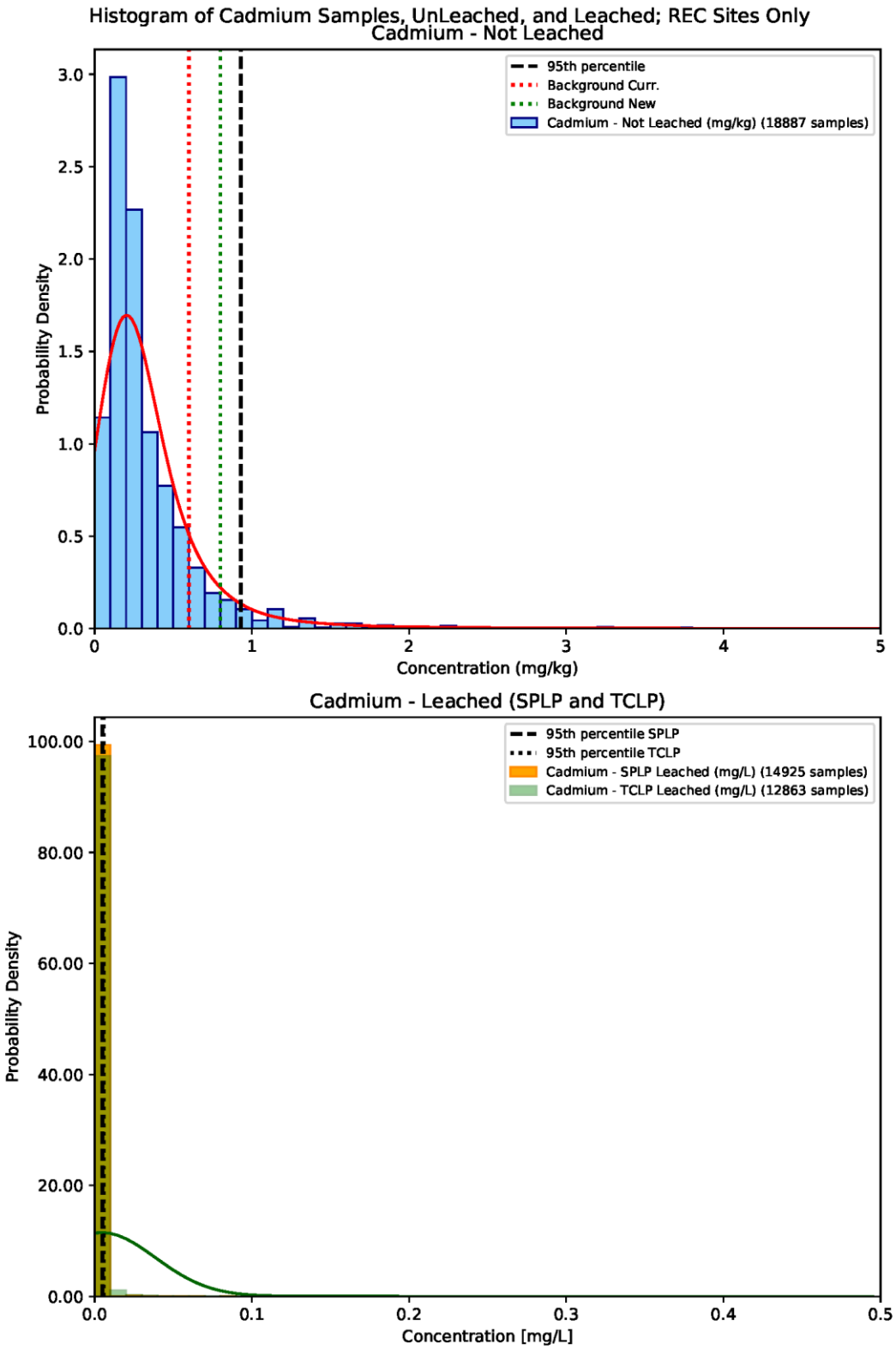


Figure 186. Histogram of RSL cadmium concentrations, REC (mg/kg)

Cadmium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

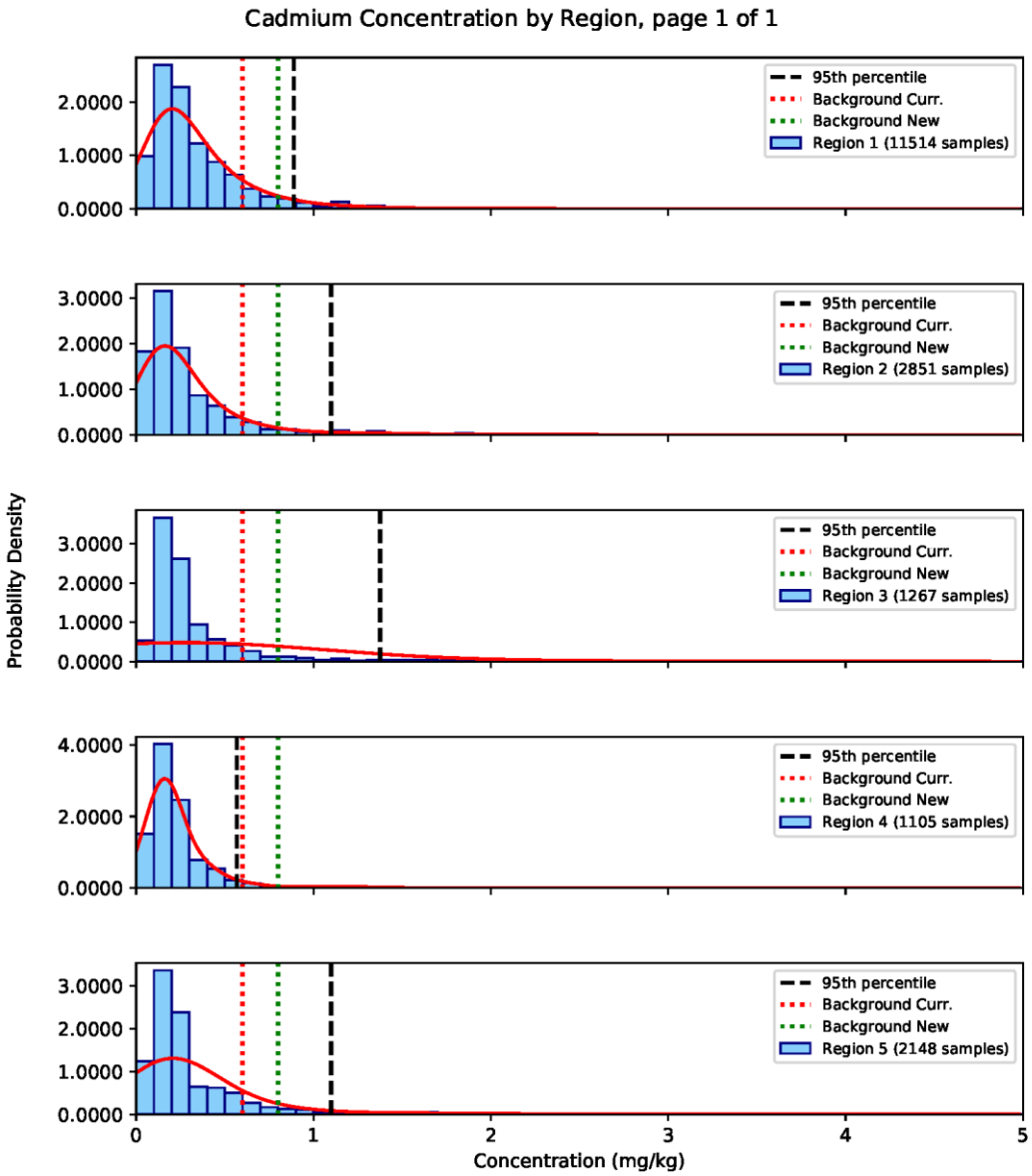


Figure 187. Histogram of RSL cadmium concentrations by IDOT Region, REC (mg/kg)

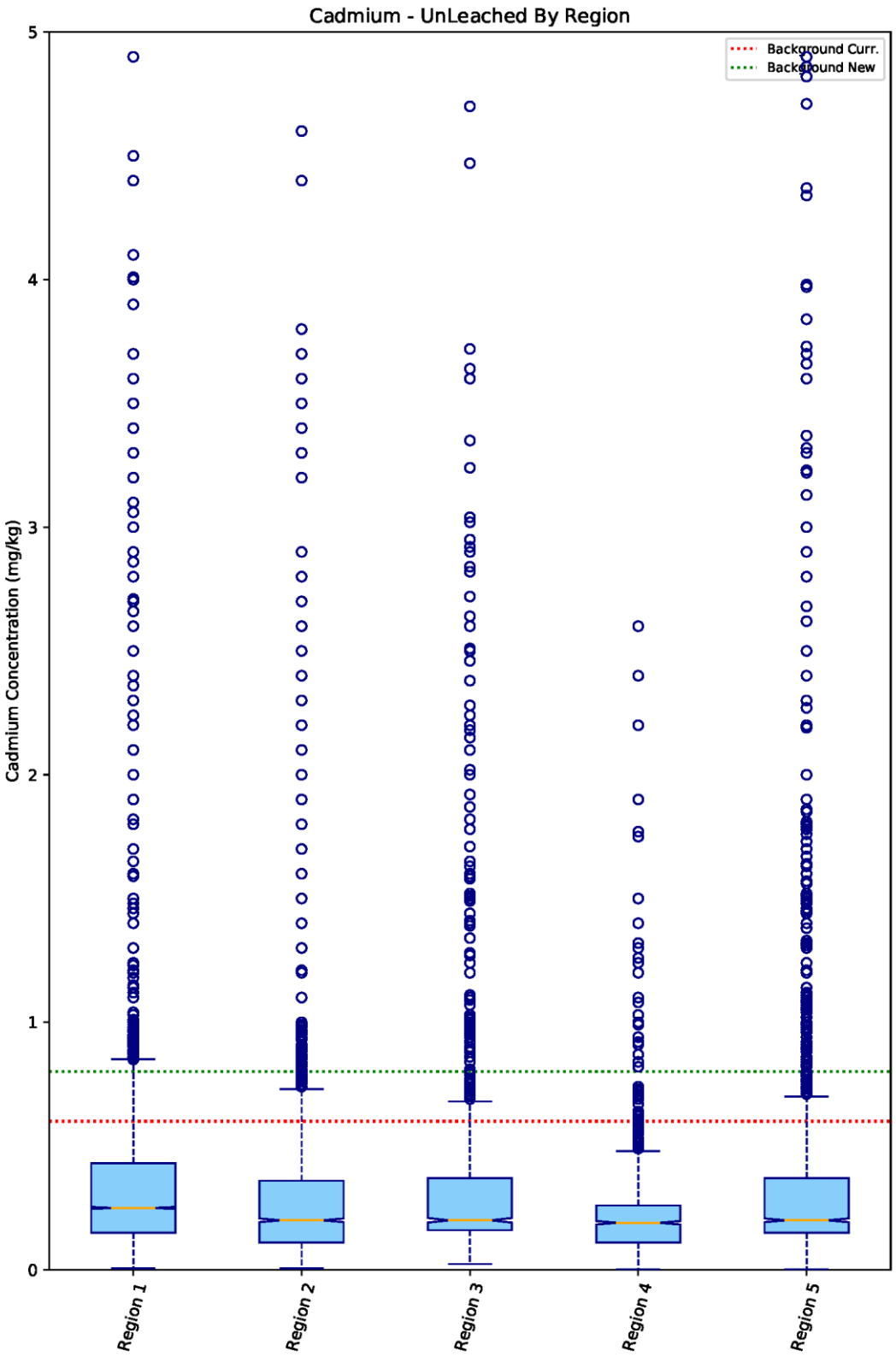


Figure 188. Boxplot of RSL cadmium concentrations by IDOT Region, REC (mg/kg)

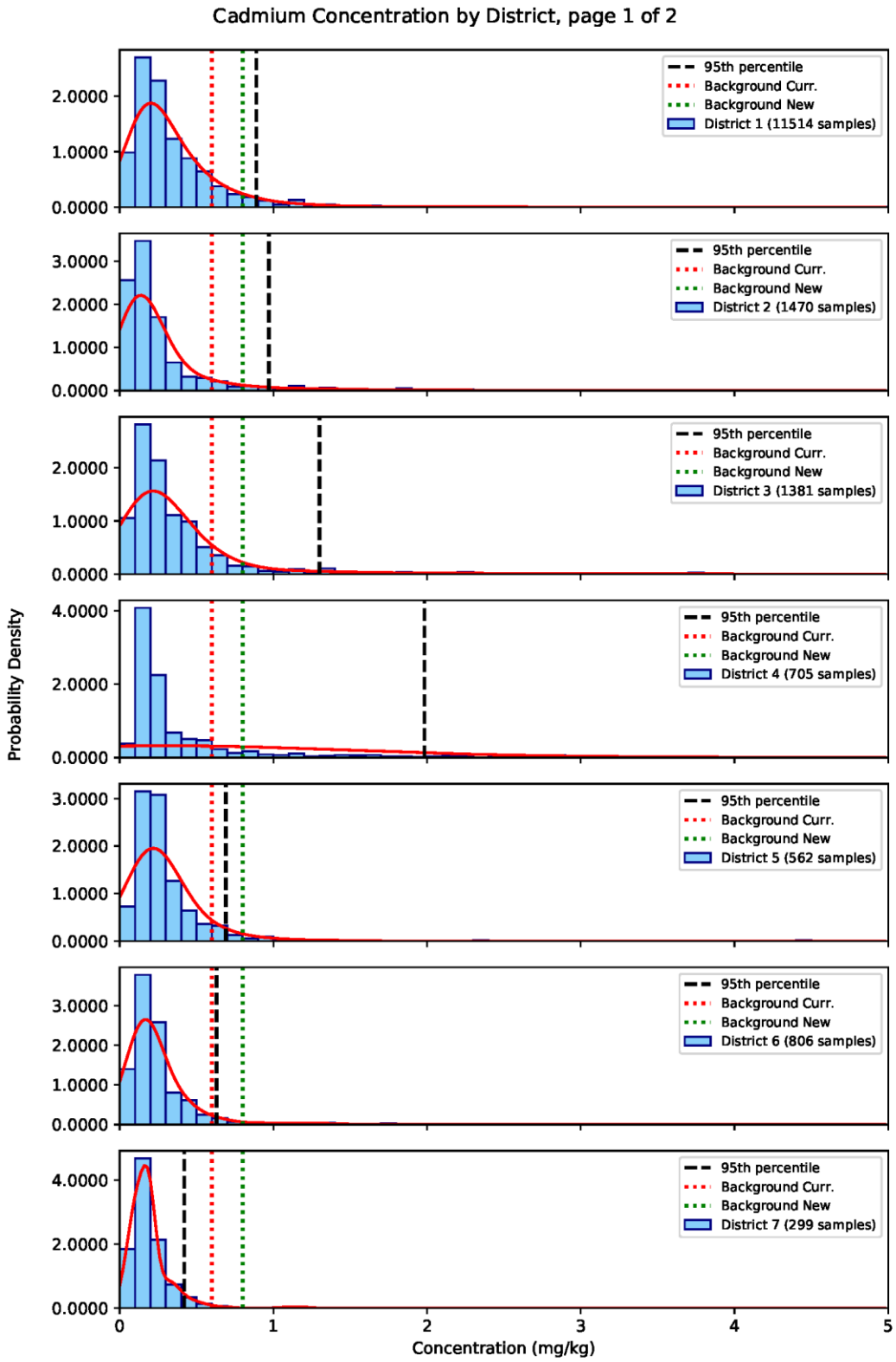


Figure 189. Histogram of RSL cadmium concentrations by IDOT District, REC (mg/kg), part 1

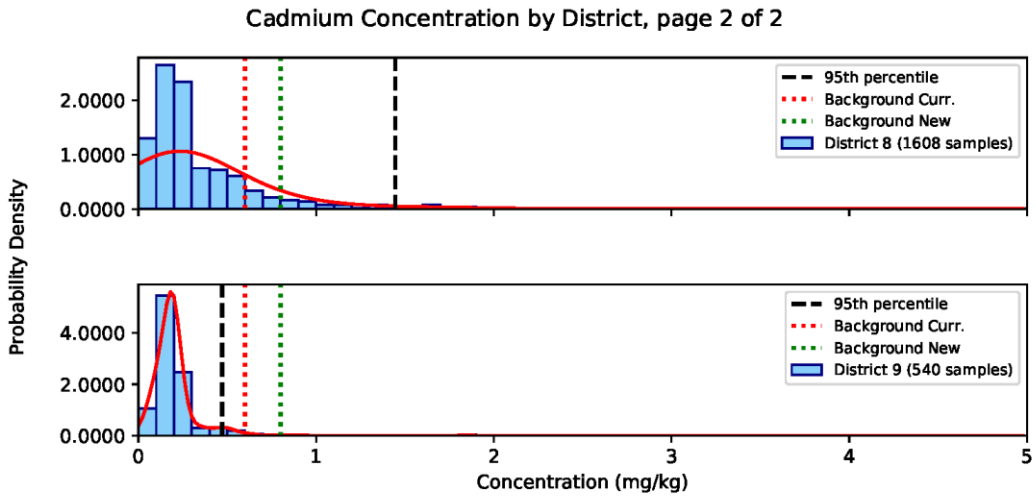


Figure 190. Histogram of RSL cadmium concentrations by IDOT District, REC (mg/kg), part 2

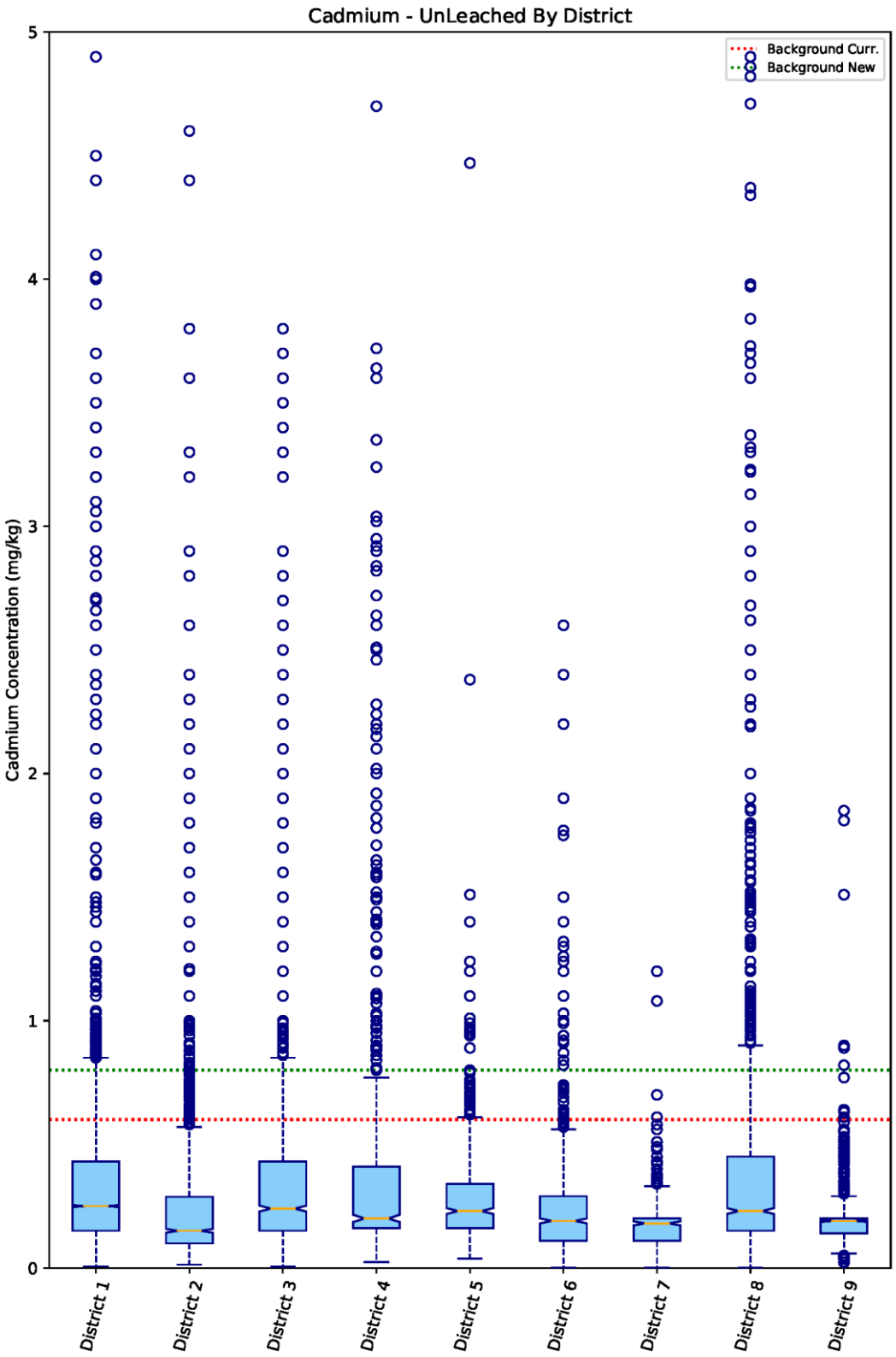


Figure 191. Boxplot of RSL cadmium concentrations by IDOT District, REC (mg/kg)

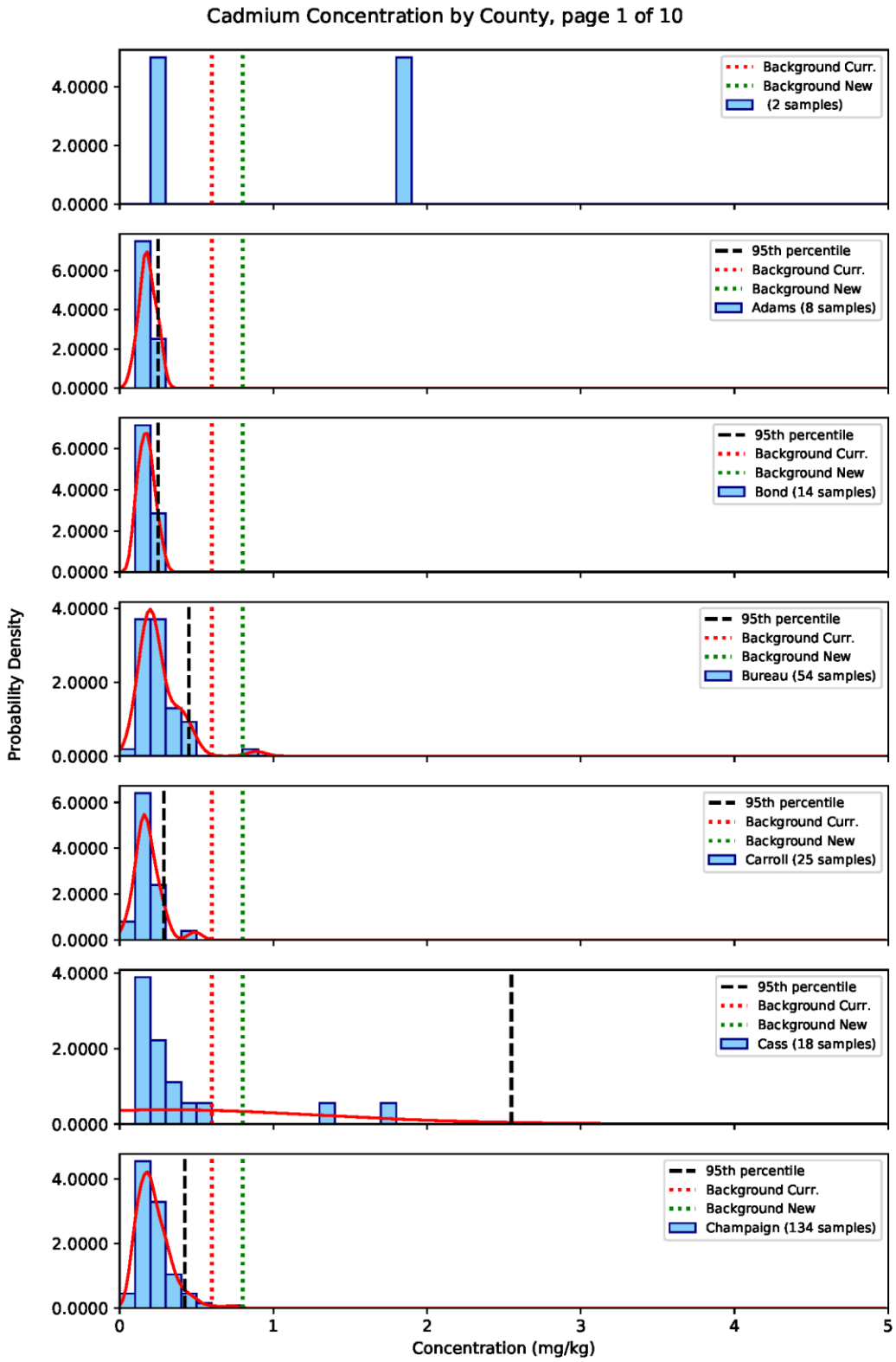


Figure 192. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 1

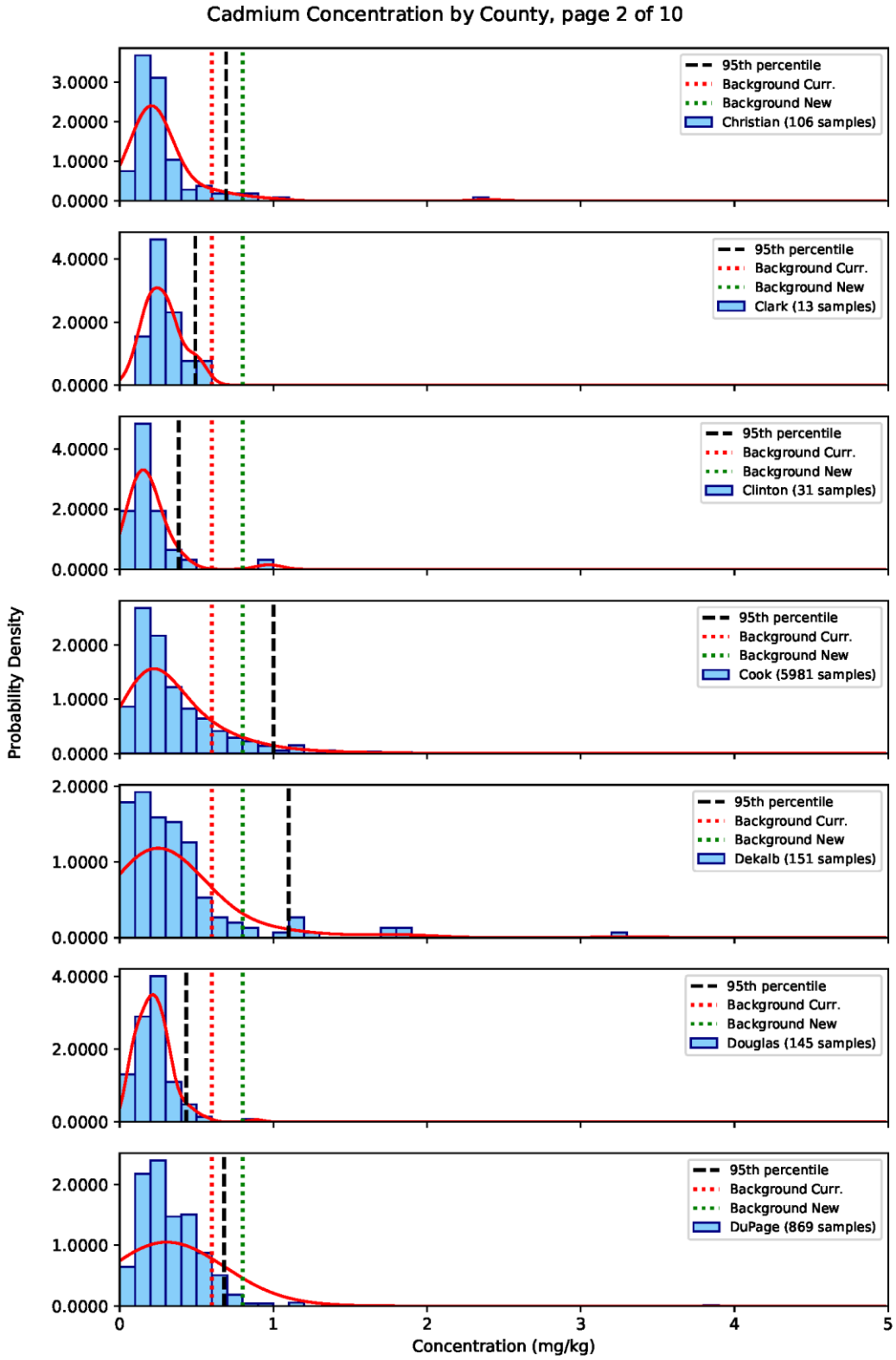


Figure 193. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 2

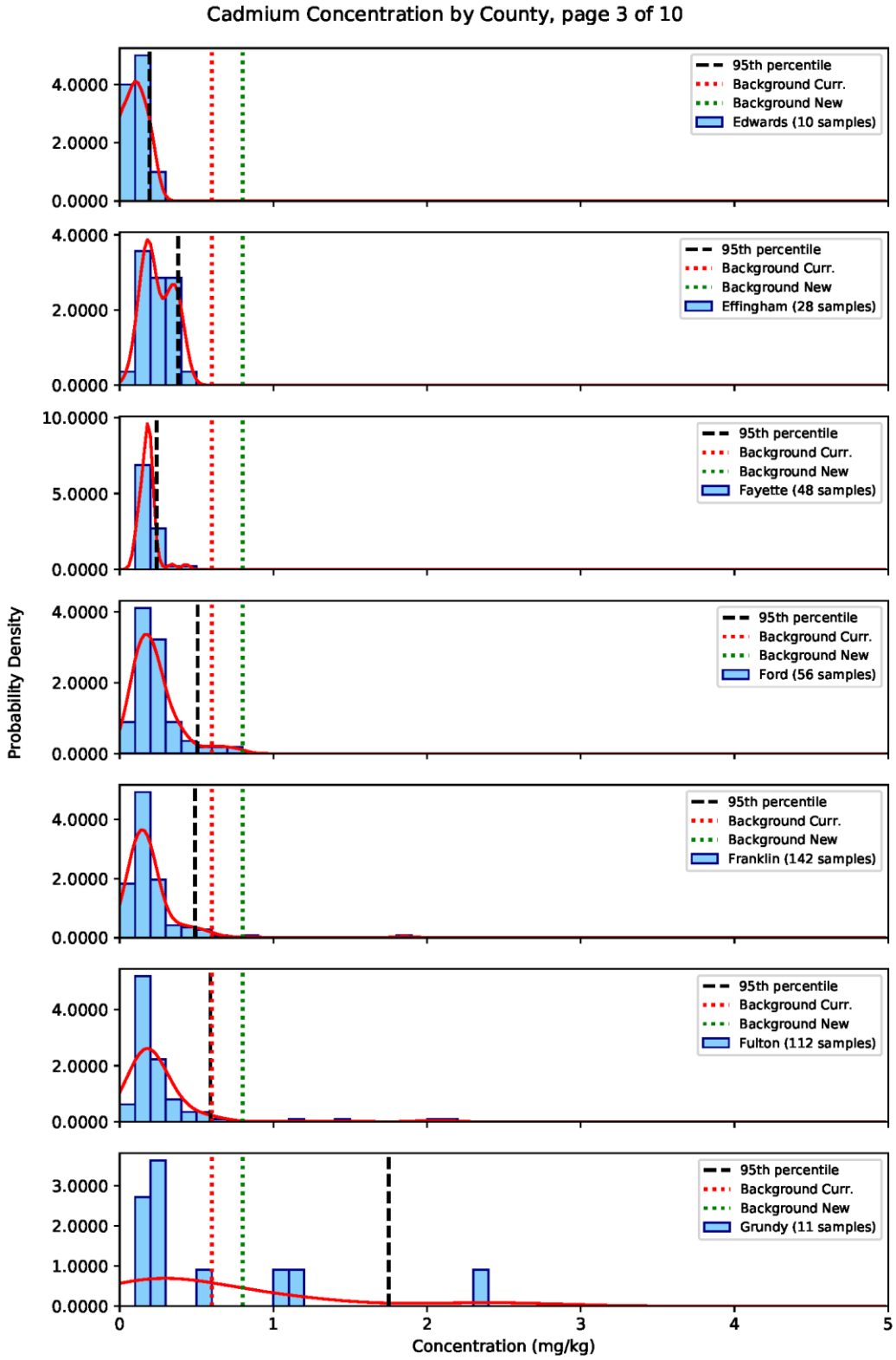


Figure 194. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 3

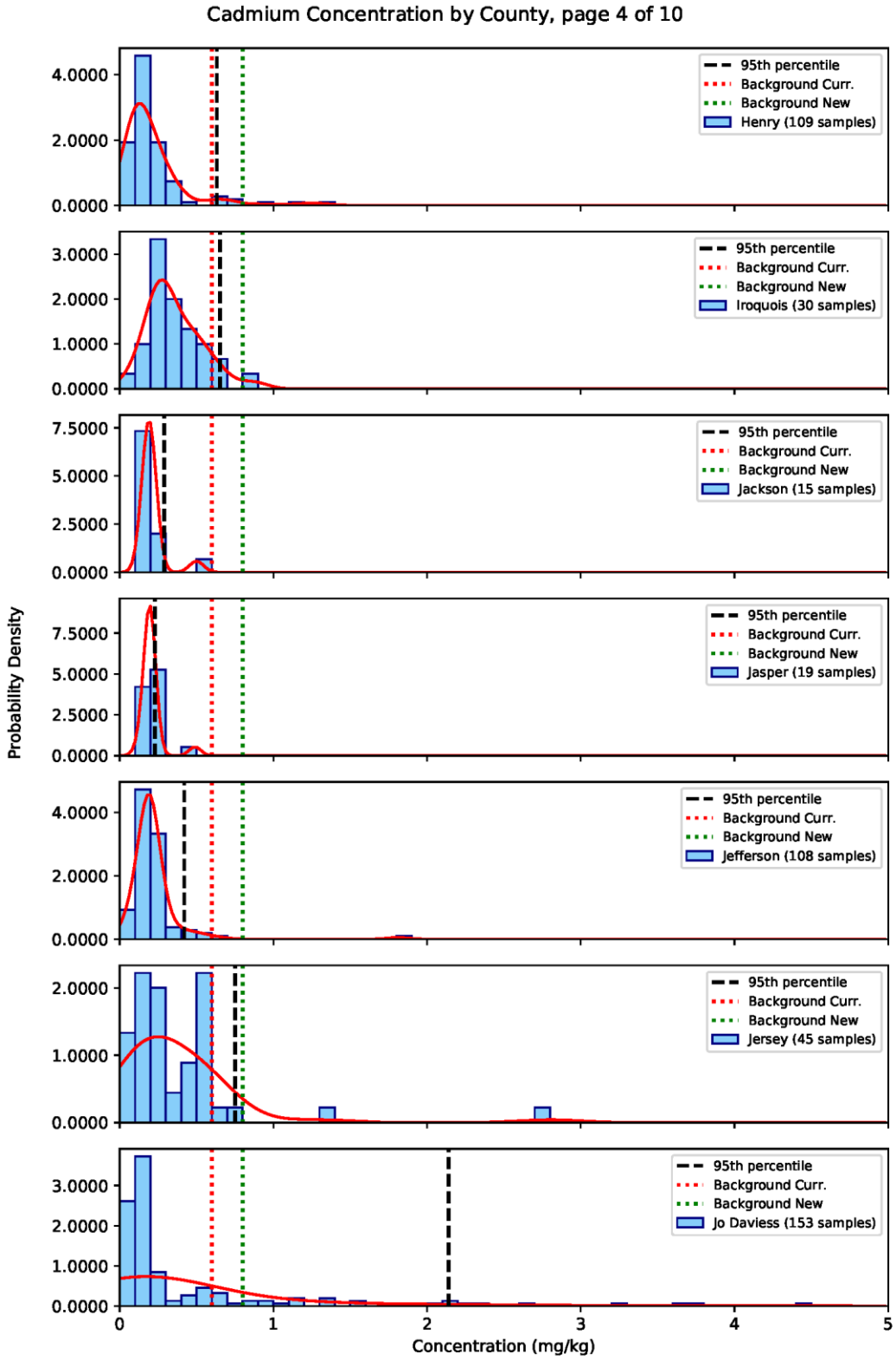


Figure 195. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 4

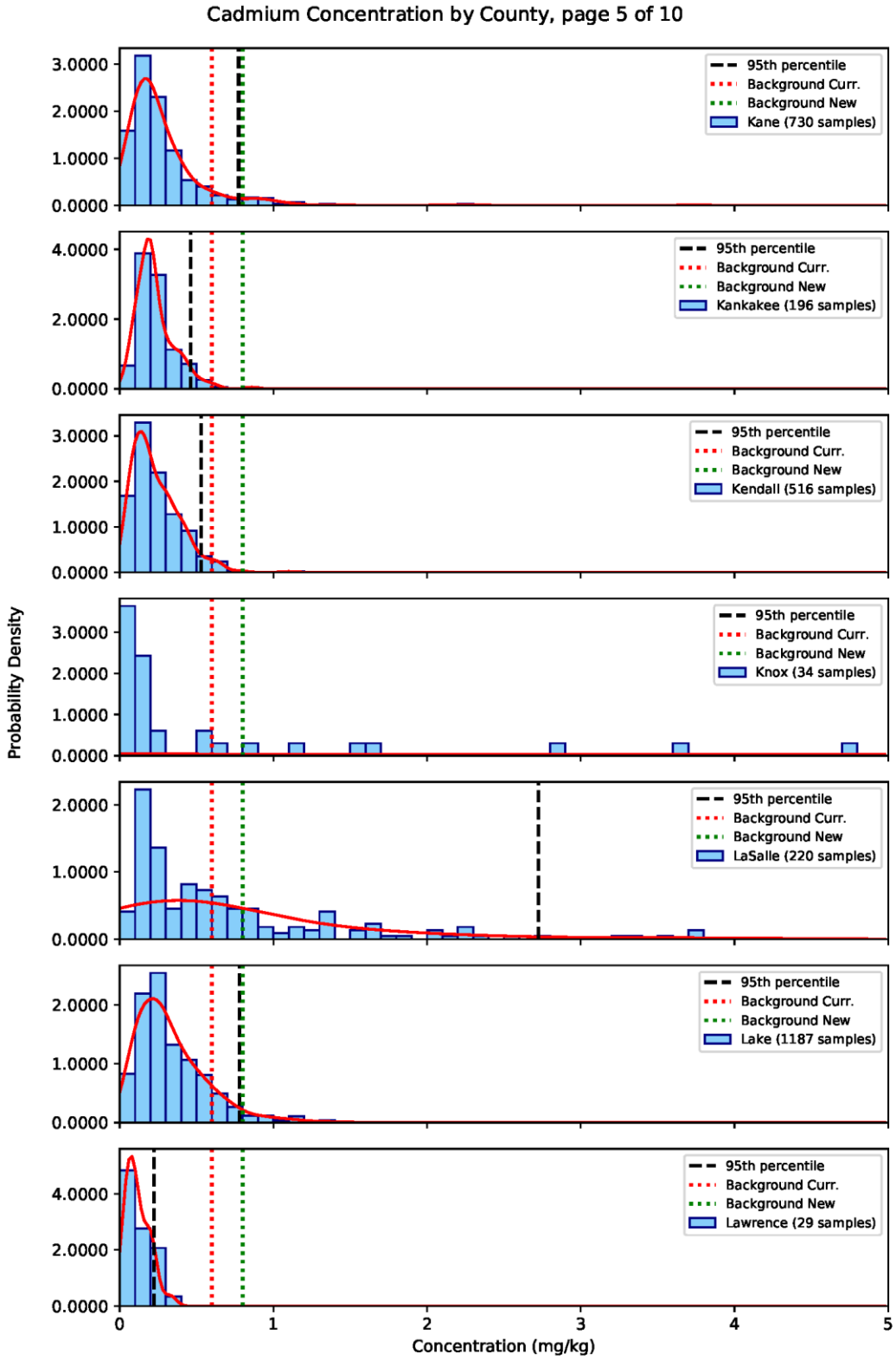


Figure 196. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 5

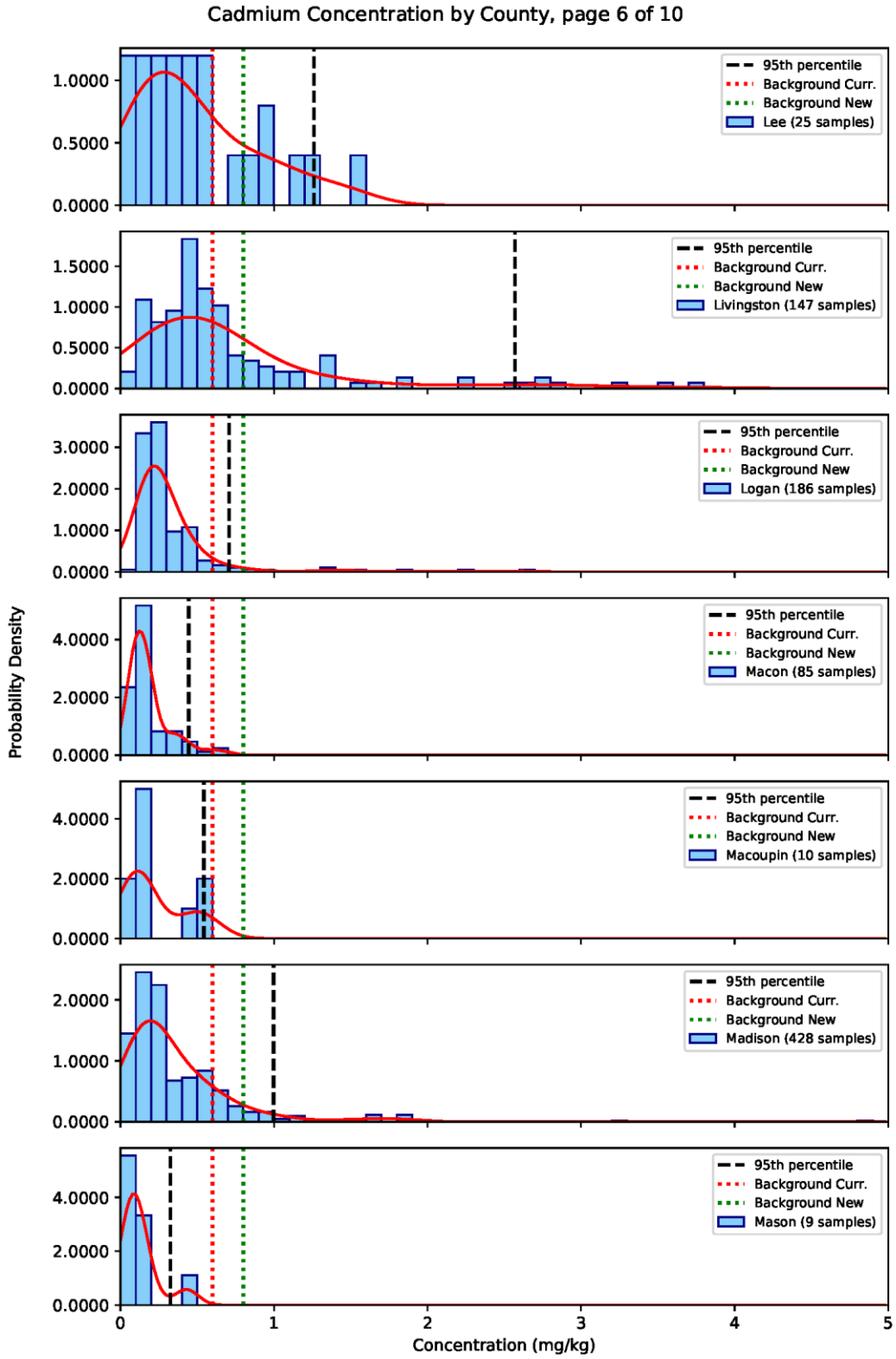


Figure 197. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 6

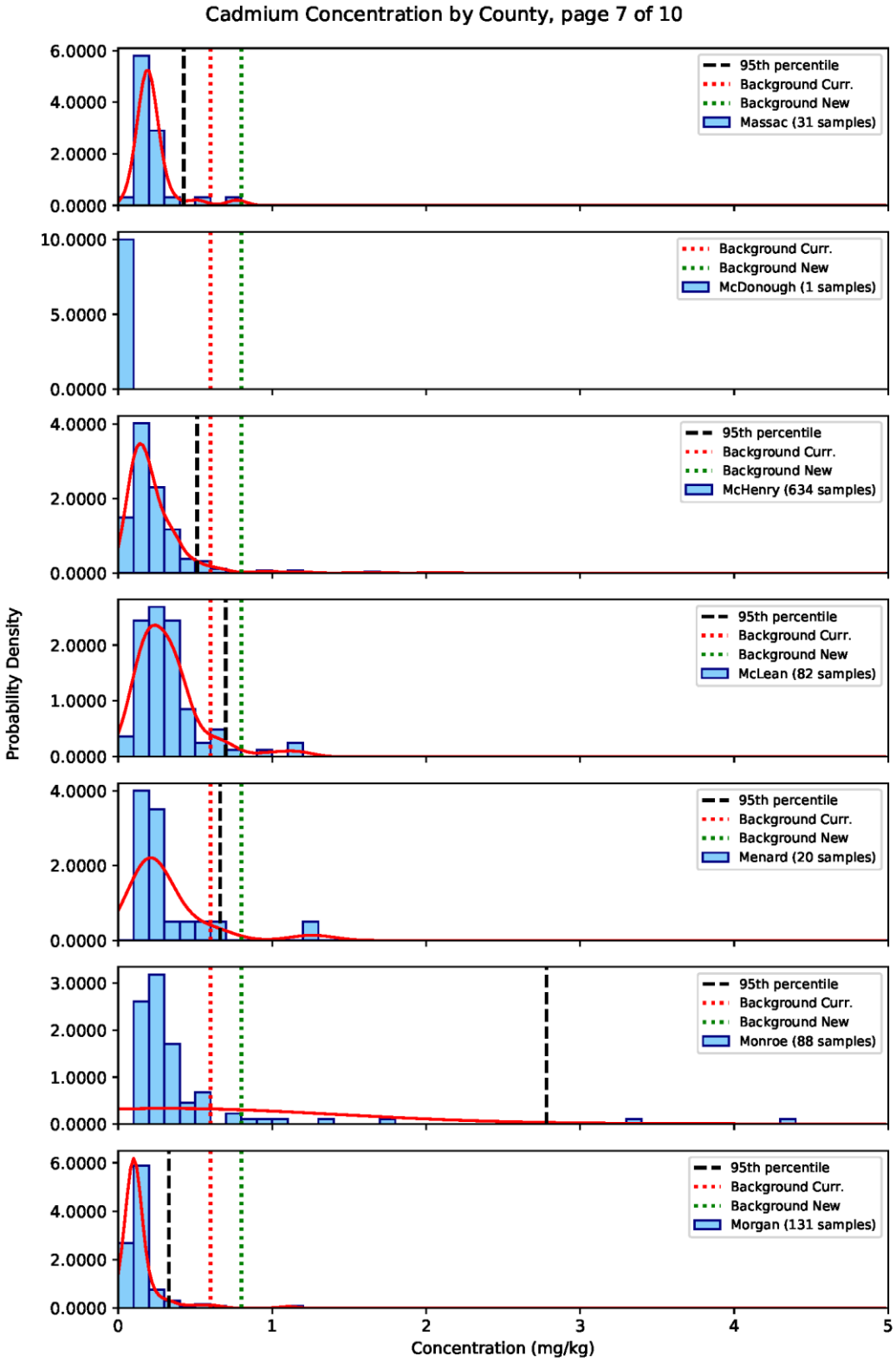


Figure 198. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 7

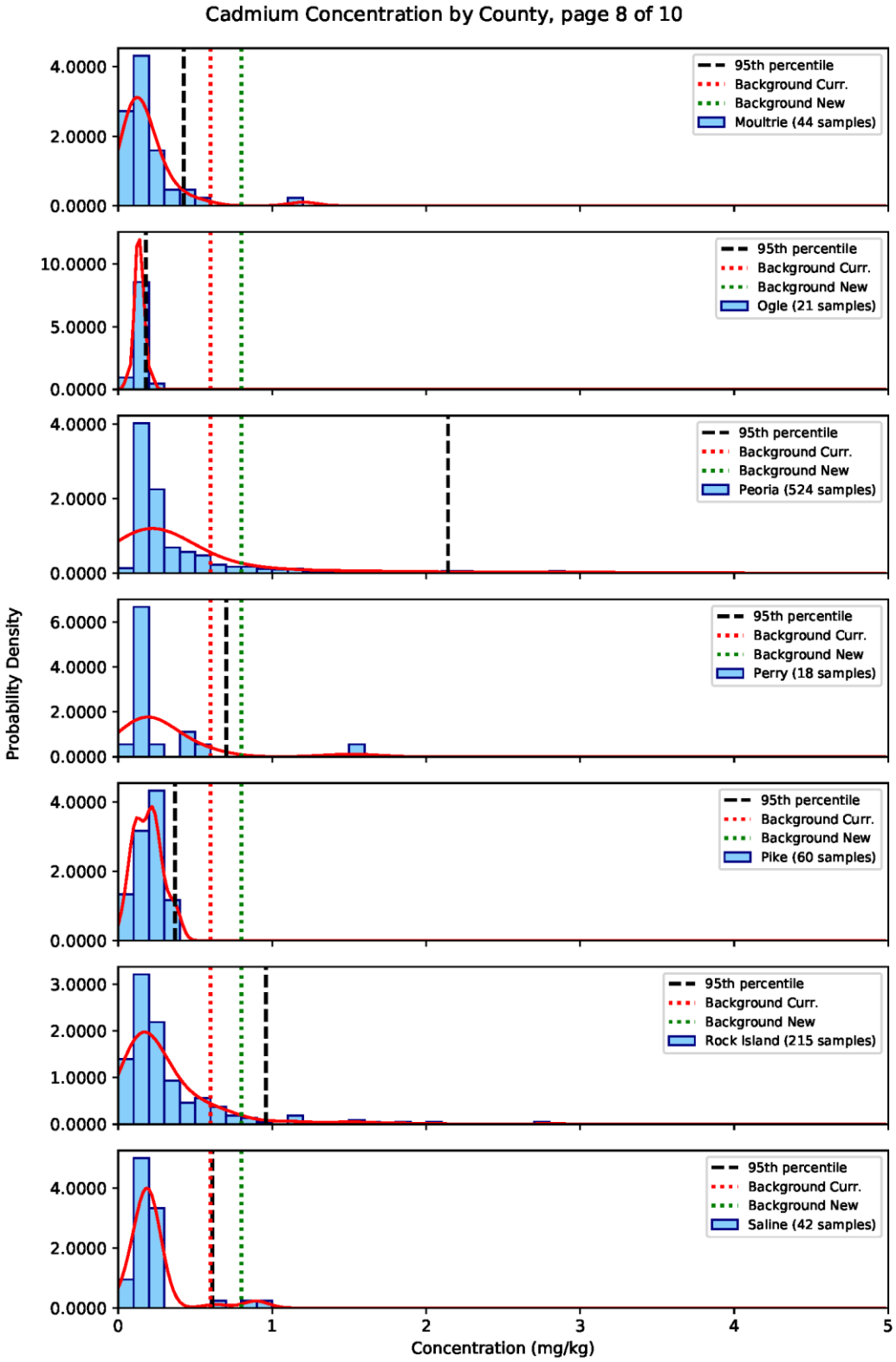


Figure 199. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 8

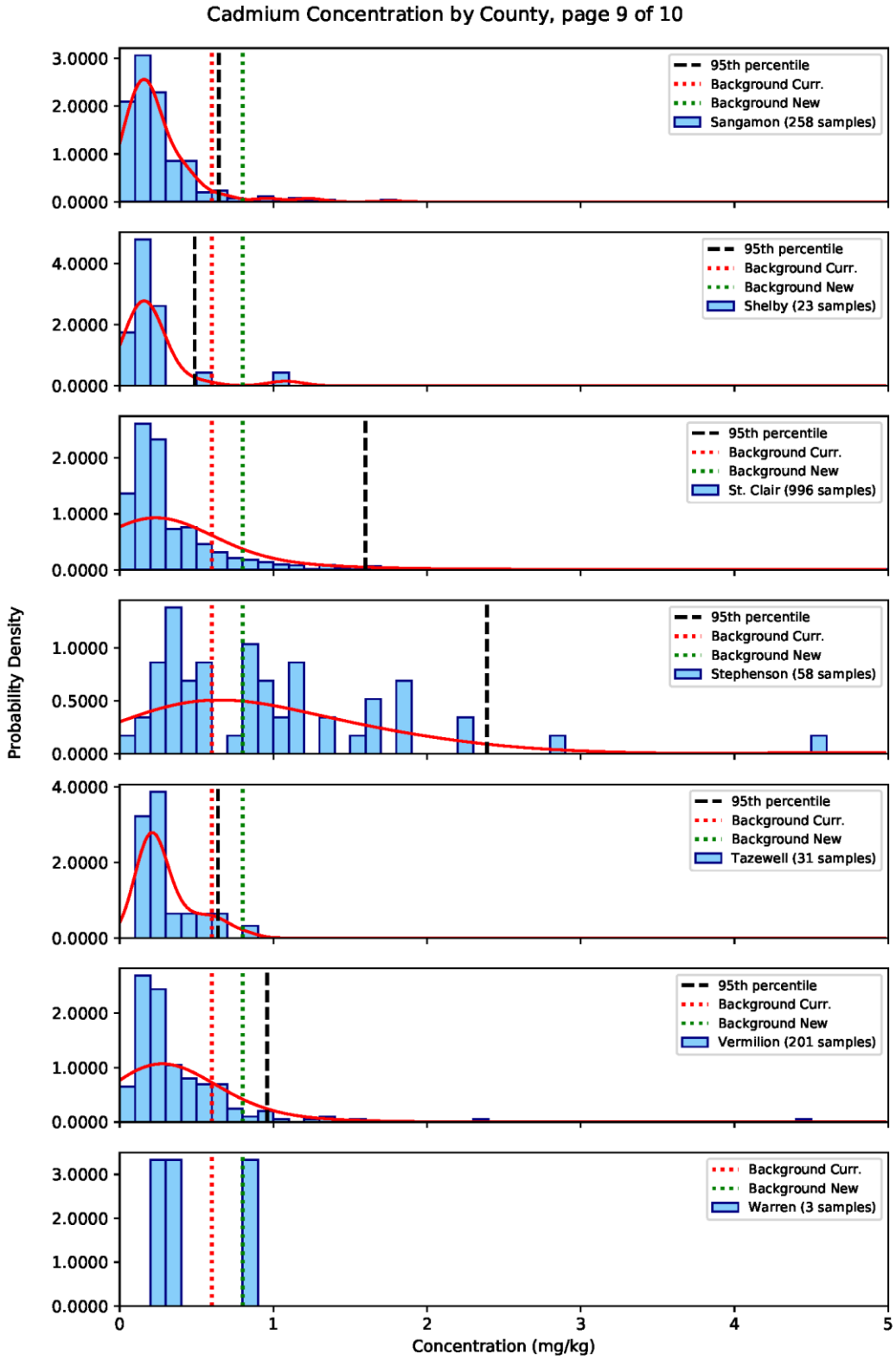


Figure 200. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 9

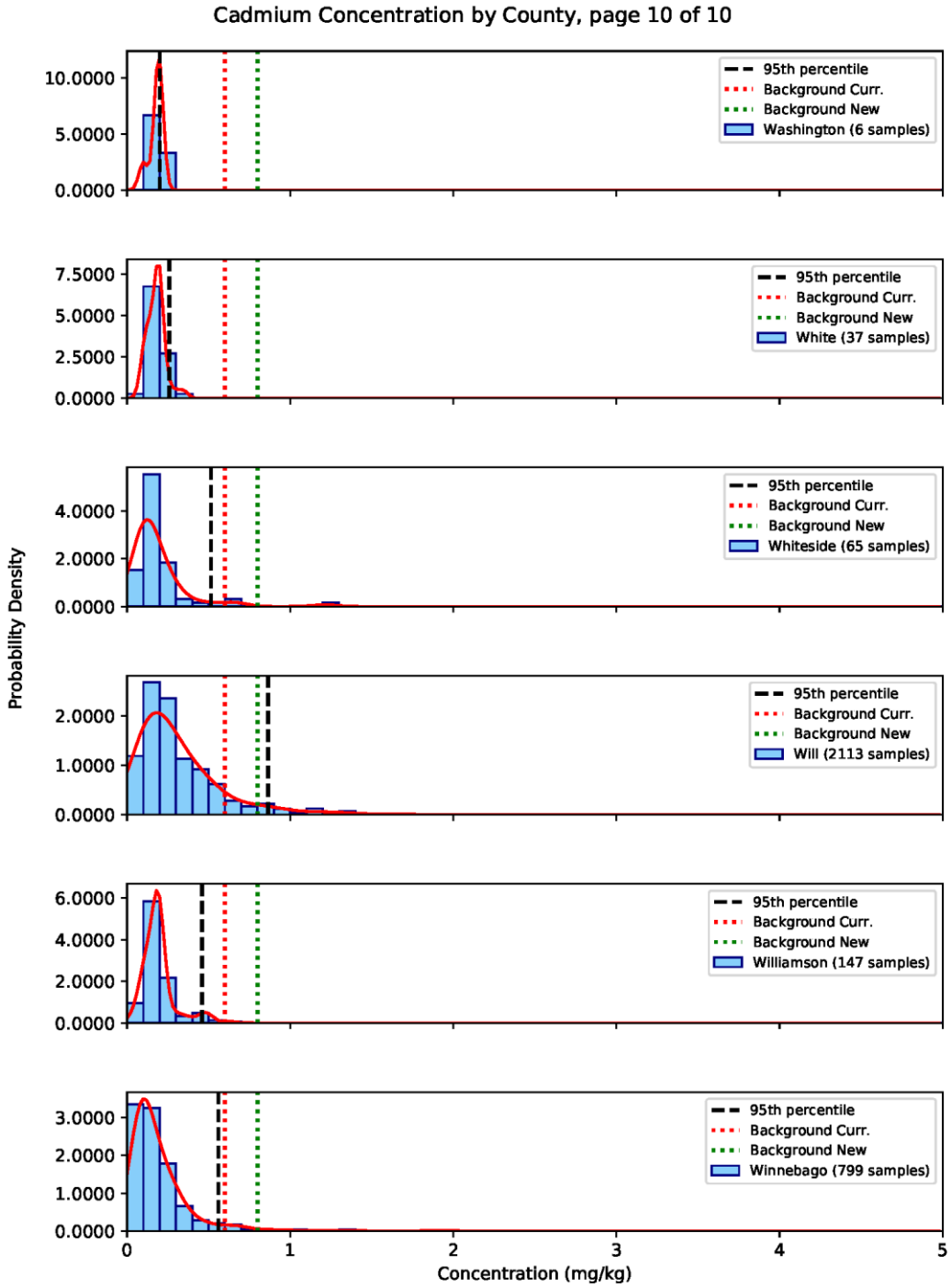


Figure 201. Histogram of RSL cadmium concentrations by Illinois county, REC (mg/kg), part 10

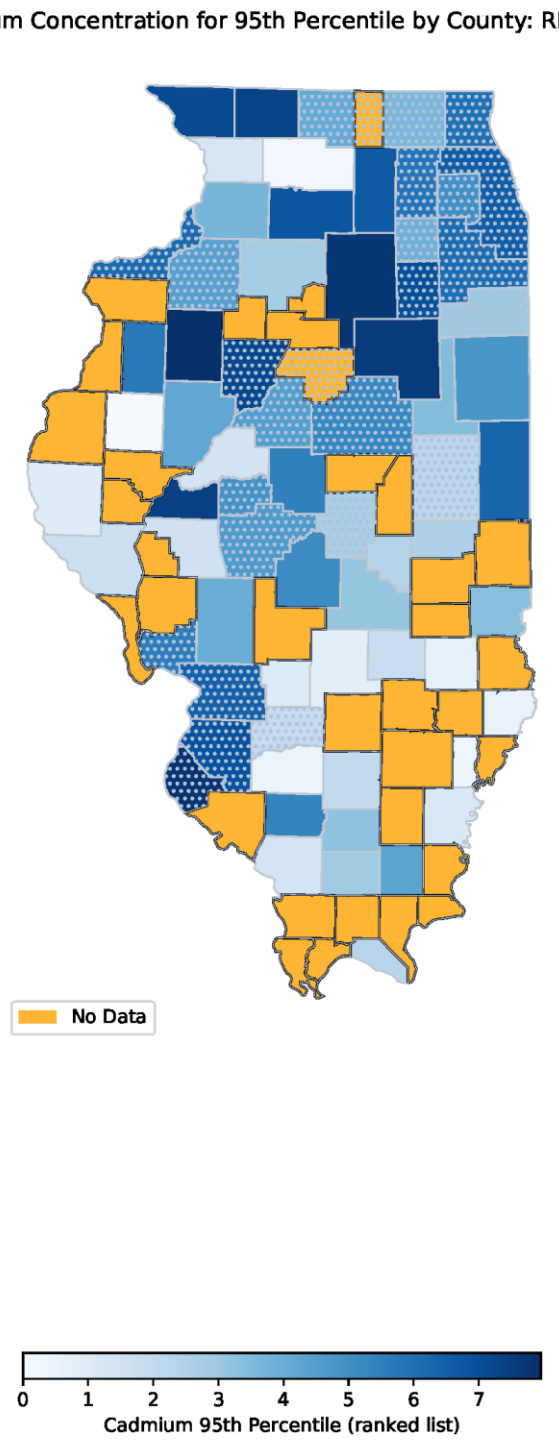


Figure 202. Map of RSL cadmium 95th percentile concentration by Illinois county, REC (mg/kg)

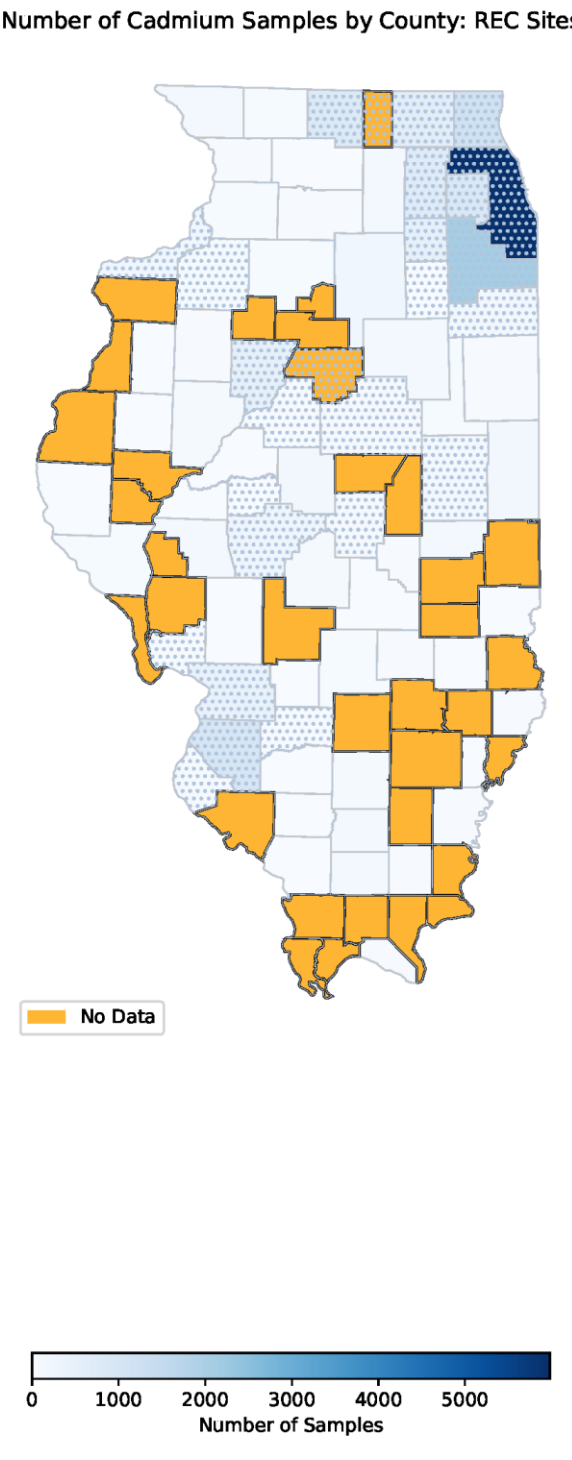


Figure 203. Map of RSL cadmium sample quantity by Illinois county, REC (mg/kg)

F.2 CADMIUM NON-REC

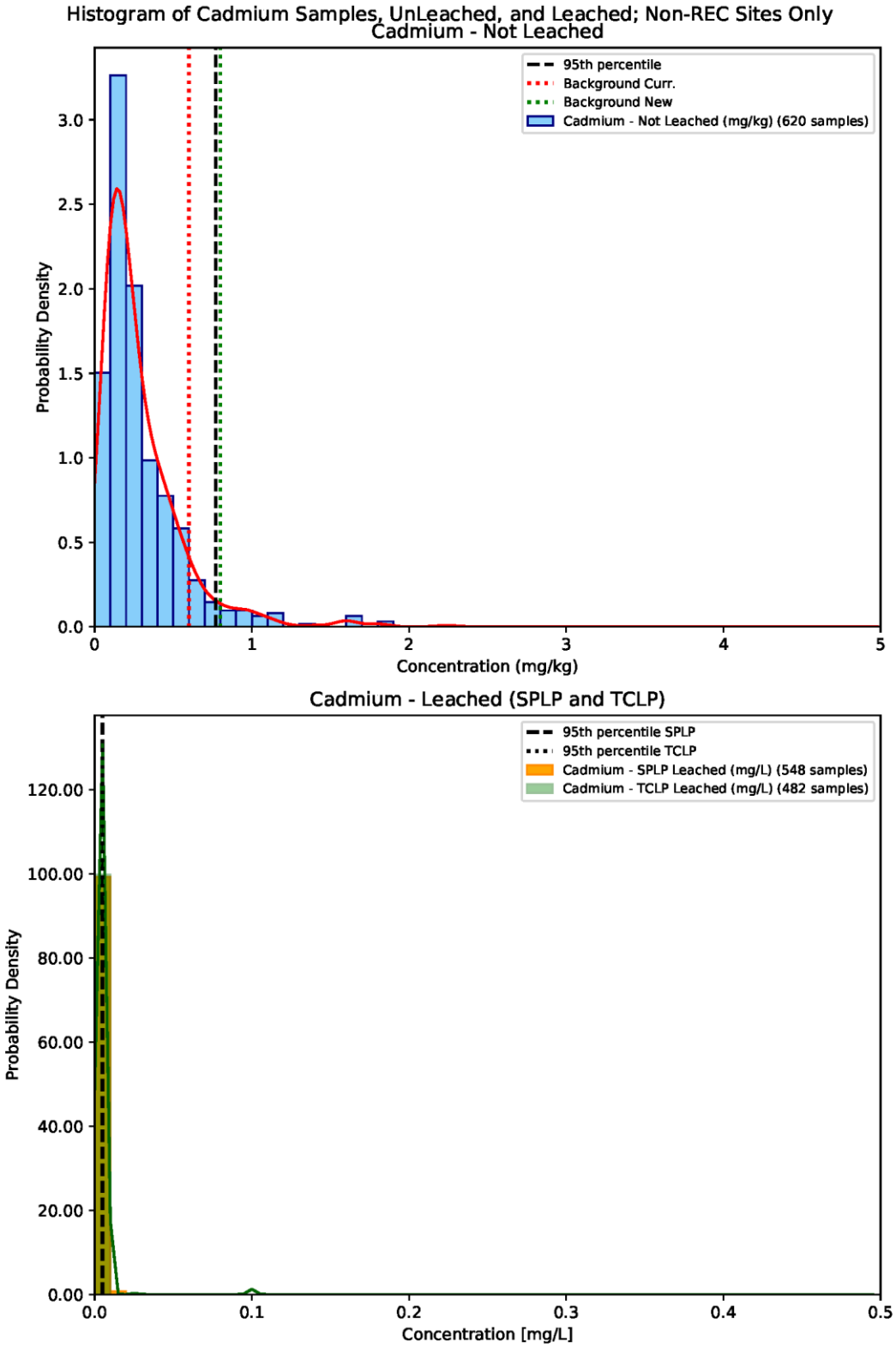


Figure 204. Histogram of RSL cadmium concentrations, Non-REC (mg/kg)

Cadmium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

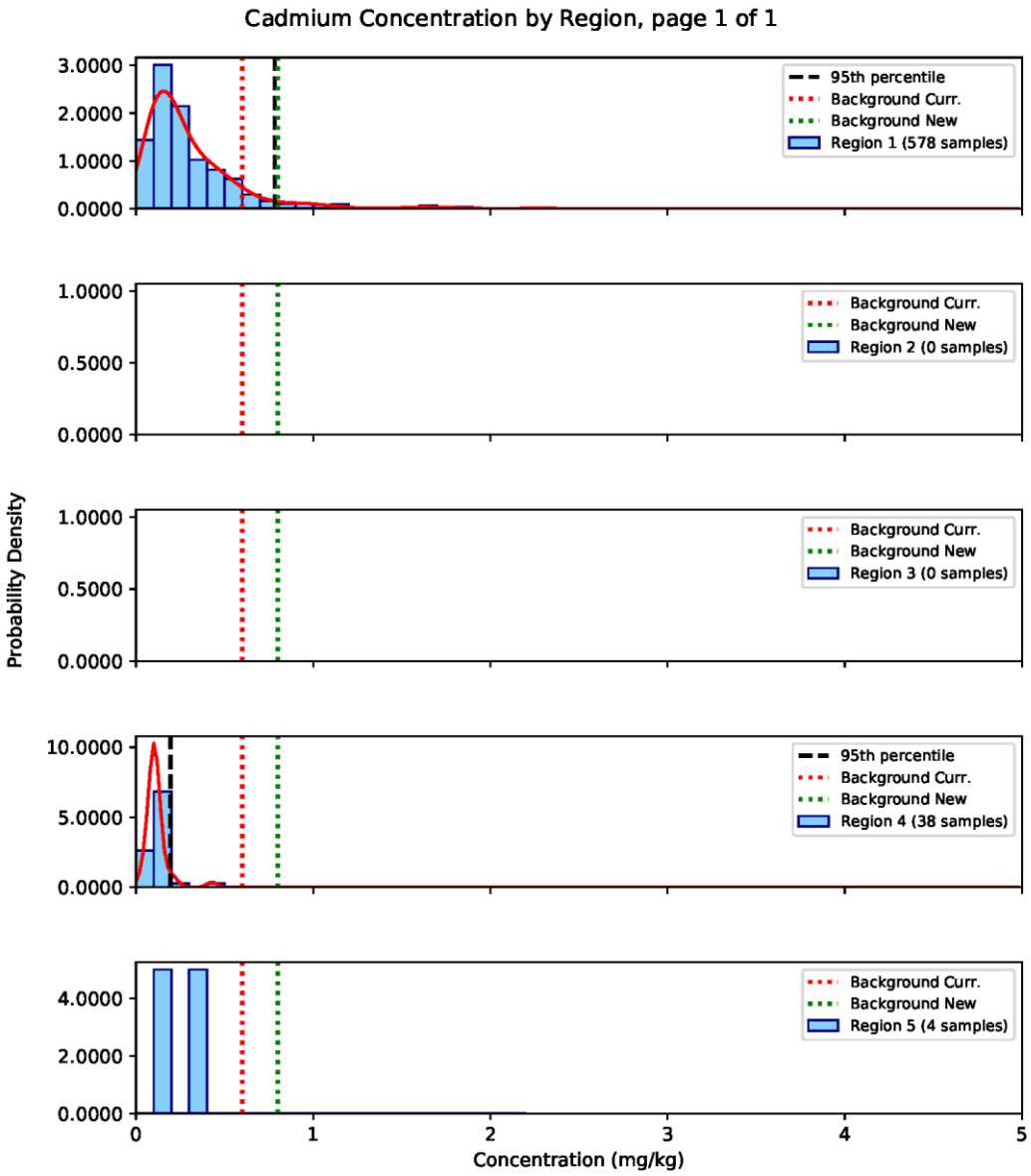


Figure 205. Histogram of RSL cadmium concentrations by IDOT Region, Non-REC (mg/kg)

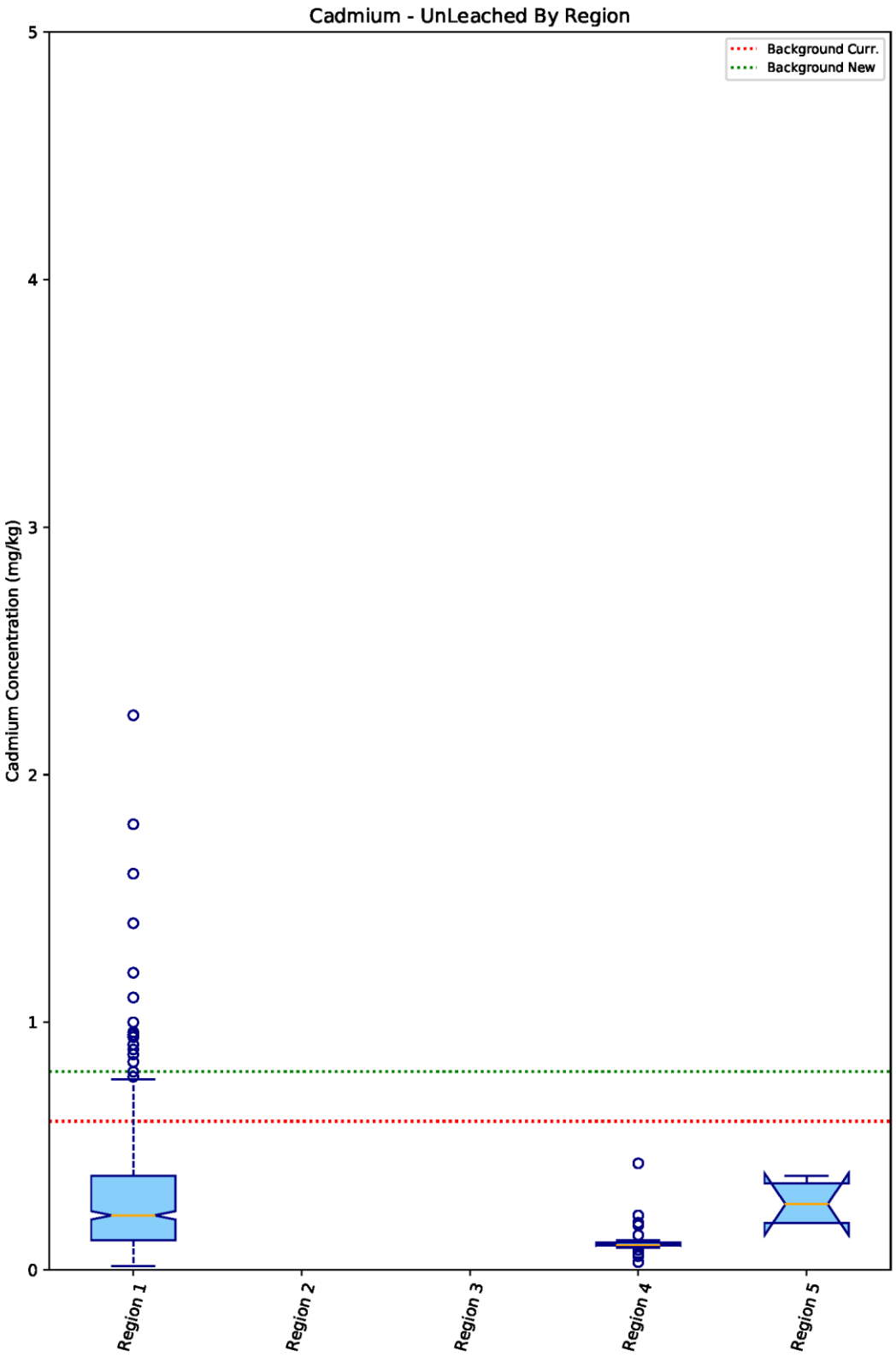


Figure 206. Boxplot of RSL cadmium concentrations by IDOT Region, Non-REC (mg/kg)

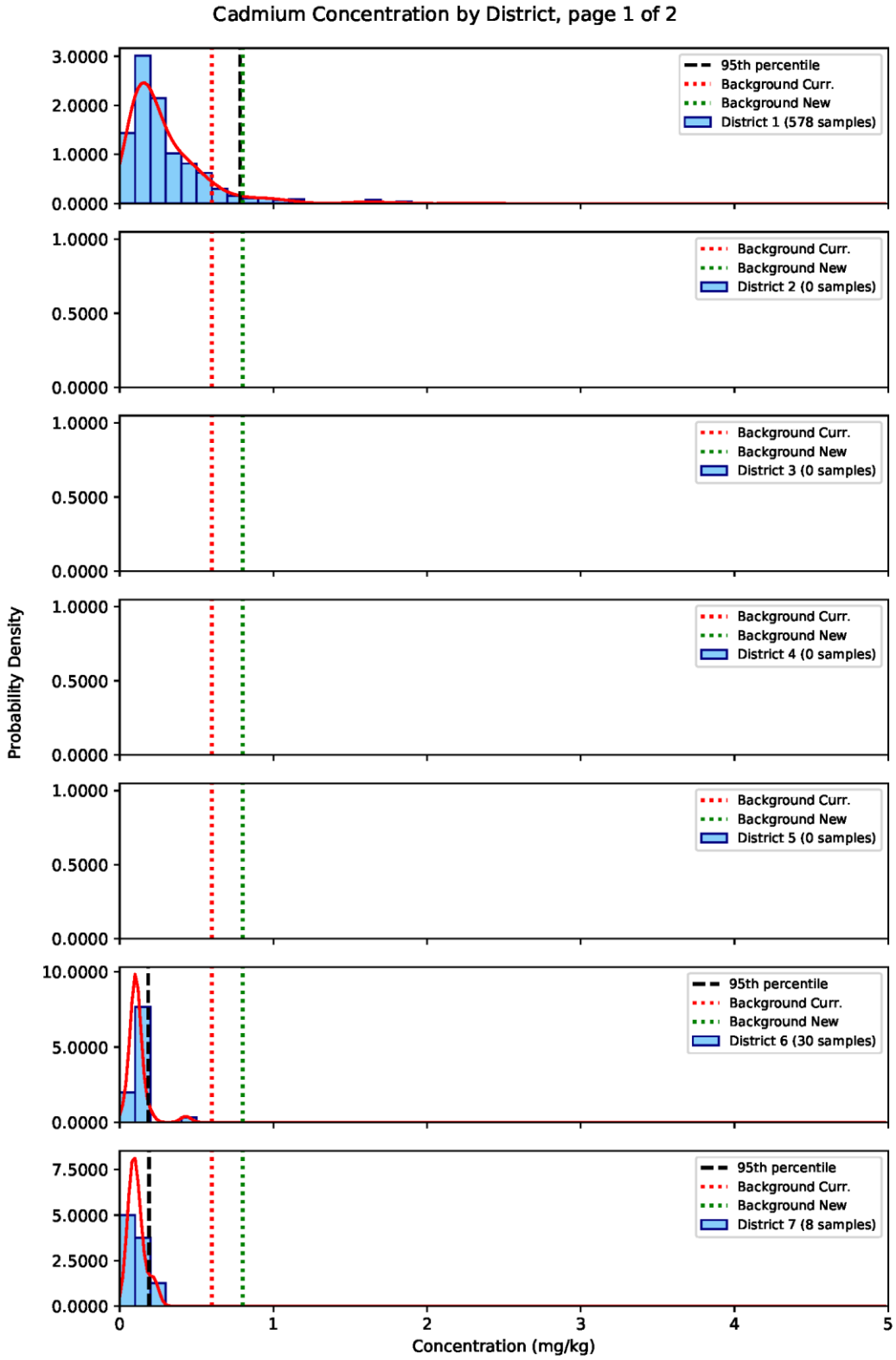


Figure 207. Histogram of RSL cadmium concentrations by IDOT District, Non-REC (mg/kg), part 1

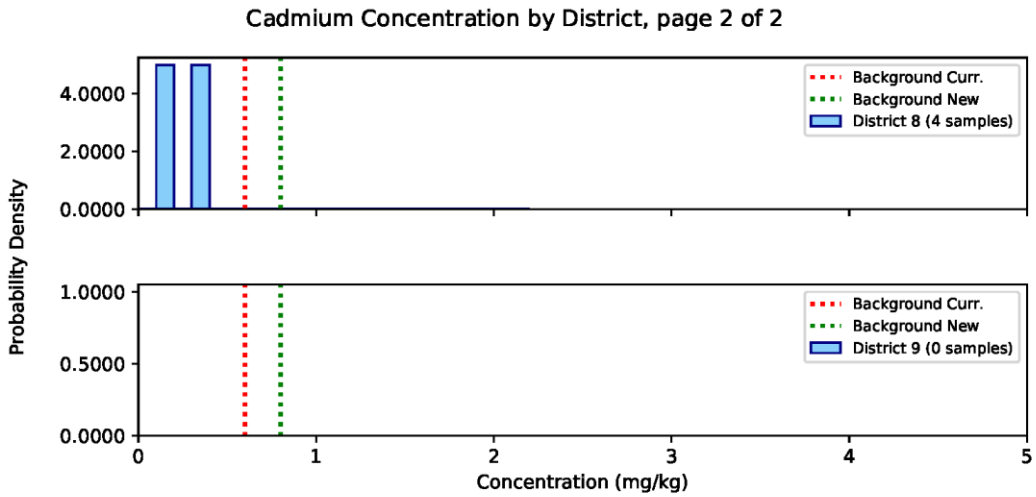


Figure 208. Histogram of RSL cadmium concentrations by IDOT District, Non-REC (mg/kg), part 2

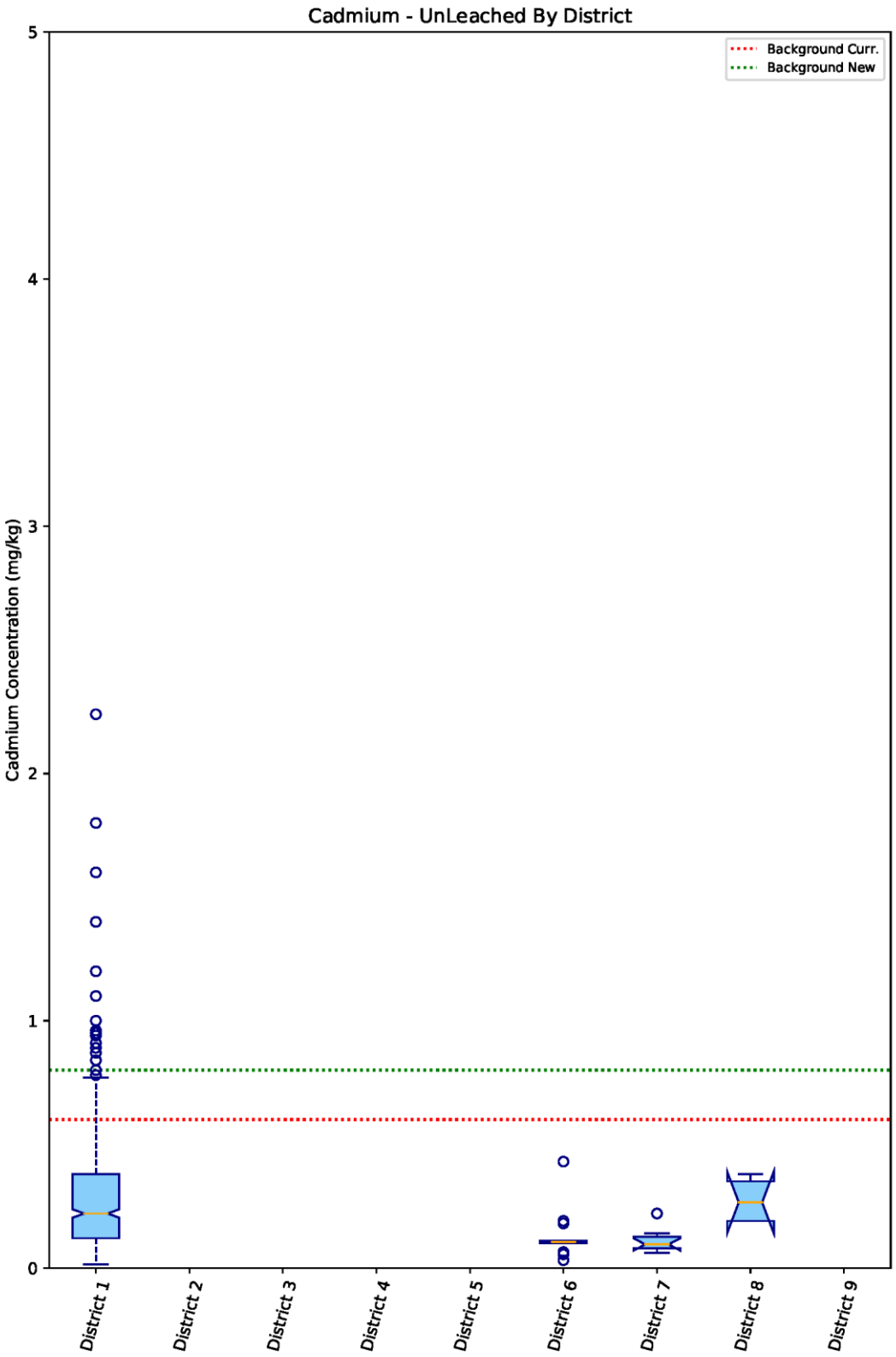


Figure 209. Boxplot of RSL cadmium concentrations by IDOT District, Non-REC (mg/kg)

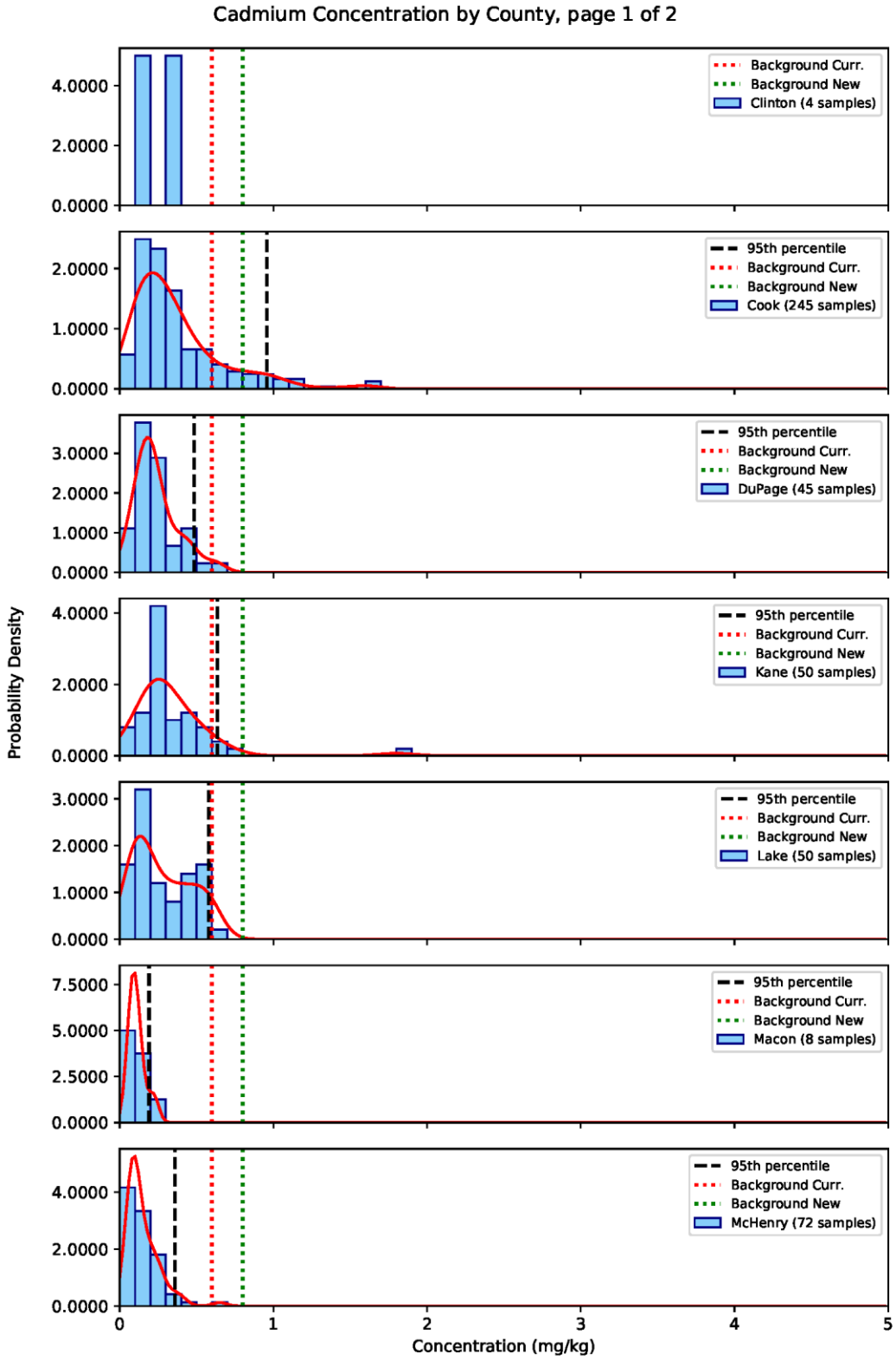


Figure 210. Histogram of RSL cadmium concentrations by Illinois county, Non-REC (mg/kg), part 1

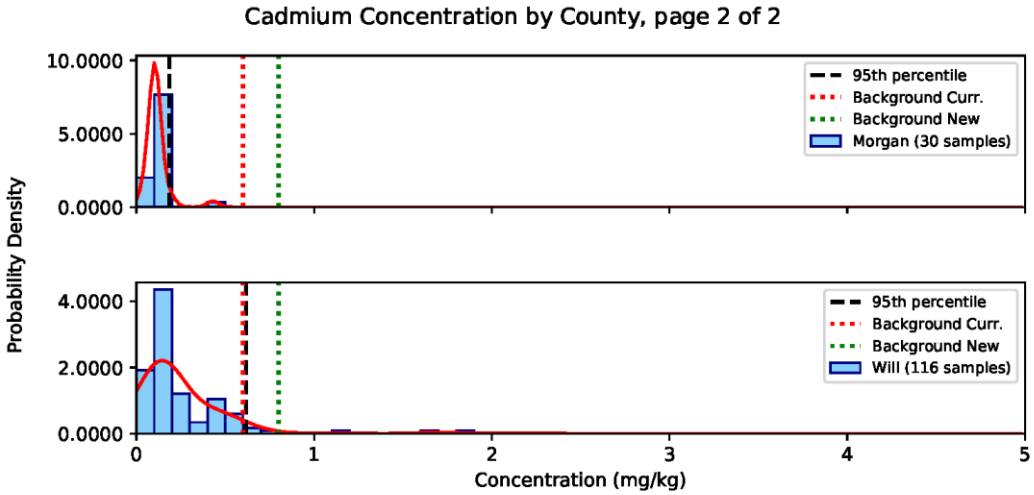


Figure 211. Histogram of RSL cadmium concentrations by Illinois county, Non-REC (mg/kg), part 2

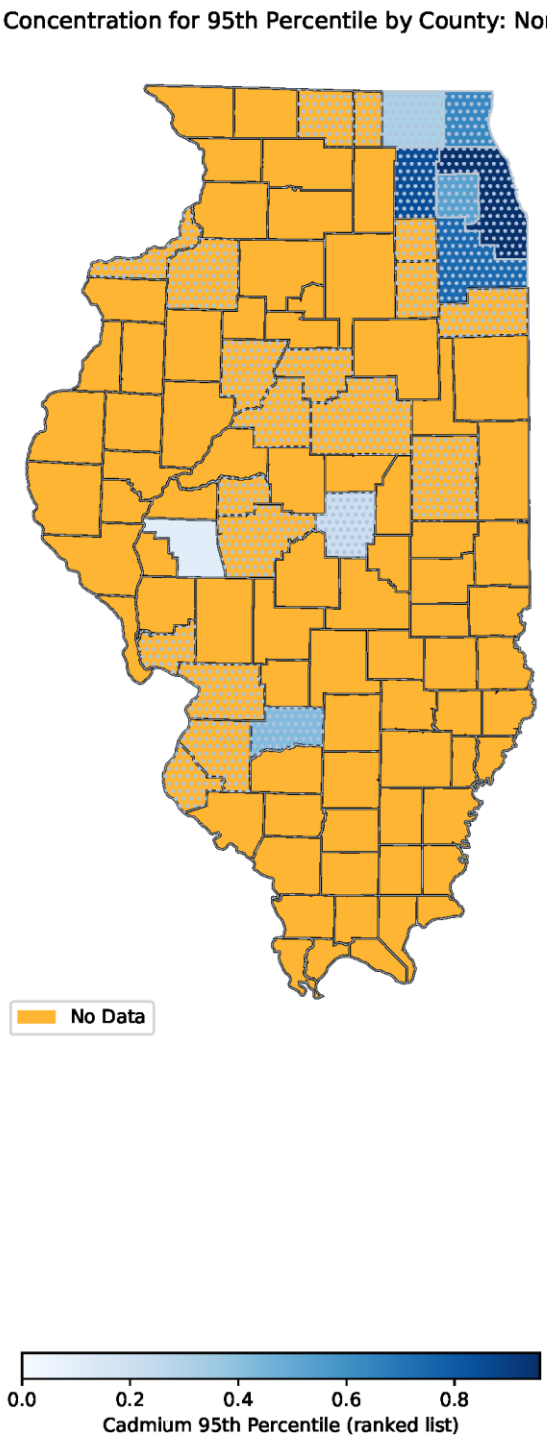


Figure 212. Map of RSL cadmium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

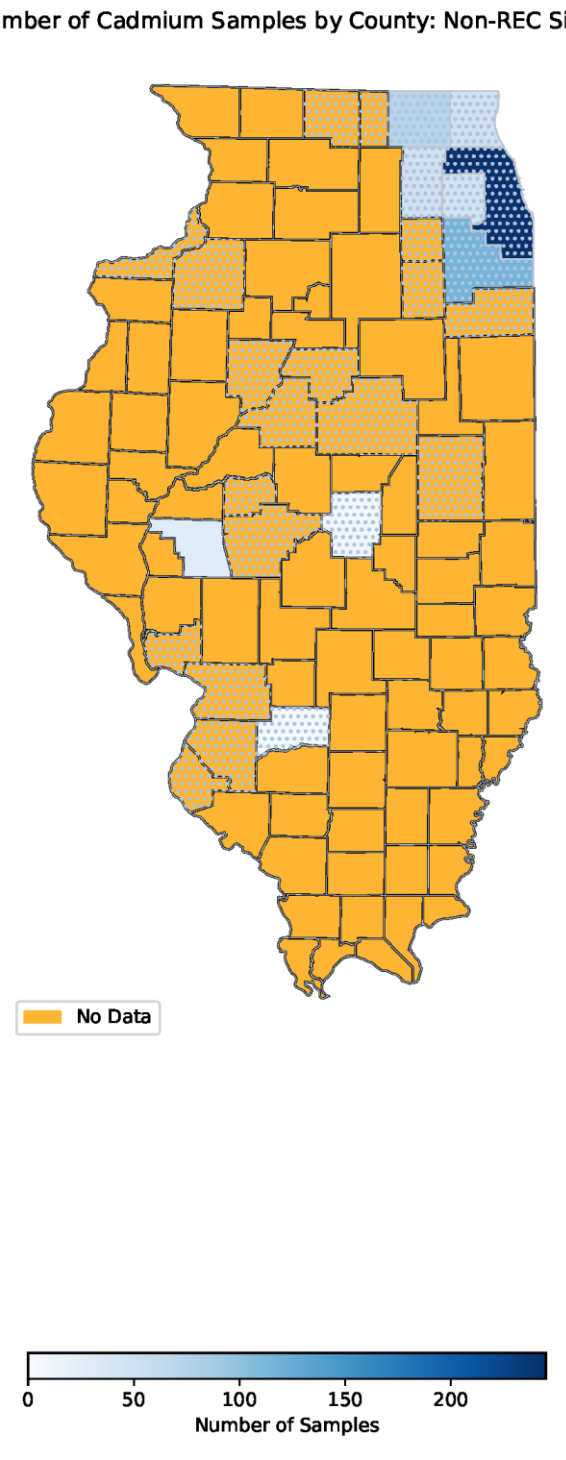


Figure 213. Map of RSL cadmium sample quantity by Illinois county, Non-REC (mg/kg)

F.3 CADMIUM DE MINIMIS

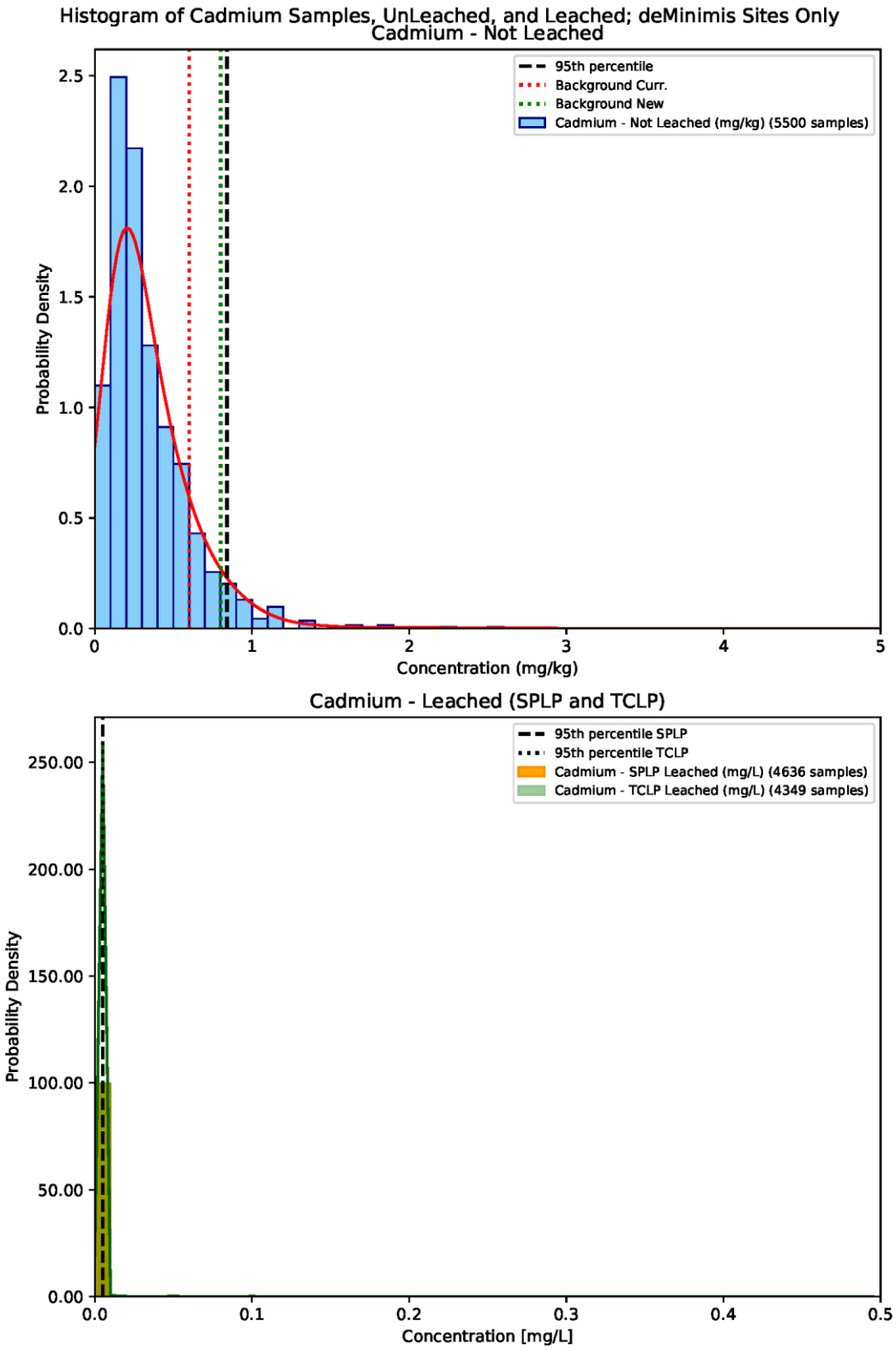


Figure 214. Histogram of RSL cadmium concentrations, de minimis (mg/kg)

Cadmium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

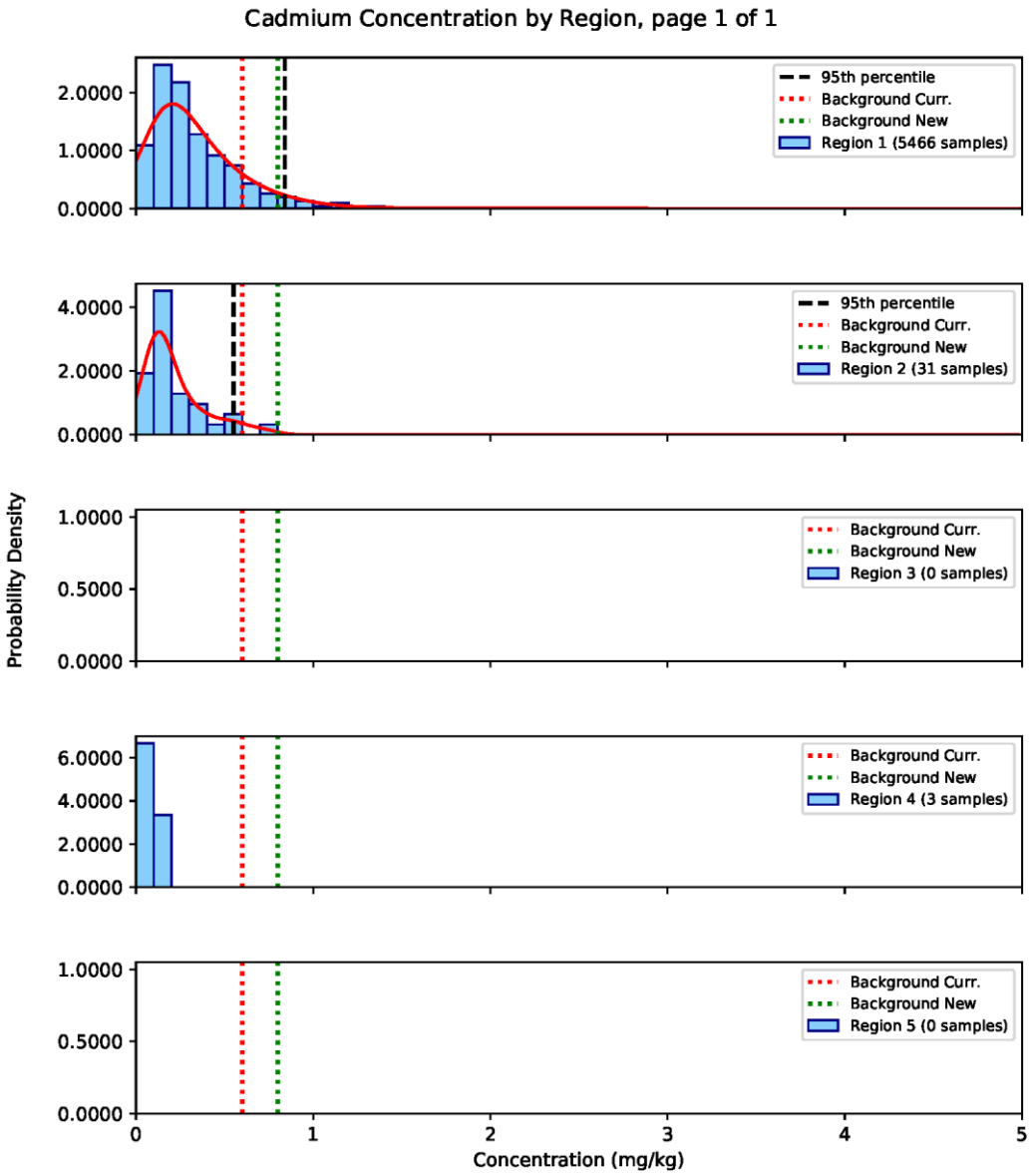


Figure 215. Histogram of RSL cadmium concentrations by IDOT Region, de minimis (mg/kg)

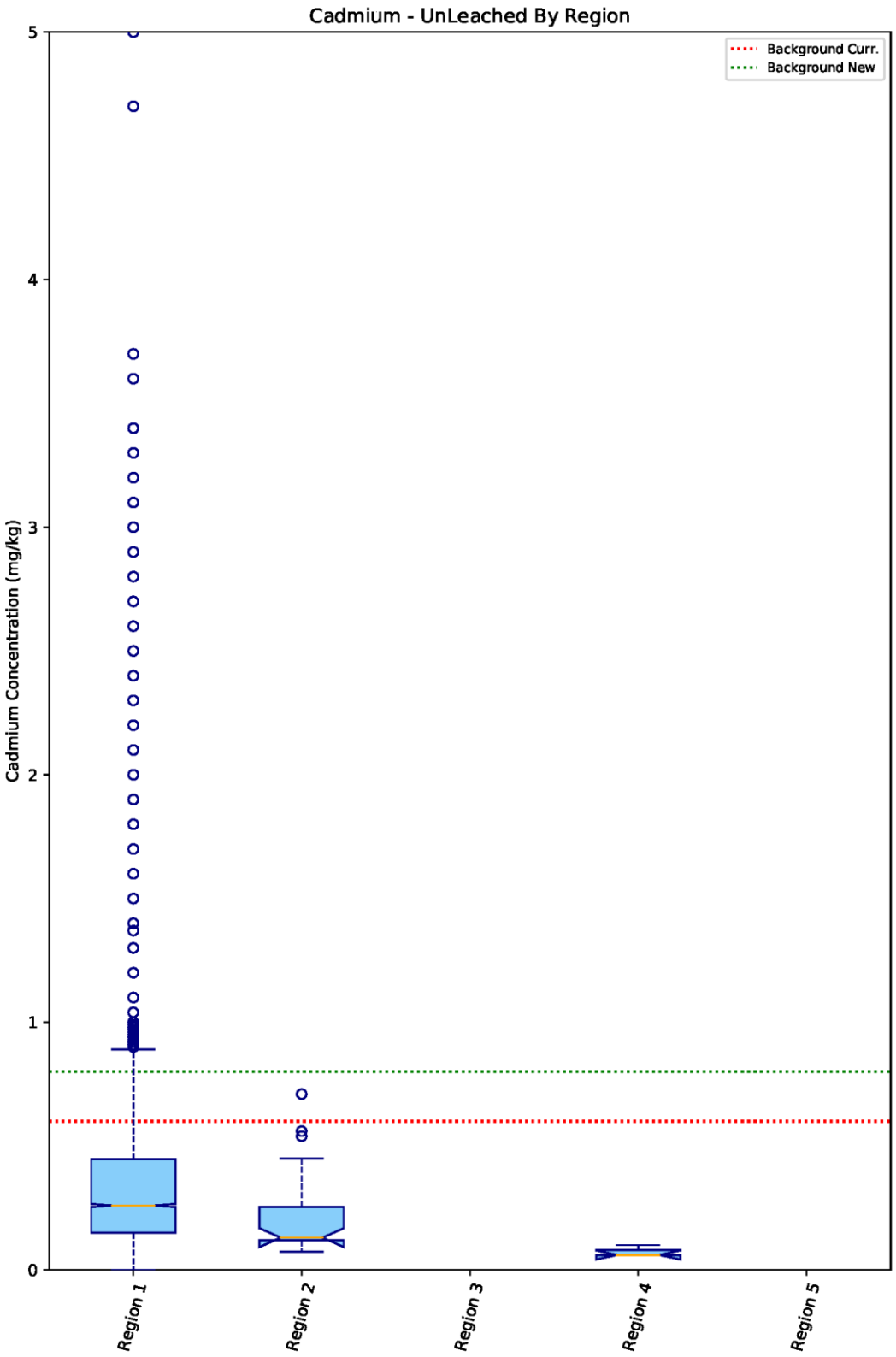


Figure 216. Boxplot of RSL cadmium concentrations by IDOT Region, de minimis (mg/kg)

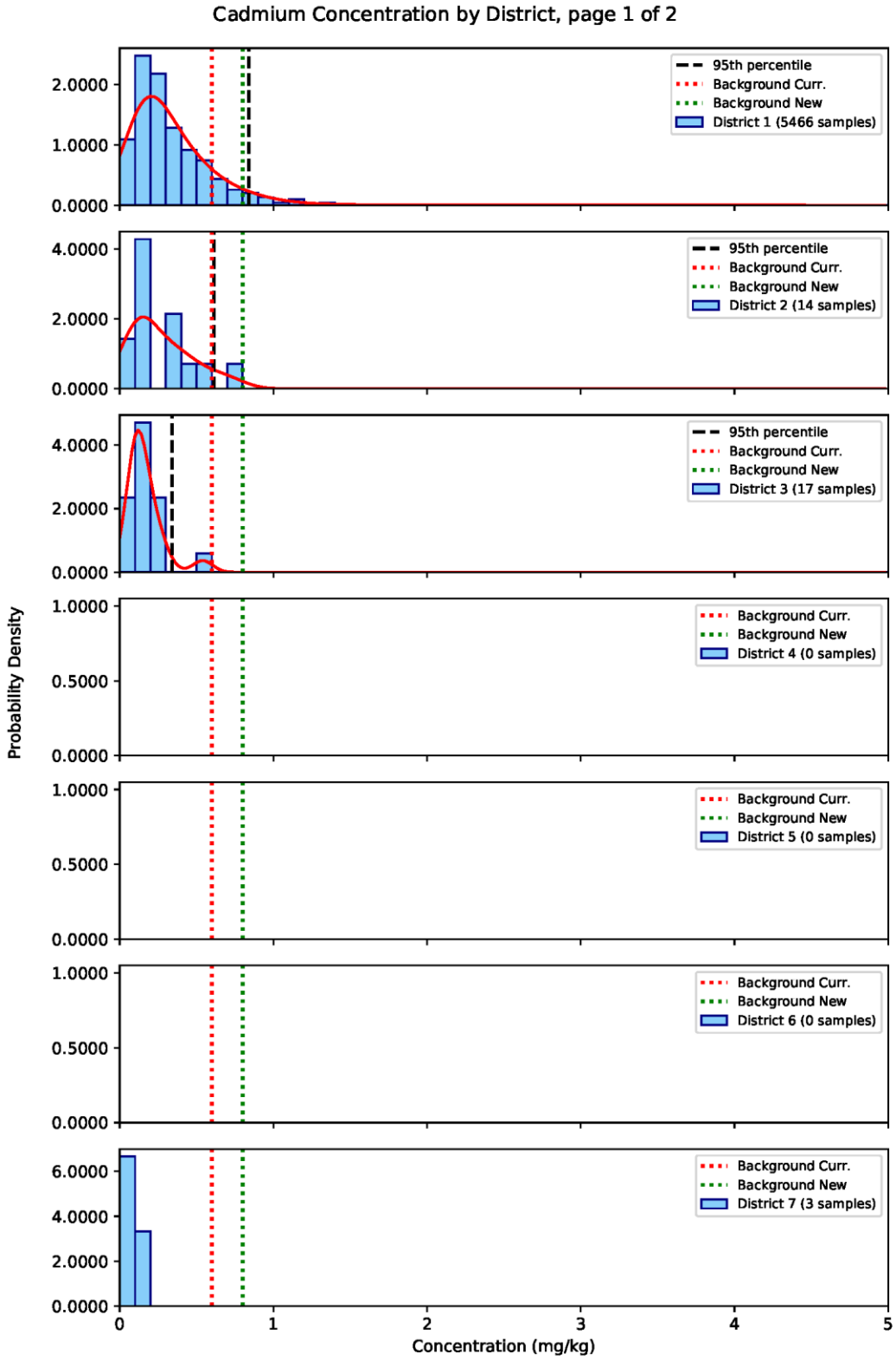


Figure 217. Histogram of RSL cadmium concentrations by IDOT District, de minimis (mg/kg), part 1

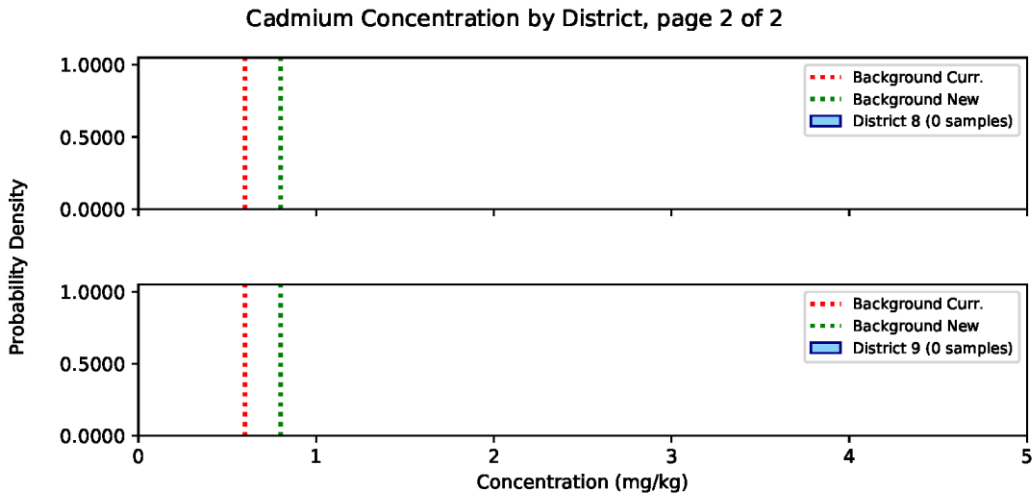


Figure 218. Histogram of RSL cadmium concentrations by IDOT District, de minimis (mg/kg), part 2

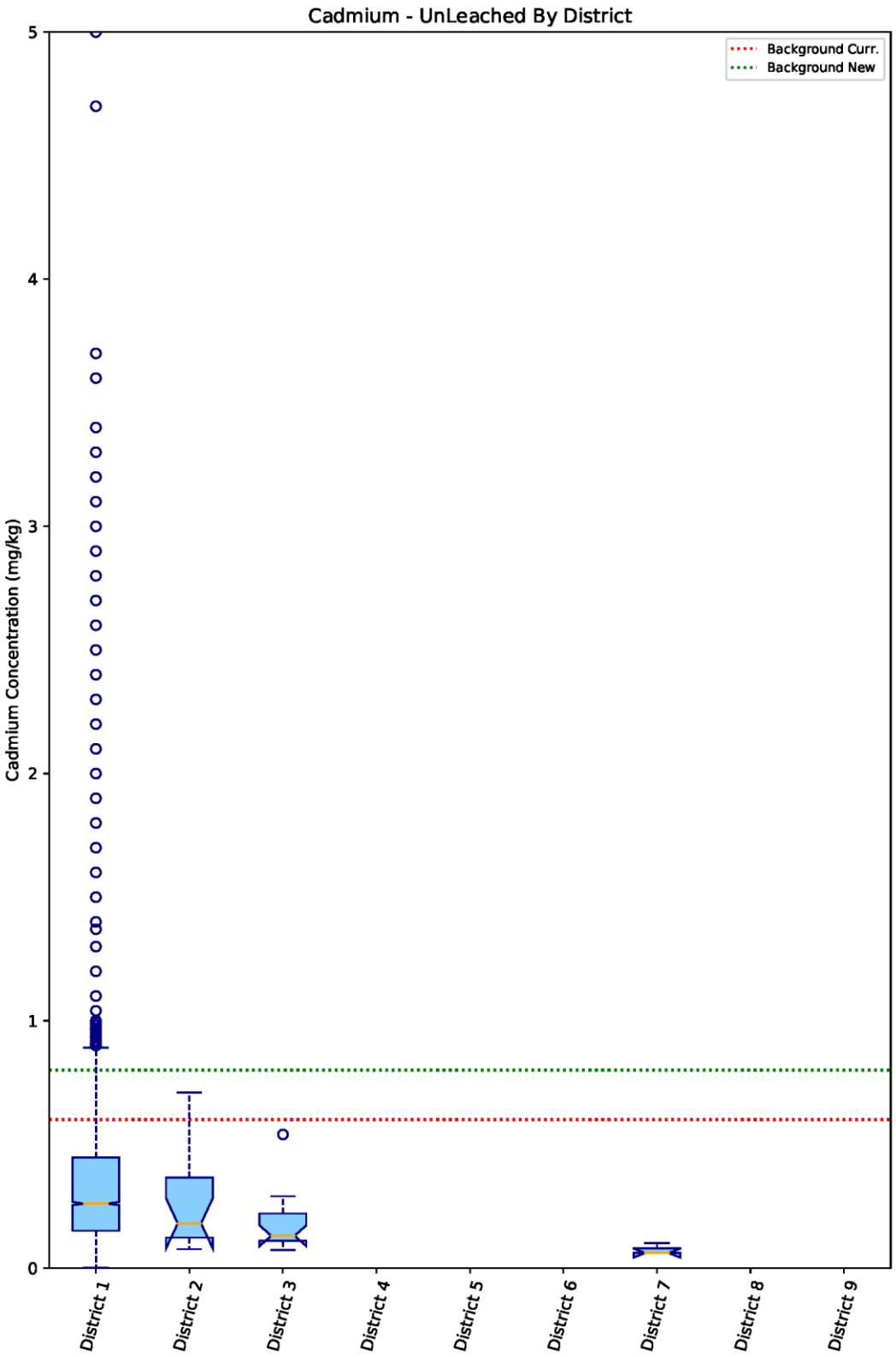


Figure 219. Boxplot of RSL cadmium concentrations by IDOT District, de minimis (mg/kg)

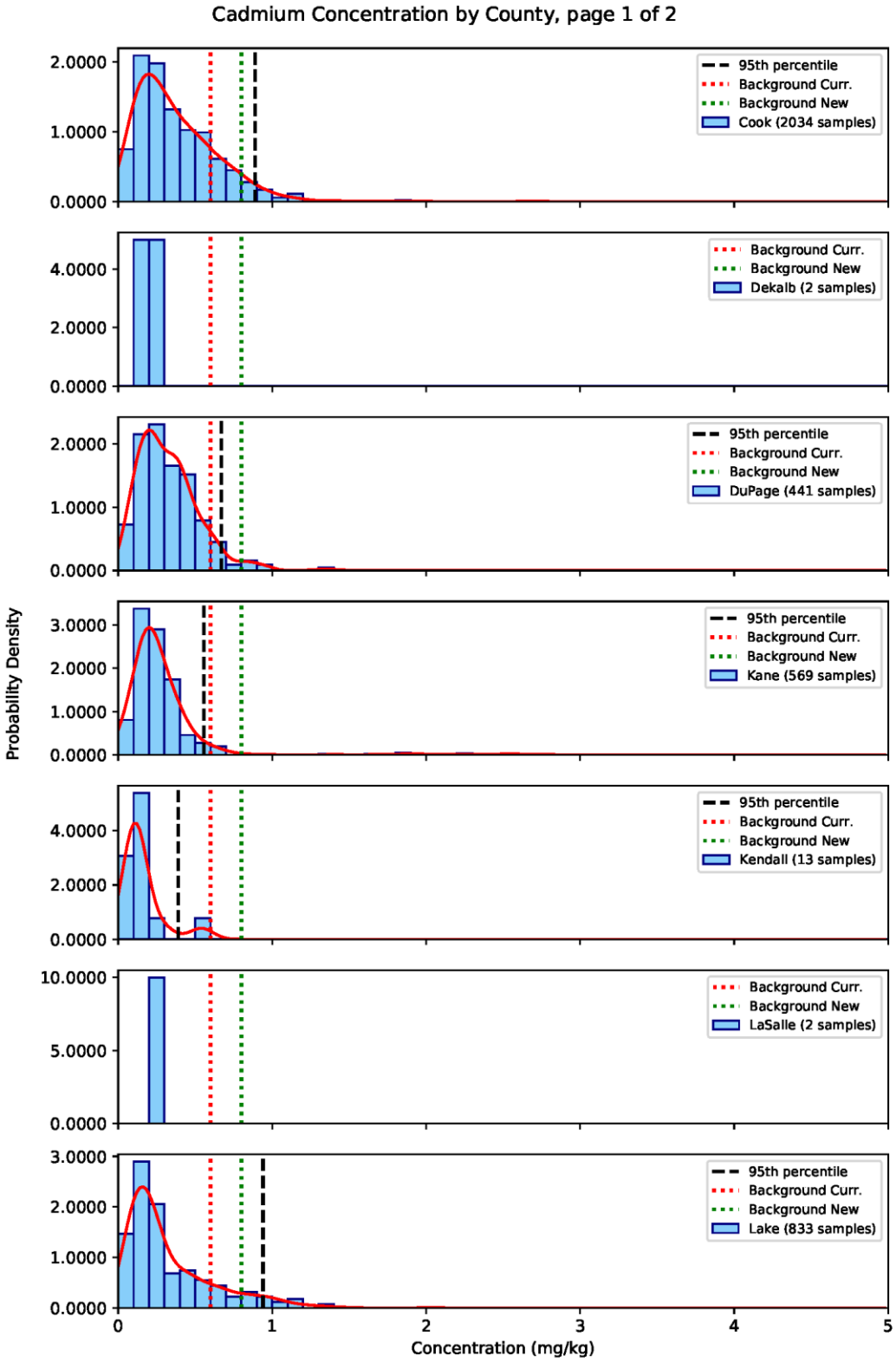


Figure 220. Histogram of RSL cadmium concentrations by Illinois county, de minimis (mg/kg), part 1

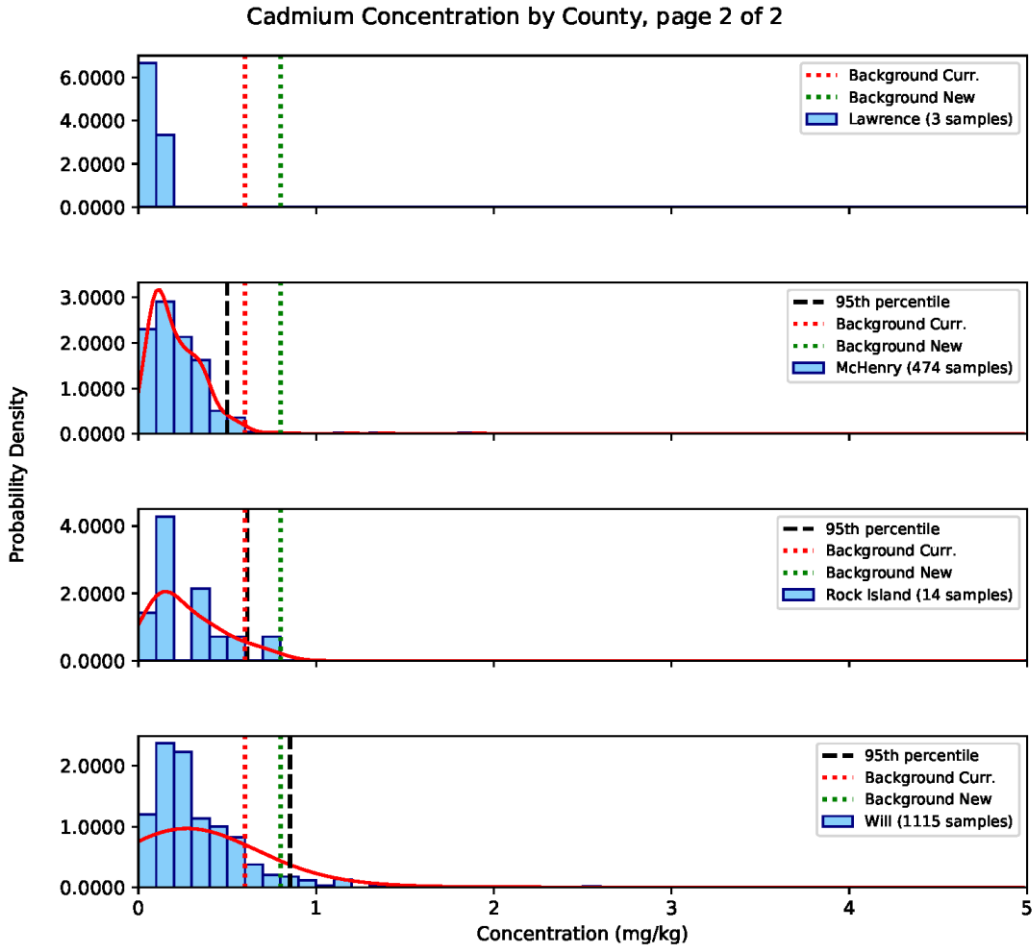


Figure 221. Histogram of RSL cadmium concentrations by Illinois county, de minimis (mg/kg), part 1

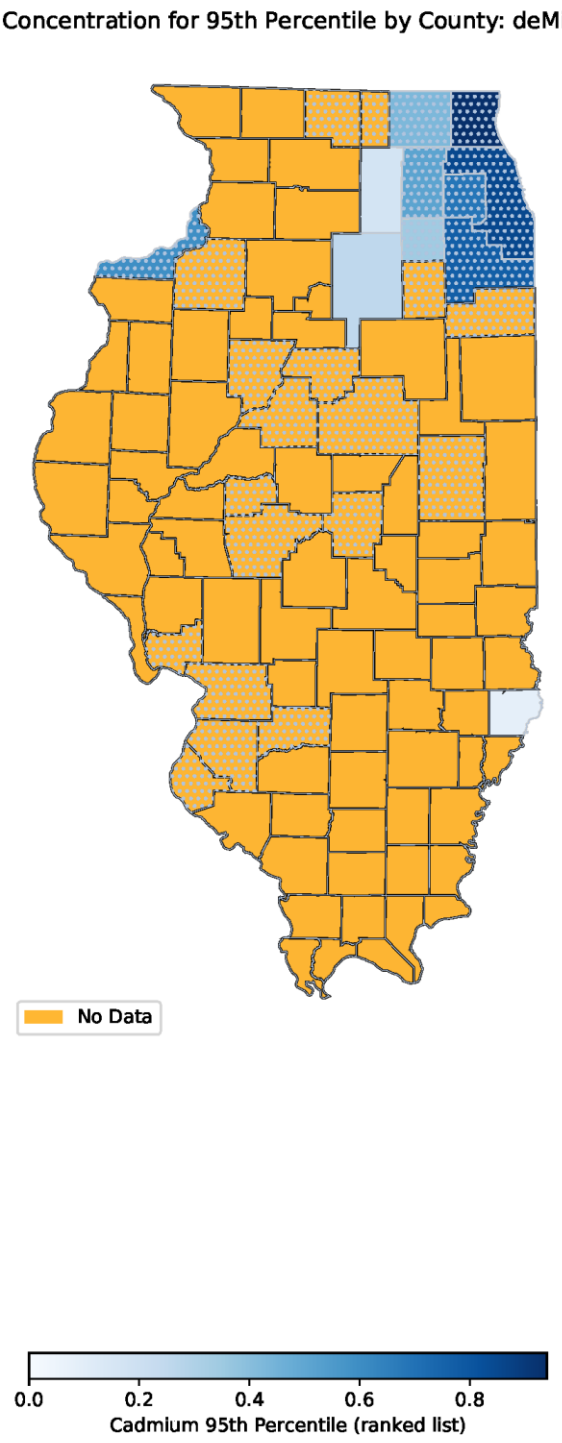


Figure 222. Map of RSL cadmium 95th percentile concentration by Illinois county, de minimis (mg/kg)

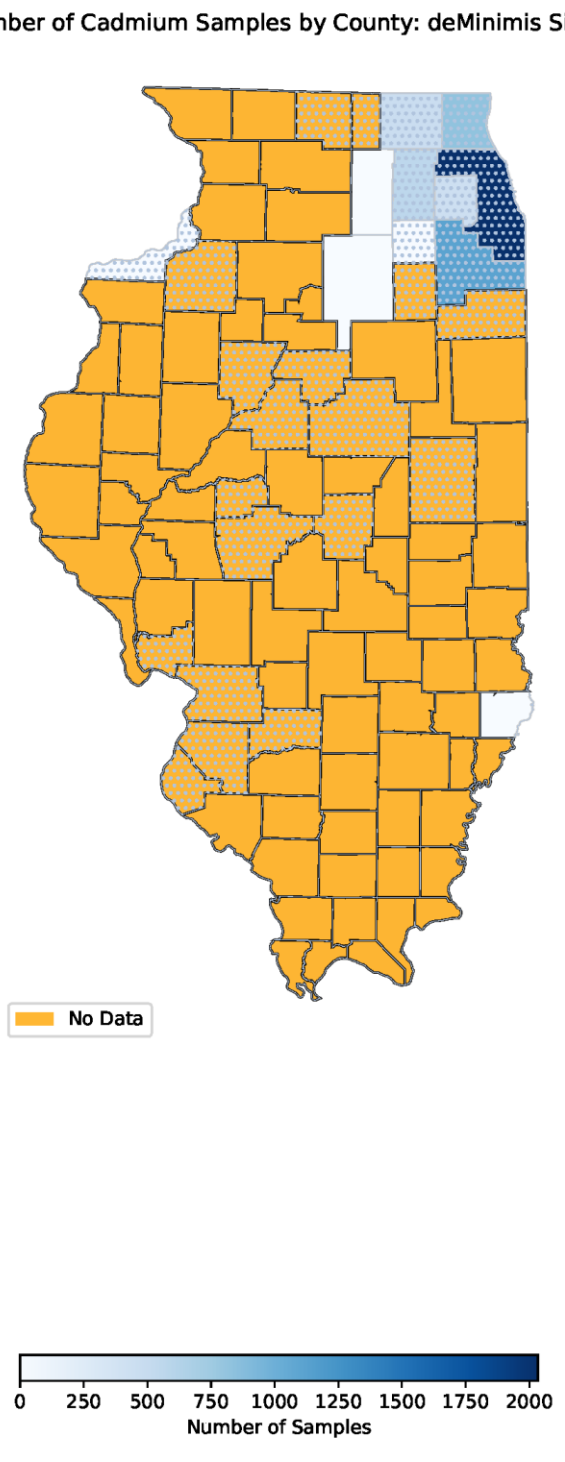


Figure 223. Map of RSL cadmium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX G. ANALYTE ANALYSIS: CALCIUM

G.1 CALCIUM REC

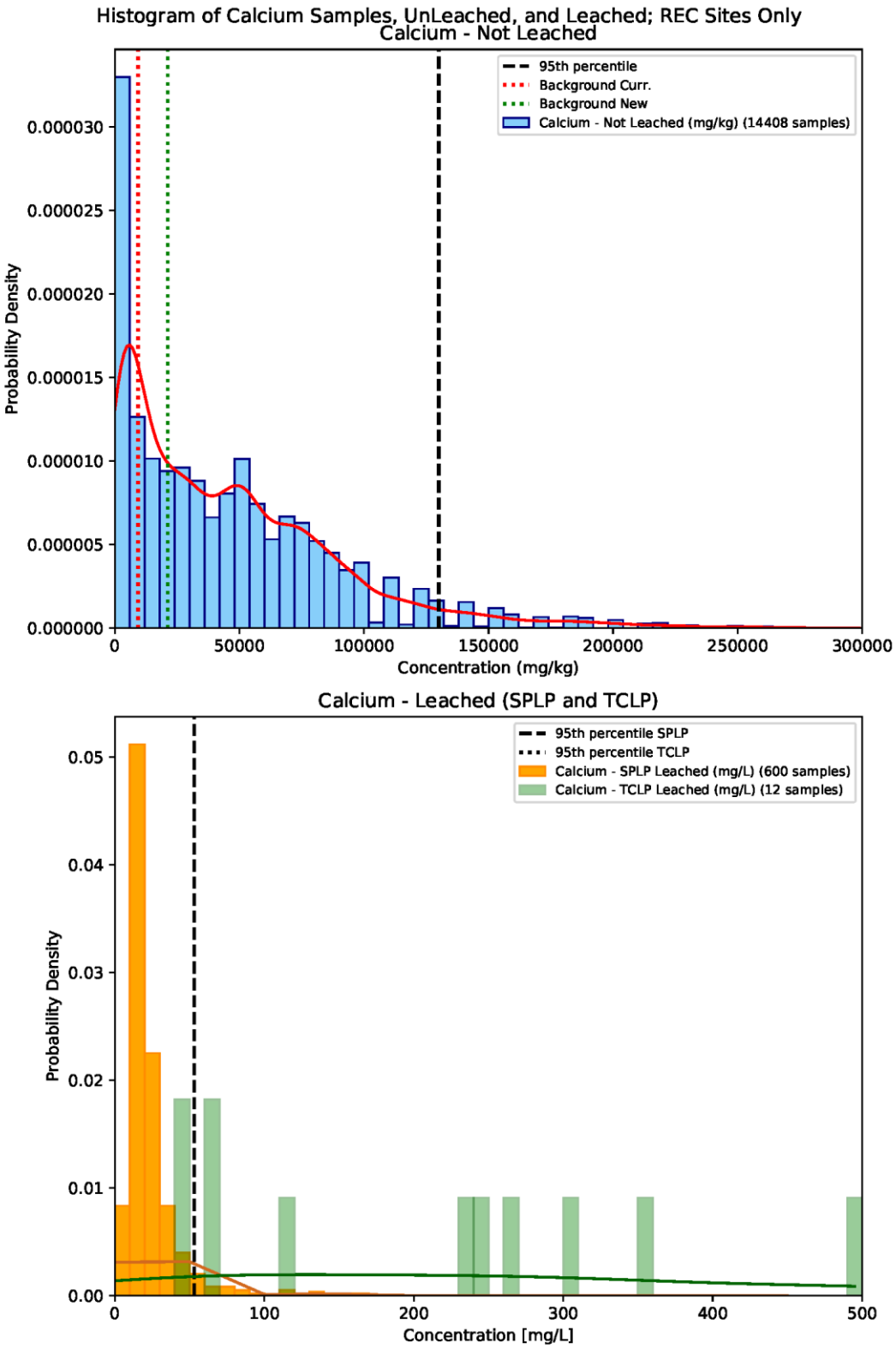


Figure 224. Histogram of RSL calcium concentrations, REC (mg/kg)

Calcium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

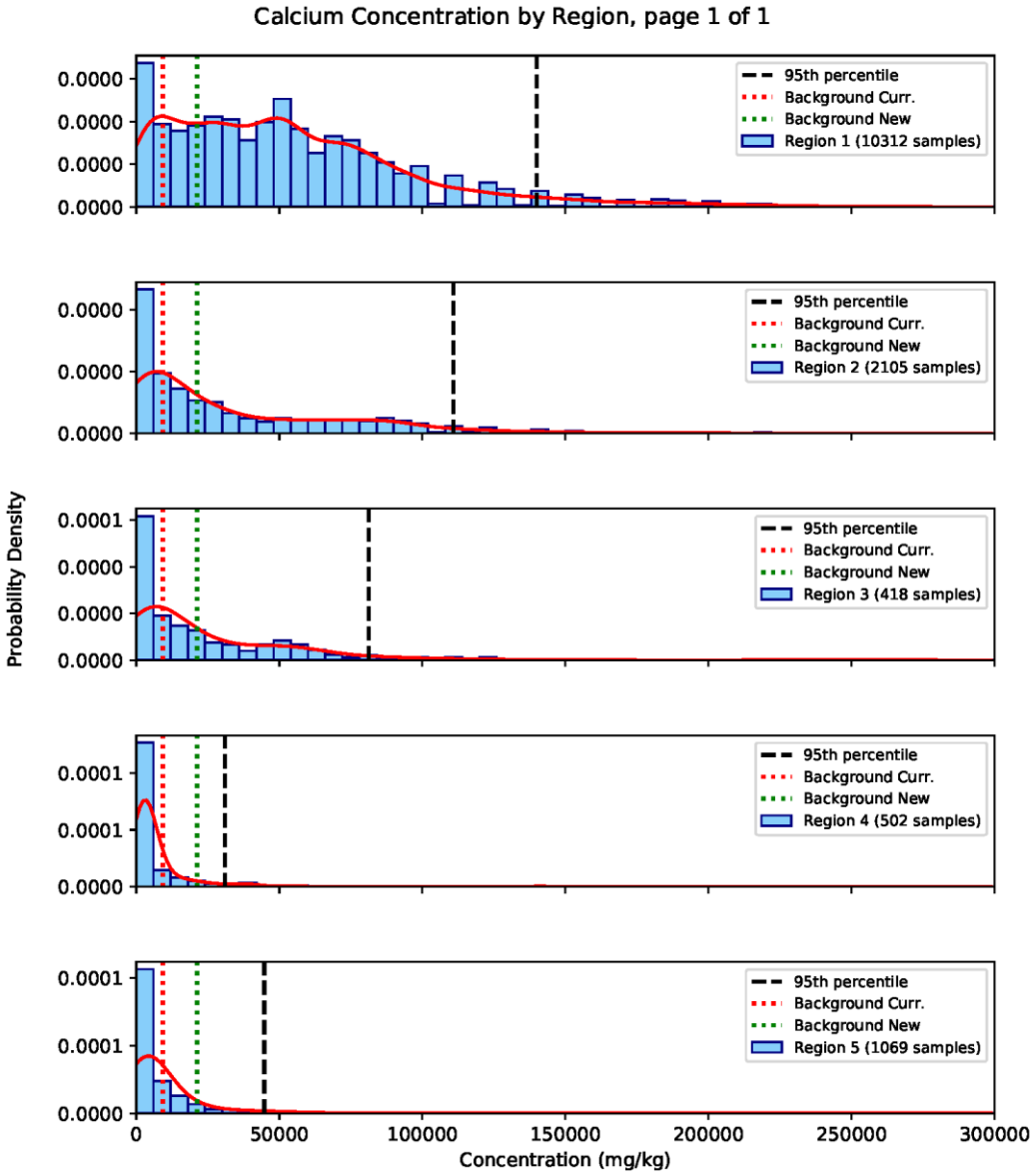


Figure 225. Histogram of RSL calcium concentrations by IDOT Region, REC (mg/kg)

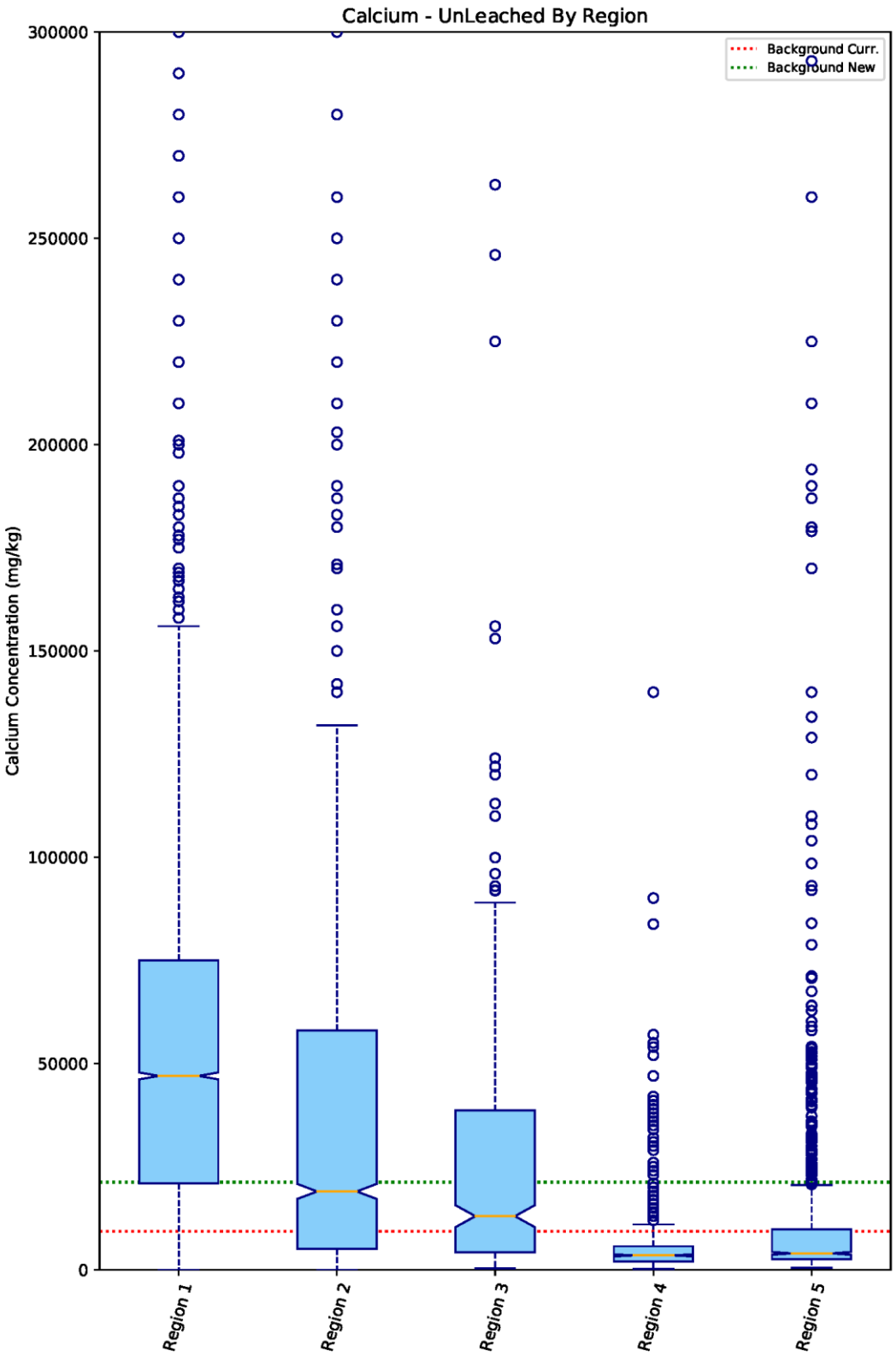


Figure 226. Boxplot of RSL calcium concentrations by IDOT Region, REC (mg/kg)

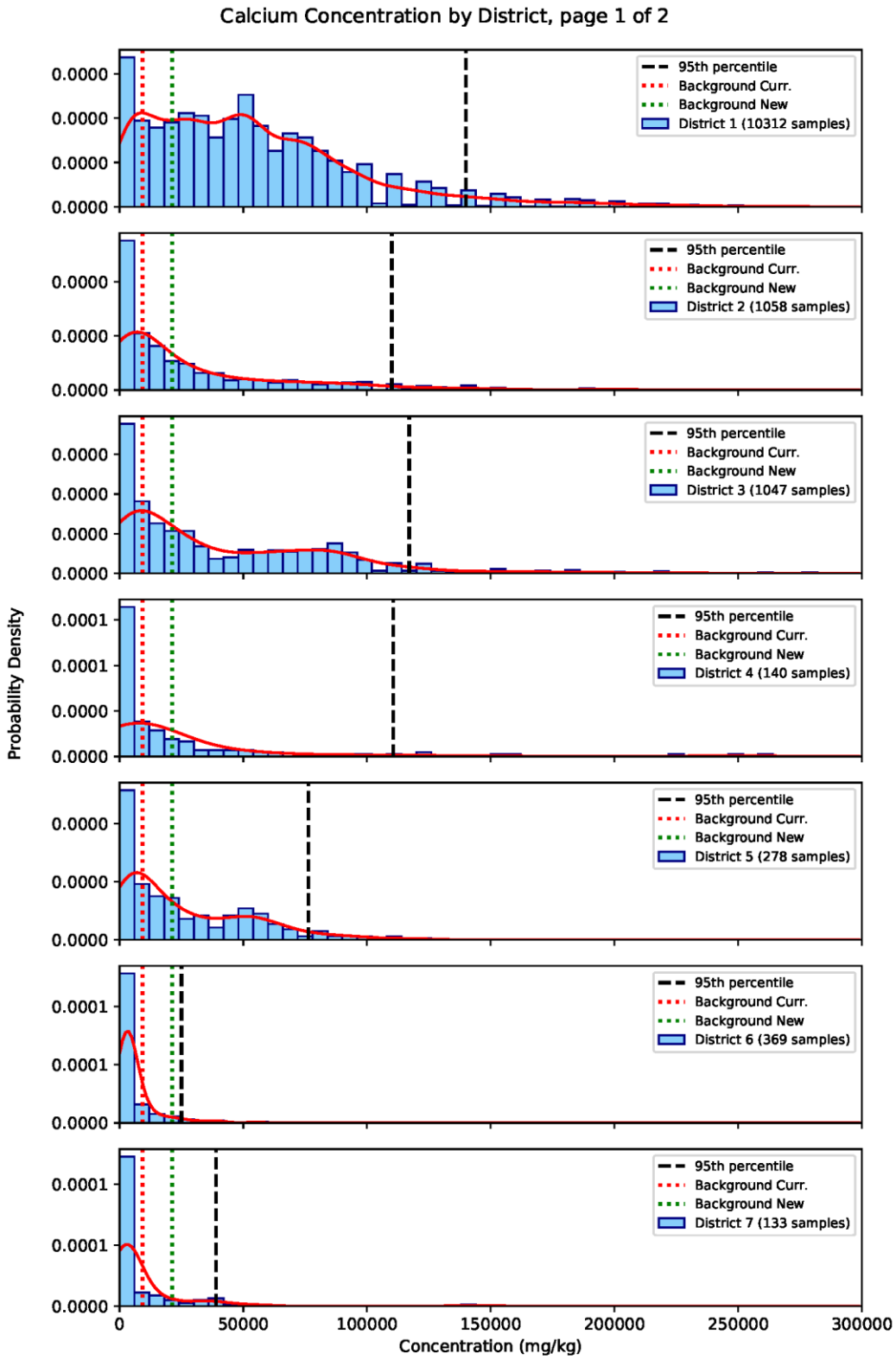


Figure 227. Histogram of RSL calcium concentrations by IDOT District, REC (mg/kg), part 1

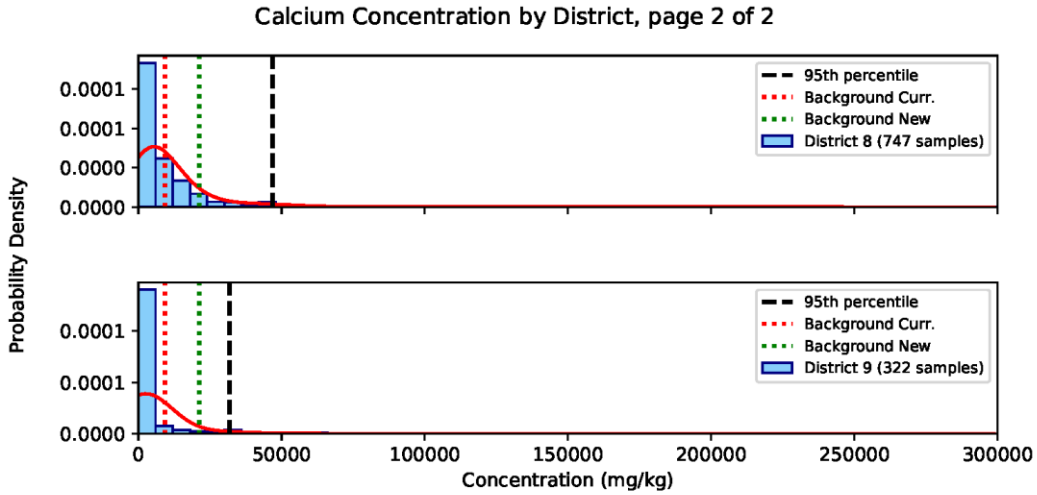


Figure 228. Histogram of RSL calcium concentrations by IDOT District, REC (mg/kg), part 2

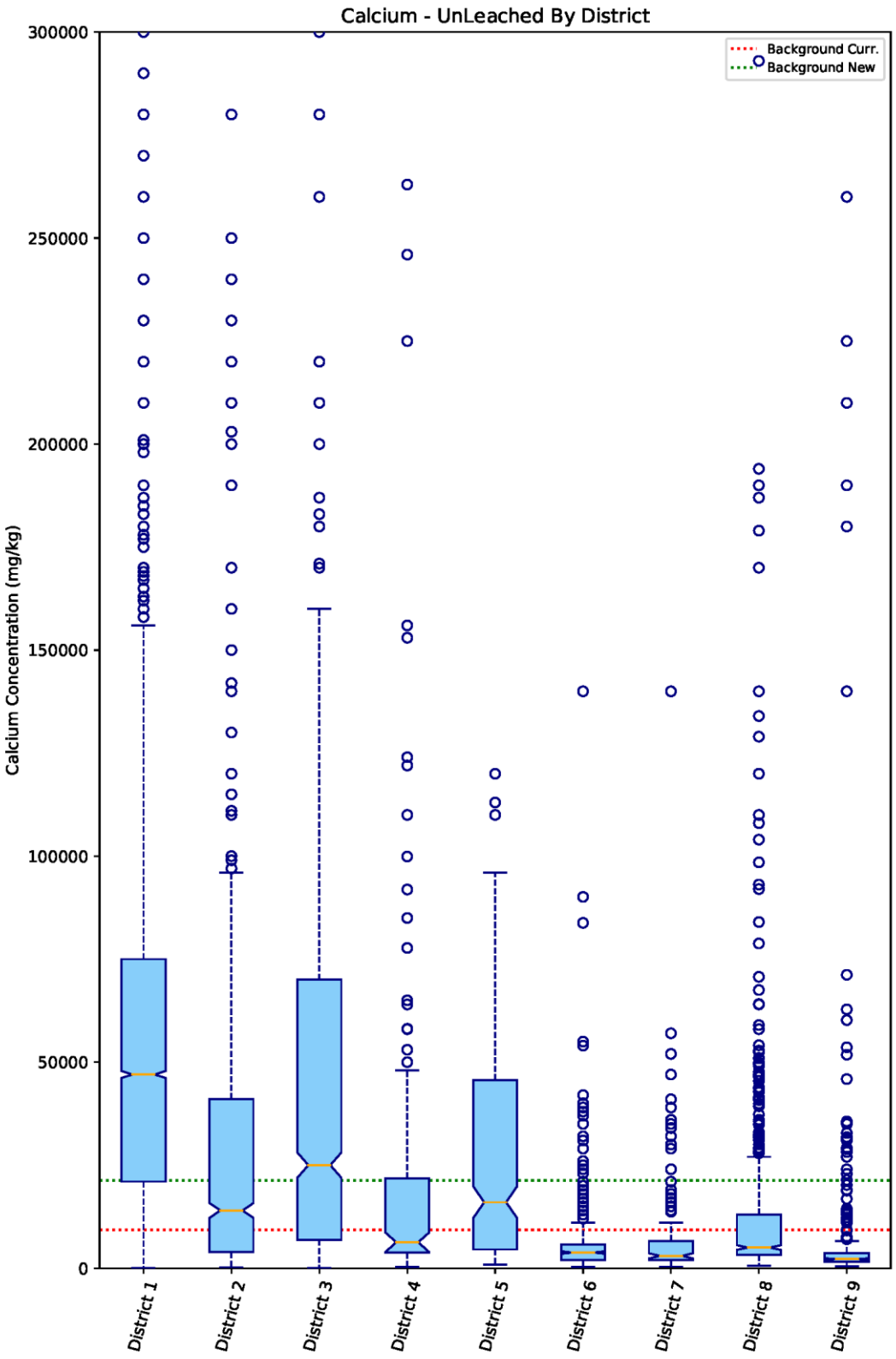


Figure 229. Boxplot of RSL calcium concentrations by IDOT District, REC (mg/kg)

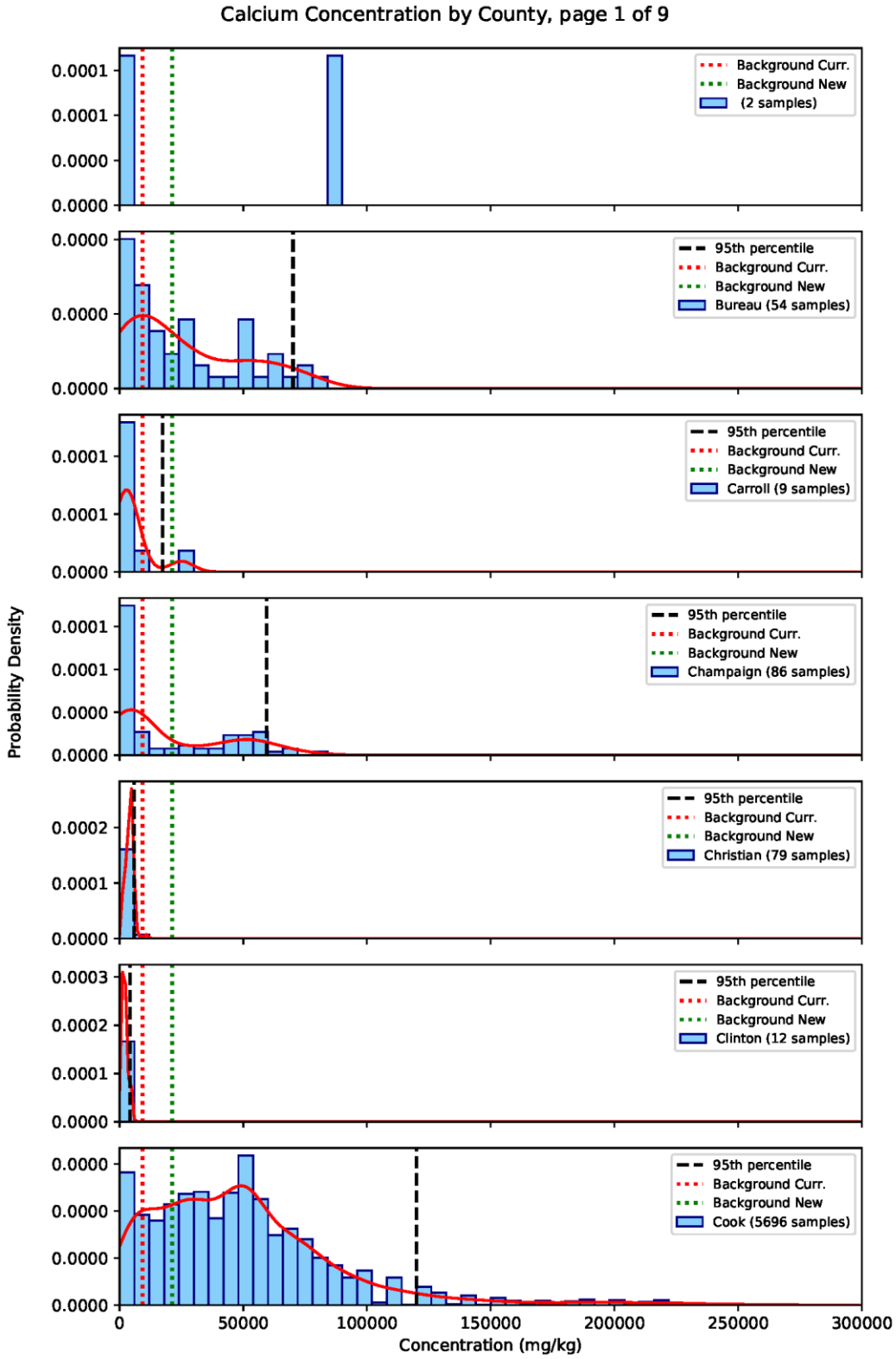


Figure 230. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 1

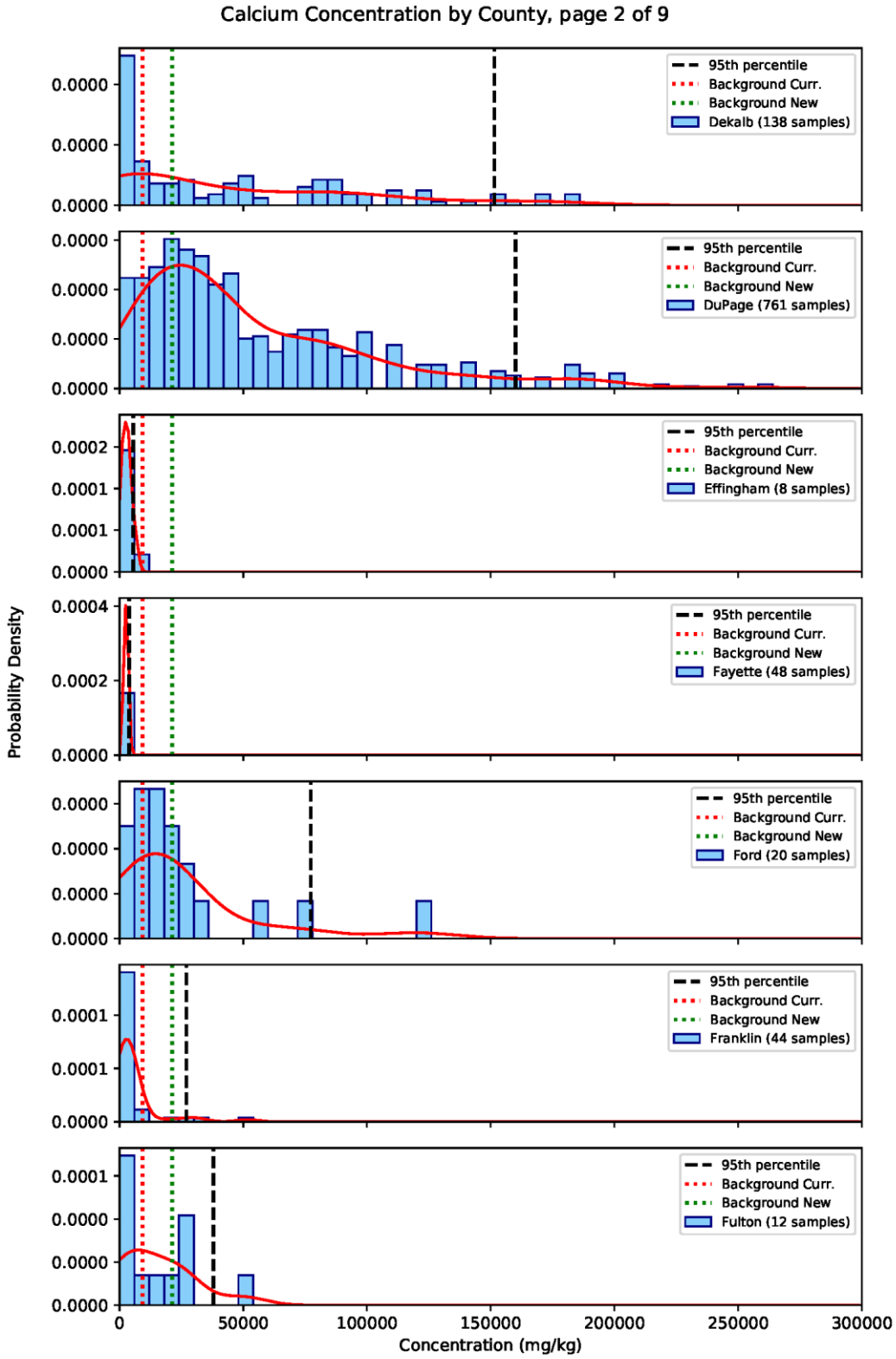


Figure 231. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 2

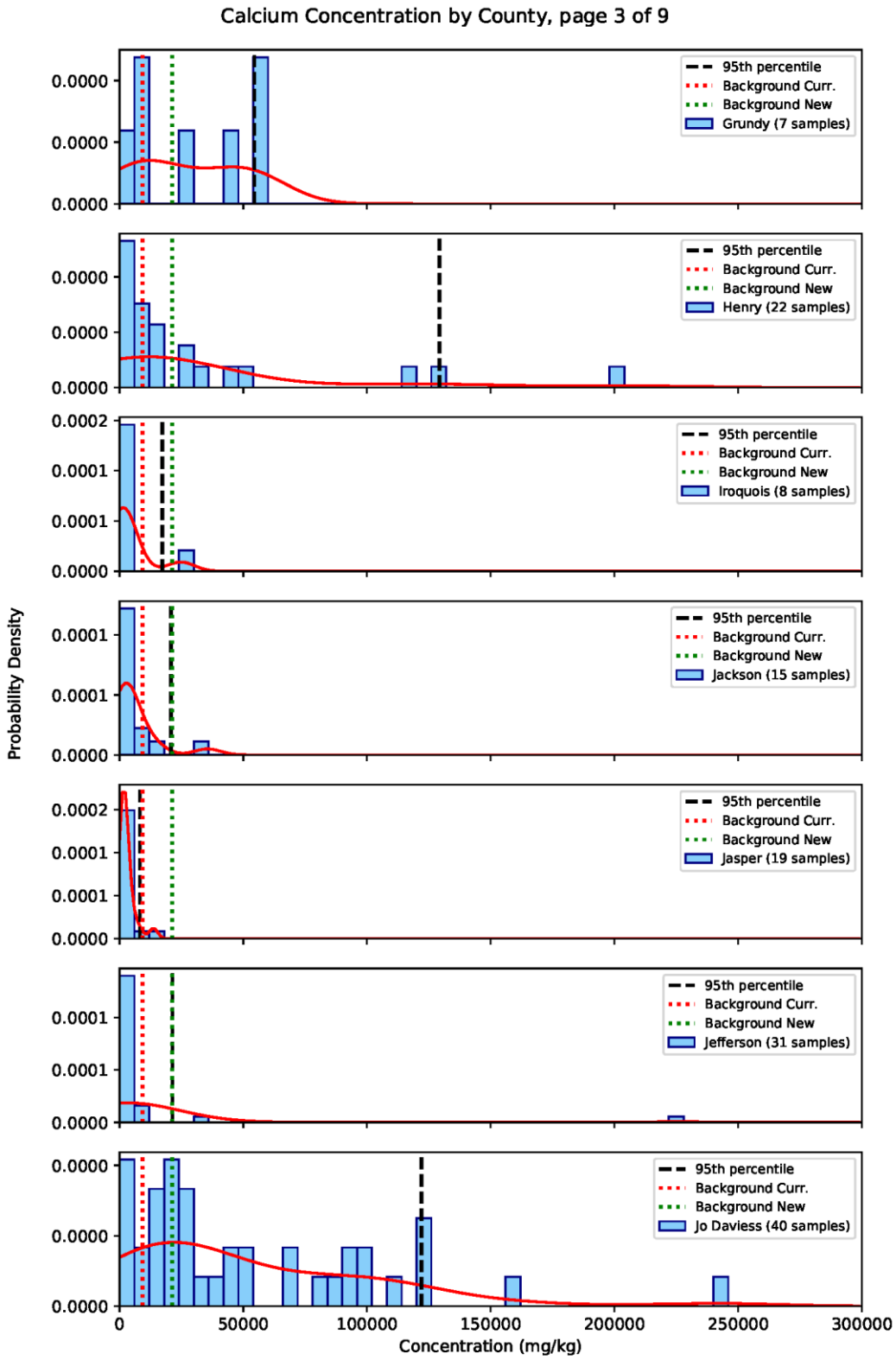


Figure 232. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 3

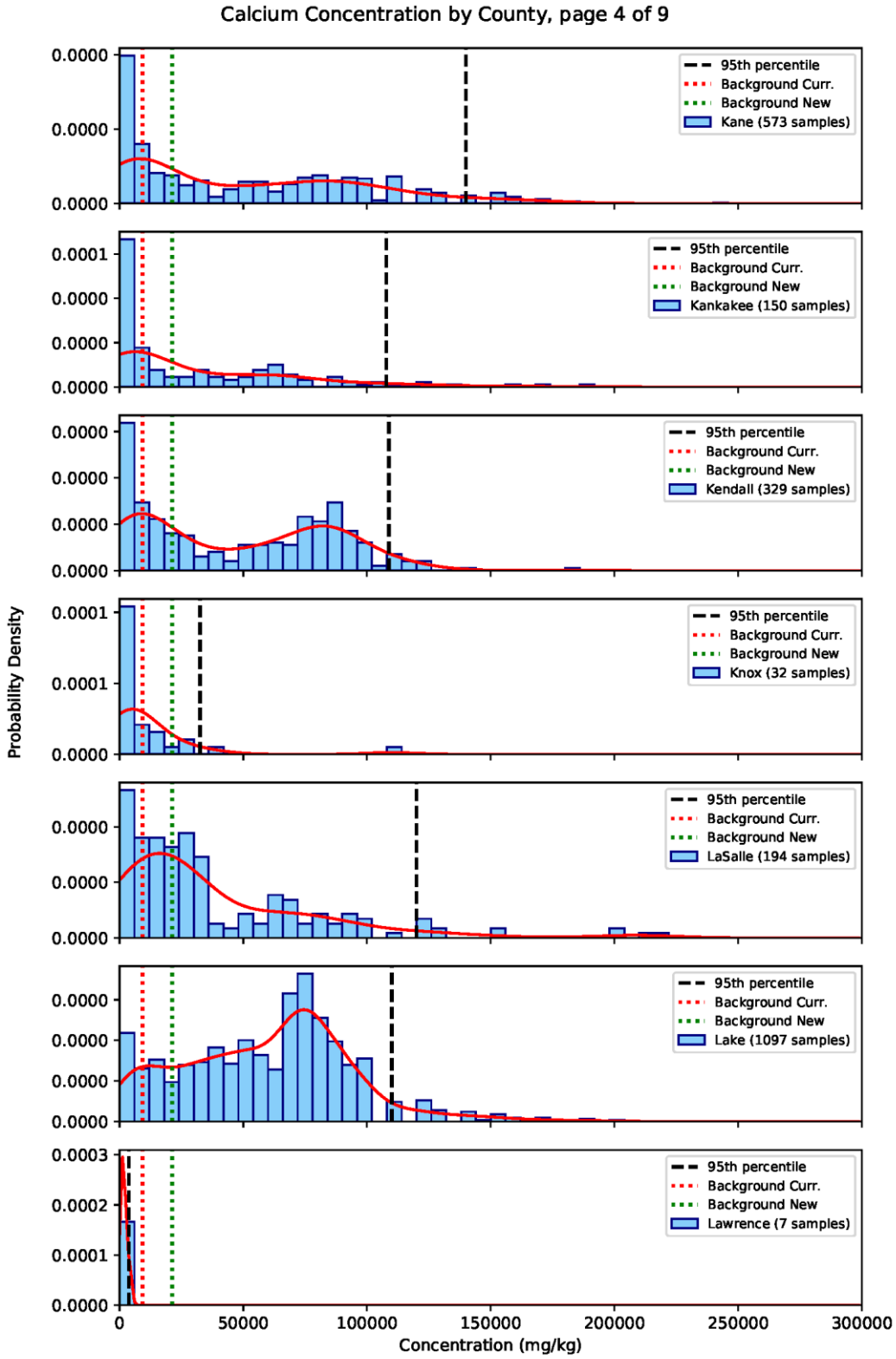


Figure 233. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 4

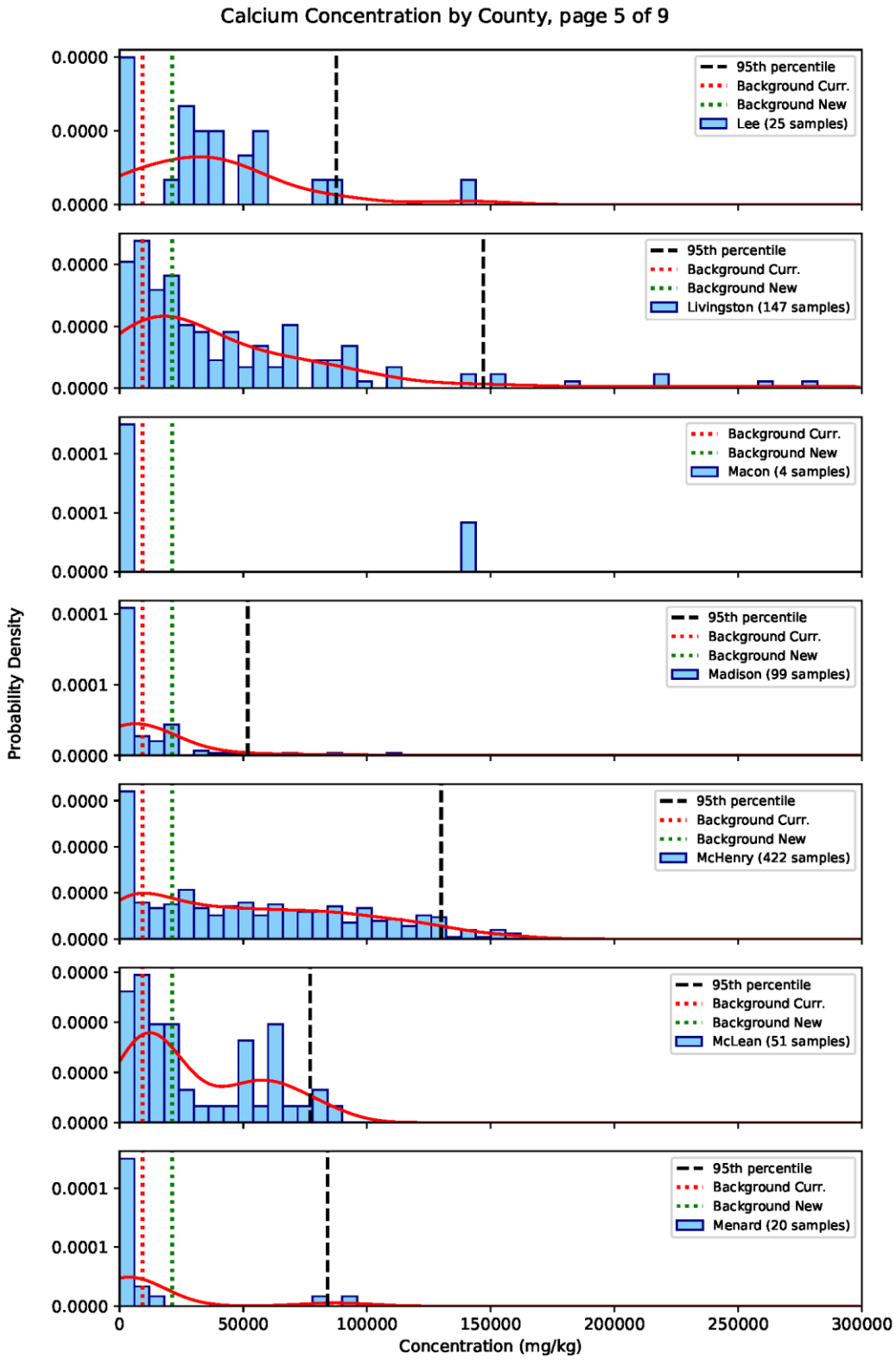


Figure 234. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 5

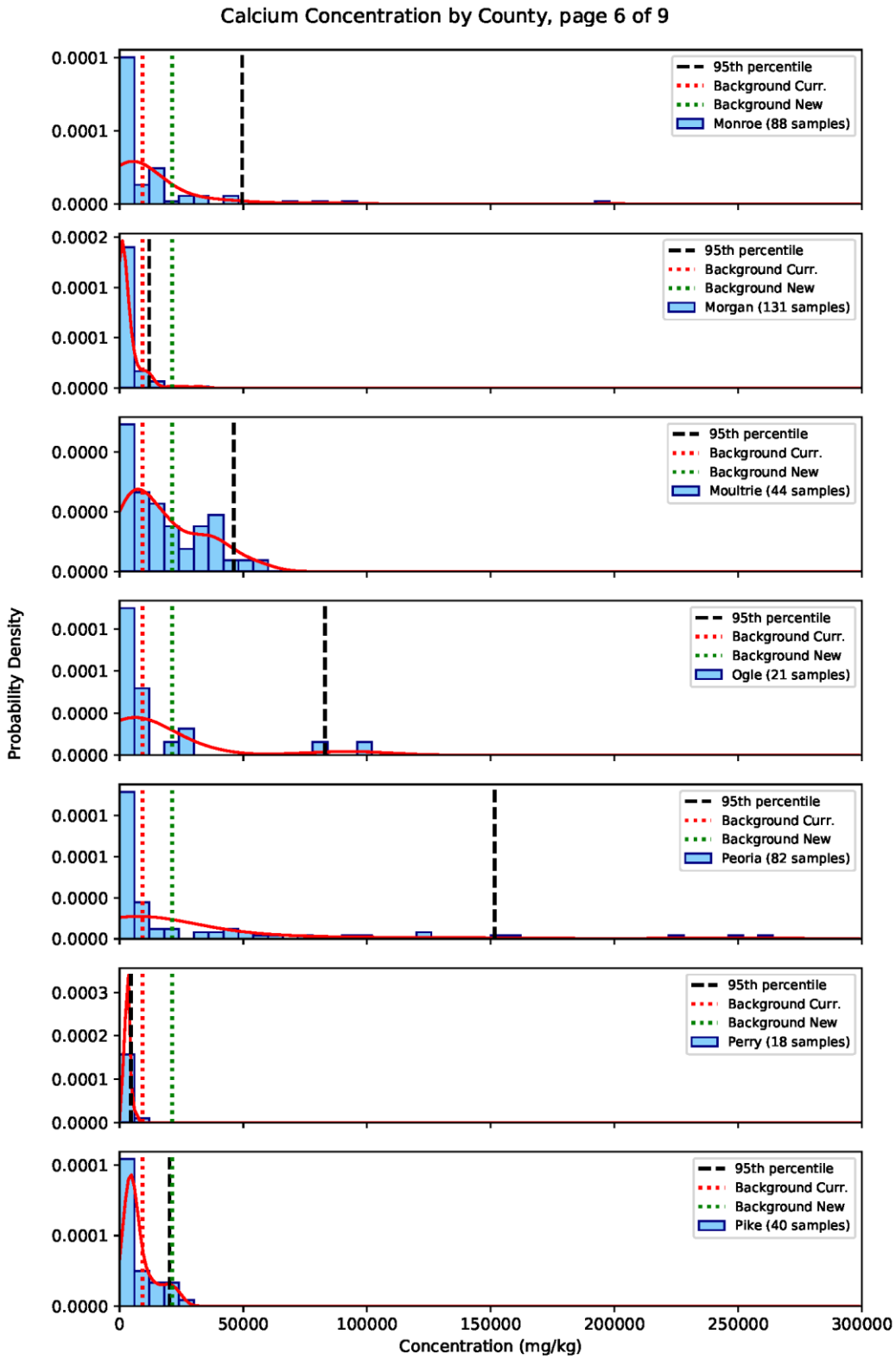


Figure 235. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 6

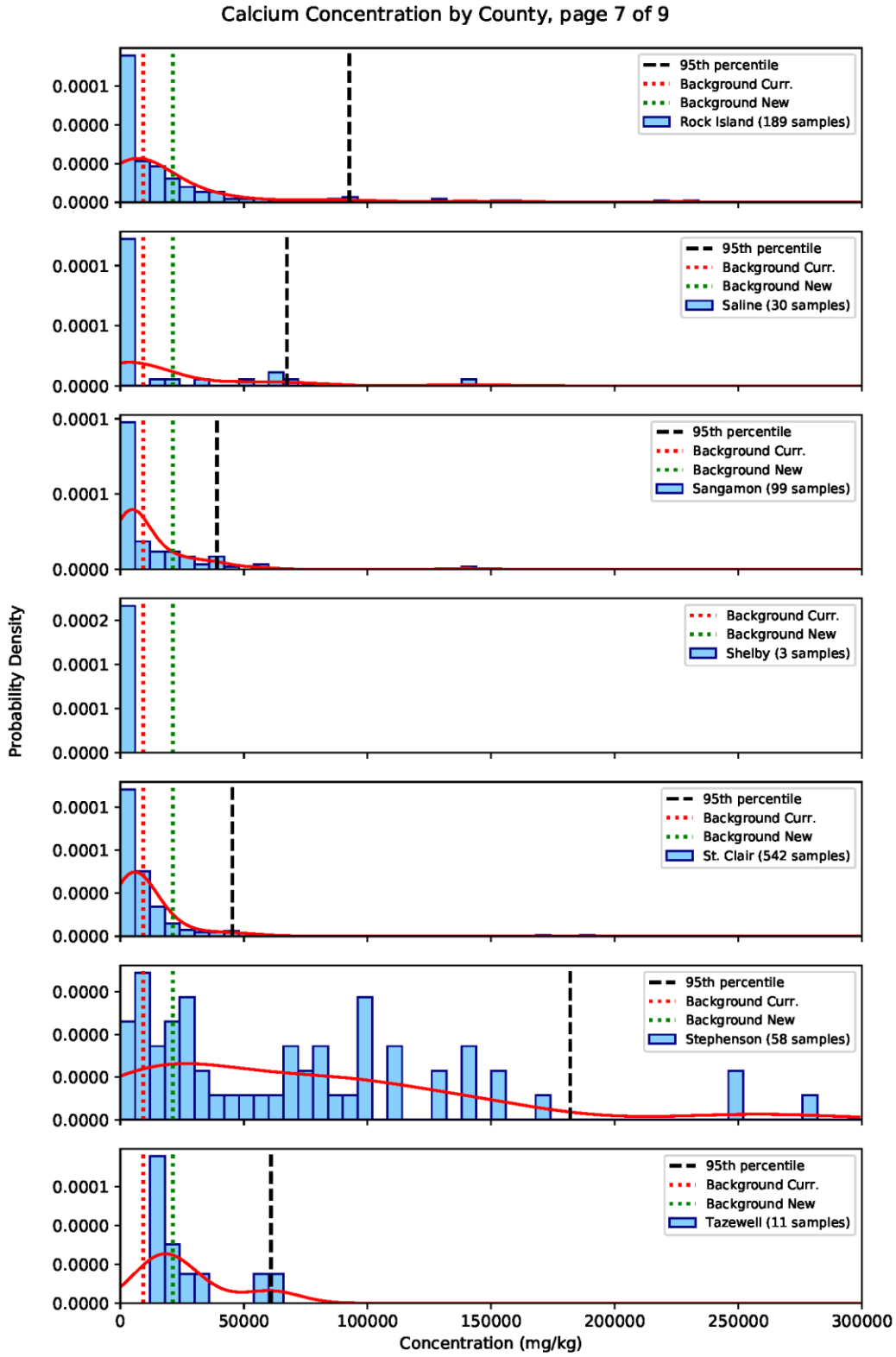


Figure 236. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 7

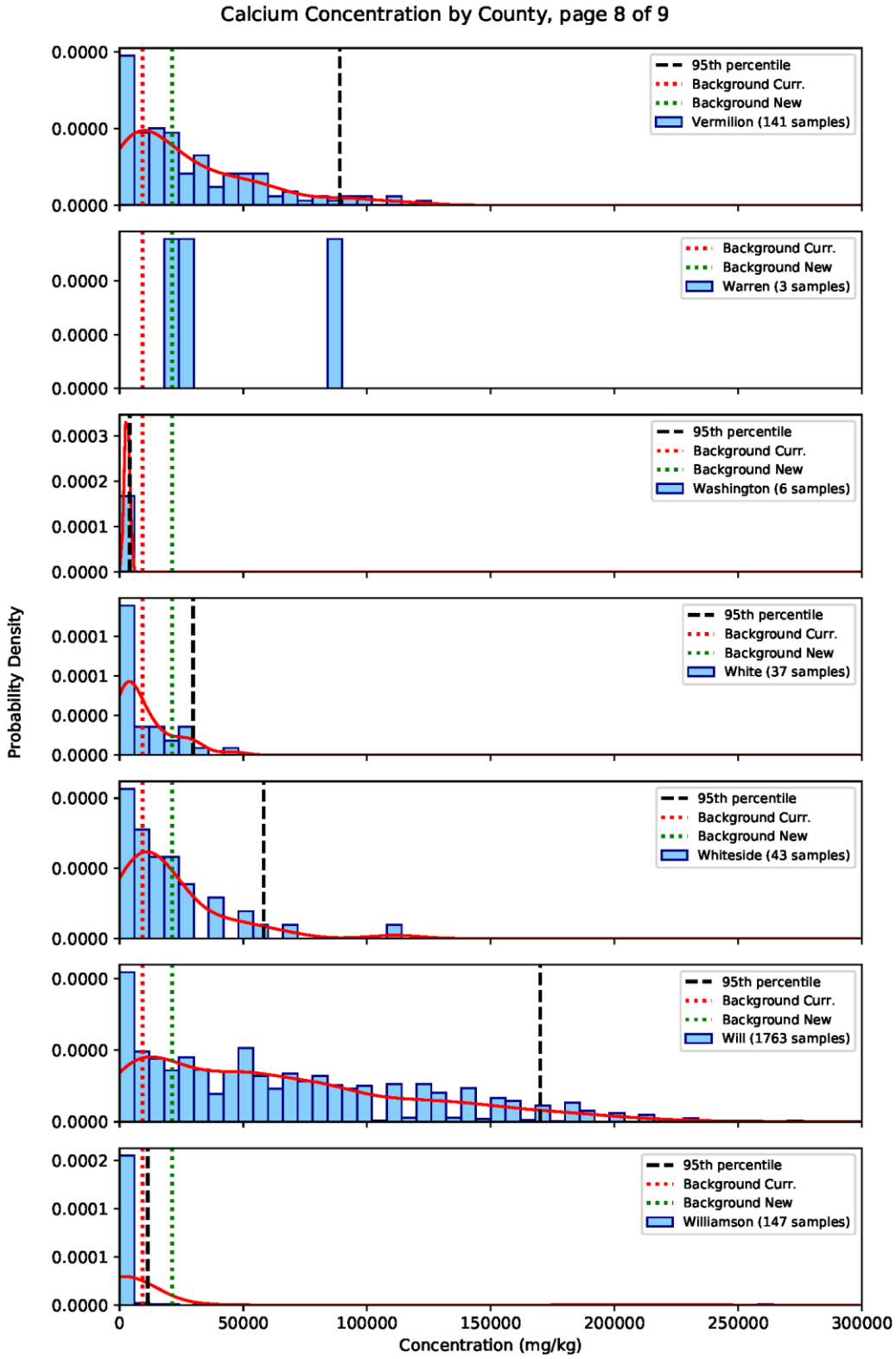


Figure 237. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 8

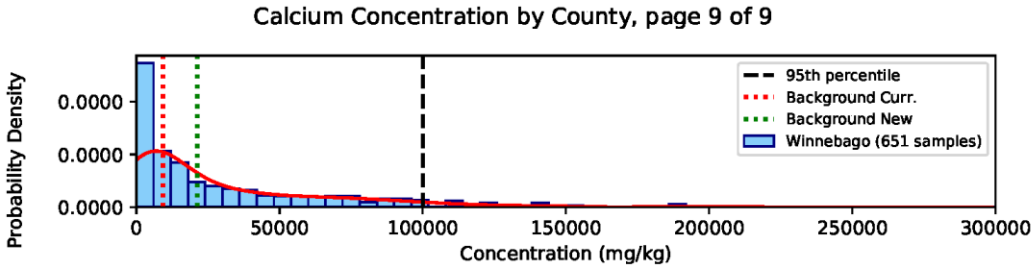


Figure 238. Histogram of RSL calcium concentrations by Illinois county, REC (mg/kg), part 9

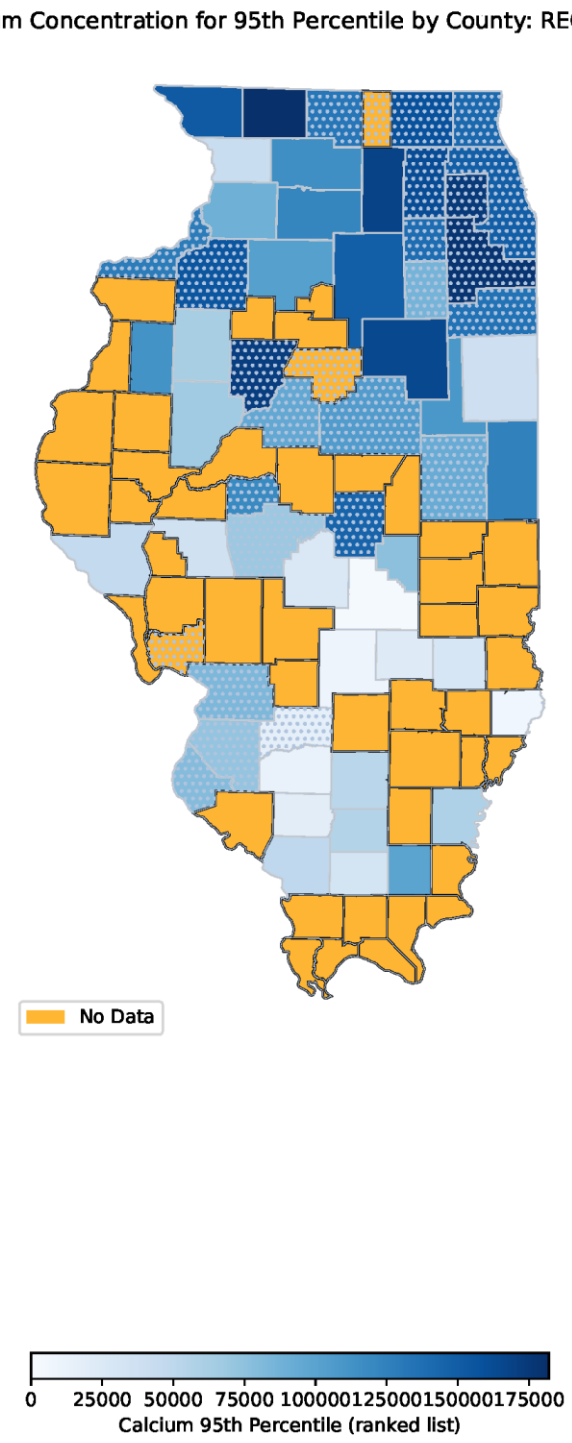


Figure 239. Map of RSL calcium 95th percentile concentration by Illinois county, REC (mg/kg)

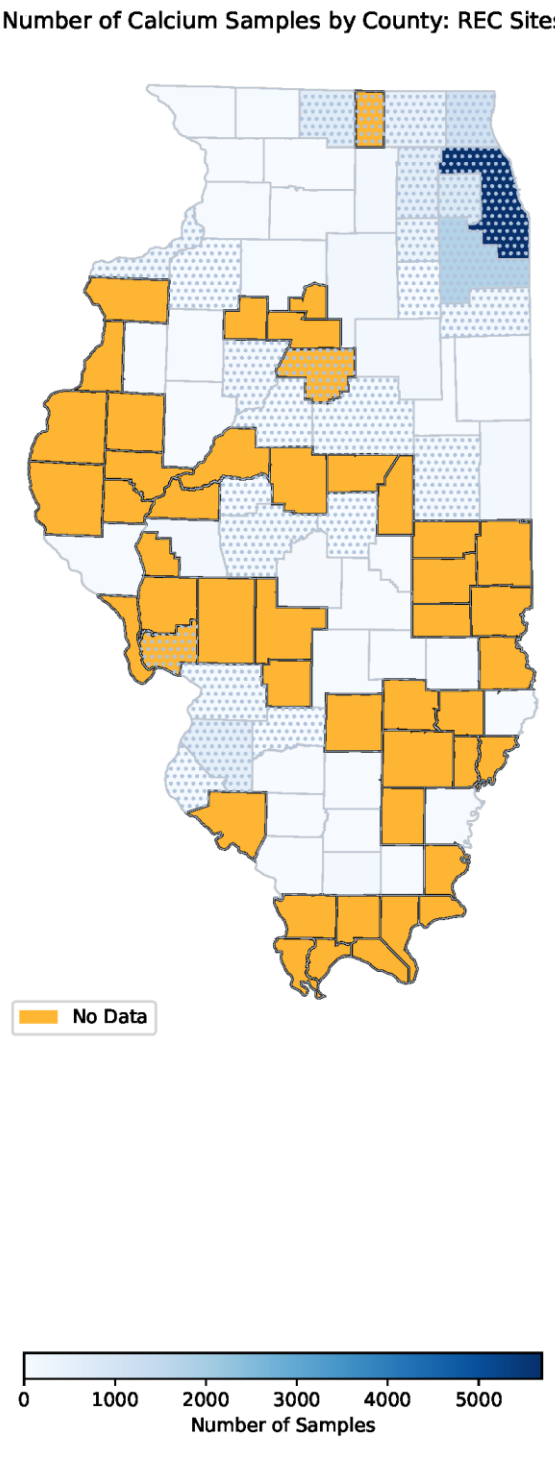


Figure 240. Map of RSL calcium sample quantity by Illinois county, REC (mg/kg)

G.2 CALCIUM NON-REC

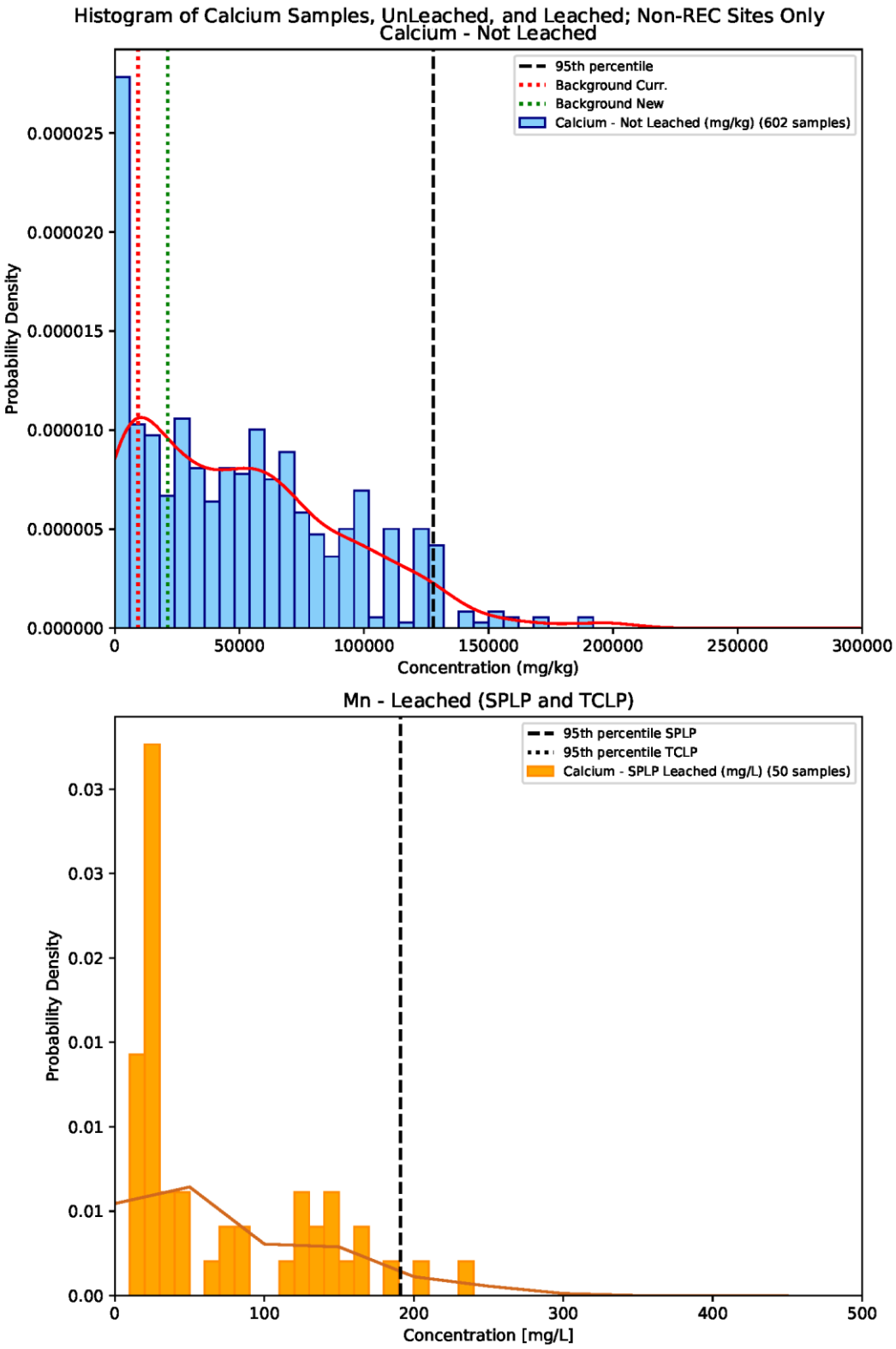


Figure 241. Histogram of RSL calcium concentrations, Non-REC (mg/kg)

Calcium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

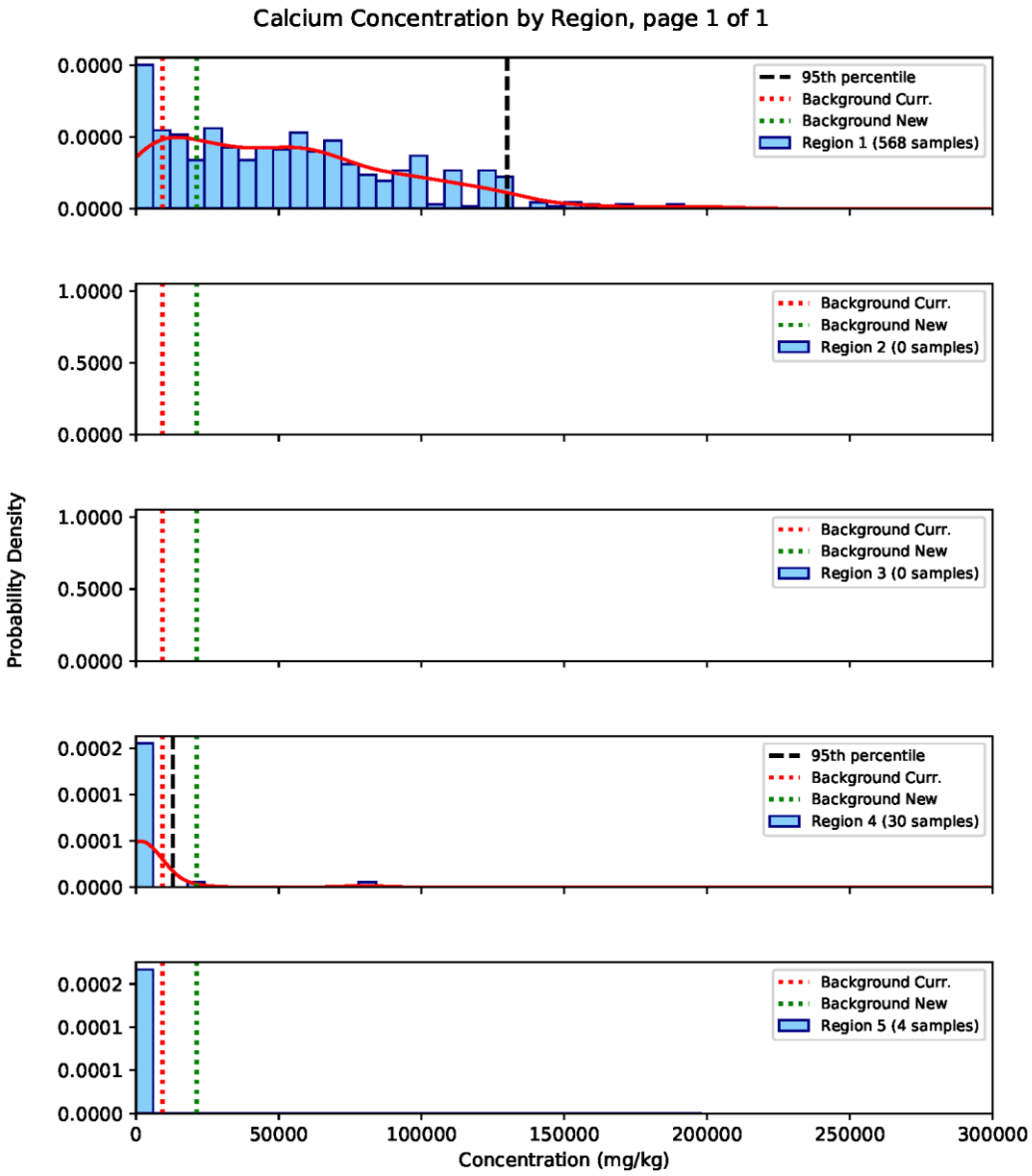


Figure 242. Histogram of RSL calcium concentrations by IDOT Region, Non-REC (mg/kg)

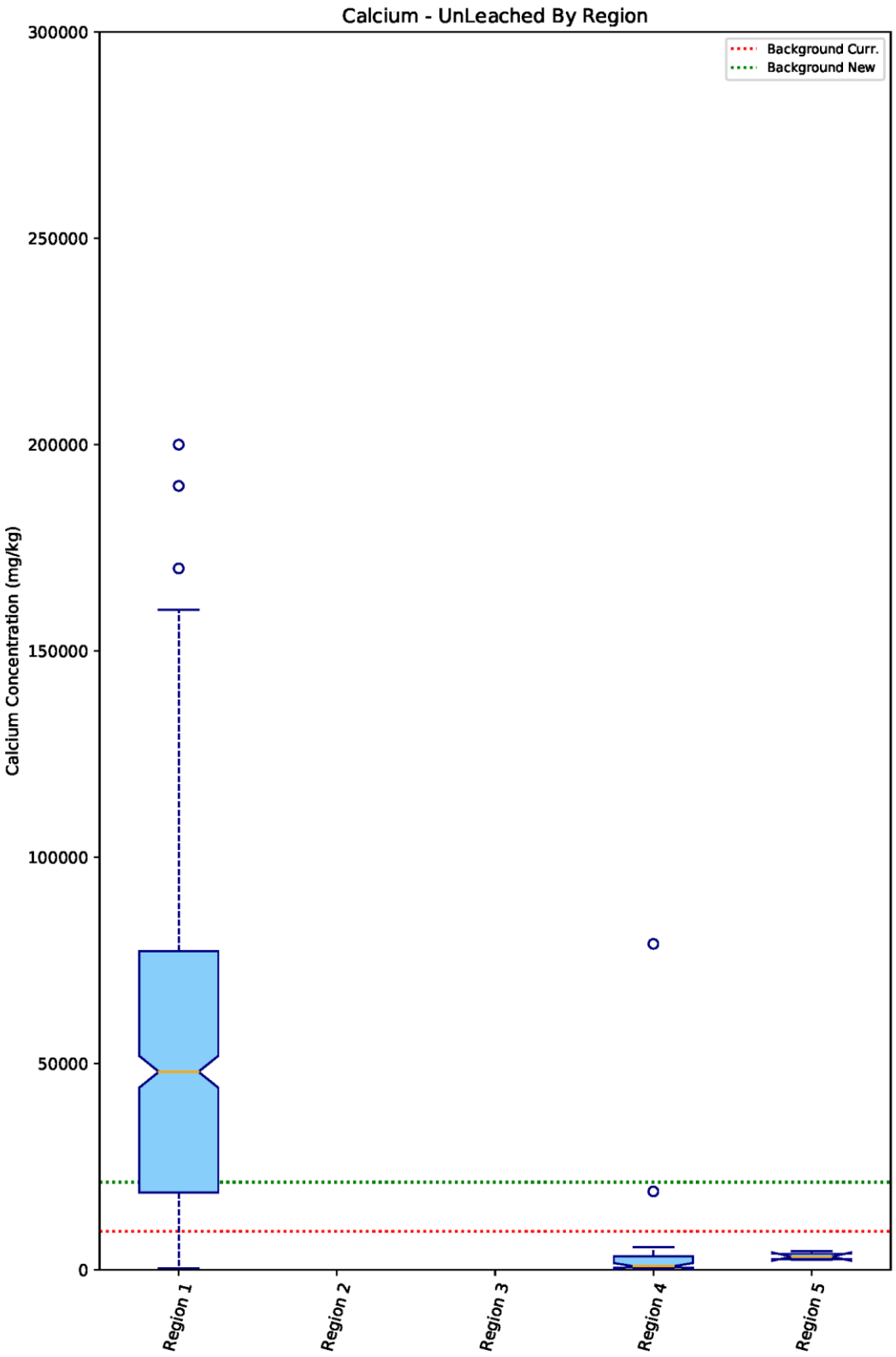


Figure 243. Boxplot of RSL calcium concentrations by IDOT Region, Non-REC (mg/kg)

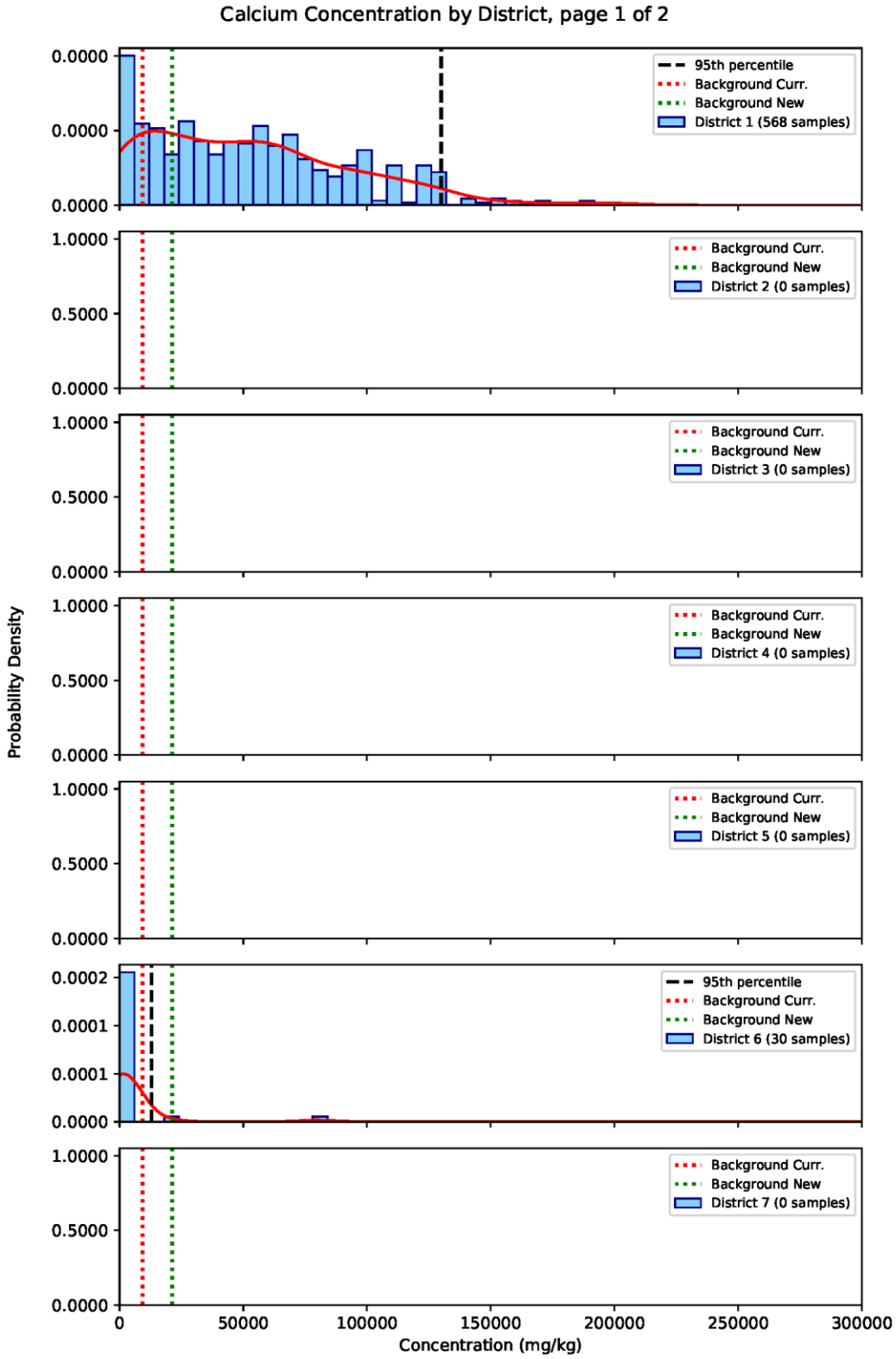


Figure 244. Histogram of RSL calcium concentrations by IDOT District, Non-REC (mg/kg), part 1

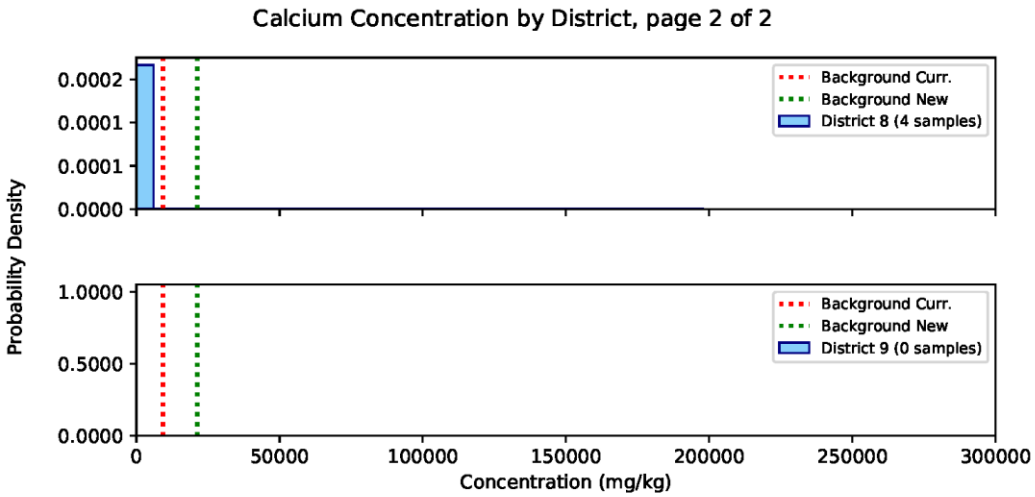


Figure 245. Histogram of RSL calcium concentrations by IDOT District, Non-REC (mg/kg), part 2

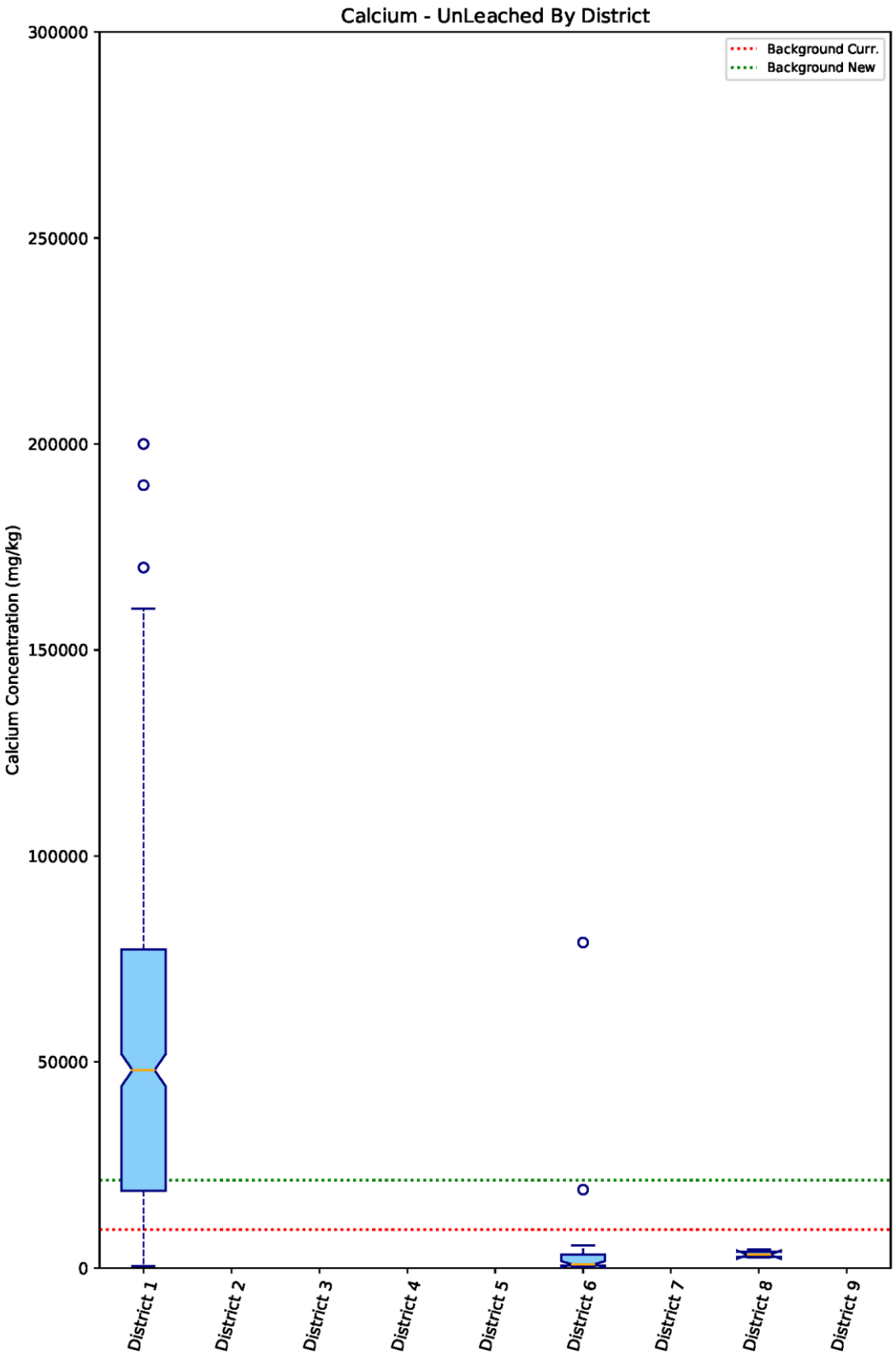


Figure 246. Boxplot of RSL calcium concentrations by IDOT District, Non-REC (mg/kg)

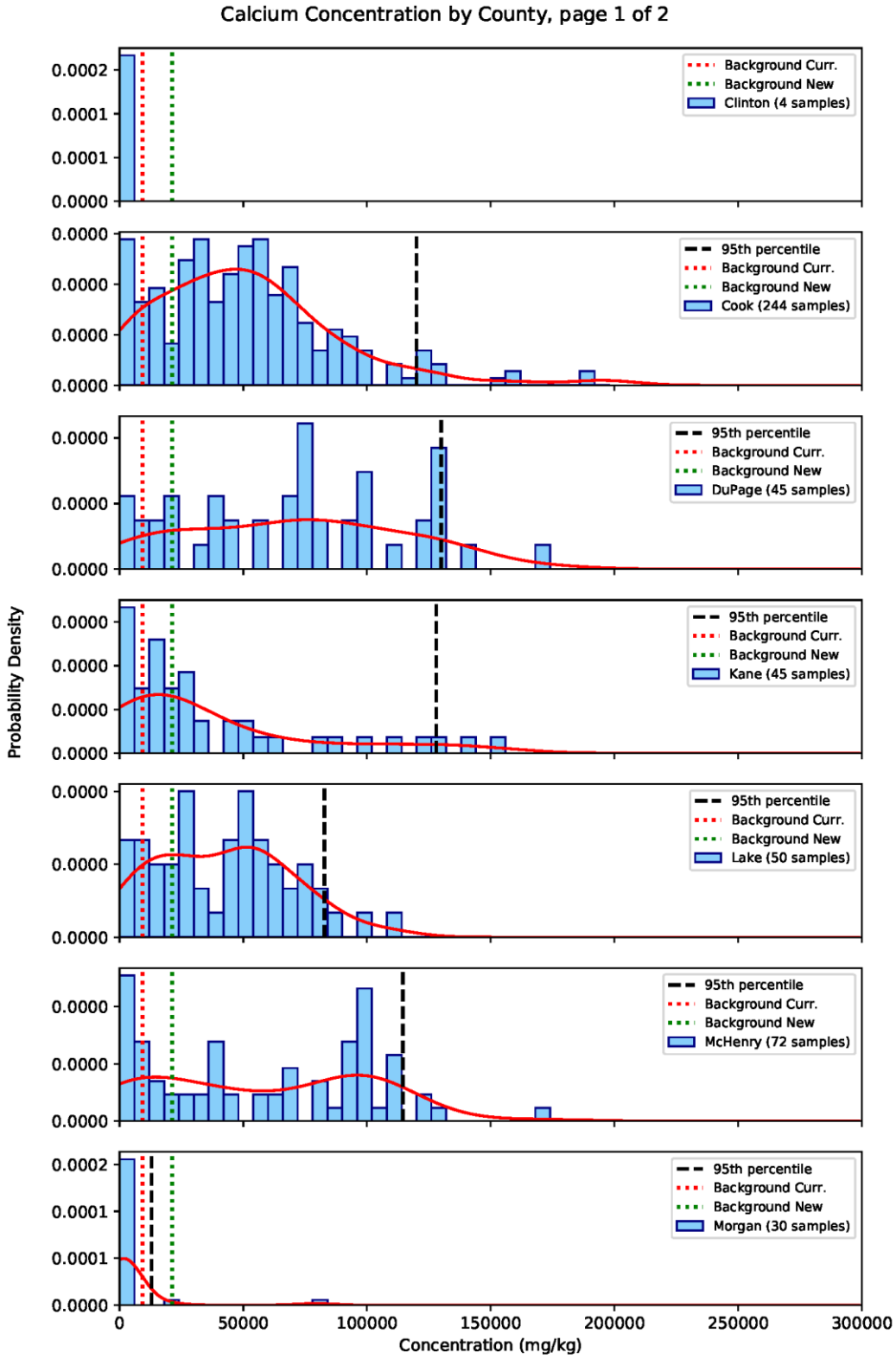


Figure 247. Histogram of RSL calcium concentrations by Illinois county, Non-REC (mg/kg), part 1

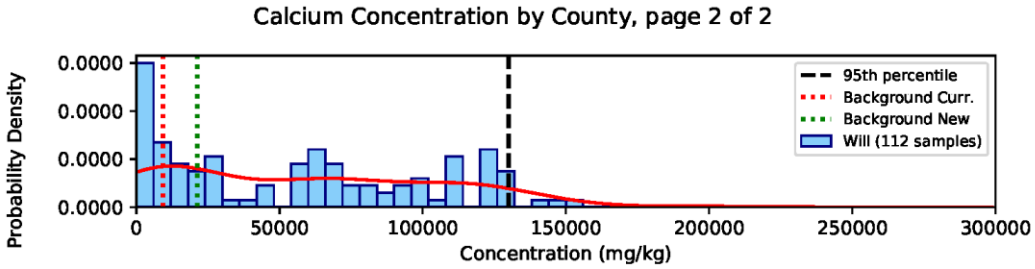


Figure 248. Histogram of RSL calcium concentrations by Illinois county, Non-REC (mg/kg), part 2

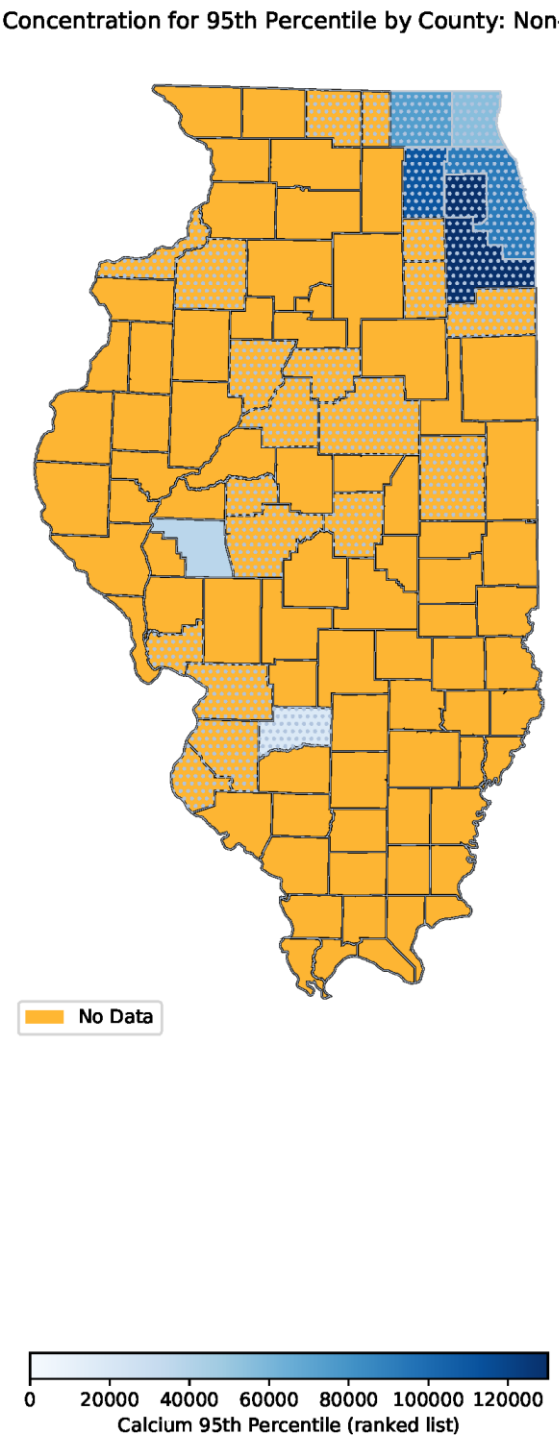


Figure 249. Map of RSL calcium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

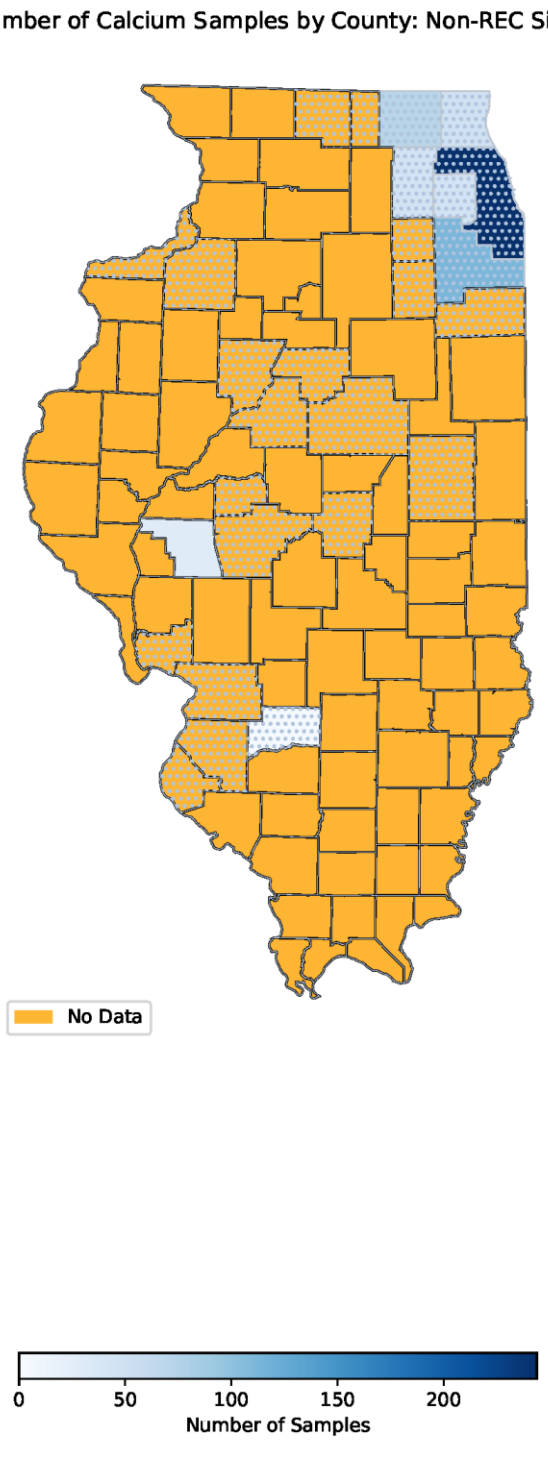


Figure 250. Map of RSL calcium sample quantity by Illinois county, Non-REC (mg/kg)

G.3 CALCIUM DE MINIMIS

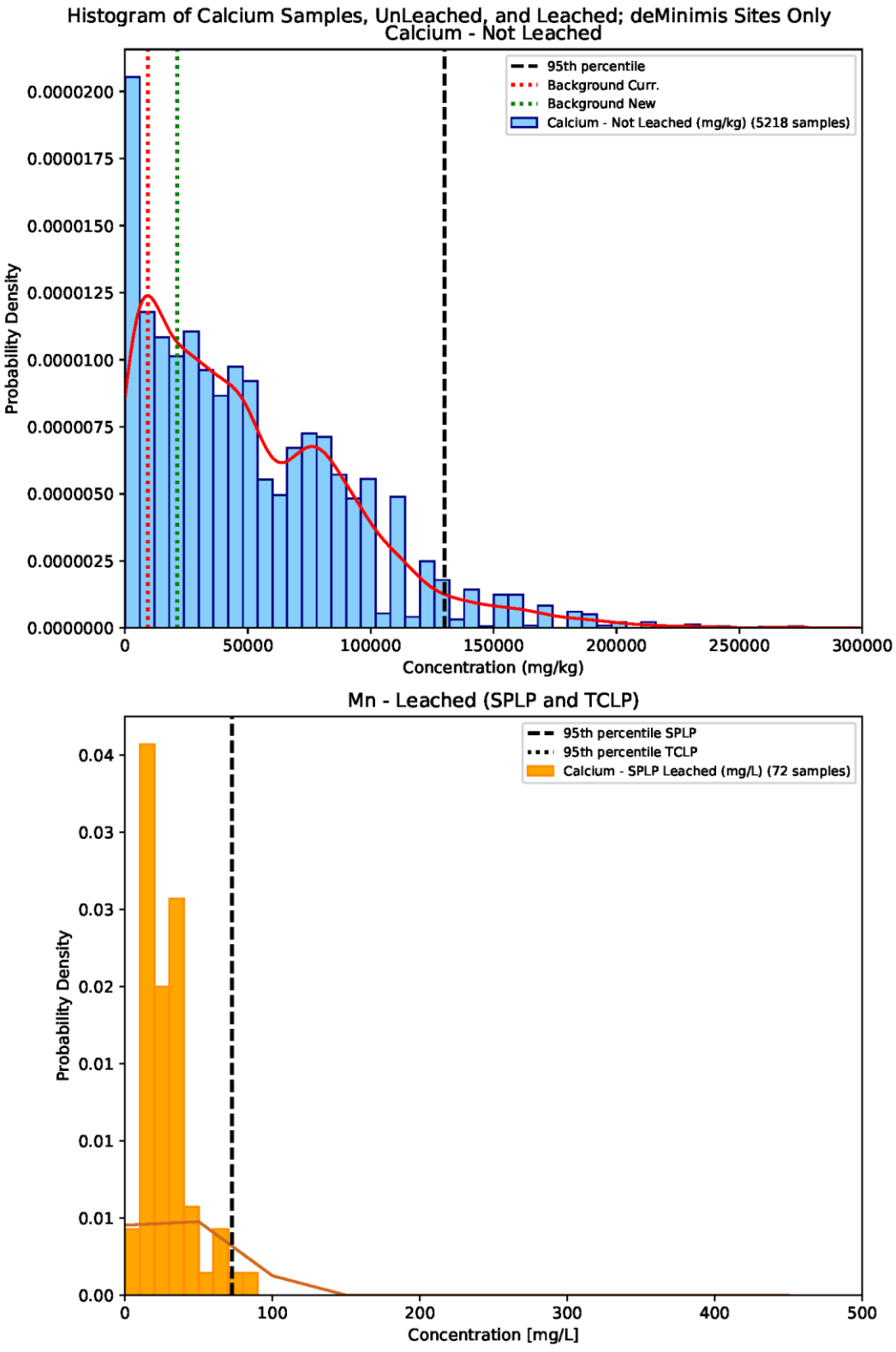


Figure 251. Histogram of RSL calcium concentrations, de minimis (mg/kg)

Calcium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

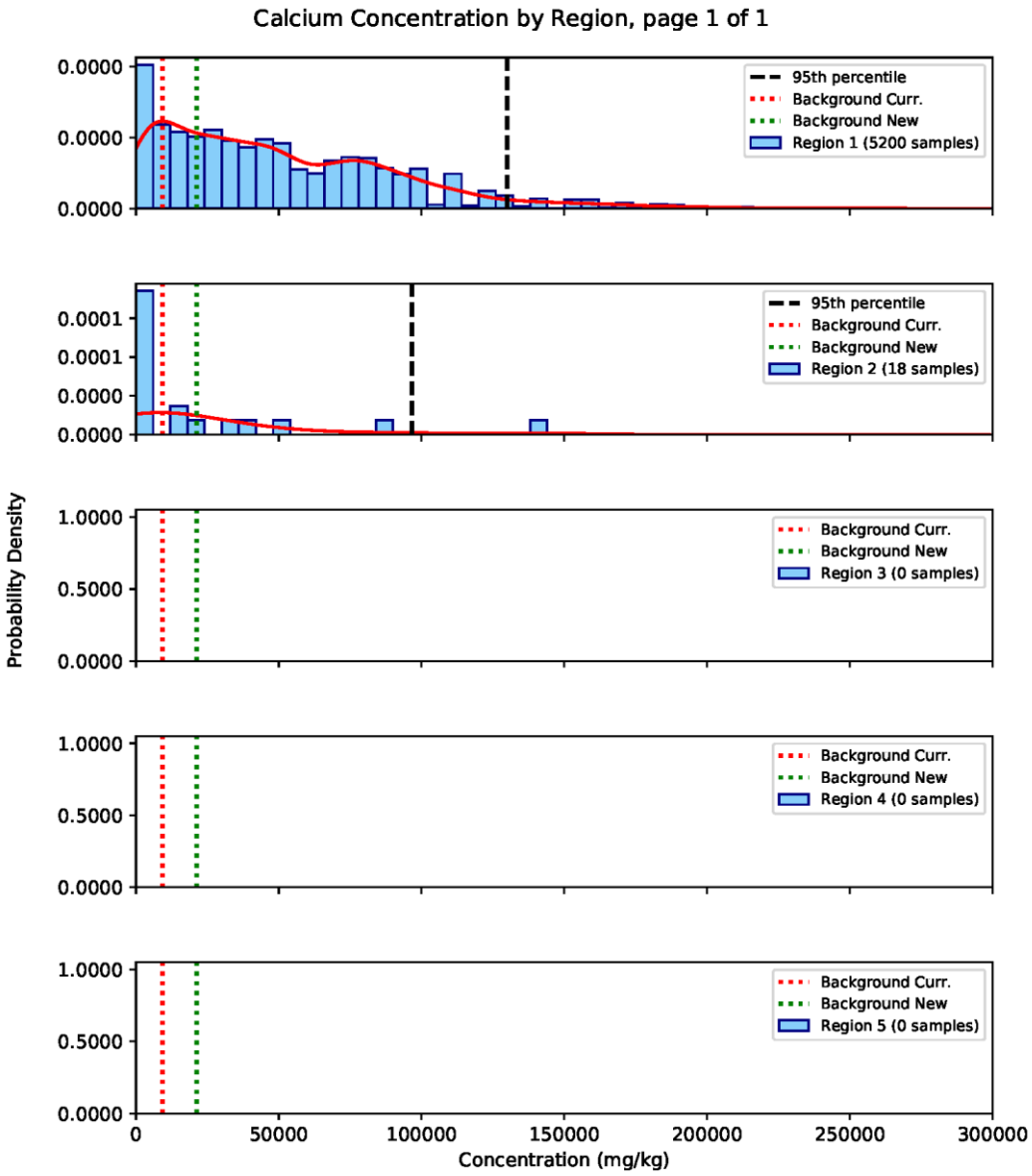


Figure 252. Histogram of RSL calcium concentrations by IDOT Region, de minimis (mg/kg)

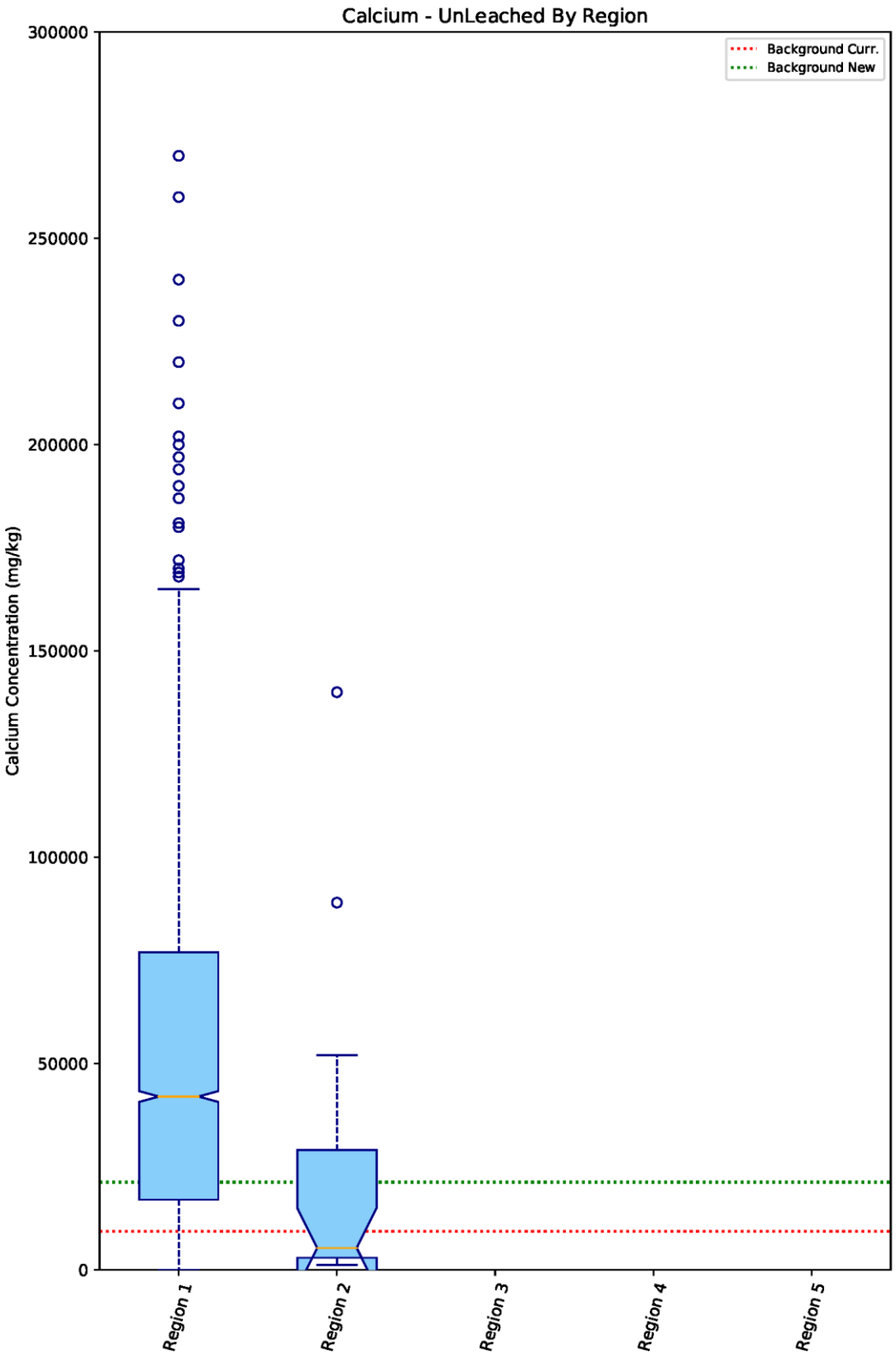


Figure 253. Boxplot of RSL calcium concentrations by IDOT Region, de minimis (mg/kg)

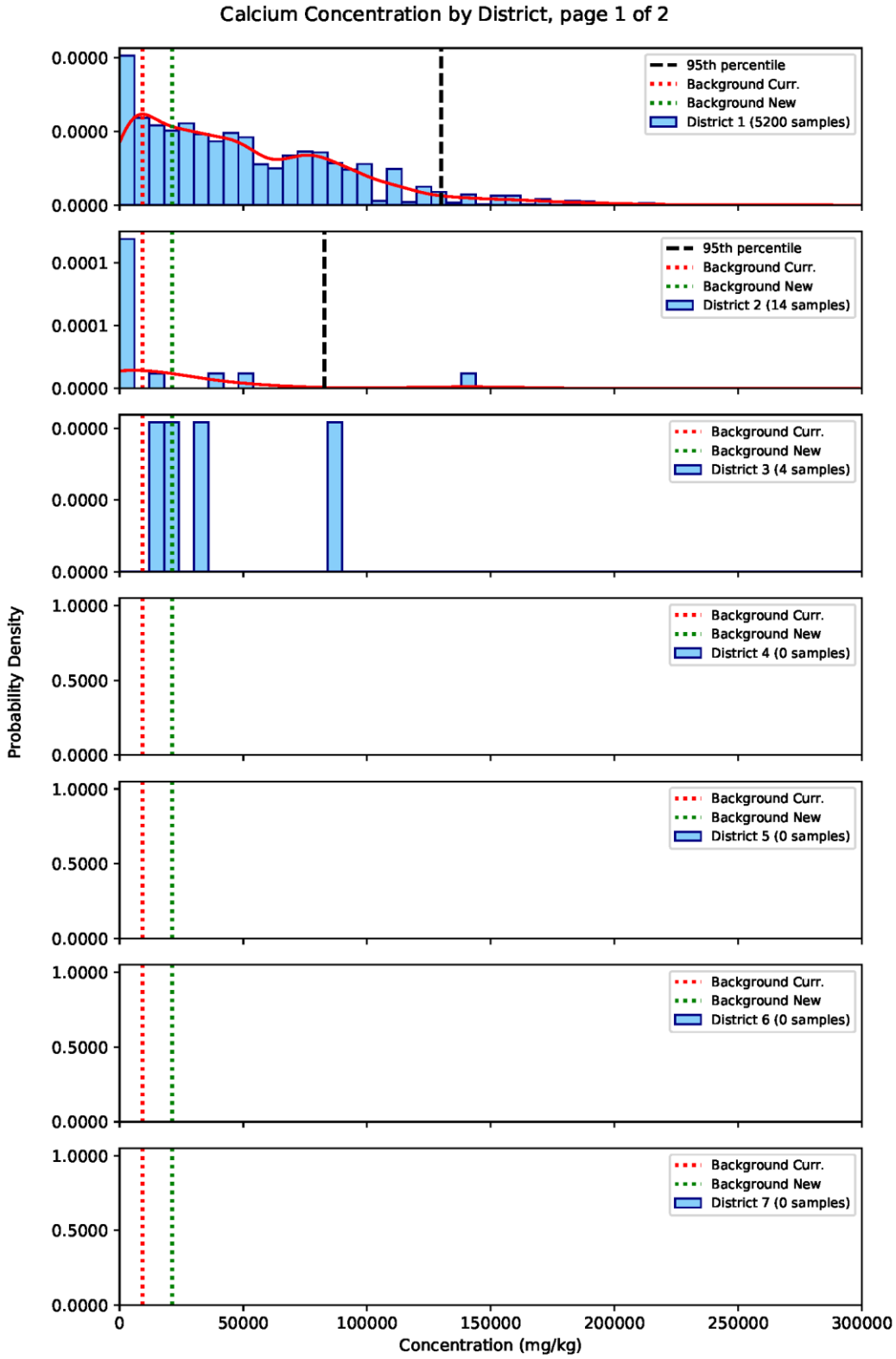


Figure 254. Histogram of RSL calcium concentrations by IDOT District, de minimis (mg/kg), part 1

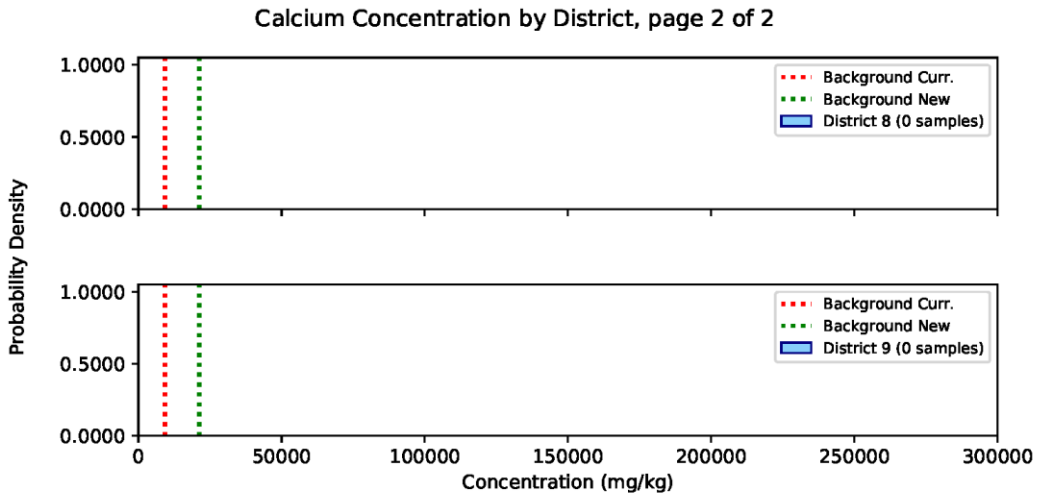


Figure 255. Histogram of RSL calcium concentrations by IDOT District, de minimis (mg/kg), part 2

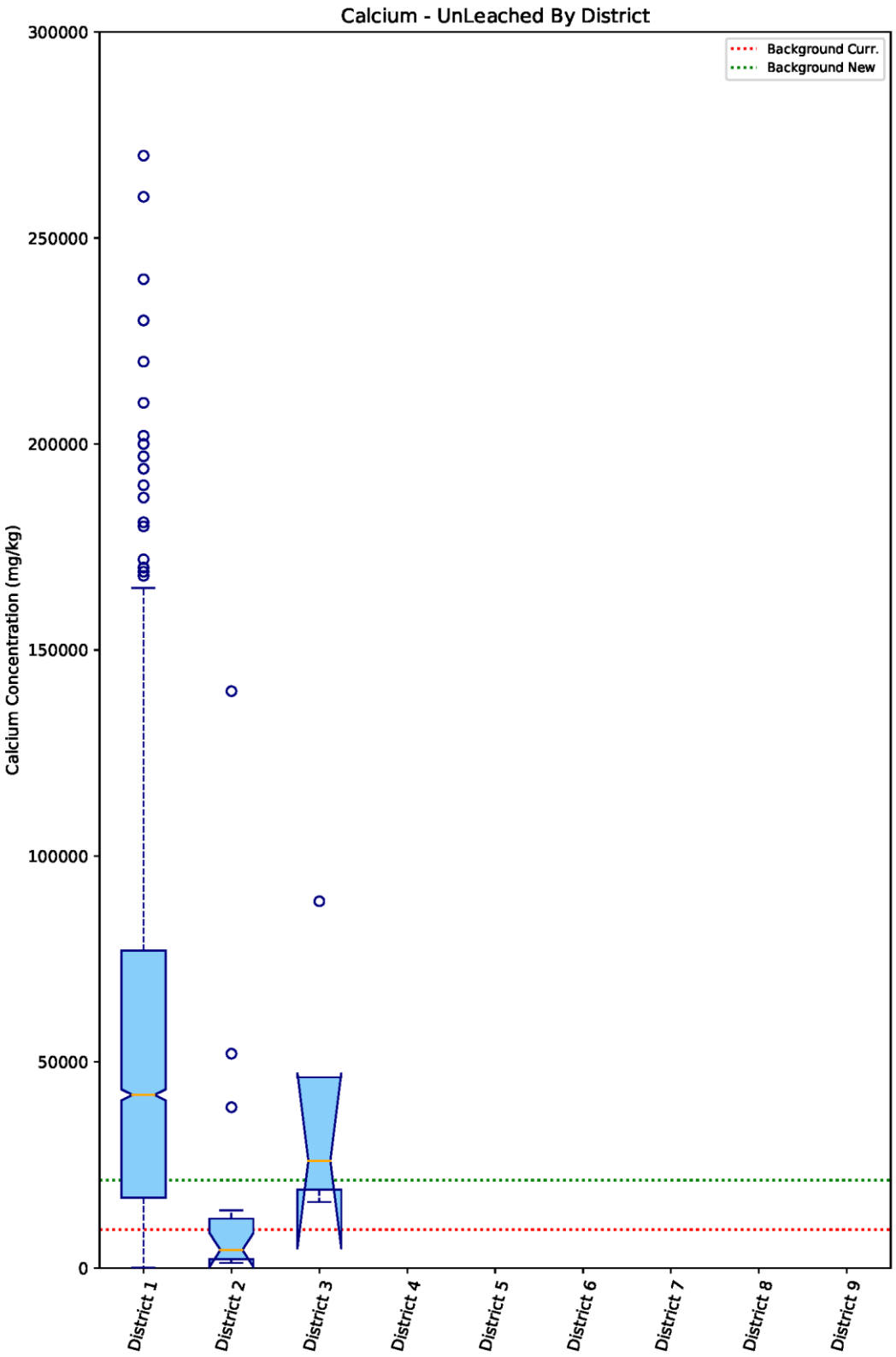


Figure 256. Boxplot of RSL calcium concentrations by IDOT District, de minimis (mg/kg)

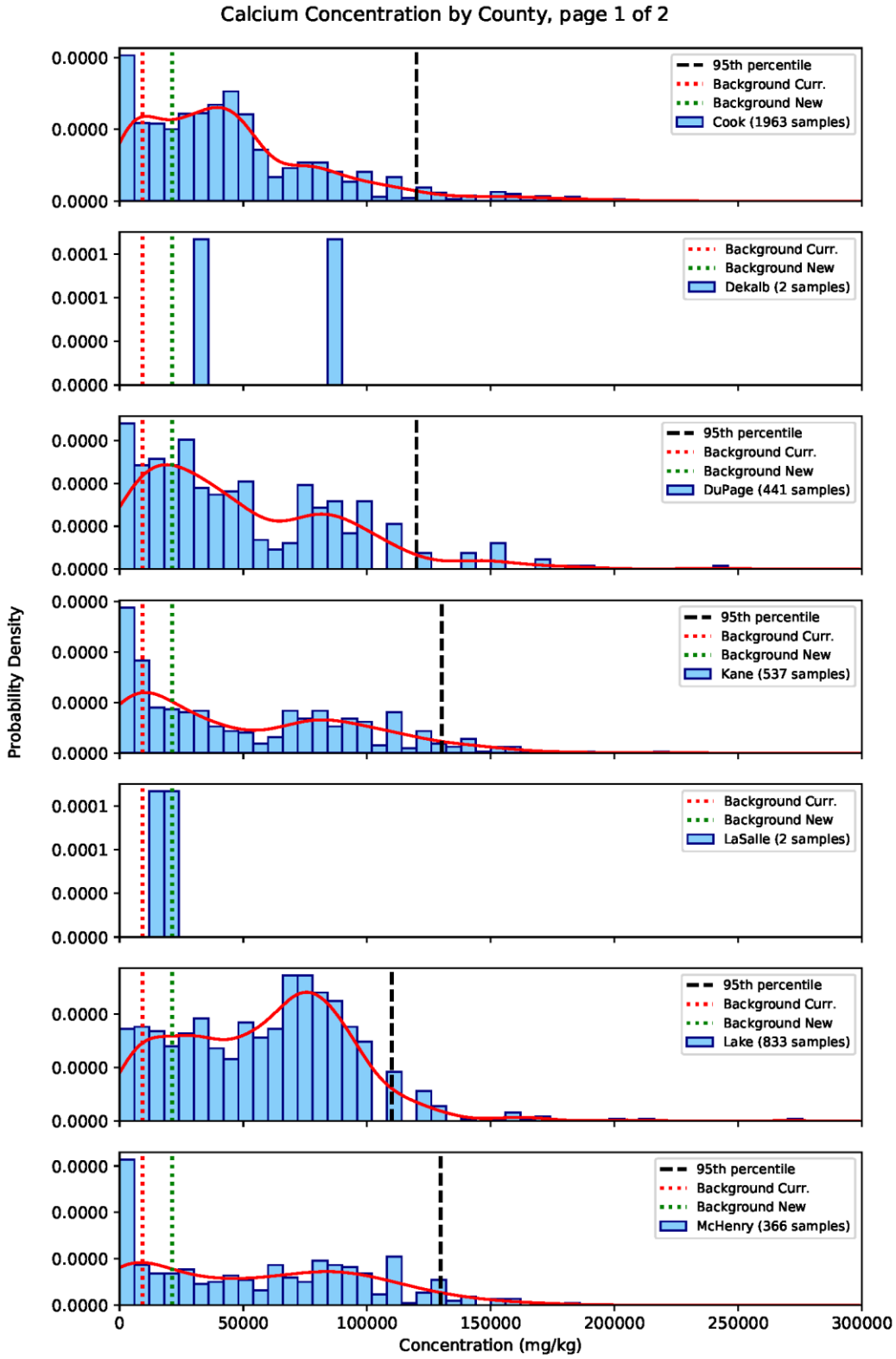


Figure 257. Histogram of RSL calcium concentrations by Illinois county, de minimis (mg/kg), part 1

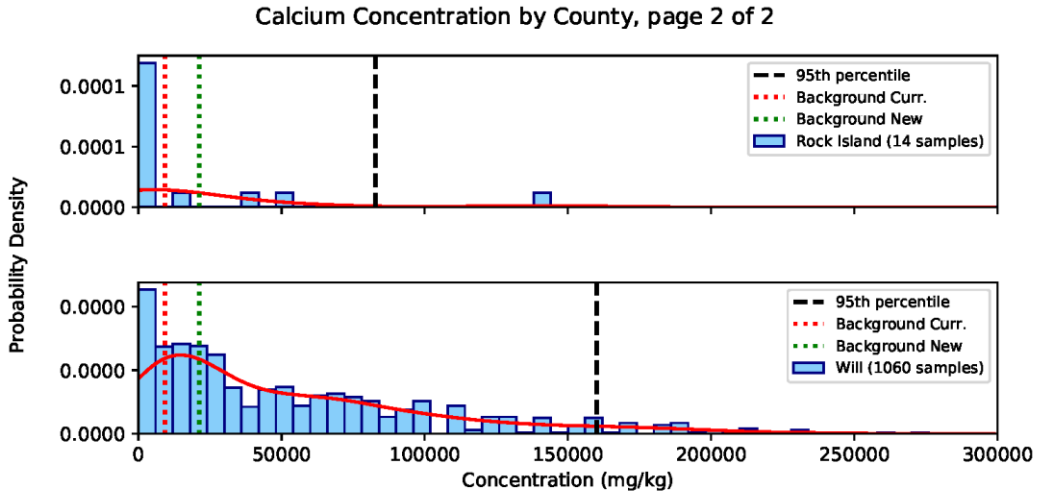


Figure 258. Histogram of RSL calcium concentrations by Illinois county, de minimis (mg/kg), part 2

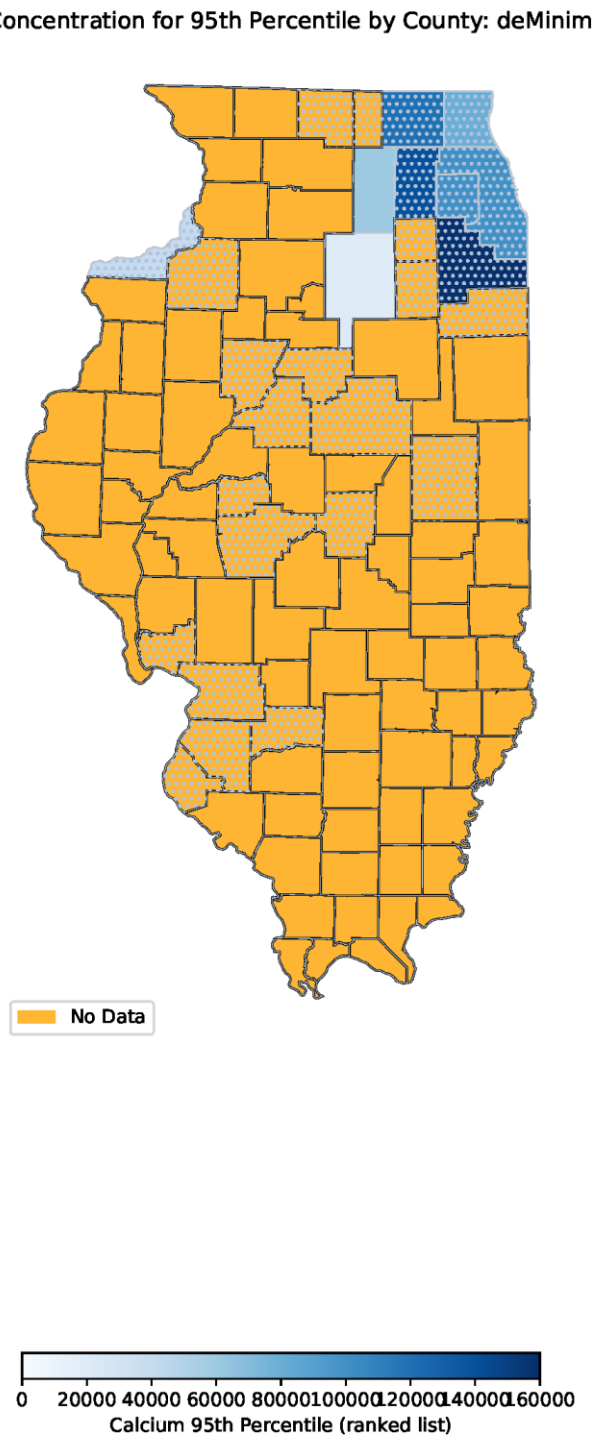


Figure 259. Map of RSL calcium 95th percentile concentration by Illinois county, de minimis (mg/kg)

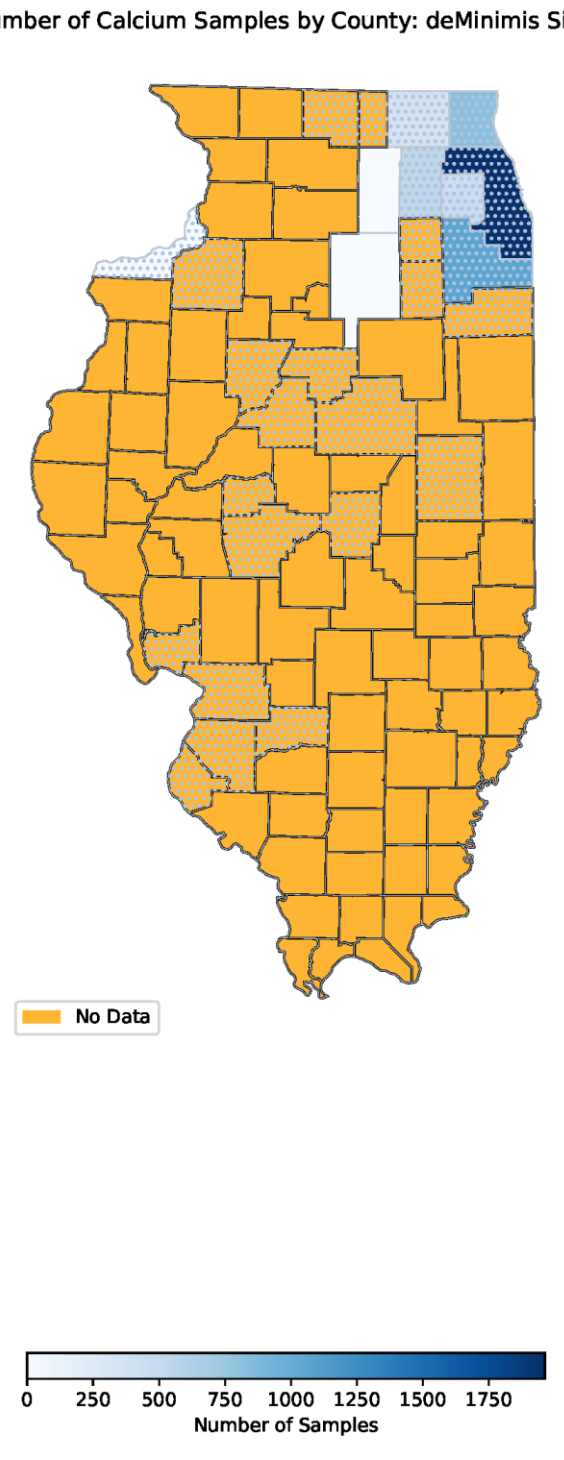


Figure 260. Map of RSL calcium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX H. ANALYTE ANALYSIS: CHROMIUM

H.1 CHROMIUM REC

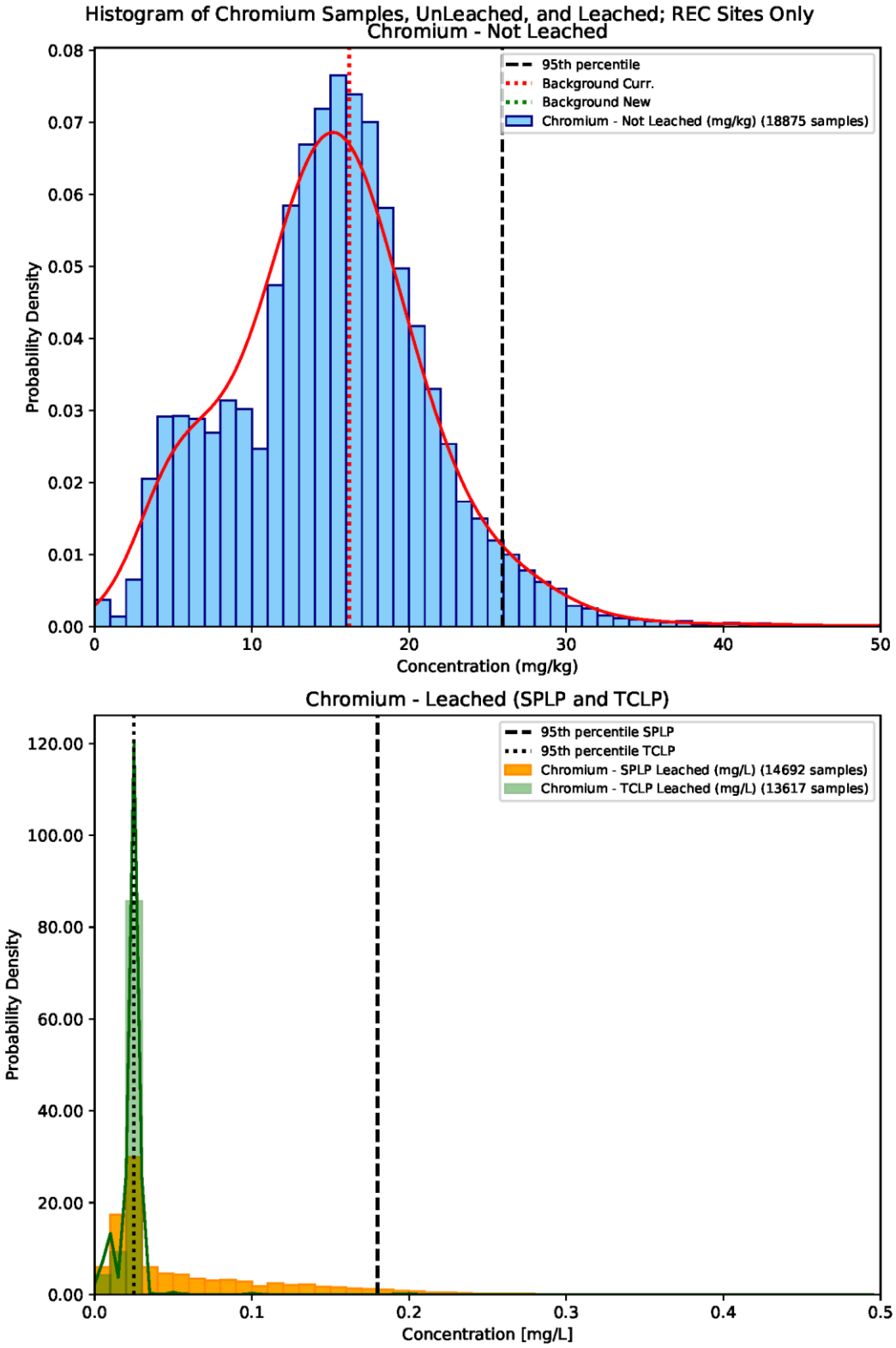


Figure 261. Histogram of RSL chromium concentrations, REC (mg/kg)

Chromium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

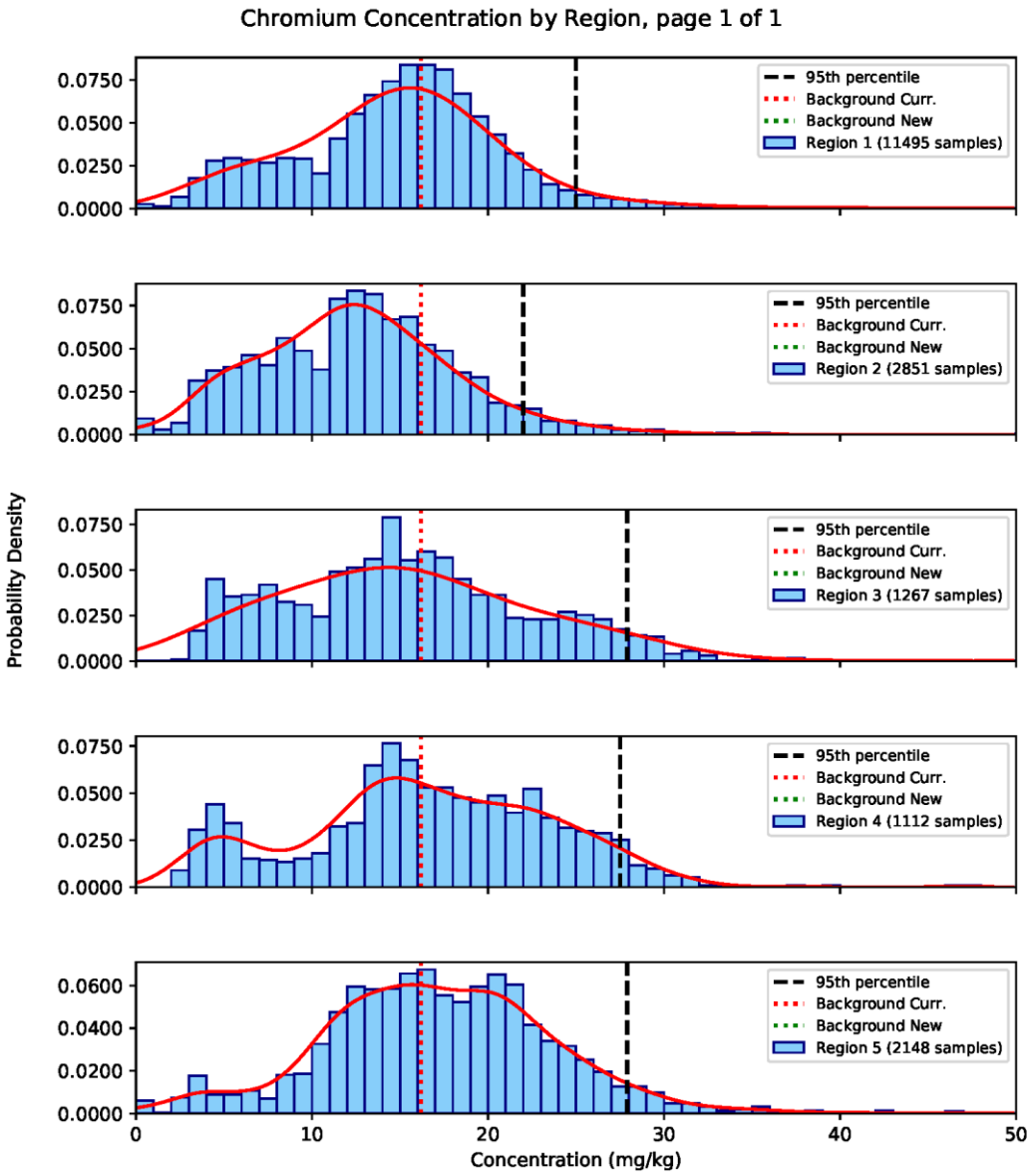


Figure 262. Histogram of RSL chromium concentrations by IDOT Region, REC (mg/kg)

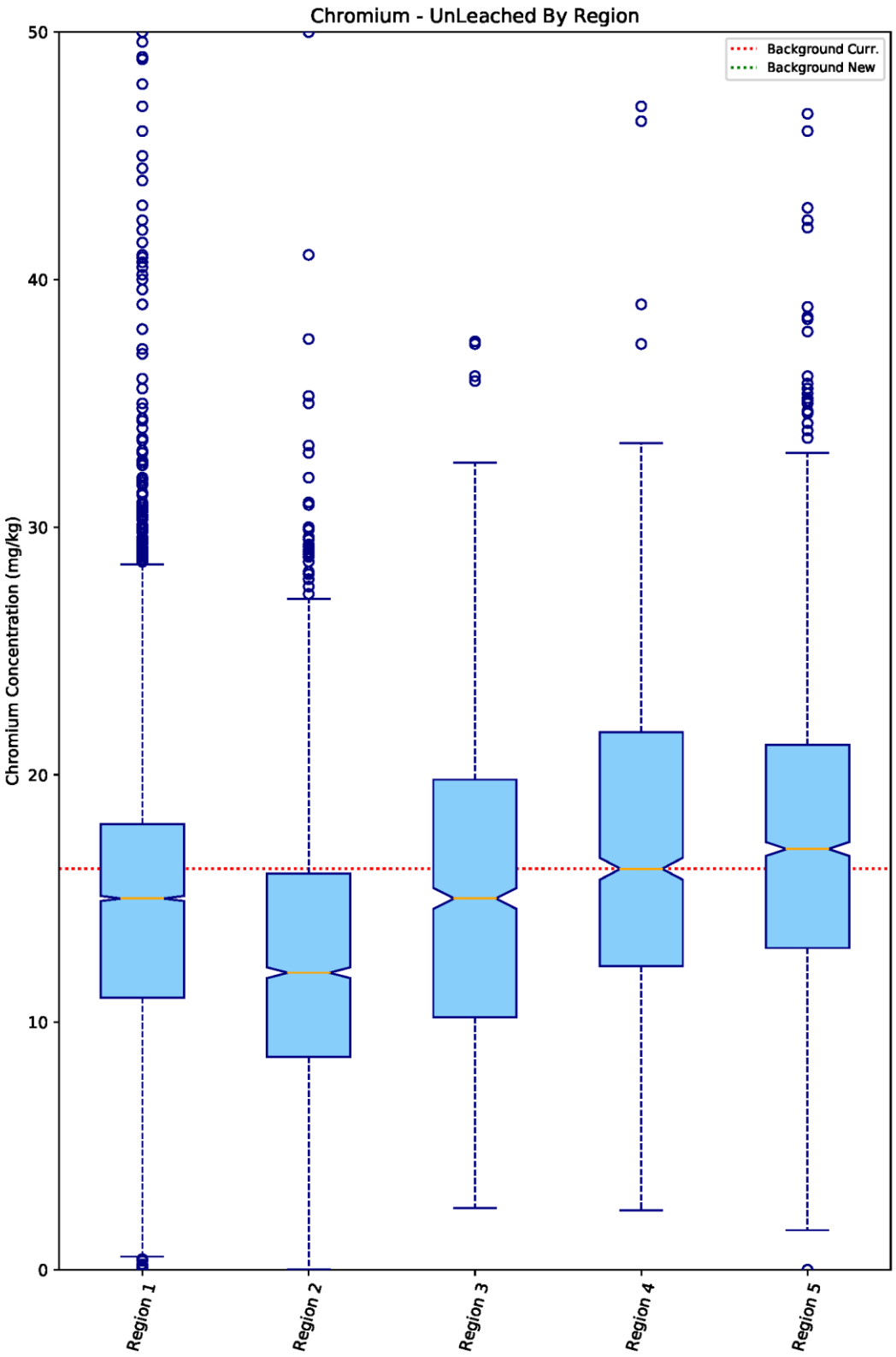


Figure 263. Boxplot of RSL chromium concentrations by IDOT Region, REC (mg/kg)

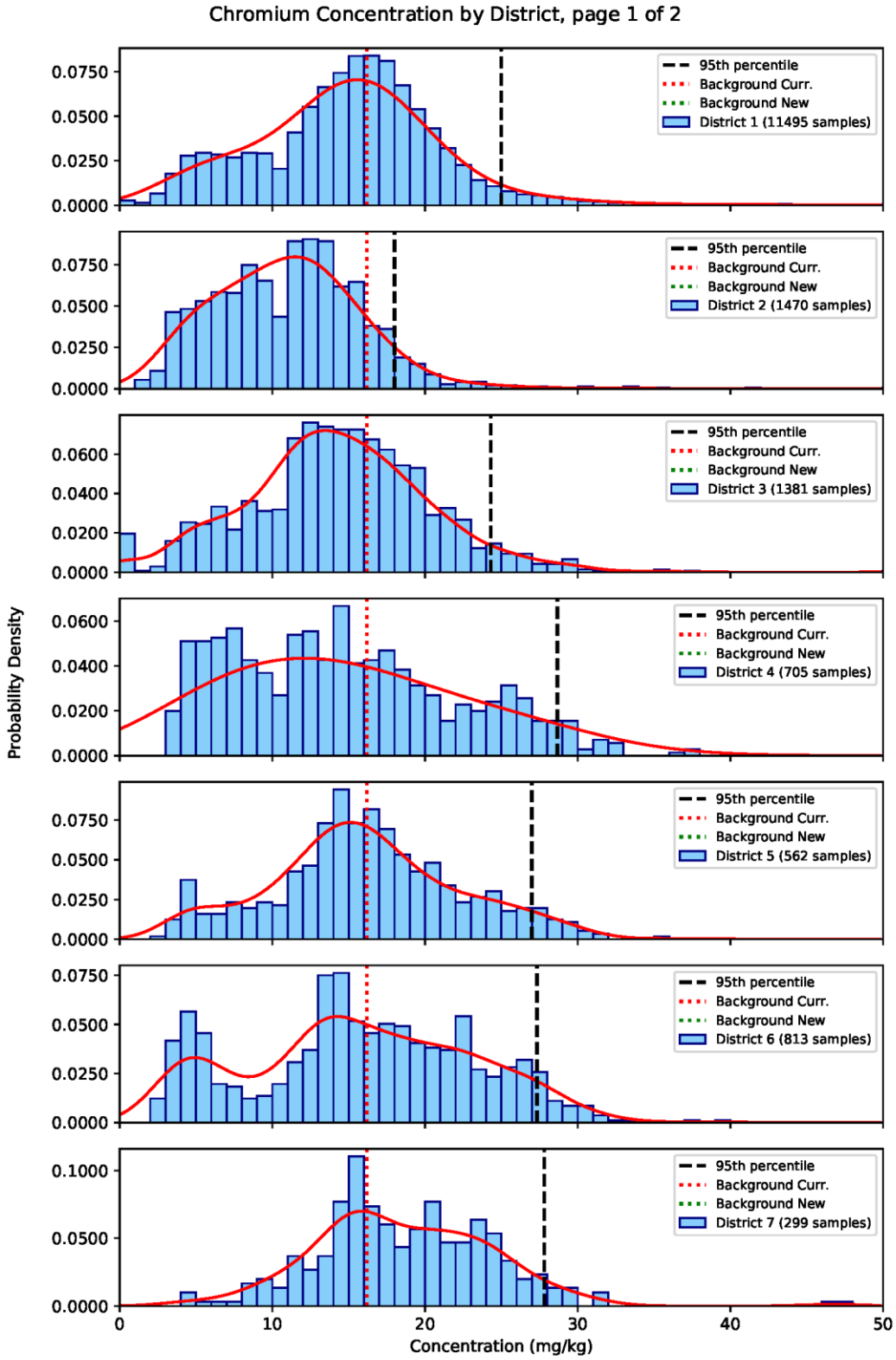


Figure 264. Histogram of RSL chromium concentrations by IDOT District, REC (mg/kg), part 1

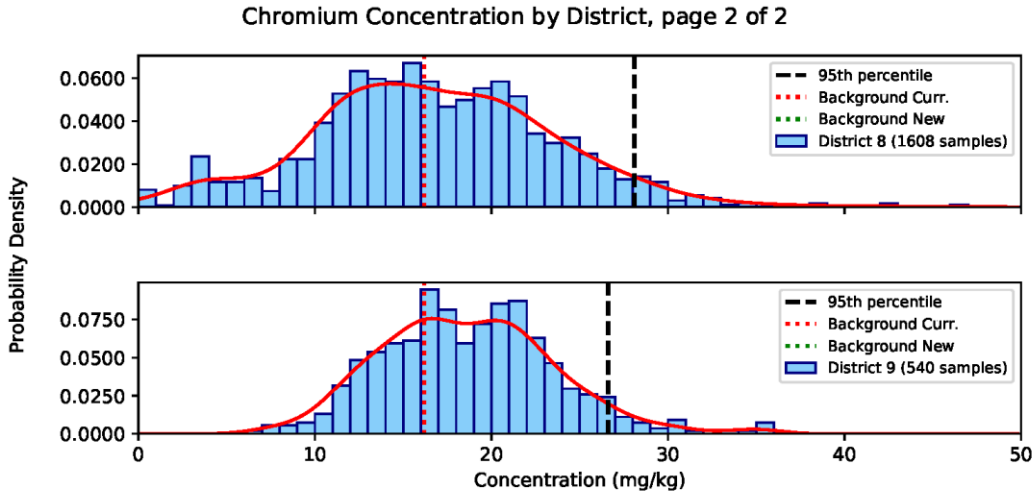


Figure 265. Histogram of RSL chromium concentrations by IDOT District, REC (mg/kg), part 2

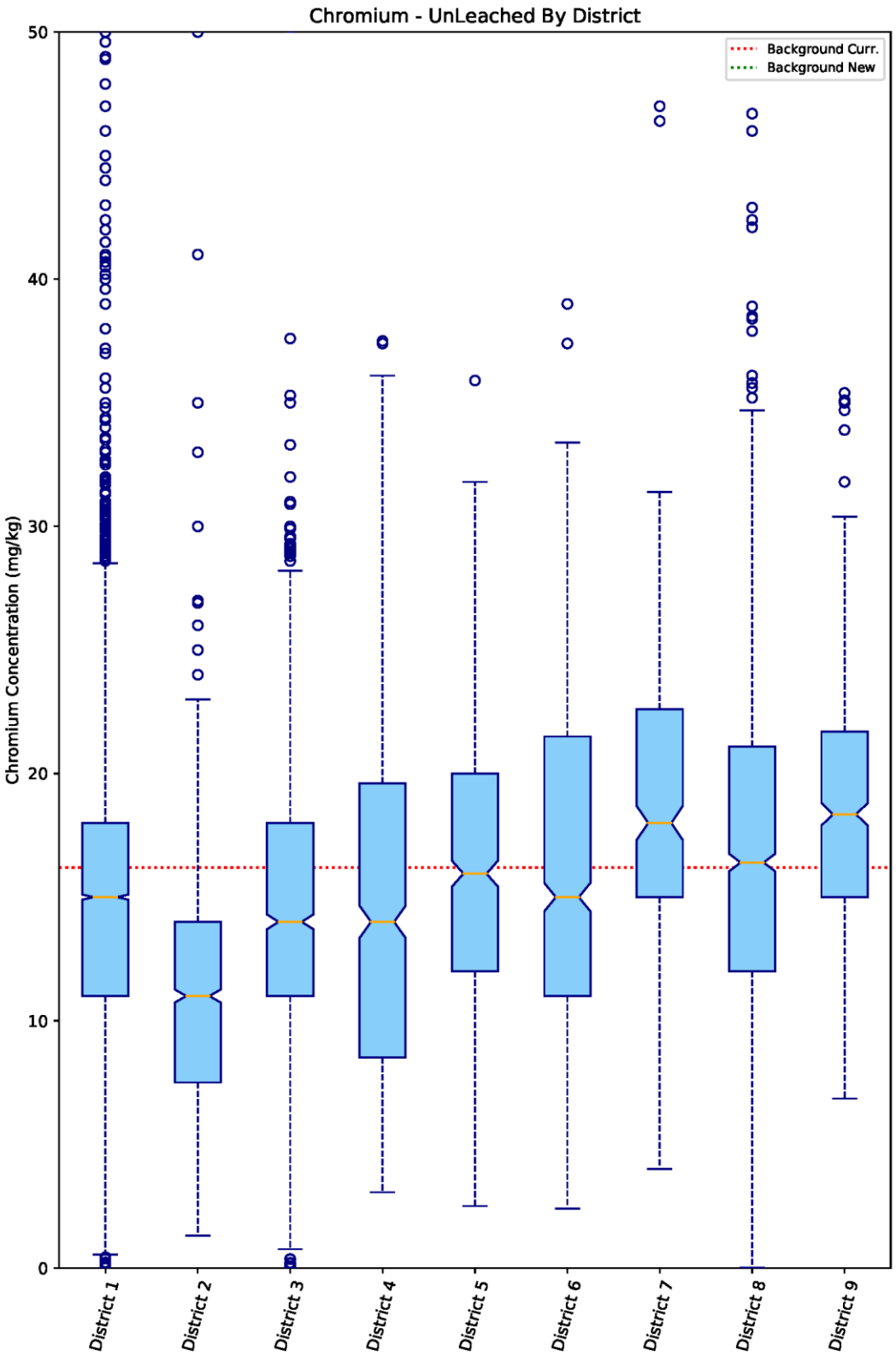


Figure 266. Boxplot of RSL chromium concentrations by IDOT District, REC (mg/kg)

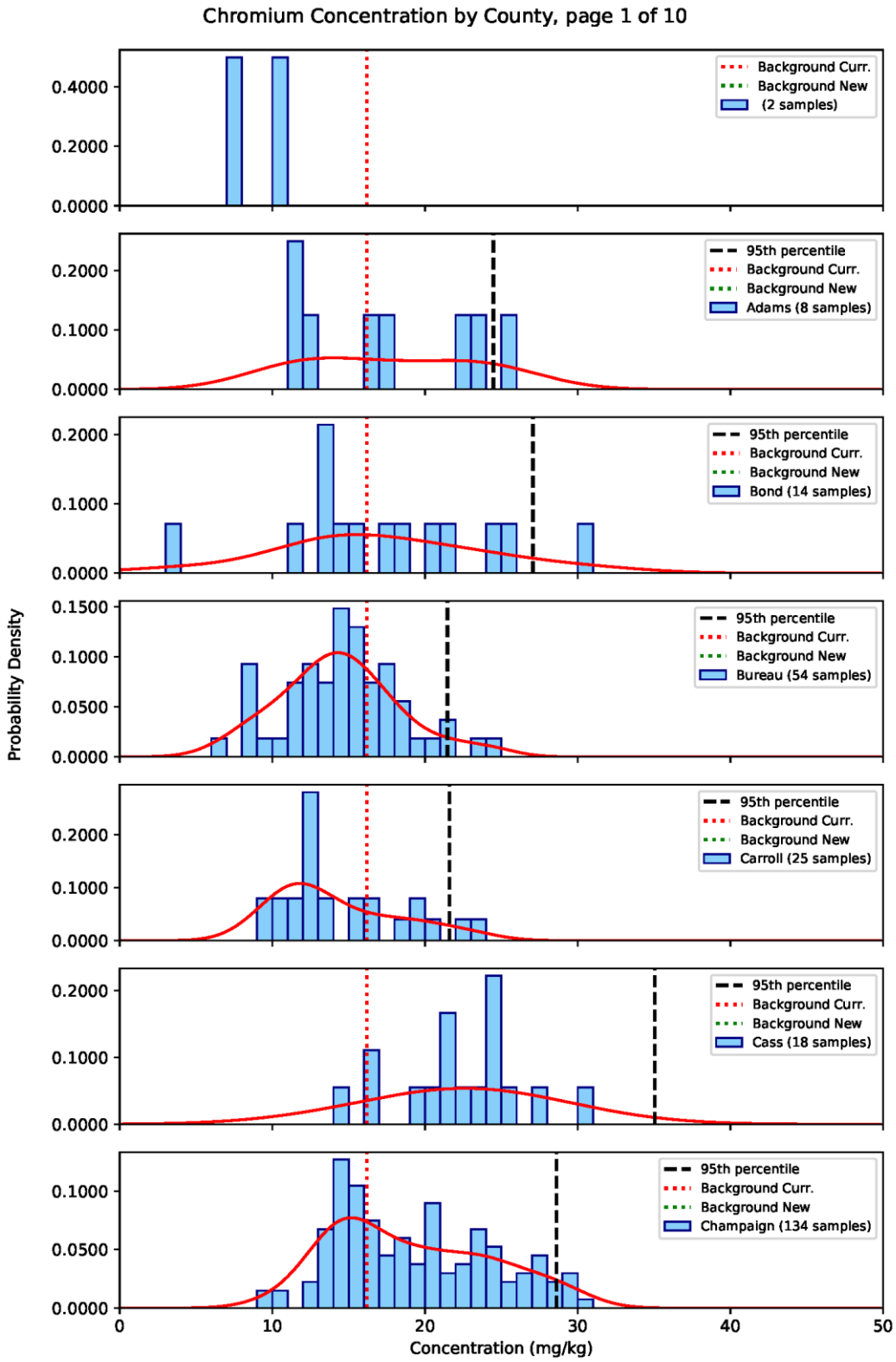


Figure 267. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 1

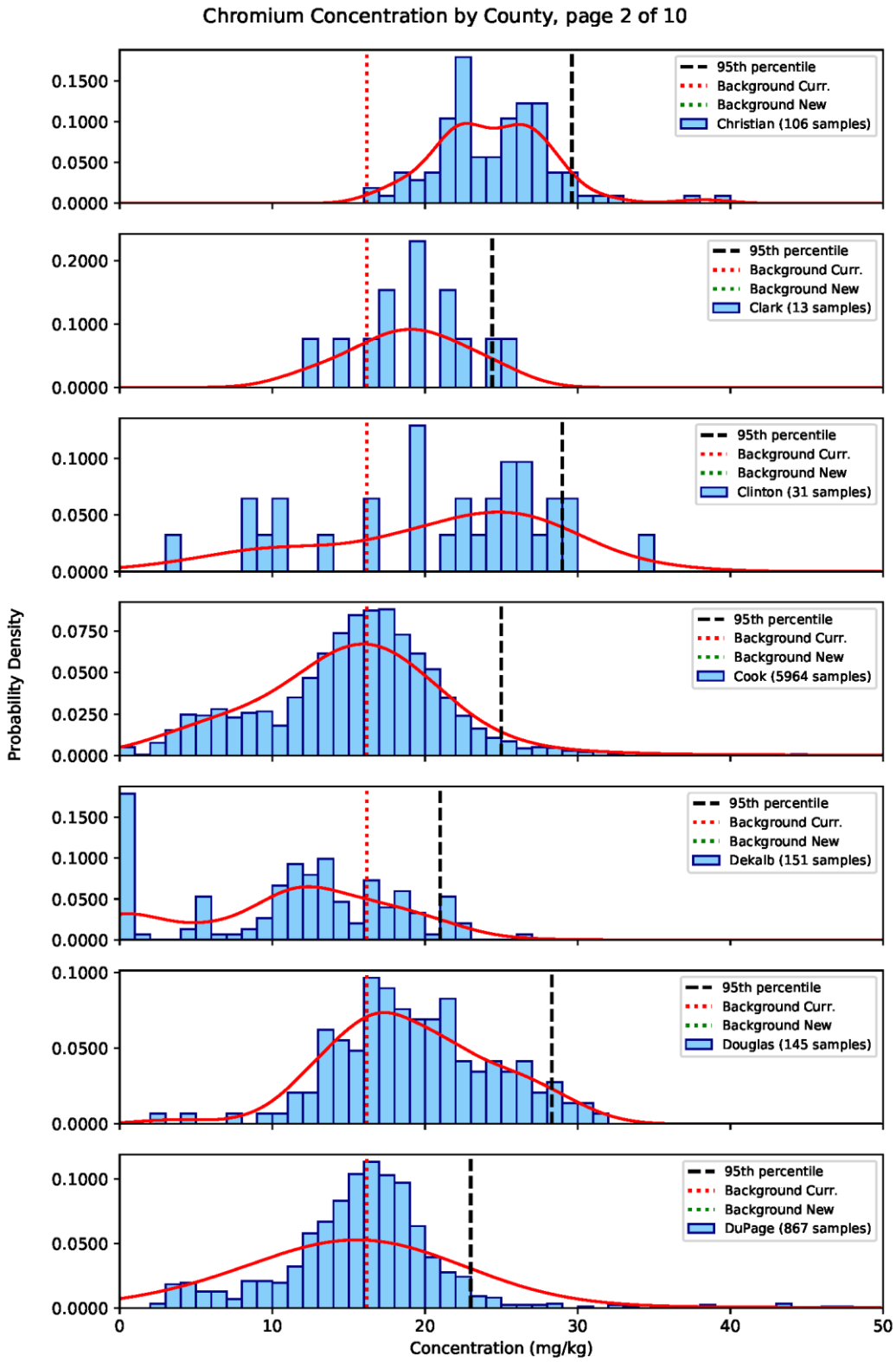


Figure 268. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 2

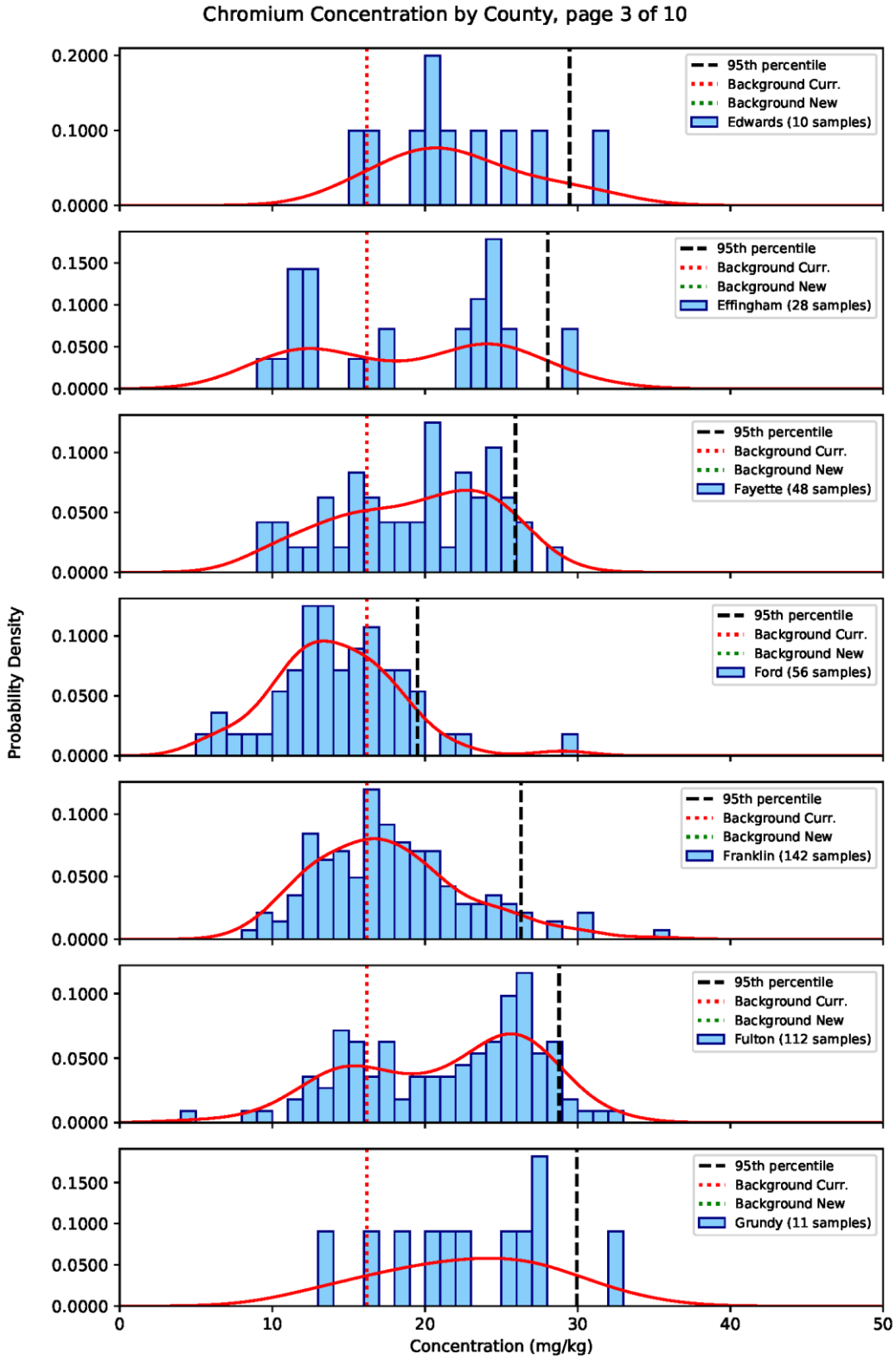


Figure 269. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 3

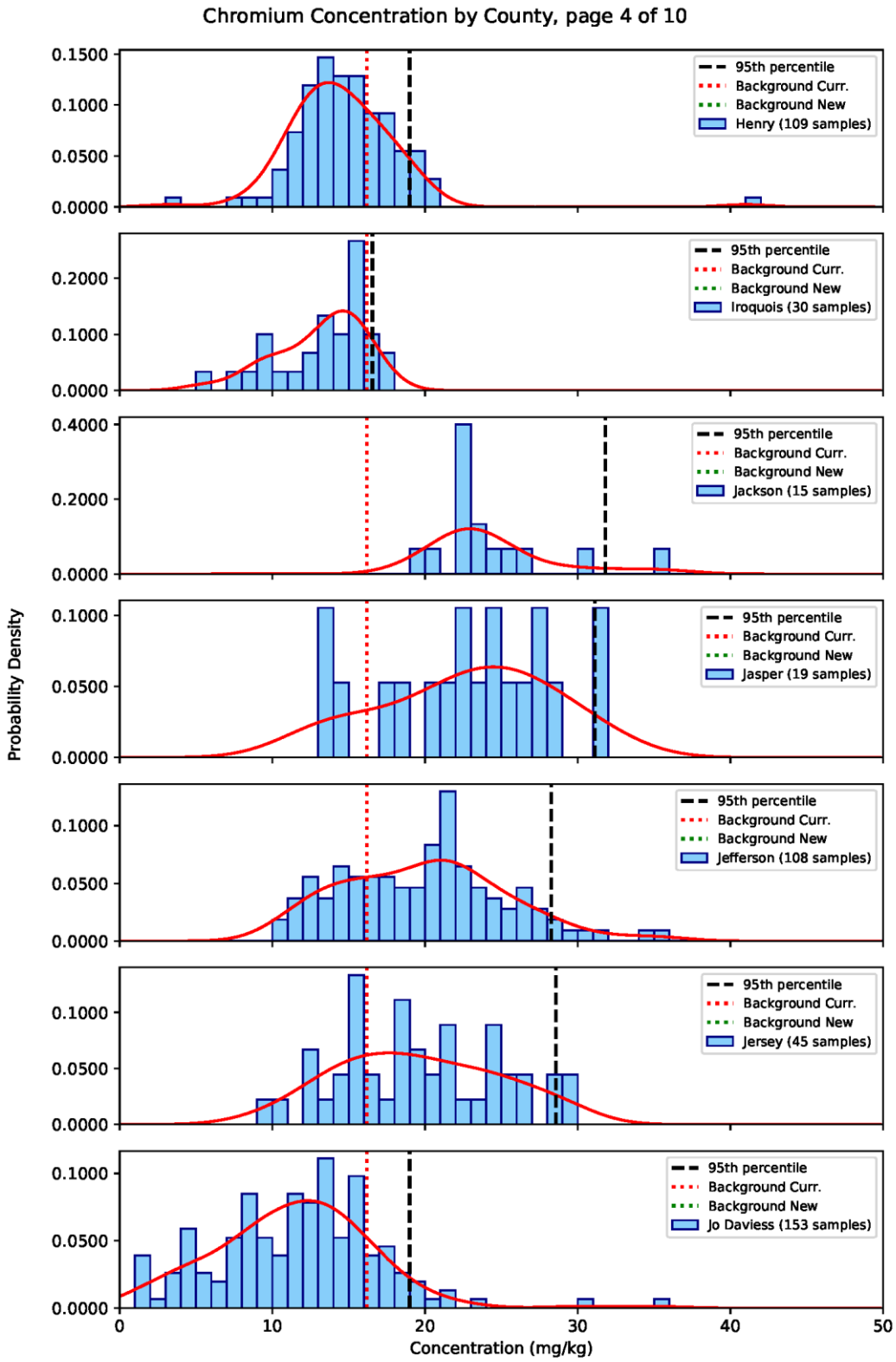


Figure 270. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 4

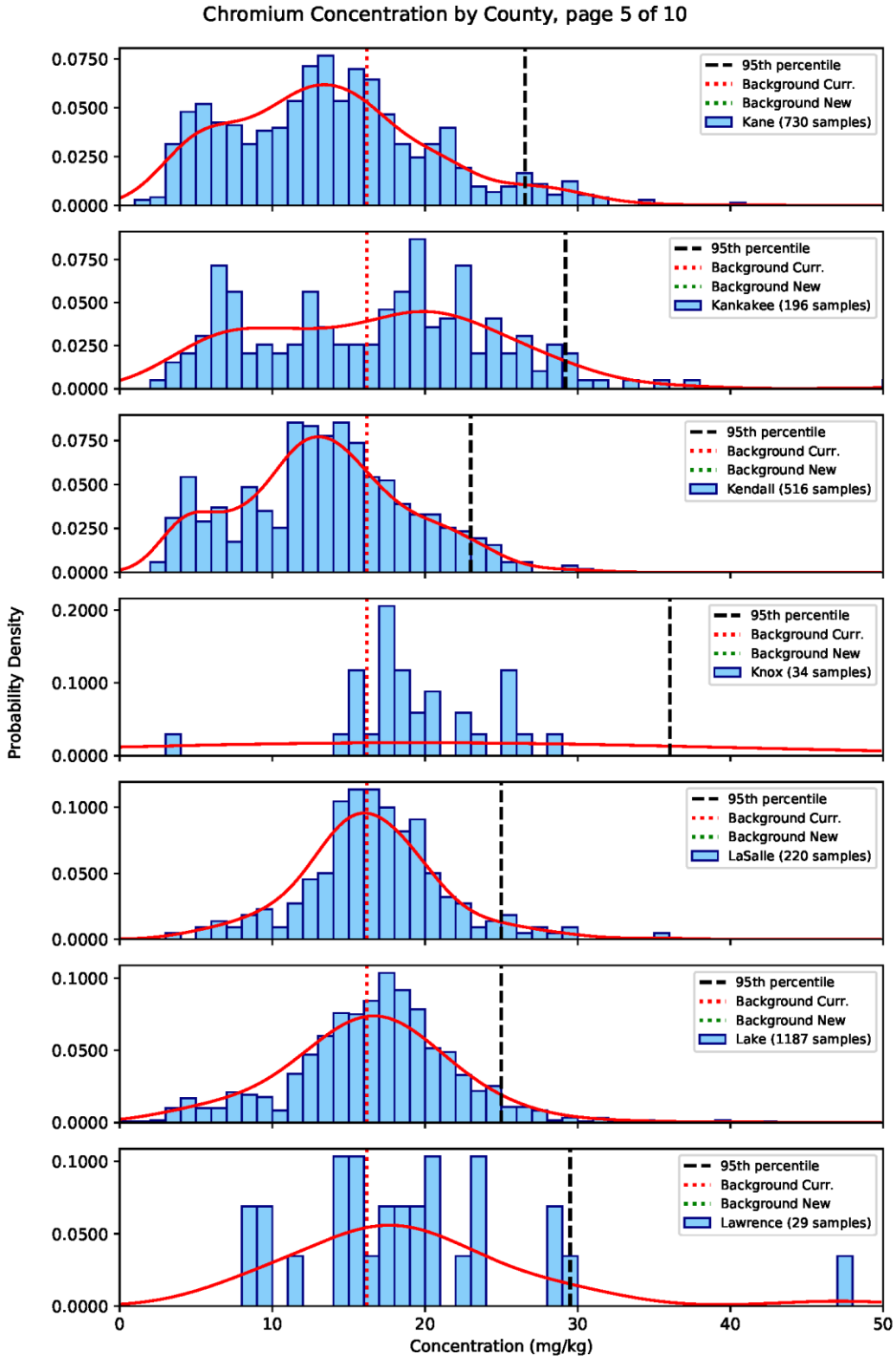


Figure 271. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 5

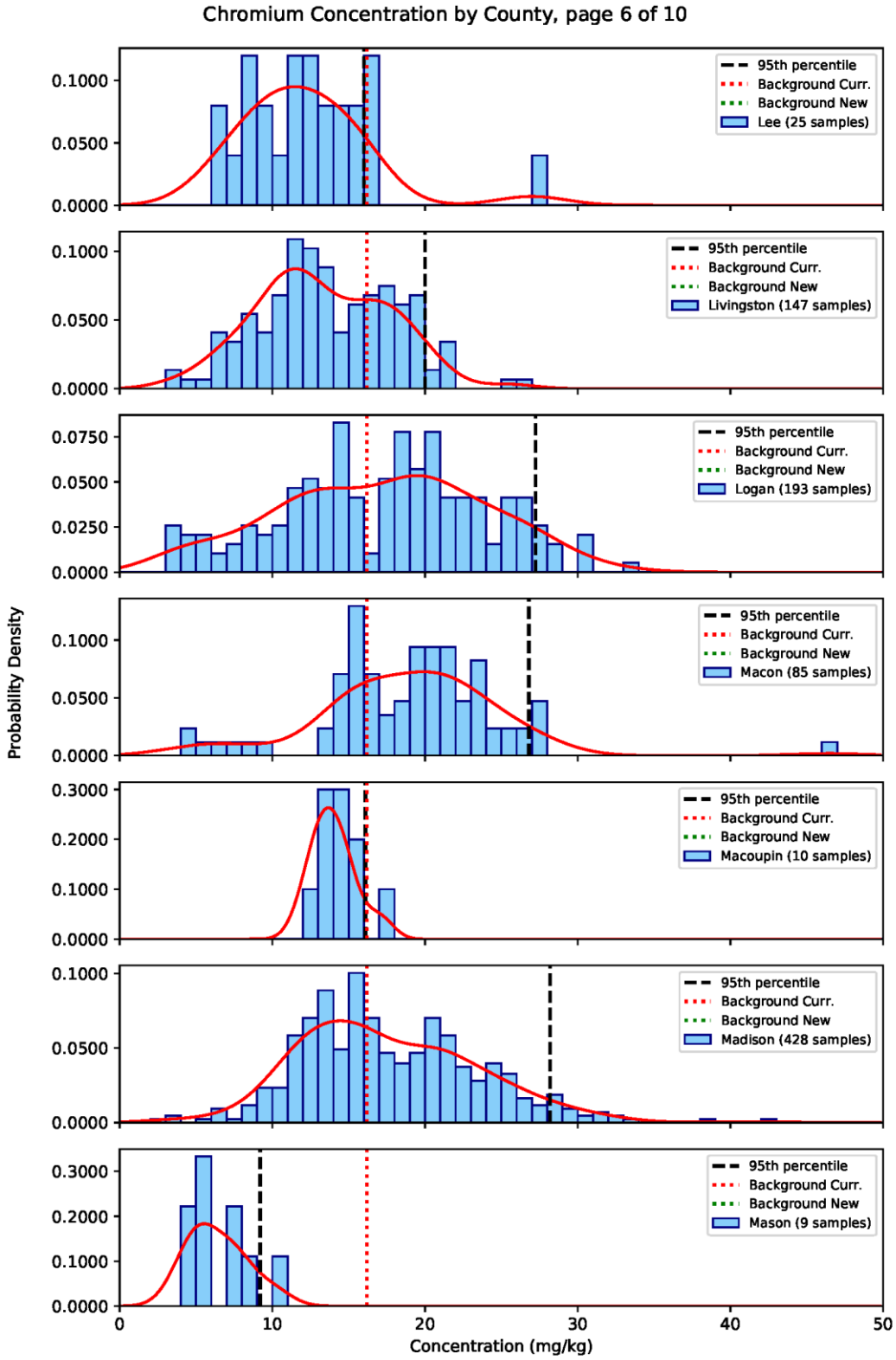


Figure 272. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 6

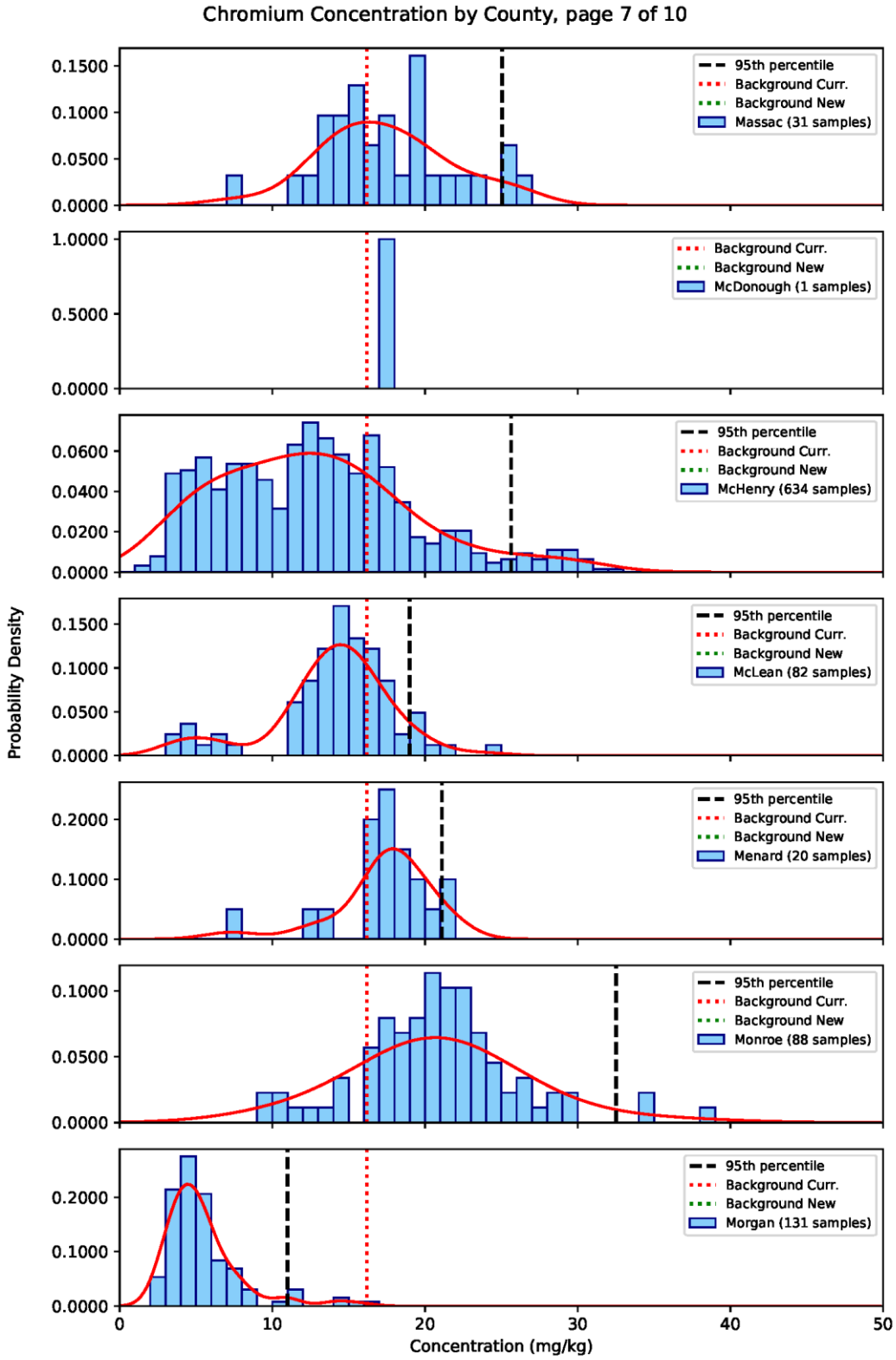


Figure 273. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 7

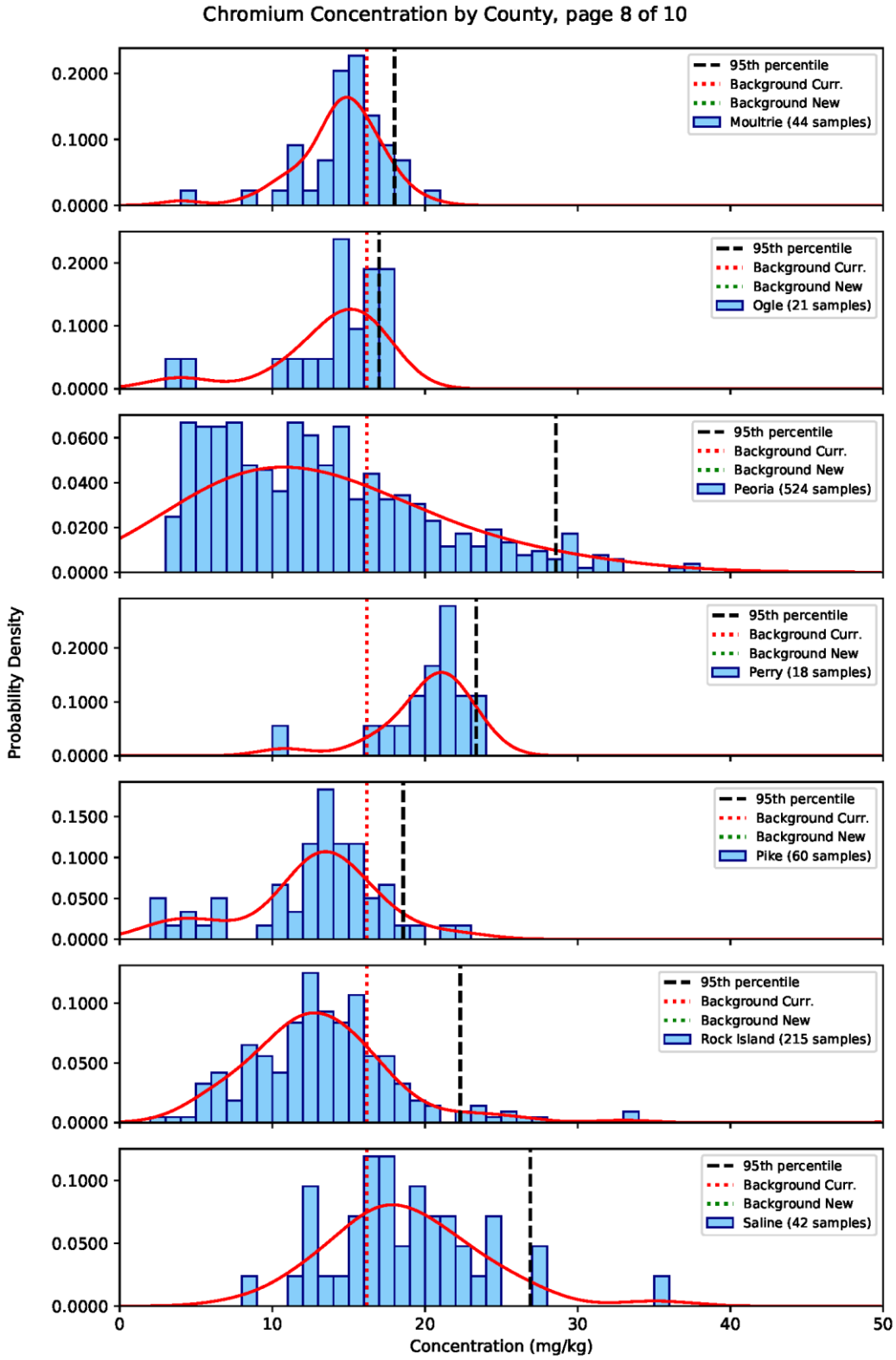


Figure 274. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 8

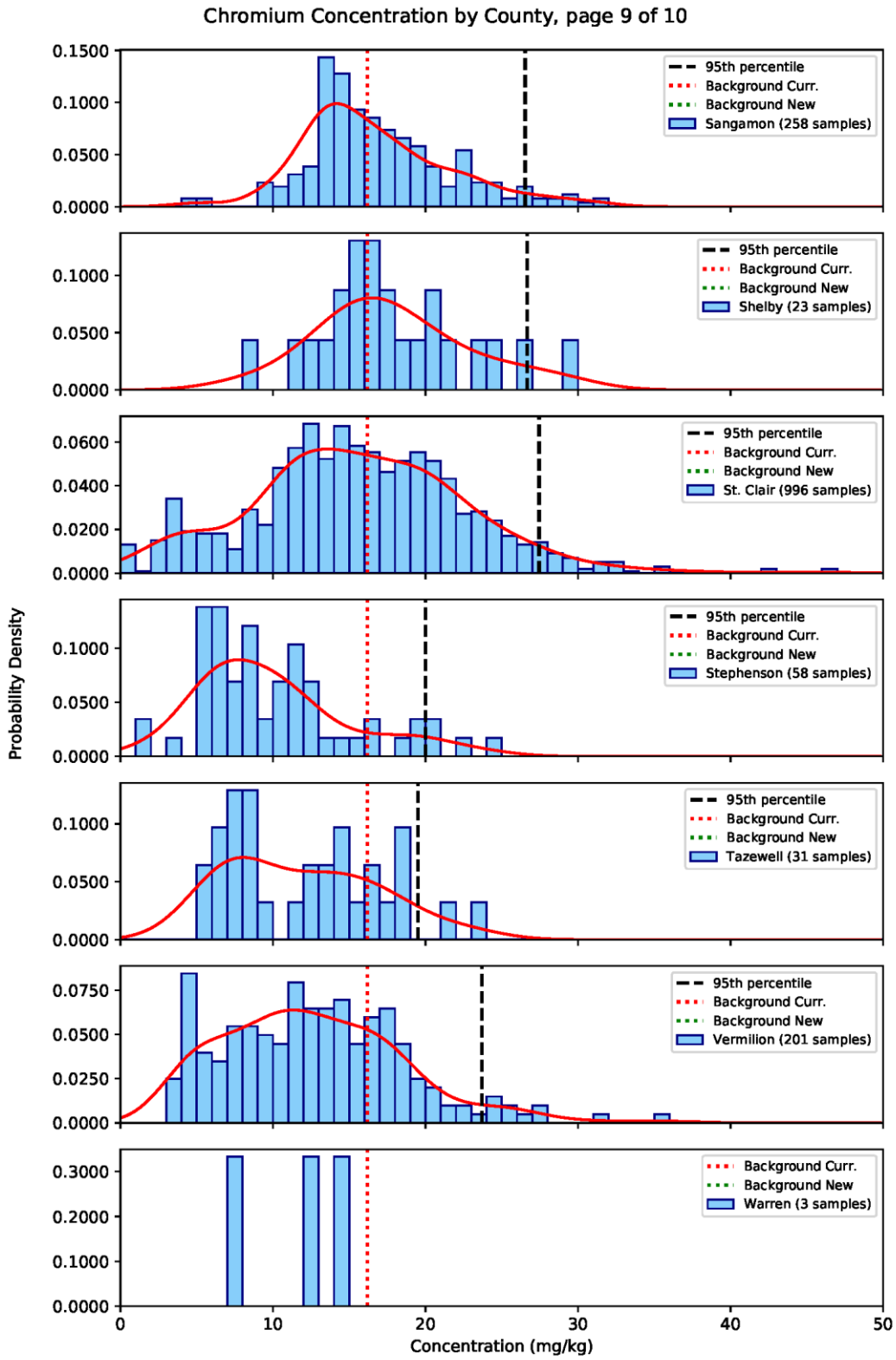


Figure 275. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 9

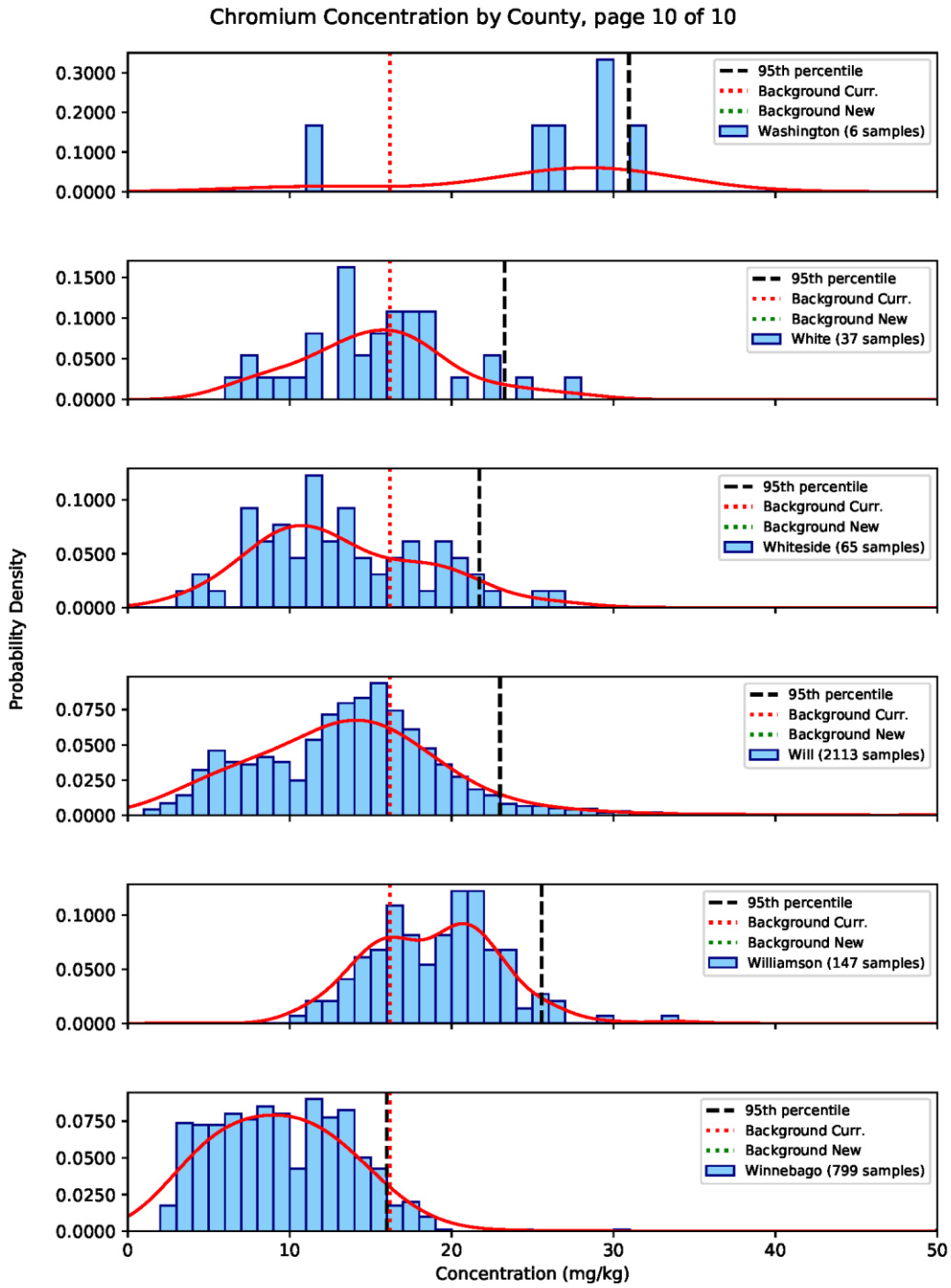


Figure 276. Histogram of RSL chromium concentrations by Illinois county, REC (mg/kg), part 10

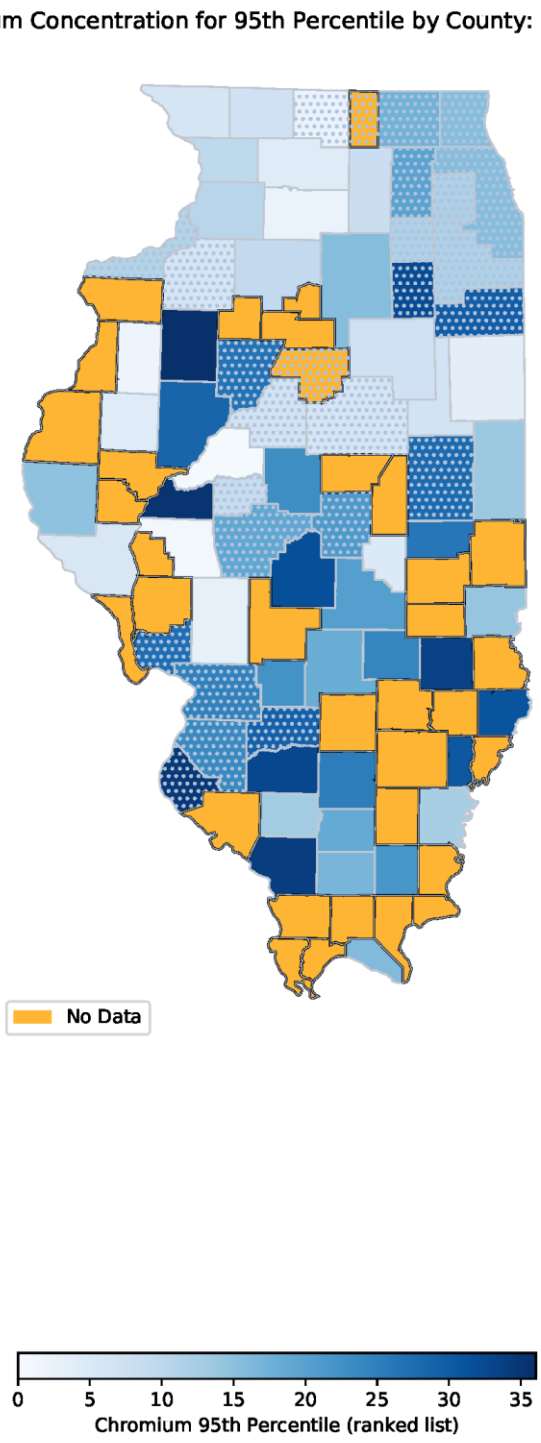


Figure 277. Map of RSL chromium 95th percentile concentration by Illinois county, REC (mg/kg)

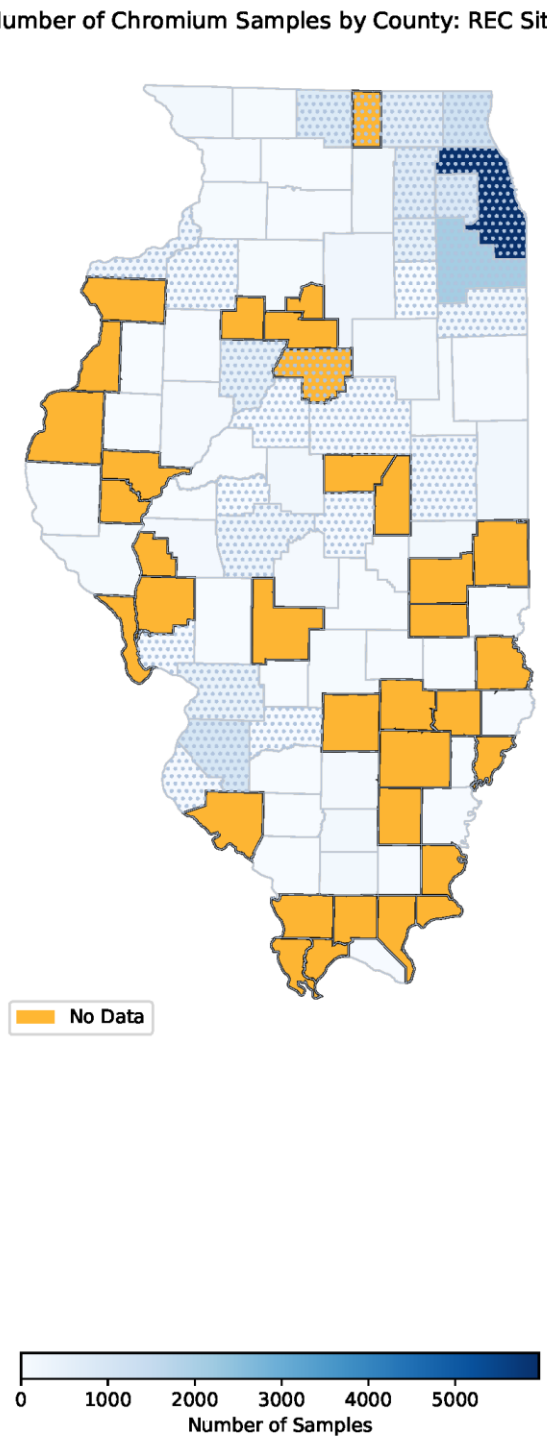


Figure 278. Map of RSL chromium sample quantity by Illinois county, REC (mg/kg)

H.2 CHROMIUM NON-REC

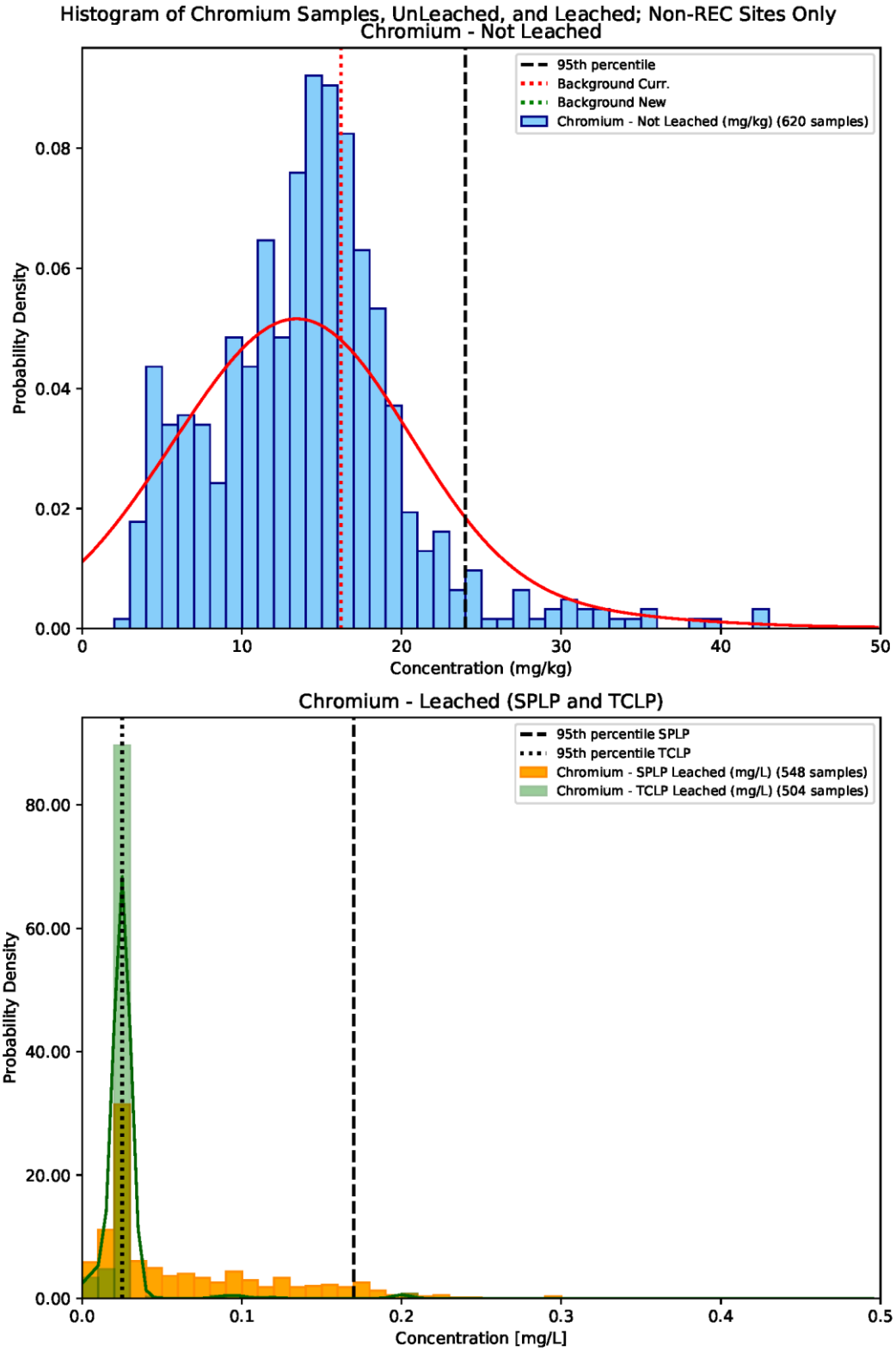


Figure 279. Histogram of RSL chromium concentrations, Non-REC (mg/kg)

Chromium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

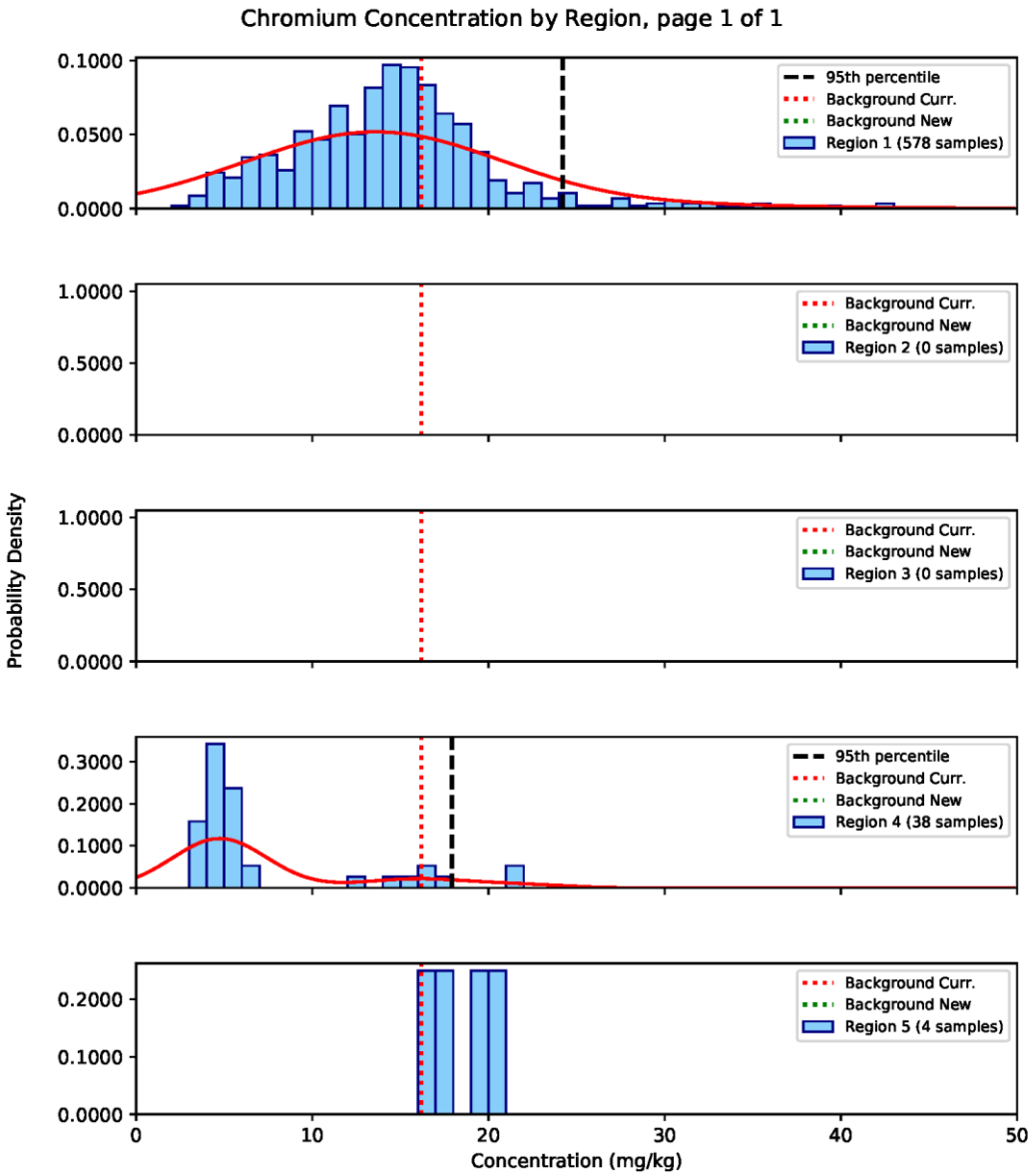


Figure 280. Histogram of RSL chromium concentrations by IDOT Region, Non-REC (mg/kg)

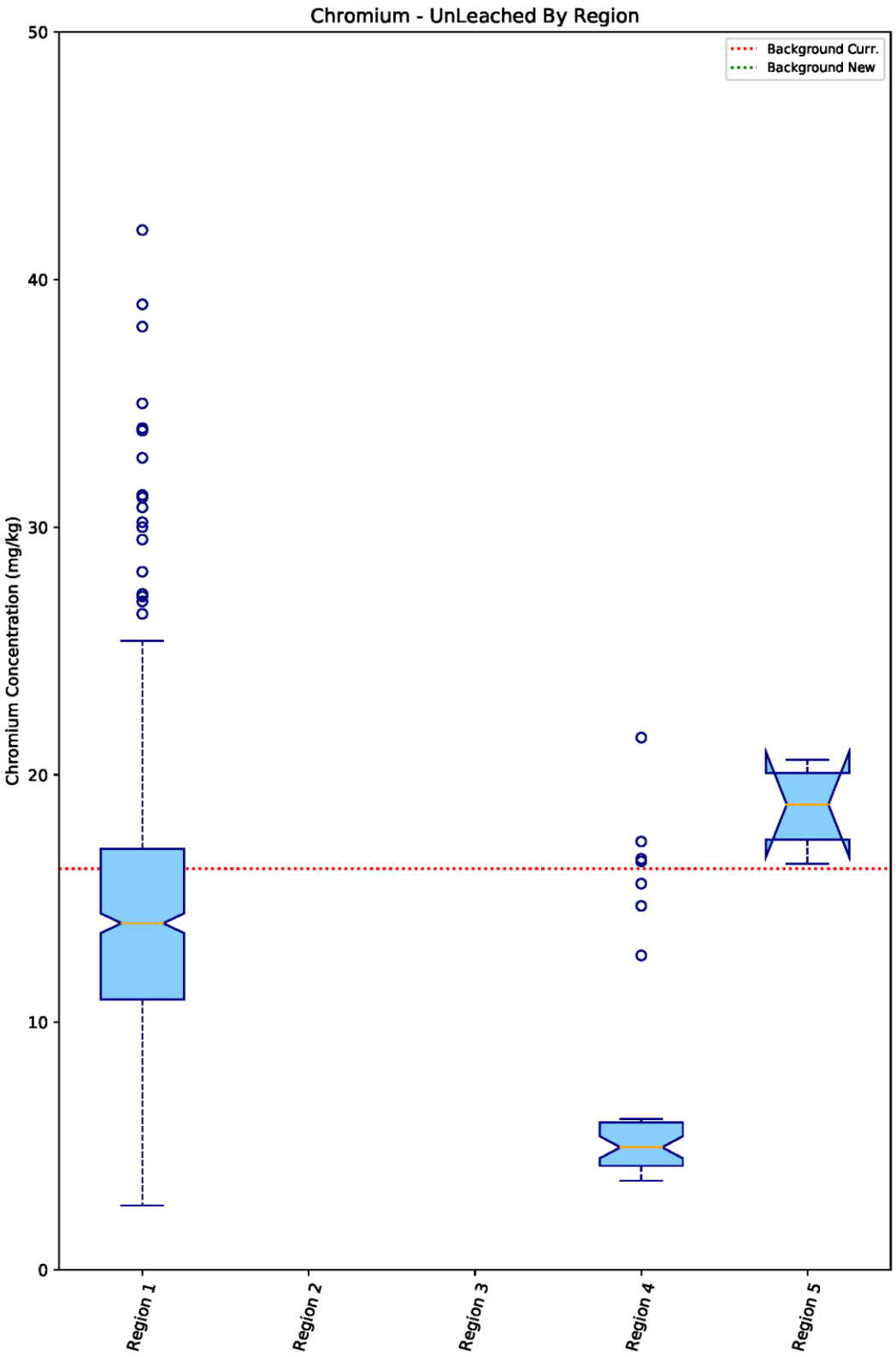


Figure 281. Boxplot of RSL chromium concentrations by IDOT Region, Non-REC (mg/kg)

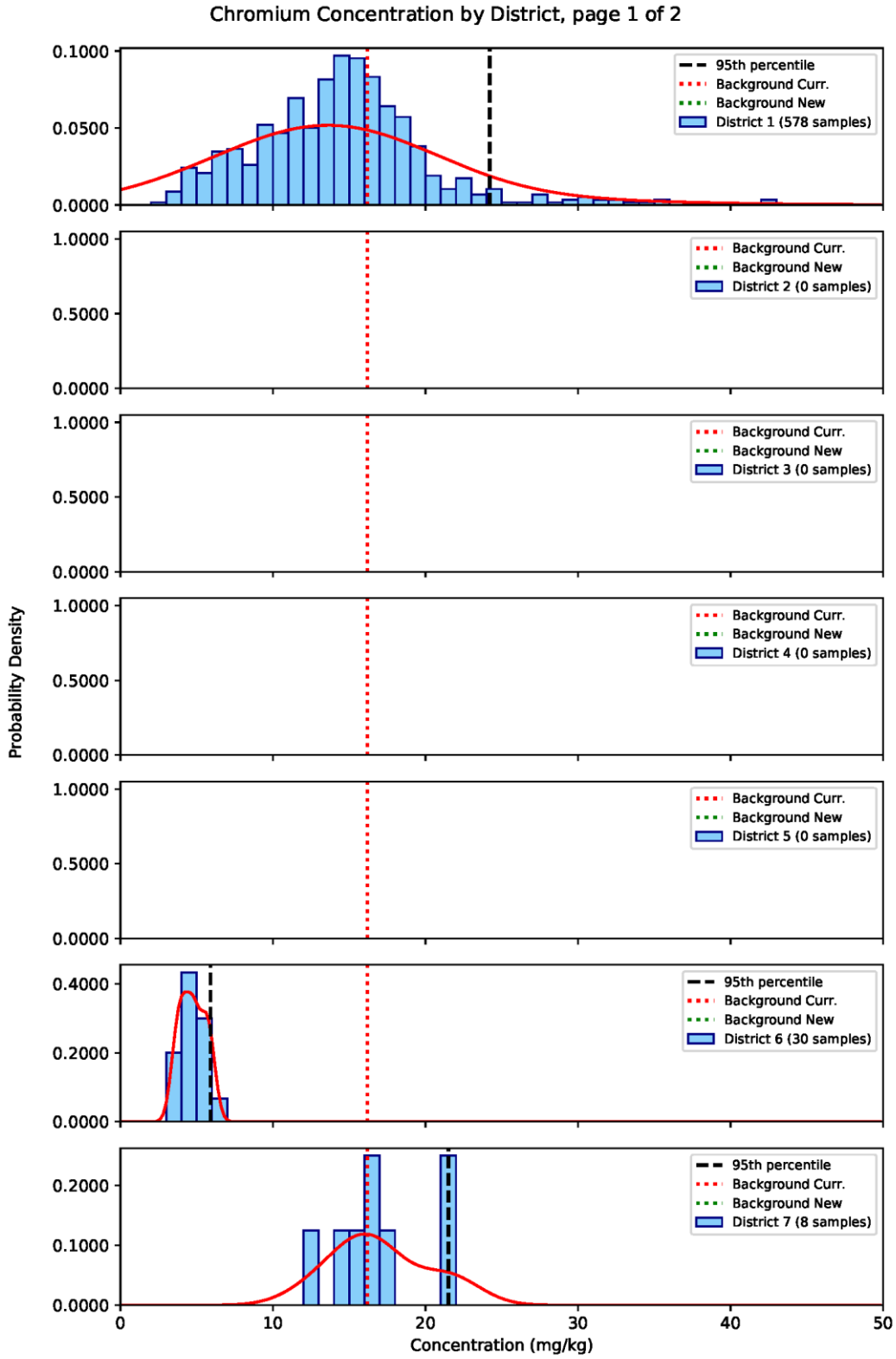


Figure 282. Histogram of RSL chromium concentrations by IDOT District, Non-REC (mg/kg), part 1

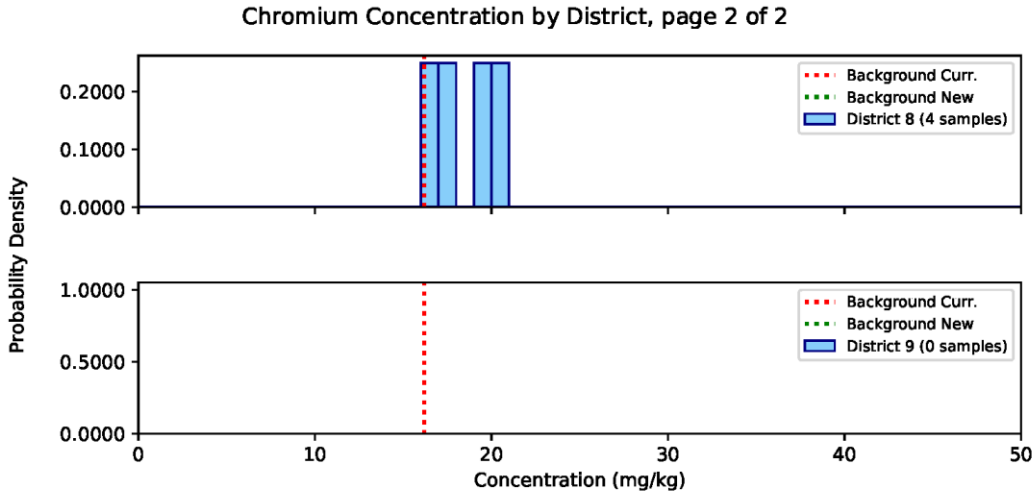


Figure 283. Histogram of RSL chromium concentrations by IDOT District, Non-REC (mg/kg), part 2

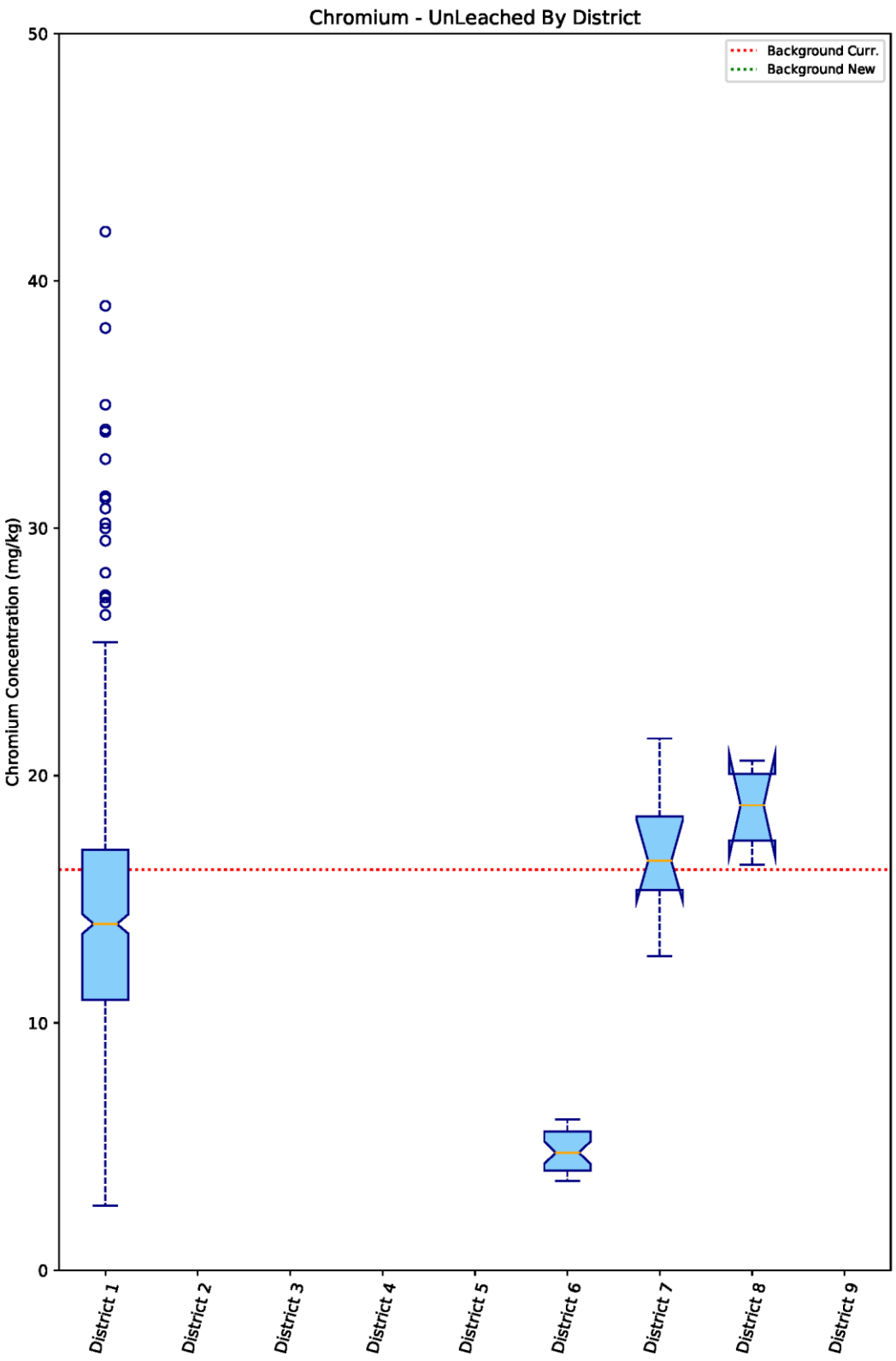


Figure 284. Boxplot of RSL chromium concentrations by IDOT District, Non-REC (mg/kg)

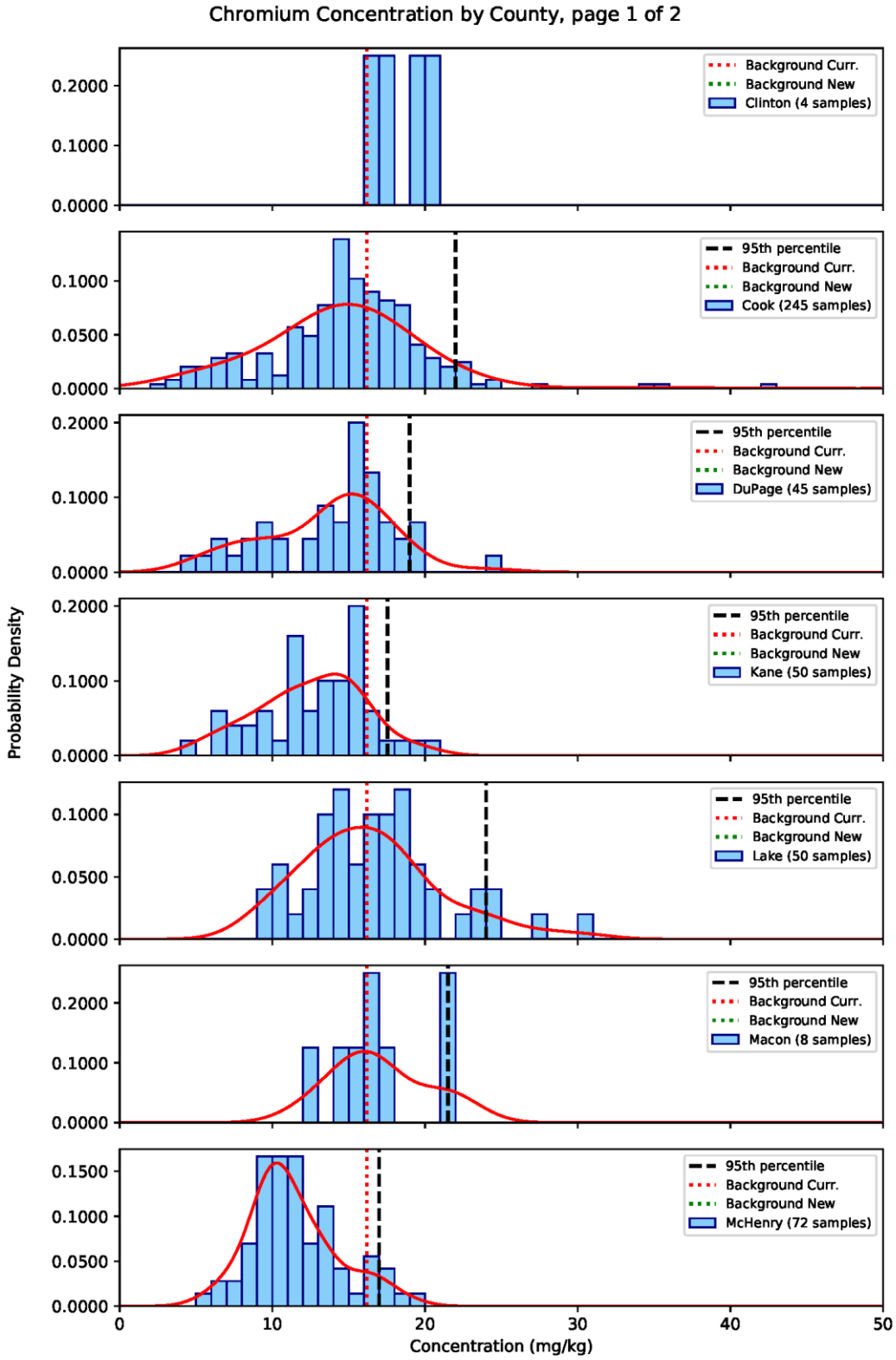


Figure 285. Histogram of RSL chromium concentrations by Illinois county, Non-REC (mg/kg), part 1

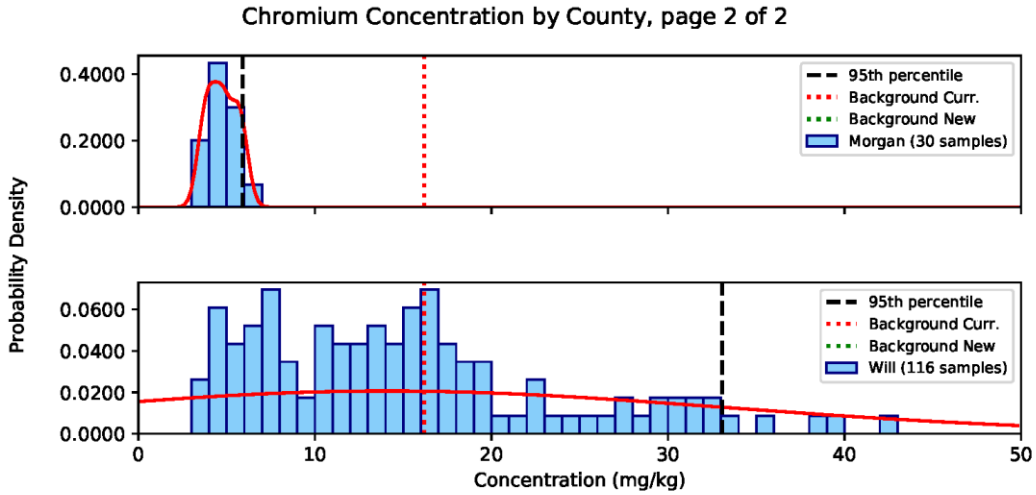


Figure 286. Histogram of RSL chromium concentrations by Illinois county, Non-REC (mg/kg), part 2

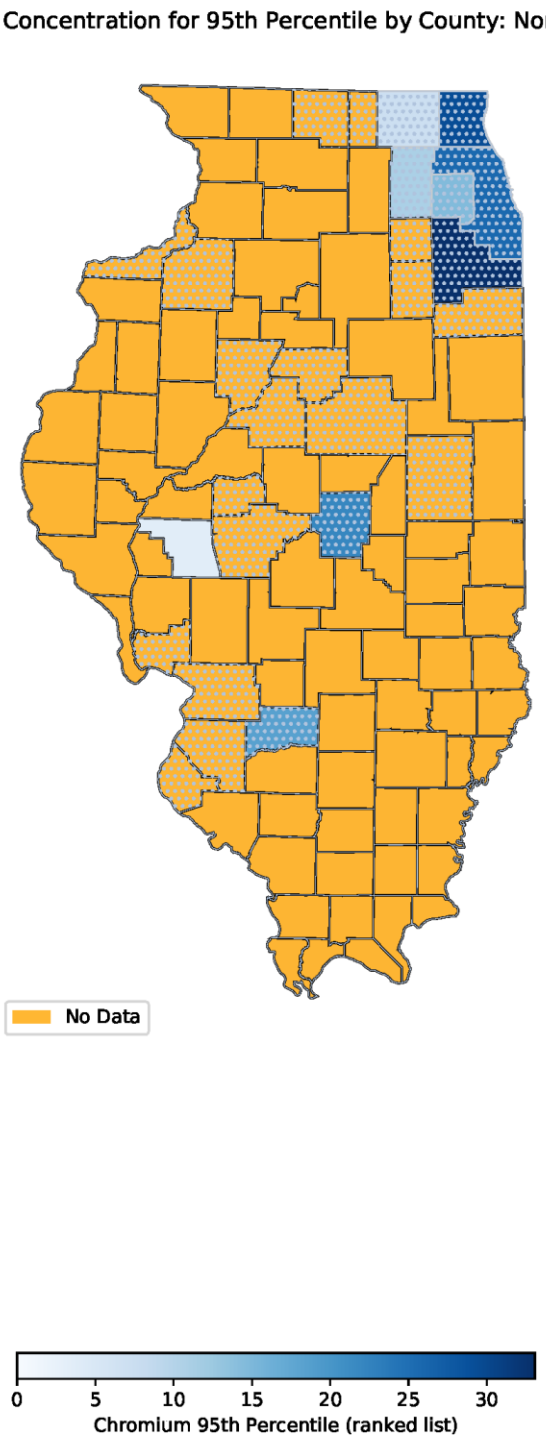


Figure 287. Map of RSL chromium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

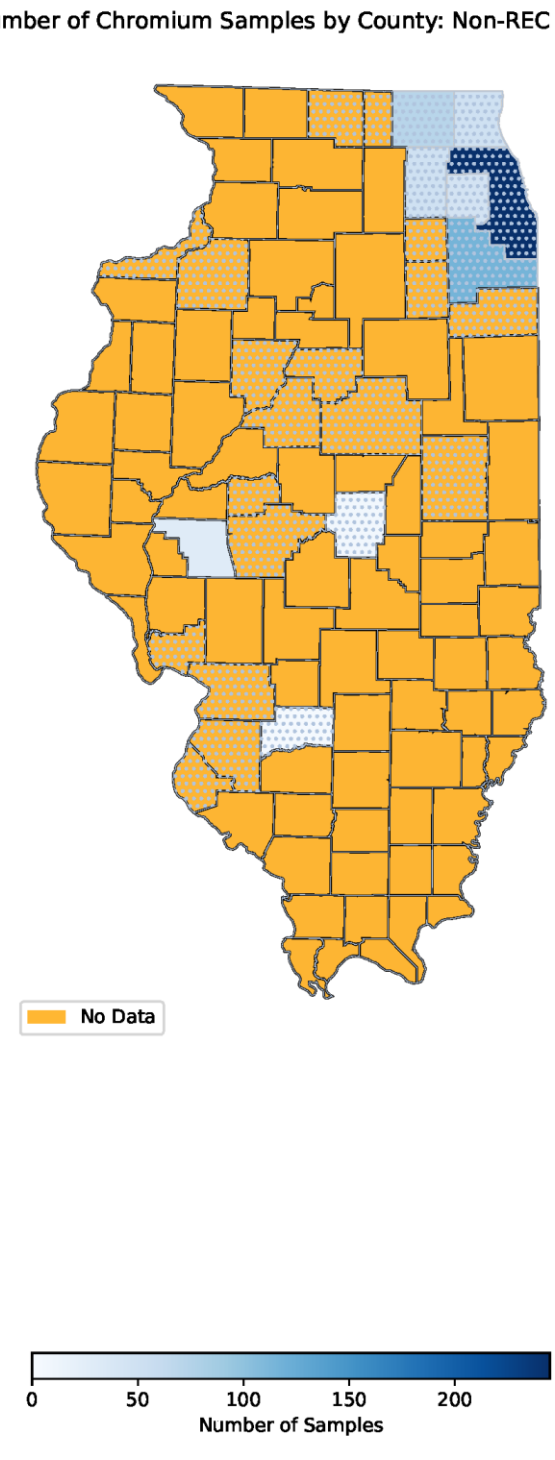


Figure 288. Map of RSL chromium sample quantity by Illinois county, Non-REC (mg/kg)

H.3 CHROMIUM DE MINIMIS

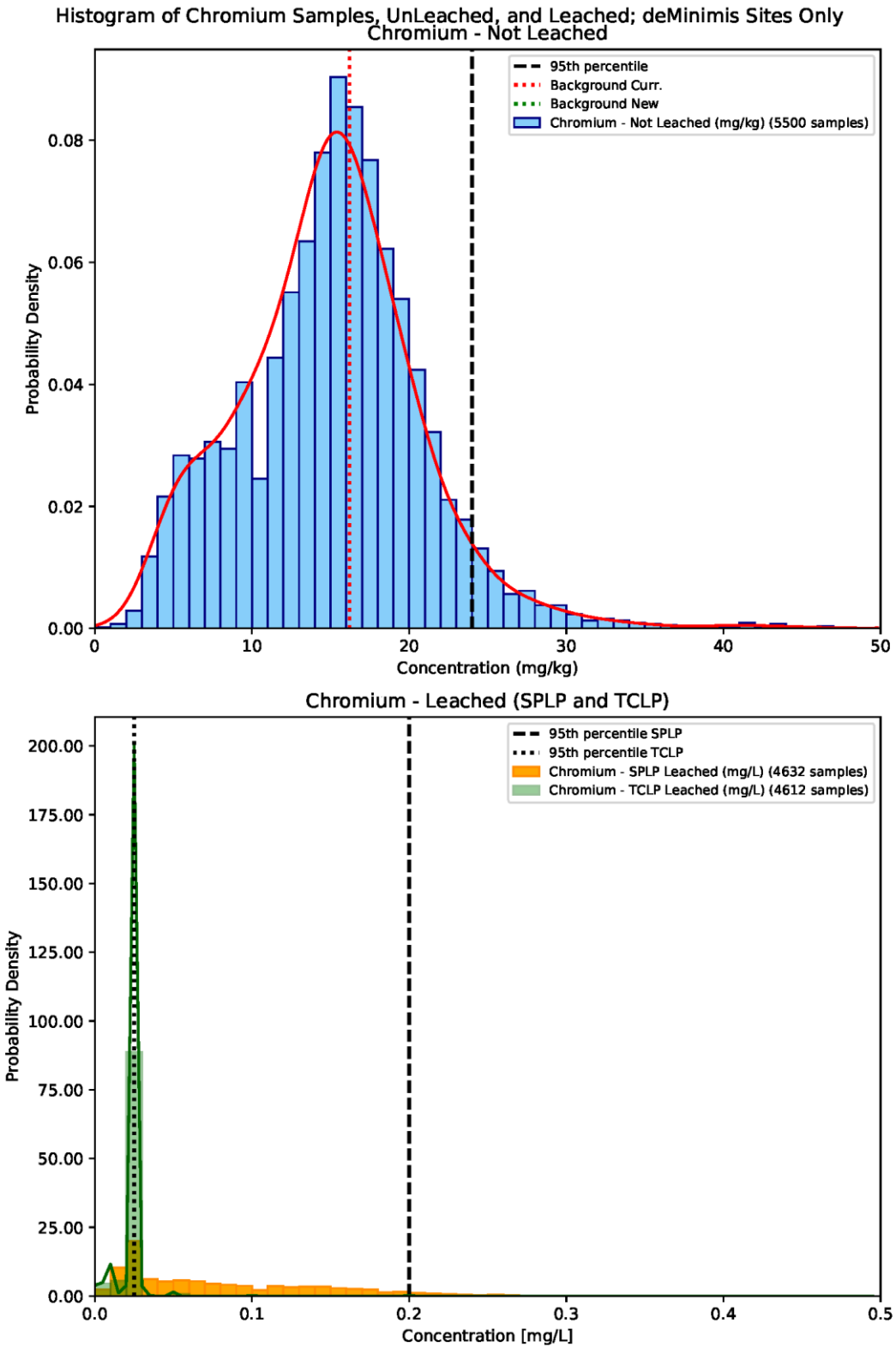


Figure 289. Histogram of RSL chromium concentrations, de minimis (mg/kg)

Chromium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

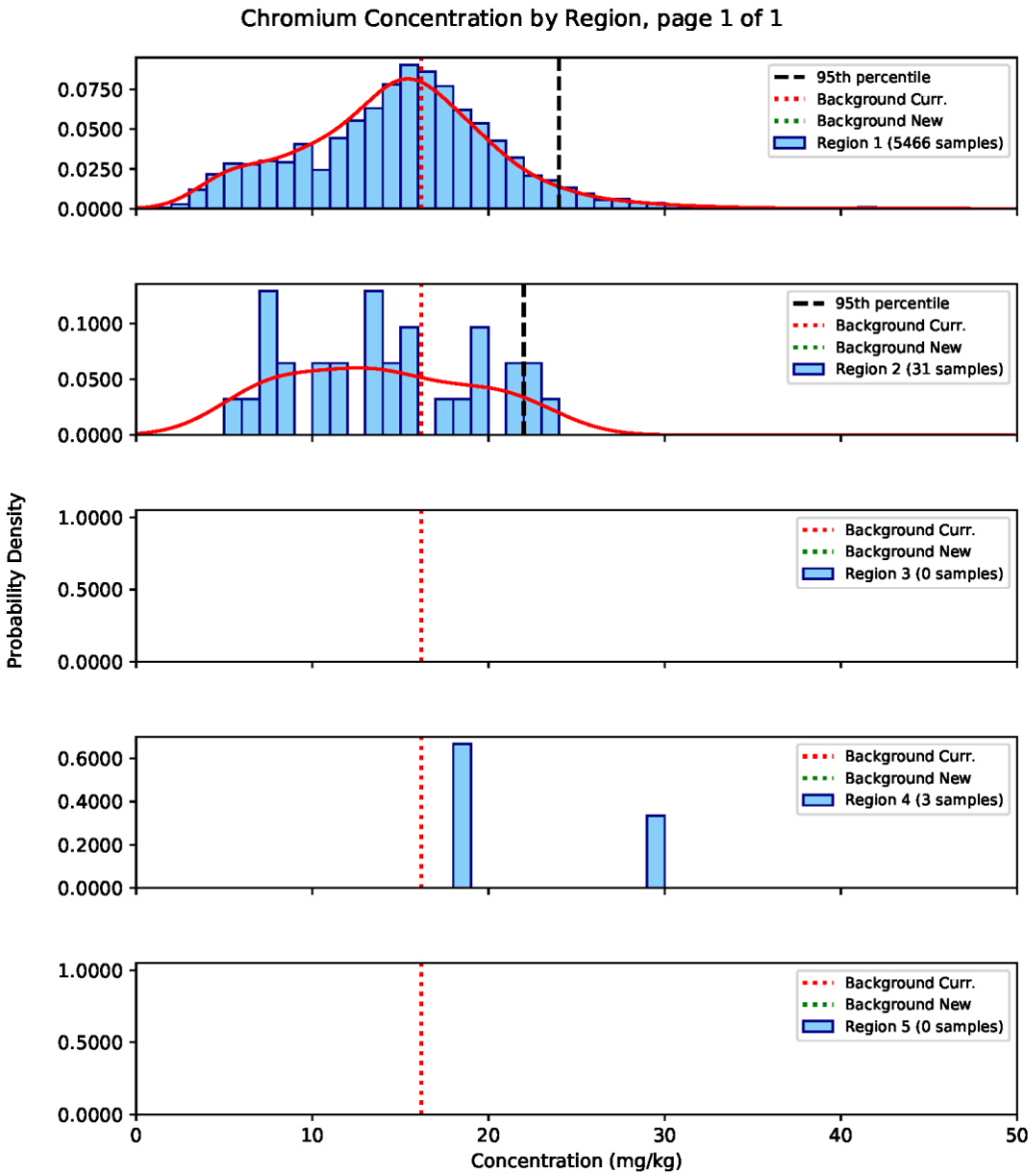


Figure 290. Histogram of RSL chromium concentrations by IDOT Region, de minimis (mg/kg)

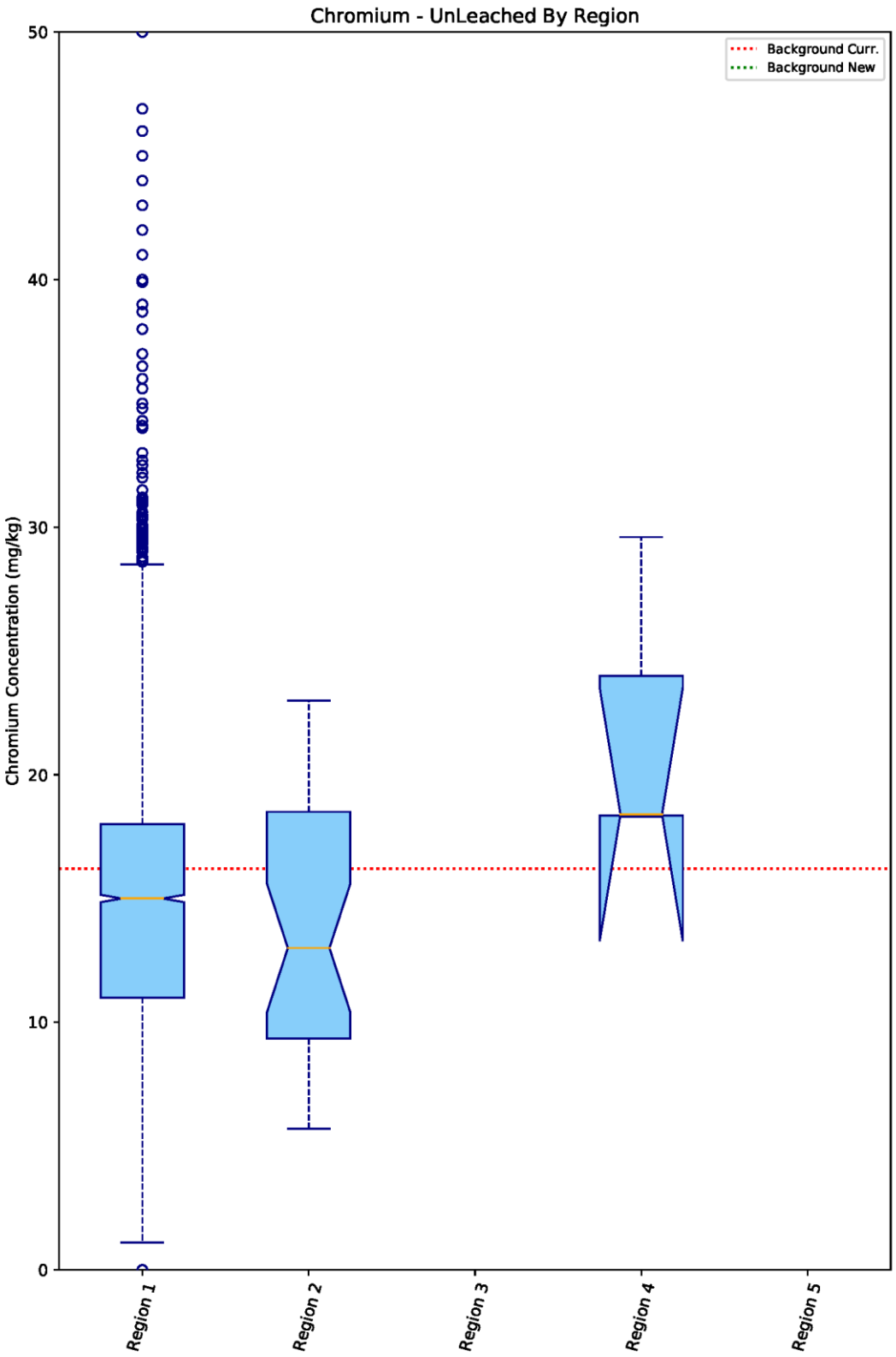


Figure 291. Boxplot of RSL chromium concentrations by IDOT Region, de minimis (mg/kg)

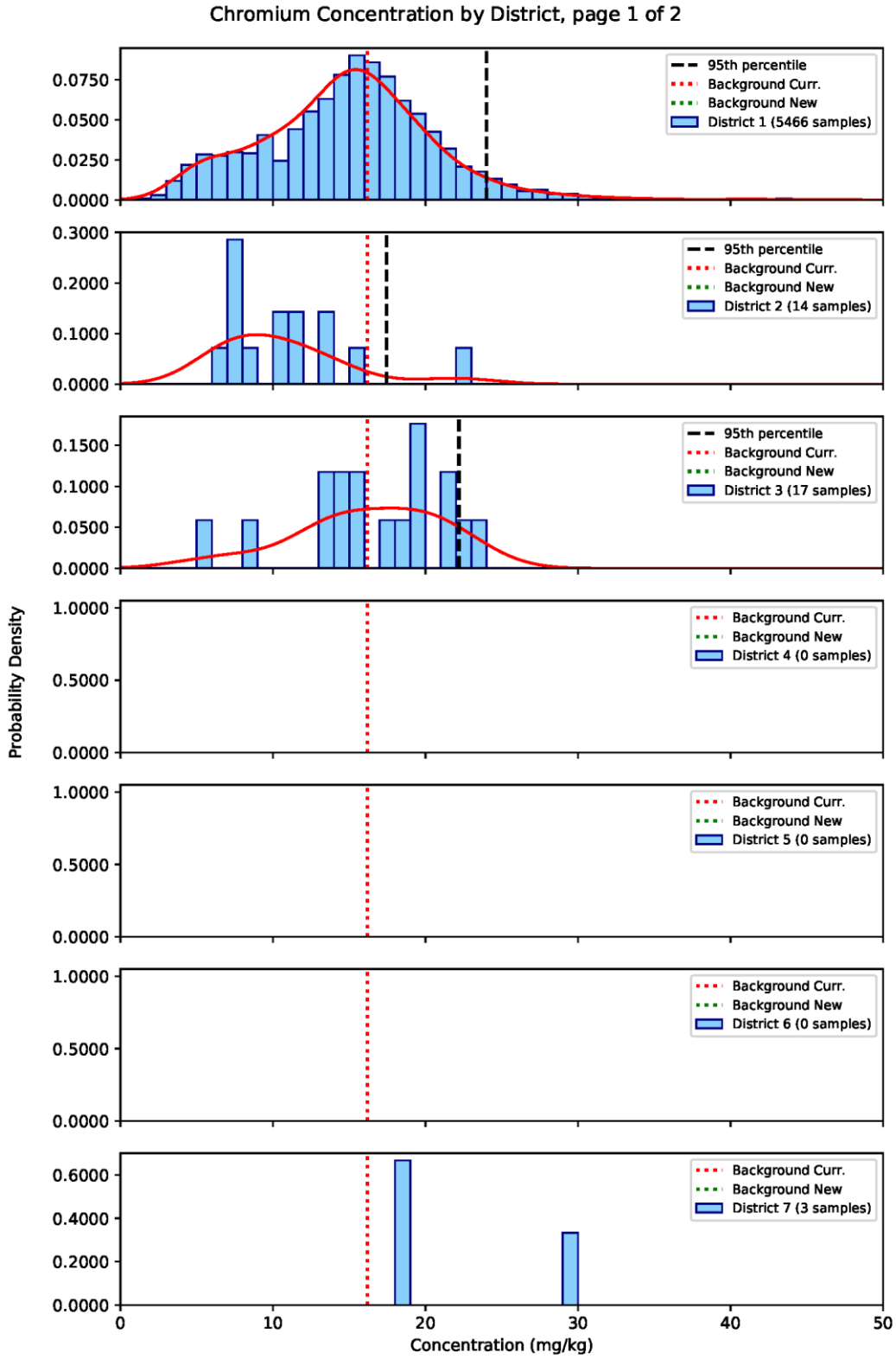


Figure 292. Histogram of RSL chromium concentrations by IDOT District, de minimis (mg/kg), part 1

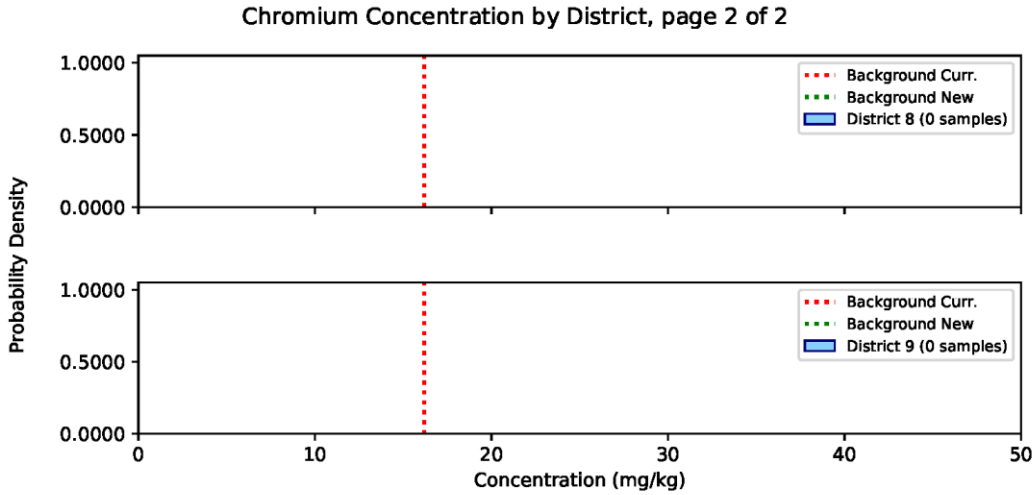


Figure 293. Histogram of RSL chromium concentrations by IDOT District, de minimis (mg/kg), part 2

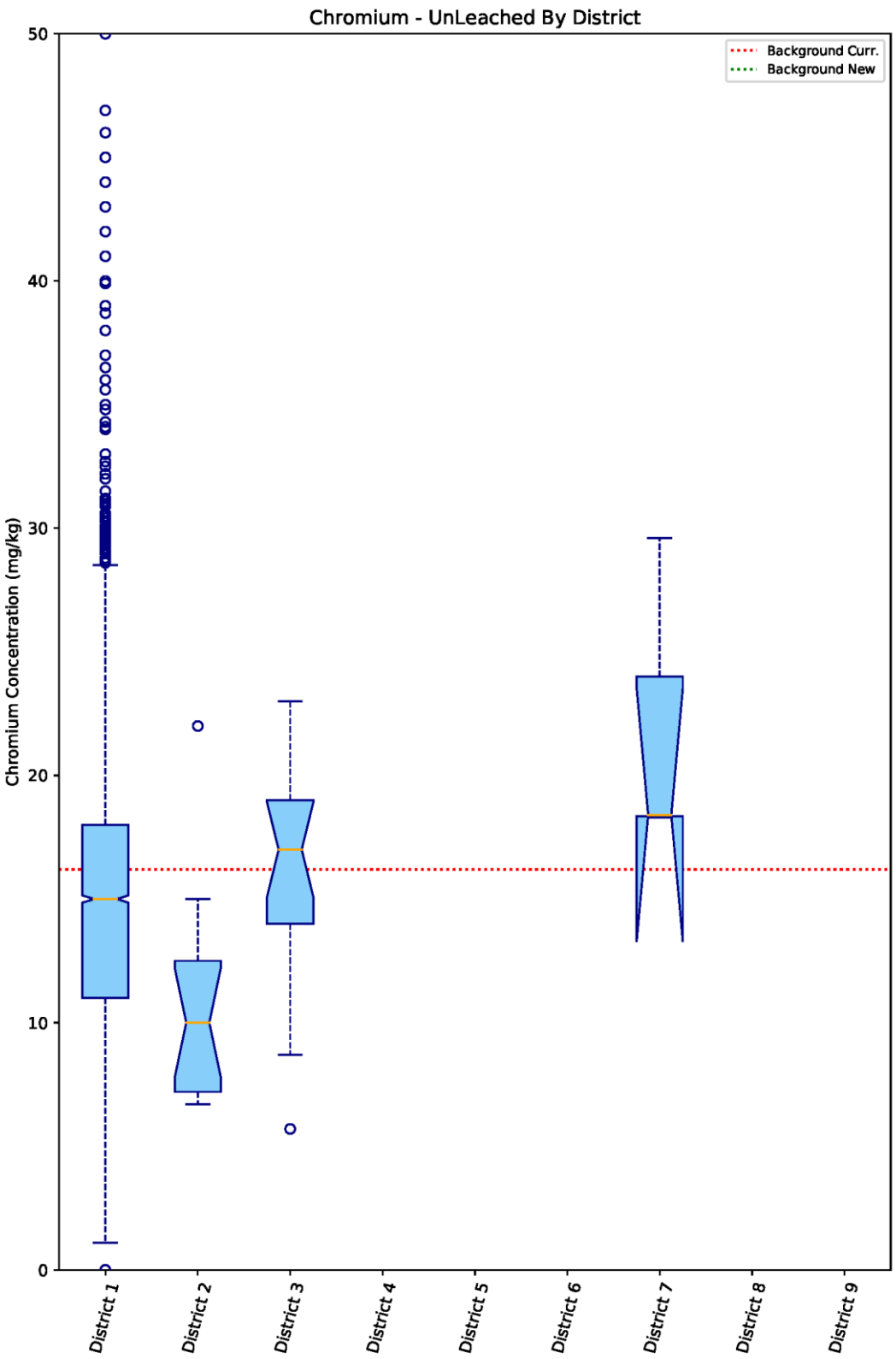


Figure 294. Boxplot of RSL chromium concentrations by IDOT District, de minimis (mg/kg)

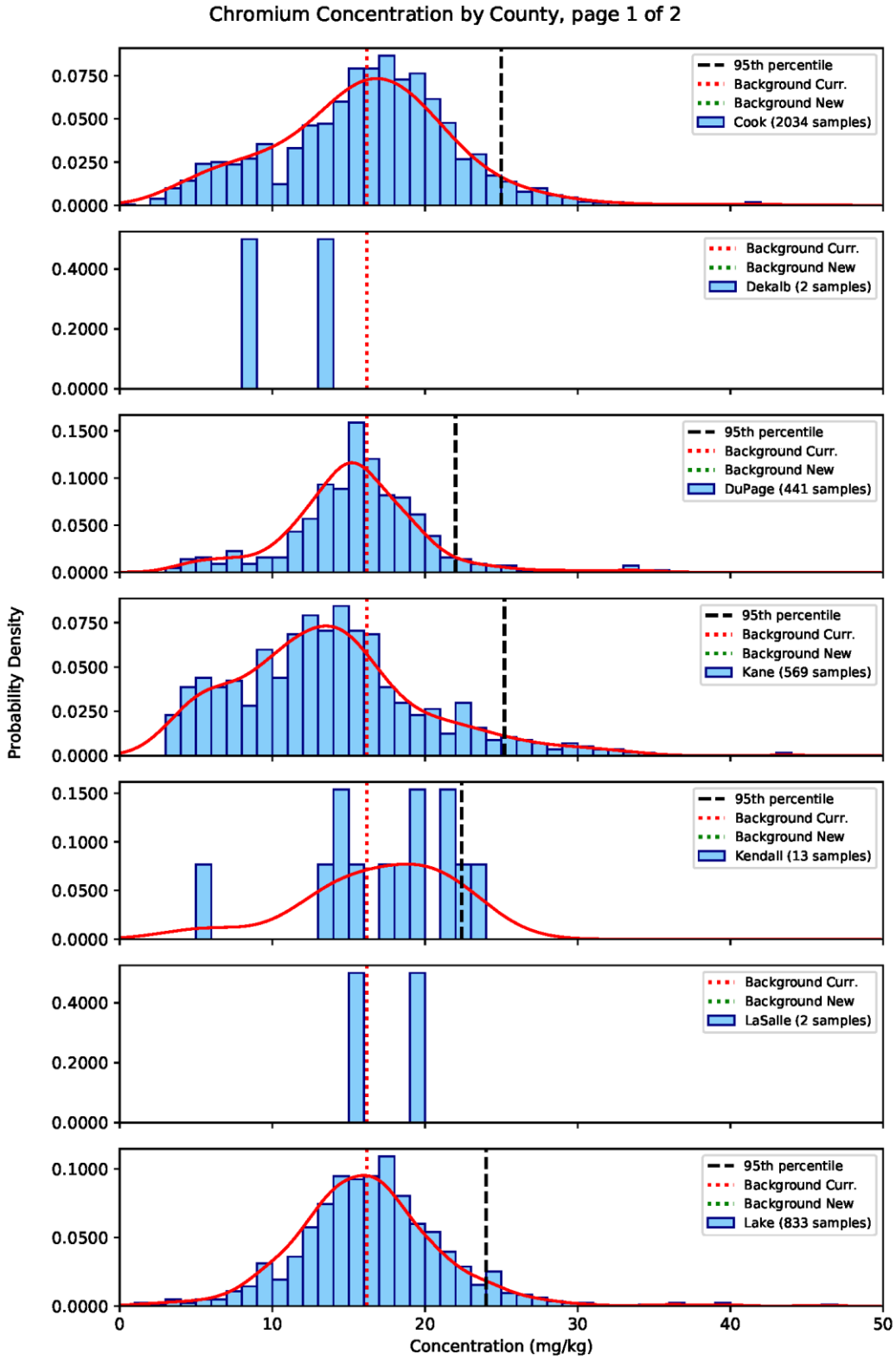


Figure 295. Histogram of RSL chromium concentrations by Illinois county, de minimis (mg/kg), part 1

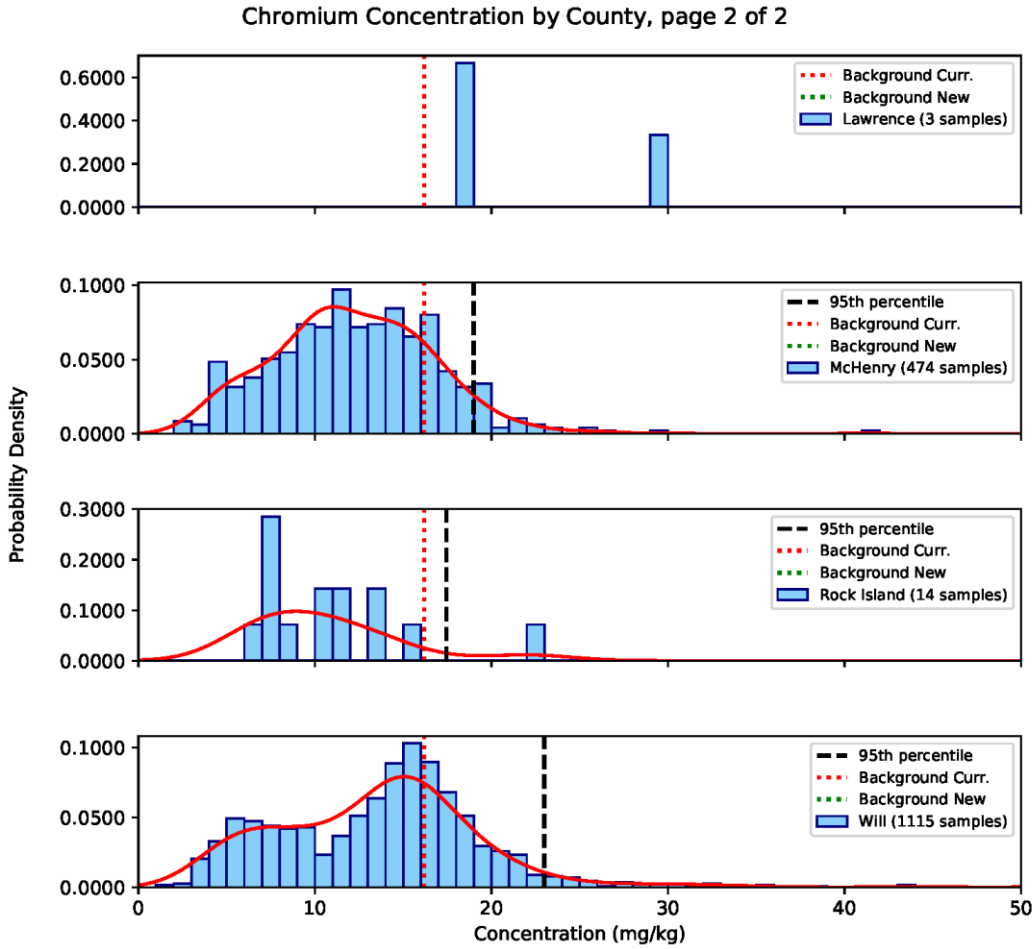


Figure 296. Histogram of RSL chromium concentrations by Illinois county, de minimis (mg/kg), part 2

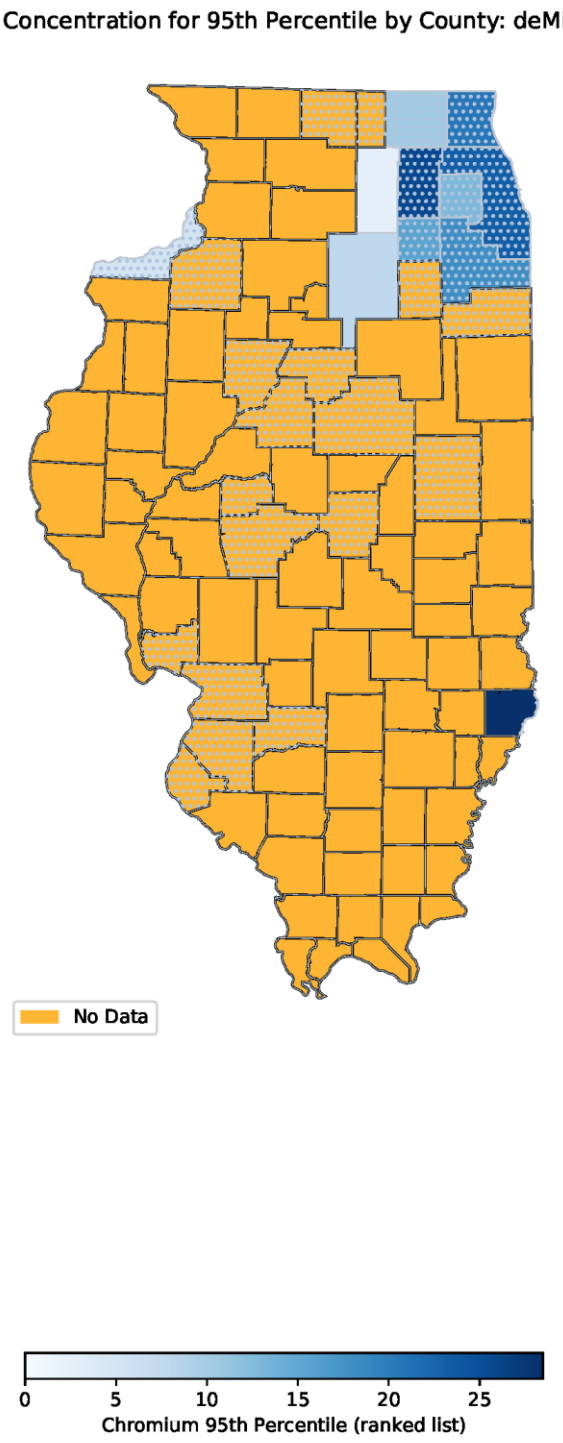


Figure 297. Map of RSL chromium 95th percentile concentration by Illinois county, de minimis (mg/kg)

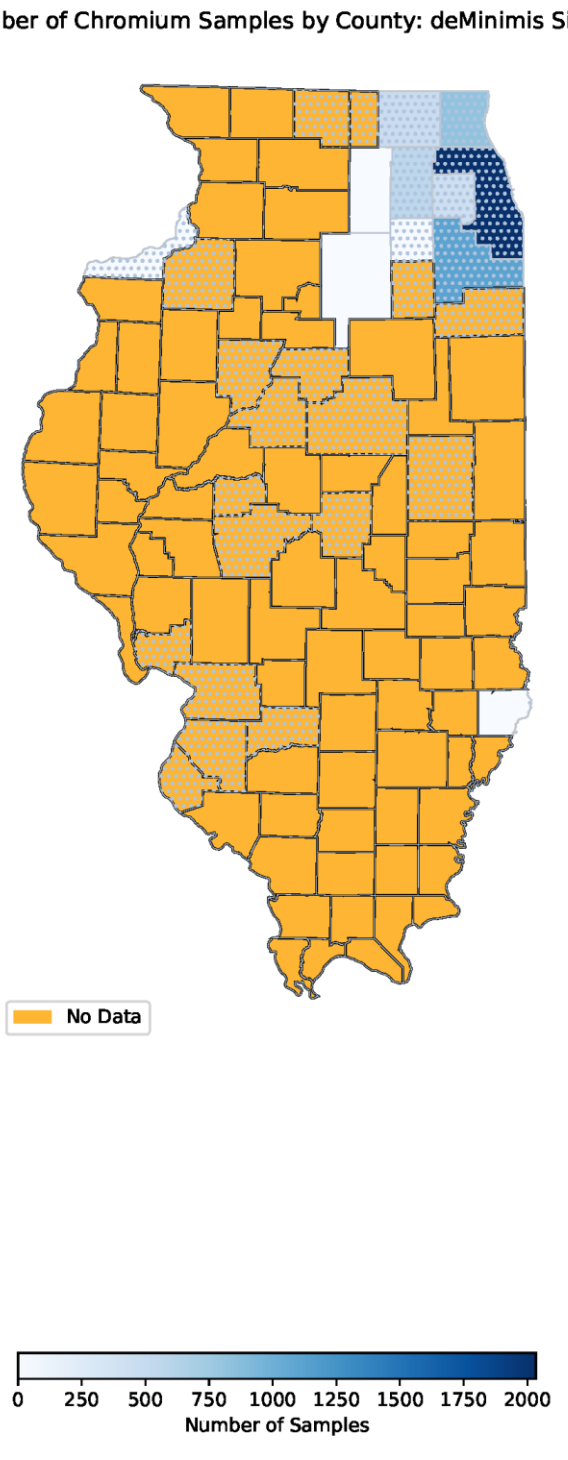


Figure 298. Map of RSL chromium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX I. ANALYTE ANALYSIS: COBALT

I.1 COBALT REC

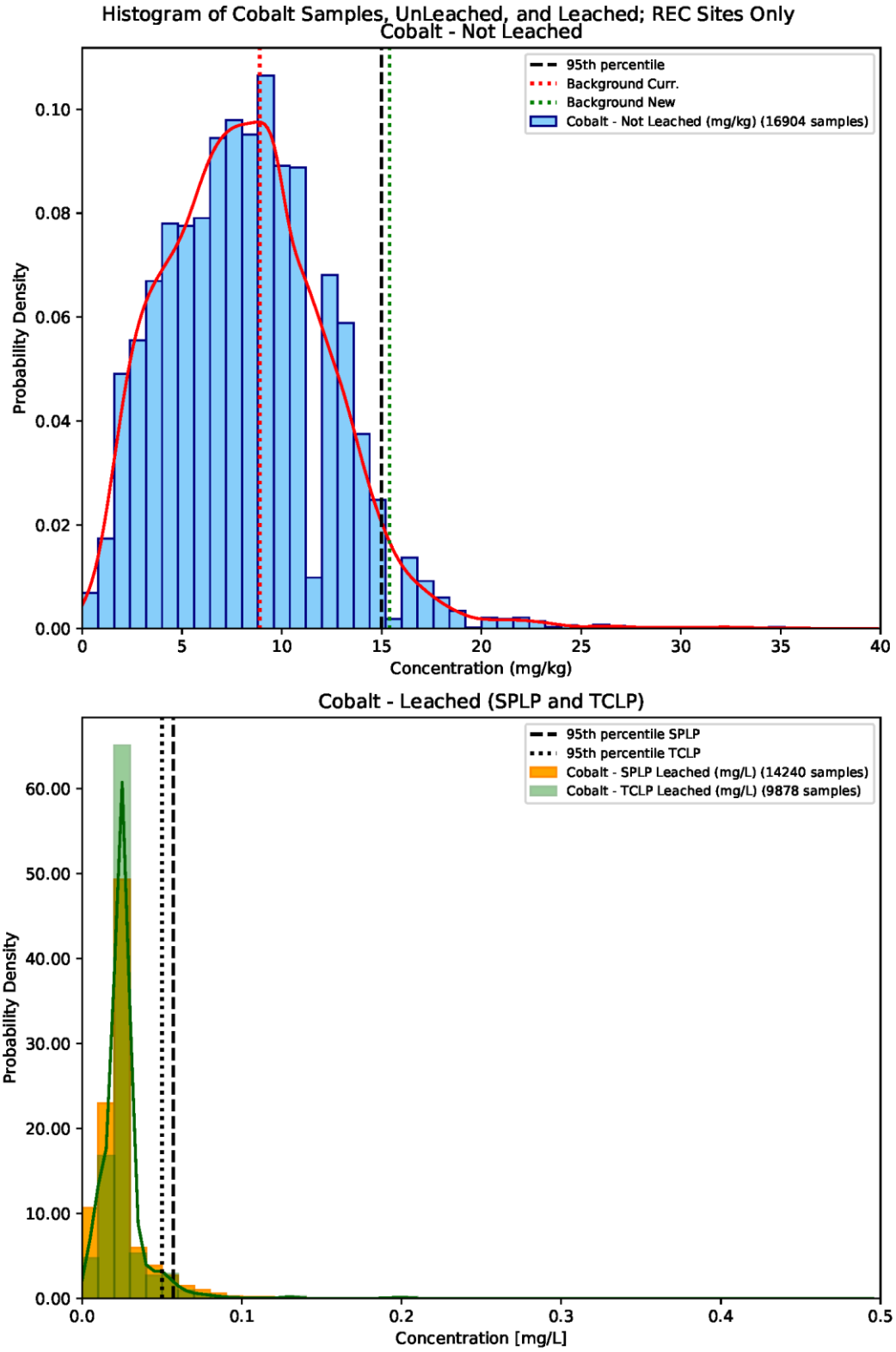


Figure 299. Histogram of RSL cobalt concentrations, REC (mg/kg)

Cobalt Unleached Concentration (mg/kg)

1) Region

2) District

3) County

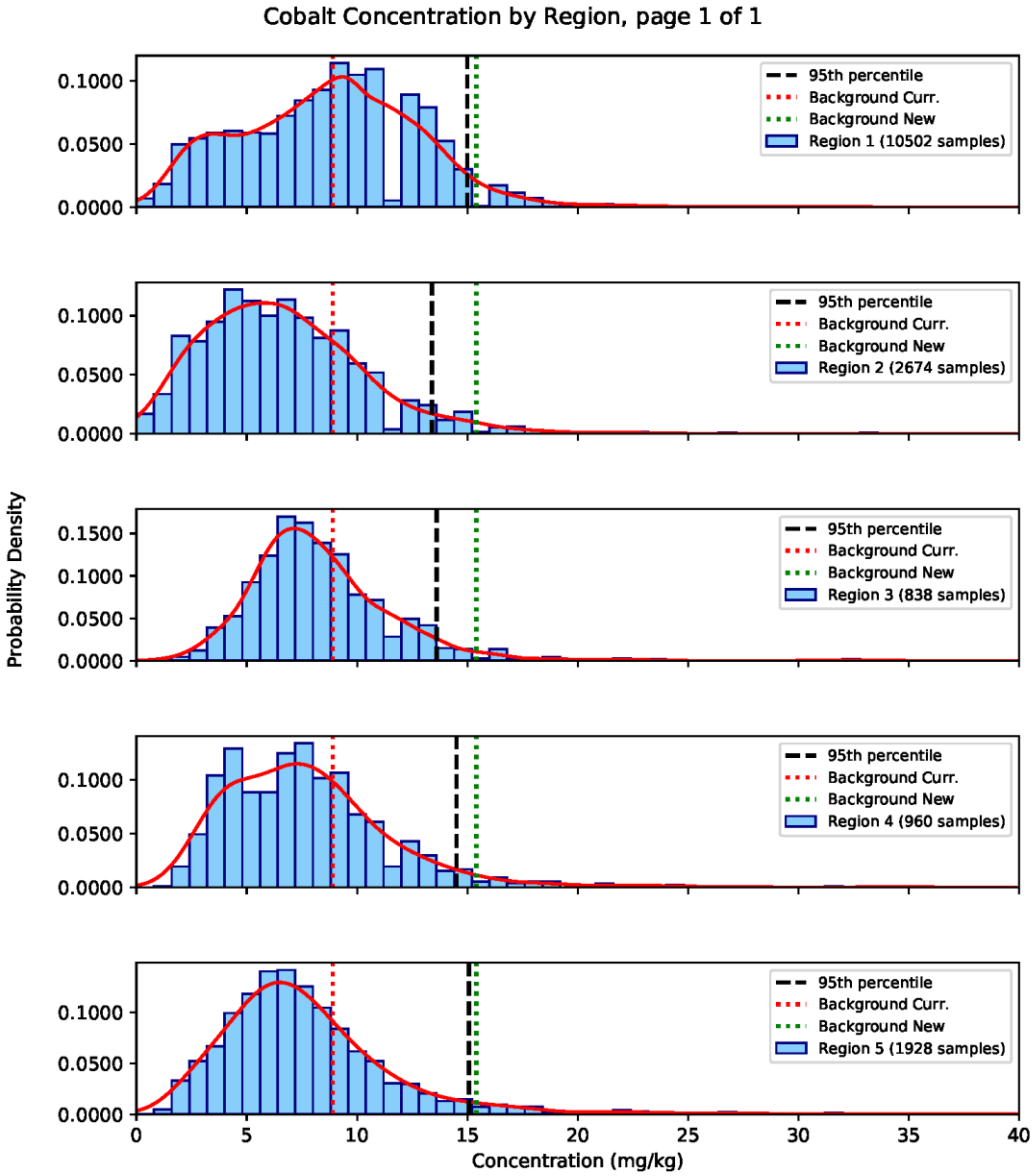


Figure 300. Histogram of RSL cobalt concentrations by IDOT Region, REC (mg/kg)

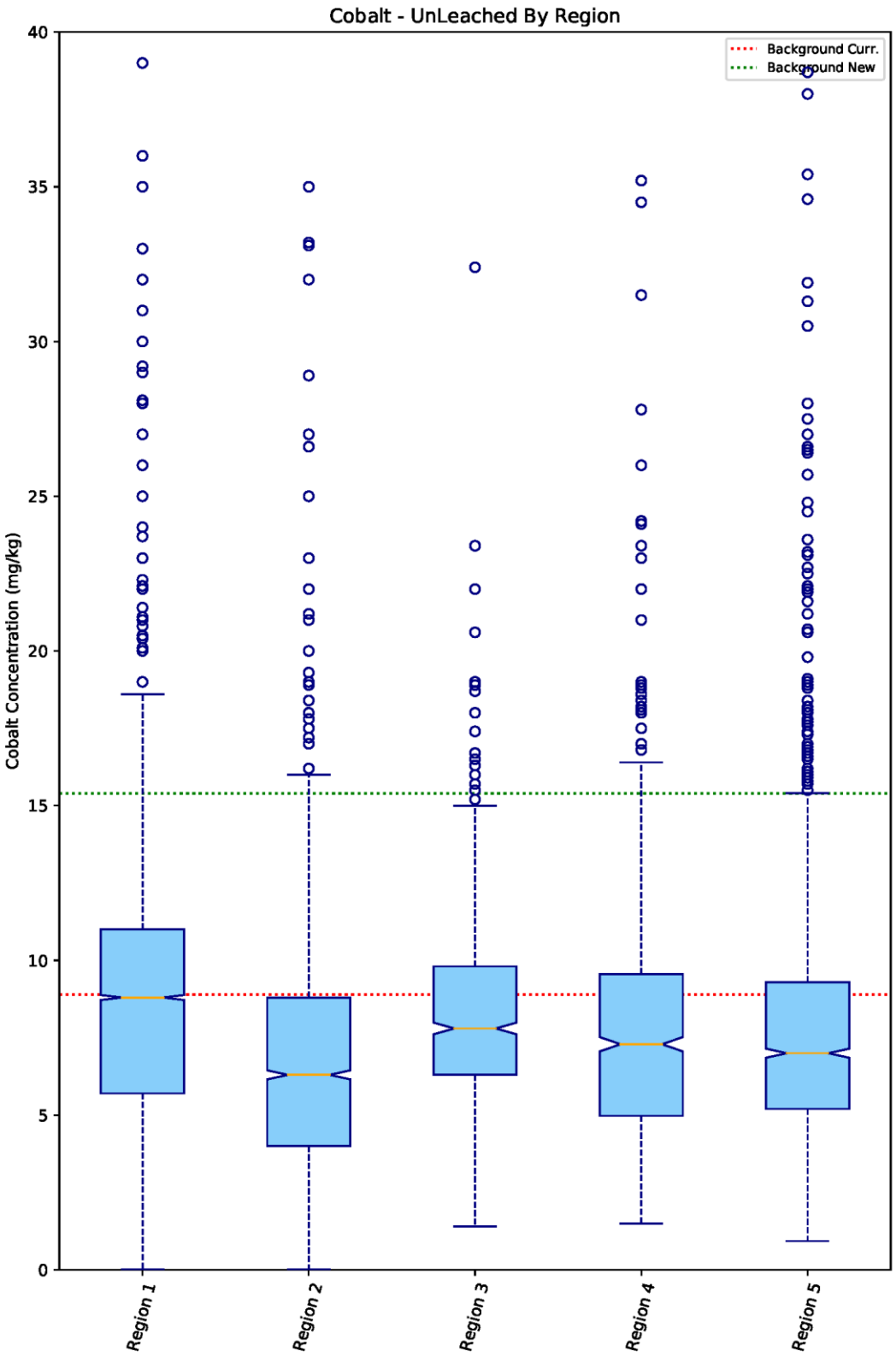


Figure 301. Boxplot of RSL cobalt concentrations by IDOT Region, REC (mg/kg)

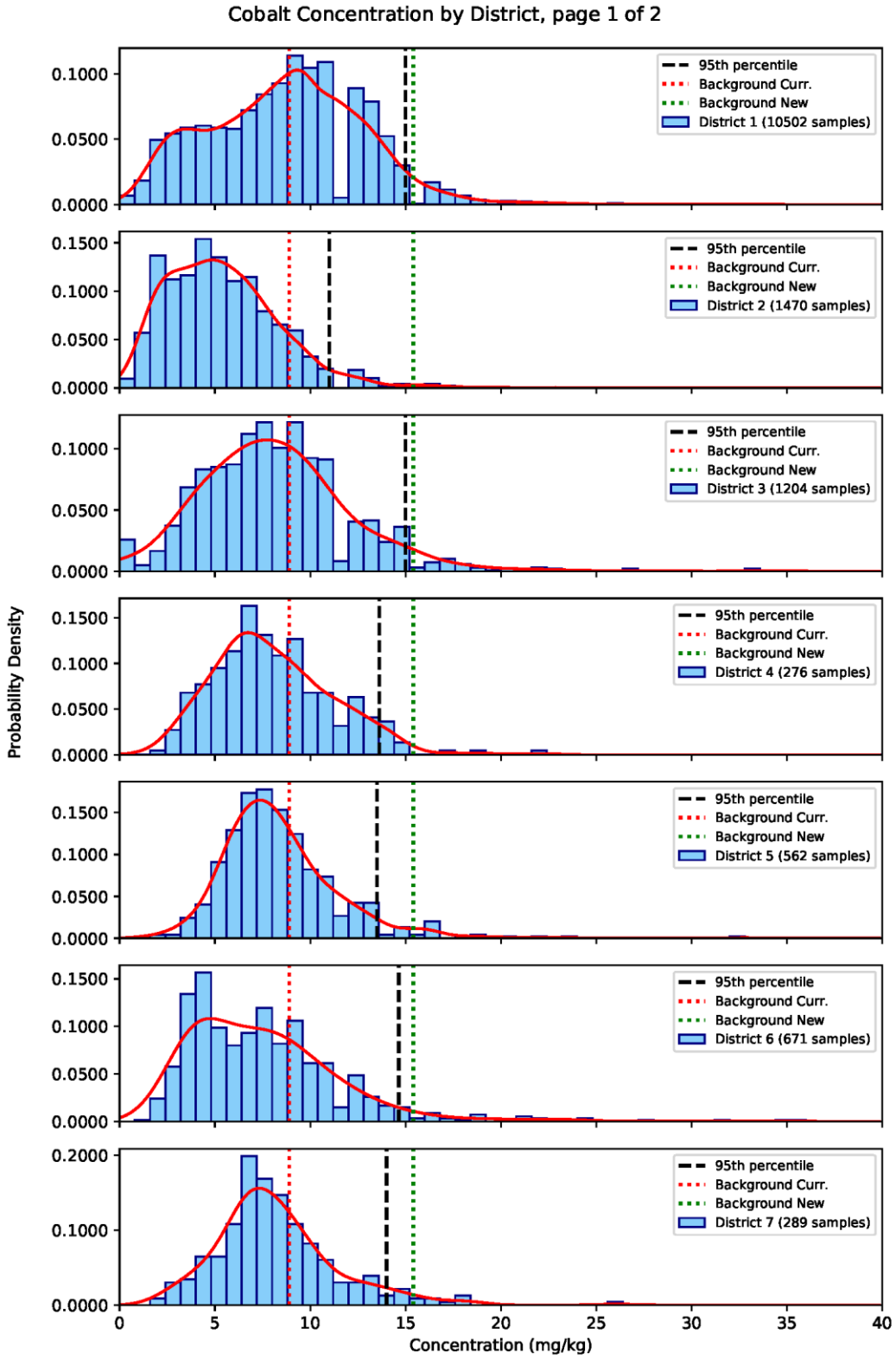


Figure 302. Histogram of RSL cobalt concentrations by IDOT District, REC (mg/kg), part 1

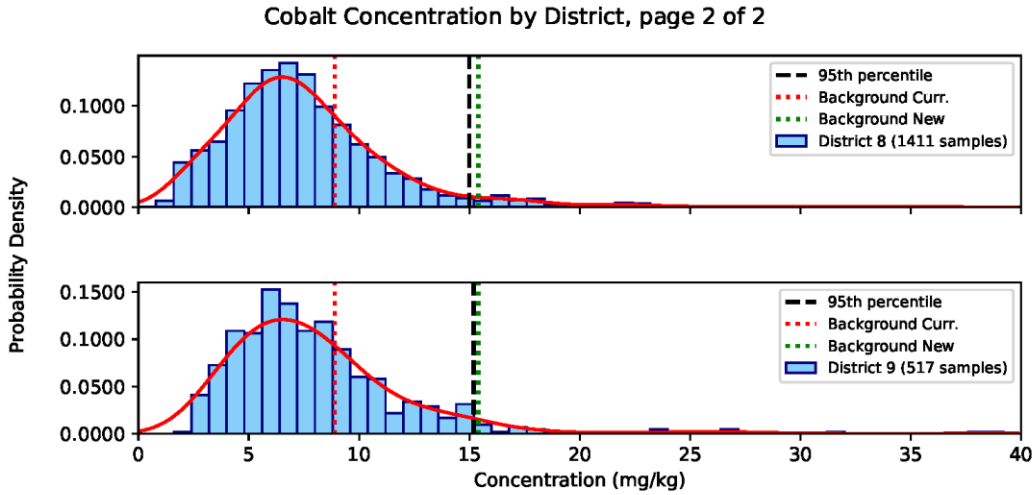


Figure 303. Histogram of RSL cobalt concentrations by IDOT District, REC (mg/kg), part 2

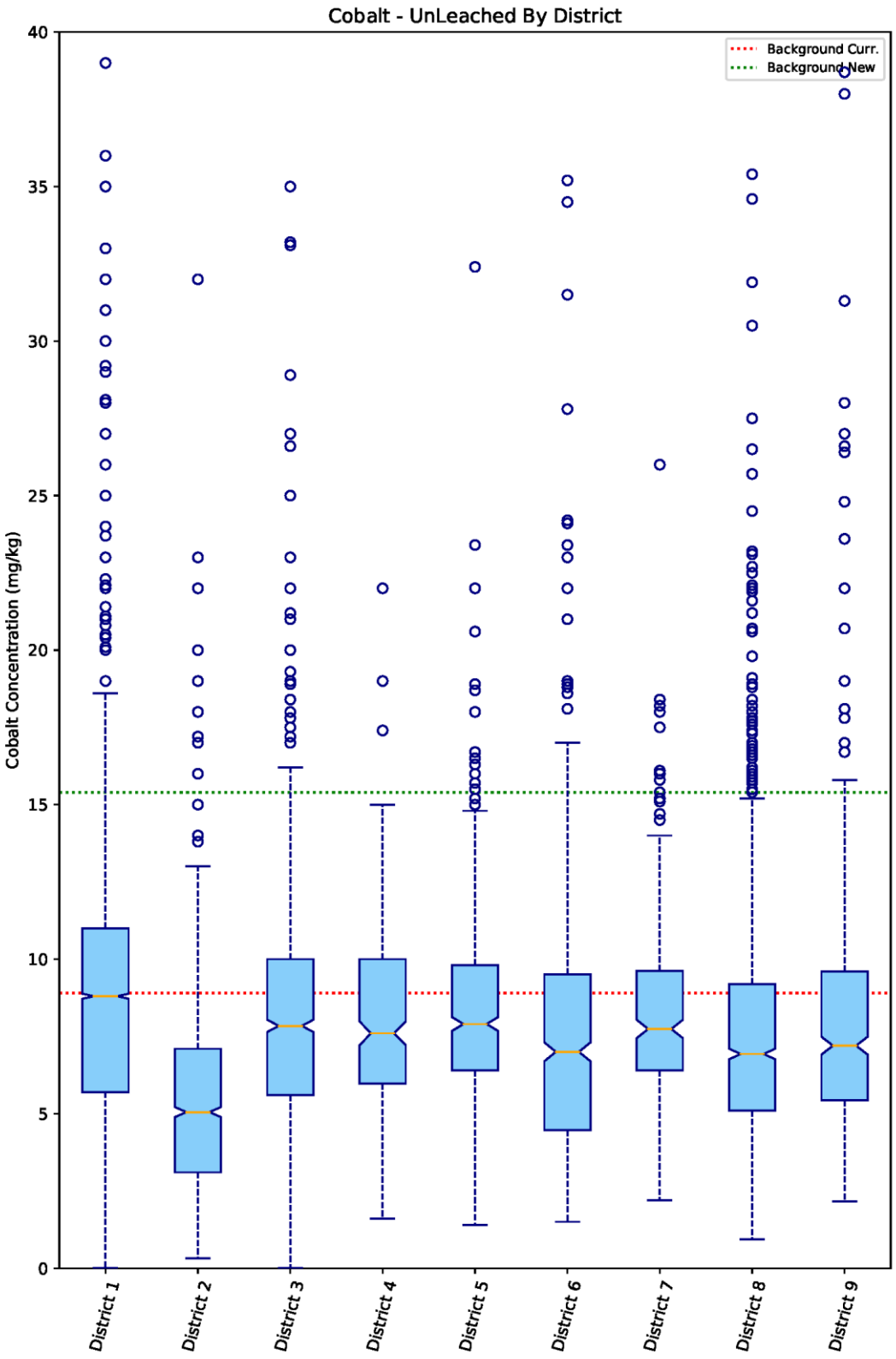


Figure 304. Boxplot of RSL cobalt concentrations by IDOT District, REC (mg/kg)

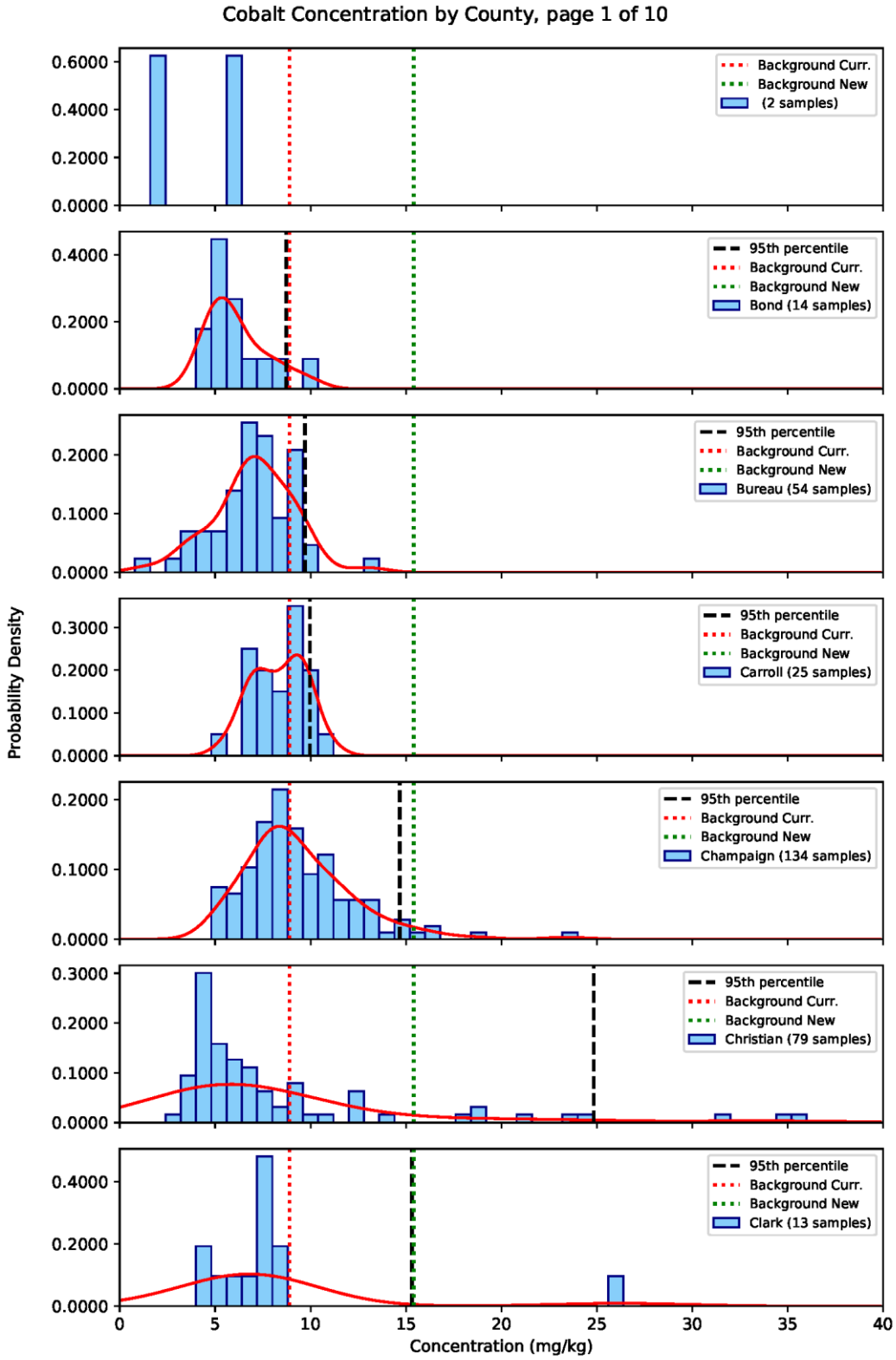


Figure 305. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 1

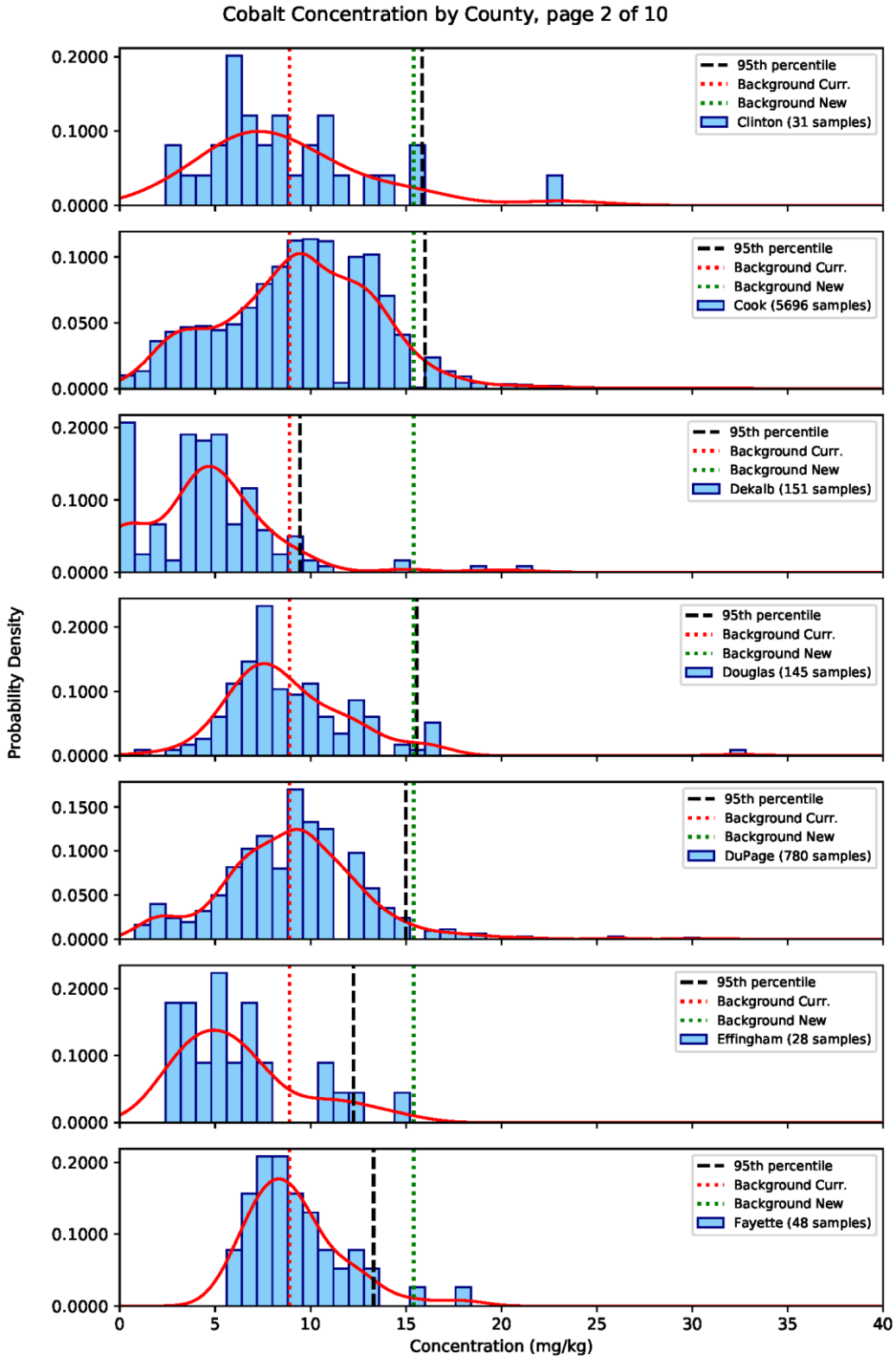


Figure 306. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 2

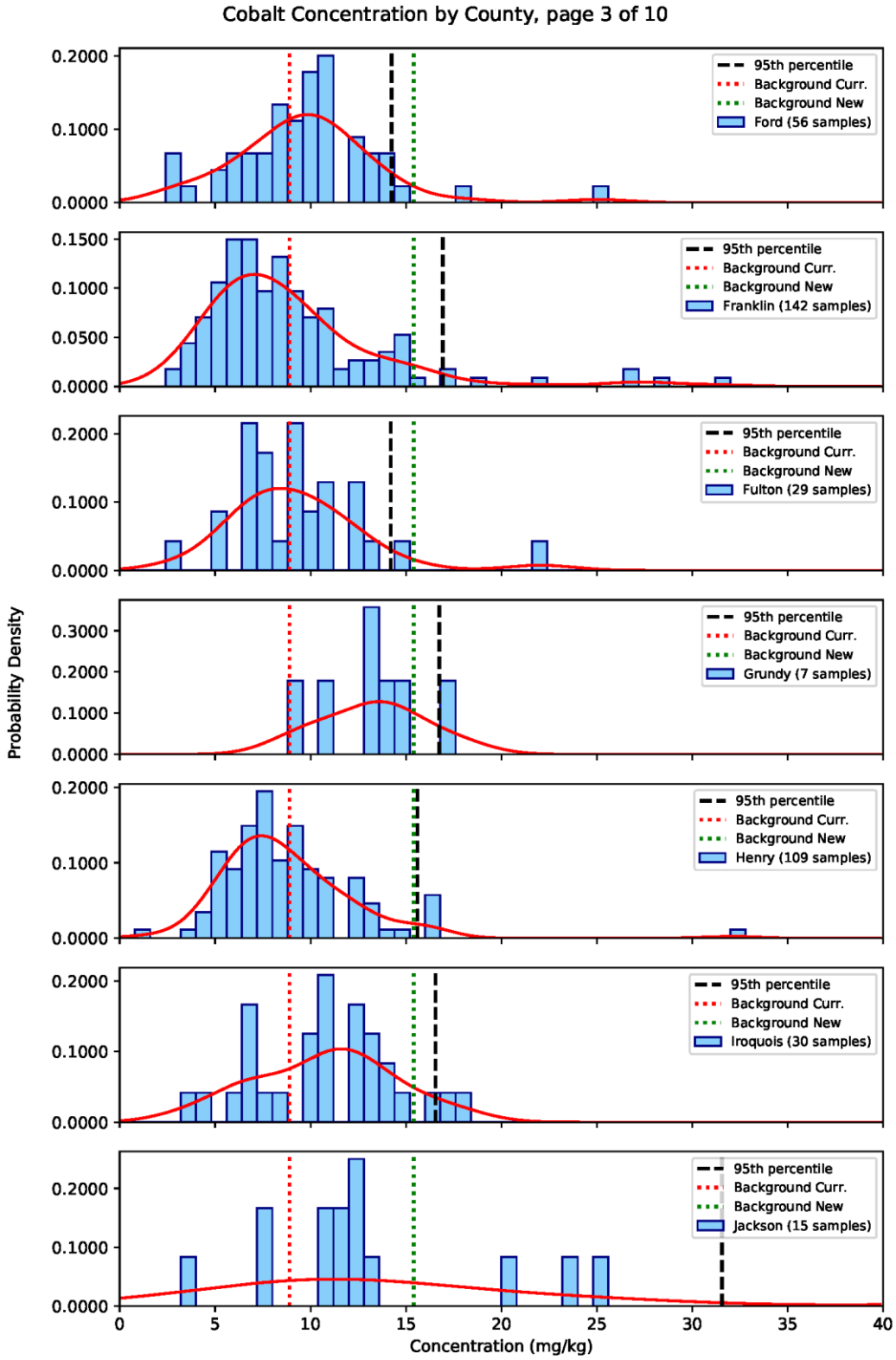


Figure 307. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 3

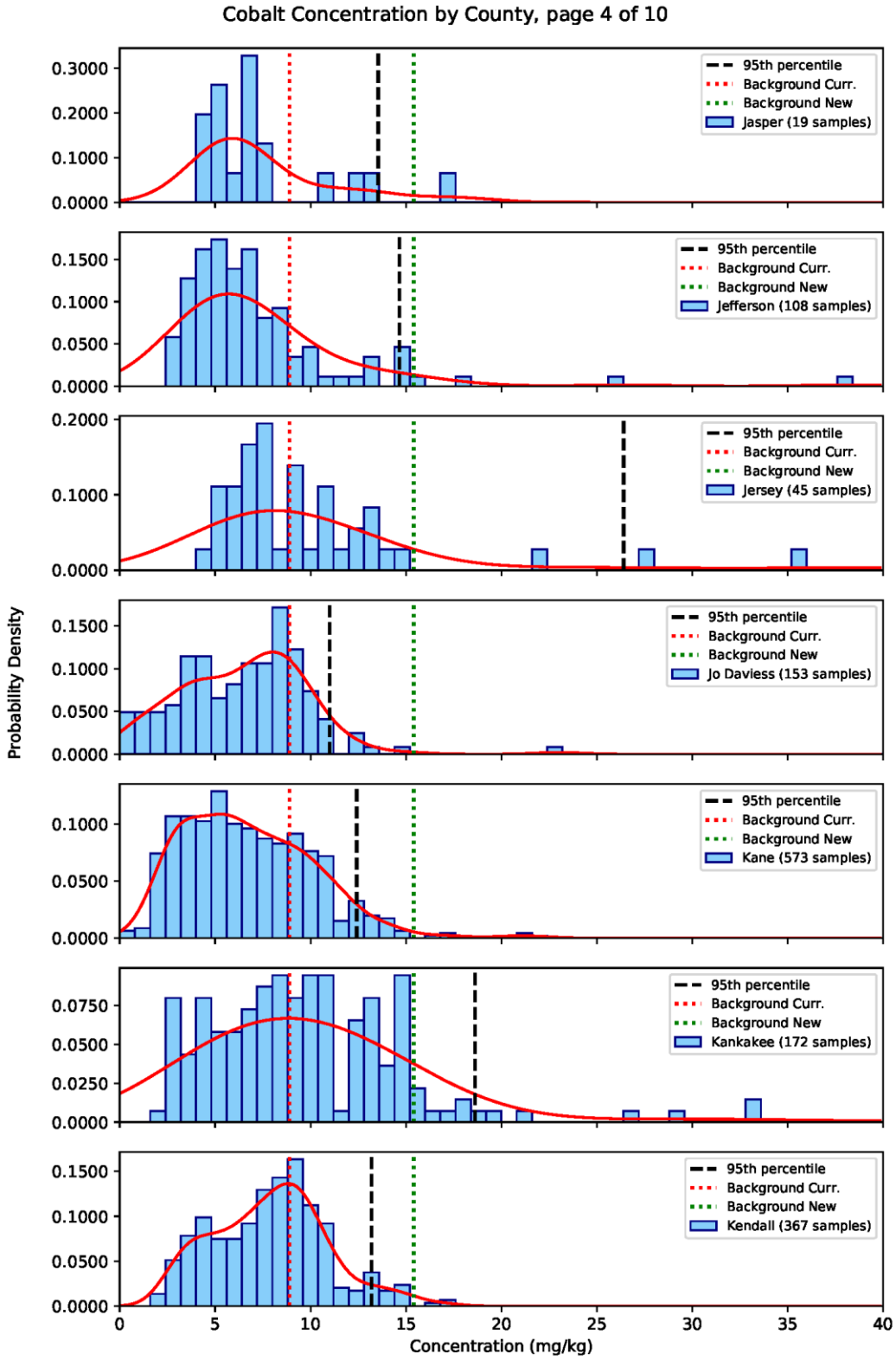


Figure 308. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 4

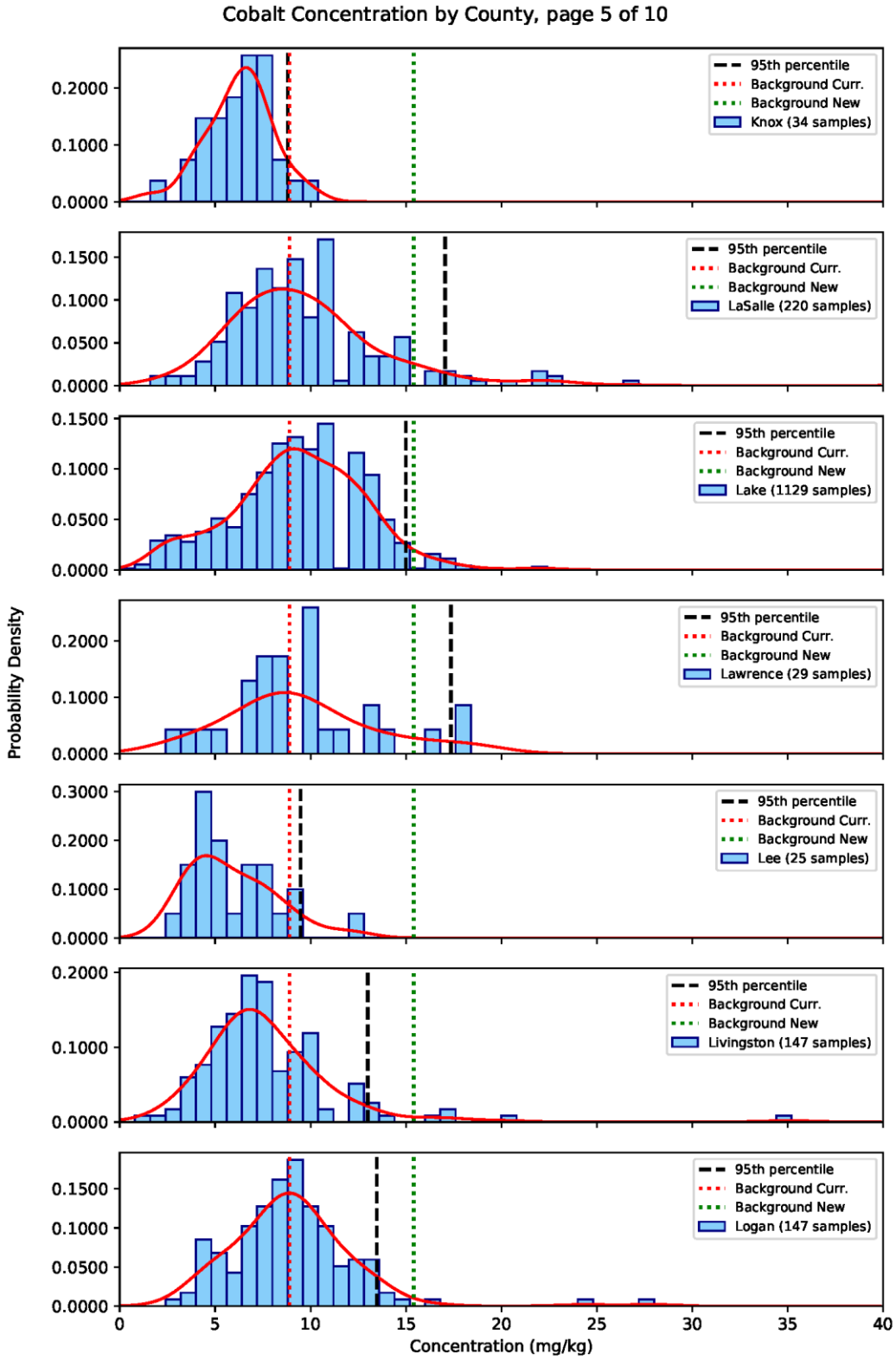


Figure 309. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 5

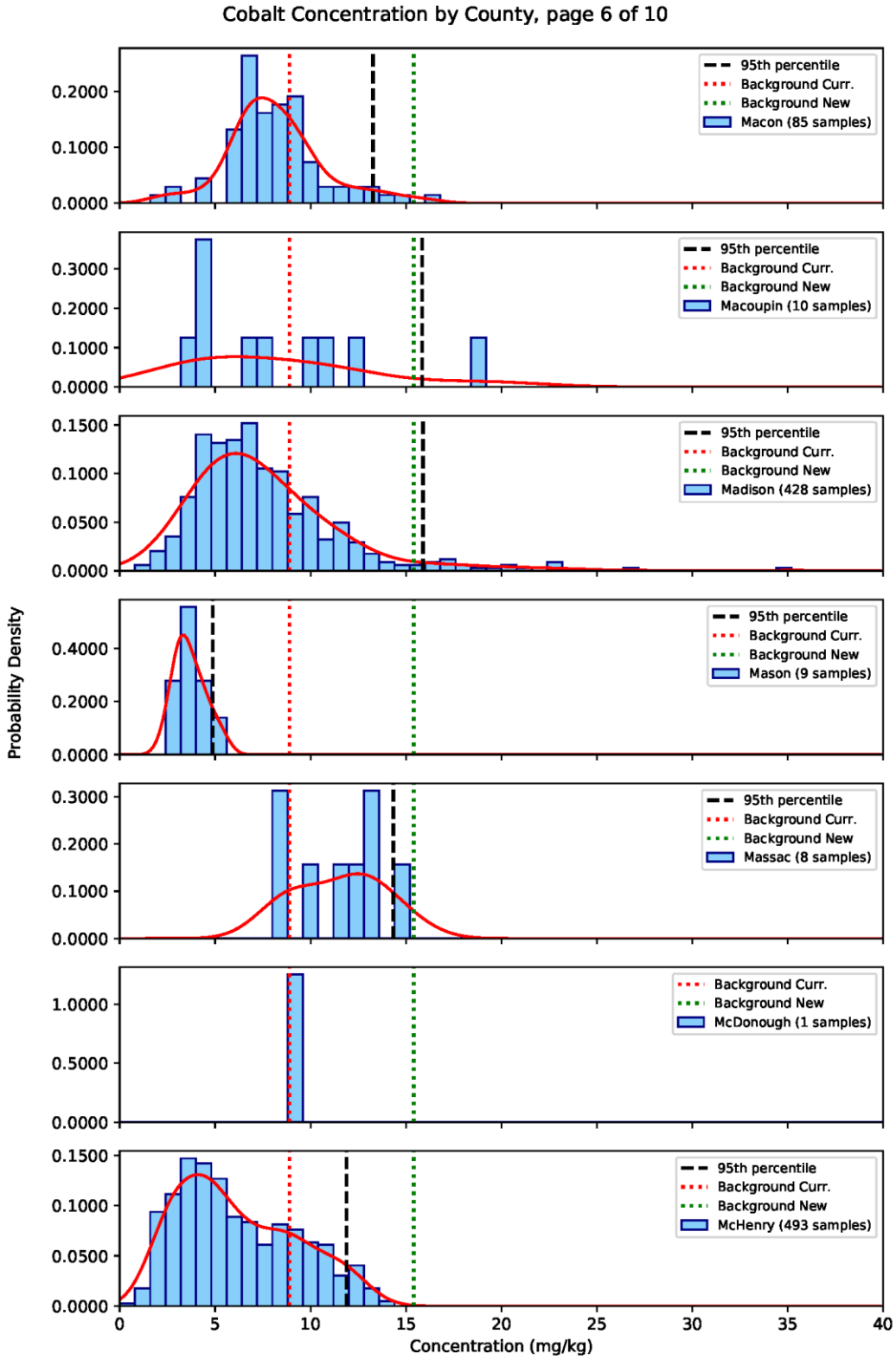


Figure 310. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 6

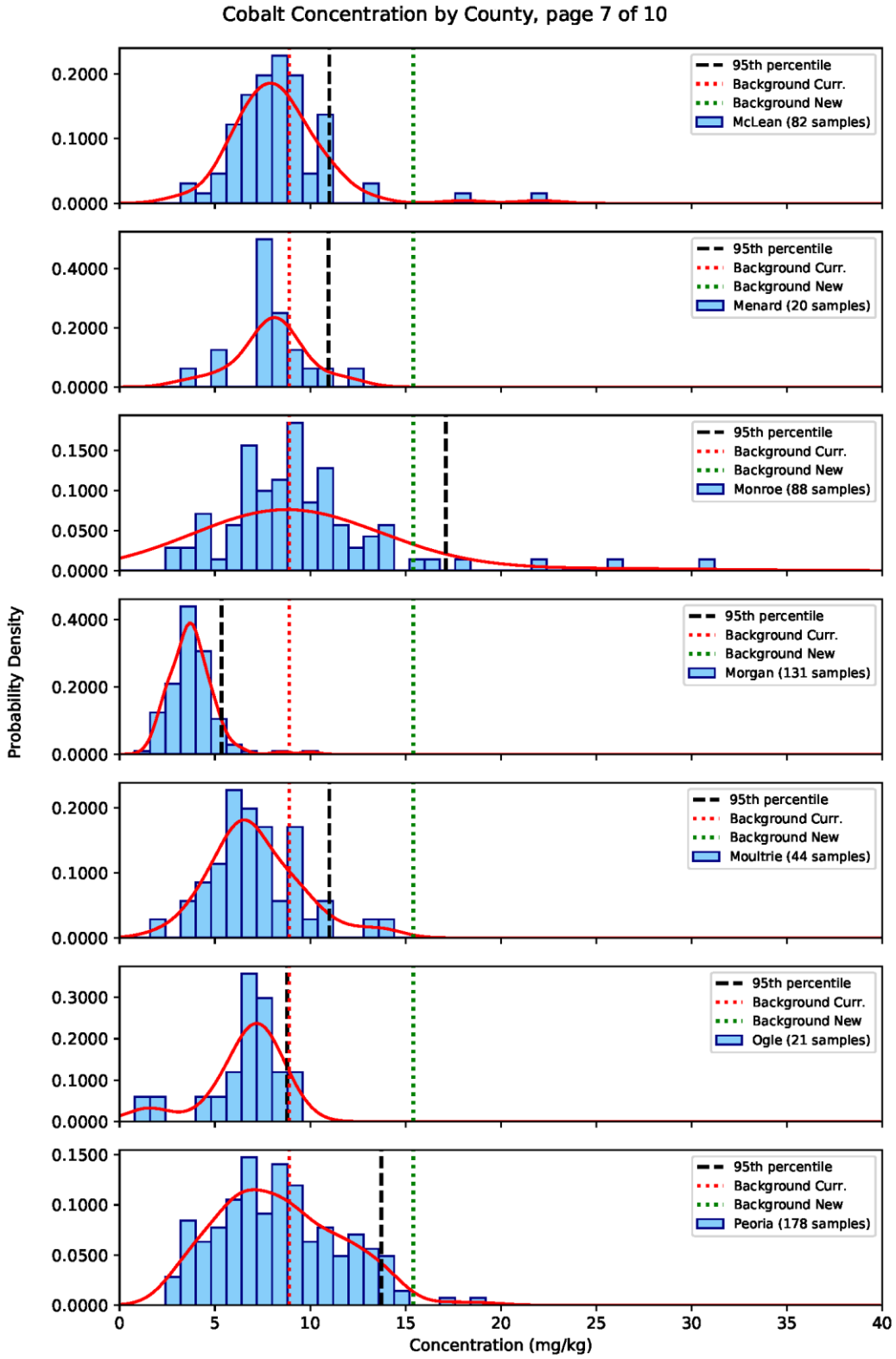


Figure 311. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 7

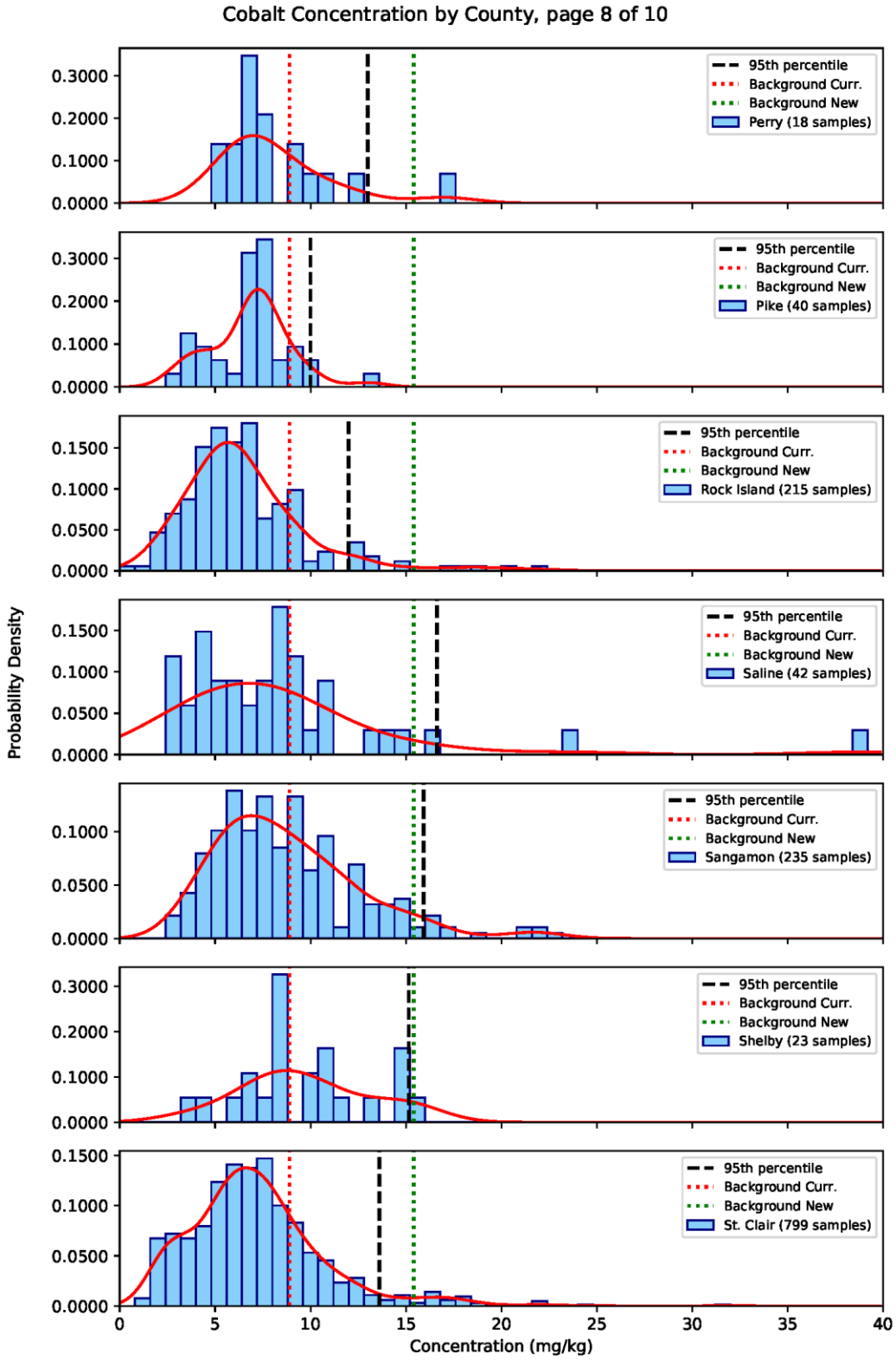


Figure 312. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 8

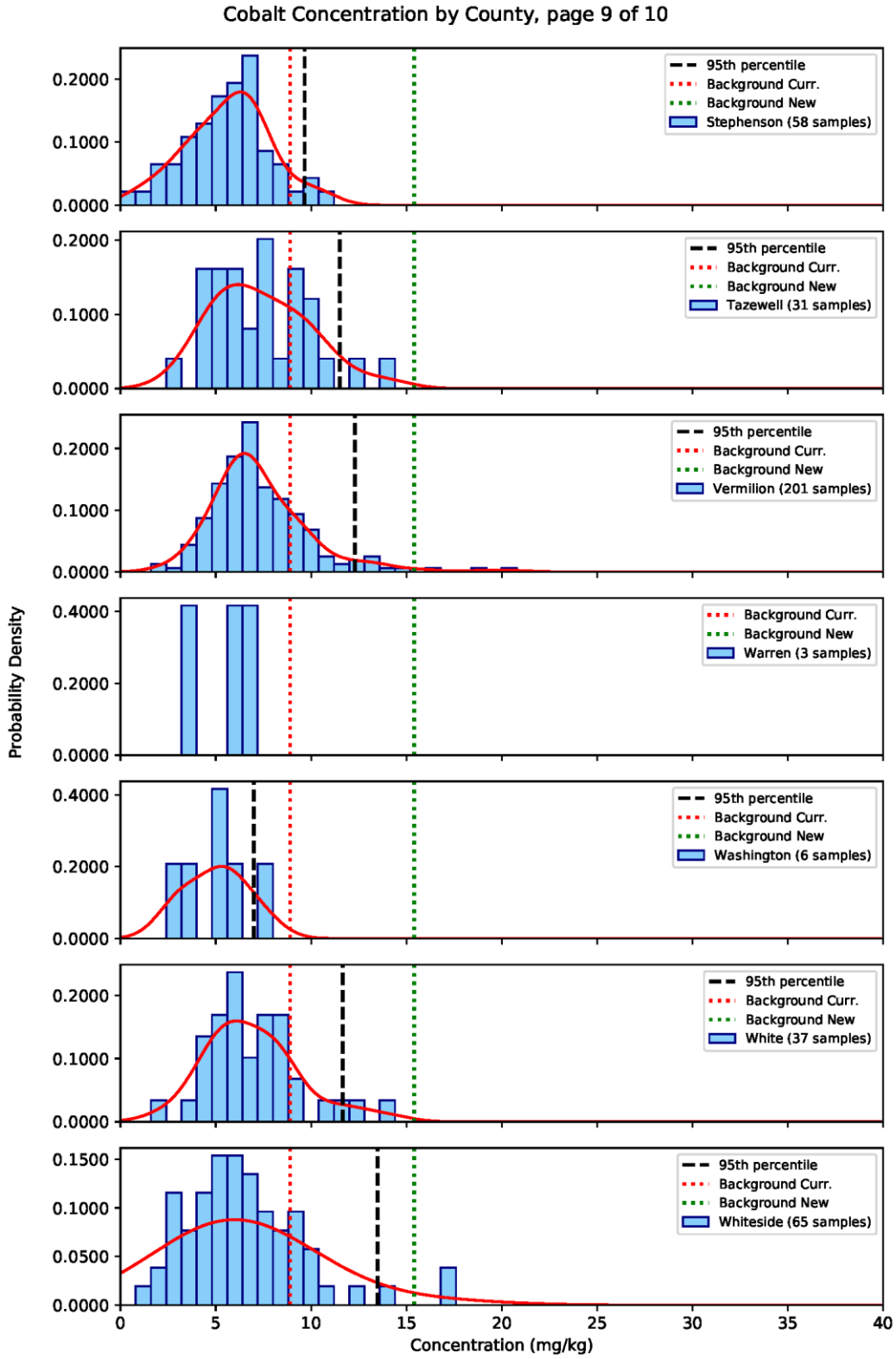


Figure 313. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 9

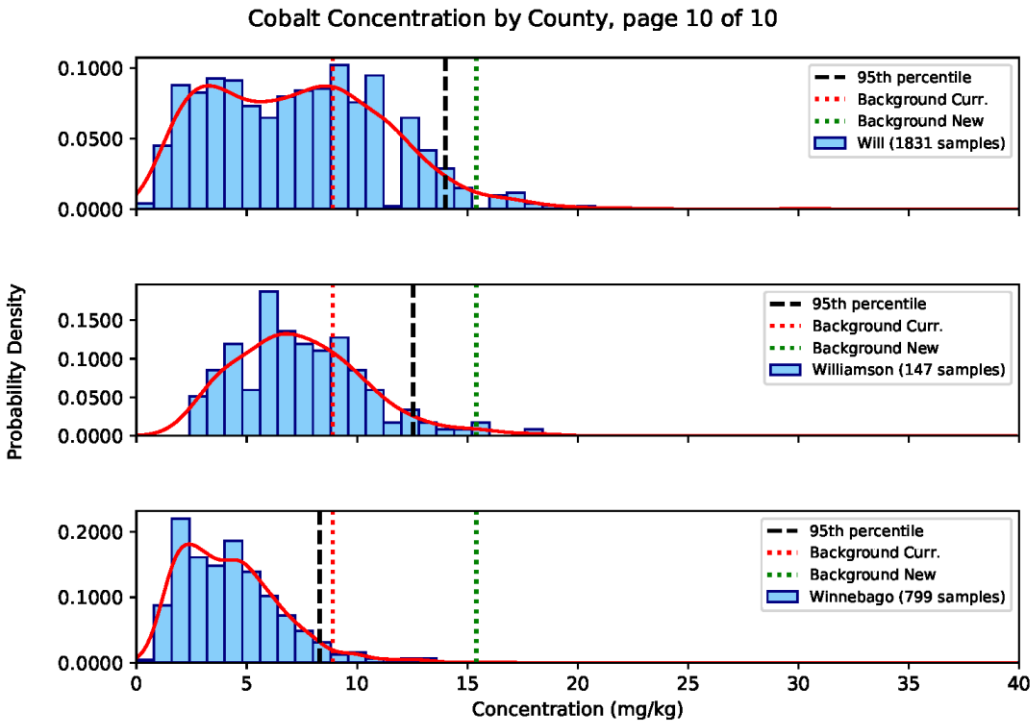


Figure 314. Histogram of RSL cobalt concentrations by Illinois county, REC (mg/kg), part 10

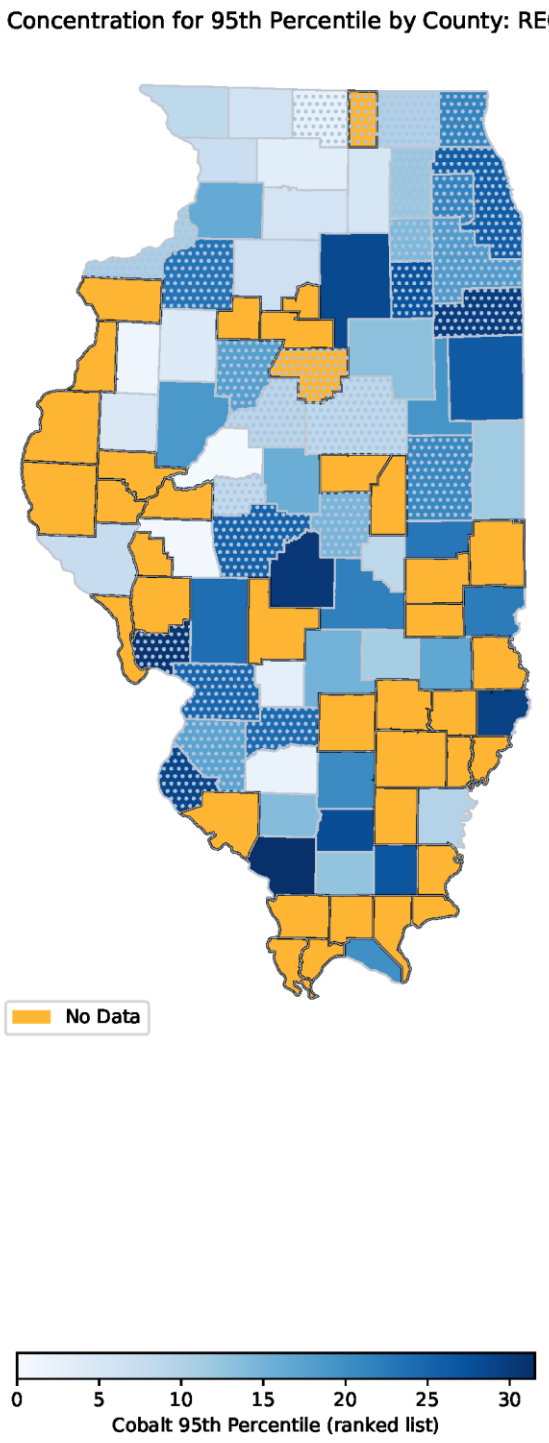


Figure 315. Map of RSL cobalt 95th percentile concentration by Illinois county, REC (mg/kg)

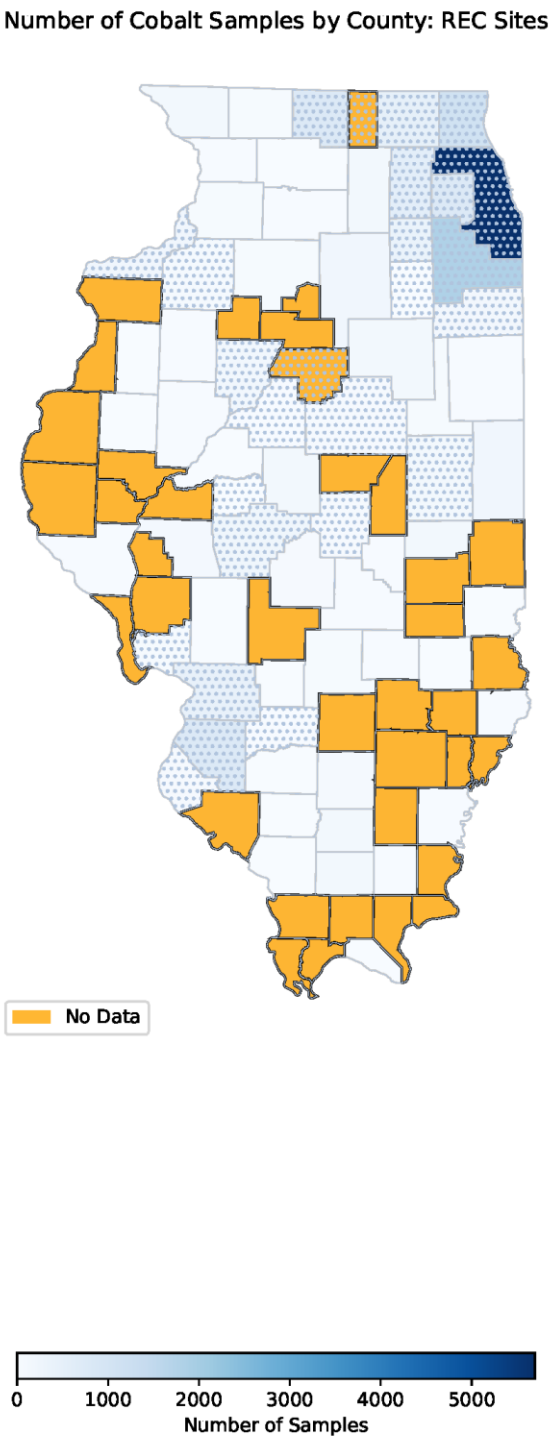


Figure 316. Map of RSL cobalt sample quantity by Illinois county, REC (mg/kg)

I.2 COBALT NON-REC

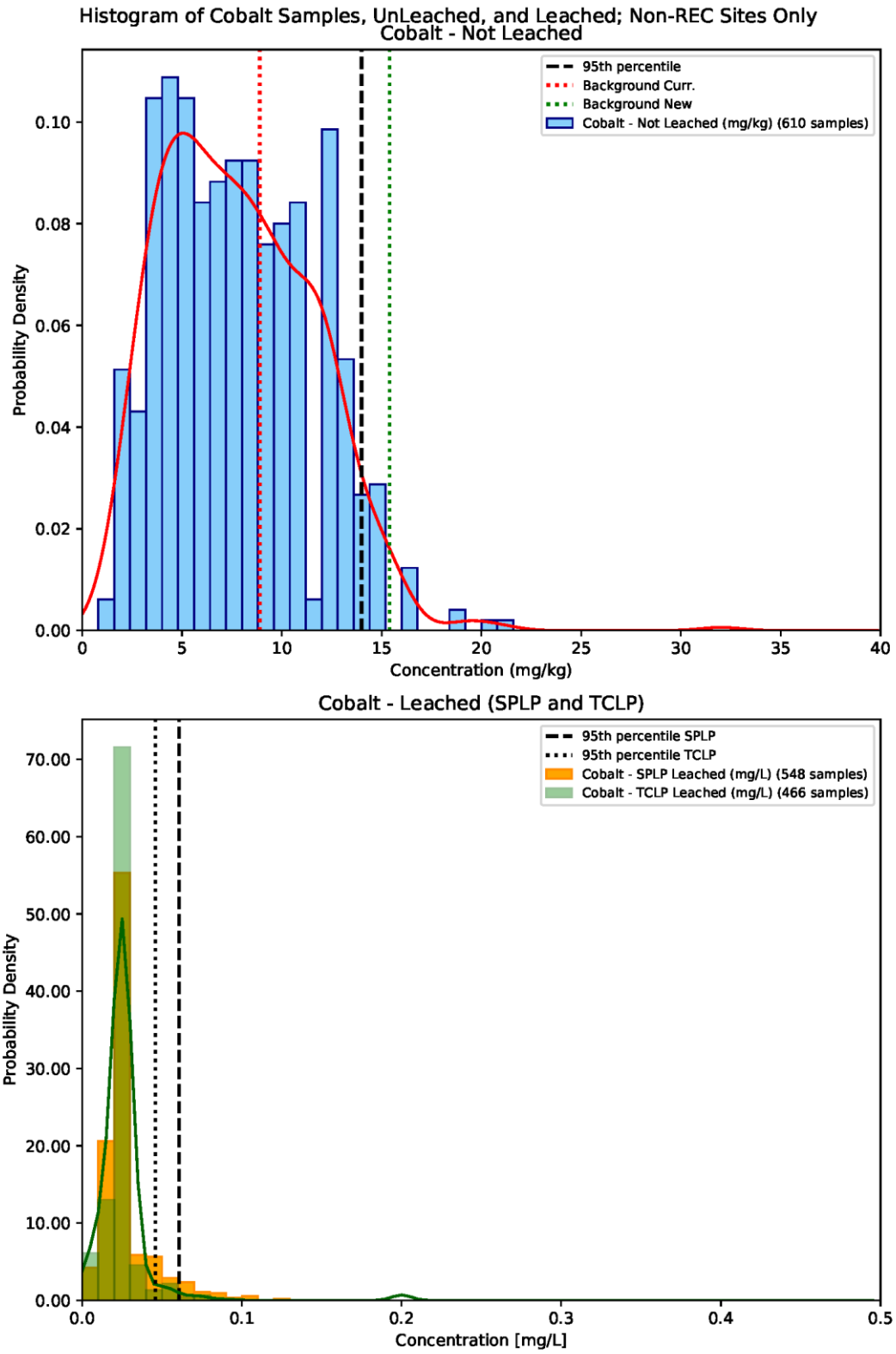


Figure 317. Histogram of RSL cobalt concentrations, Non-REC (mg/kg)

Cobalt Unleached Concentration (mg/kg)

1) Region

2) District

3) County

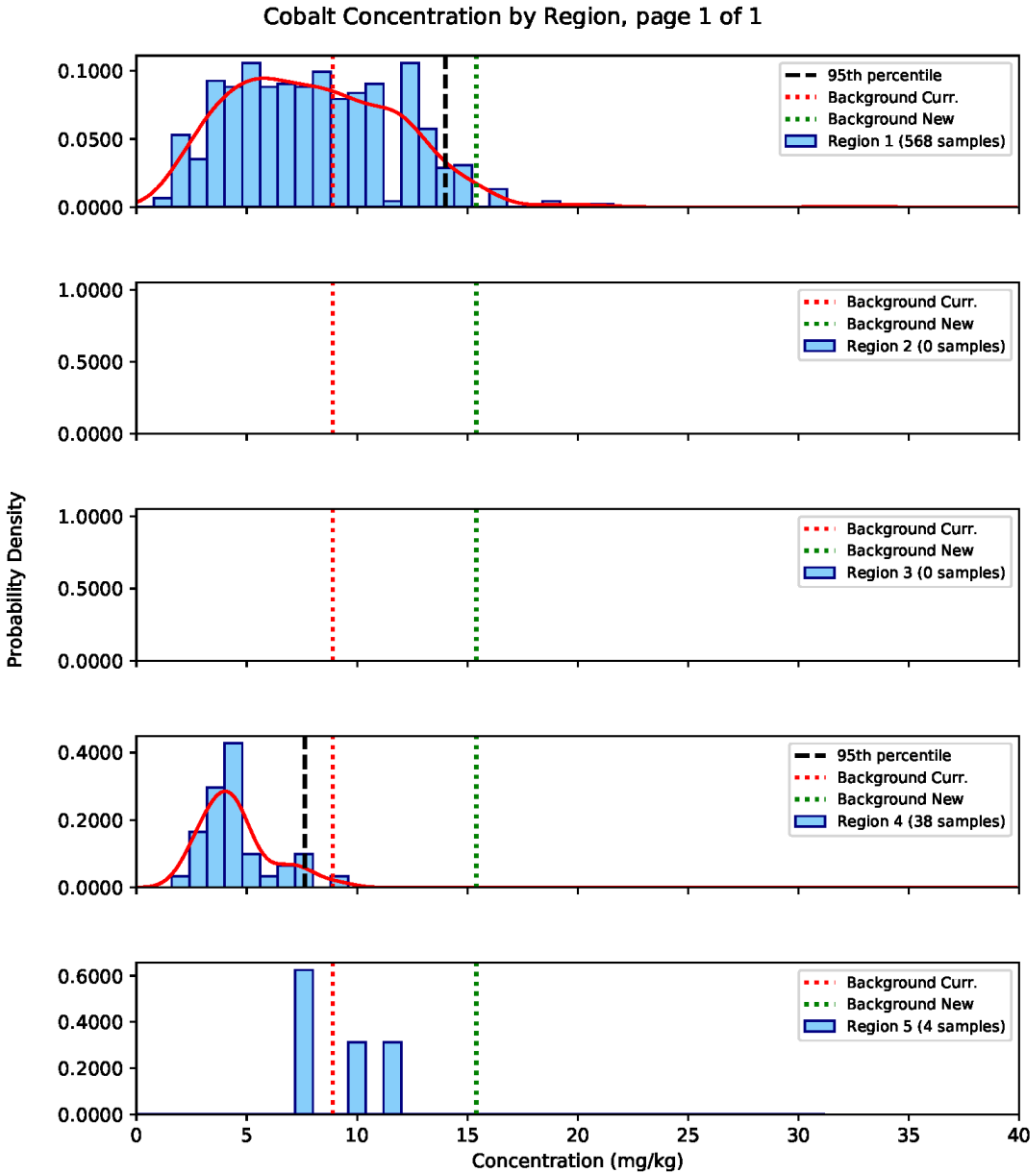


Figure 318. Histogram of RSL cobalt concentrations by IDOT Region, Non-REC (mg/kg)

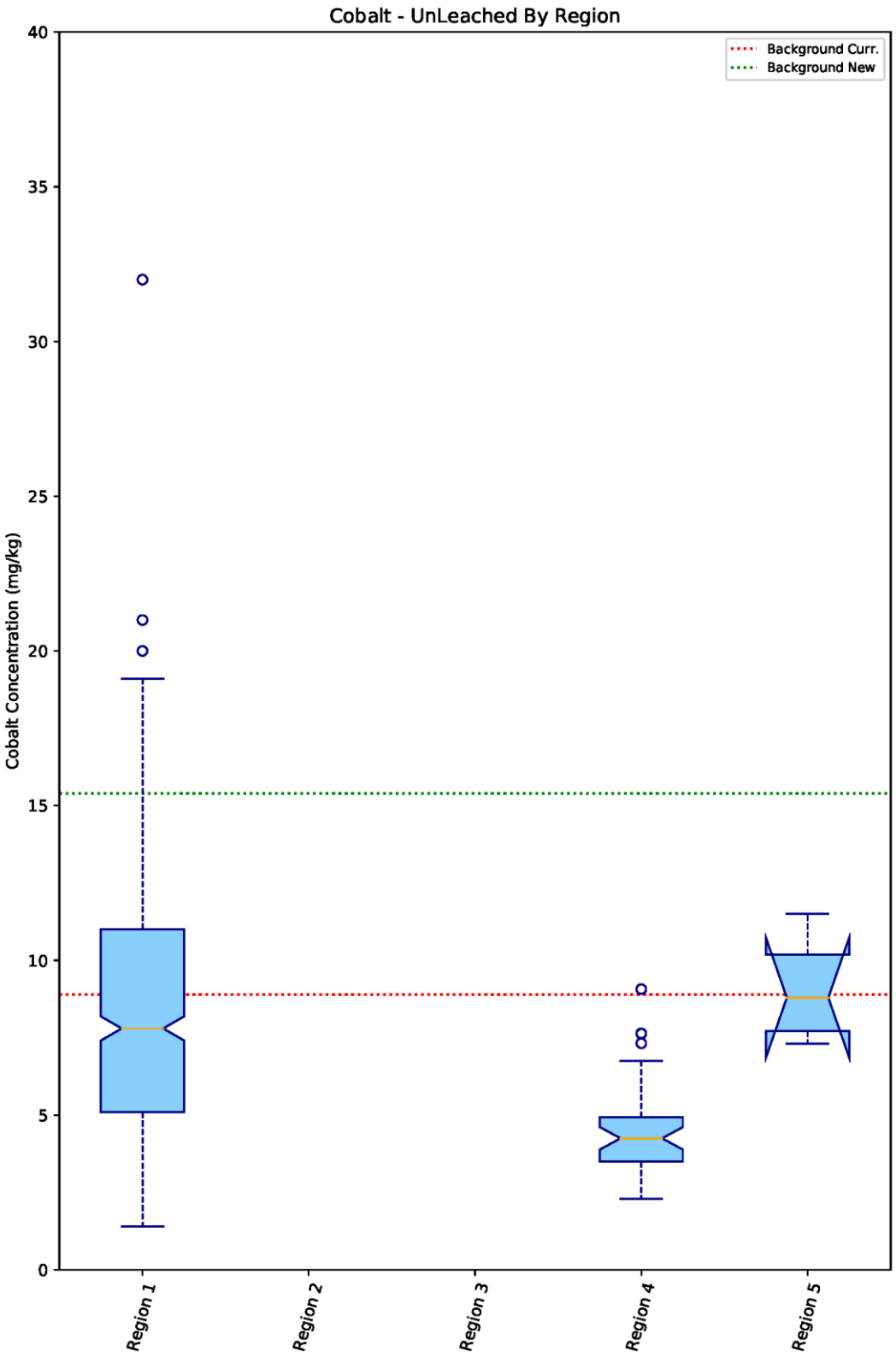


Figure 319. Boxplot of RSL cobalt concentrations by IDOT Region, Non-REC (mg/kg)

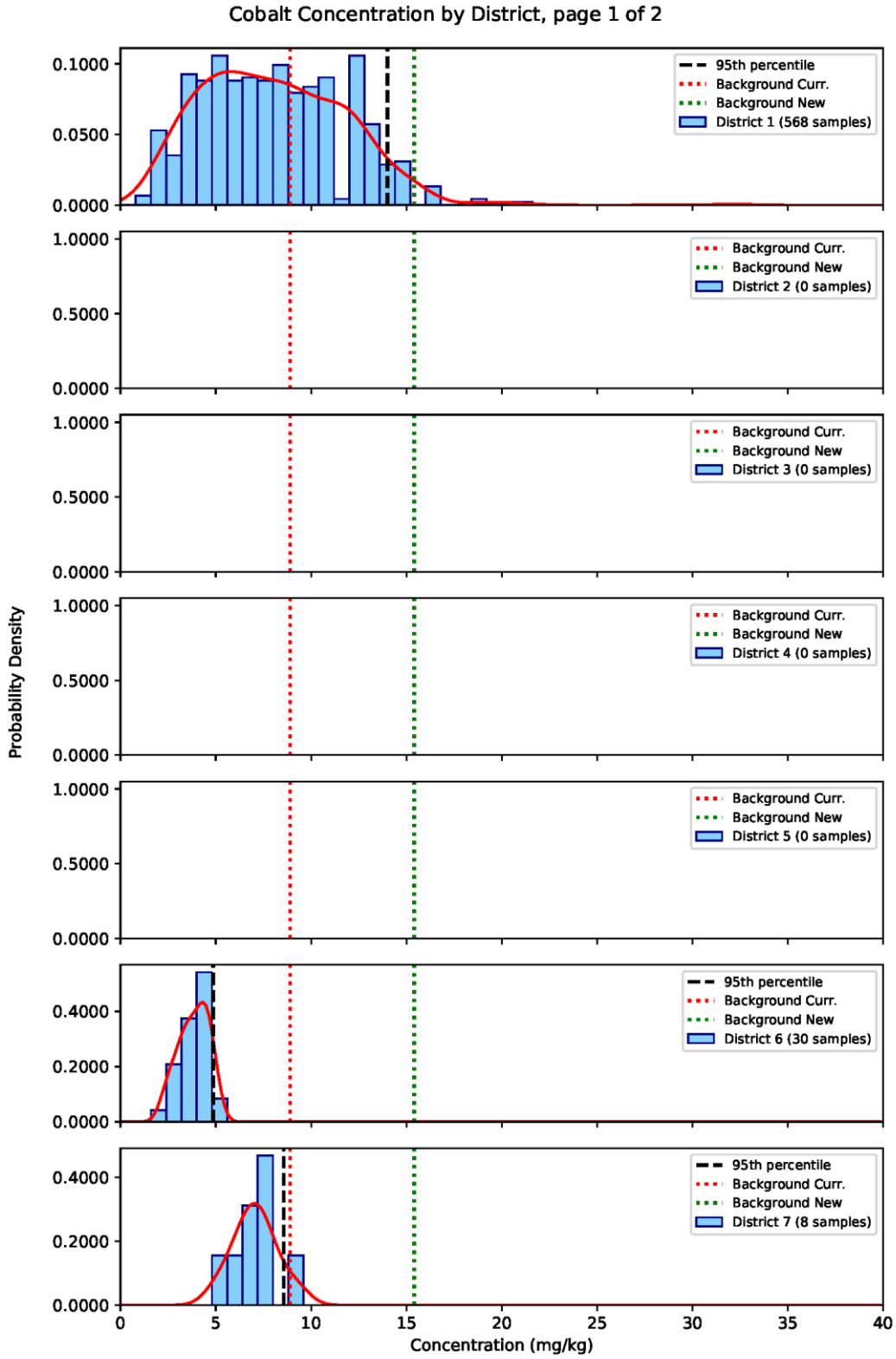


Figure 320. Histogram of RSL cobalt concentrations by IDOT District, Non-REC (mg/kg), part 1

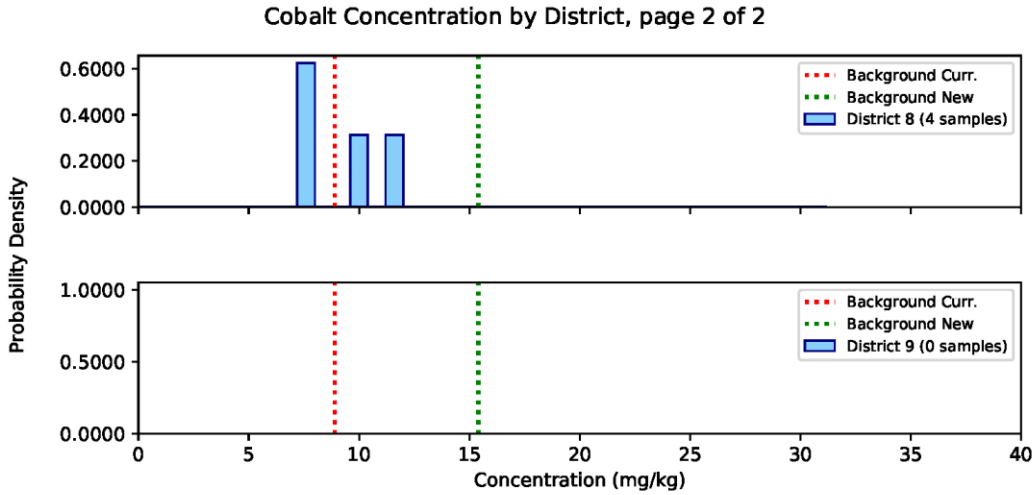


Figure 321. Histogram of RSL cobalt concentrations by IDOT District, Non-REC (mg/kg), part 2

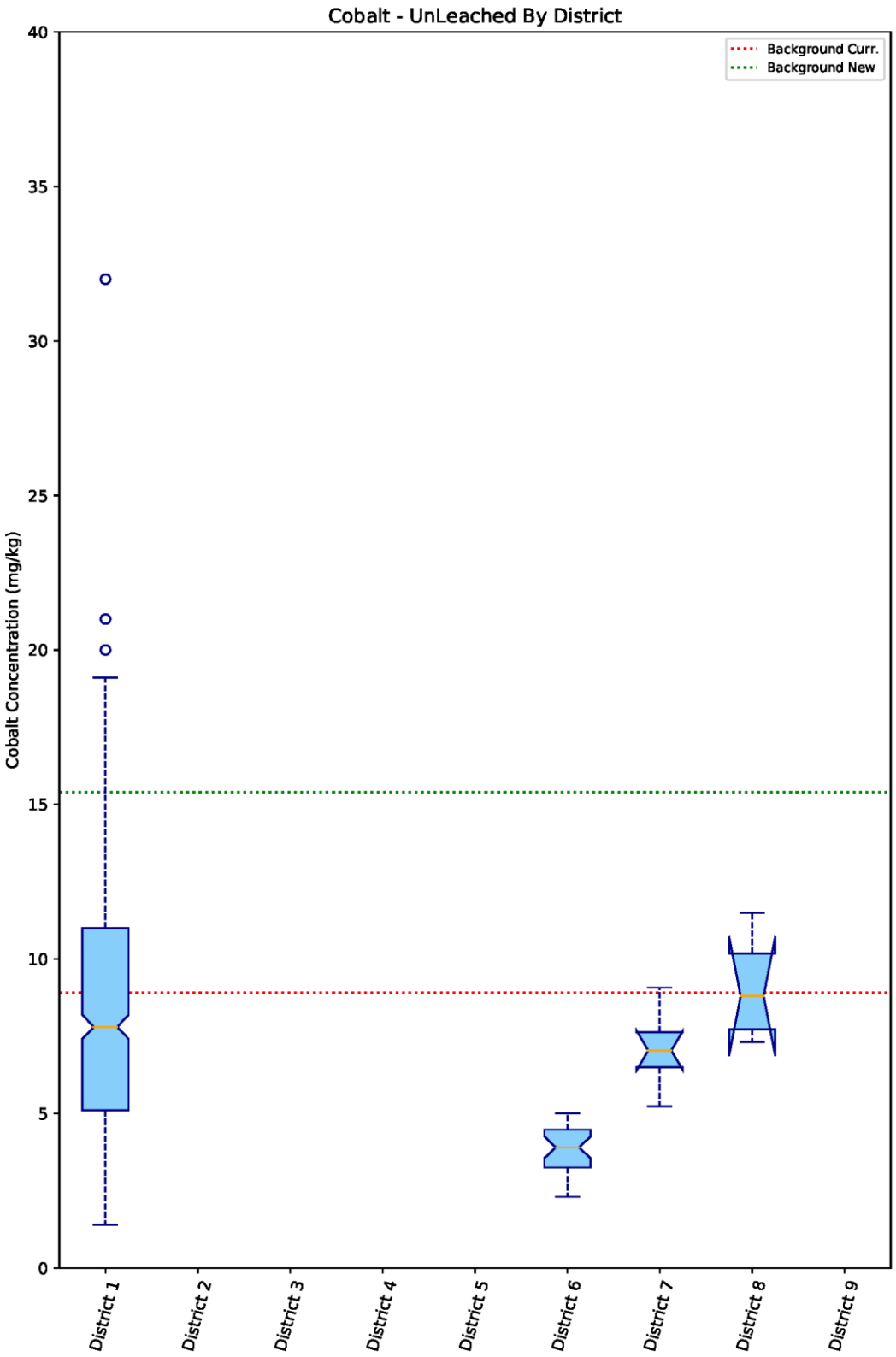


Figure 322. Boxplot of RSL cobalt concentrations by IDOT District, Non-REC (mg/kg)

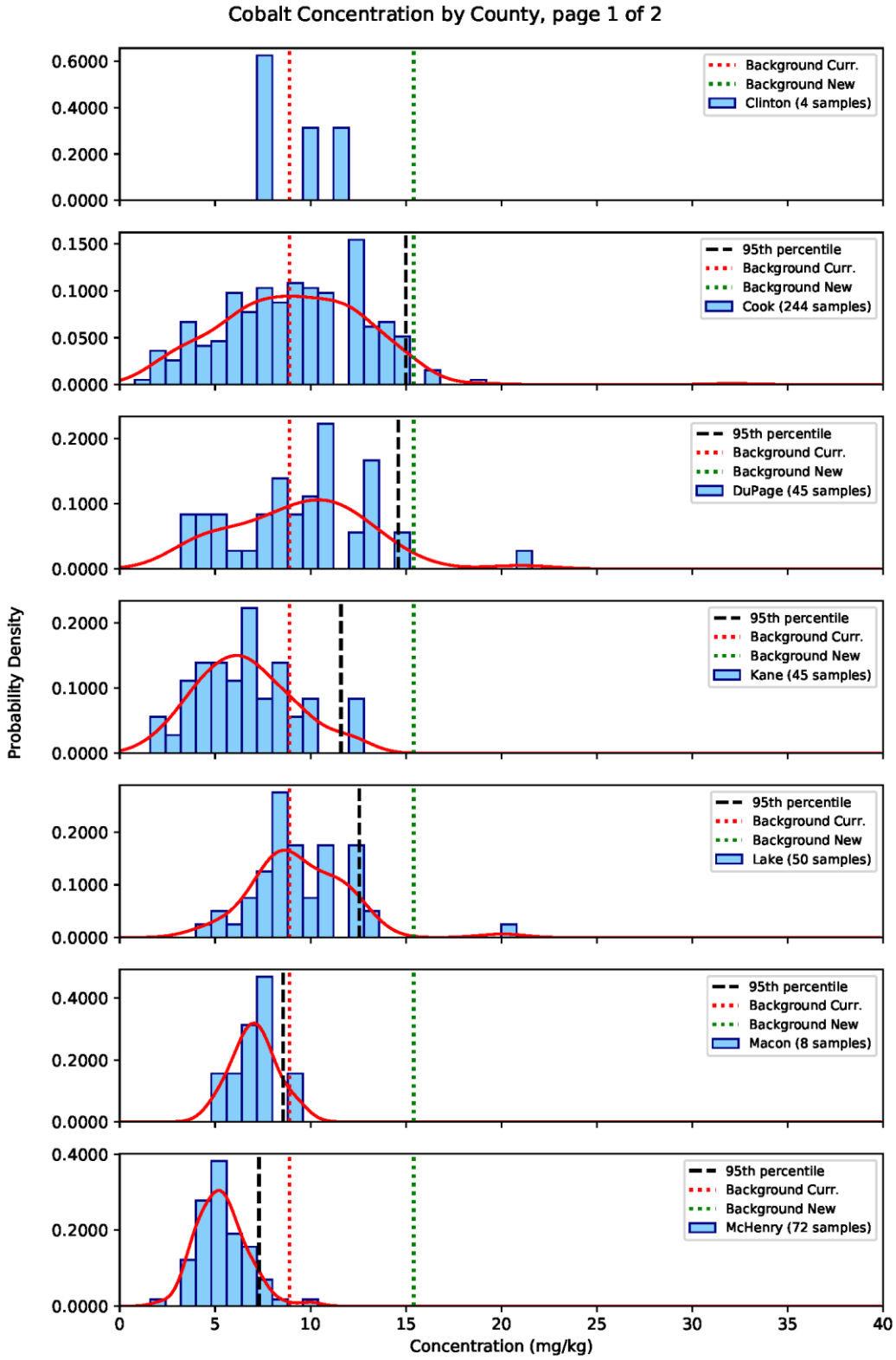


Figure 323. Histogram of RSL cobalt concentrations by Illinois county, Non-REC (mg/kg), part 1

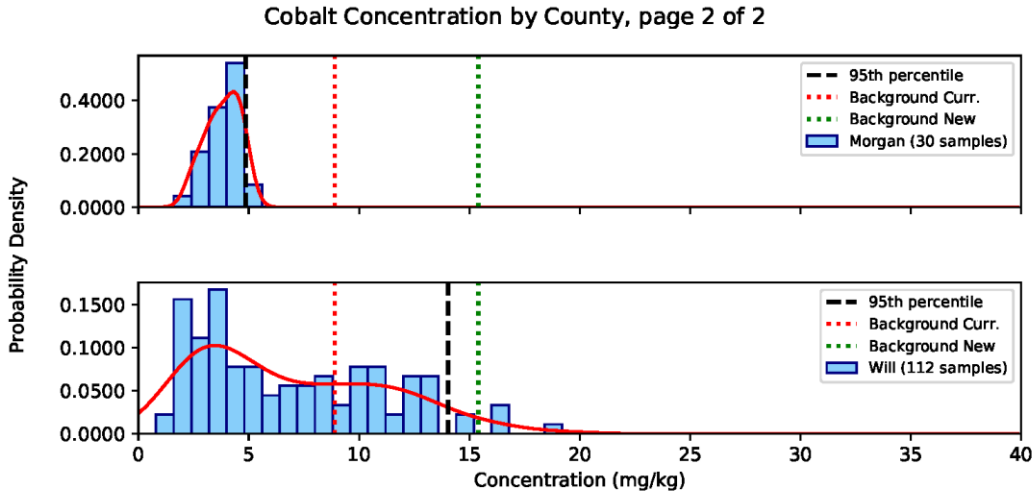


Figure 324. Histogram of RSL cobalt concentrations by Illinois county, Non-REC (mg/kg), part 2

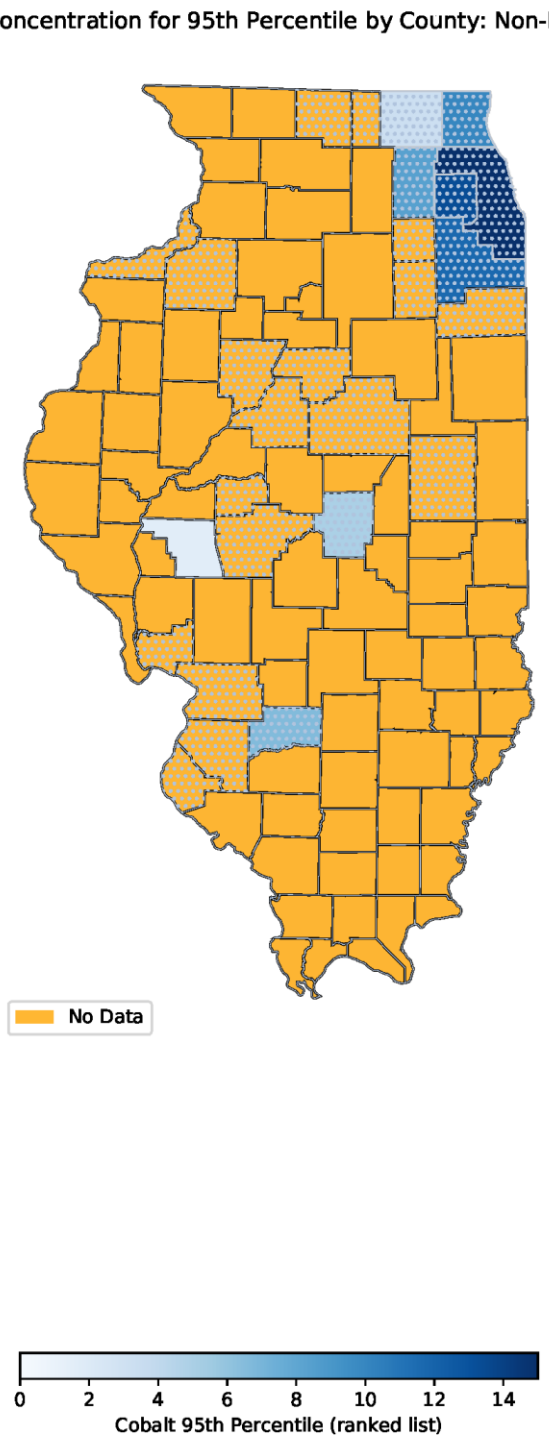


Figure 325. Map of RSL cobalt 95th percentile concentration by Illinois county, Non-REC (mg/kg)

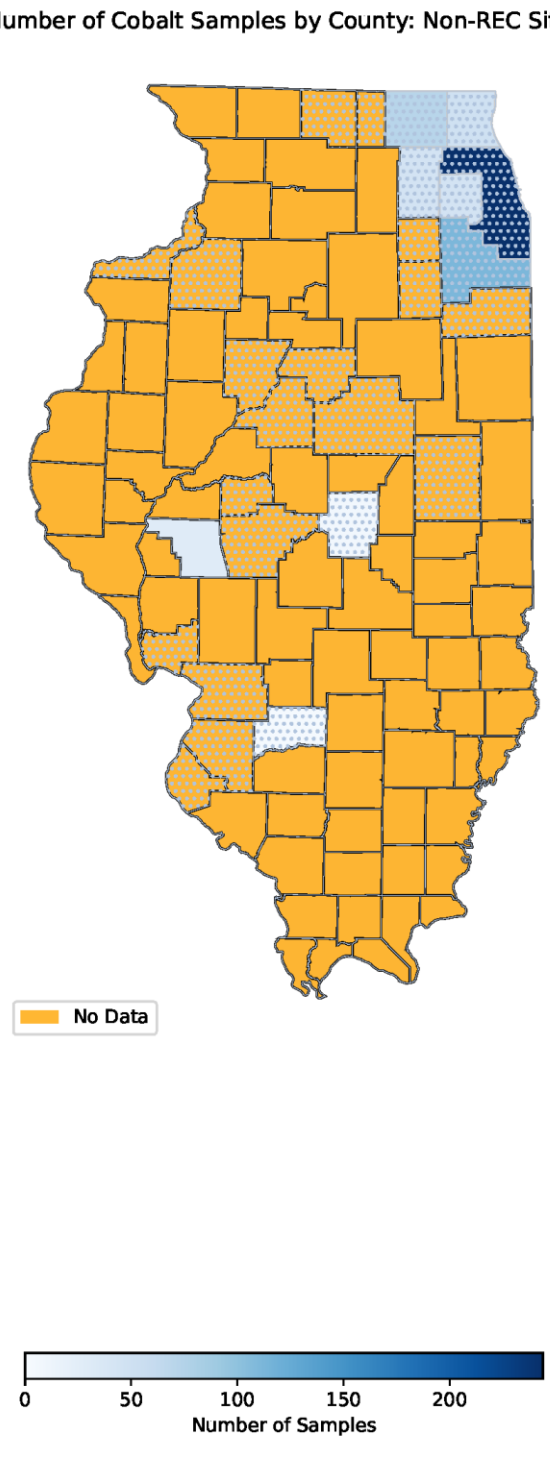


Figure 326. Map of RSL cobalt sample quantity by Illinois county, Non-REC (mg/kg)

I.3 COBALT DE MINIMIS

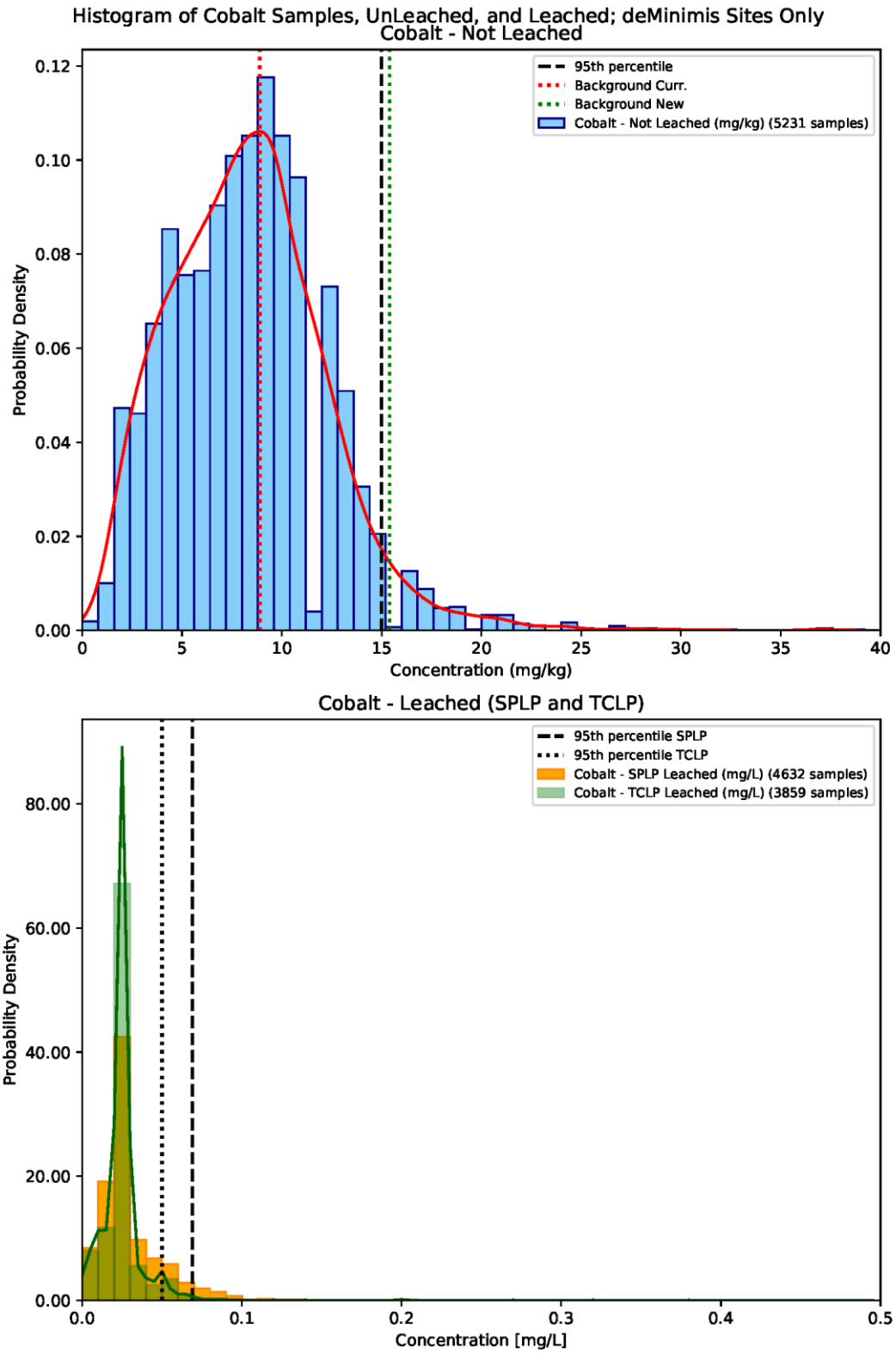


Figure 327. Histogram of RSL cobalt concentrations, de minimis (mg/kg)

Cobalt Unleached Concentration (mg/kg)

1) Region

2) District

3) County

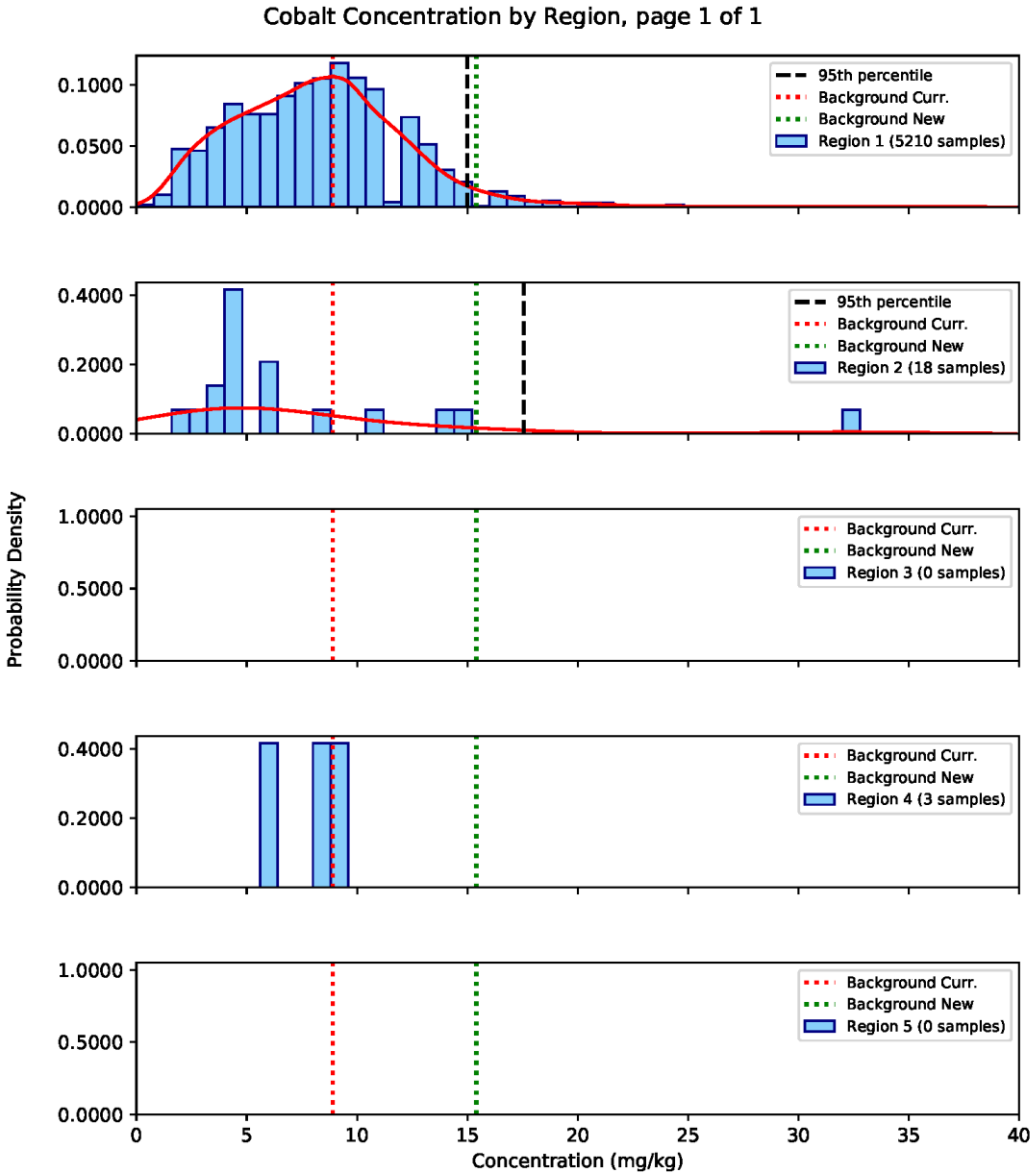


Figure 328. Histogram of RSL cobalt concentrations by IDOT Region, de minimis (mg/kg)

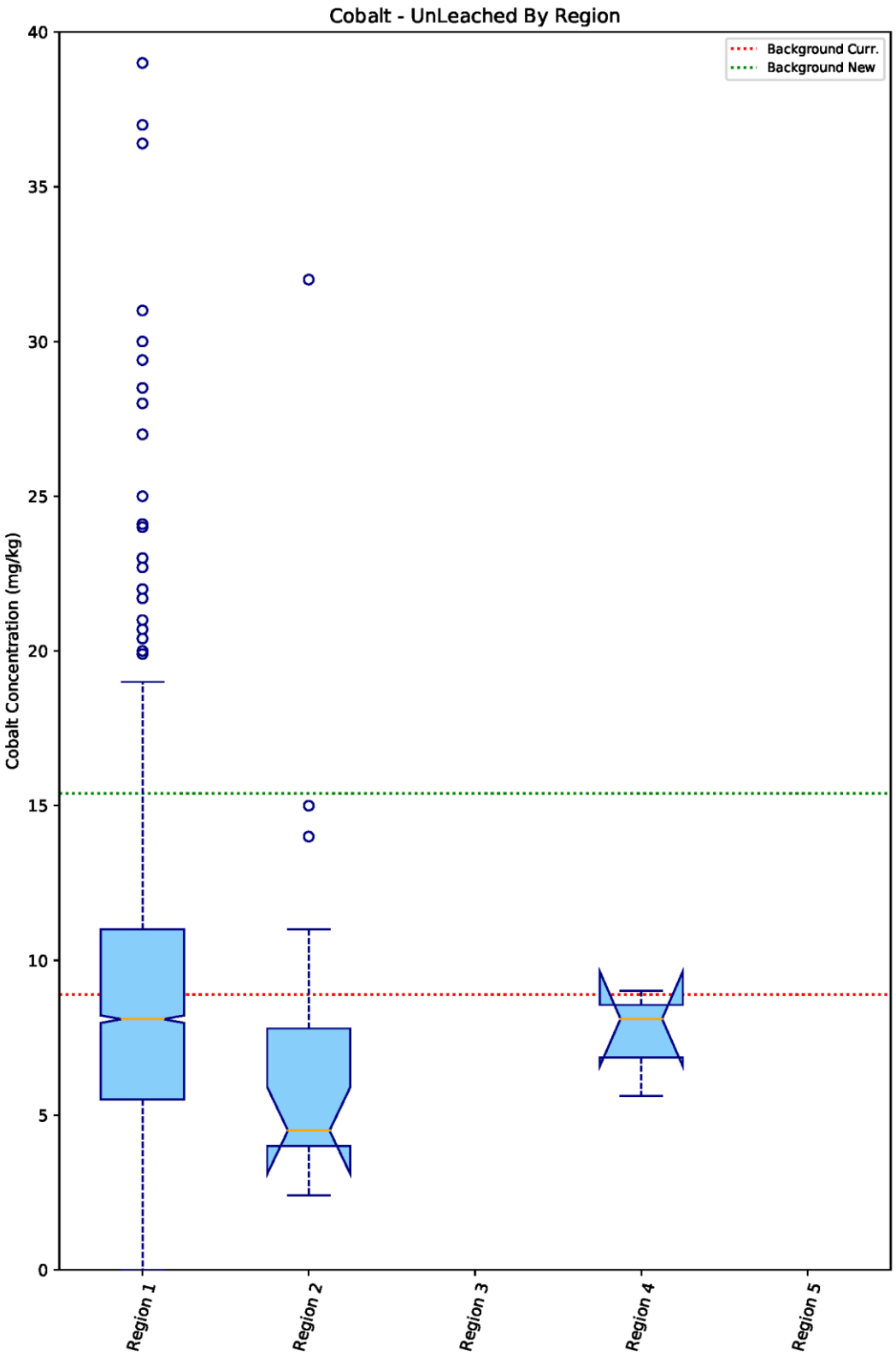


Figure 329. Boxplot of RSL cobalt concentrations by IDOT Region, de minimis (mg/kg)

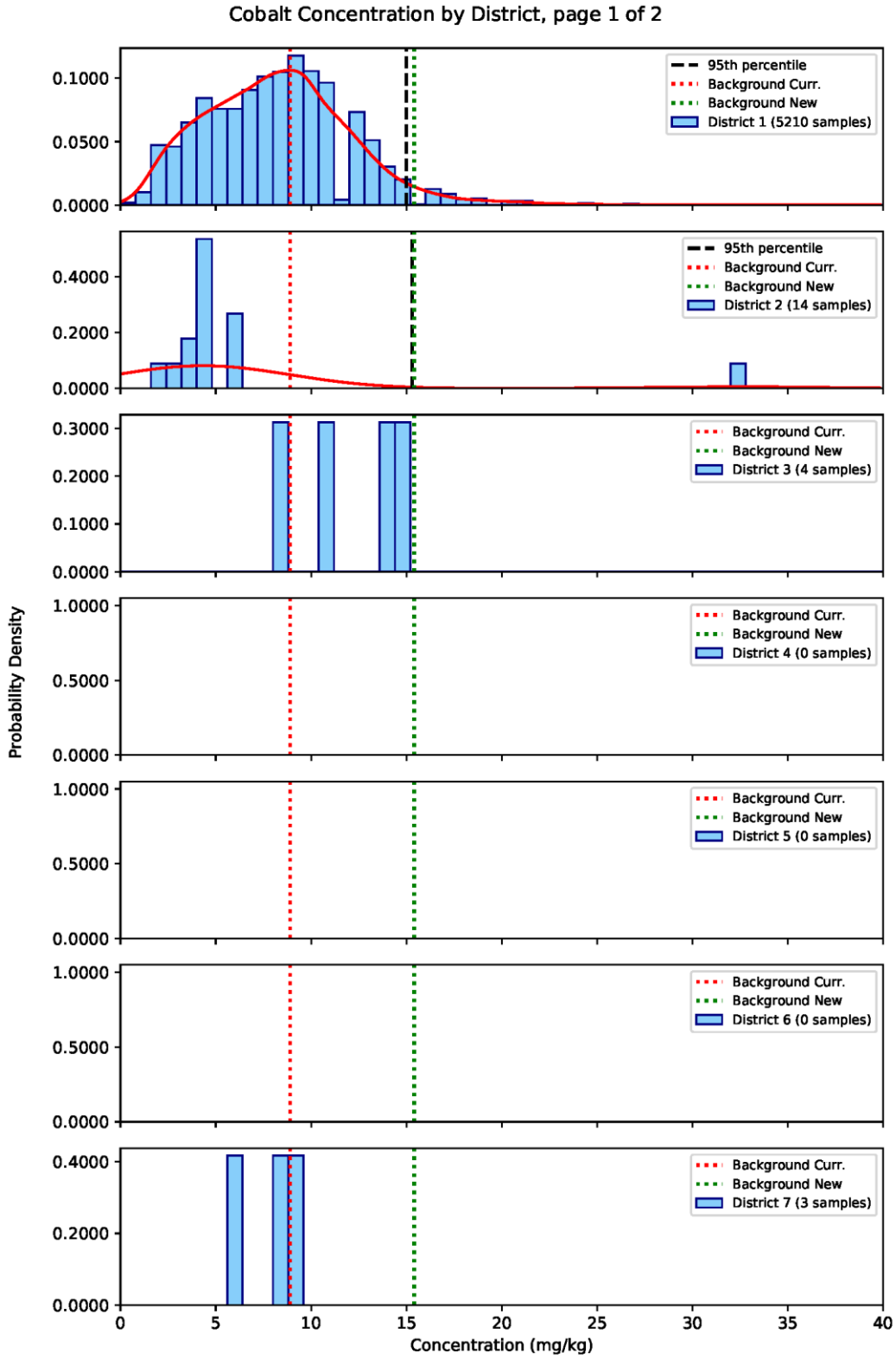


Figure 330. Histogram of RSL cobalt concentrations by IDOT District, de minimis (mg/kg), part 1

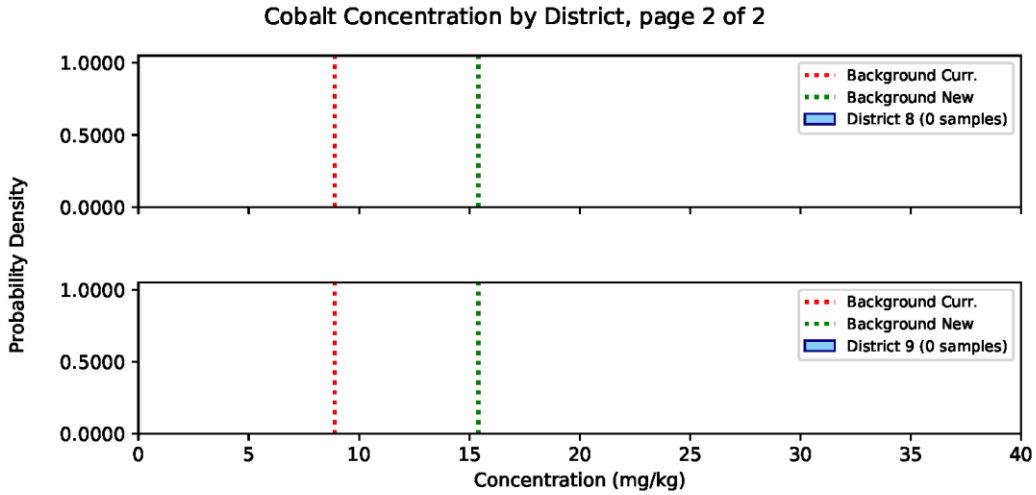


Figure 331. Histogram of RSL cobalt concentrations by IDOT District, de minimis (mg/kg), part 2

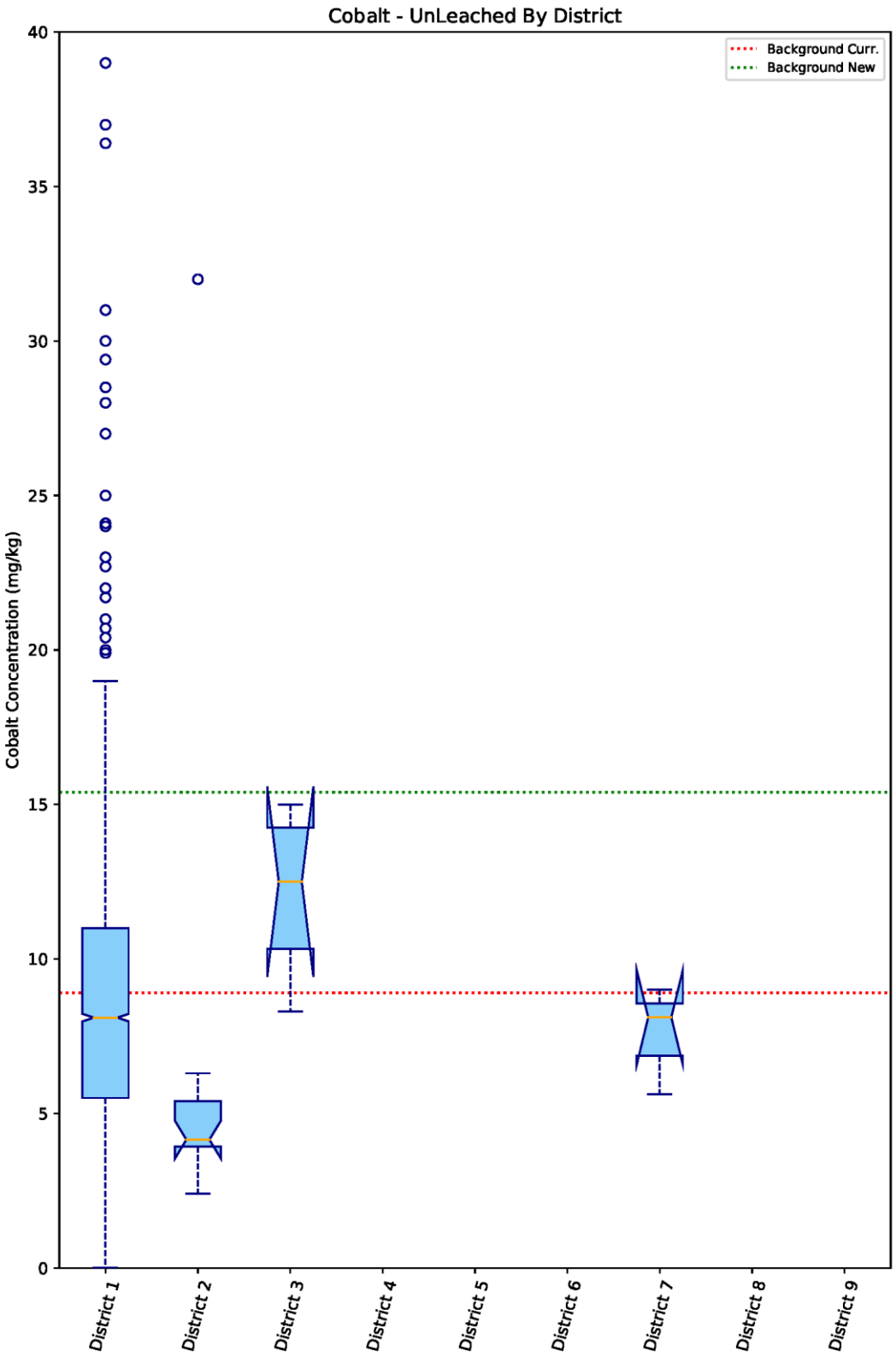


Figure 332. Boxplot of RSL cobalt concentrations by IDOT District, de minimis (mg/kg)

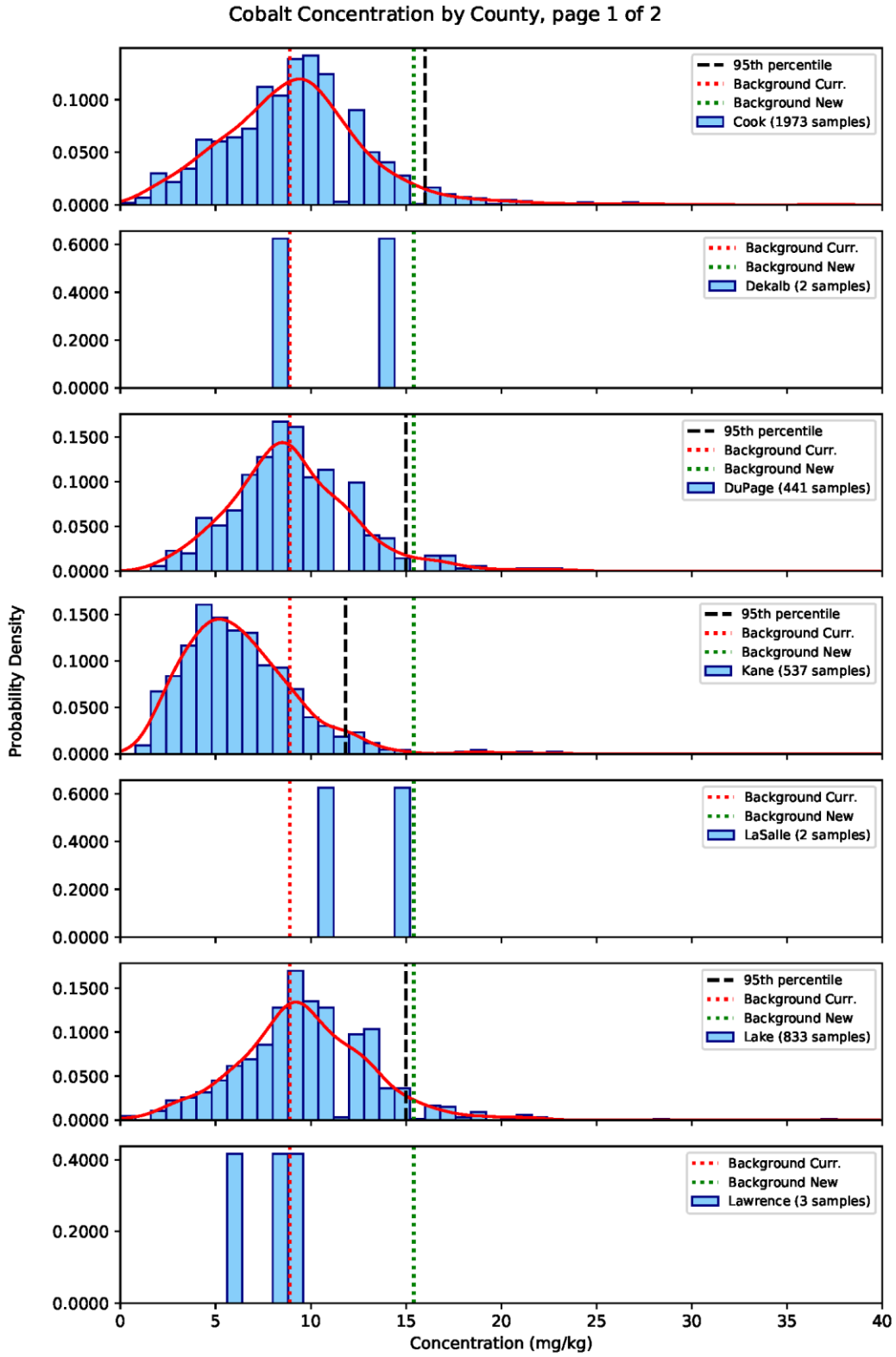


Figure 333. Histogram of RSL cobalt concentrations by Illinois county, de minimis (mg/kg), part 1

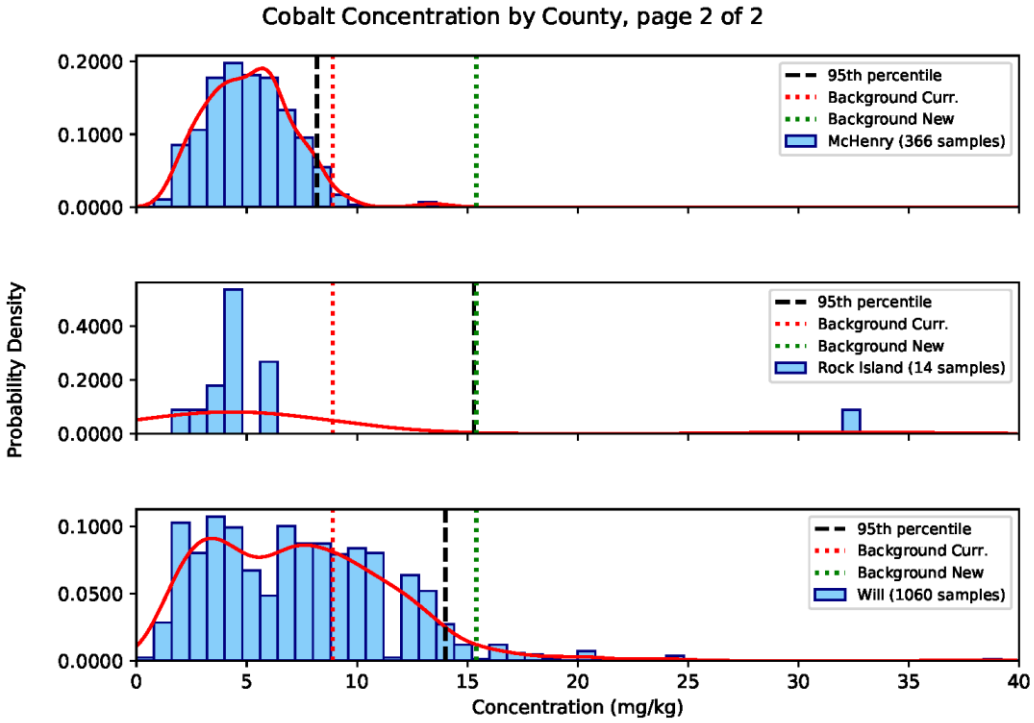


Figure 334. Histogram of RSL cobalt concentrations by Illinois county, de minimis (mg/kg), part 2

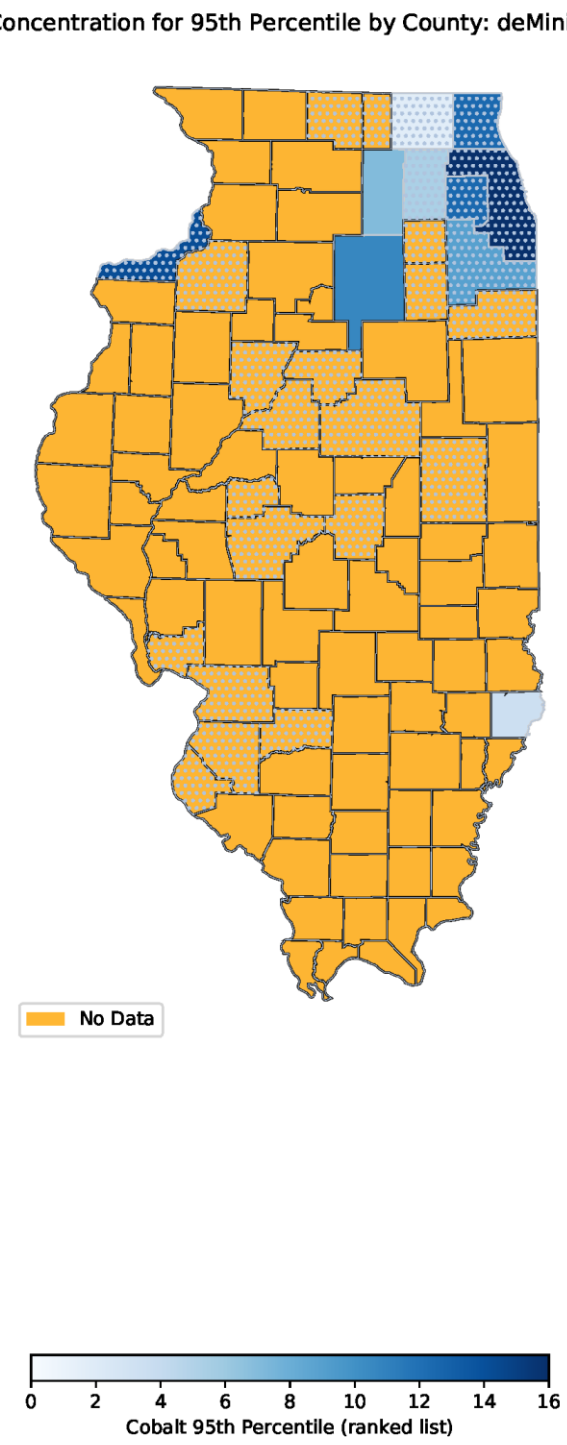


Figure 335. Map of RSL cobalt 95th percentile concentration by Illinois county, de minimis (mg/kg)

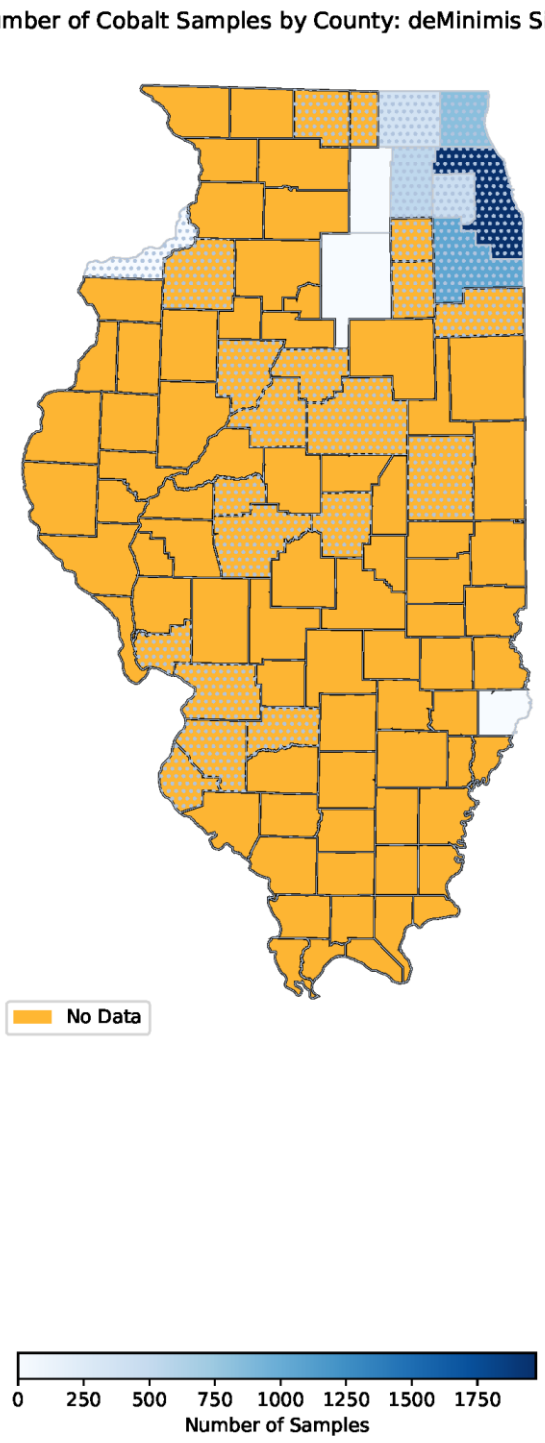


Figure 336. Map of RSL cobalt sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX J. ANALYTE ANALYSIS: COPPER

J.1 COPPER REC

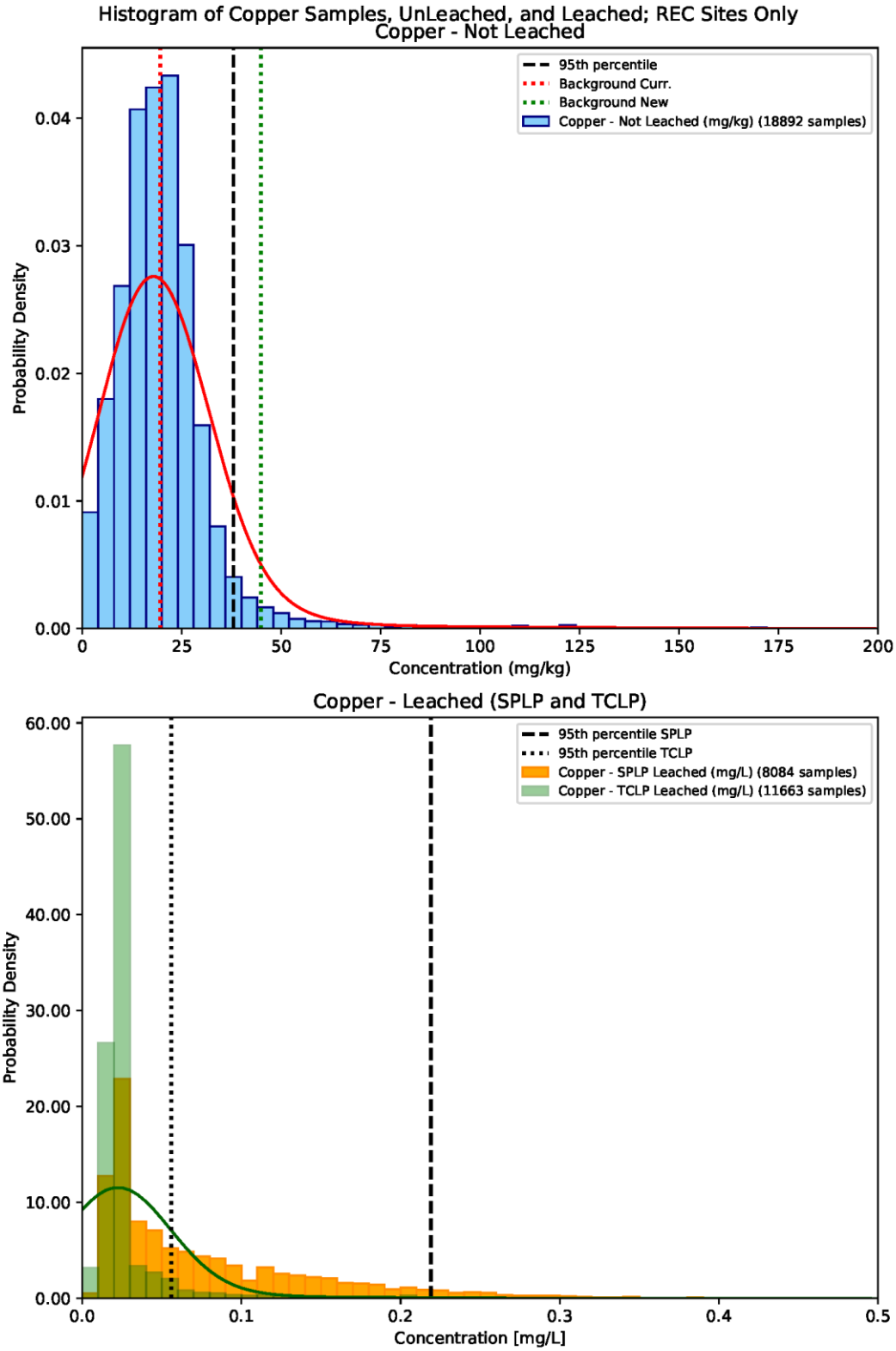


Figure 337. Histogram of RSL copper concentrations, REC (mg/kg)

Copper Unleached Concentration (mg/kg)

1) Region

2) District

3) County

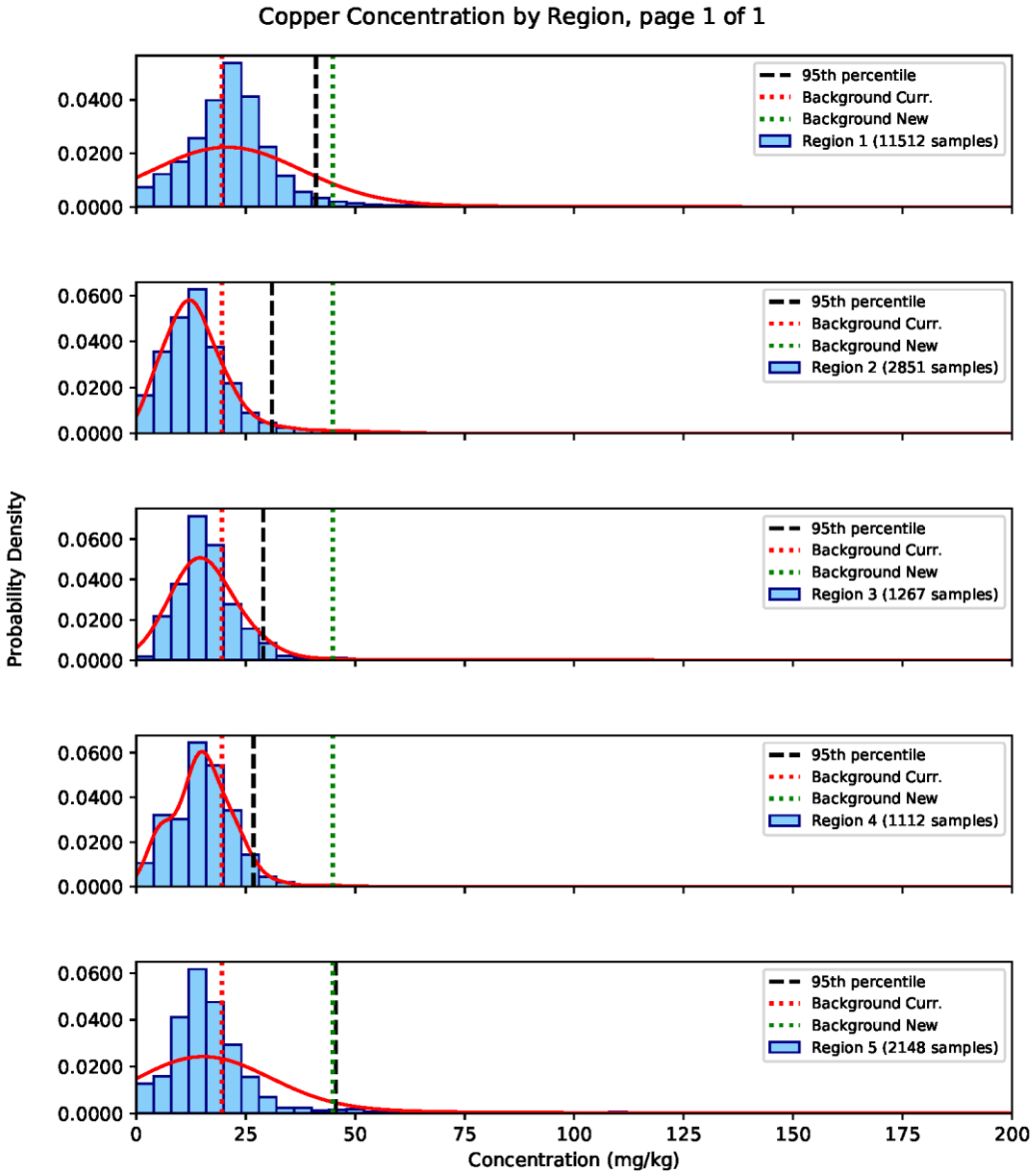


Figure 338. Histogram of RSL copper concentrations by IDOT Region, REC (mg/kg)

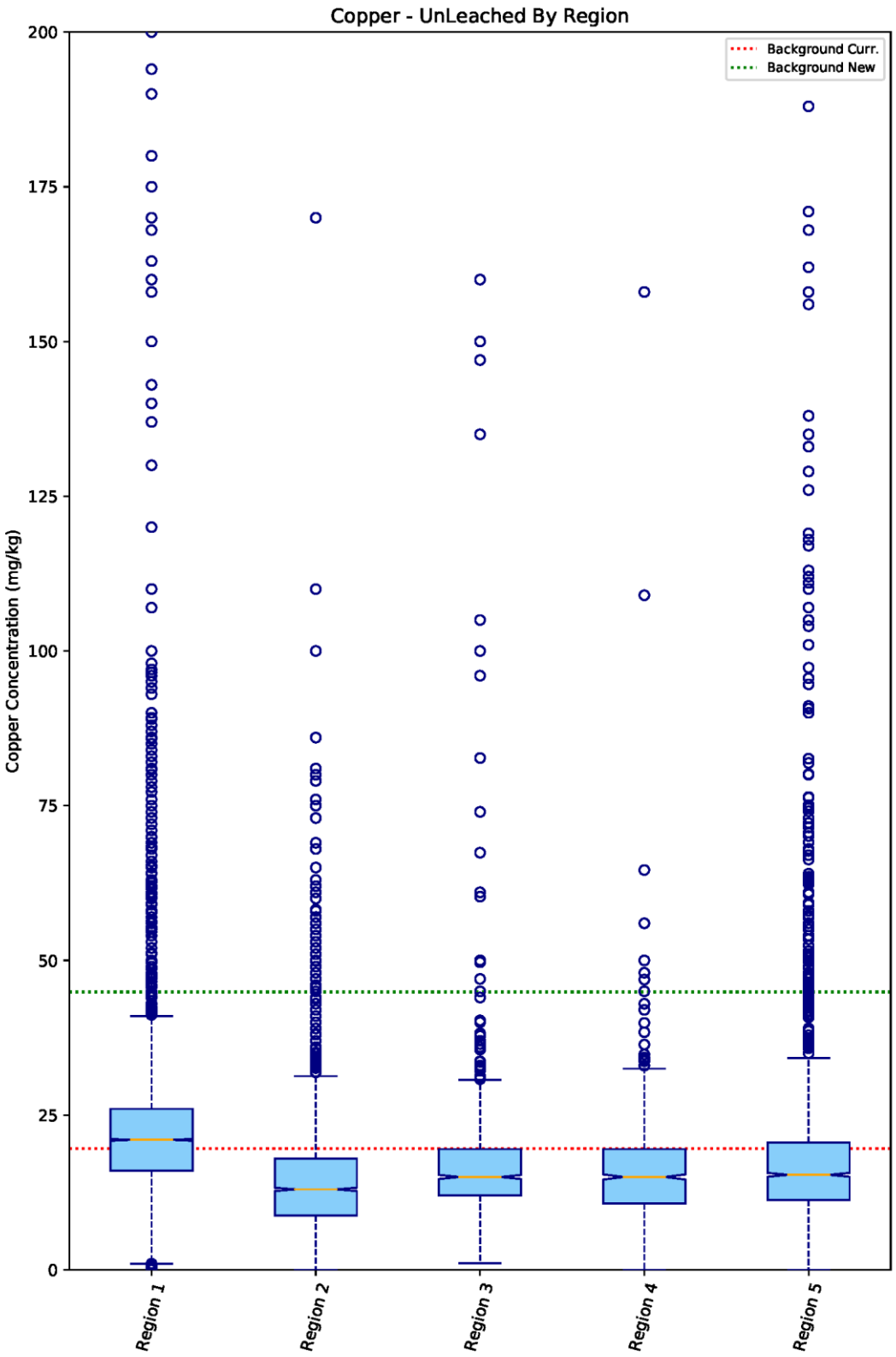


Figure 339. Boxplot of RSL copper concentrations by IDOT Region, REC (mg/kg)

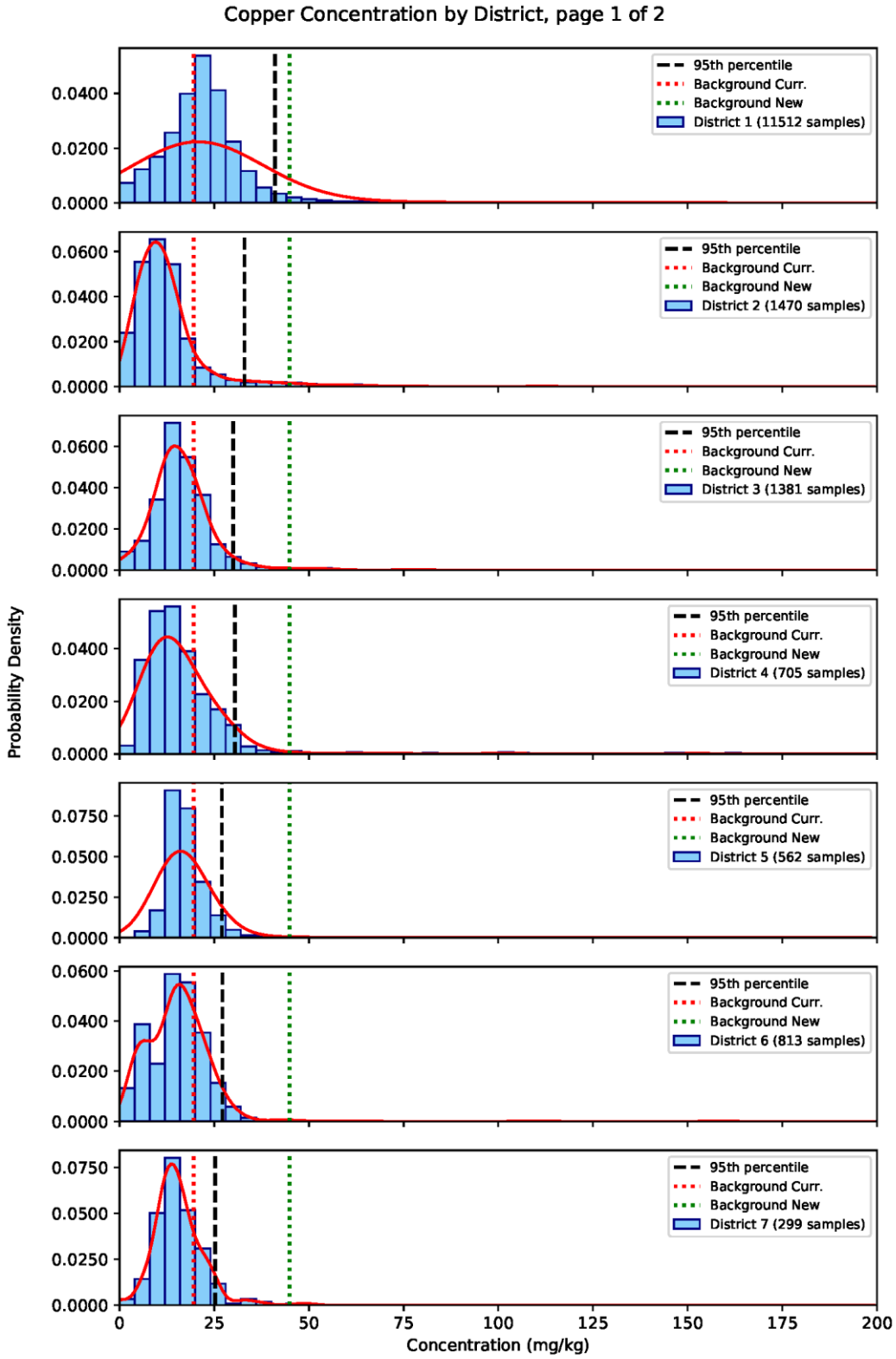


Figure 340. Histogram of RSL copper concentrations by IDOT District, REC (mg/kg), part 1

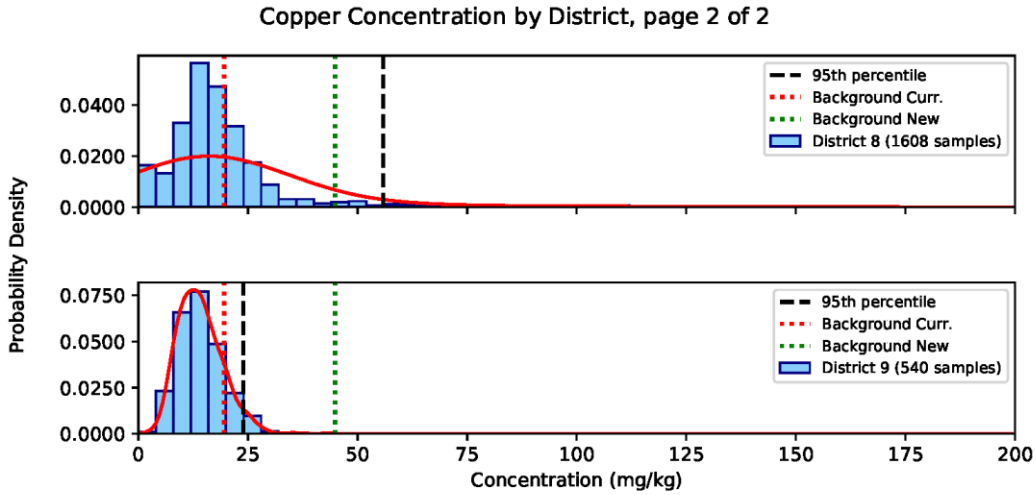


Figure 341. Histogram of RSL copper concentrations by IDOT District, REC (mg/kg), part 2

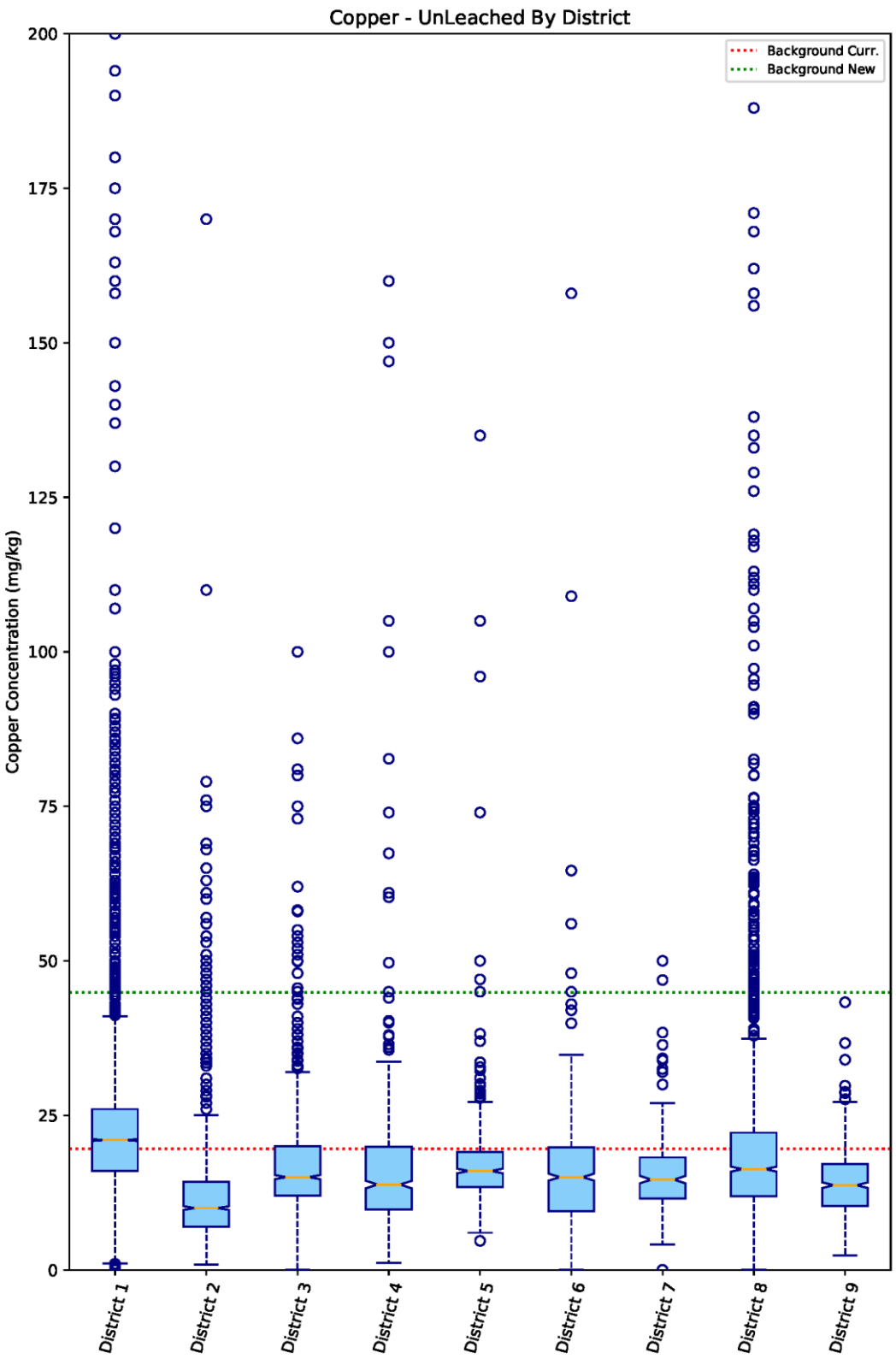


Figure 342. Boxplot of RSL copper concentrations by IDOT District, REC (mg/kg)

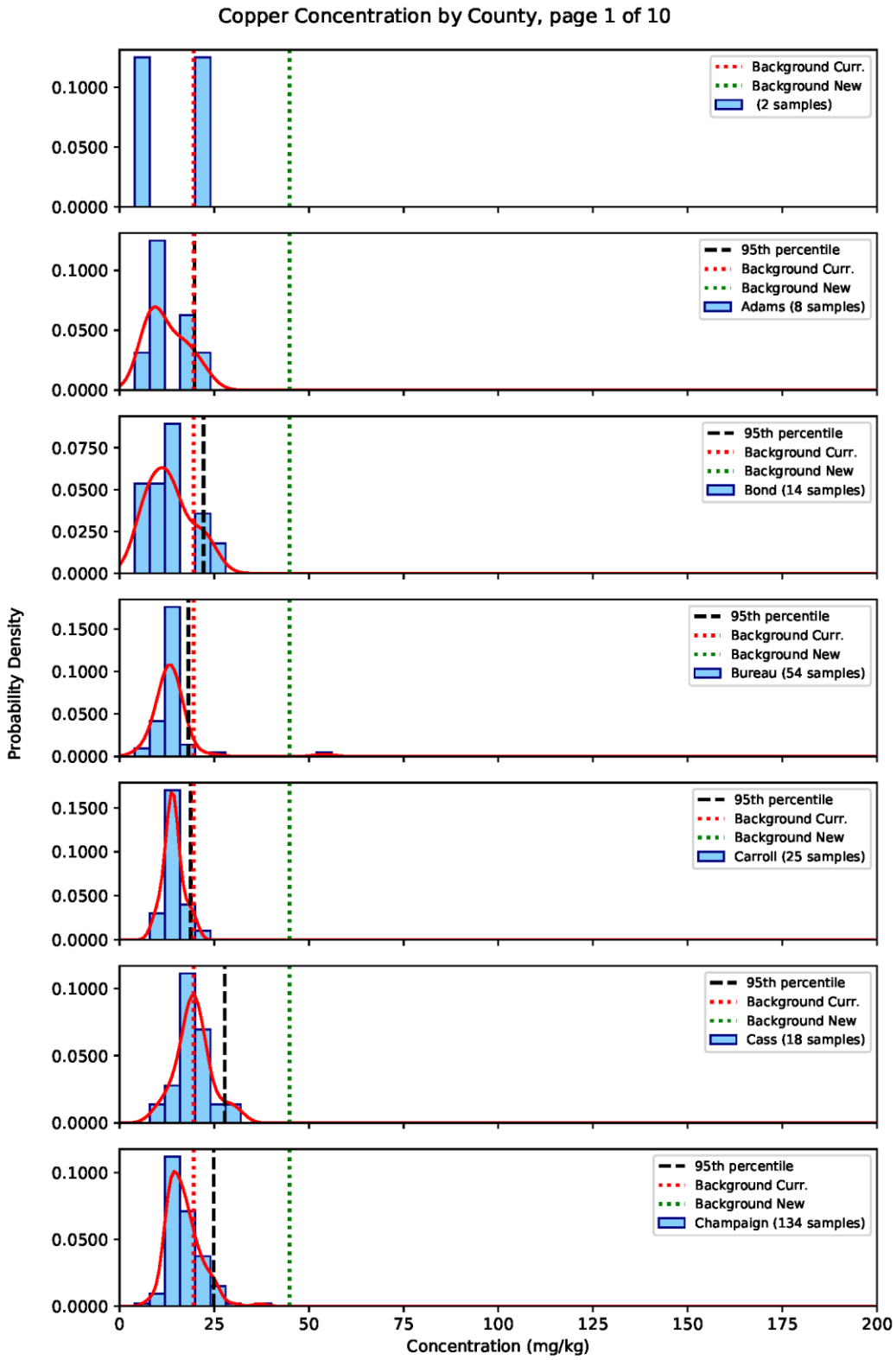


Figure 343. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 1

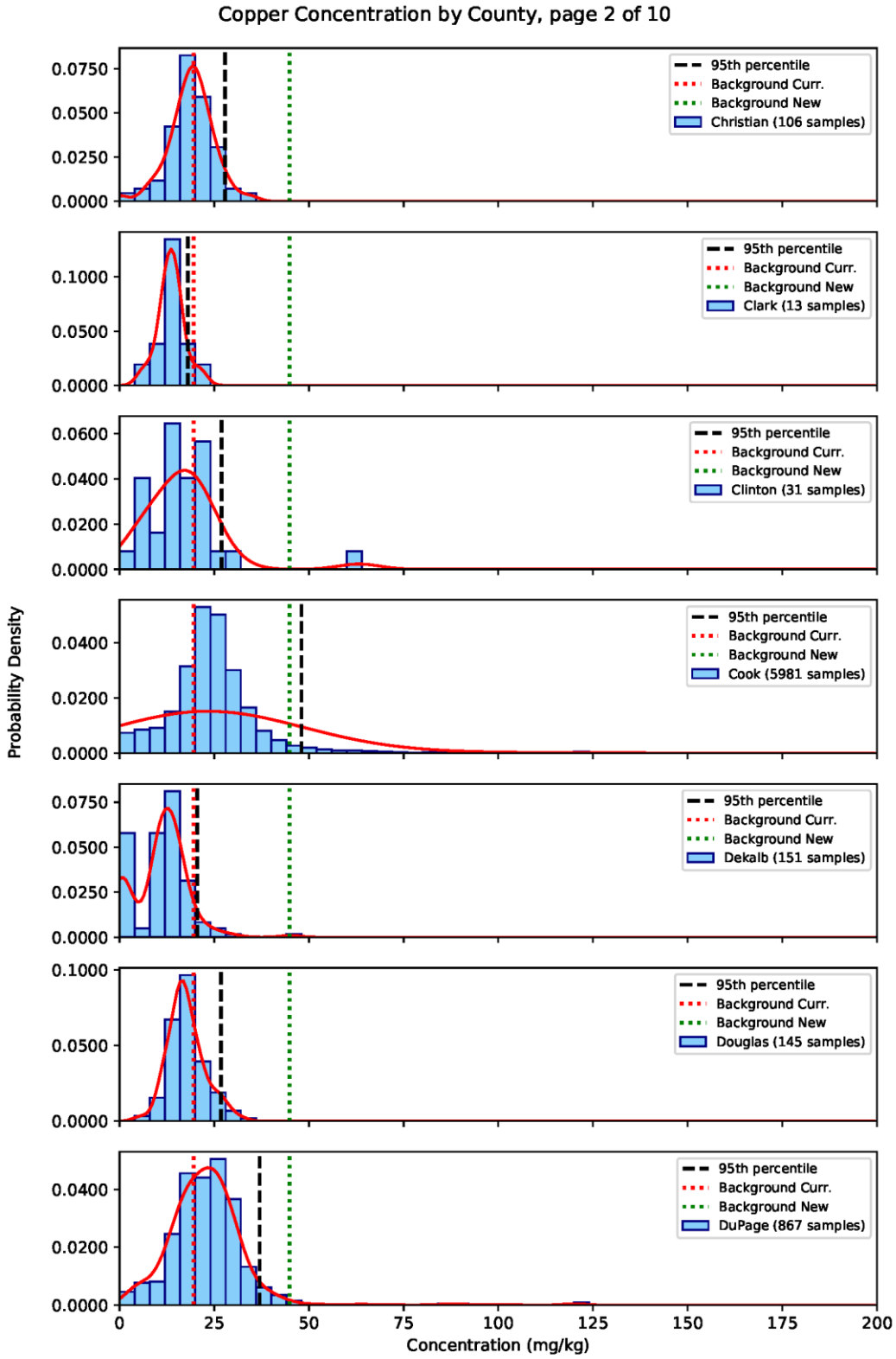


Figure 344. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 2

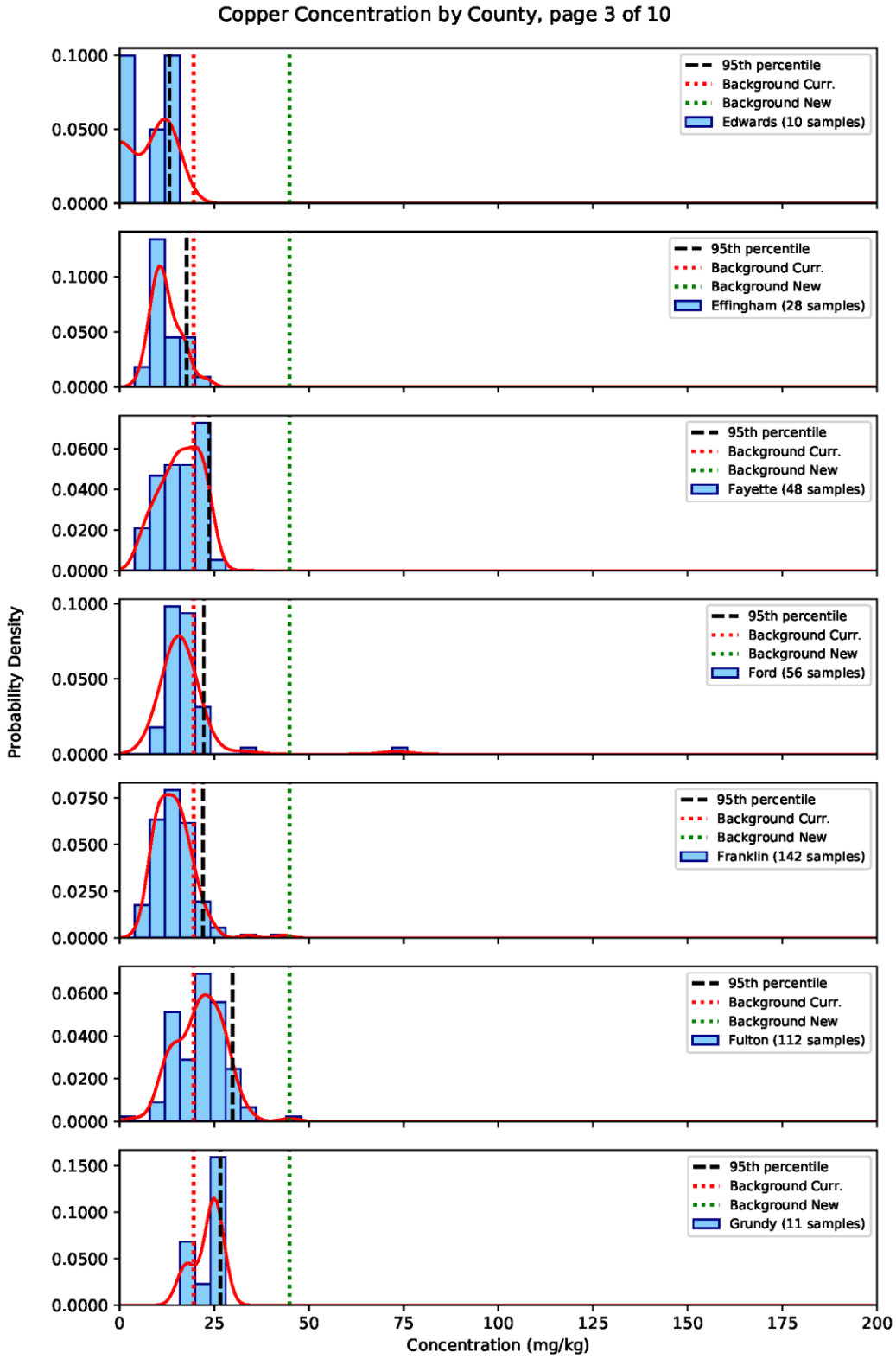


Figure 345. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 3

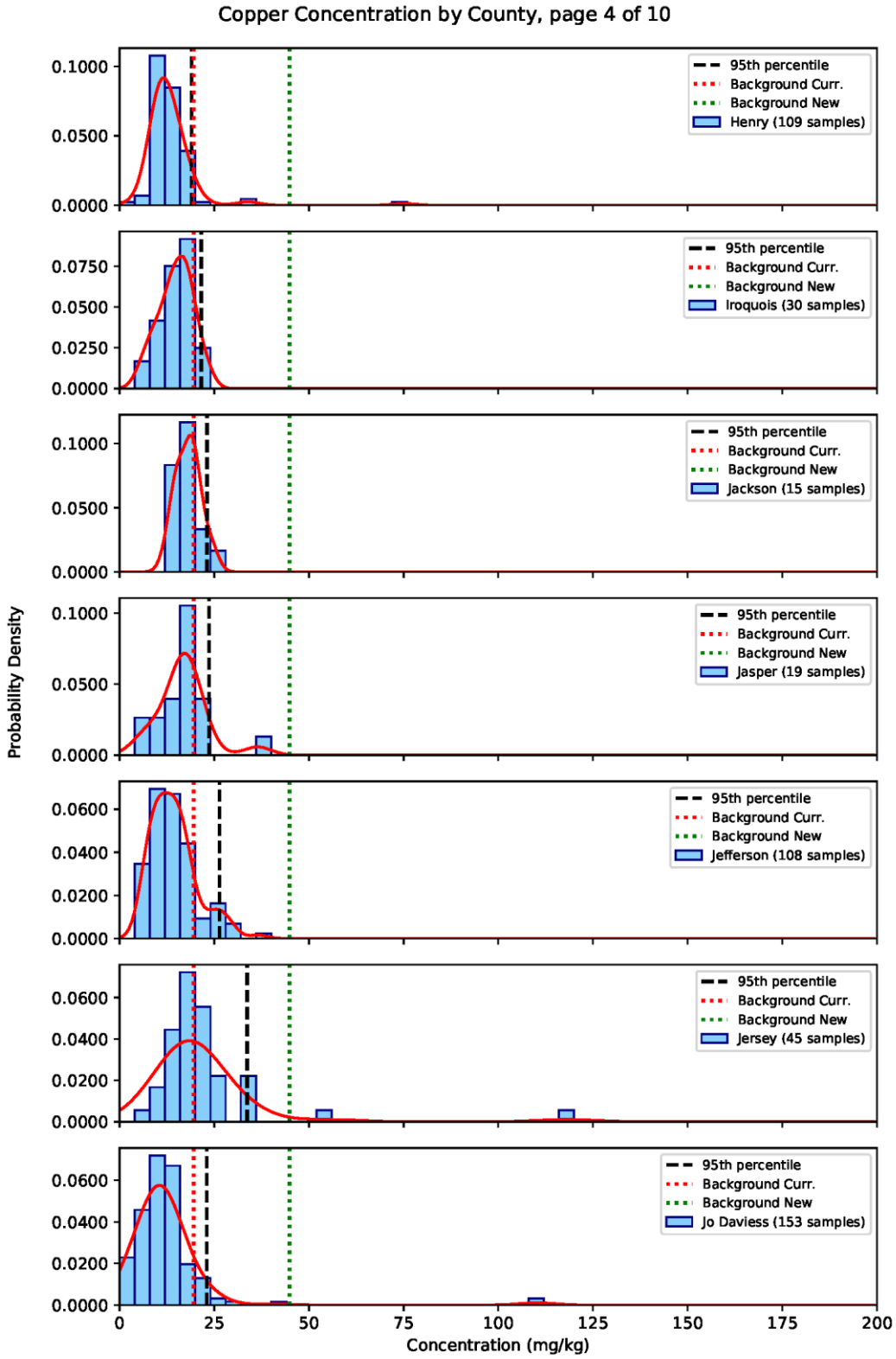


Figure 346. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 4

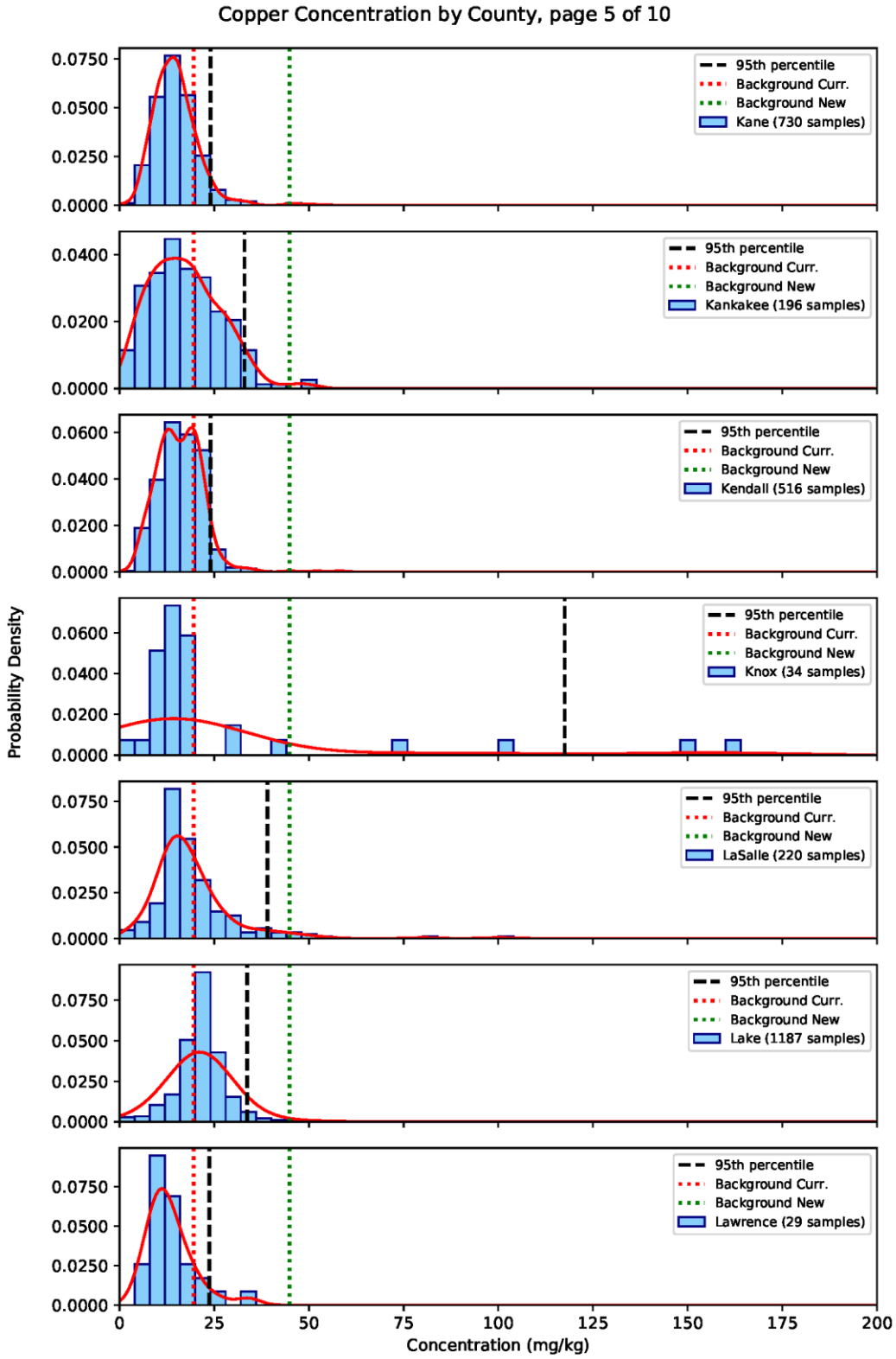


Figure 347. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 5

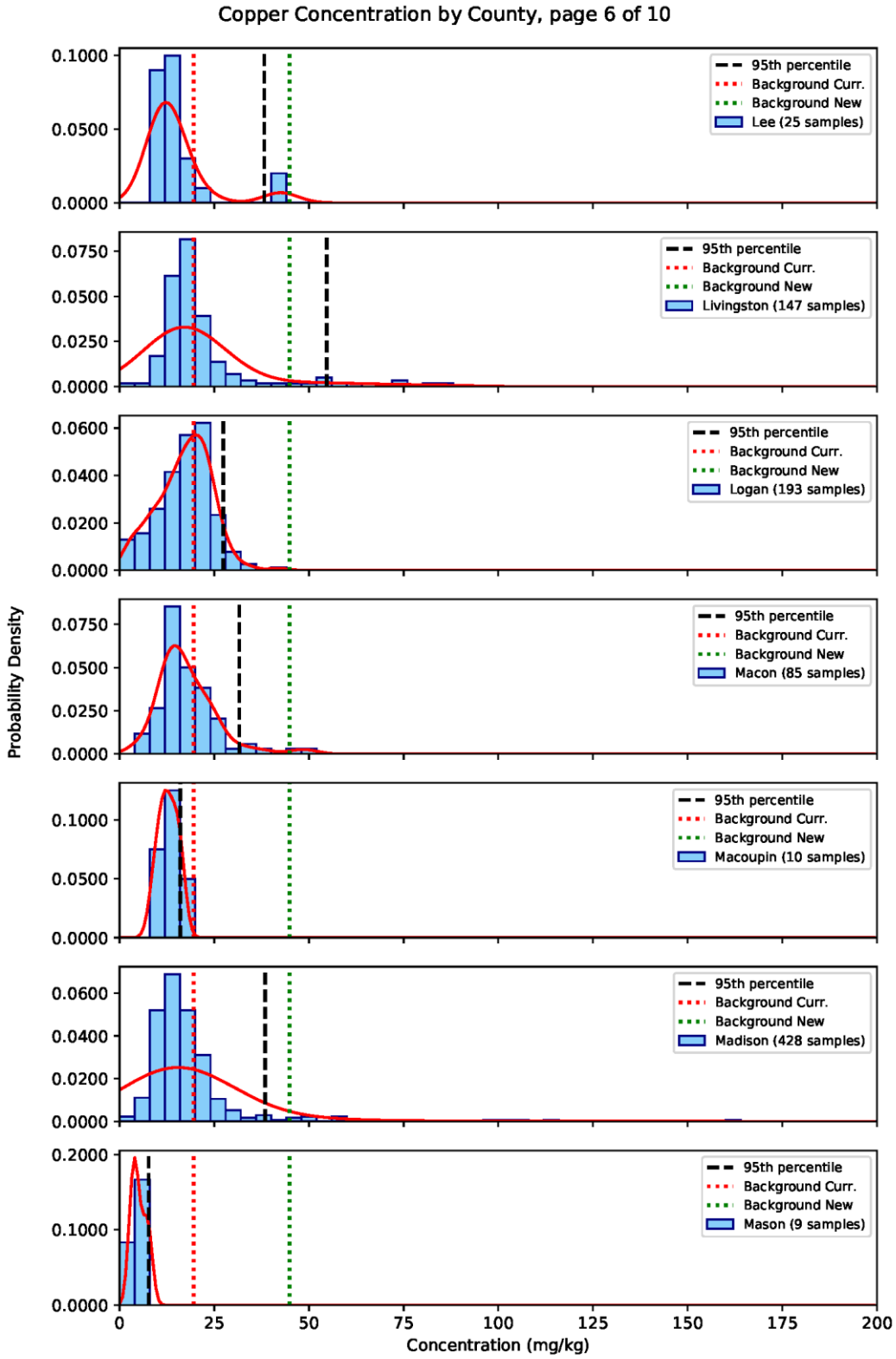


Figure 348. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 6

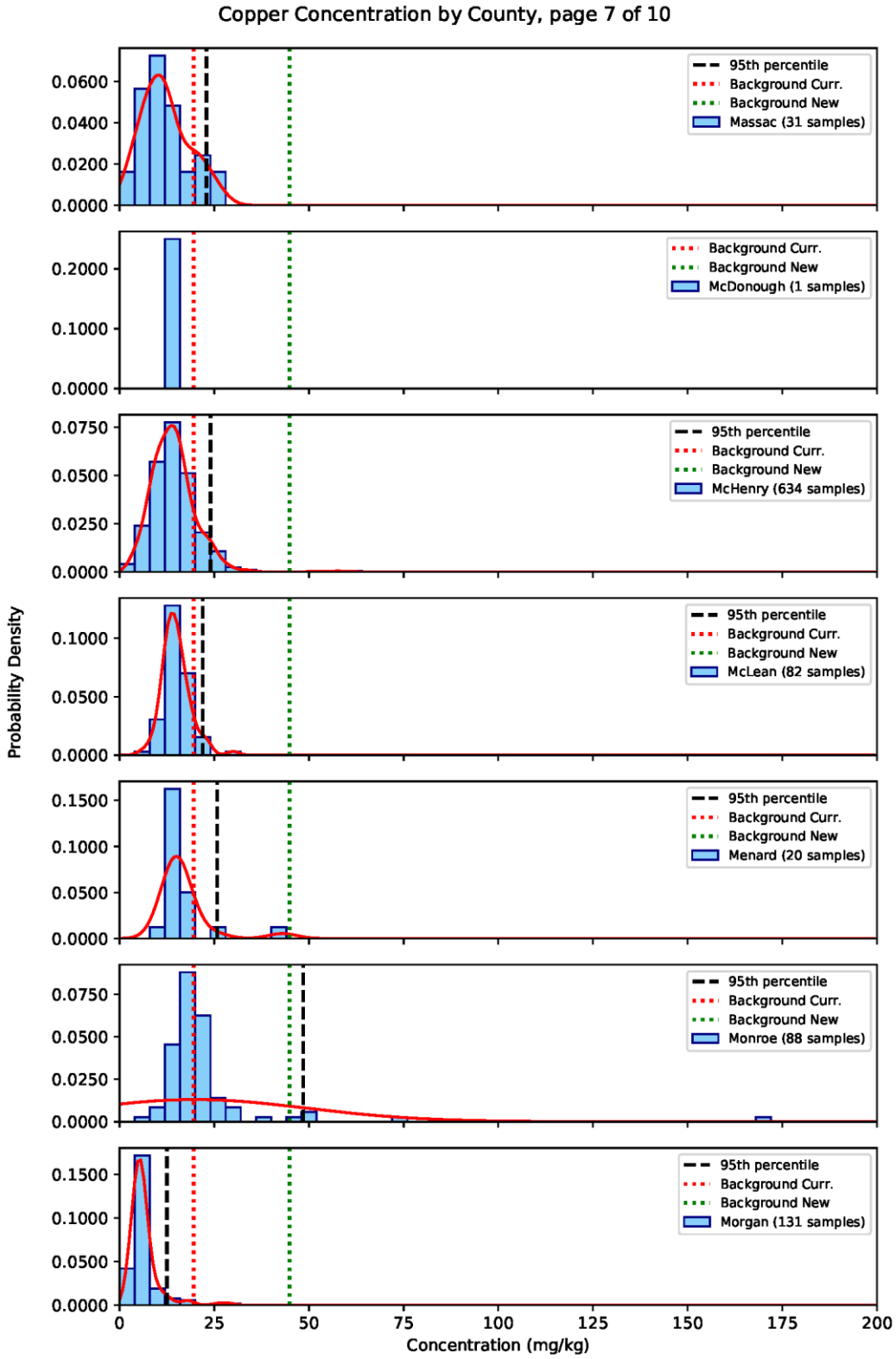


Figure 349. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 7

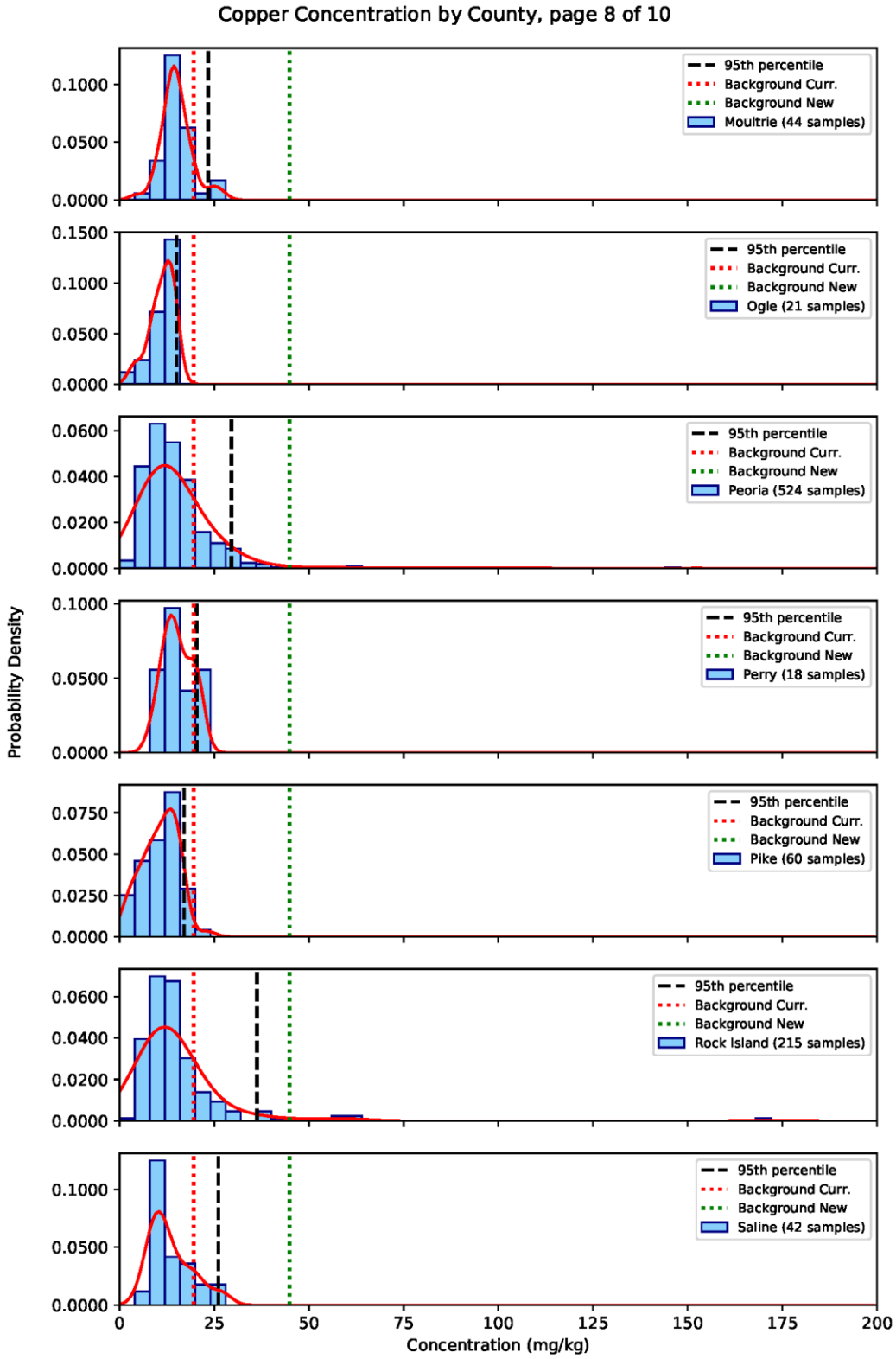


Figure 350. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 8

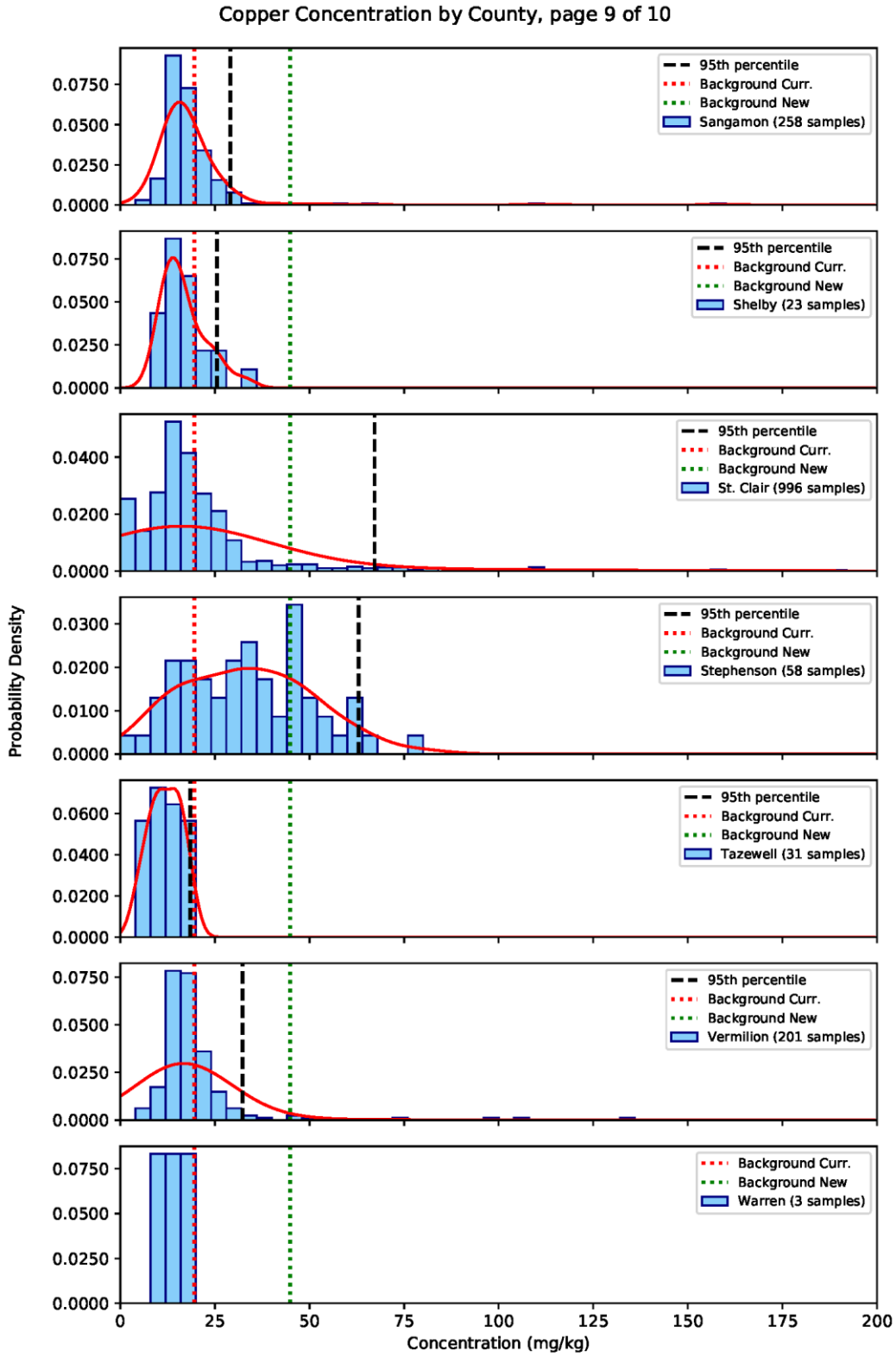


Figure 351. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 9

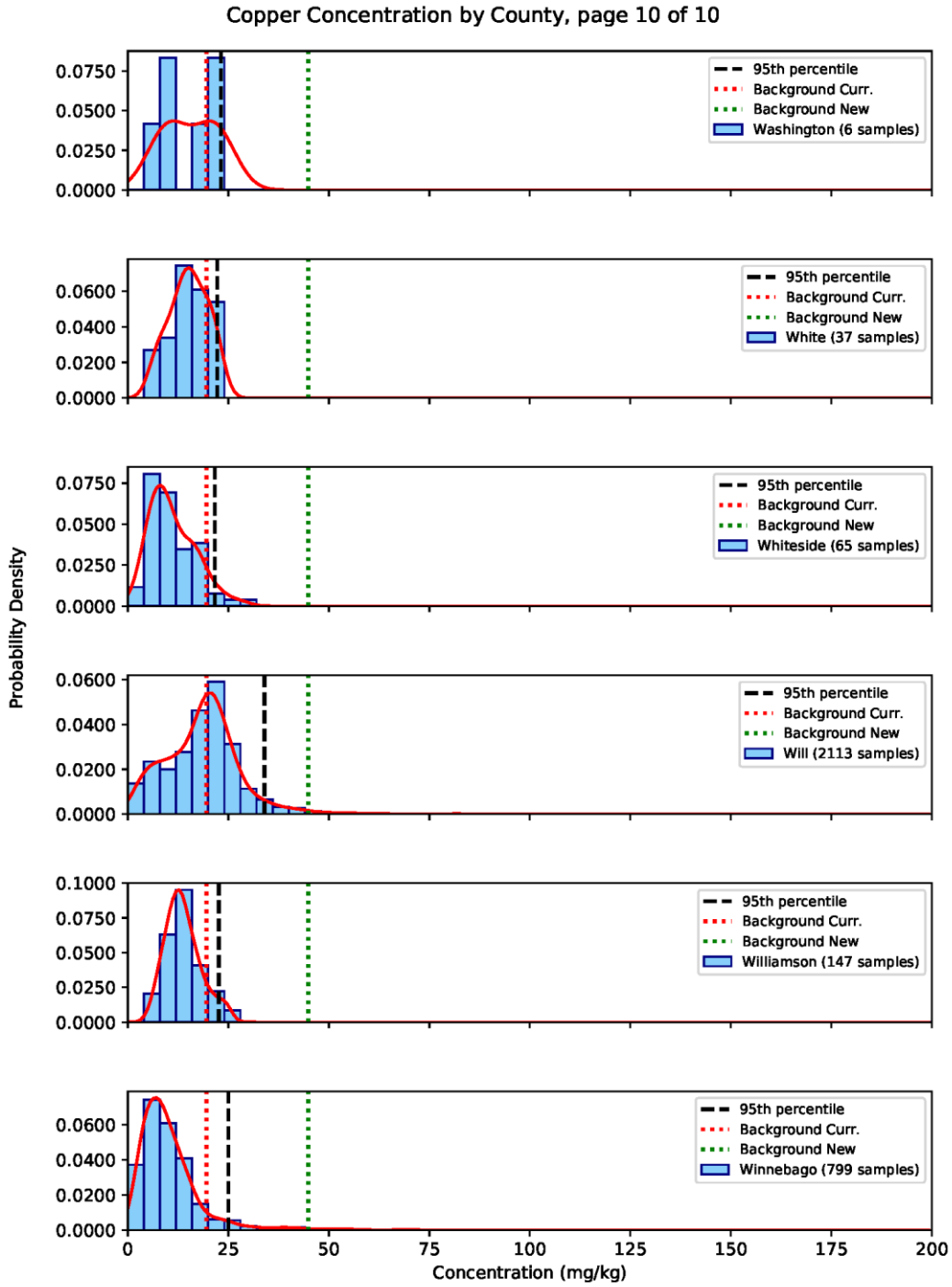


Figure 352. Histogram of RSL copper concentrations by Illinois county, REC (mg/kg), part 10

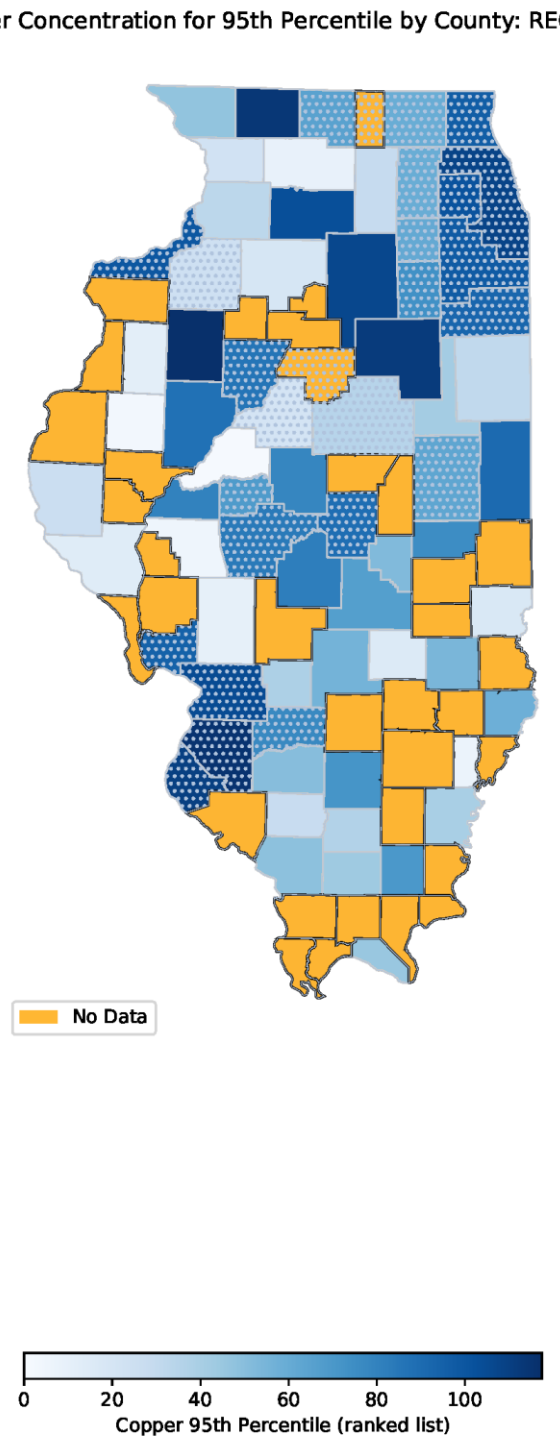


Figure 353. Map of RSL copper 95th percentile concentration by Illinois county, REC (mg/kg)

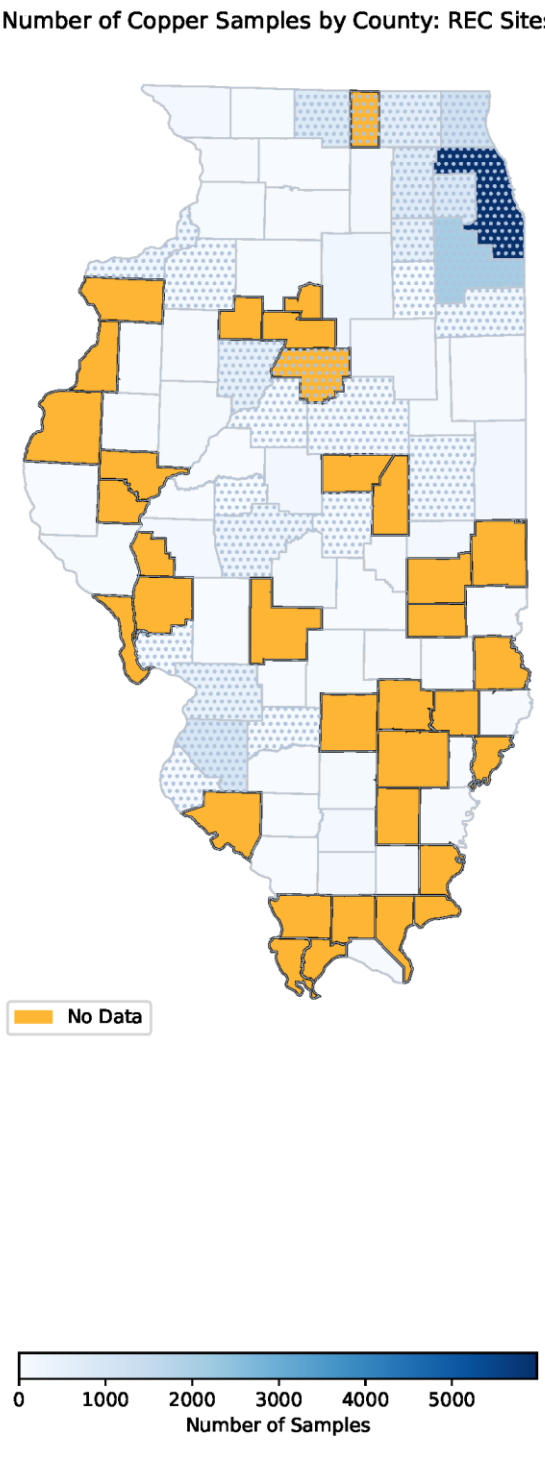


Figure 354. Map of RSL copper sample quantity by Illinois county, REC (mg/kg)

J.2 COPPER NON-REC

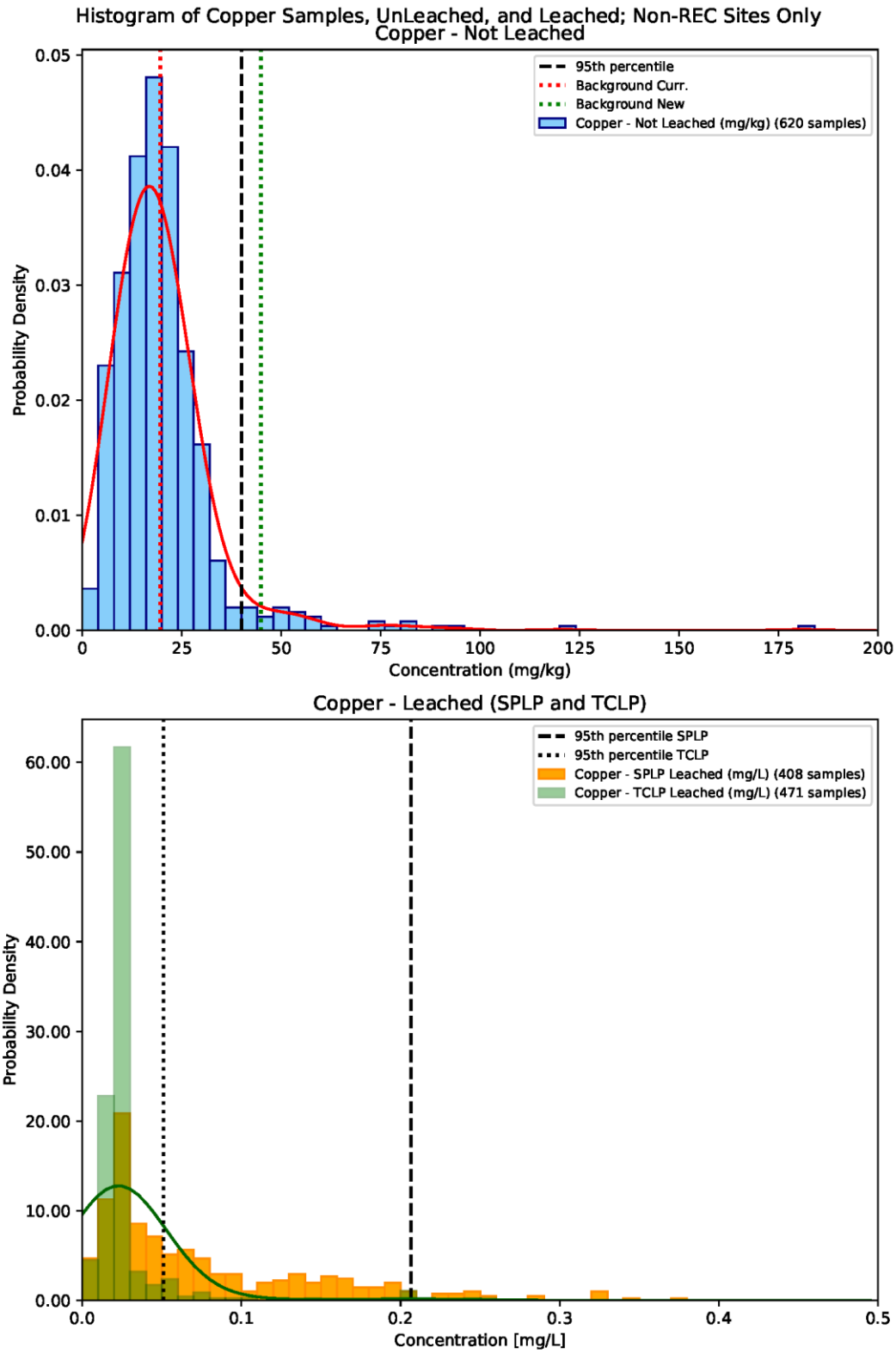


Figure 355. Histogram of RSL copper concentrations, Non-REC (mg/kg)

Copper Unleached Concentration (mg/kg)

1) Region

2) District

3) County

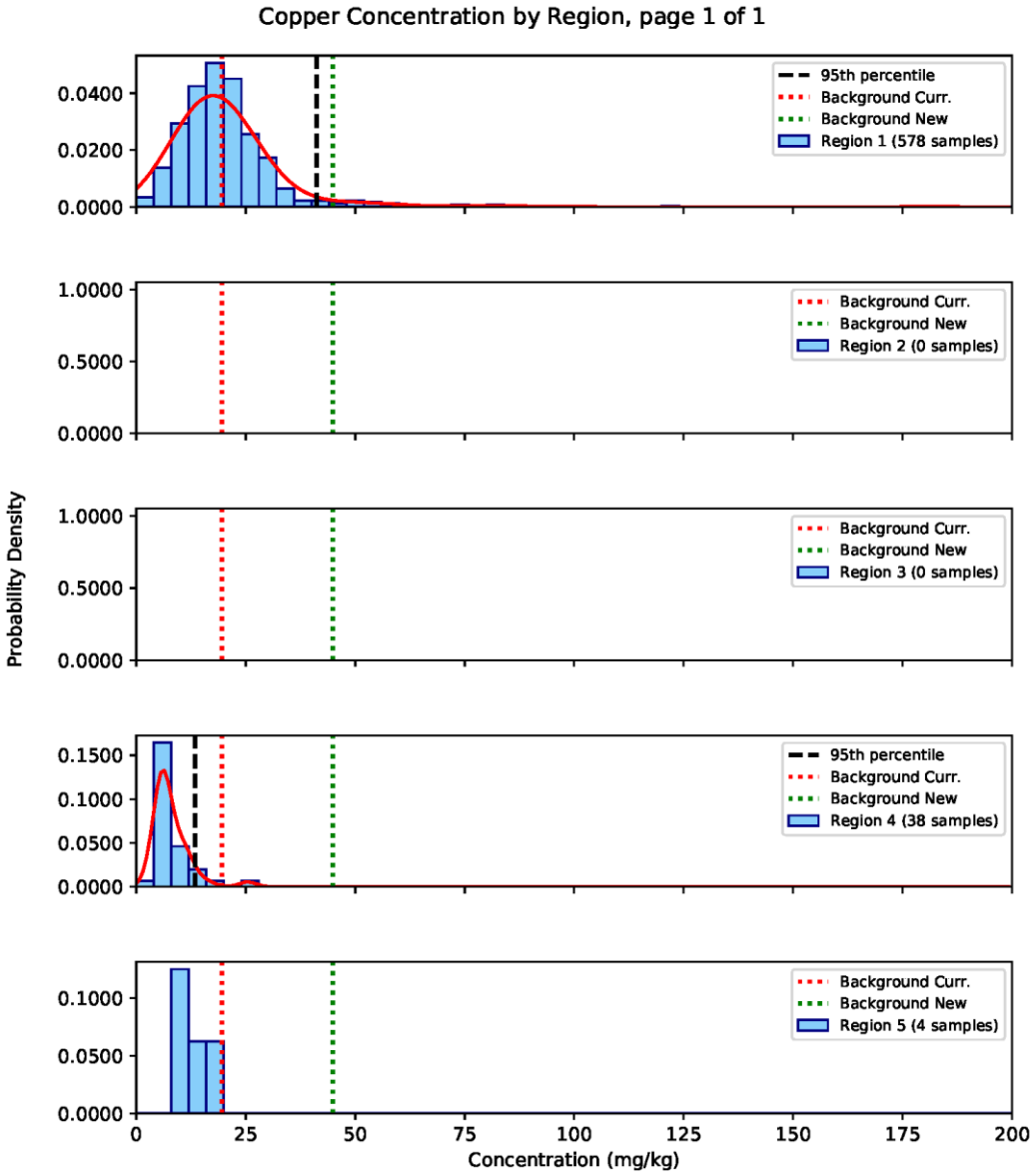


Figure 356. Histogram of RSL copper concentrations by IDOT Region, Non-REC (mg/kg)

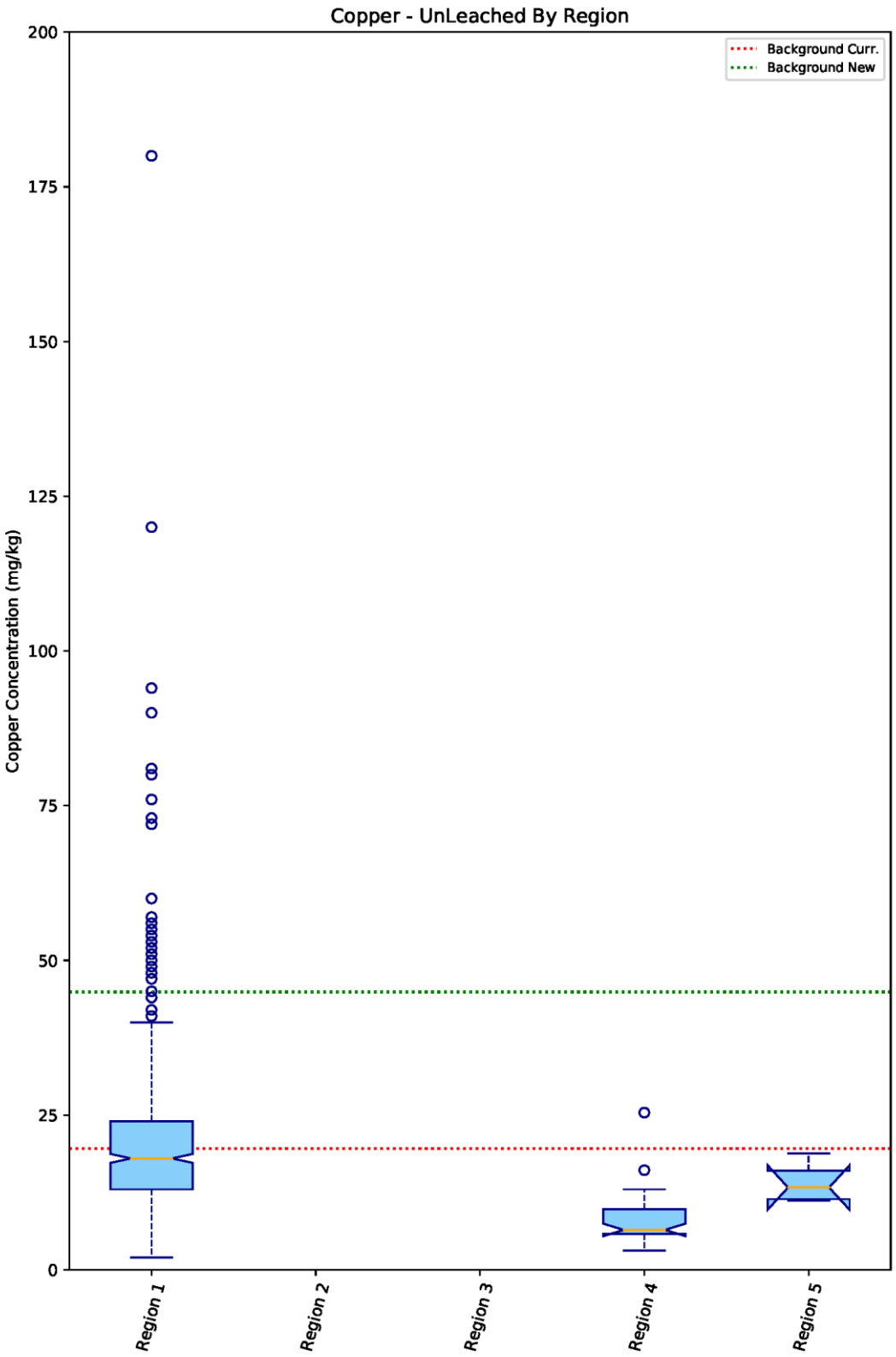


Figure 357. Boxplot of RSL copper concentrations by IDOT Region, Non-REC (mg/kg)

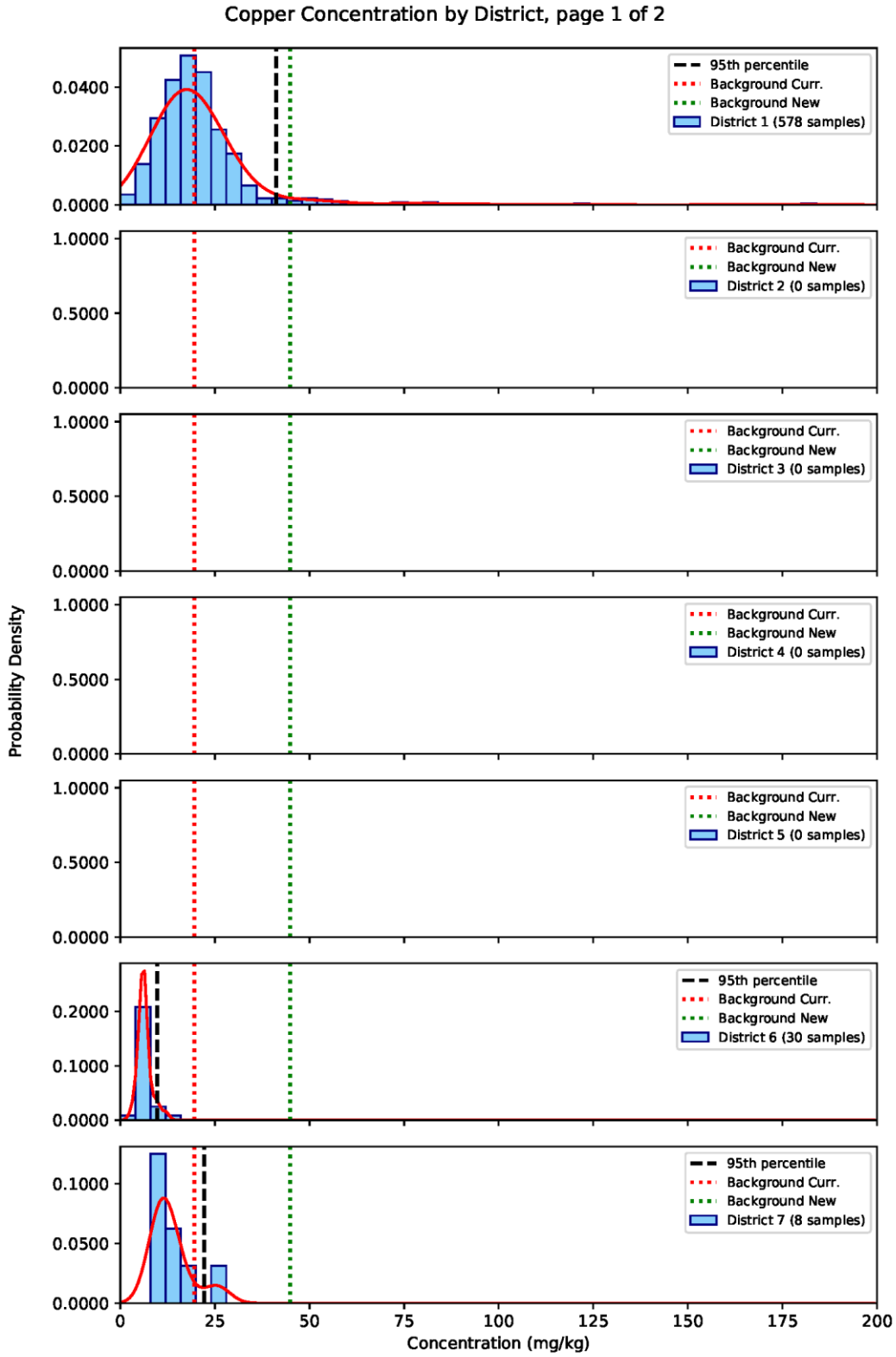


Figure 358. Histogram of RSL copper concentrations by IDOT District, Non-REC (mg/kg), part 1

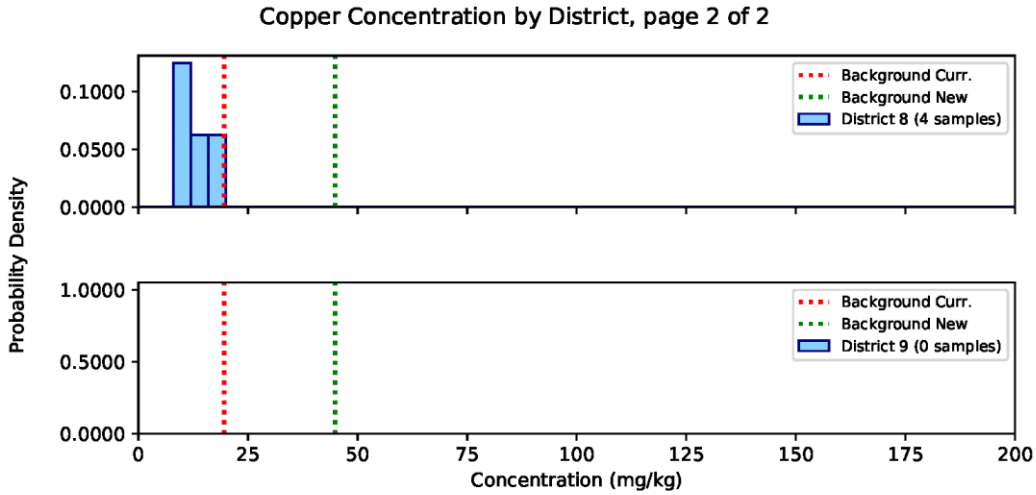


Figure 359. Histogram of RSL copper concentrations by IDOT District, Non-REC (mg/kg), part 2

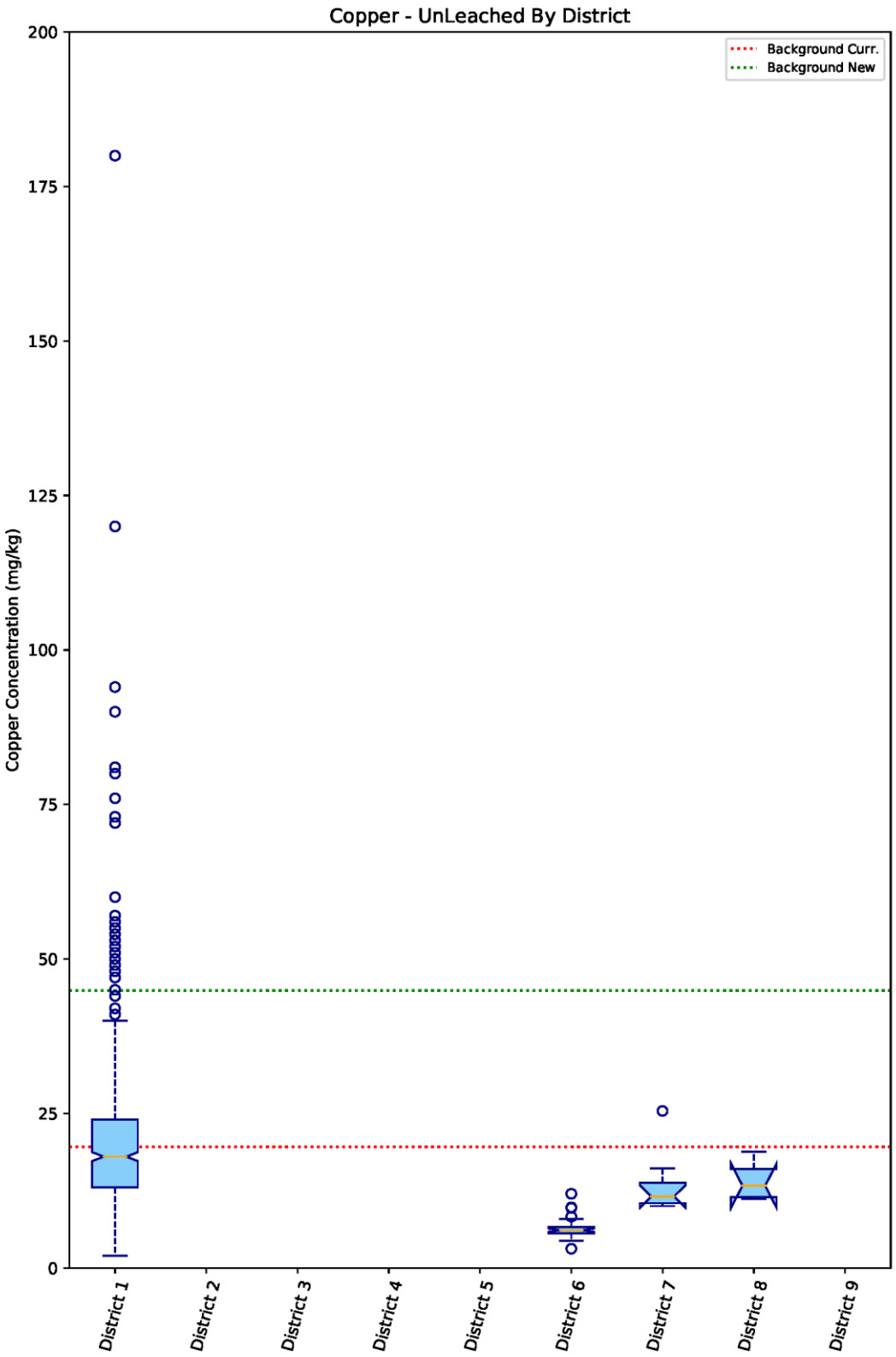


Figure 360. Boxplot of RSL copper concentrations by IDOT District, Non-REC (mg/kg)

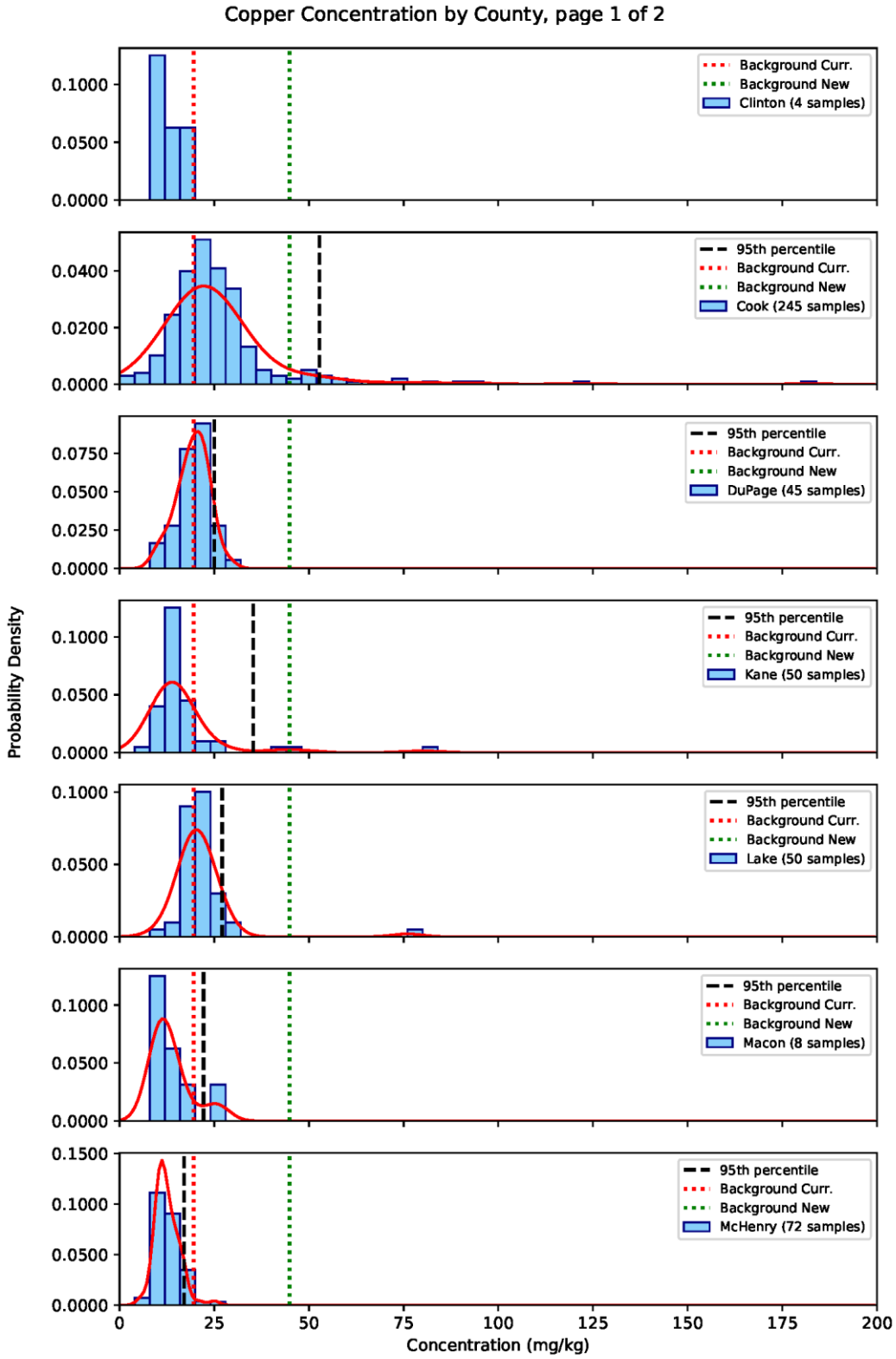


Figure 361. Histogram of RSL copper concentrations by Illinois county, Non-REC (mg/kg), part 1

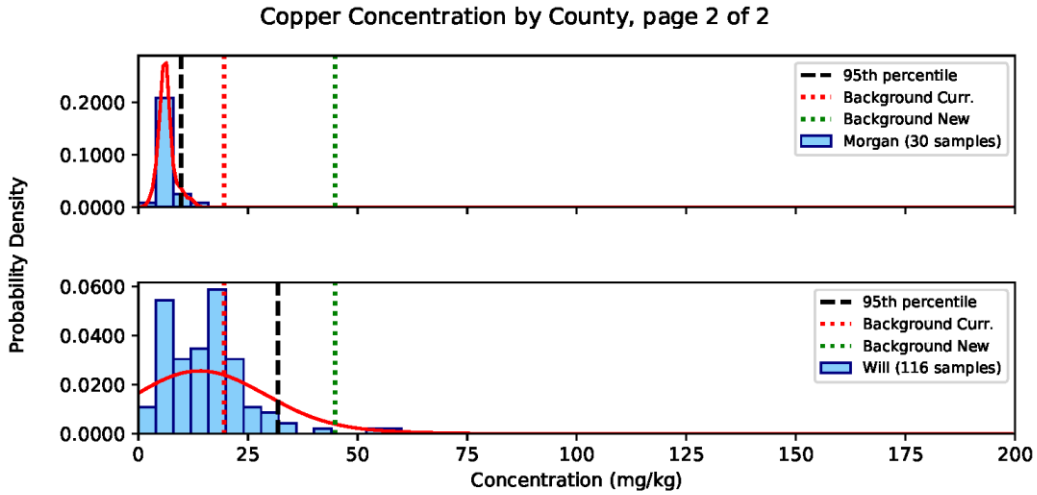


Figure 362. Histogram of RSL copper concentrations by Illinois county, Non-REC (mg/kg), part 2

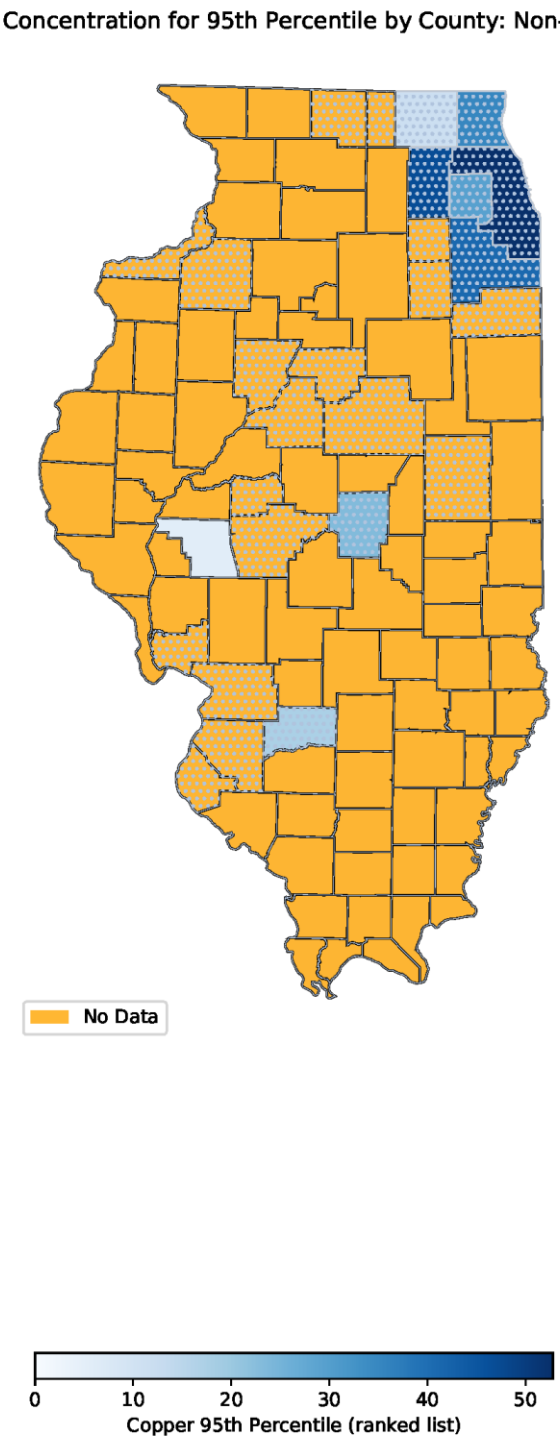


Figure 363. Map of RSL copper 95th percentile concentration by Illinois county, Non-REC (mg/kg)

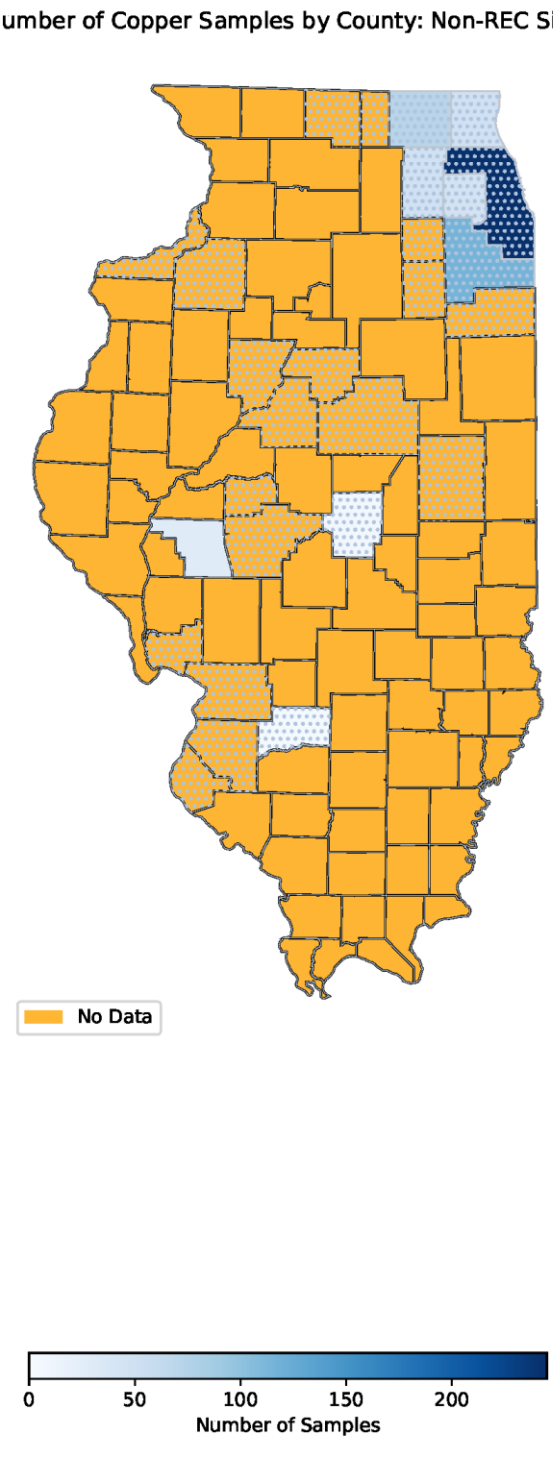


Figure 364. Map of RSL copper sample quantity by Illinois county, Non-REC (mg/kg)

J.3 COPPER DE MINIMIS

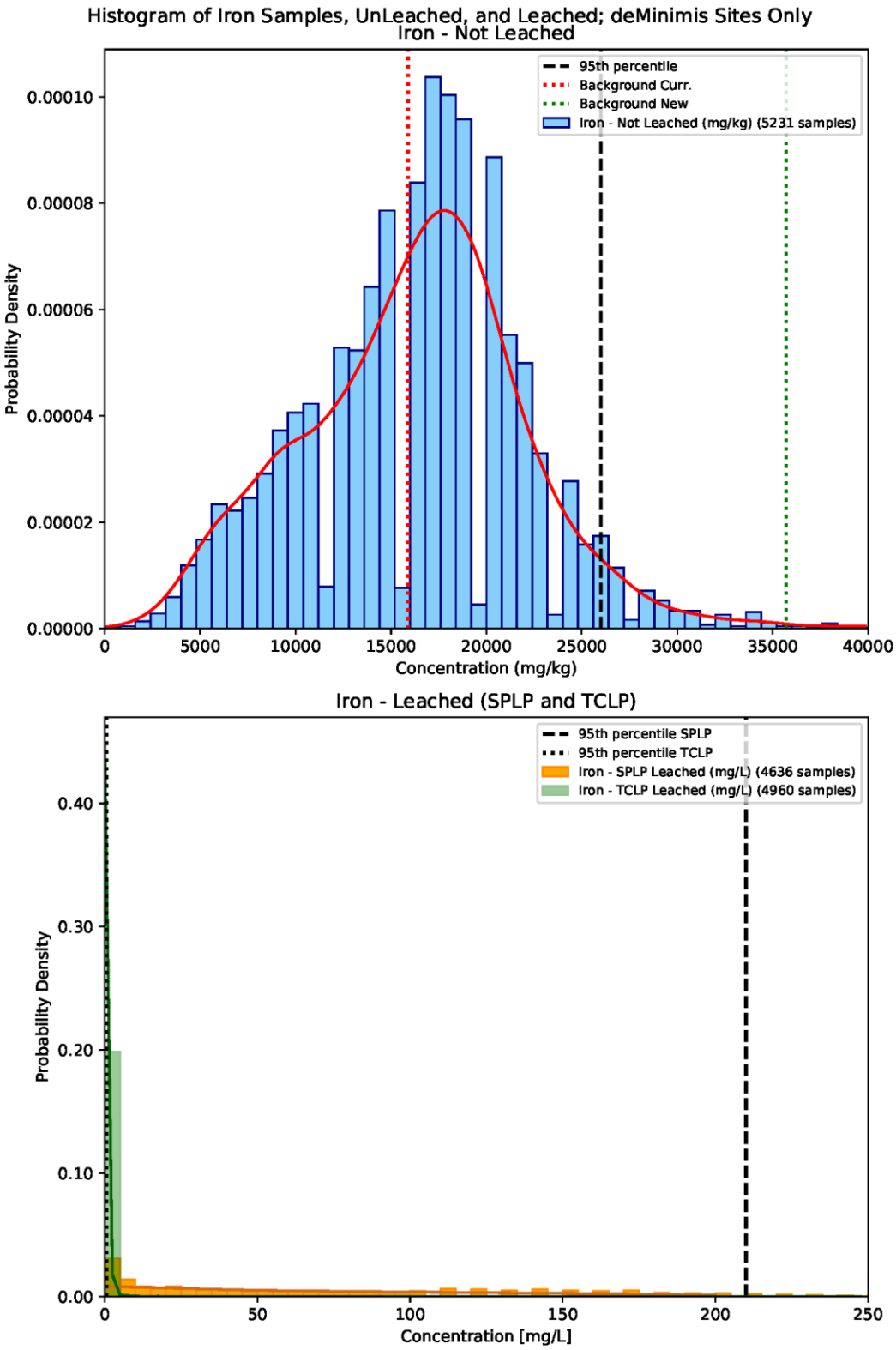


Figure 365. Histogram of RSL copper concentrations, de minimis (mg/kg)

Iron Unleached Concentration (mg/kg)

1) Region

2) District

3) County

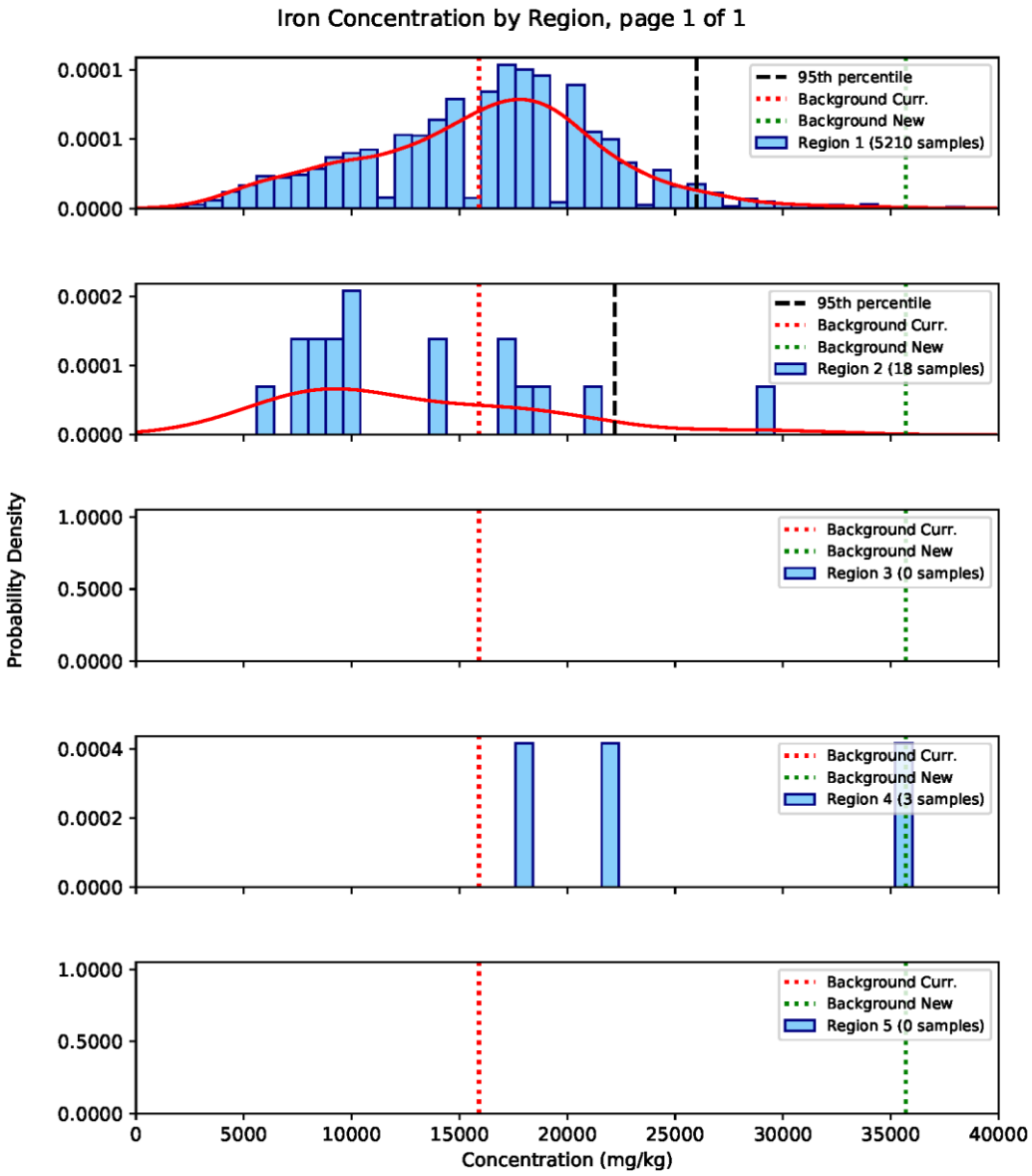


Figure 366. Histogram of RSL copper concentrations by IDOT Region, de minimis (mg/kg)

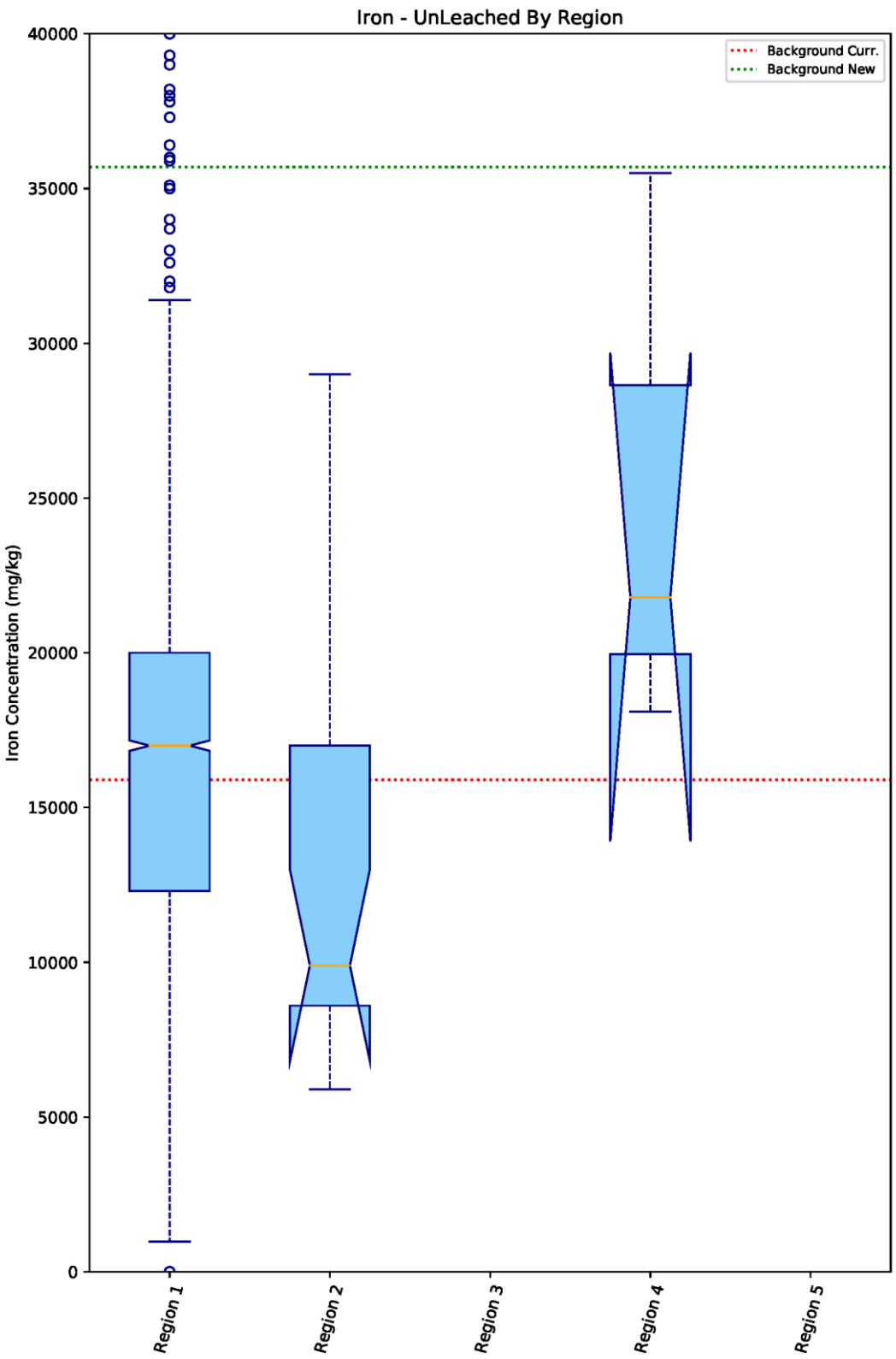


Figure 367. Boxplot of RSL copper concentrations by IDOT Region, de minimis (mg/kg)

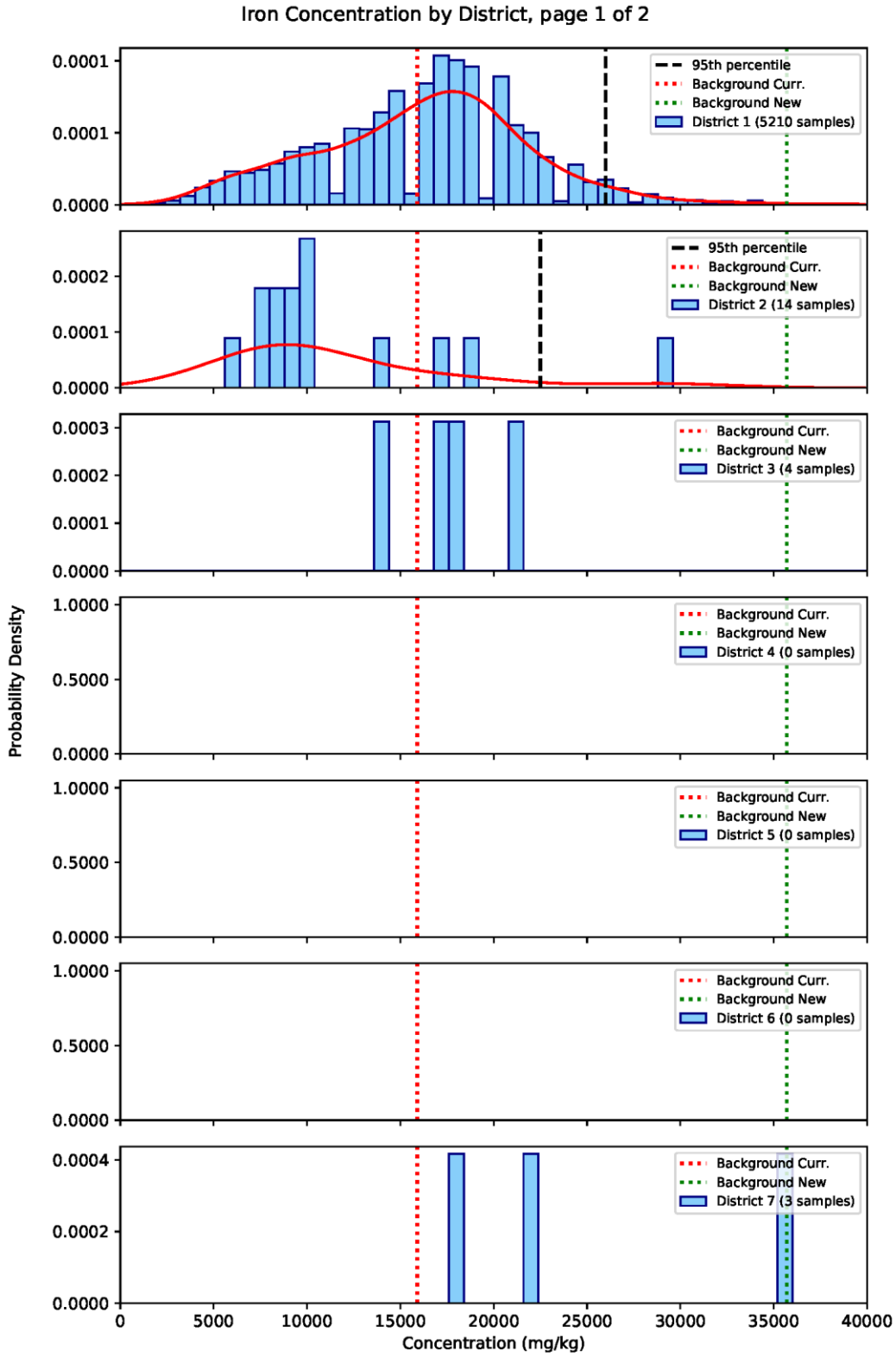


Figure 368. Histogram of RSL copper concentrations by IDOT District, de minimis (mg/kg), part 1

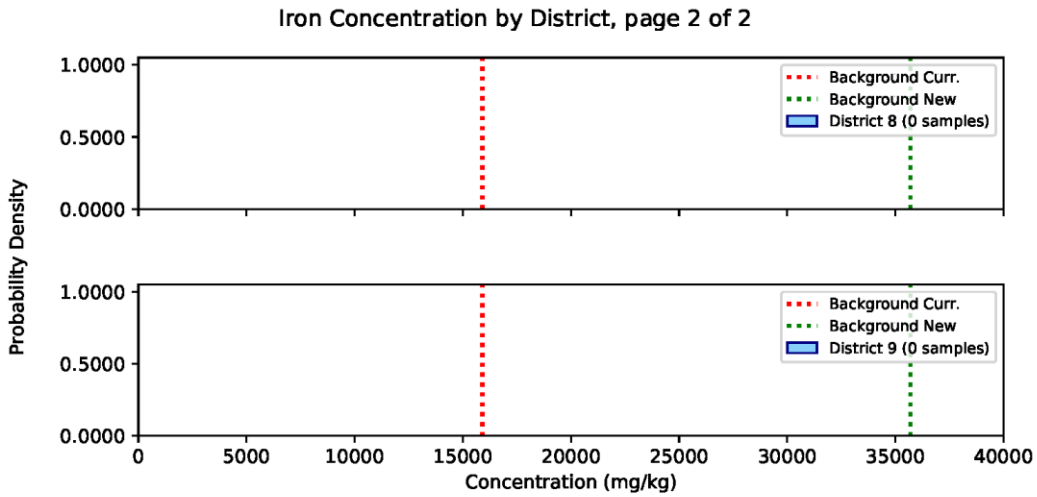


Figure 369. Histogram of RSL copper concentrations by IDOT District, de minimis (mg/kg), part 2

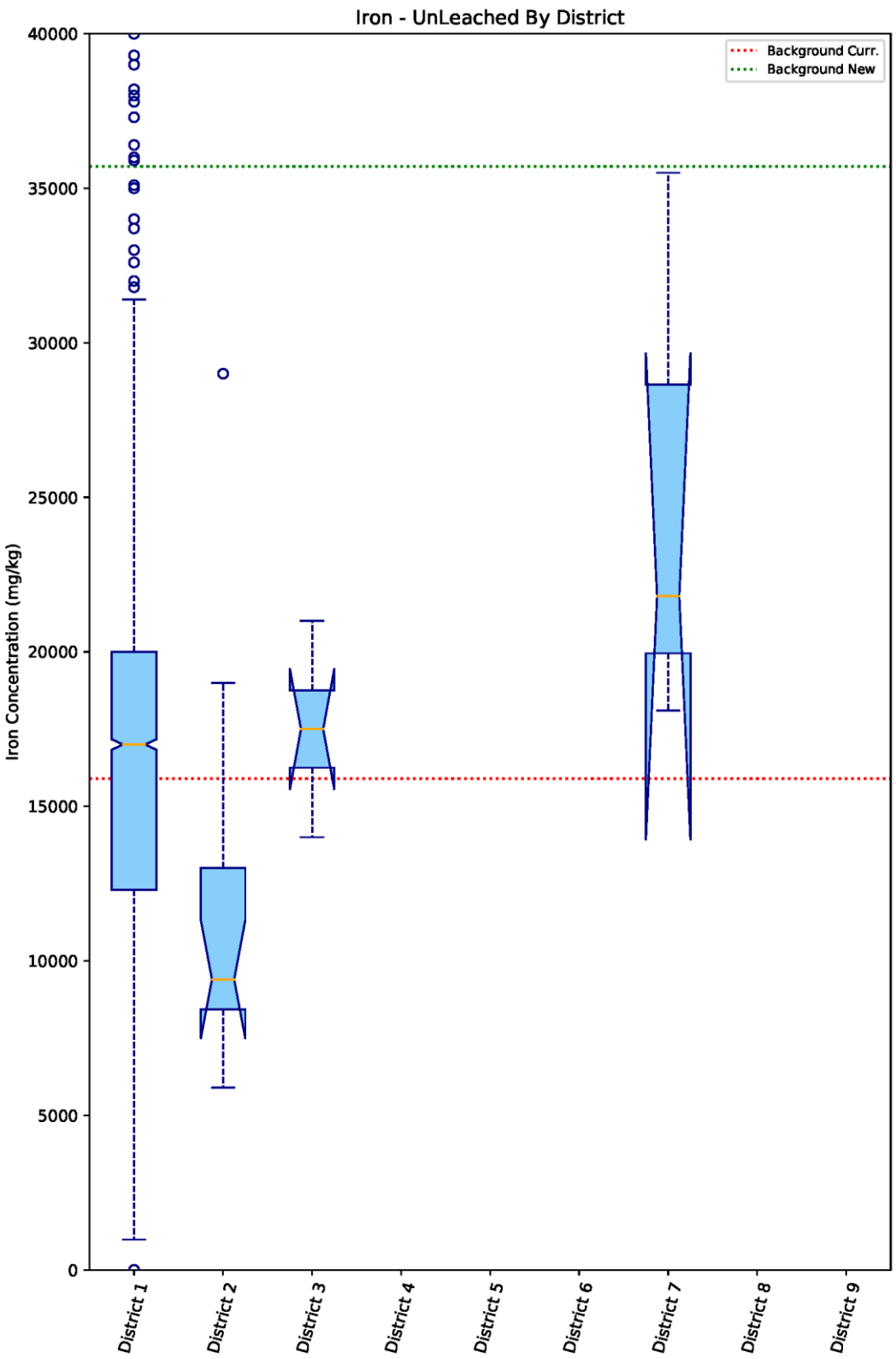


Figure 370. Boxplot of RSL copper concentrations by IDOT District, de minimis (mg/kg)

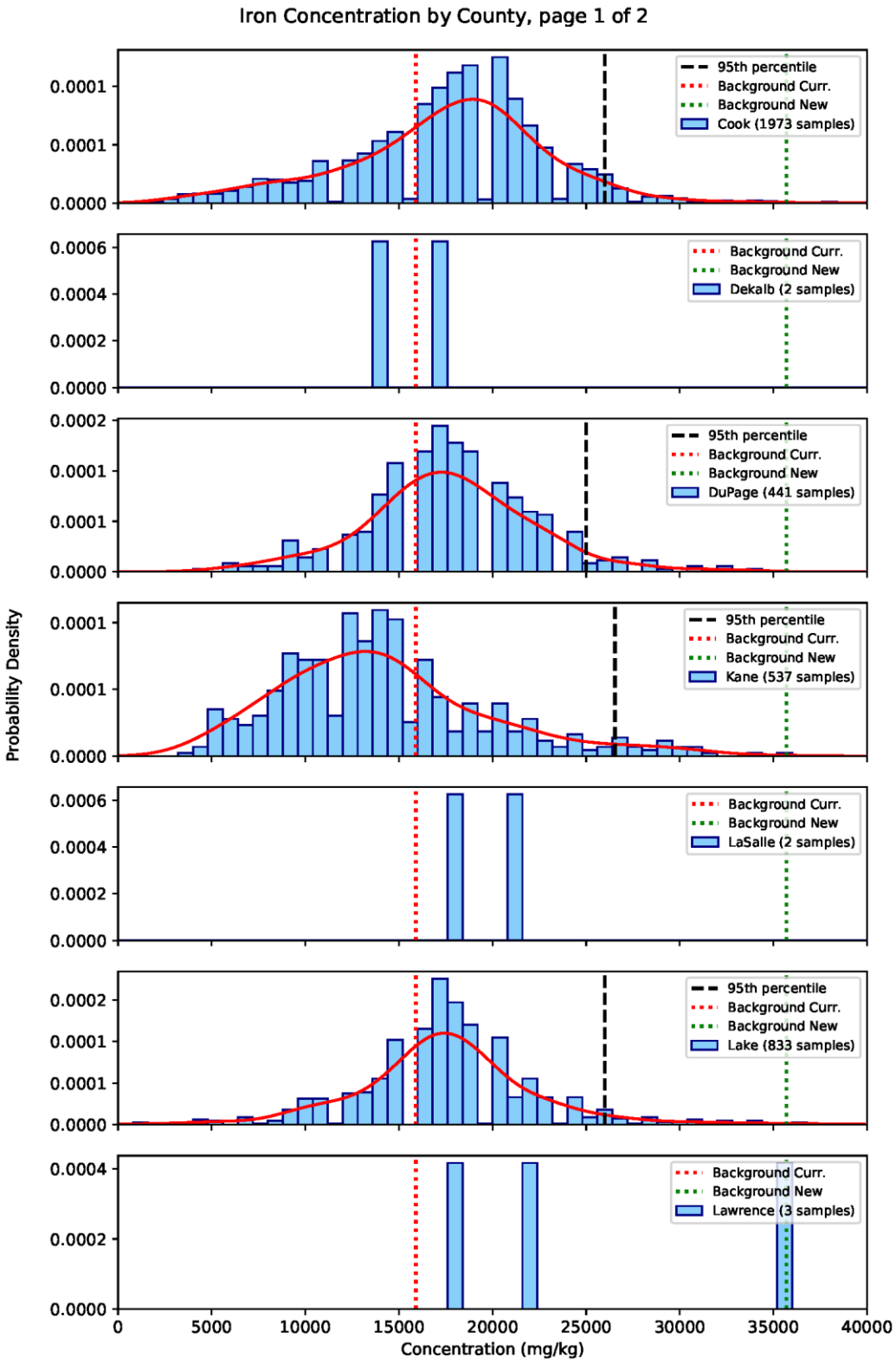


Figure 371. Histogram of RSL copper concentrations by Illinois county, de minimis (mg/kg), part 1

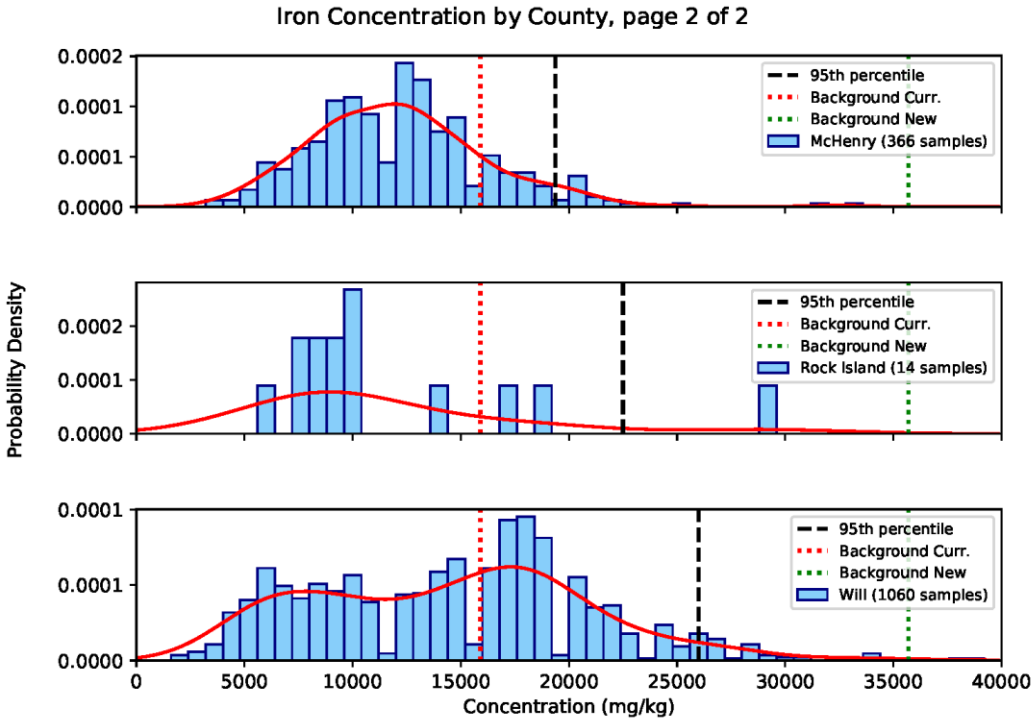


Figure 372. Histogram of RSL copper concentrations by Illinois county, de minimis (mg/kg), part 2

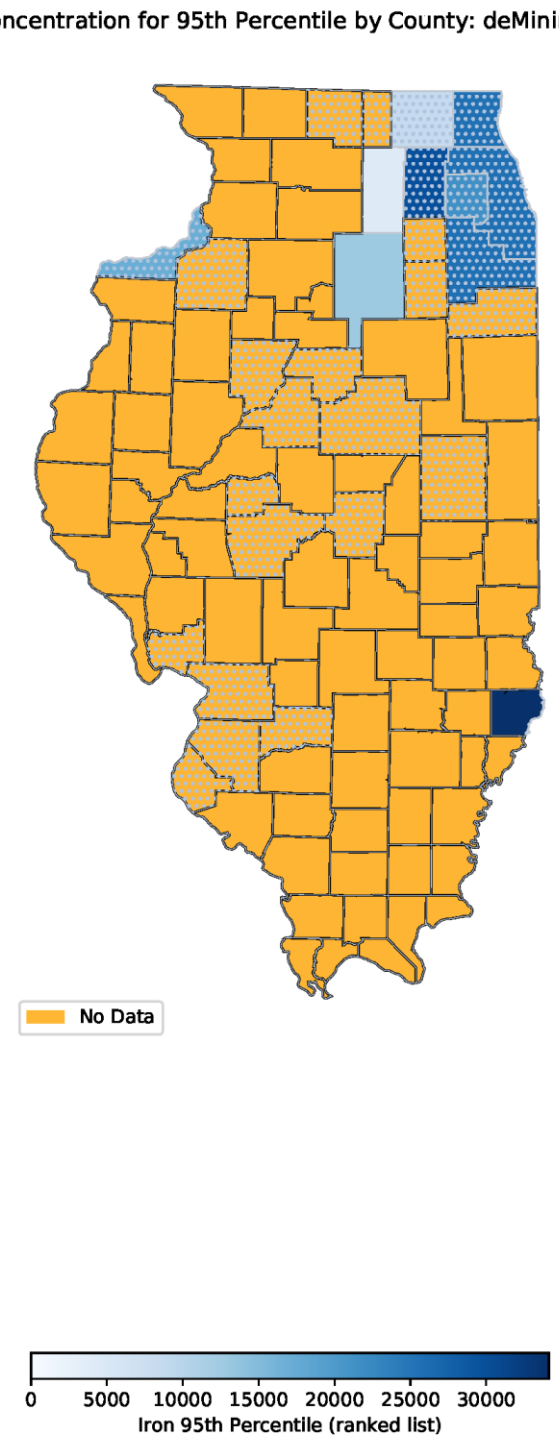


Figure 373. Map of RSL copper 95th percentile concentration by Illinois county, de minimis (mg/kg)

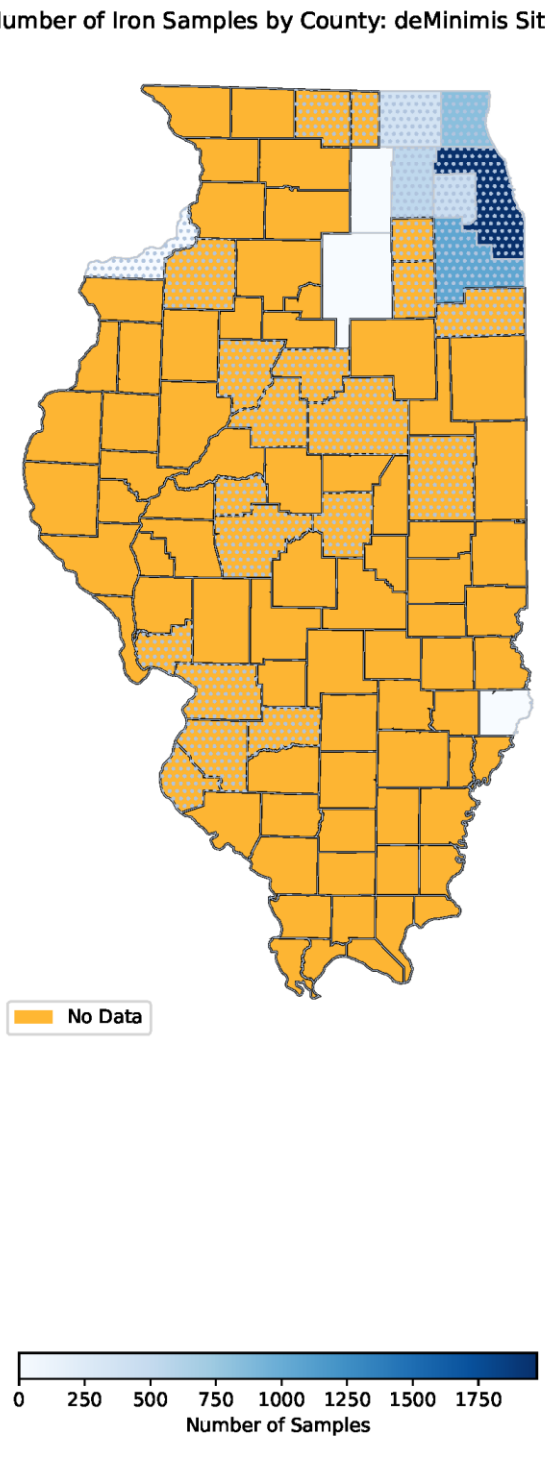


Figure 374. Map of RSL copper sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX K. ANALYTE ANALYSIS: IRON

K.1 IRON REC

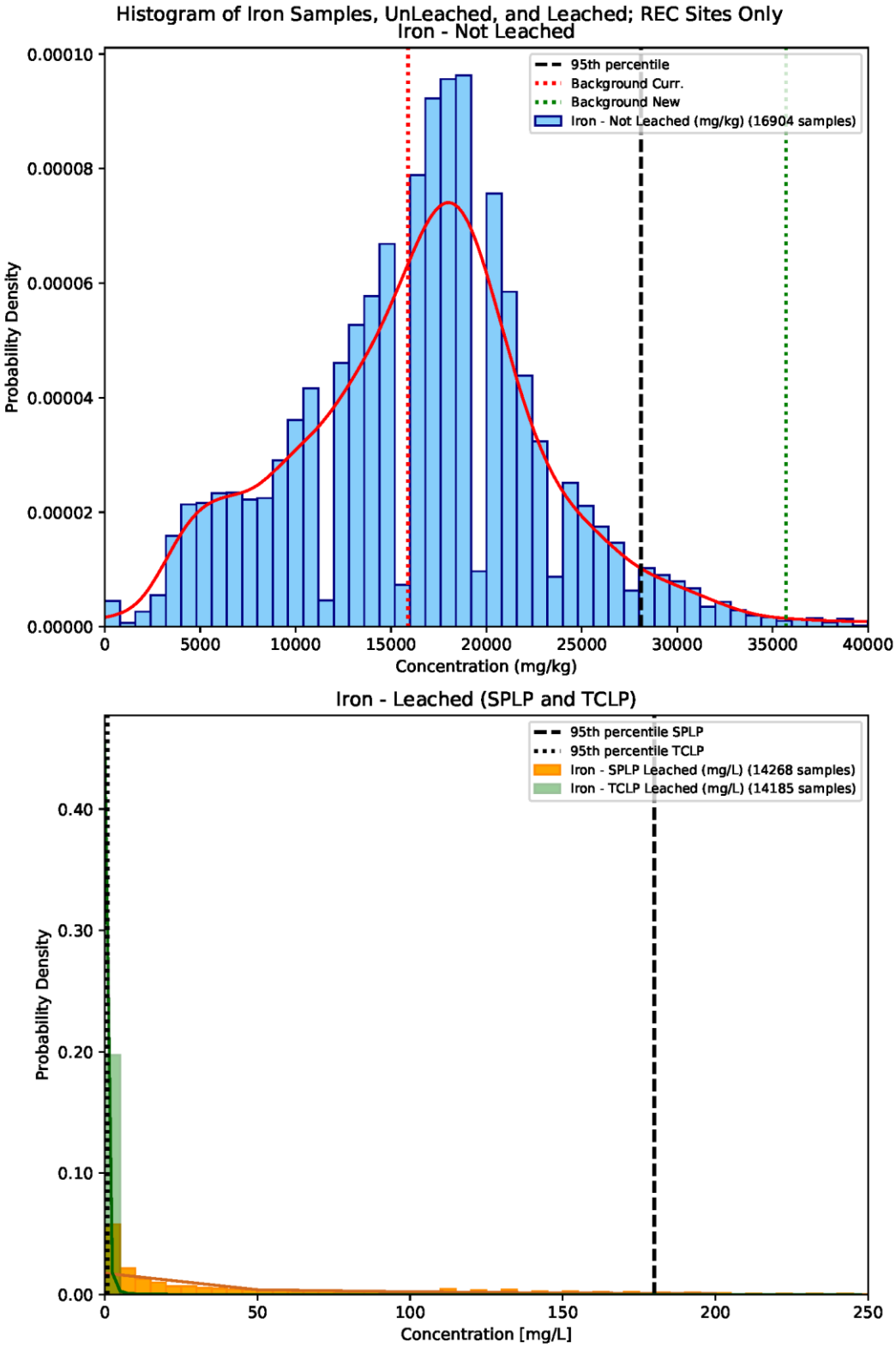


Figure 375. Histogram of RSL iron concentrations, REC (mg/kg)

Iron Unleached Concentration (mg/kg)

1) Region

2) District

3) County

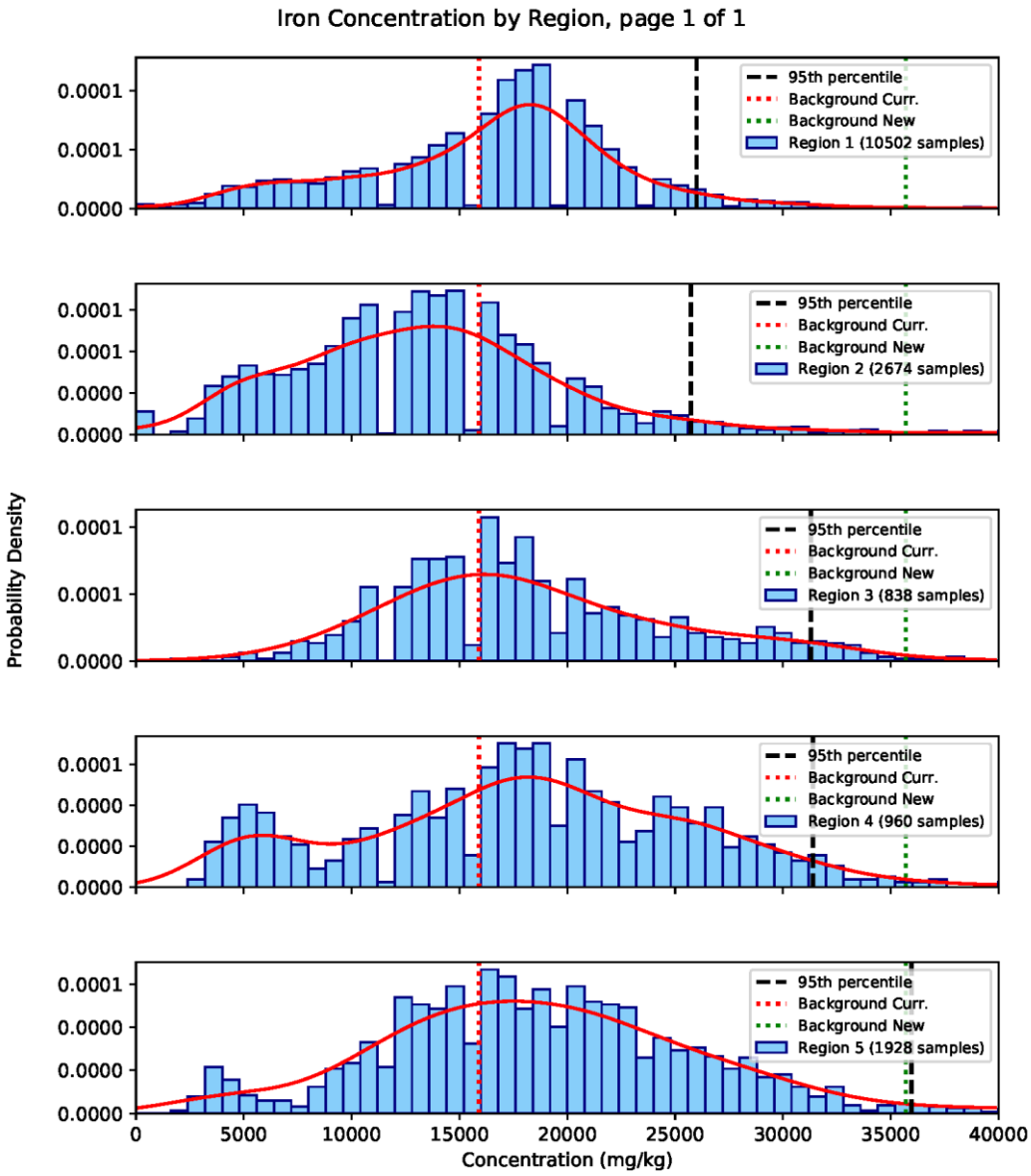


Figure 376. Histogram of RSL iron concentrations by IDOT Region, REC (mg/kg)

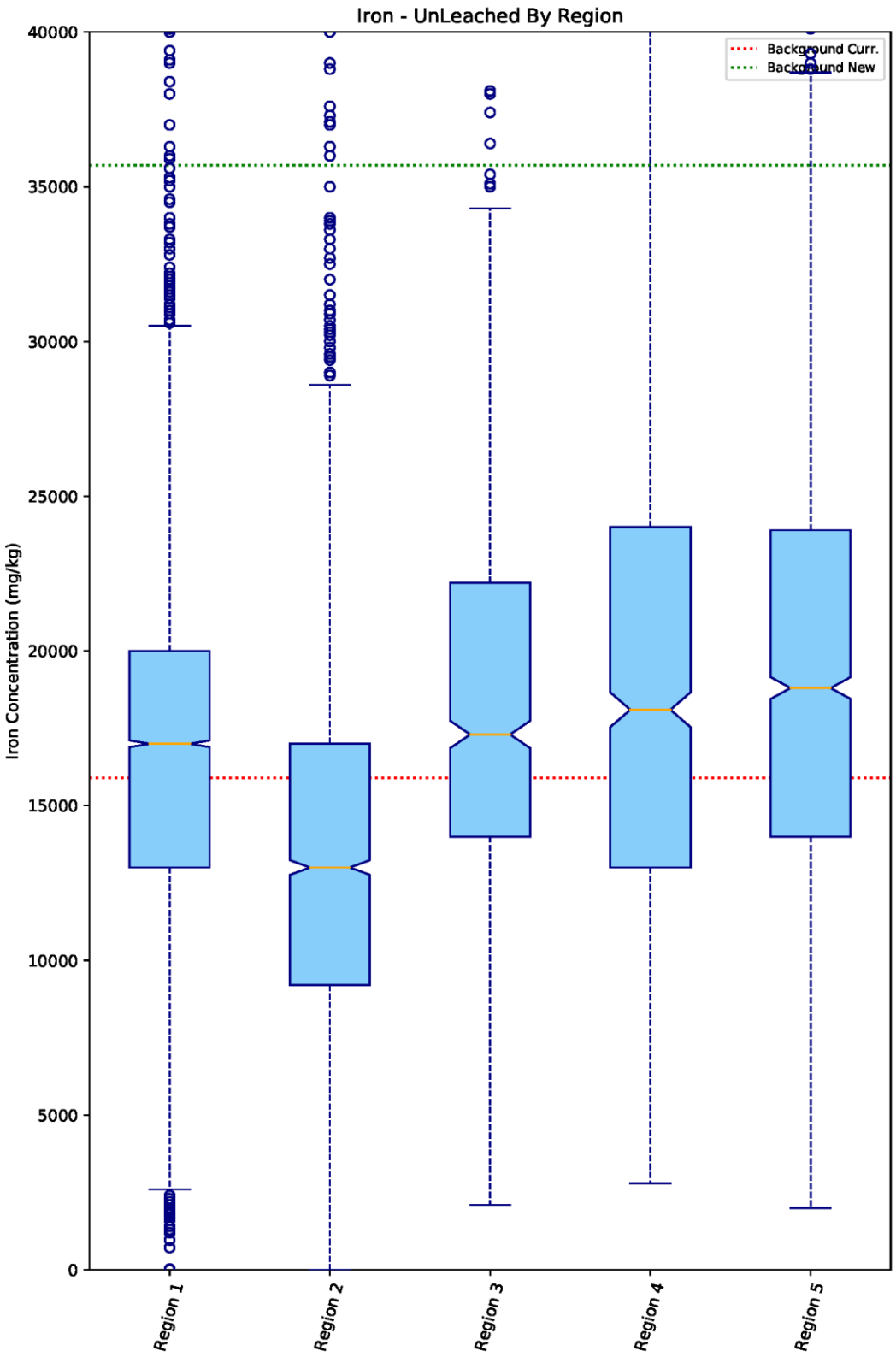


Figure 377. Boxplot of RSL iron concentrations by IDOT Region, REC (mg/kg)

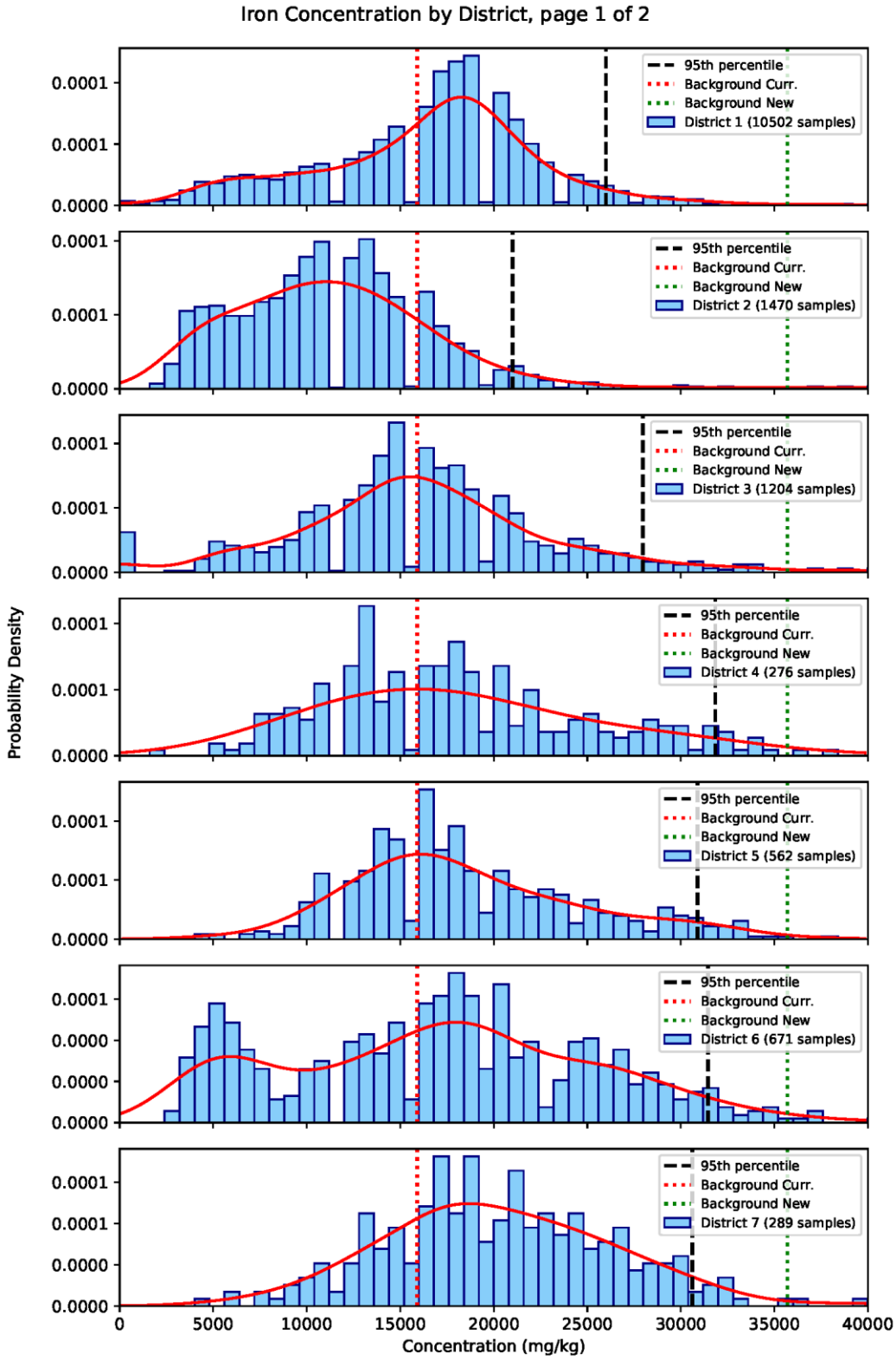


Figure 378. Histogram of RSL iron concentrations by IDOT District, REC (mg/kg), part 1

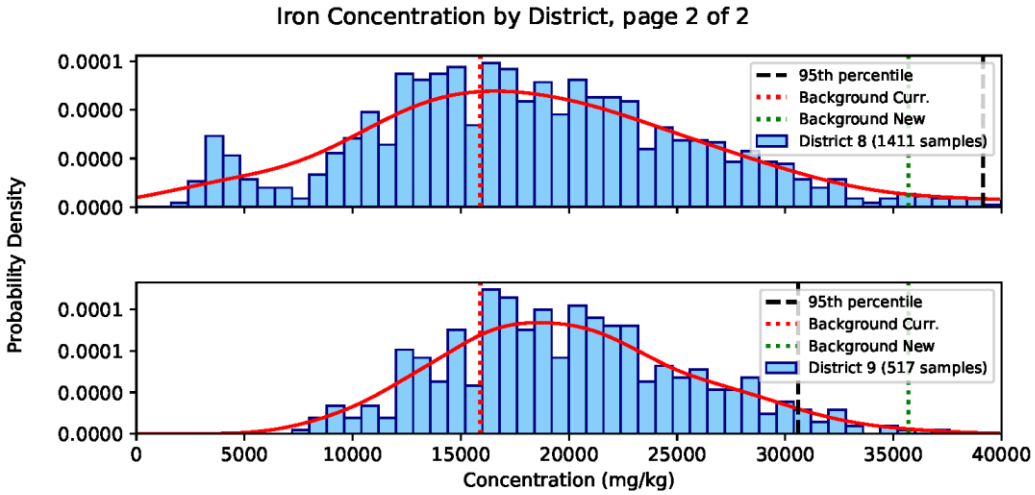


Figure 379. Histogram of RSL iron concentrations by IDOT District, REC (mg/kg), part 2

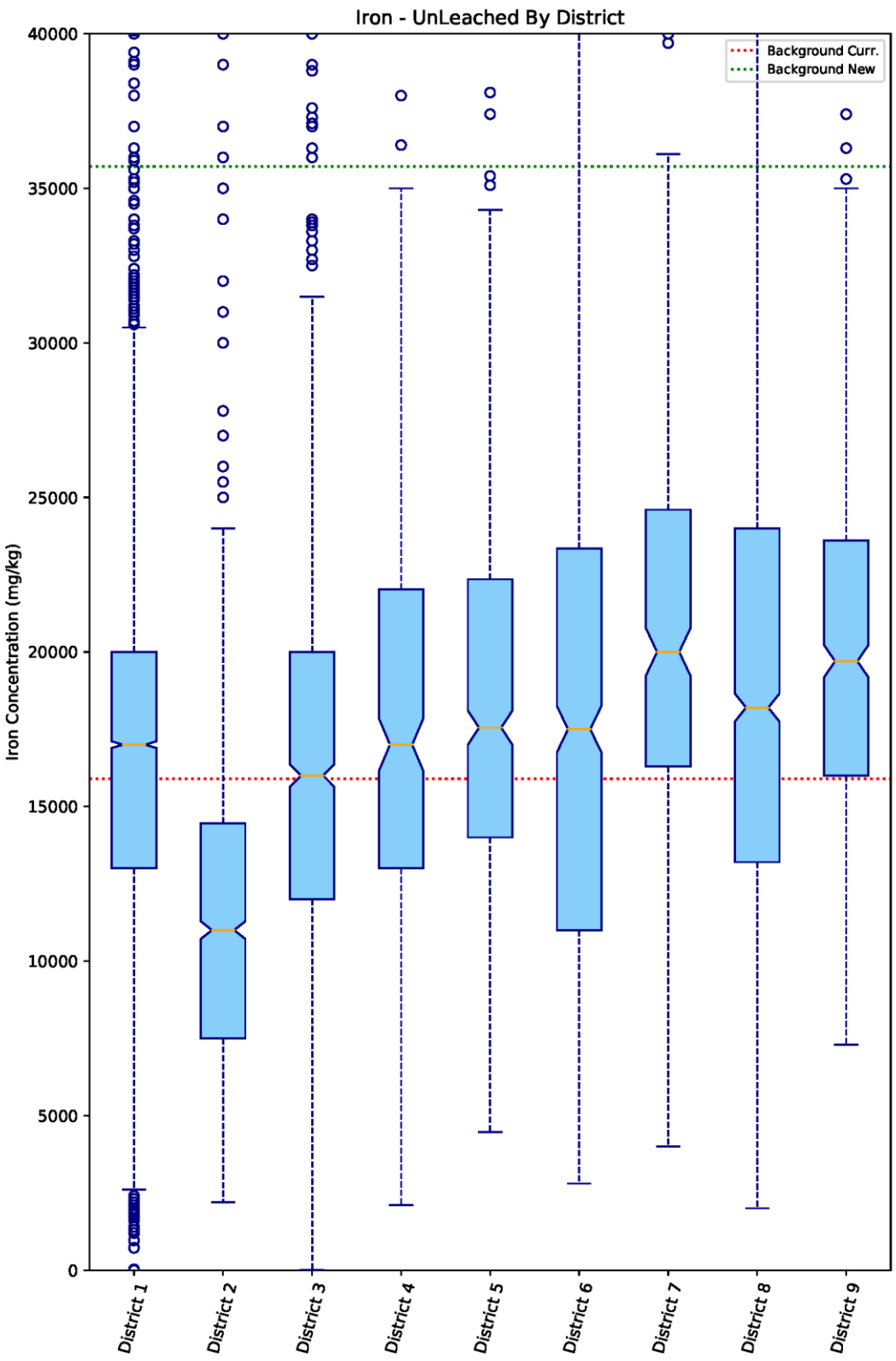


Figure 380. Boxplot of RSL iron concentrations by IDOT District, REC (mg/kg)

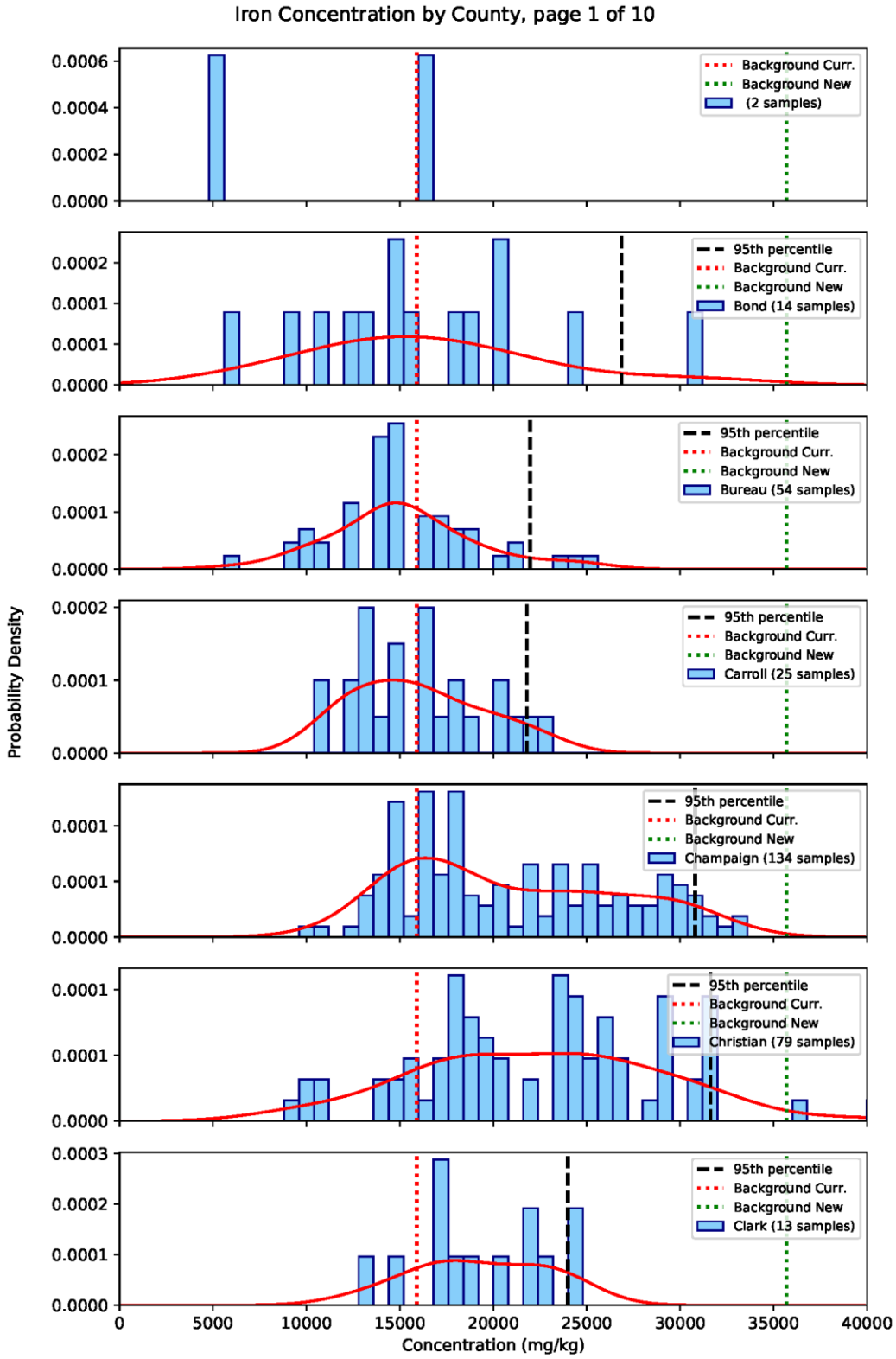


Figure 381. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 1

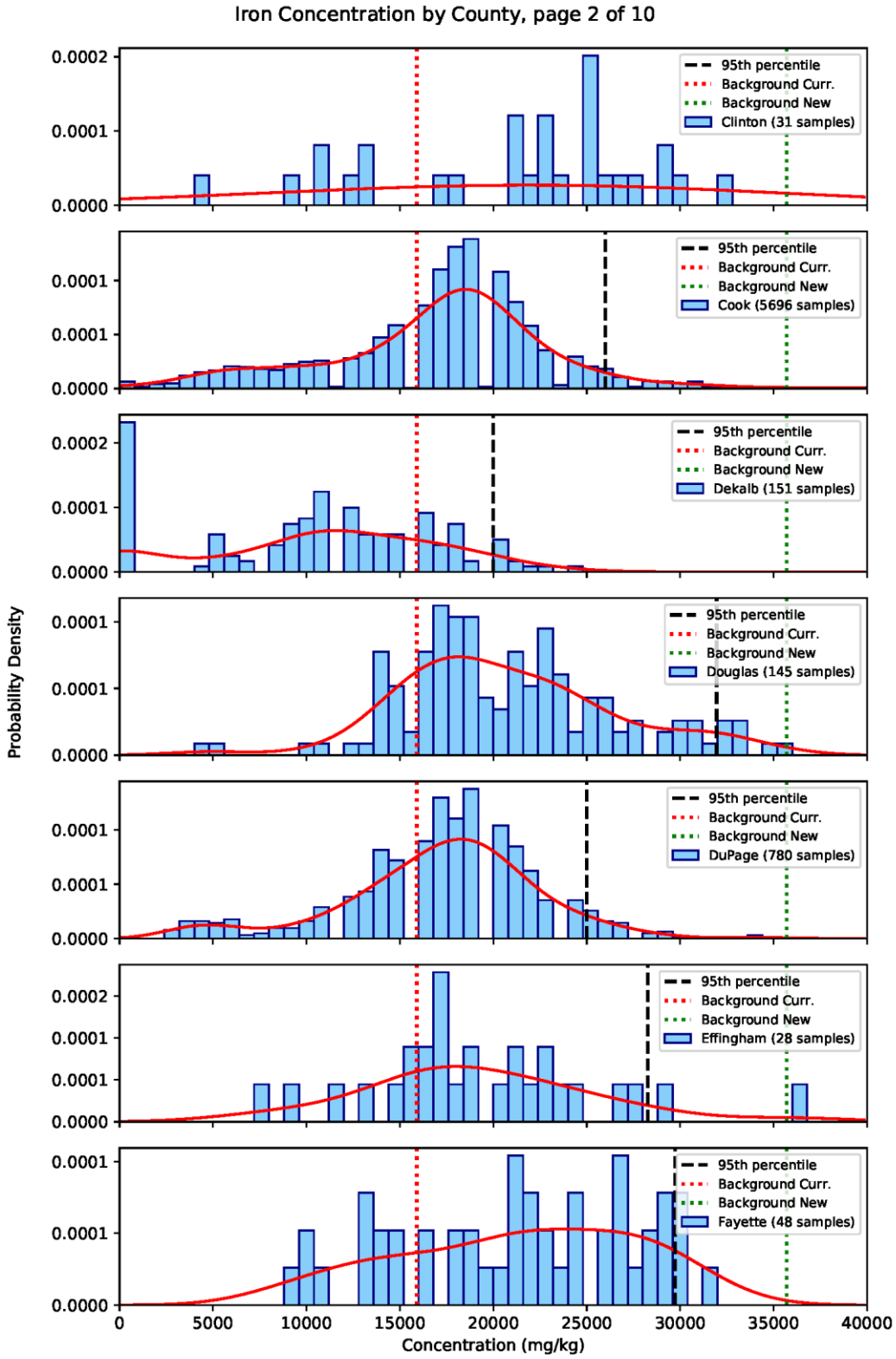


Figure 382. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 2

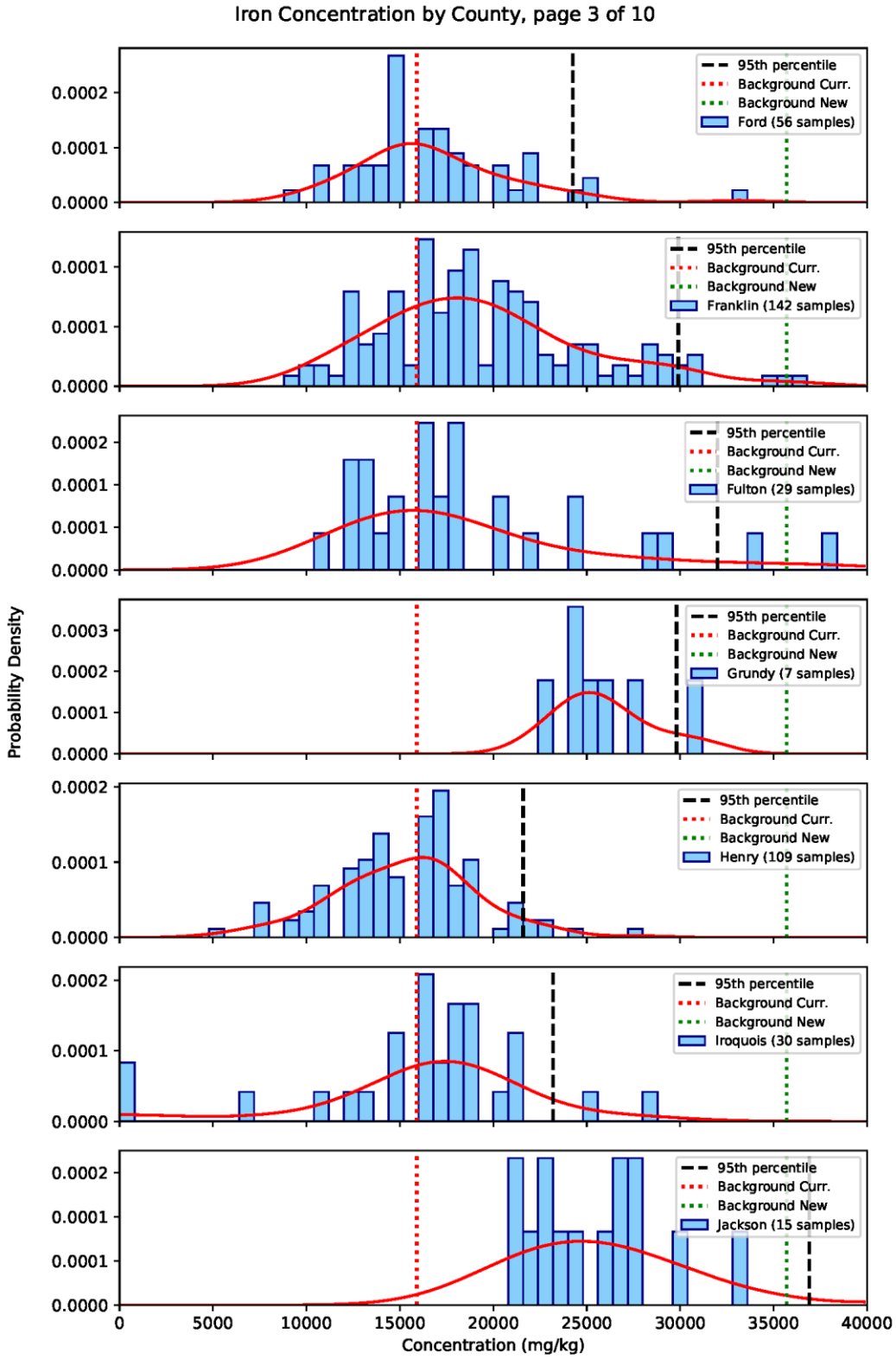


Figure 383. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 3

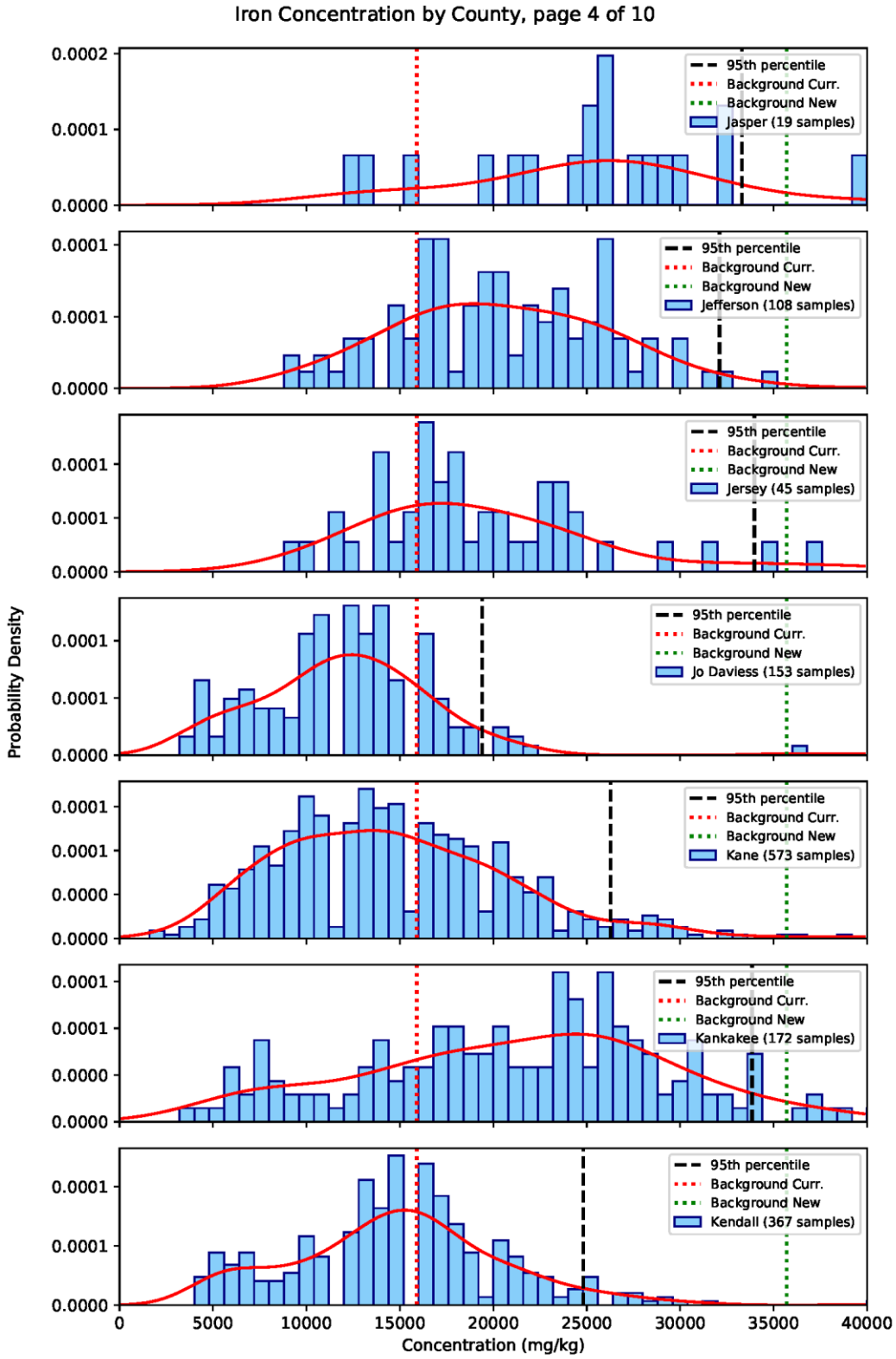


Figure 384. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 4

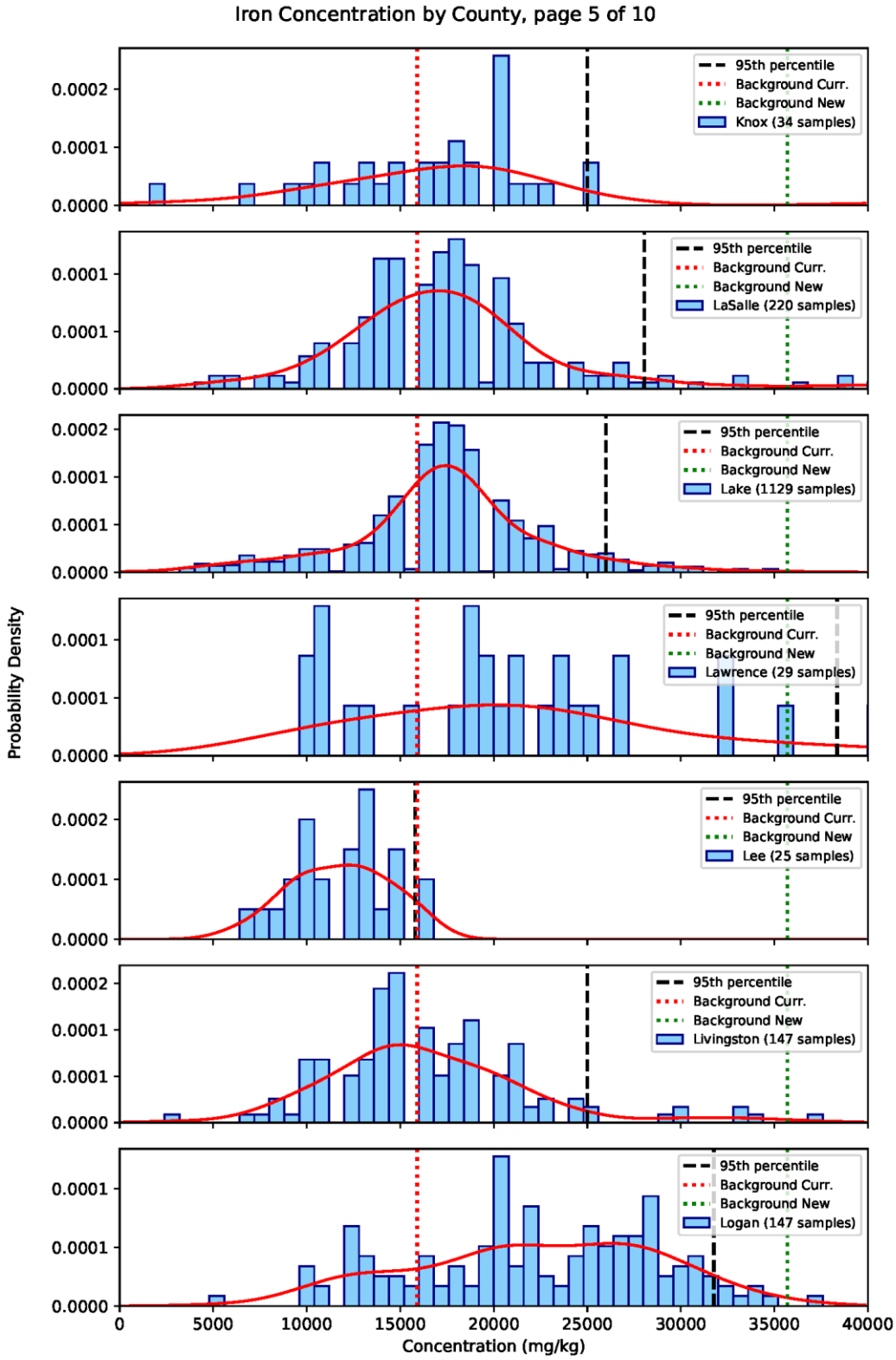


Figure 385. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 5

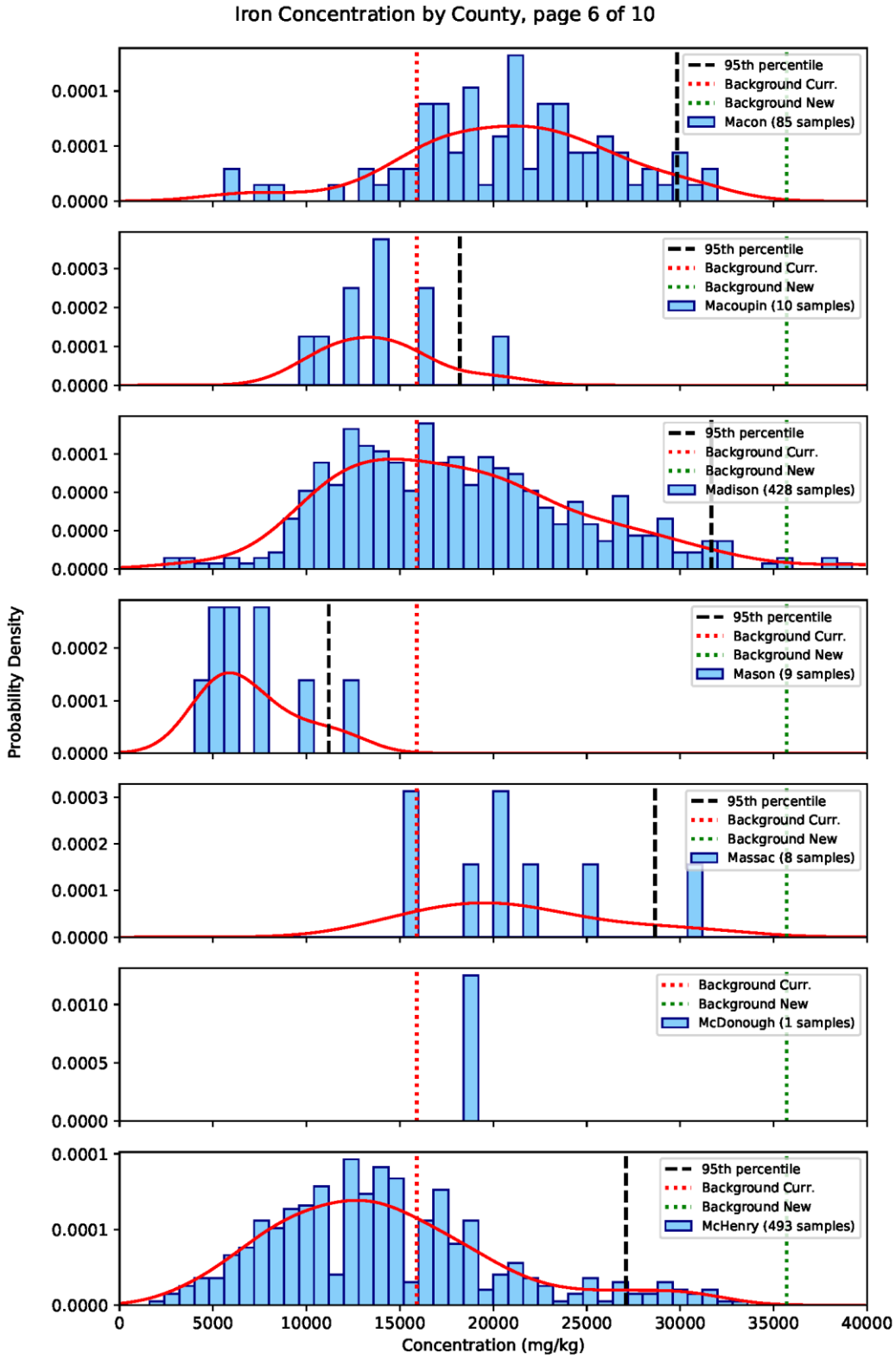


Figure 386. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 6

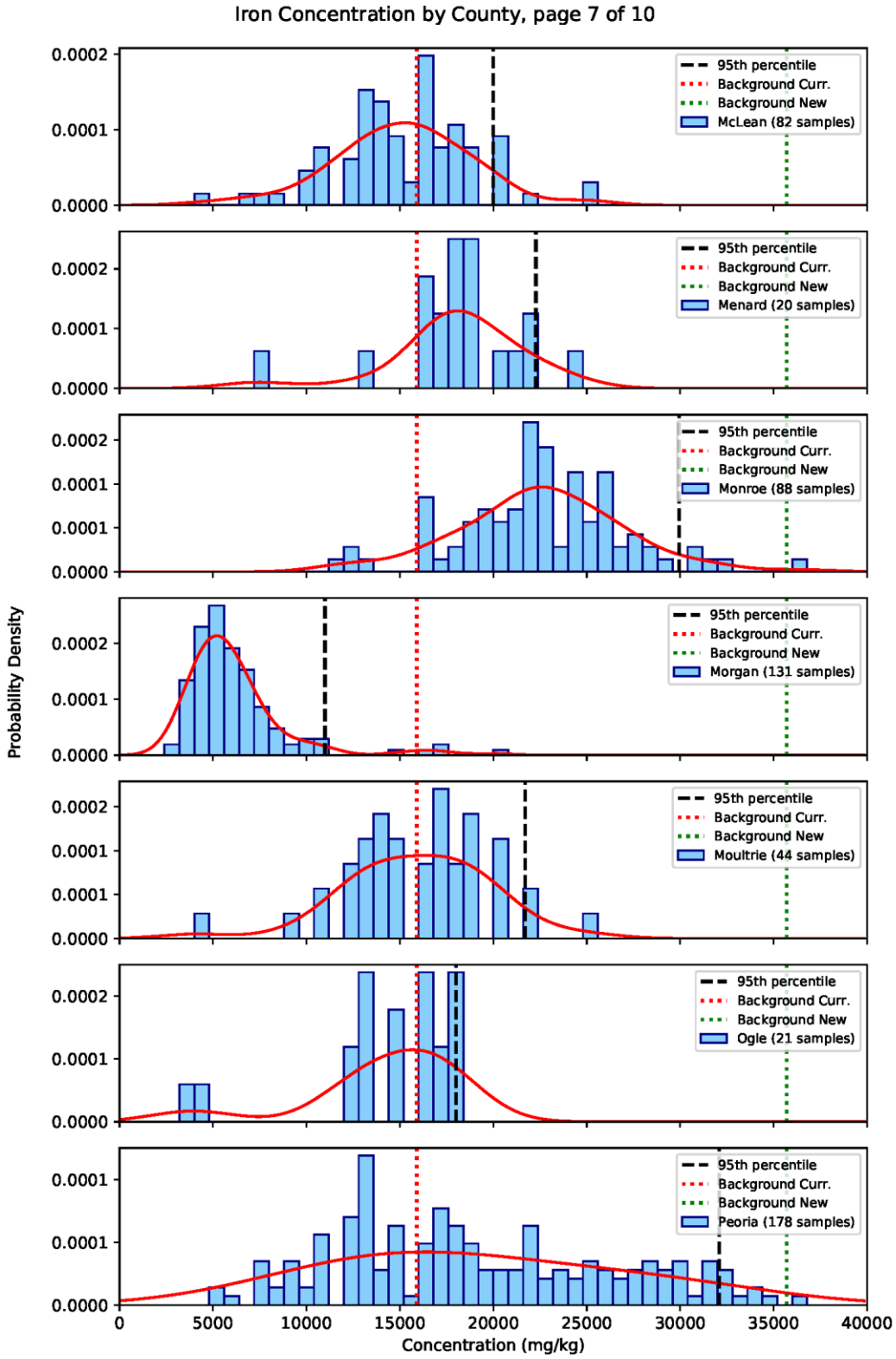


Figure 387. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 7

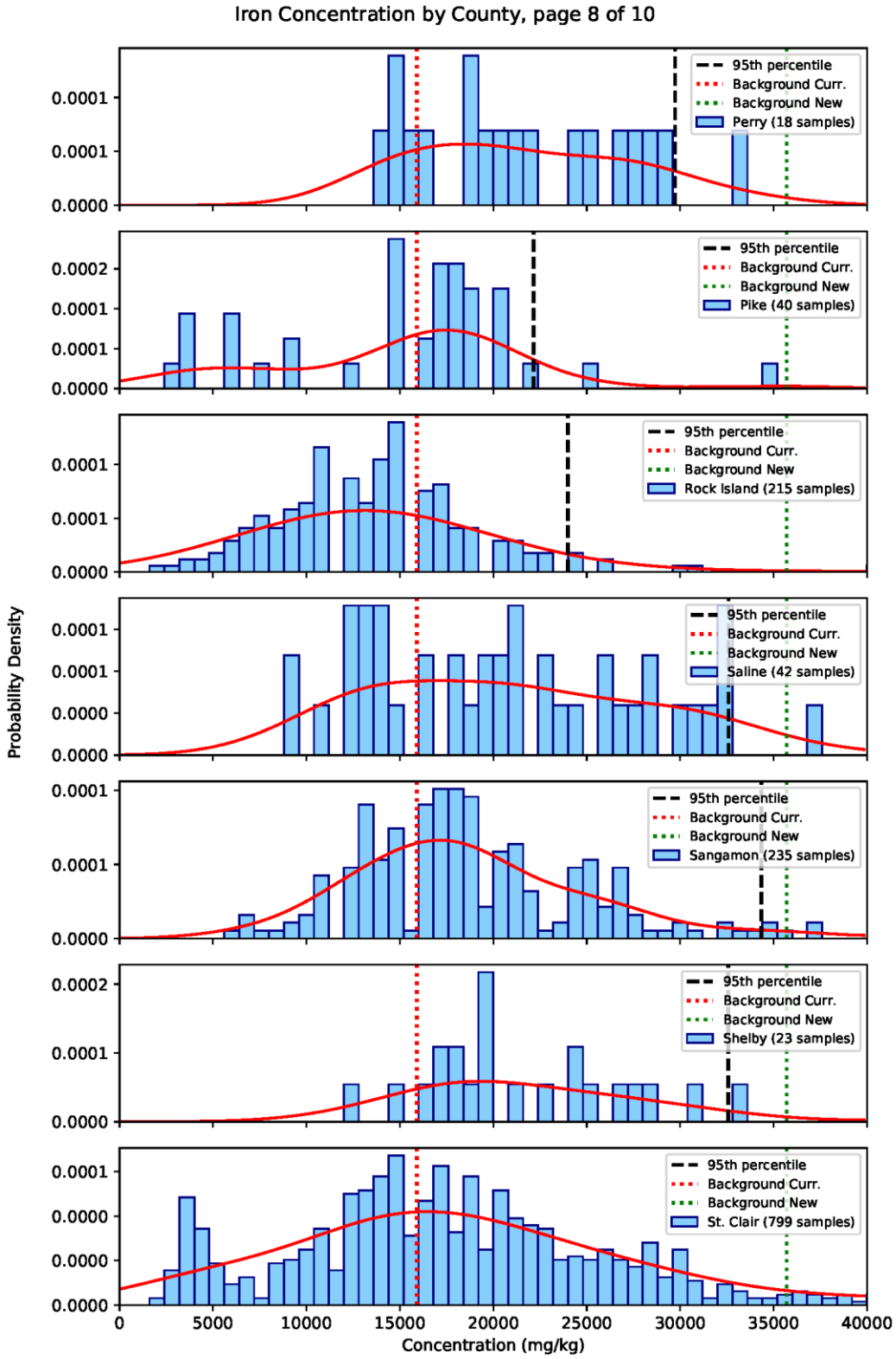


Figure 388. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 8

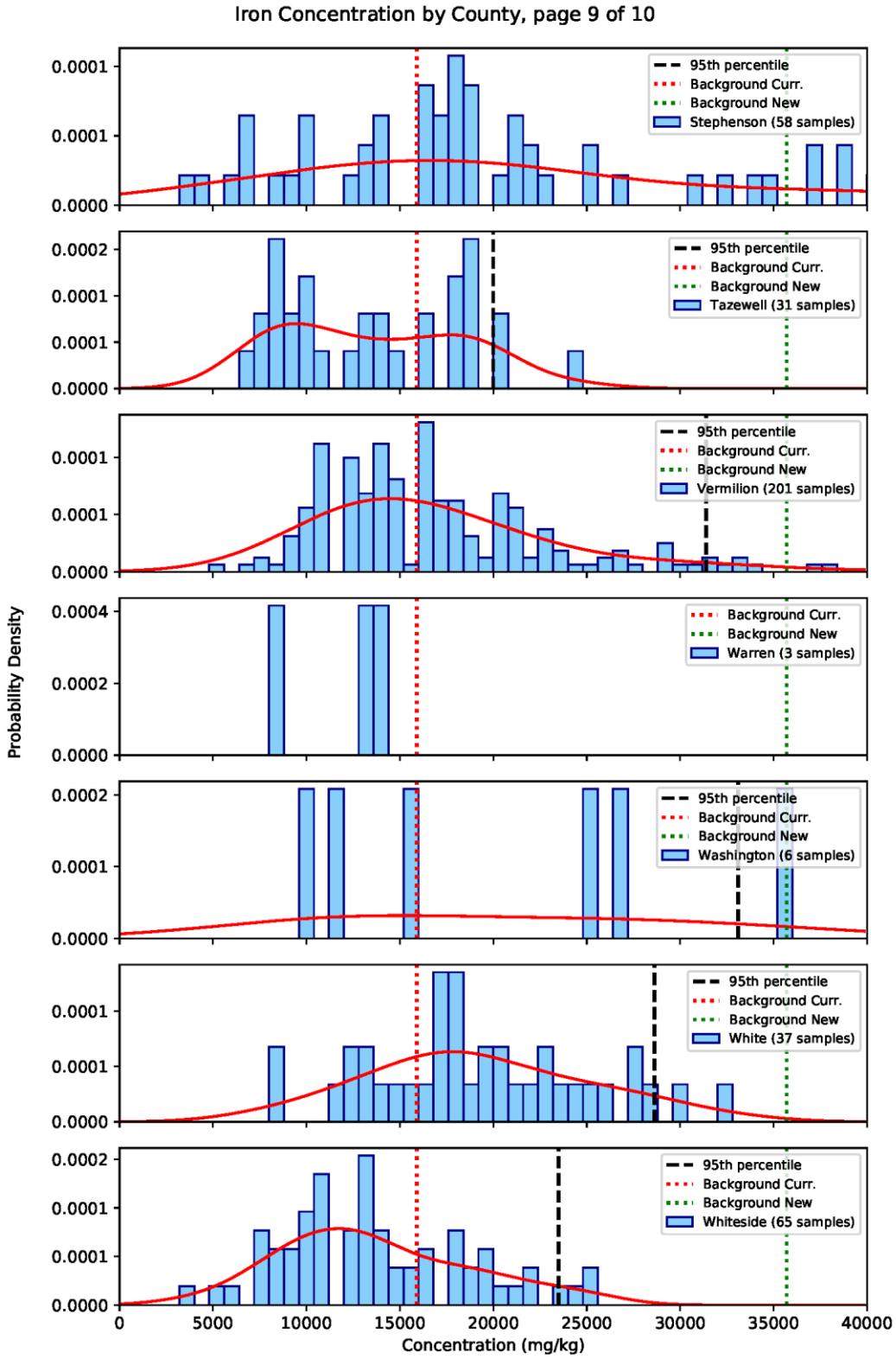


Figure 389. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 9

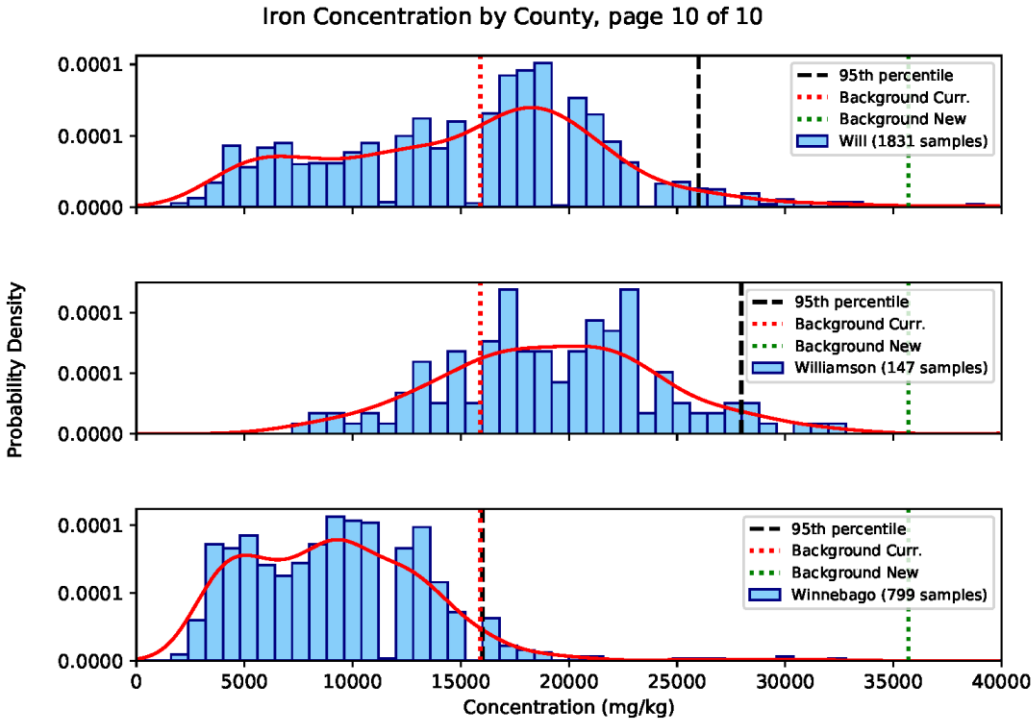


Figure 390. Histogram of RSL iron concentrations by Illinois county, REC (mg/kg), part 10

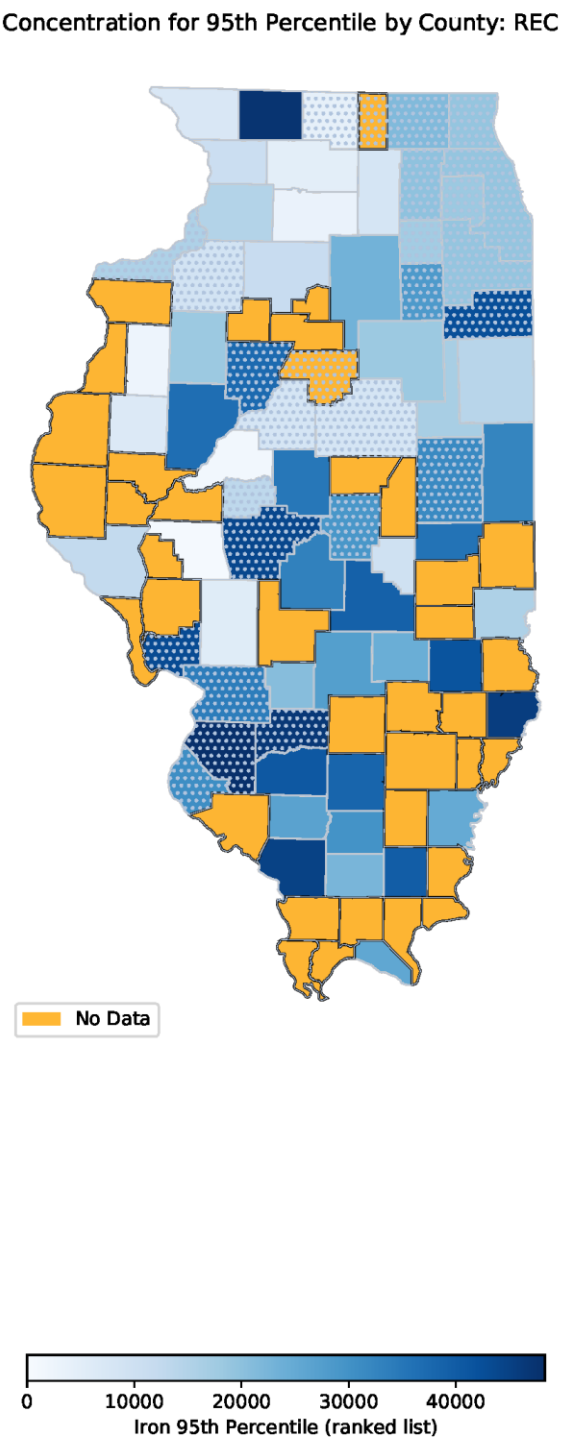


Figure 391. Map of RSL iron 95th percentile concentration by Illinois county, REC (mg/kg)

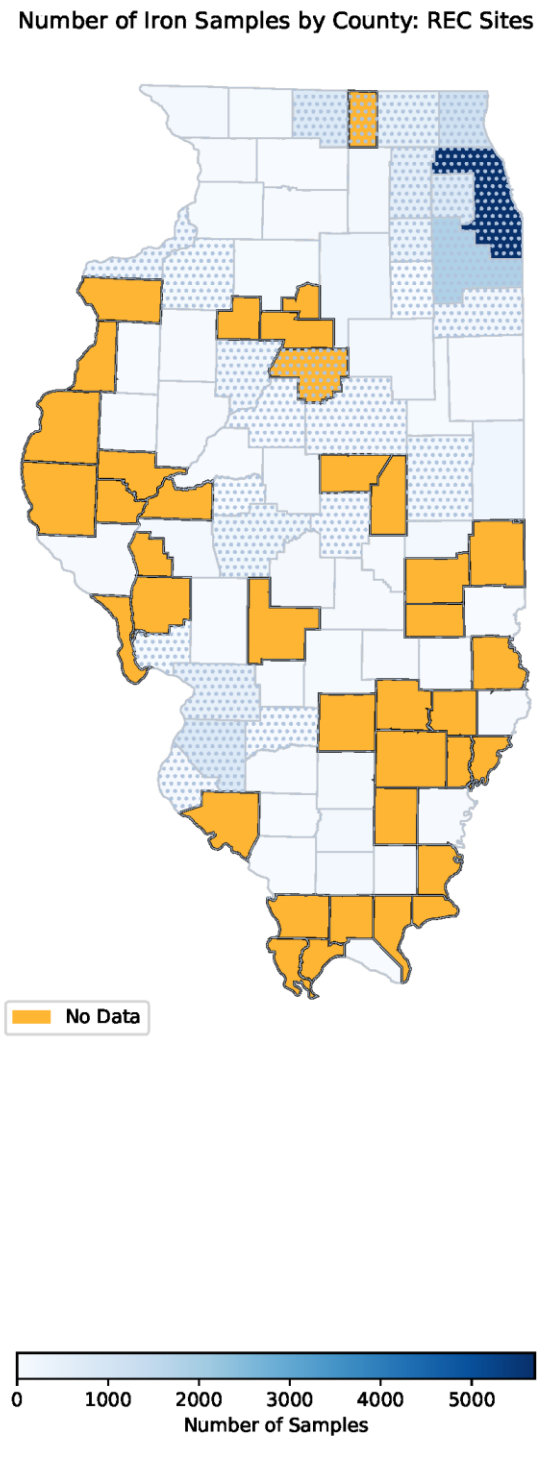


Figure 392. Map of RSL iron sample quantity by Illinois county, REC (mg/kg)

K.2 IRON NON-REC

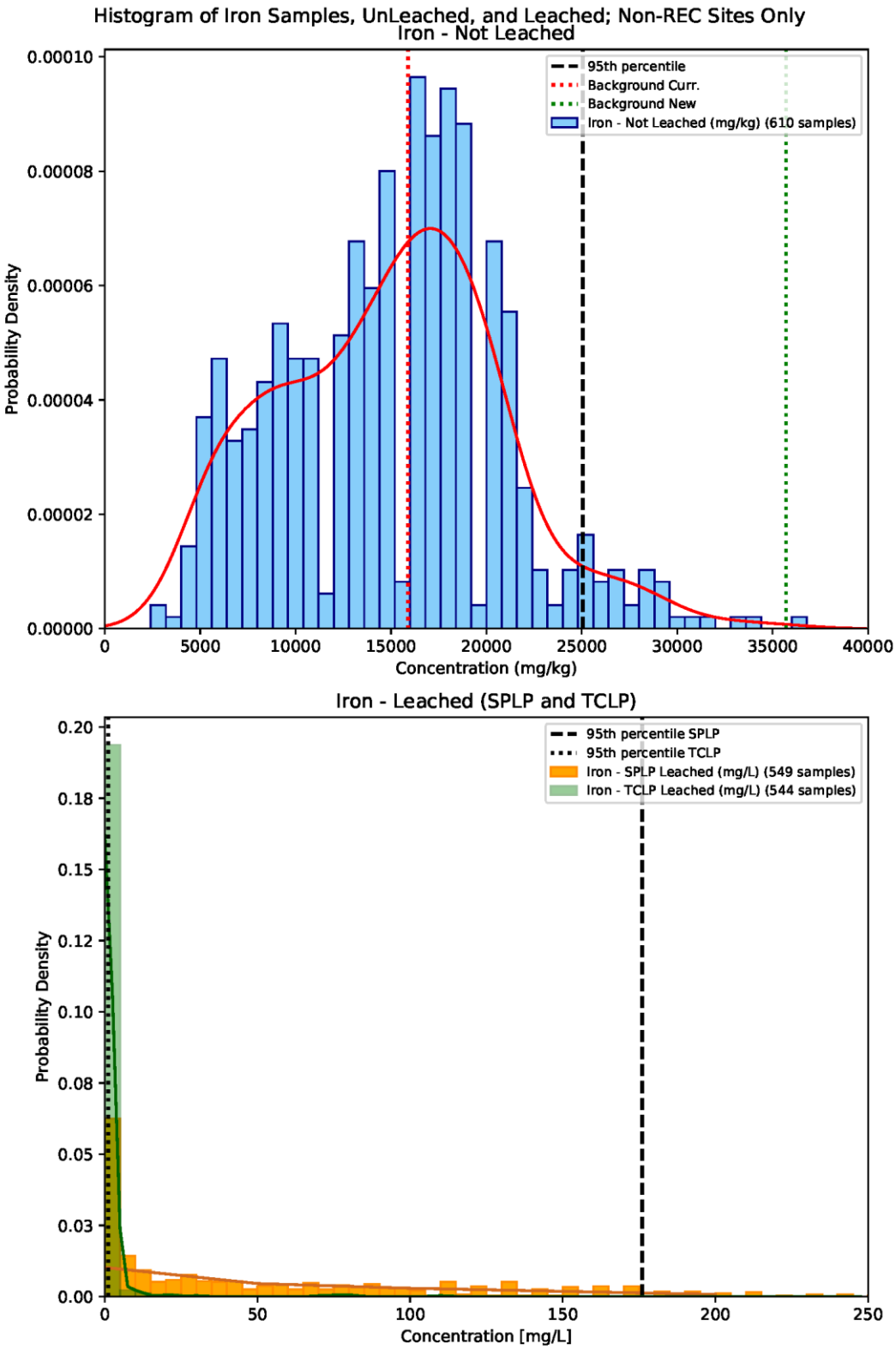


Figure 393. Histogram of RSL iron concentrations, Non-REC (mg/kg)

Iron Unleached Concentration (mg/kg)

1) Region

2) District

3) County

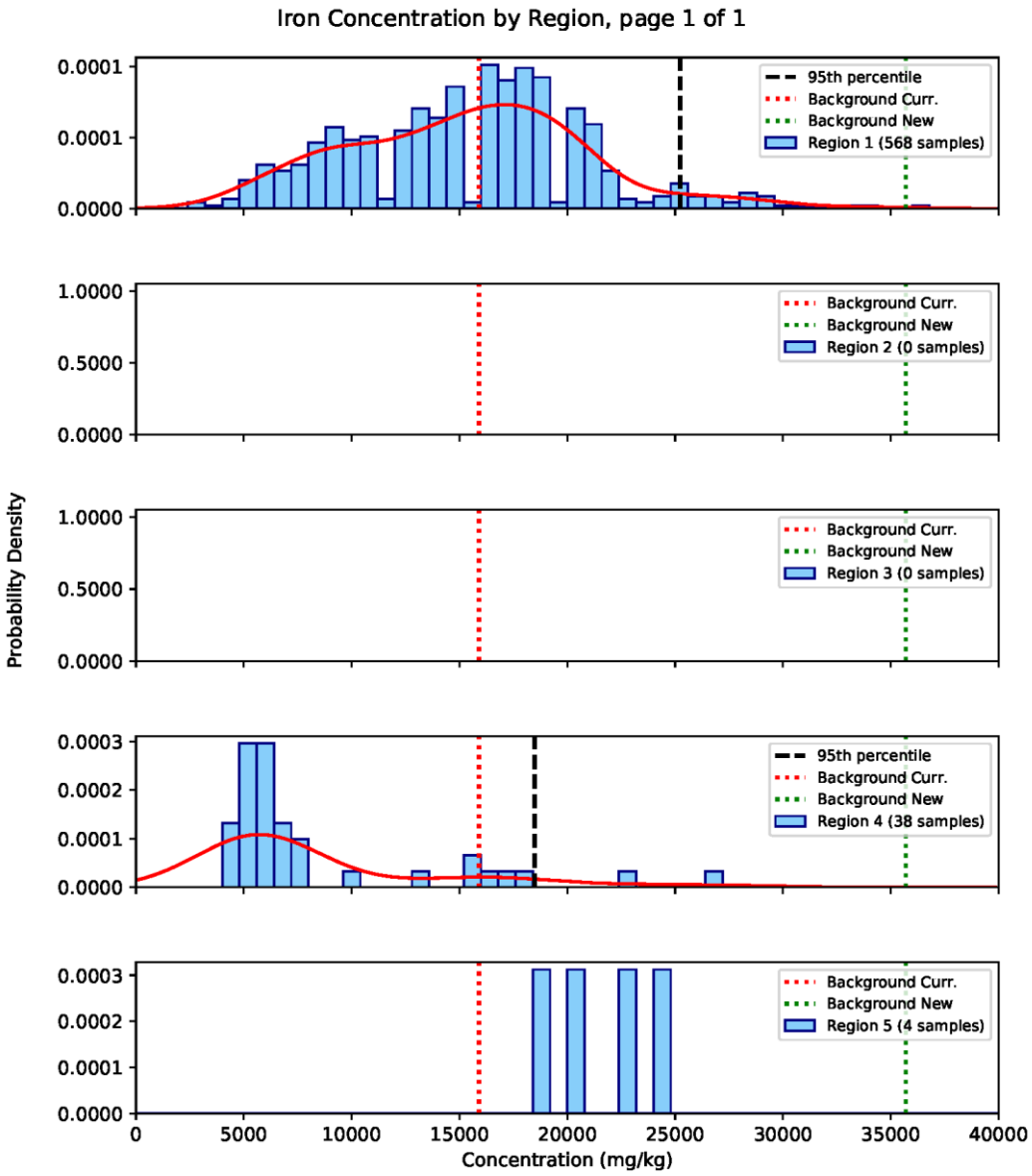


Figure 394. Histogram of RSL iron concentrations by IDOT Region, Non-REC (mg/kg)

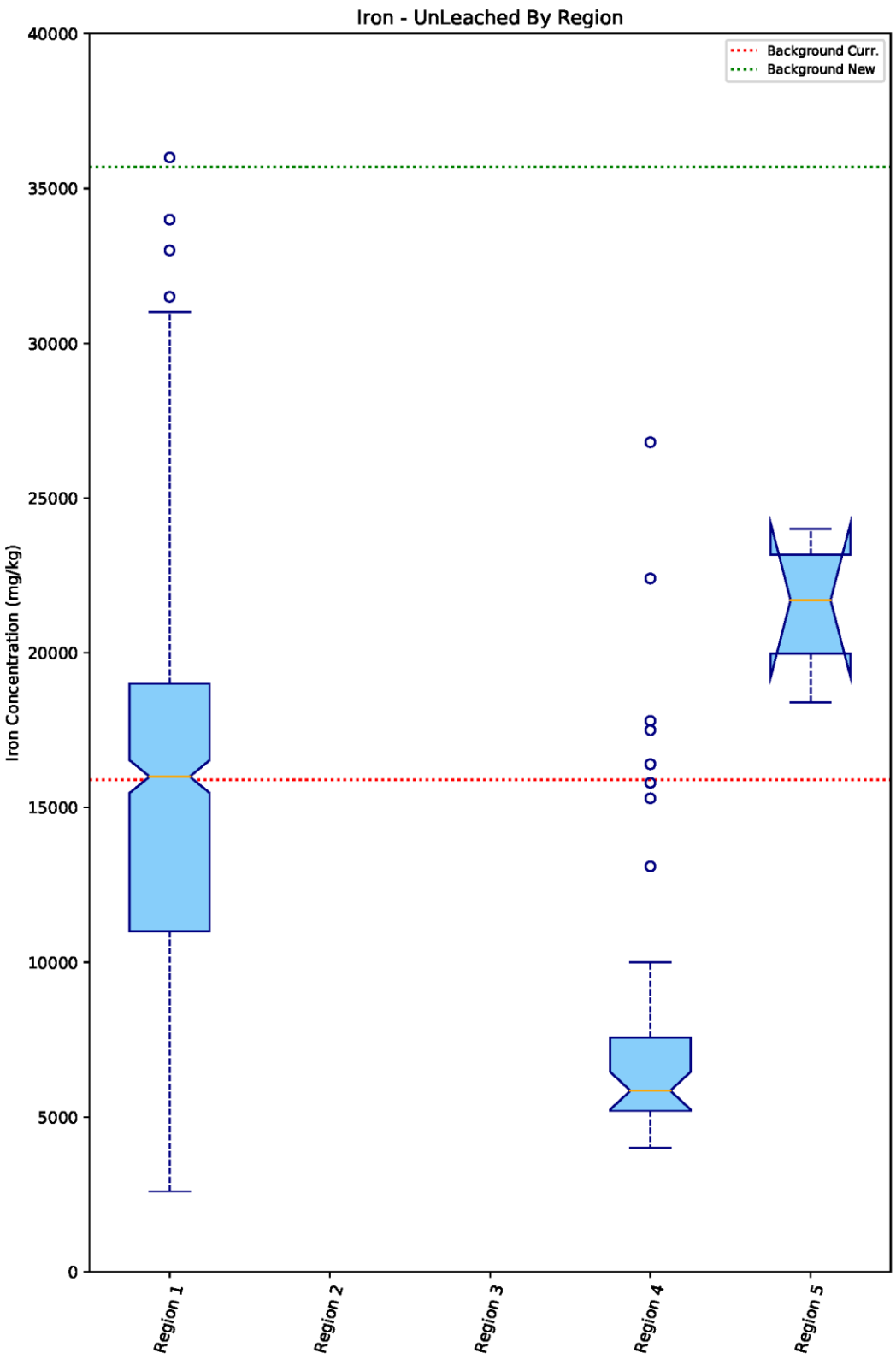


Figure 395. Boxplot of RSL iron concentrations by IDOT Region, Non-REC (mg/kg)

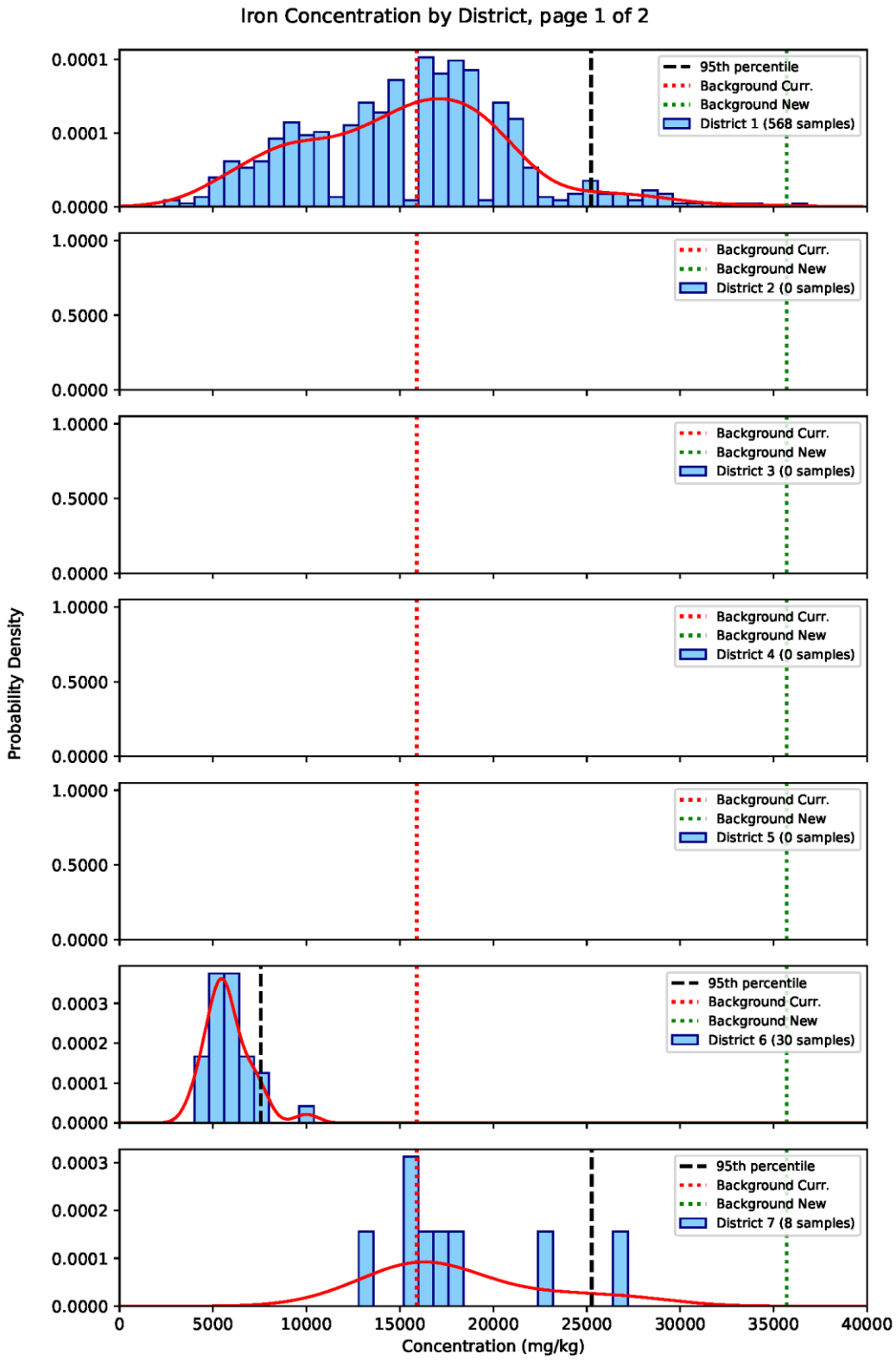


Figure 396. Histogram of RSL iron concentrations by IDOT District, Non-REC (mg/kg), part 1

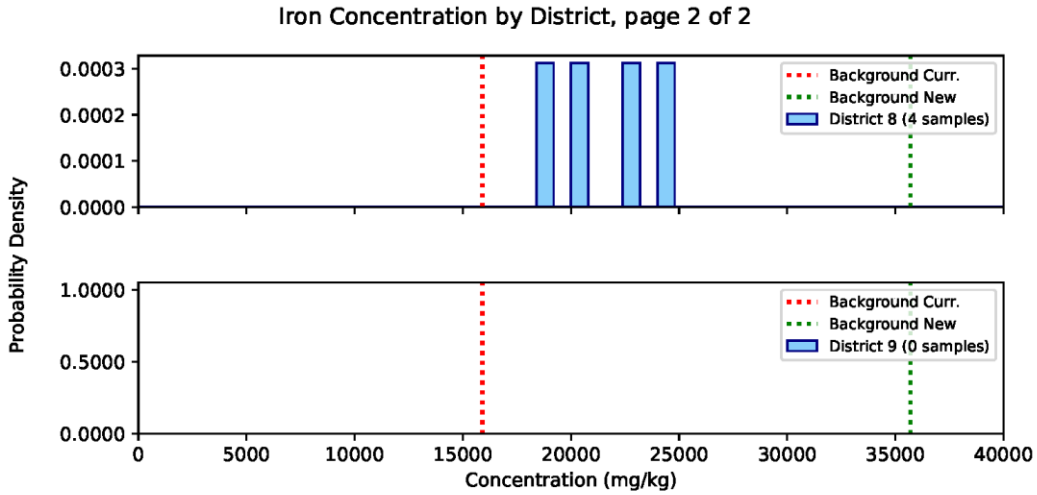


Figure 397. Histogram of RSL iron concentrations by IDOT District, Non-REC (mg/kg), part 2

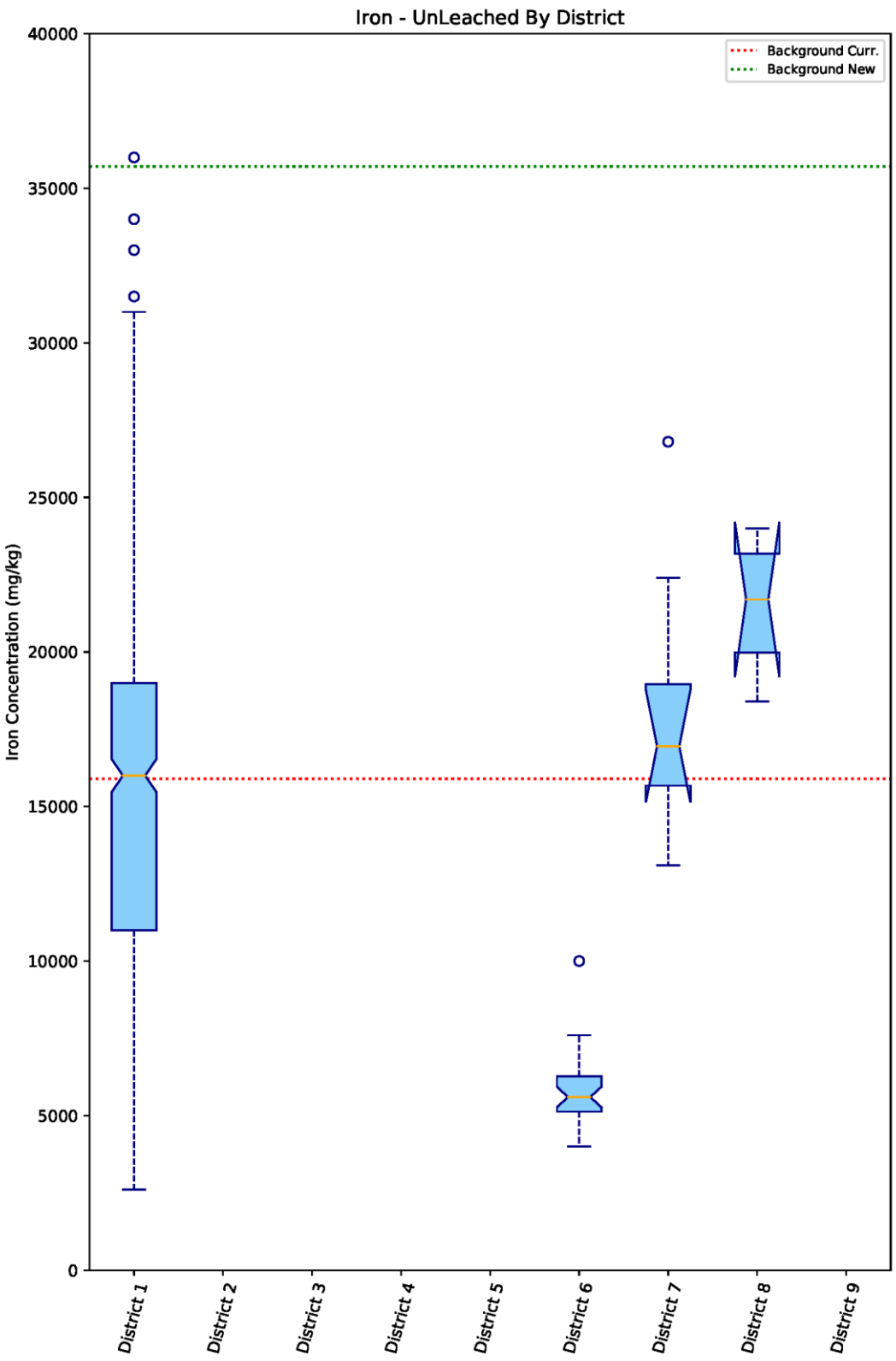


Figure 398. Boxplot of RSL iron concentrations by IDOT District, Non-REC (mg/kg)

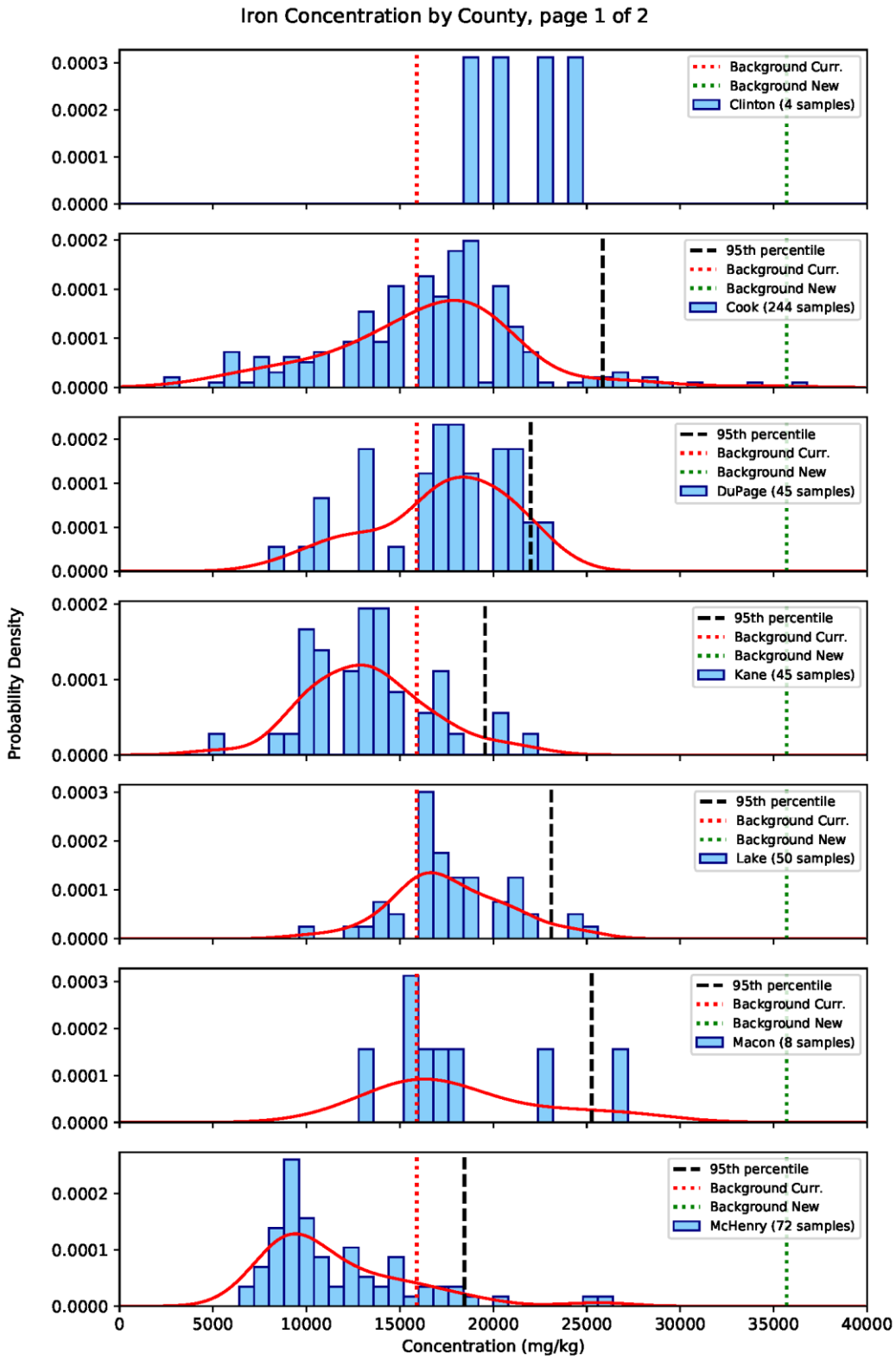


Figure 399. Histogram of RSL iron concentrations by Illinois county, Non-REC (mg/kg), part 1

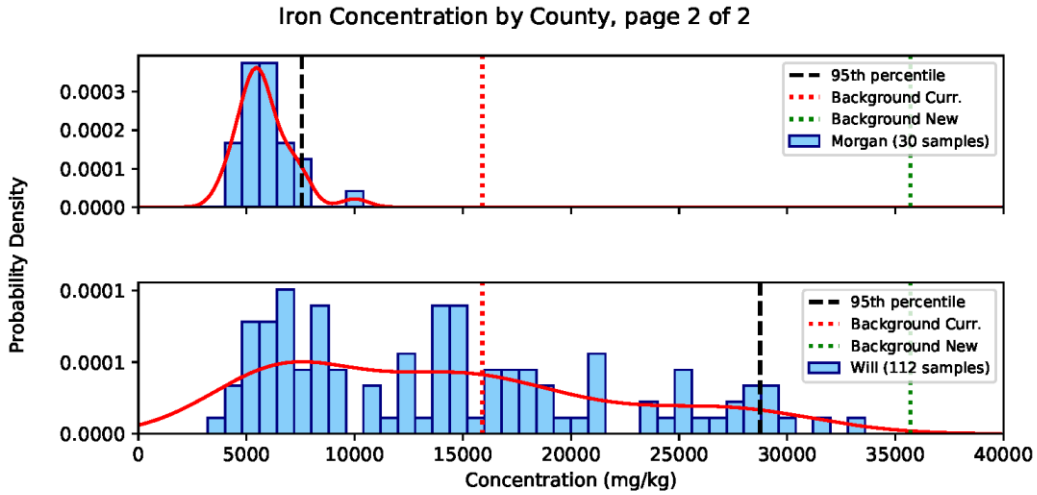


Figure 400. Histogram of RSL iron concentrations by Illinois county, Non-REC (mg/kg), part 2

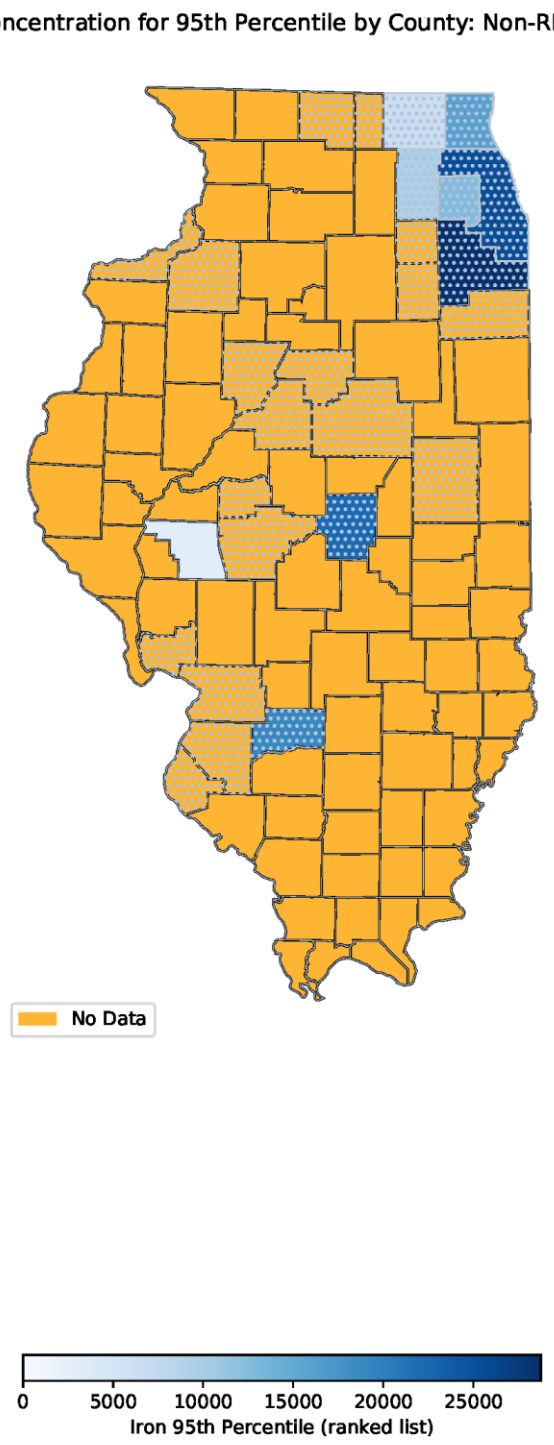


Figure 401. Map of RSL iron 95th percentile concentration by Illinois county, Non-REC (mg/kg)

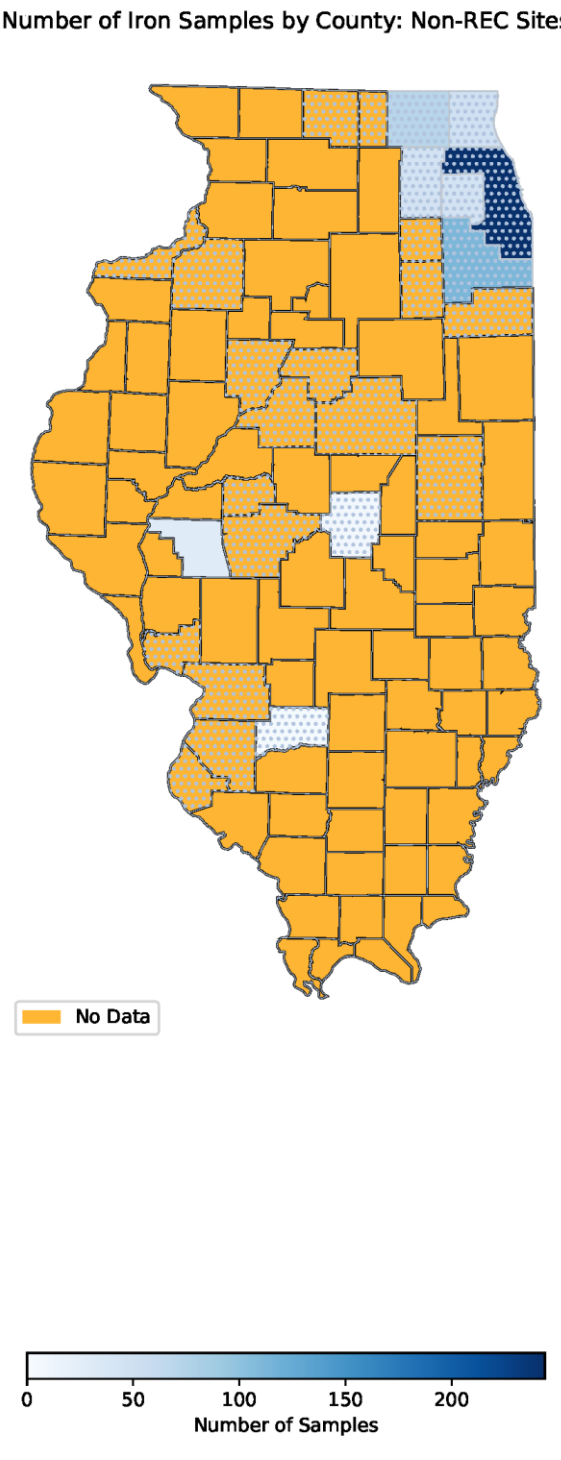


Figure 402. Map of RSL iron sample quantity by Illinois county, Non-REC (mg/kg)

K.3 IRON DE MINIMIS

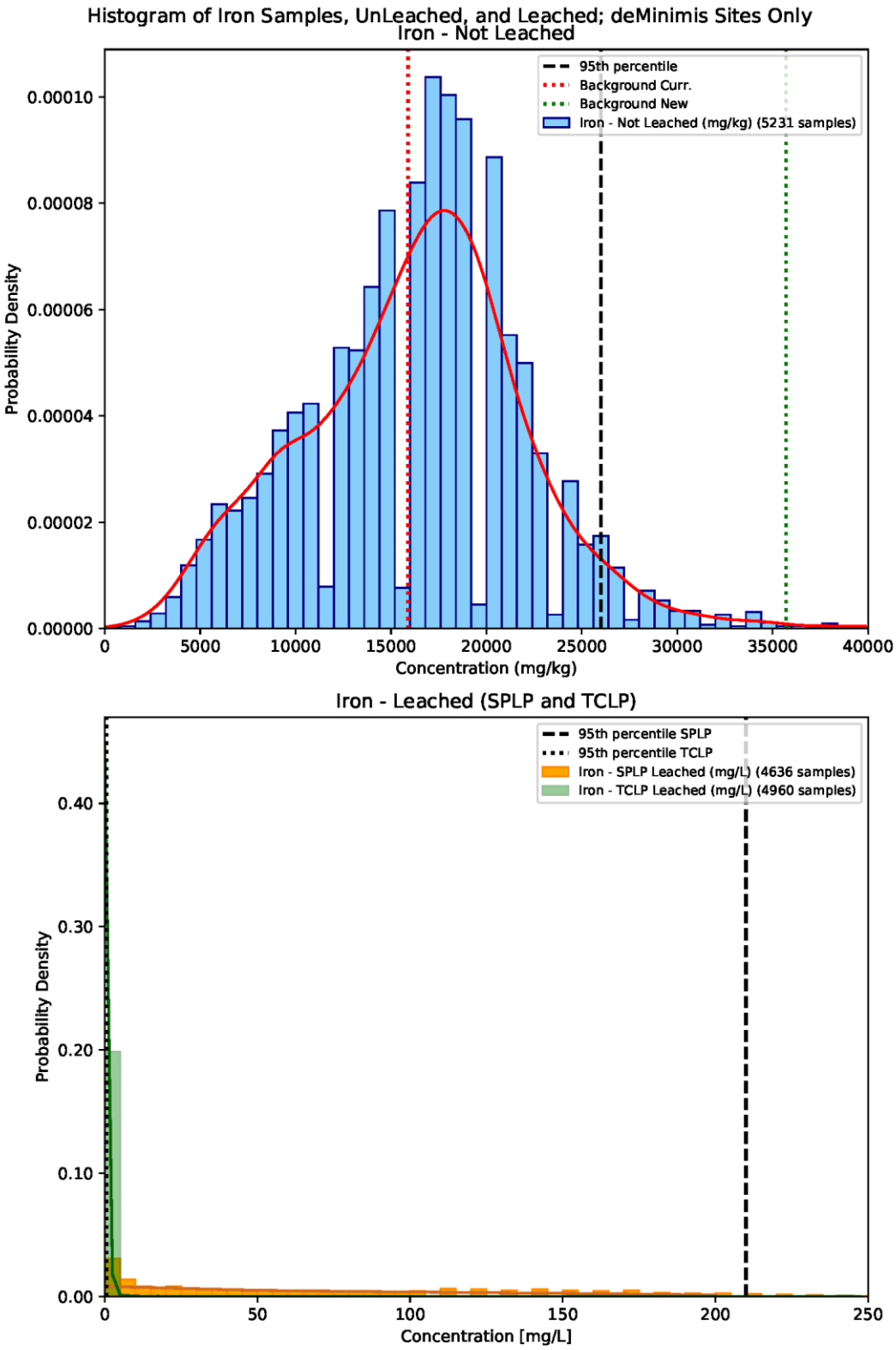


Figure 403. Histogram of RSL iron concentrations, de minimis (mg/kg)

Iron Unleached Concentration (mg/kg)

1) Region

2) District

3) County

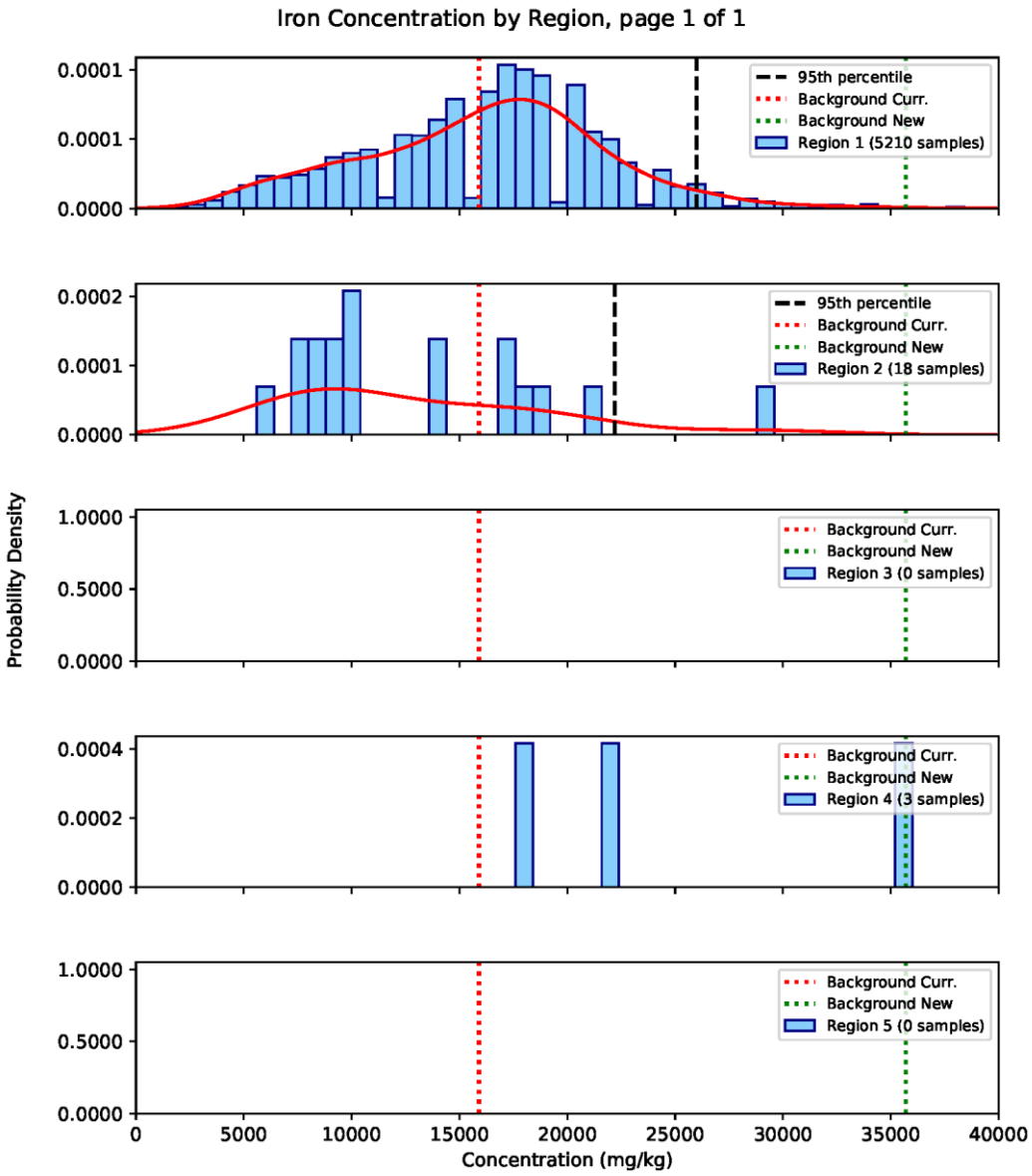


Figure 404. Histogram of RSL iron concentrations by IDOT Region, de minimis (mg/kg)

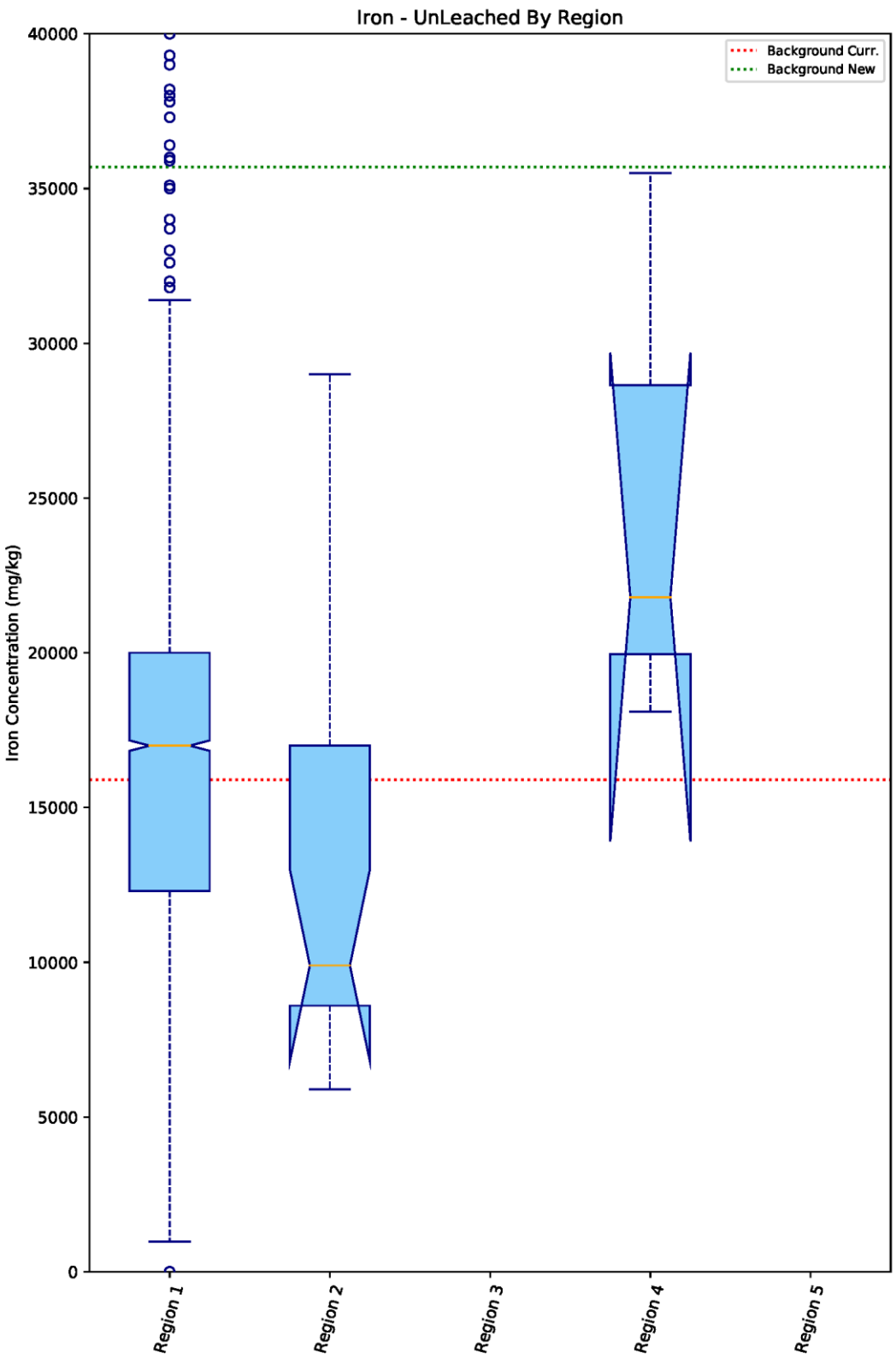


Figure 405. Boxplot of RSL iron concentrations by IDOT Region, de minimis (mg/kg)

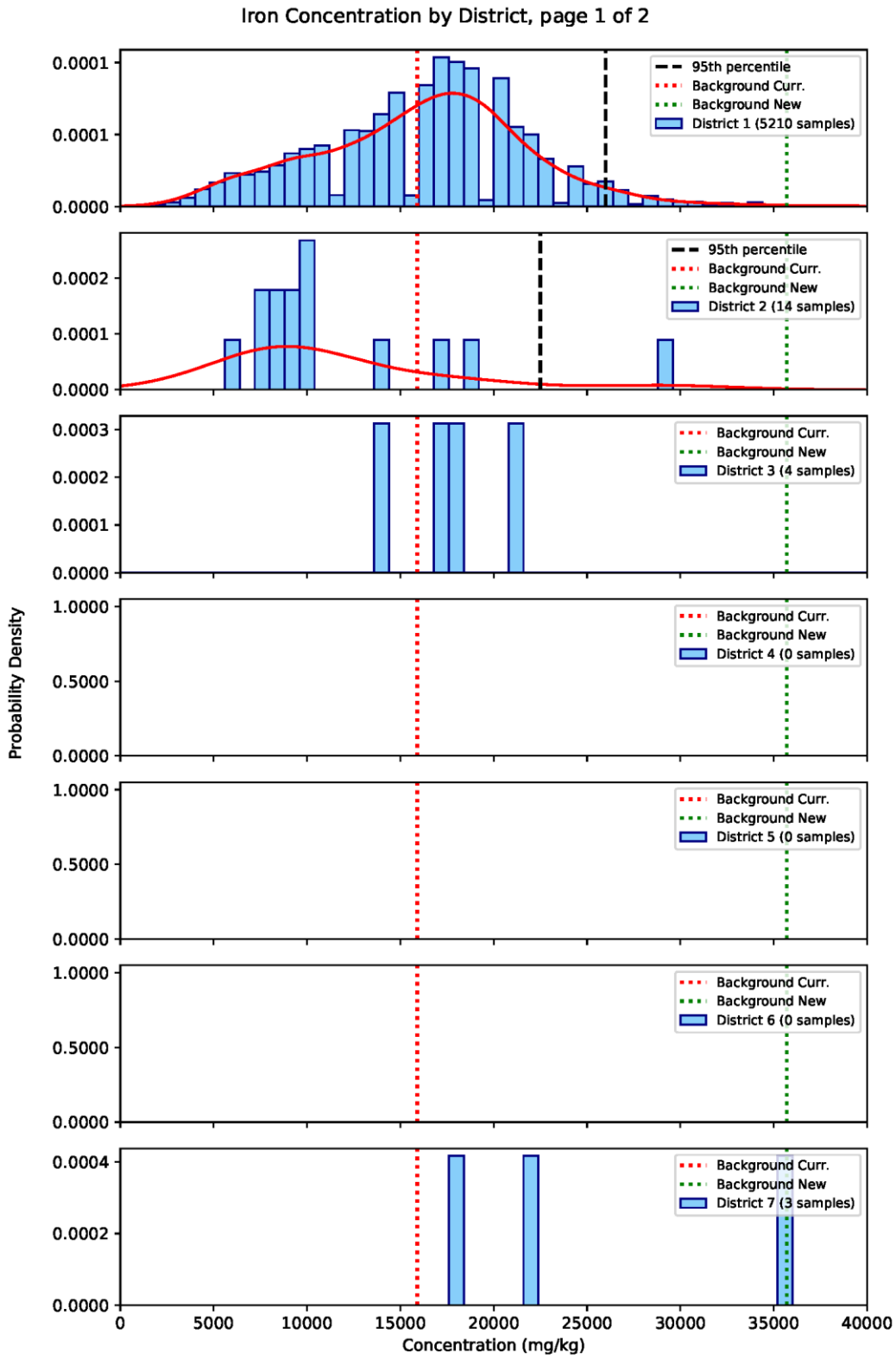


Figure 406. Histogram of RSL iron concentrations by IDOT District, de minimis (mg/kg), part 1

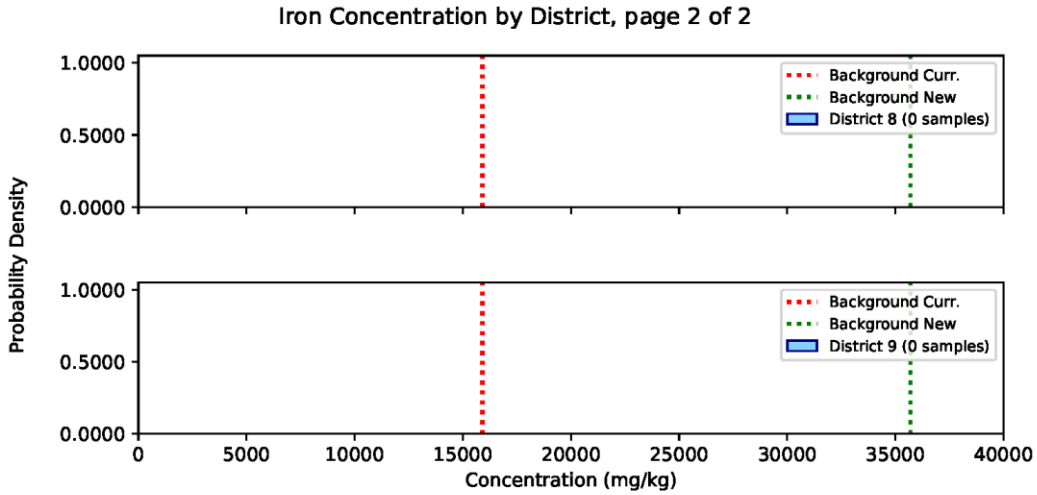


Figure 407. Histogram of RSL iron concentrations by IDOT District, de minimis (mg/kg), part 2

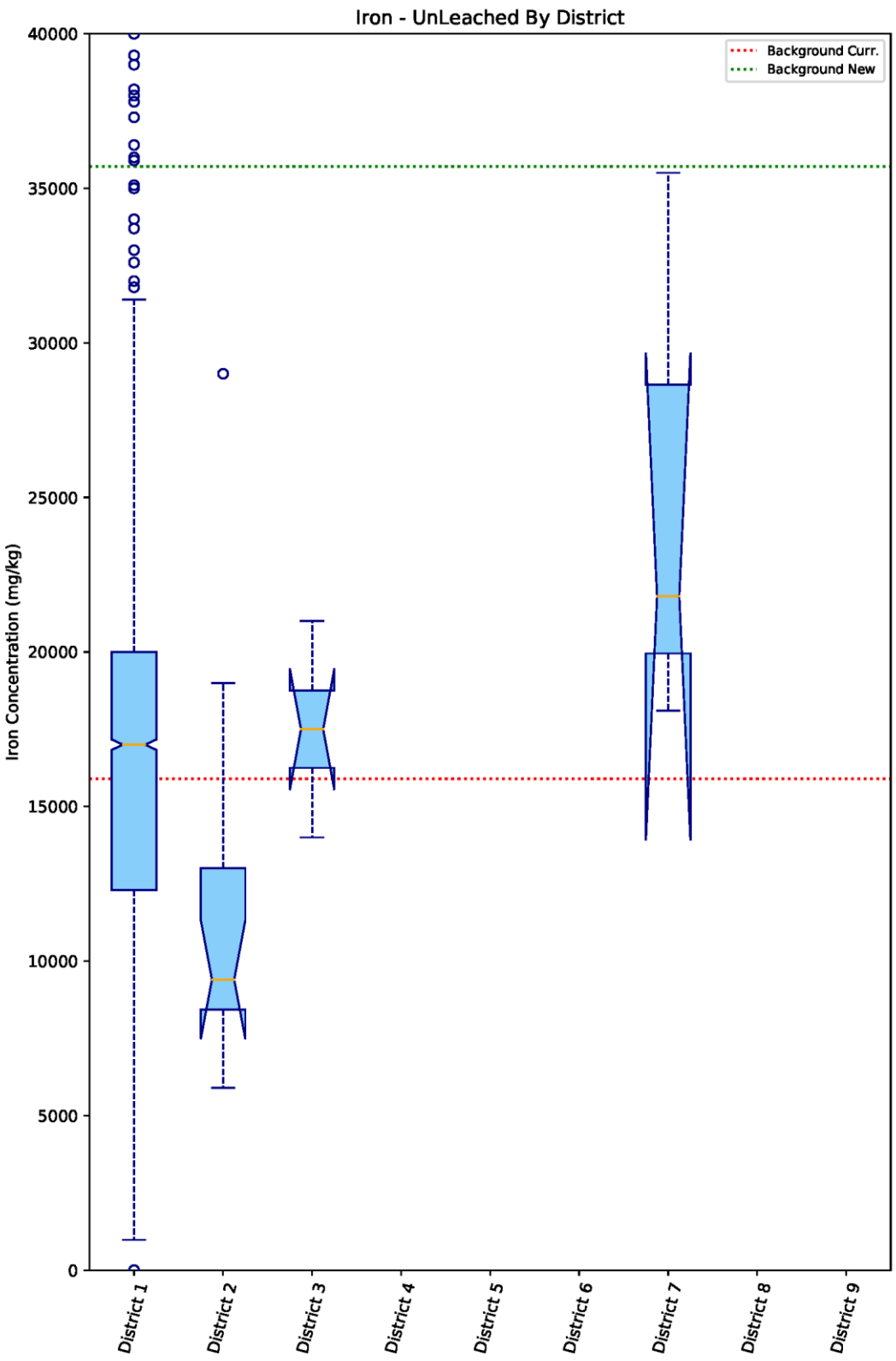


Figure 408. Boxplot of RSL iron concentrations by IDOT District, de minimis (mg/kg)

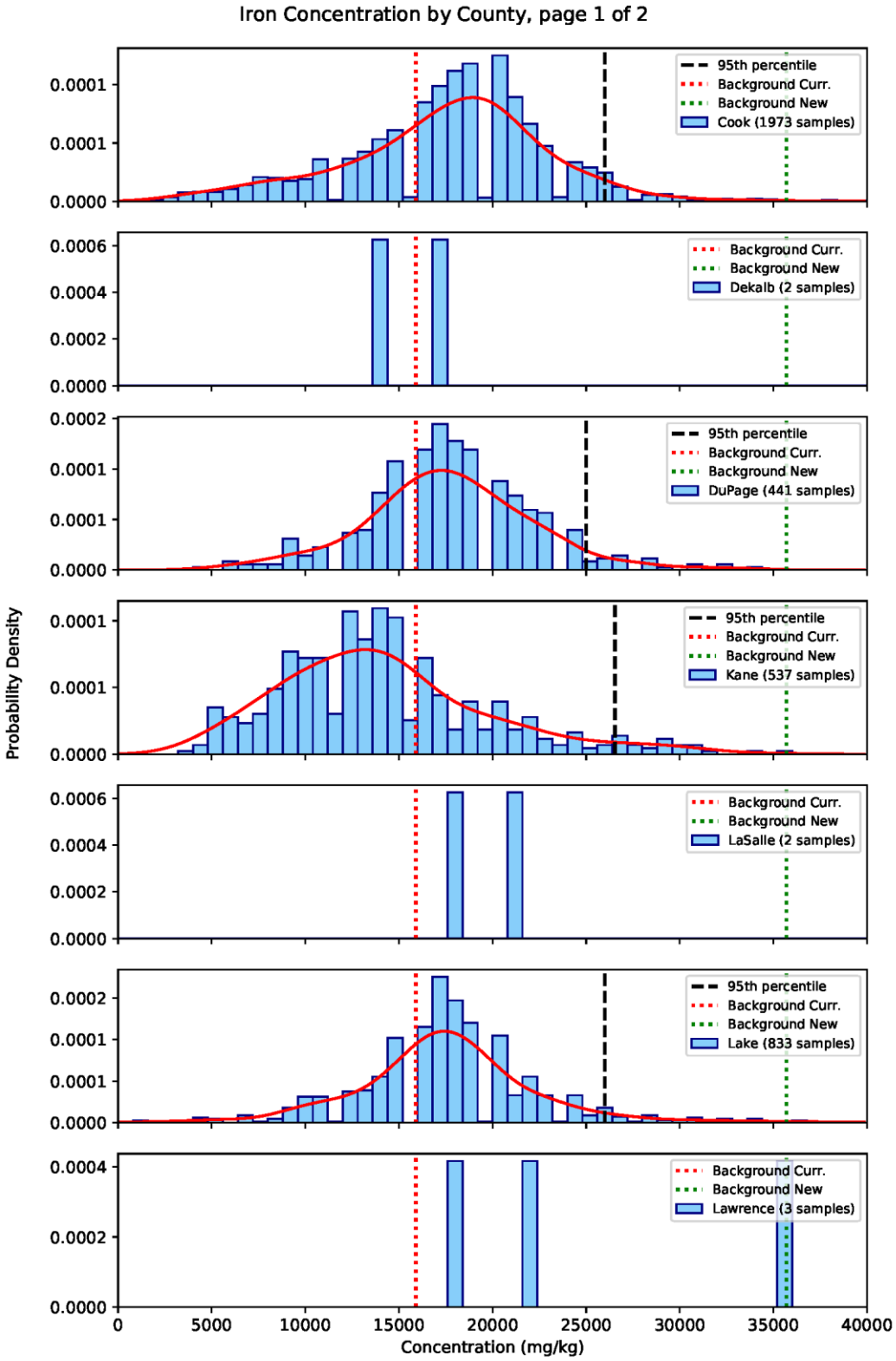


Figure 409. Histogram of RSL iron concentrations by Illinois county, de minimis (mg/kg), part 1

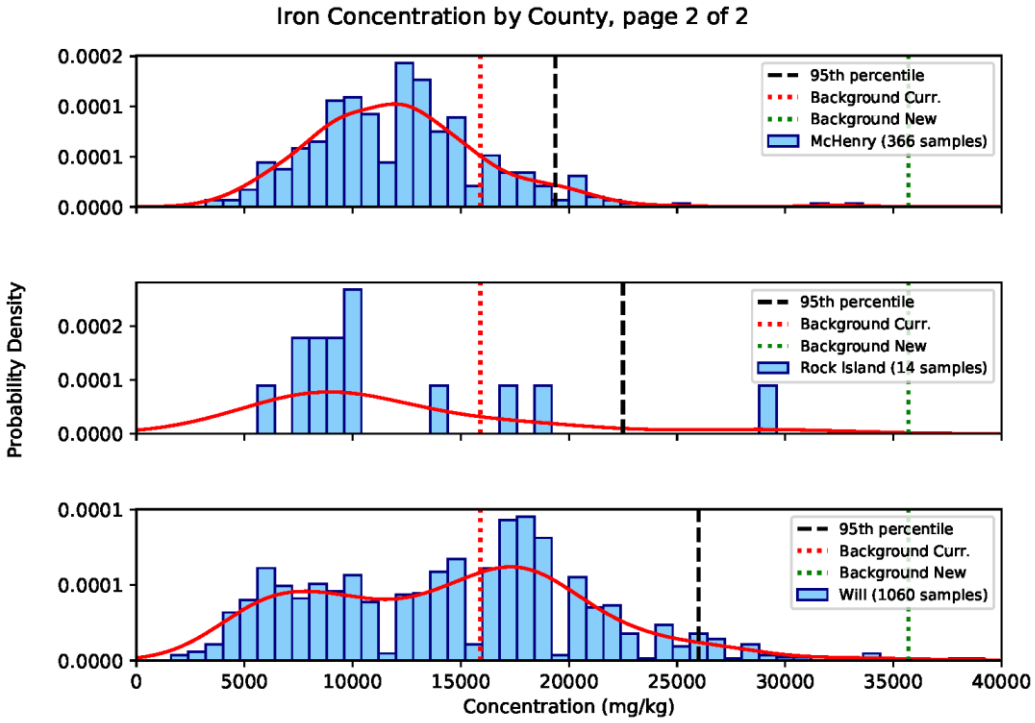


Figure 410. Histogram of RSL iron concentrations by Illinois county, de minimis (mg/kg), part 2

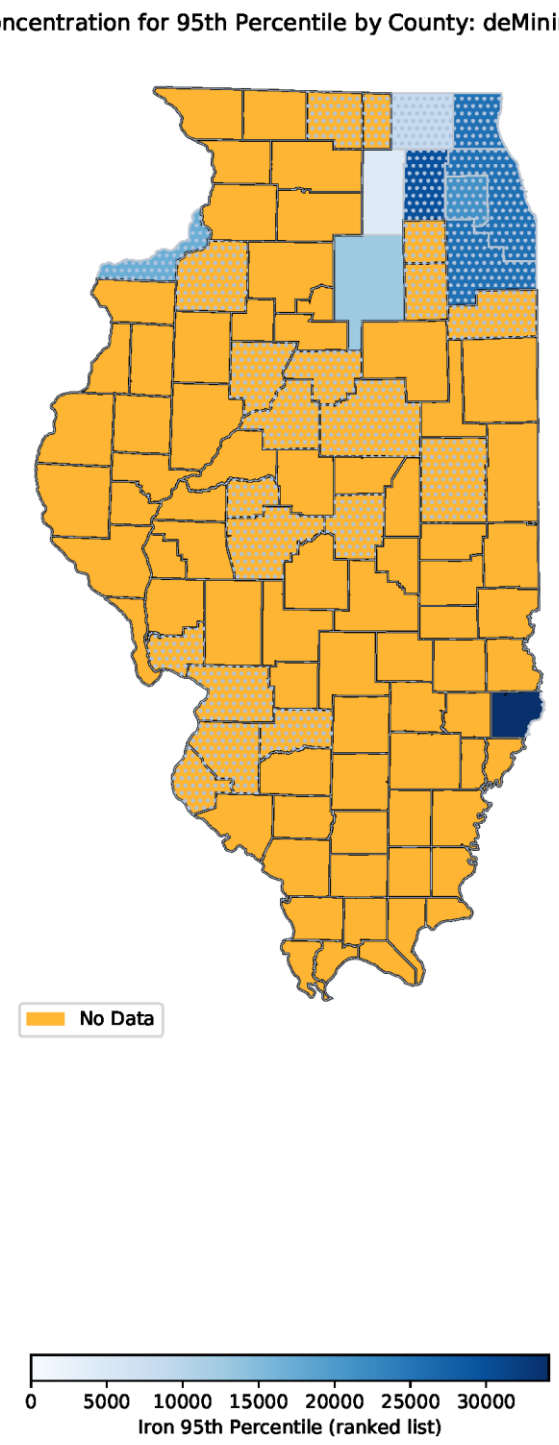


Figure 411. Map of RSL iron 95th percentile concentration by Illinois county, de minimis (mg/kg)

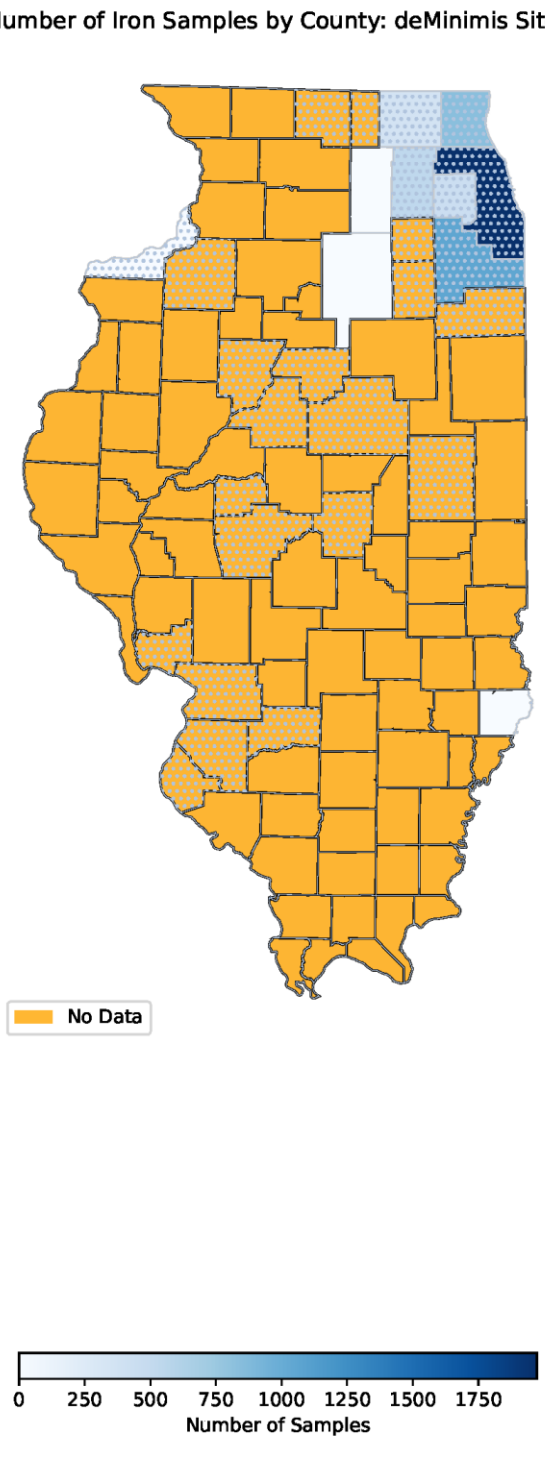


Figure 412. Map of RSL iron sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX L. ANALYTE ANALYSIS: LEAD

L.1 LEAD REC

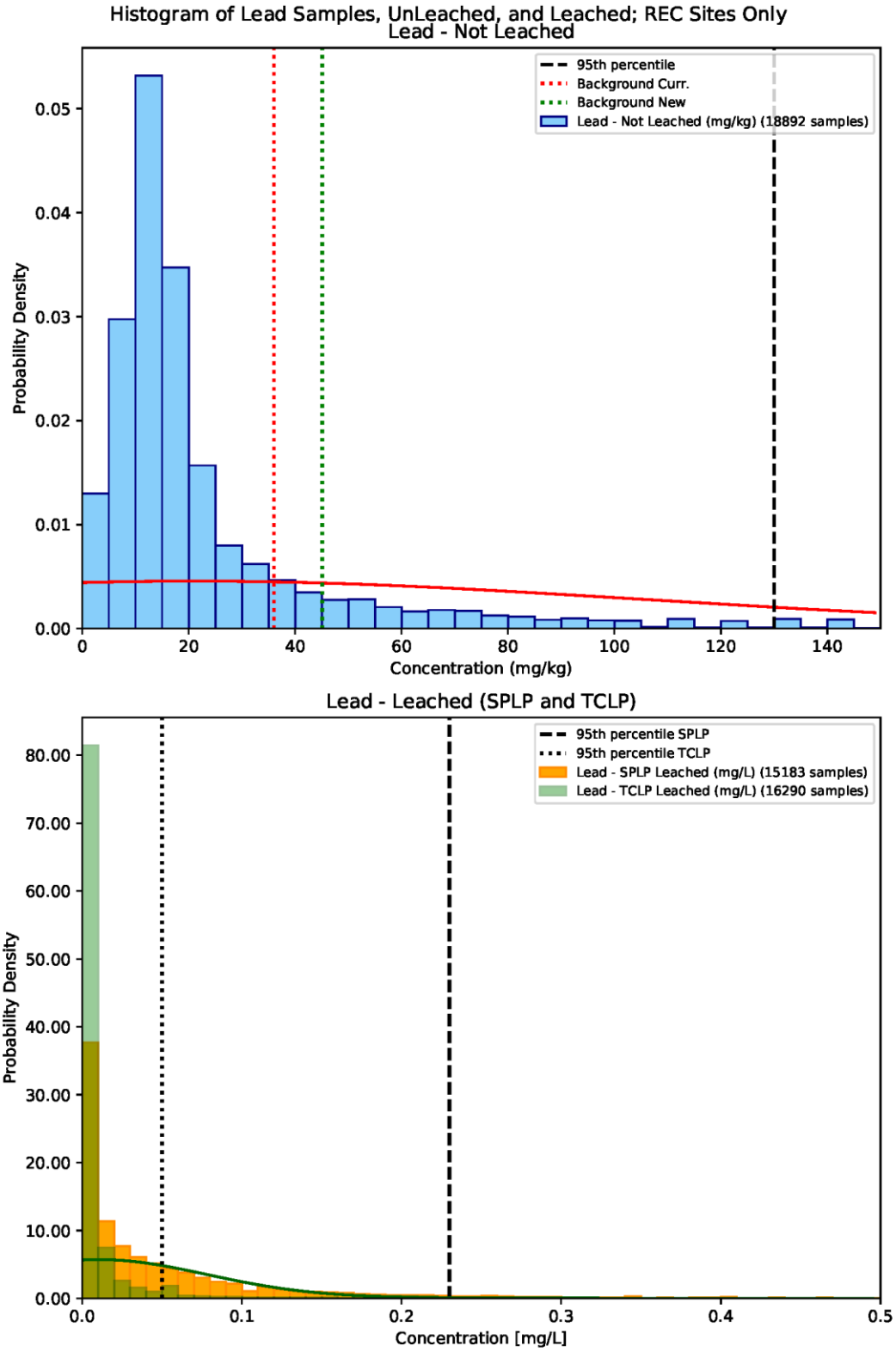


Figure 413. Histogram of RSL lead concentrations, REC (mg/kg)

Lead Unleached Concentration (mg/kg)

1) Region

2) District

3) County

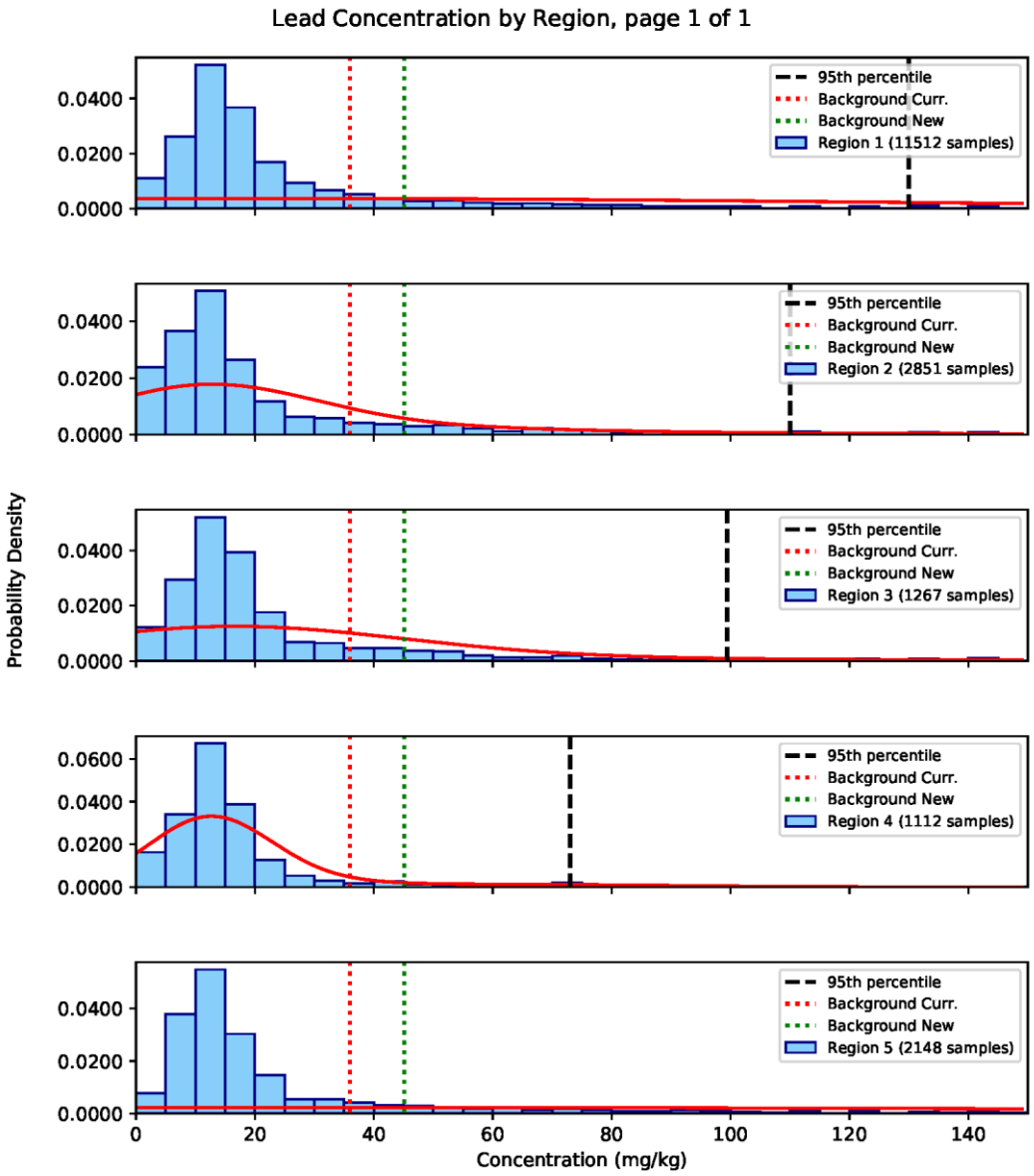


Figure 414. Histogram of RSL lead concentrations by IDOT Region, REC (mg/kg)

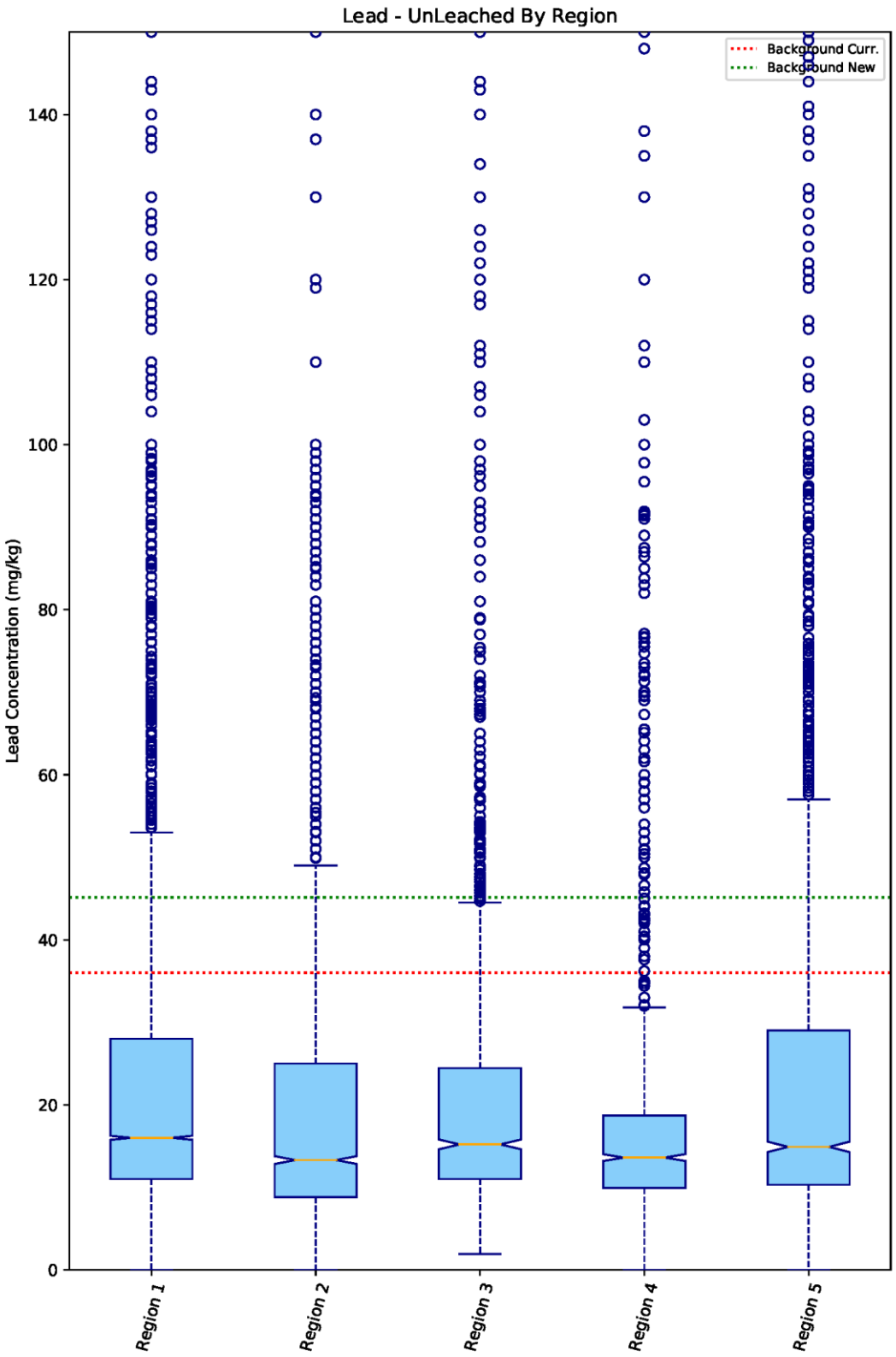


Figure 415. Boxplot of RSL lead concentrations by IDOT Region, REC (mg/kg)

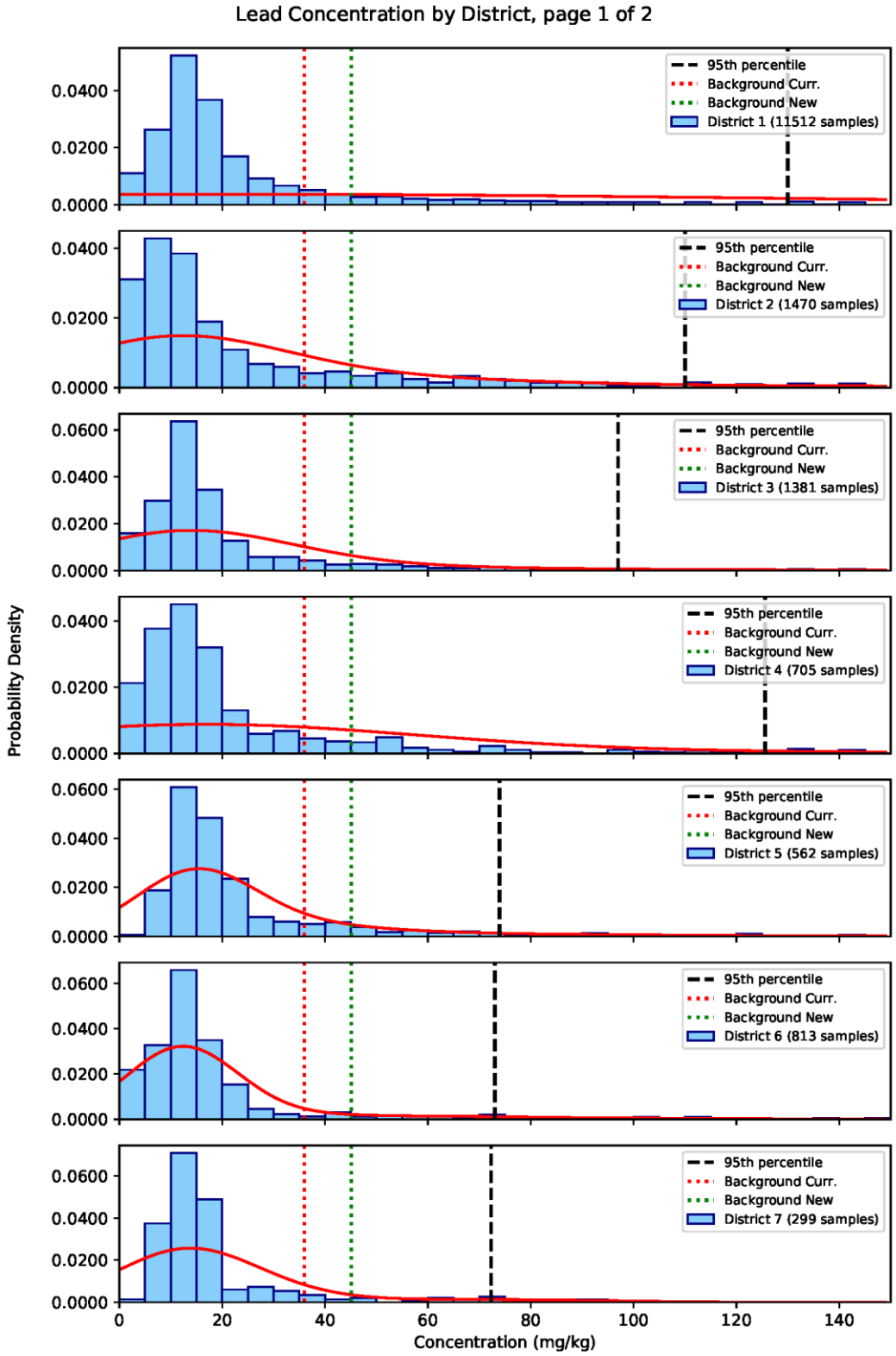


Figure 416. Histogram of RSL lead concentrations by IDOT District, REC (mg/kg), part 1

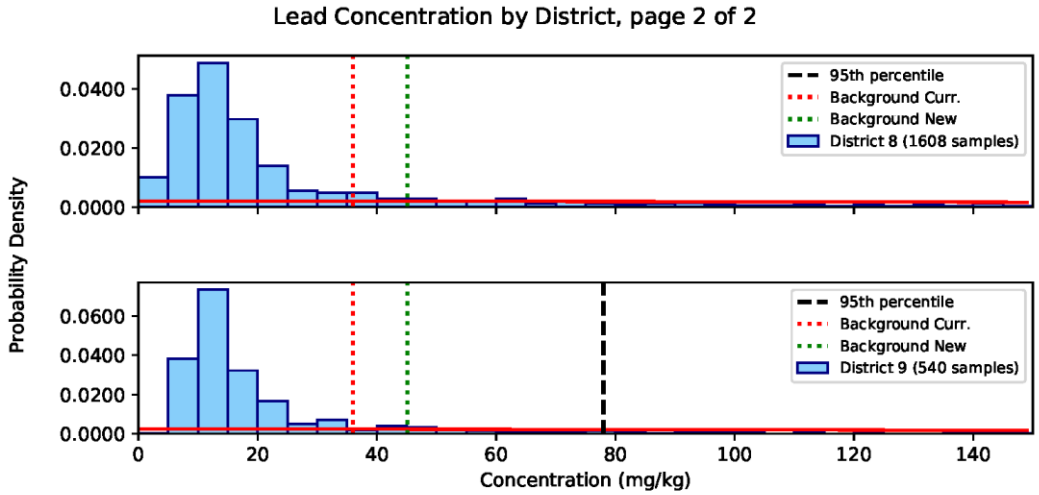


Figure 417. Histogram of RSL lead concentrations by IDOT District, REC (mg/kg), part 2

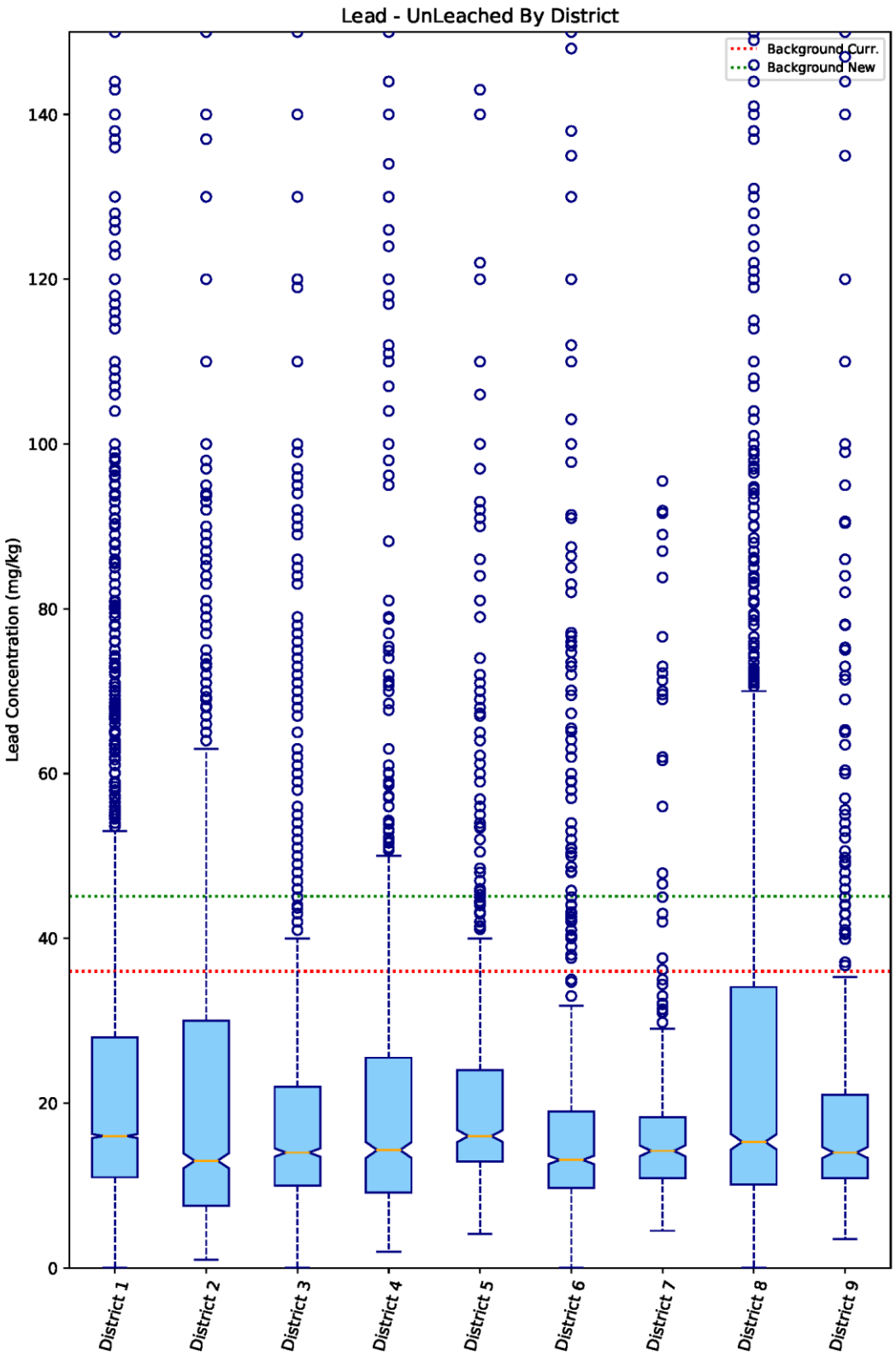


Figure 418. Boxplot of RSL lead concentrations by IDOT District, REC (mg/kg)

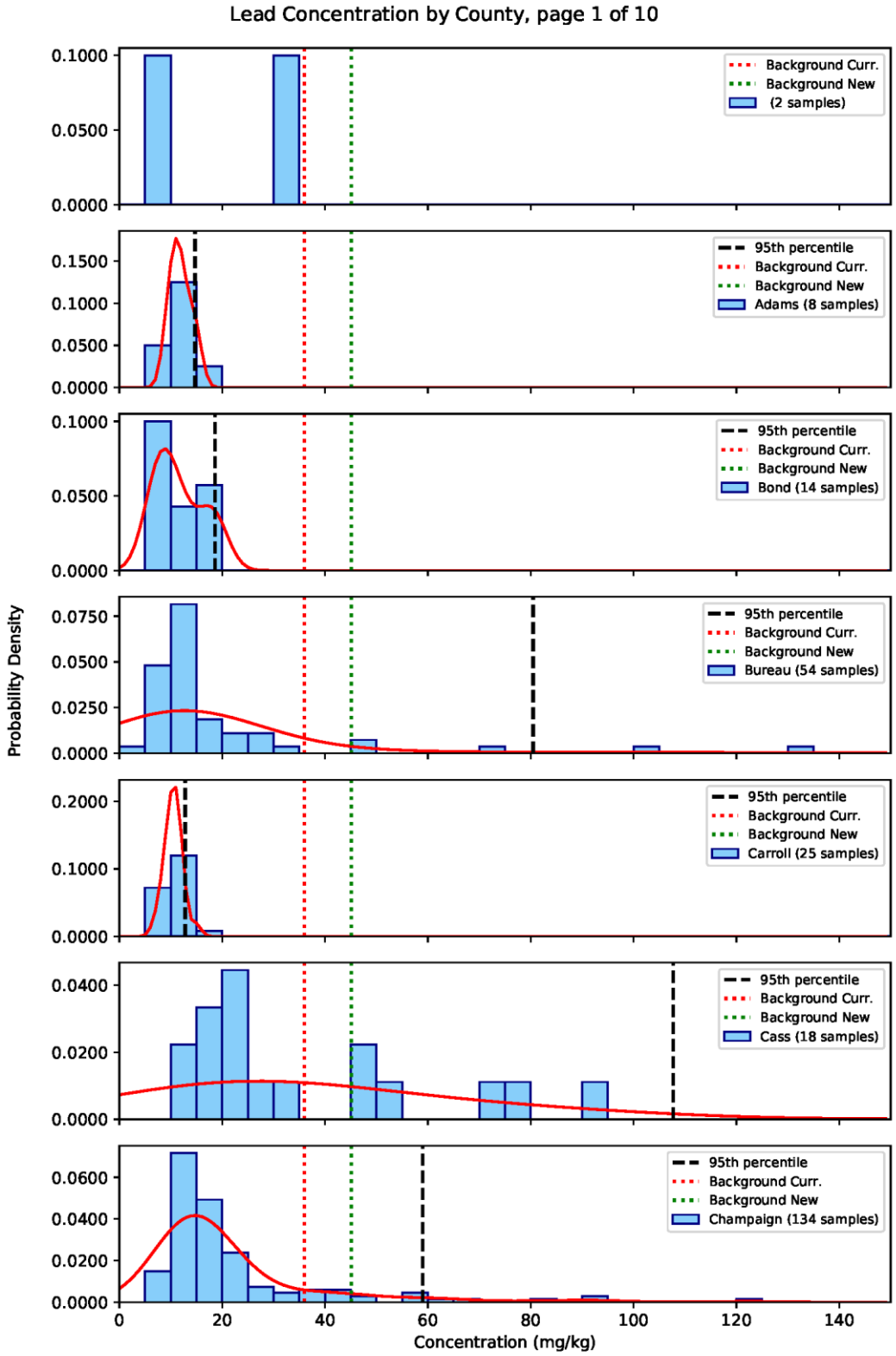


Figure 419. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 1

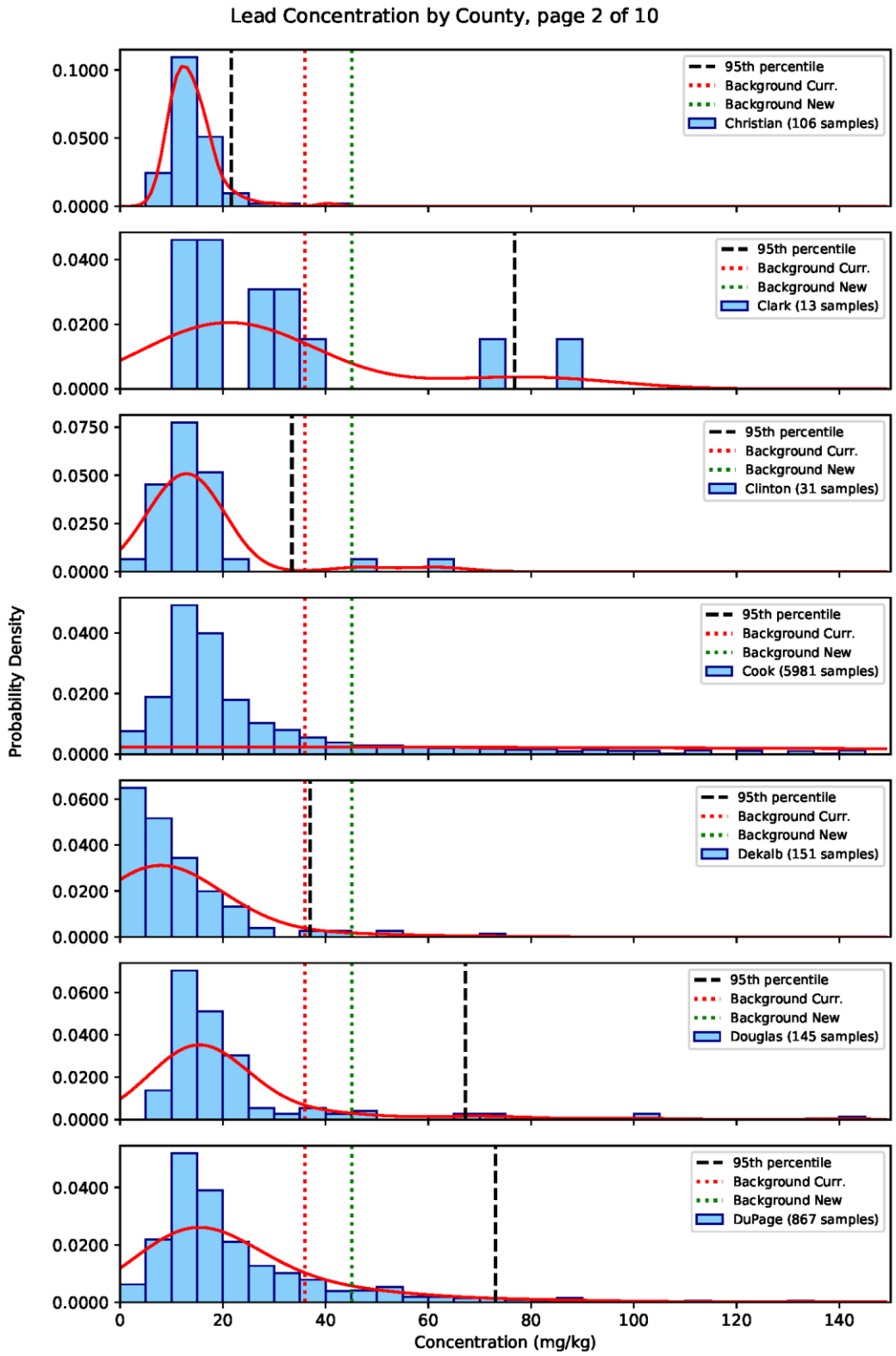


Figure 420. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 2

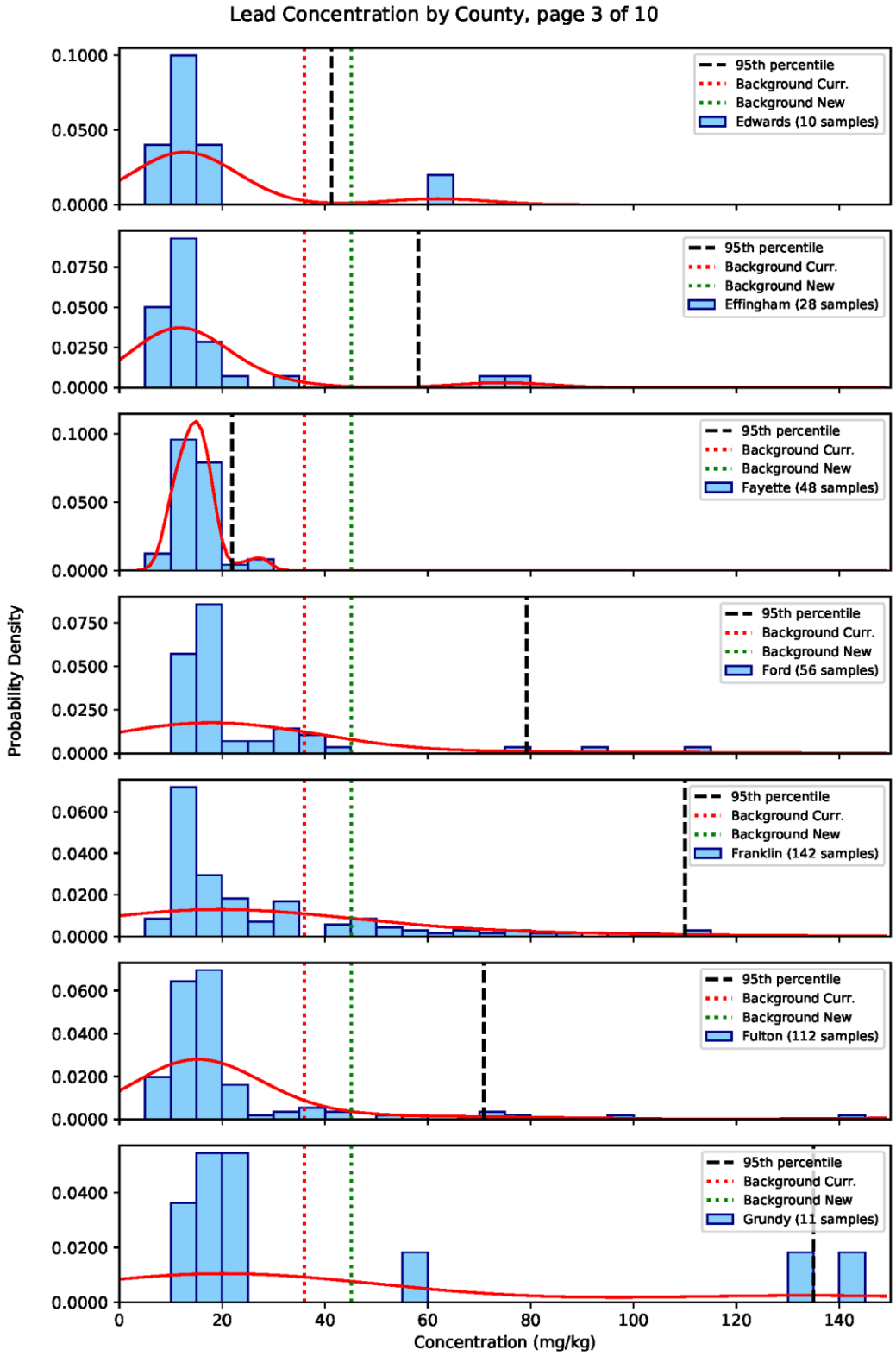


Figure 421. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 3

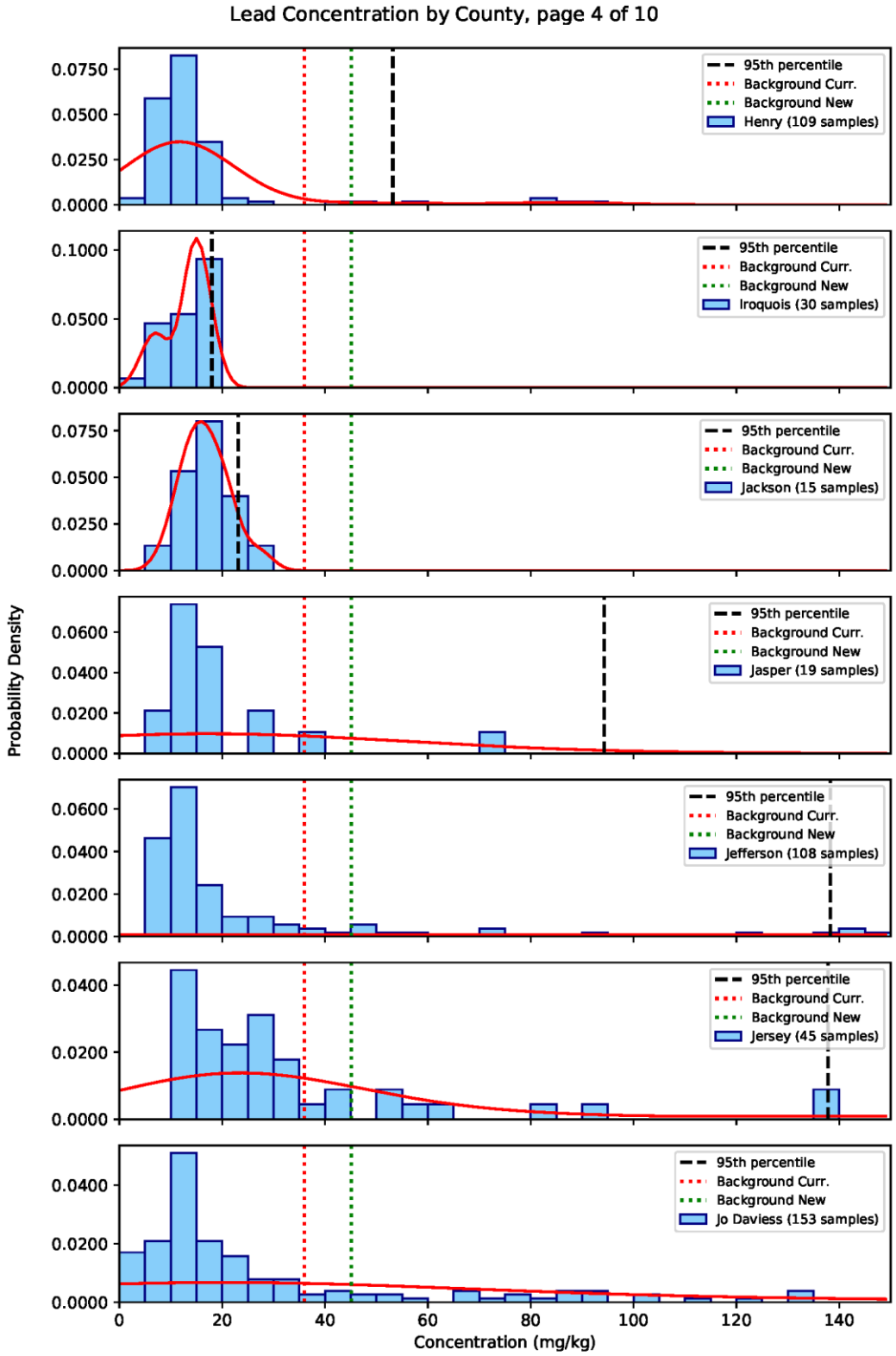


Figure 422. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 4

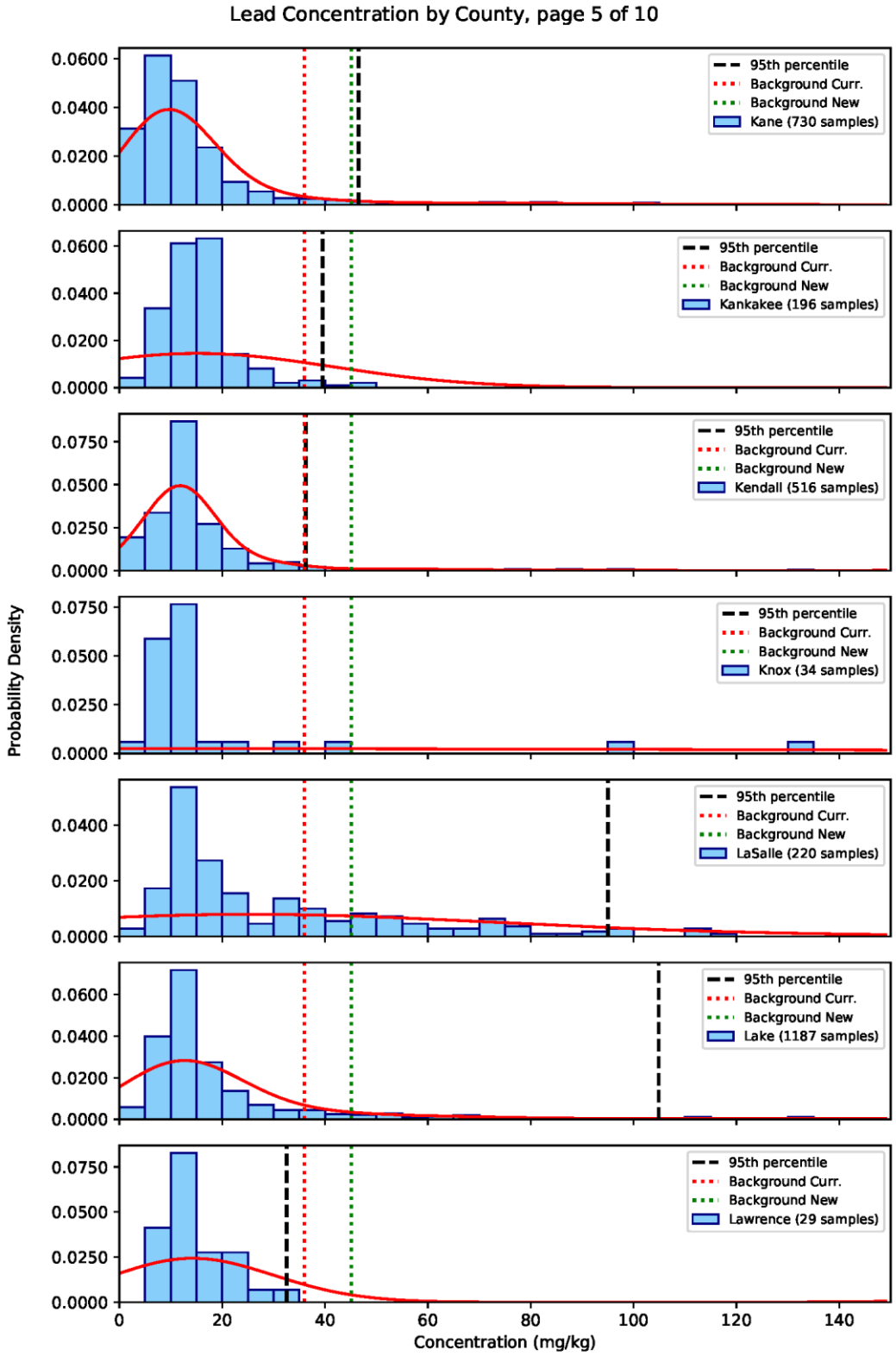


Figure 423. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 5

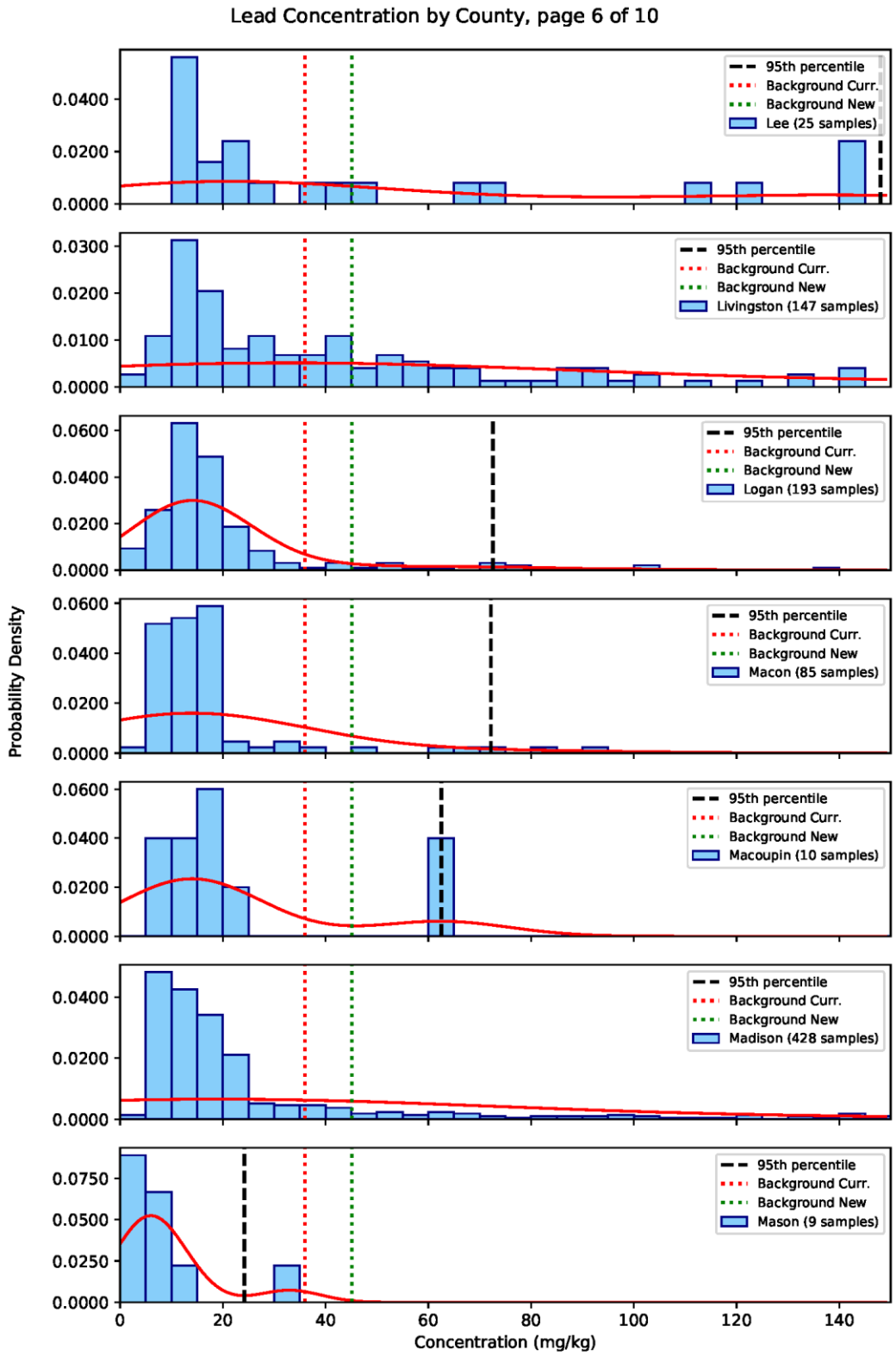


Figure 424. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 6

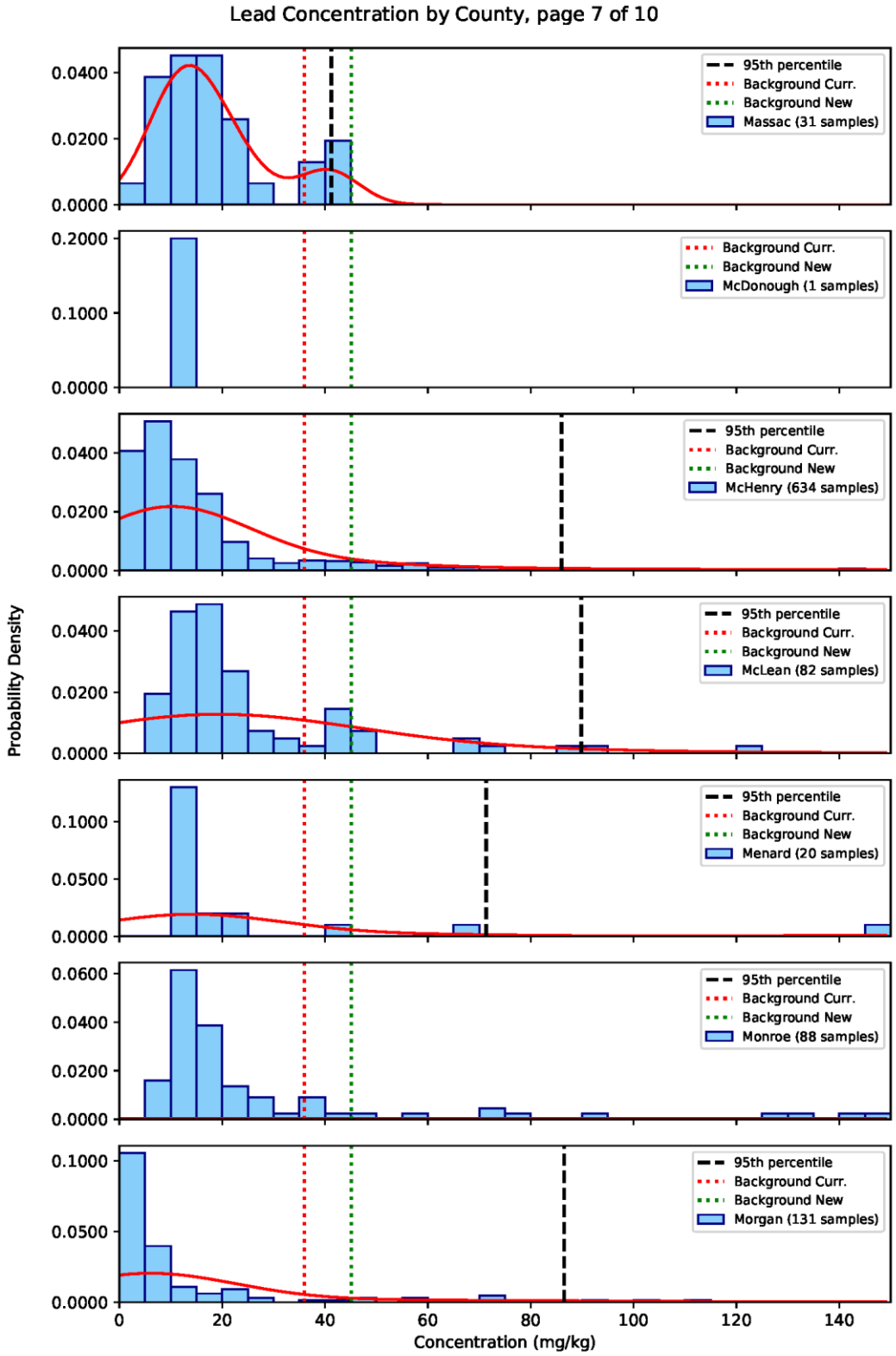


Figure 425. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 7

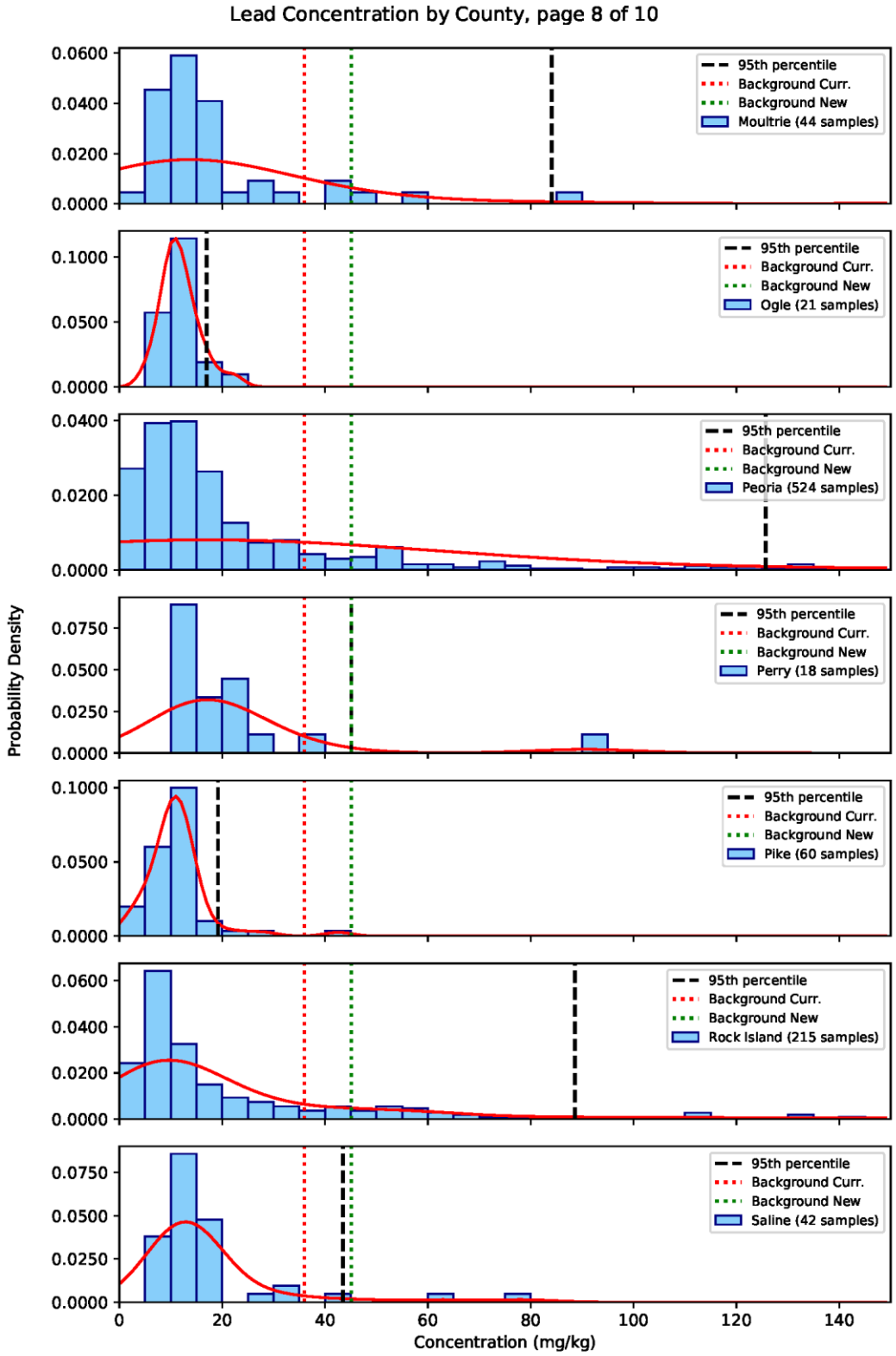


Figure 426. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 8

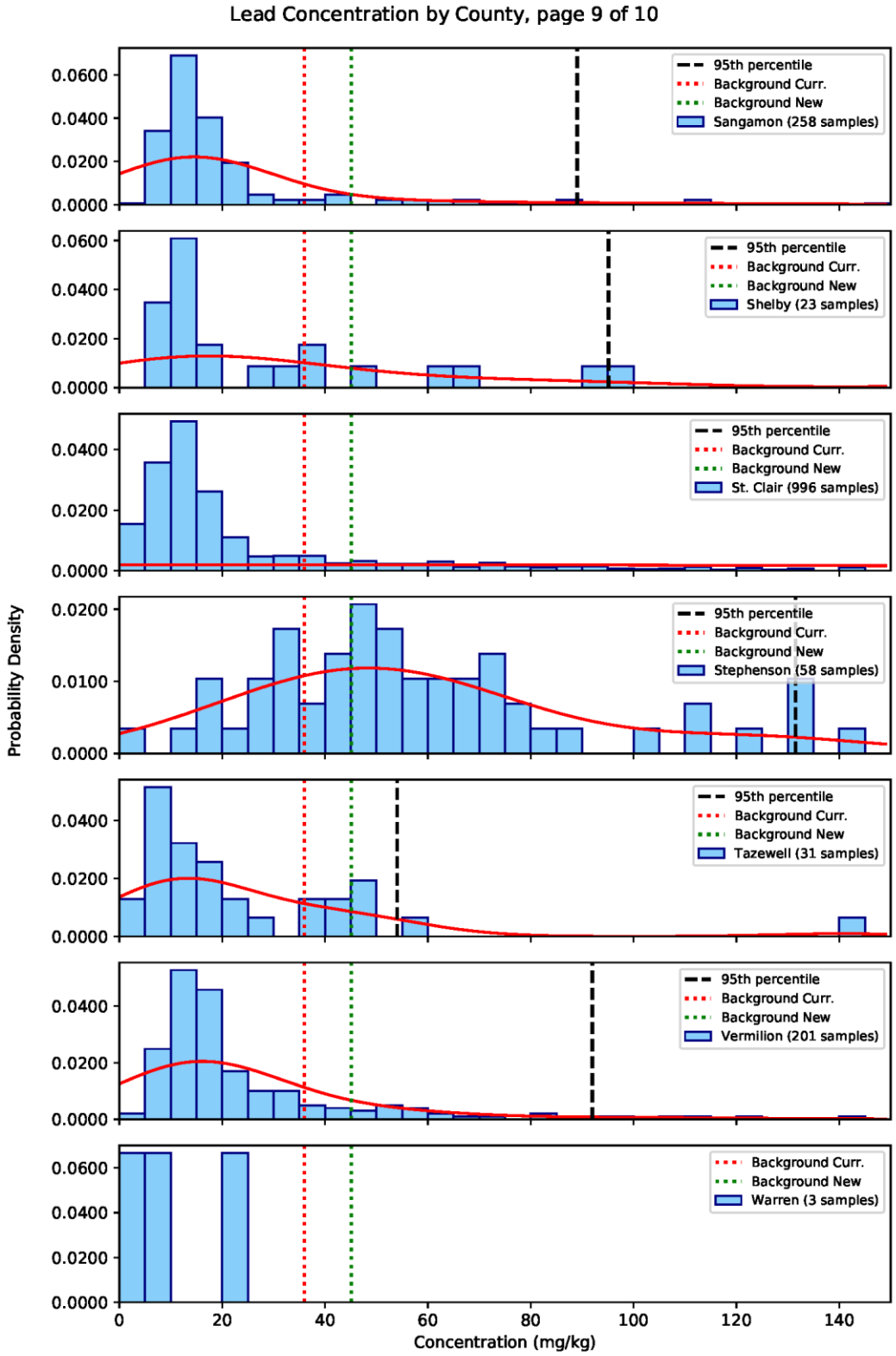


Figure 427. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 9

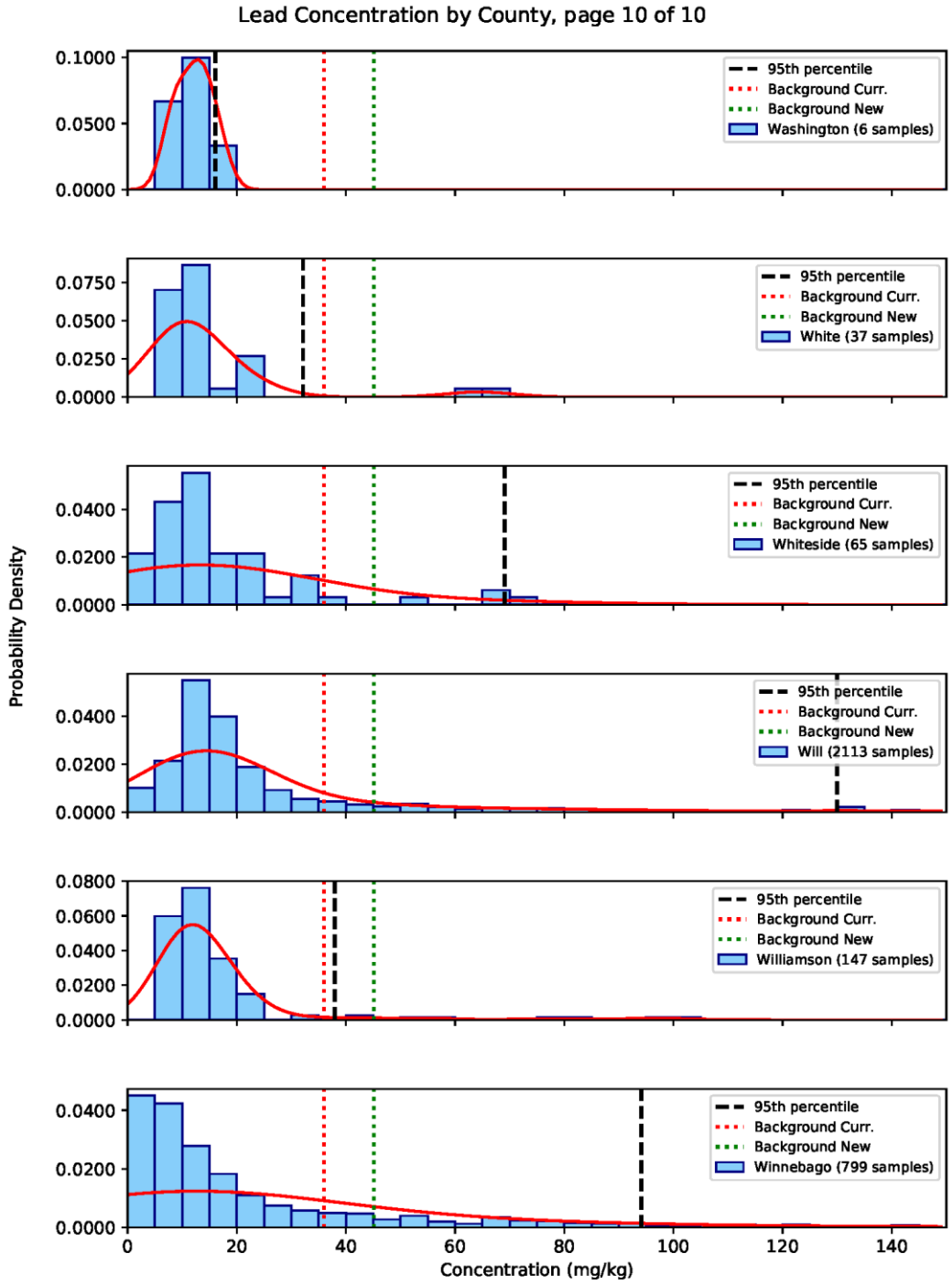


Figure 428. Histogram of RSL lead concentrations by Illinois county, REC (mg/kg), part 10

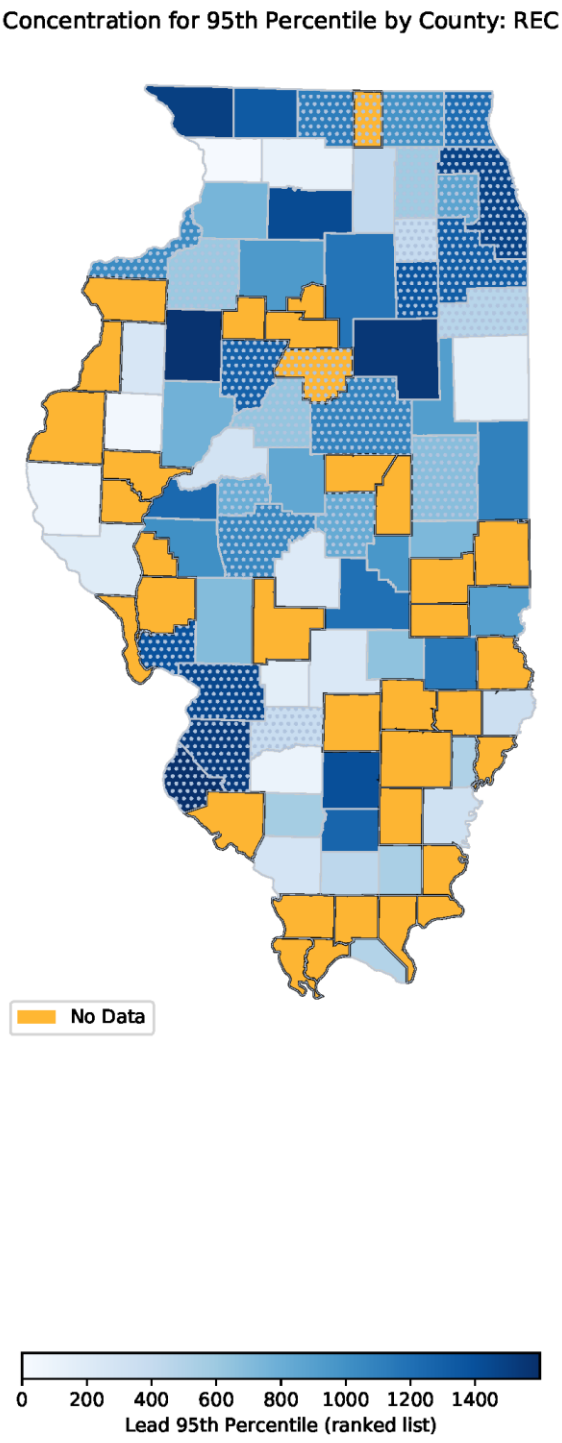


Figure 429. Map of RSL lead 95th percentile concentration by Illinois county, REC (mg/kg)

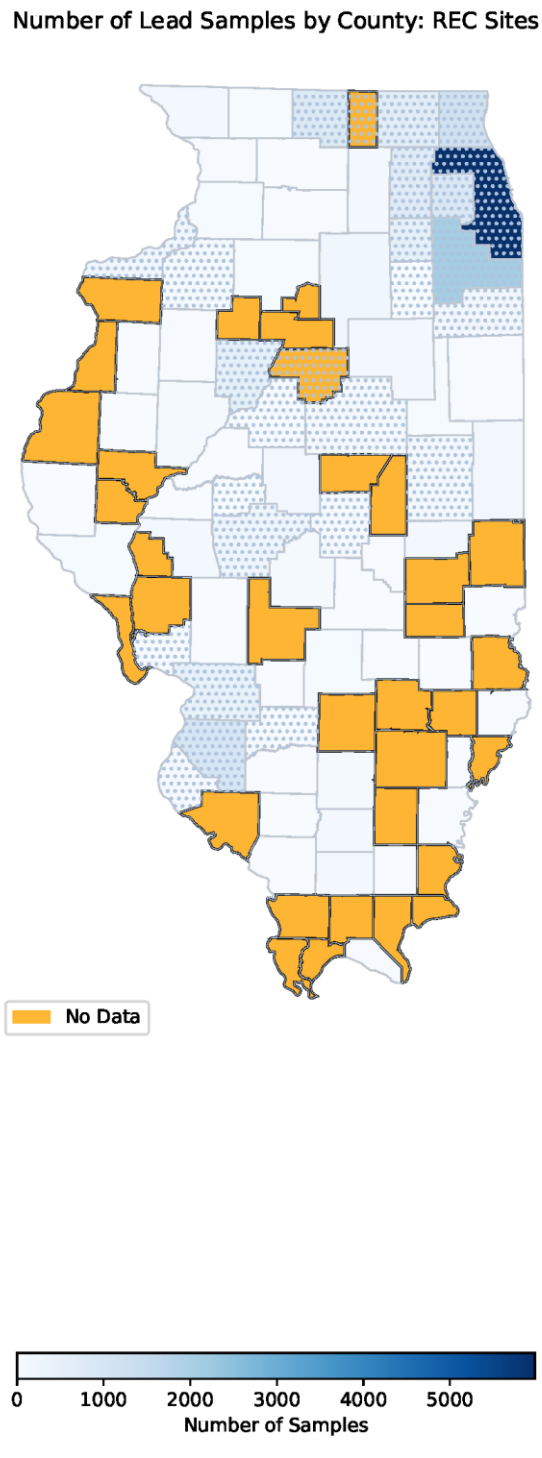


Figure 430. Map of RSL lead sample quantity by Illinois county, REC (mg/kg)

L.2 LEAD NON-REC

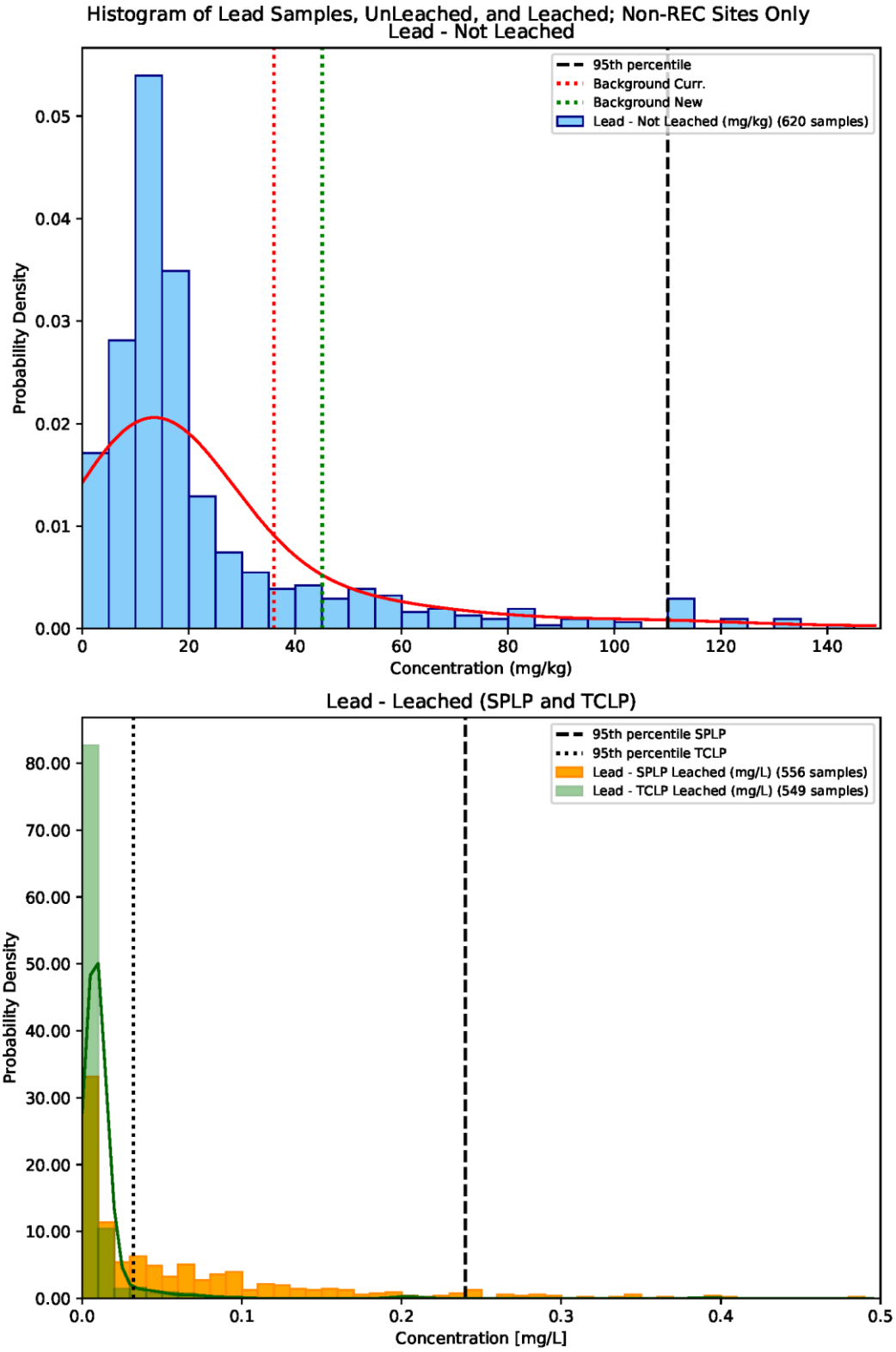


Figure 431. Histogram of RSL lead concentrations, Non-REC (mg/kg)

Lead Unleached Concentration (mg/kg)

1) Region

2) District

3) County

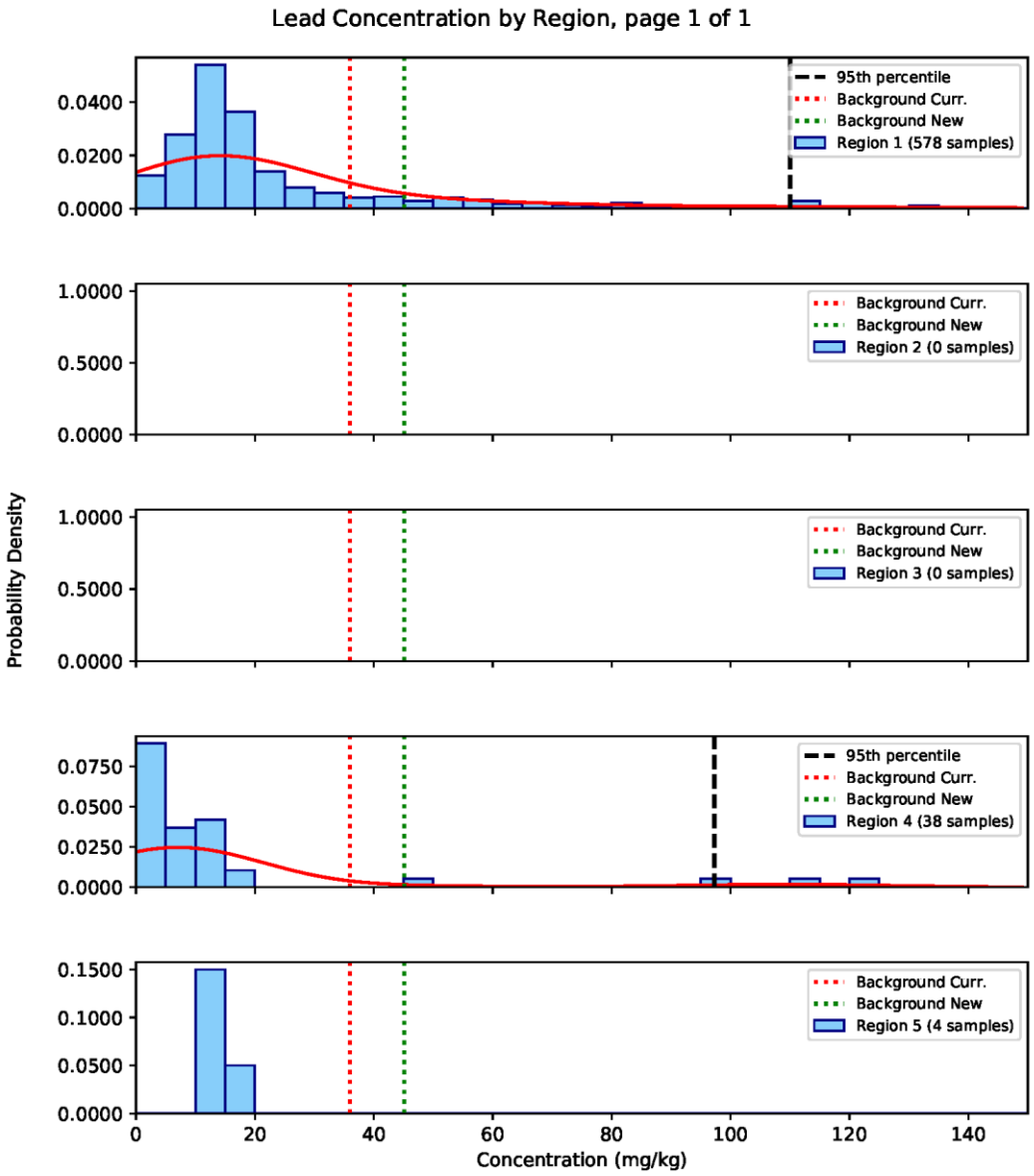


Figure 432. Histogram of RSL lead concentrations by IDOT Region, Non-REC (mg/kg)

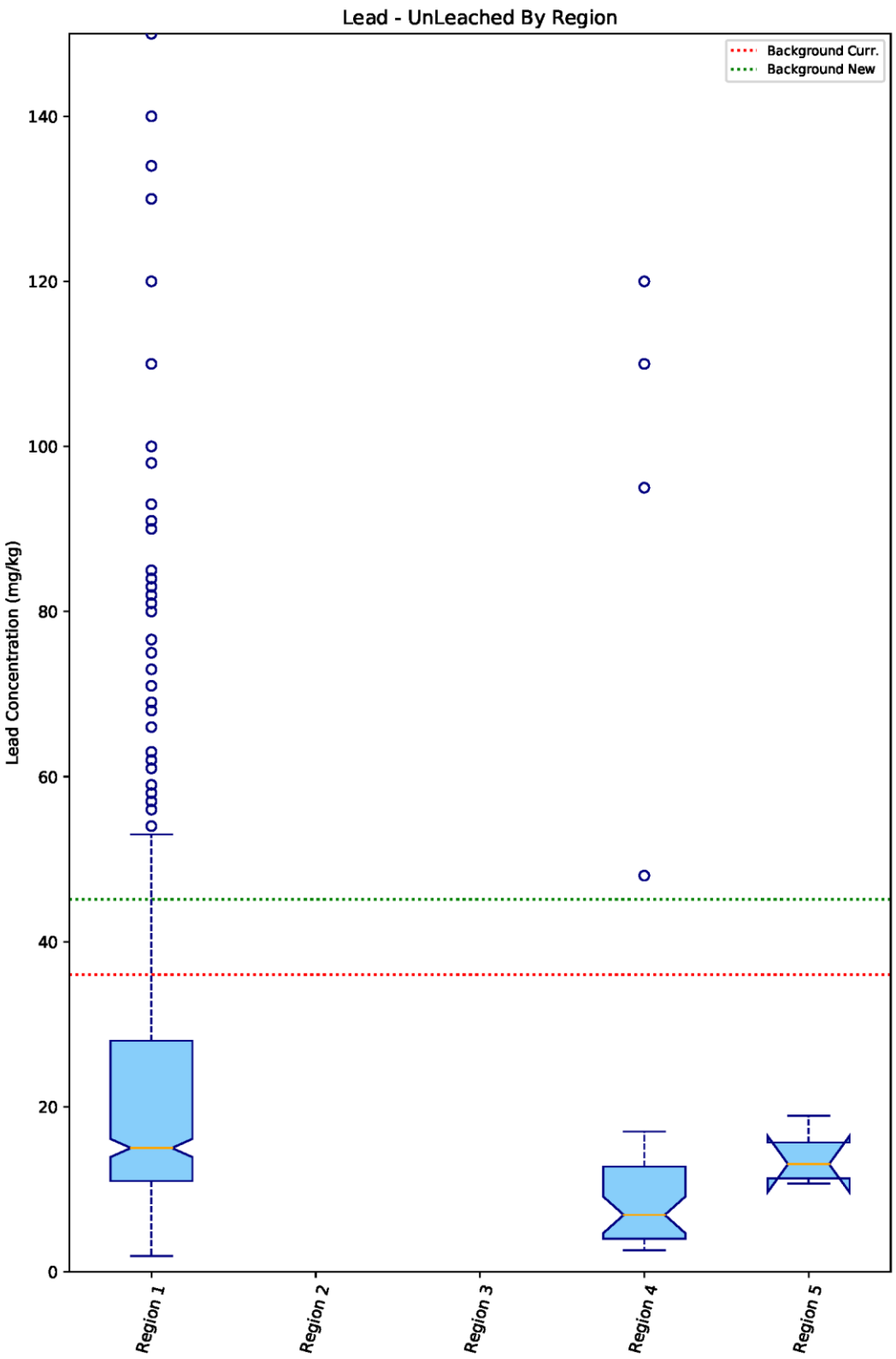


Figure 433. Boxplot of RSL lead concentrations by IDOT Region, Non-REC (mg/kg)

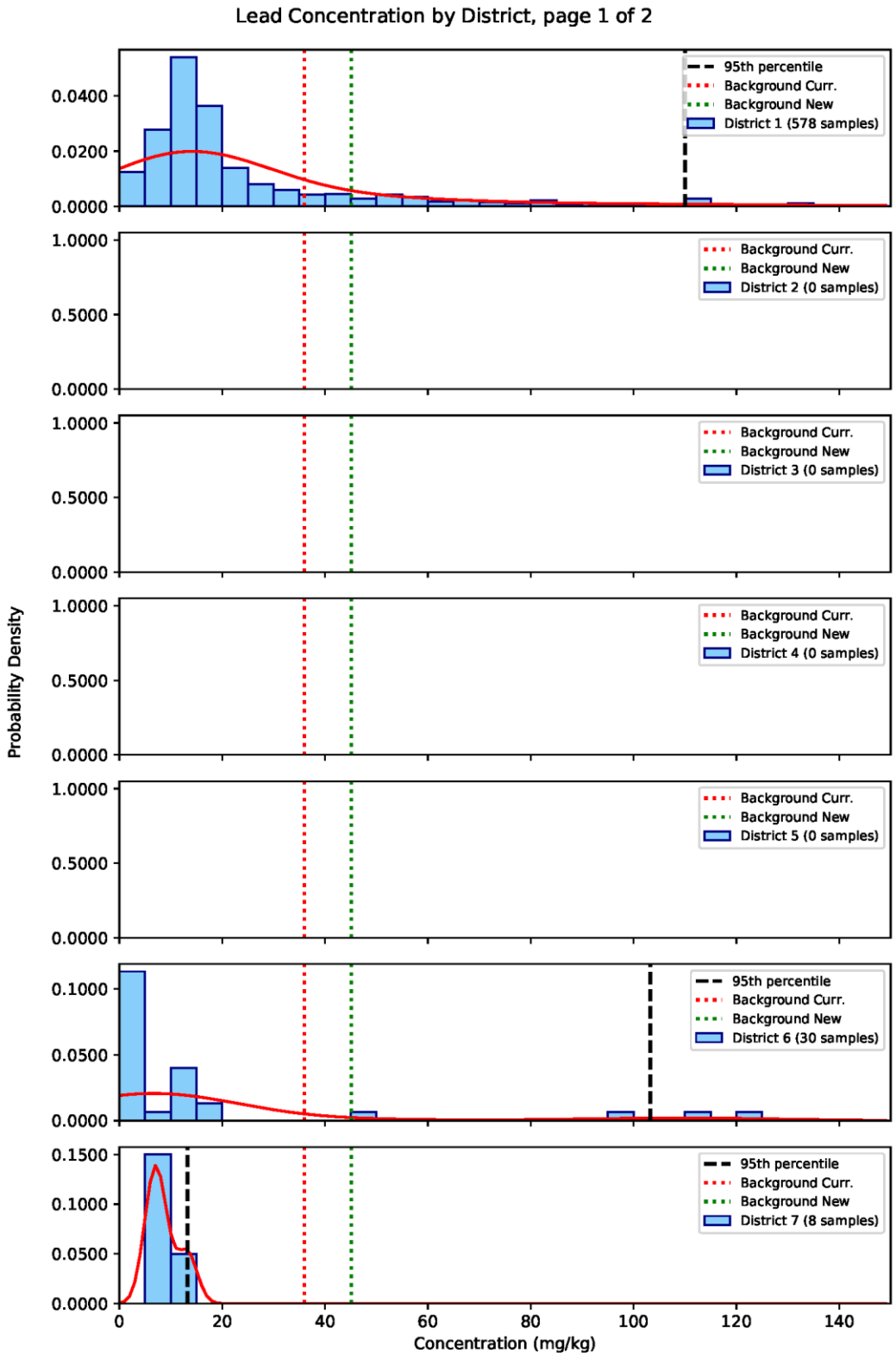


Figure 434. Histogram of RSL lead concentrations by IDOT District, Non-REC (mg/kg), part 1

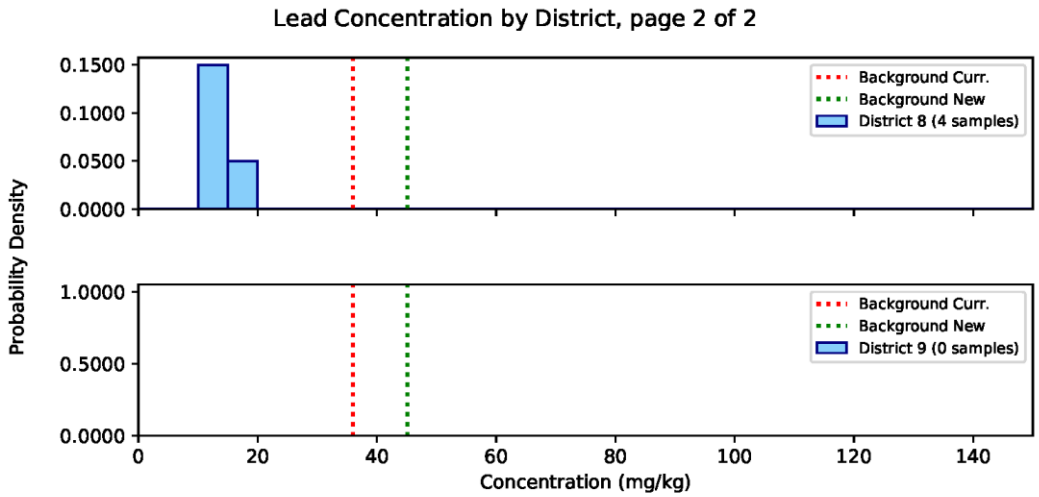


Figure 435. Histogram of RSL lead concentrations by IDOT District, Non-REC (mg/kg), part 2

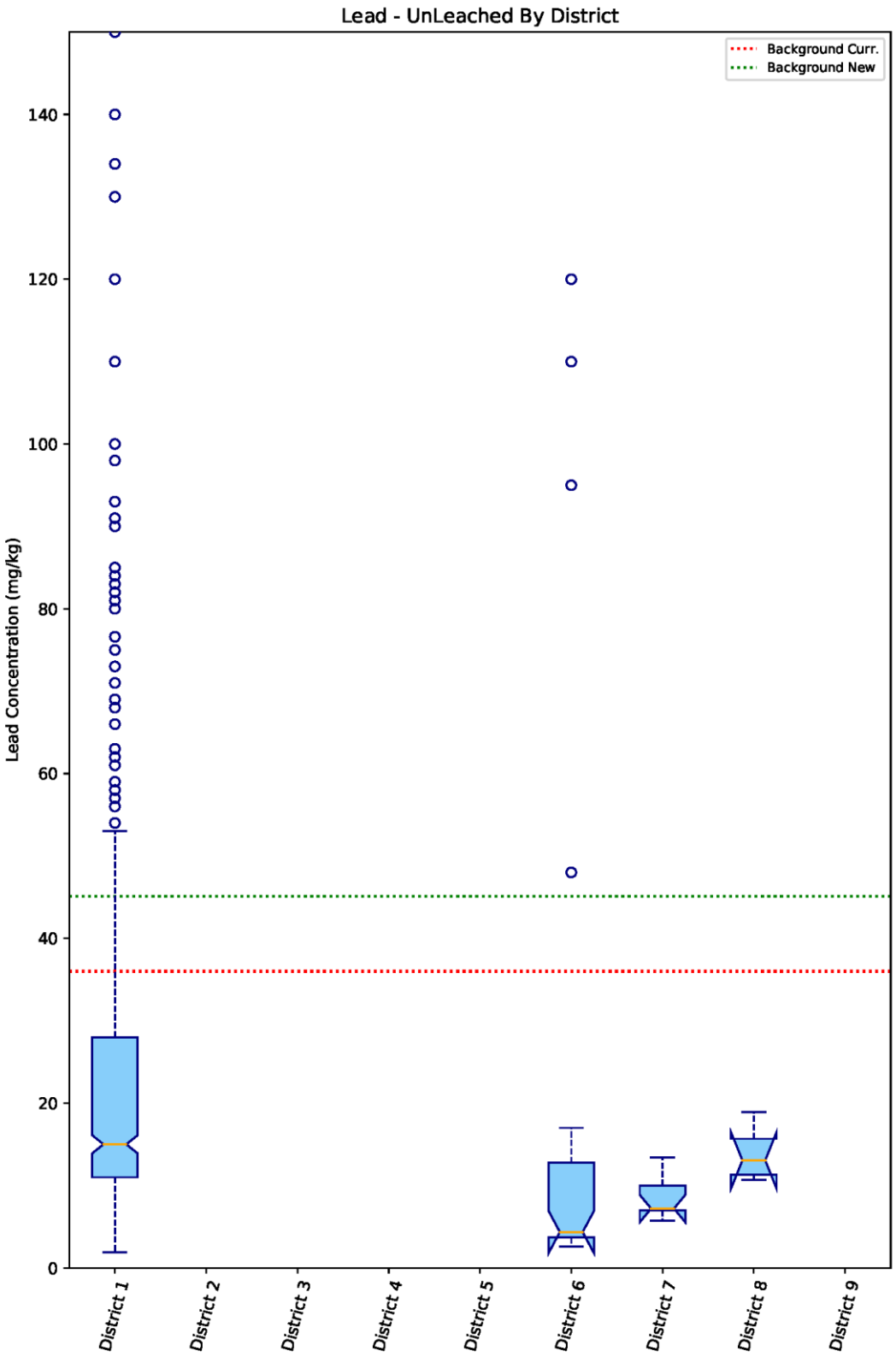


Figure 436. Boxplot of RSL lead concentrations by IDOT District, Non-REC (mg/kg)

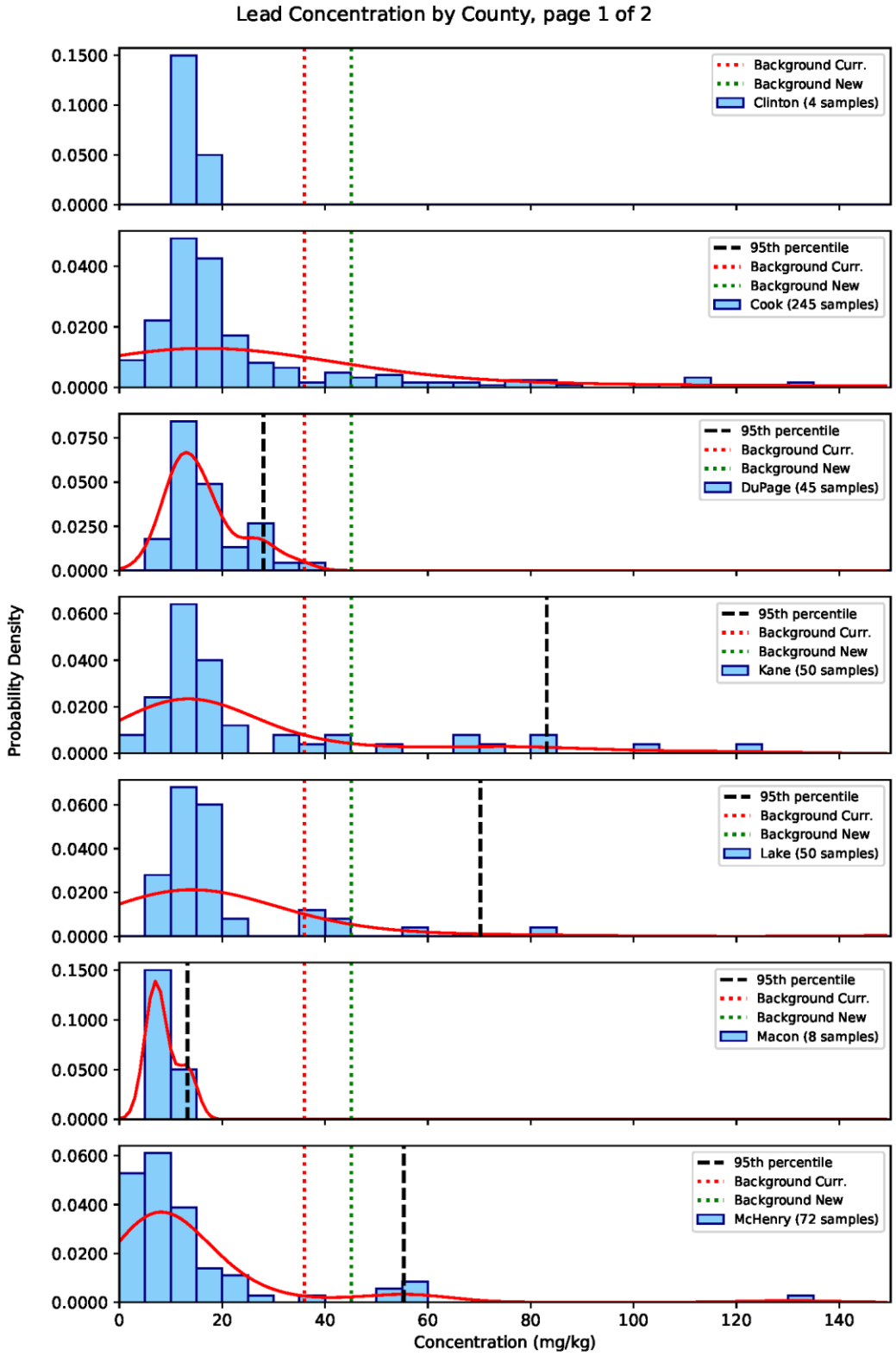


Figure 437. Histogram of RSL lead concentrations by Illinois county, Non-REC (mg/kg), part 1

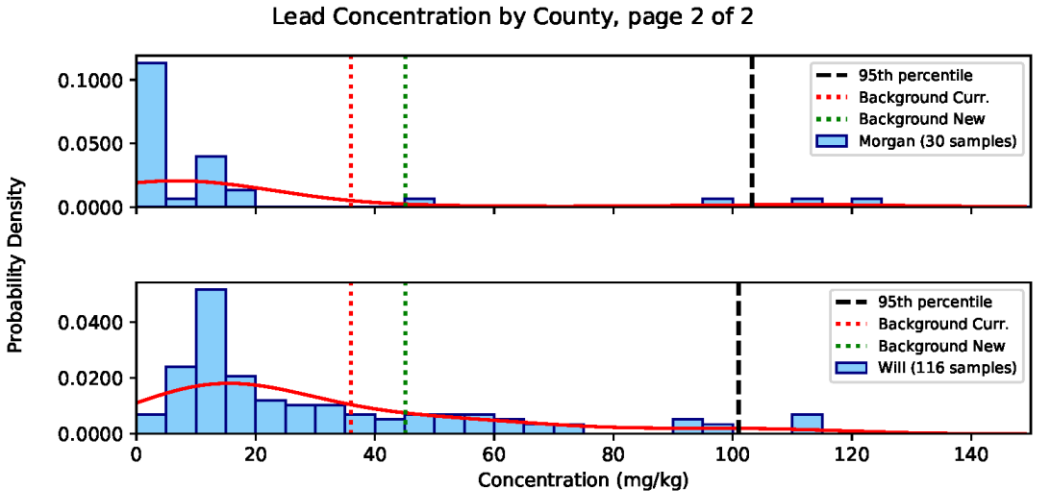


Figure 438. Histogram of RSL lead concentrations by Illinois county, Non-REC (mg/kg), part 2

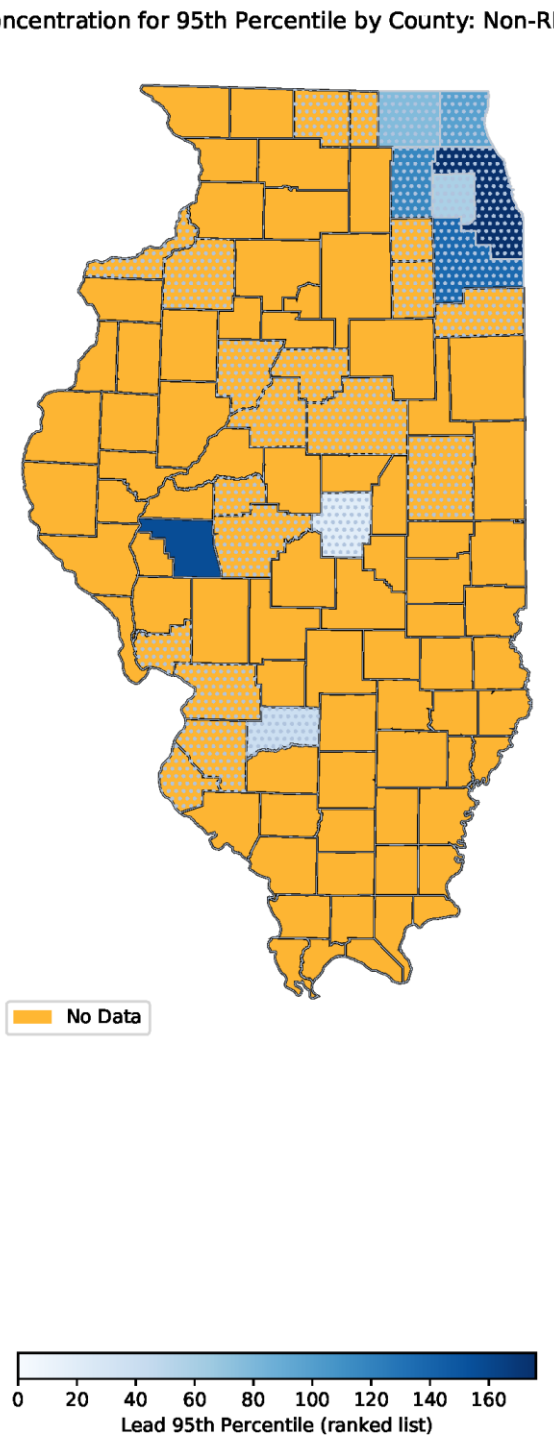


Figure 439. Map of RSL lead 95th percentile concentration by Illinois county, Non-REC (mg/kg)

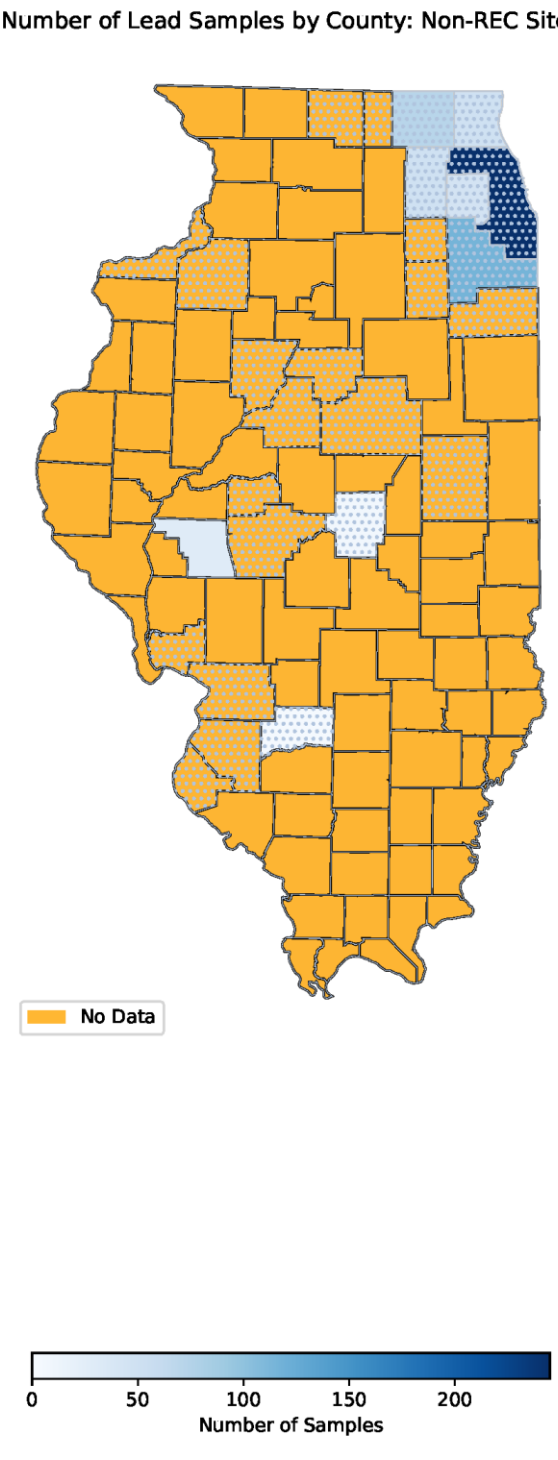


Figure 440. Map of RSL lead sample quantity by Illinois county, Non-REC (mg/kg)

L.3 LEAD DE MINIMIS

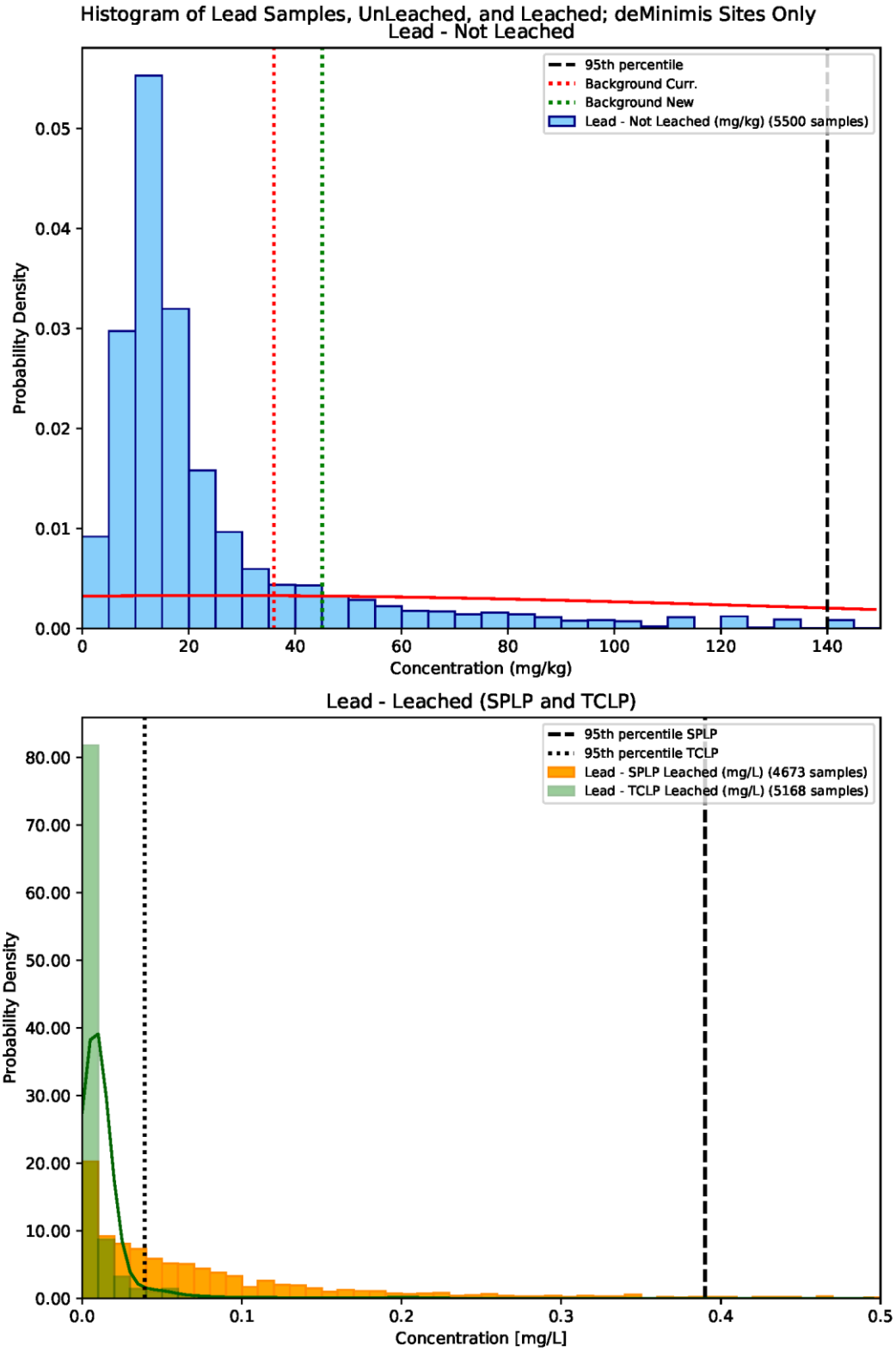


Figure 441. Histogram of RSL lead concentrations, de minimis (mg/kg)

Lead Unleached Concentration (mg/kg)

1) Region

2) District

3) County

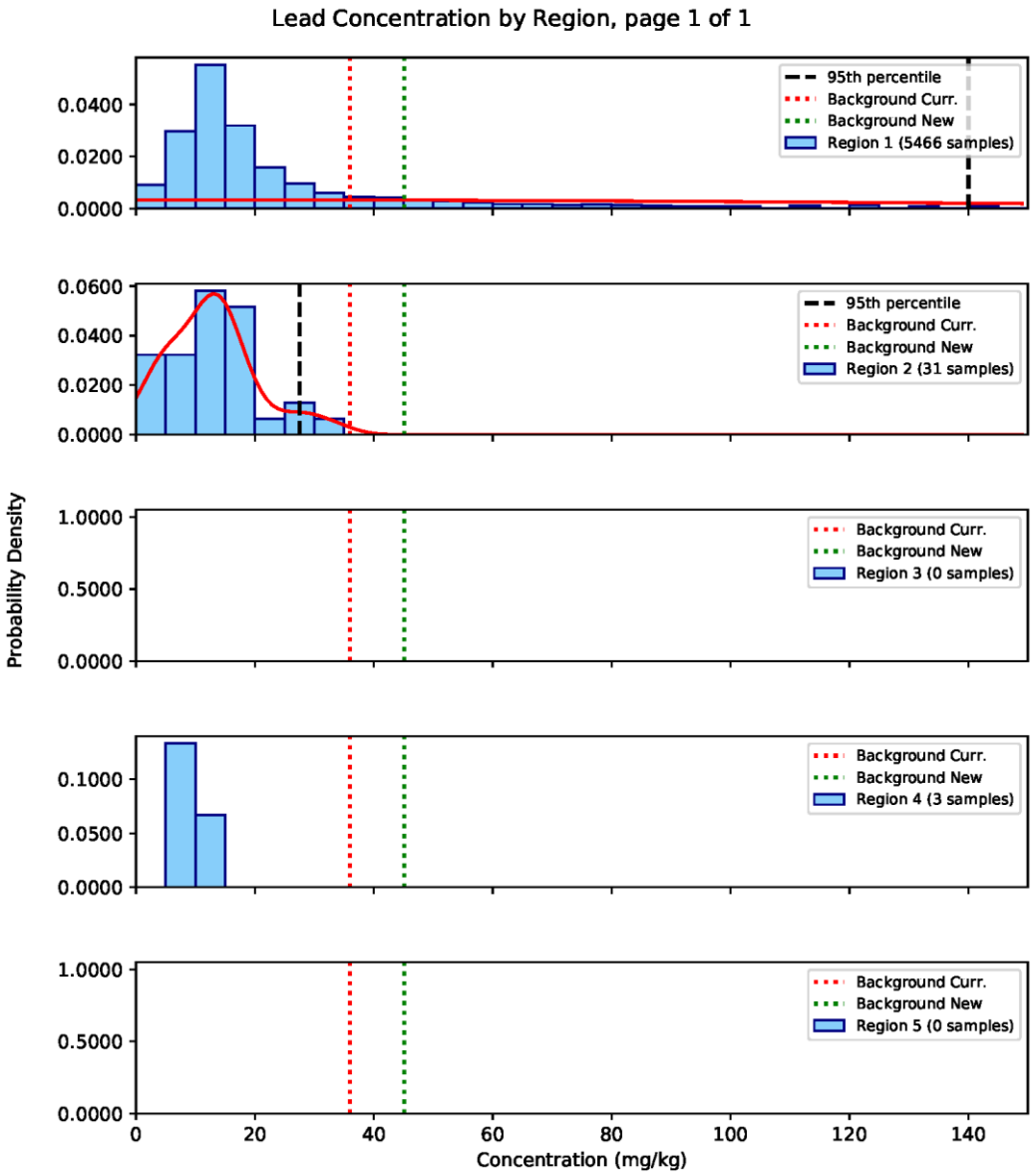


Figure 442. Histogram of RSL lead concentrations by IDOT Region, de minimis (mg/kg)

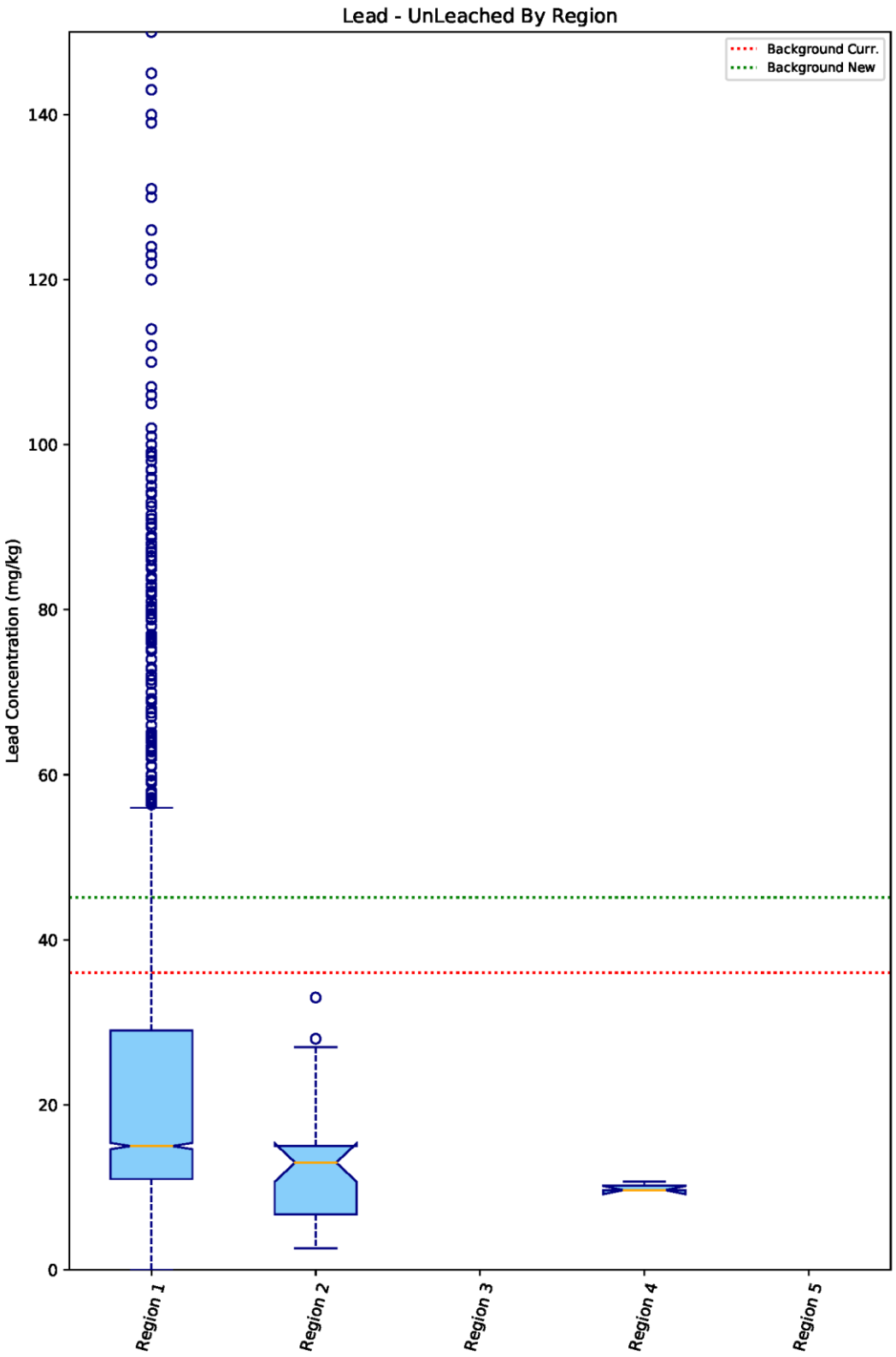


Figure 443. Boxplot of RSL lead concentrations by IDOT Region, de minimis (mg/kg)

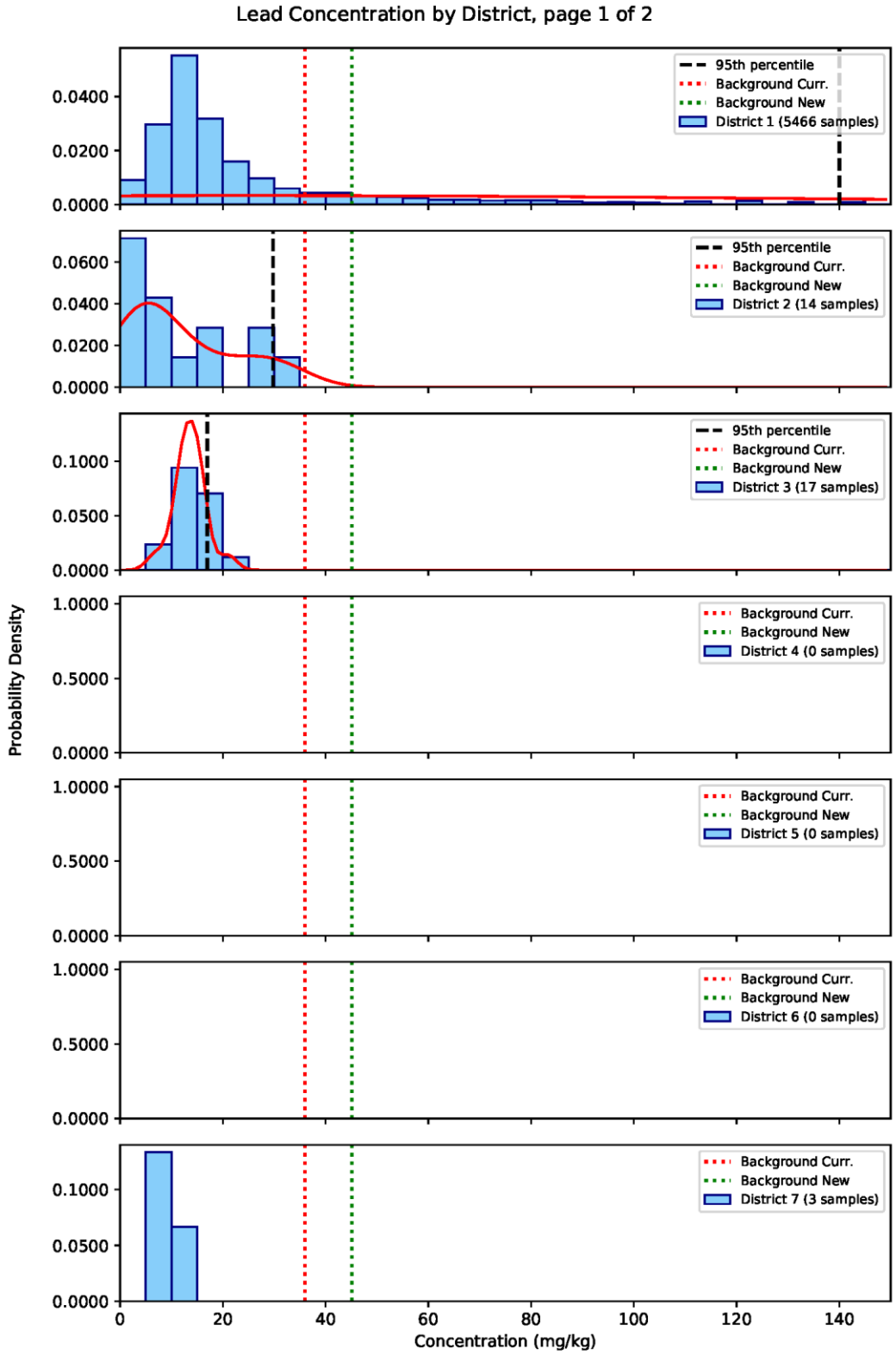


Figure 444. Histogram of RSL lead concentrations by IDOT District, de minimis (mg/kg), part 1

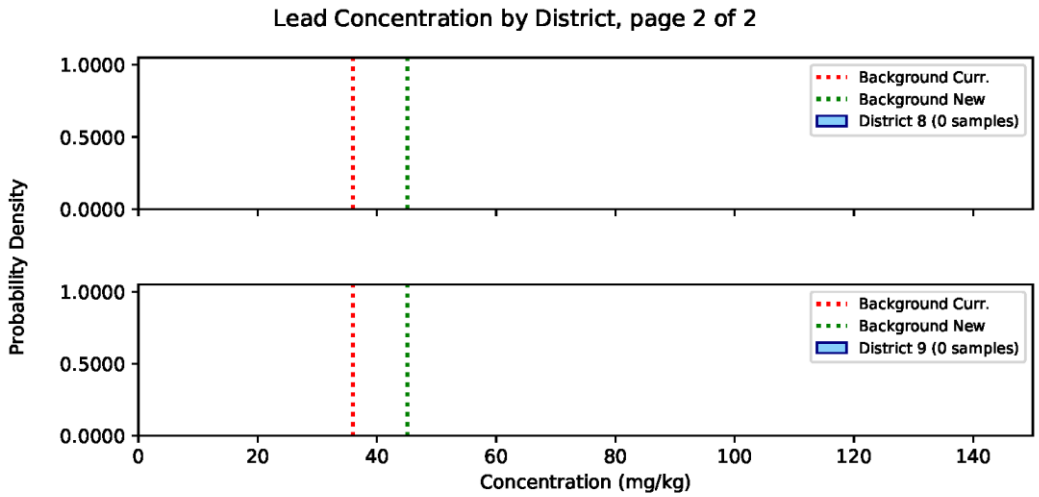


Figure 445. Histogram of RSL lead concentrations by IDOT District, de minimis (mg/kg), part 2

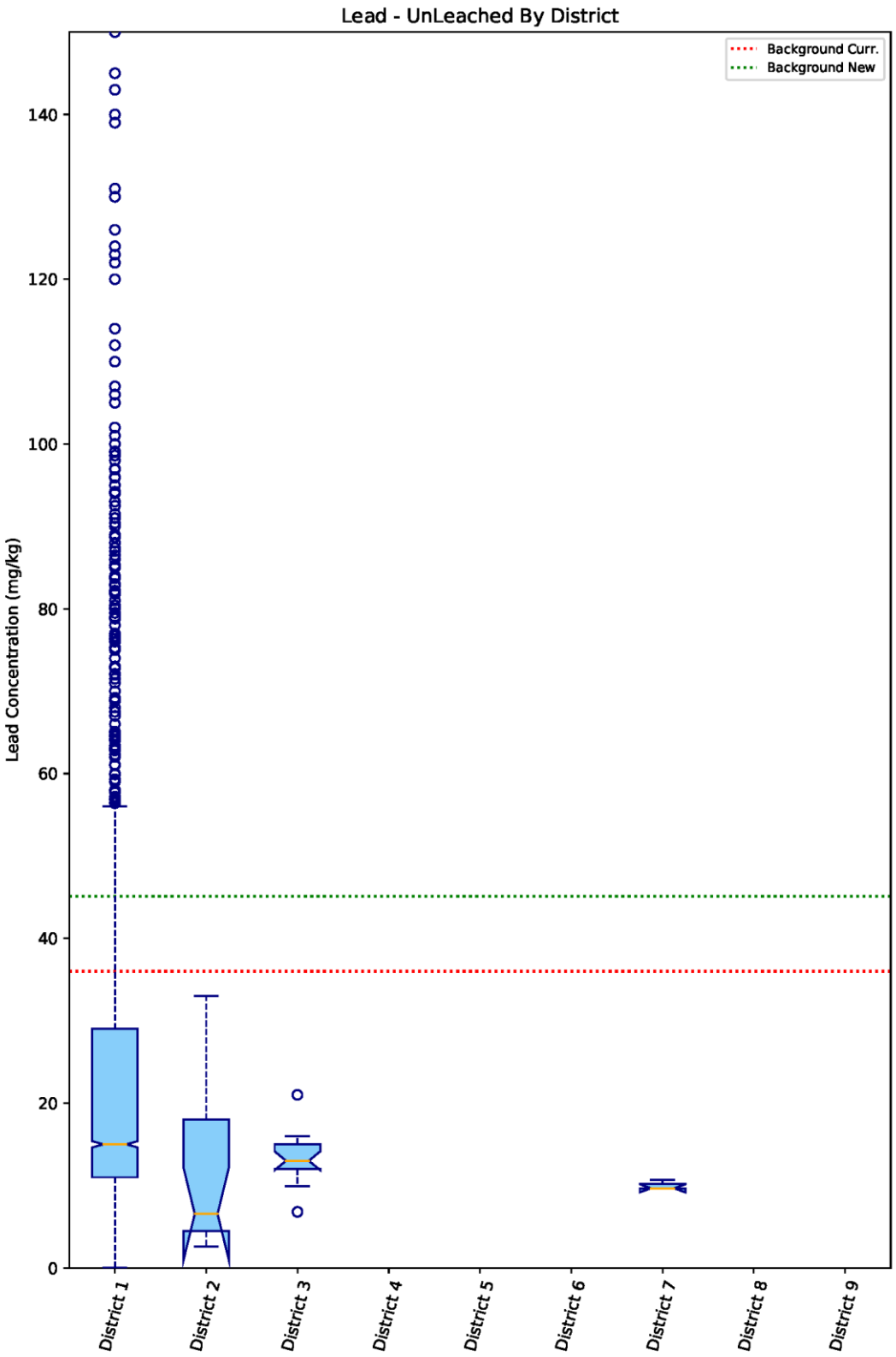


Figure 446. Boxplot of RSL lead concentrations by IDOT District, de minimis (mg/kg)

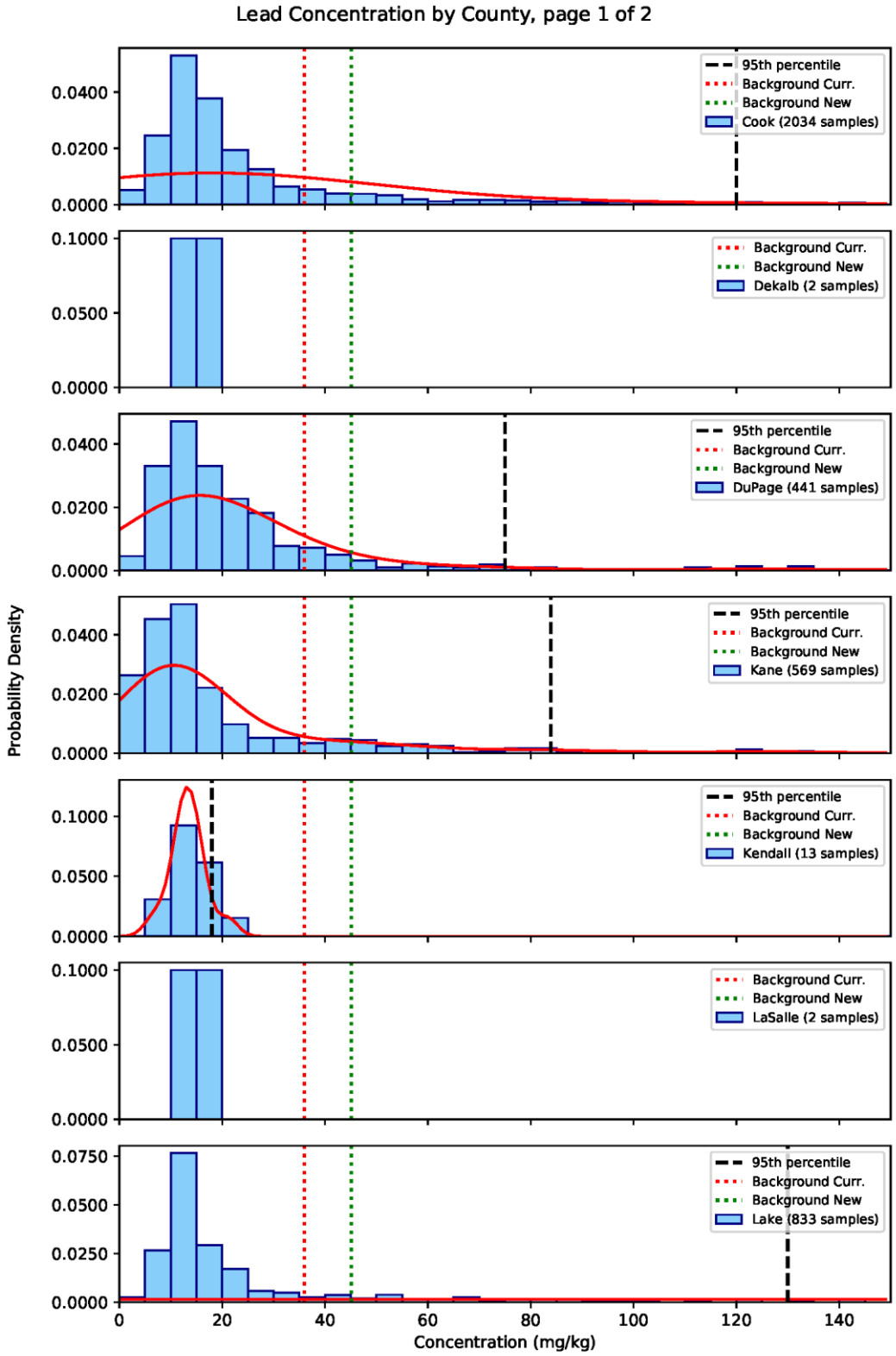


Figure 447. Histogram of RSL lead concentrations by Illinois county, de minimis (mg/kg), part 1

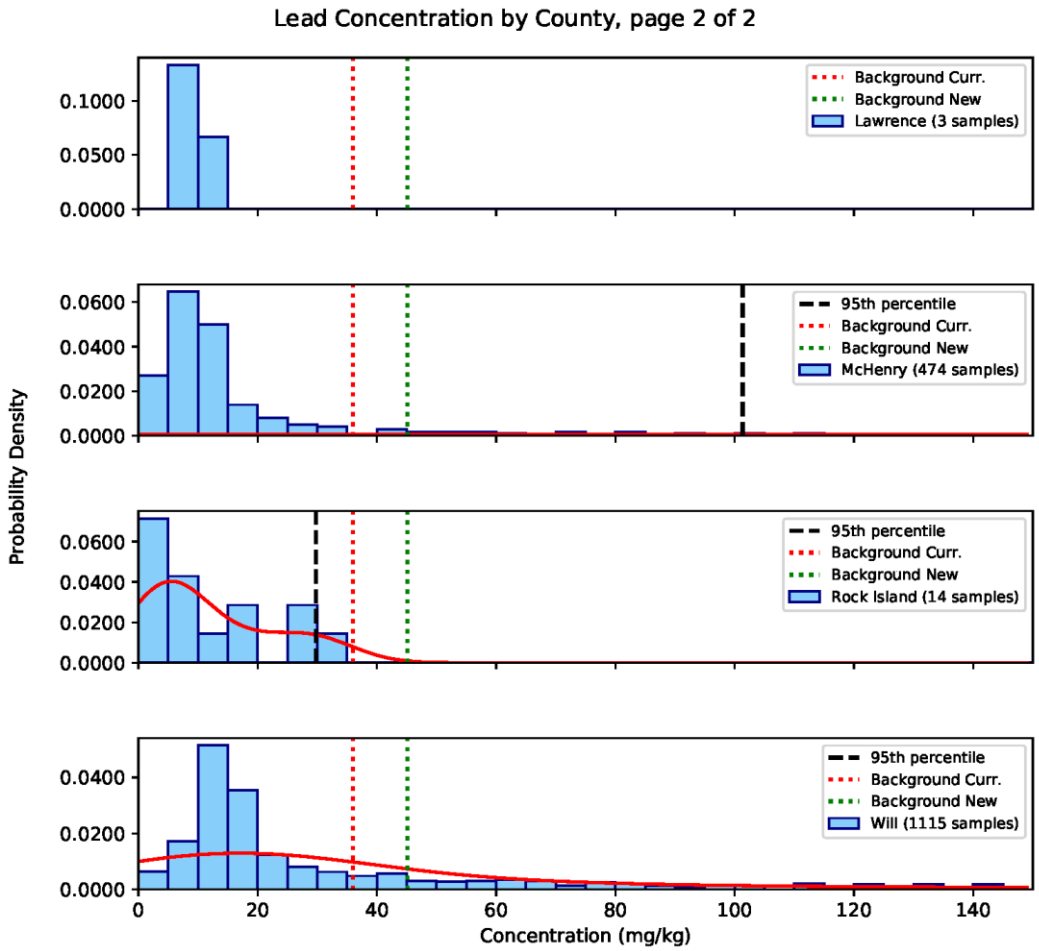


Figure 448. Histogram of RSL lead concentrations by Illinois county, de minimis (mg/kg), part 2

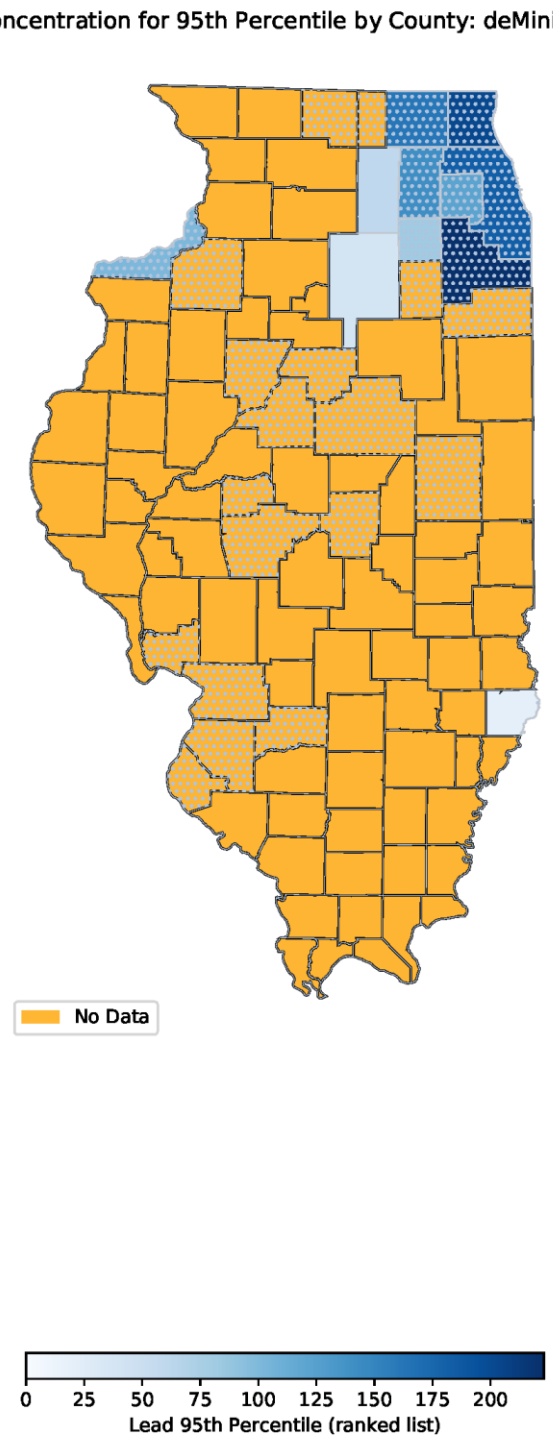


Figure 449. Map of RSL lead 95th percentile concentration by Illinois county, de minimis (mg/kg)

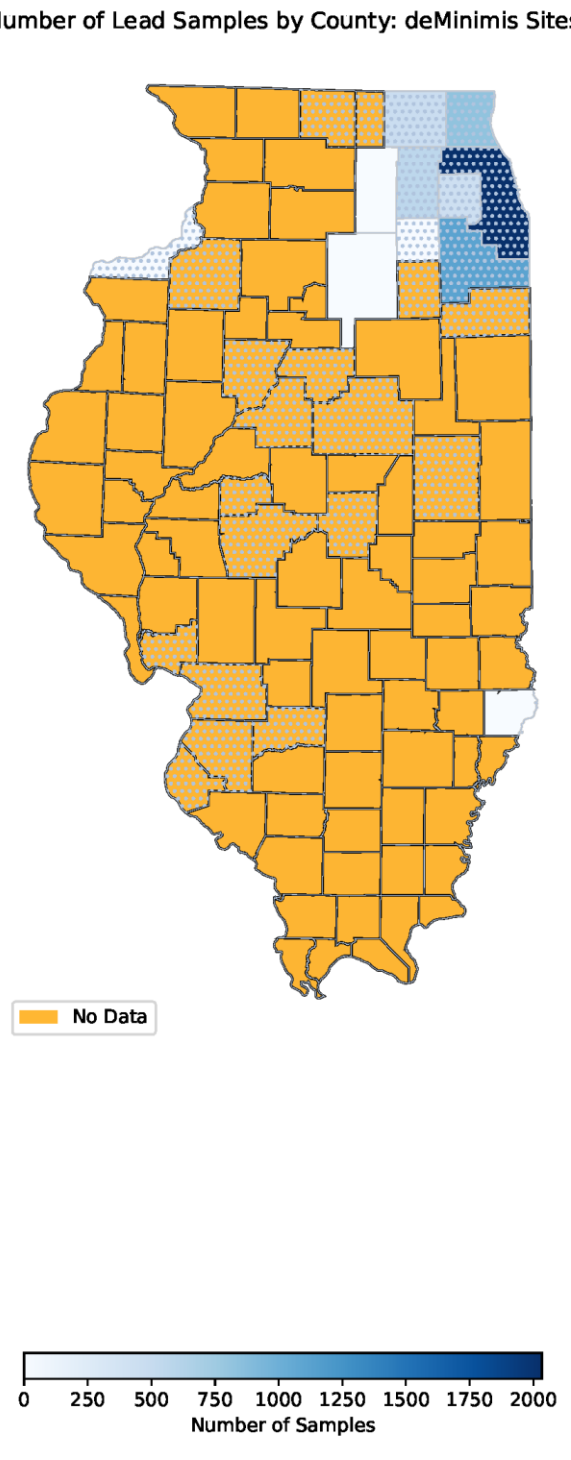


Figure 450. Map of RSL lead sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX M. ANALYTE ANALYSIS: MAGNESIUM

M.1 MAGNESIUM REC

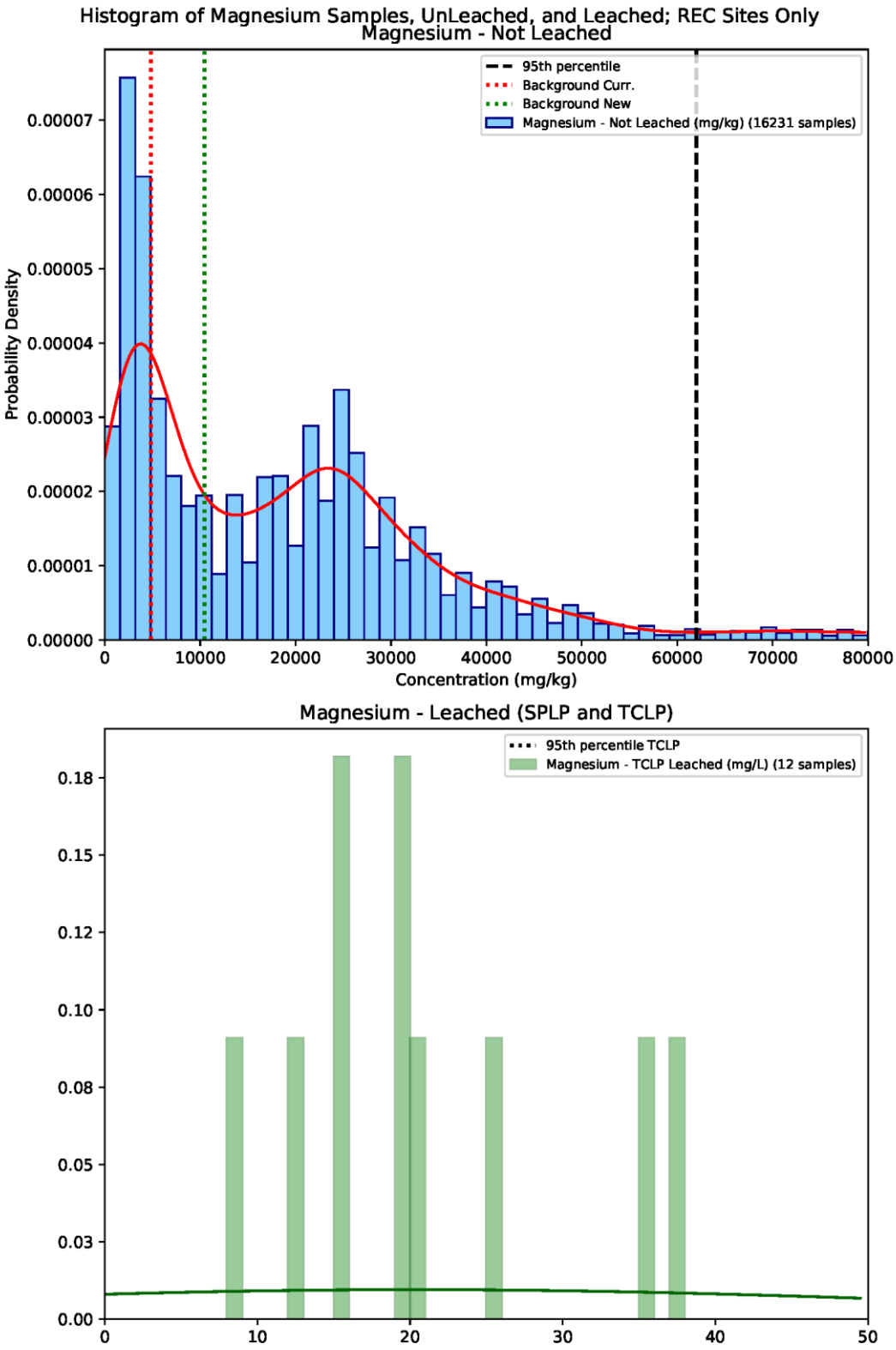


Figure 451. Histogram of RSL magnesium concentrations, REC (mg/kg)

Magnesium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

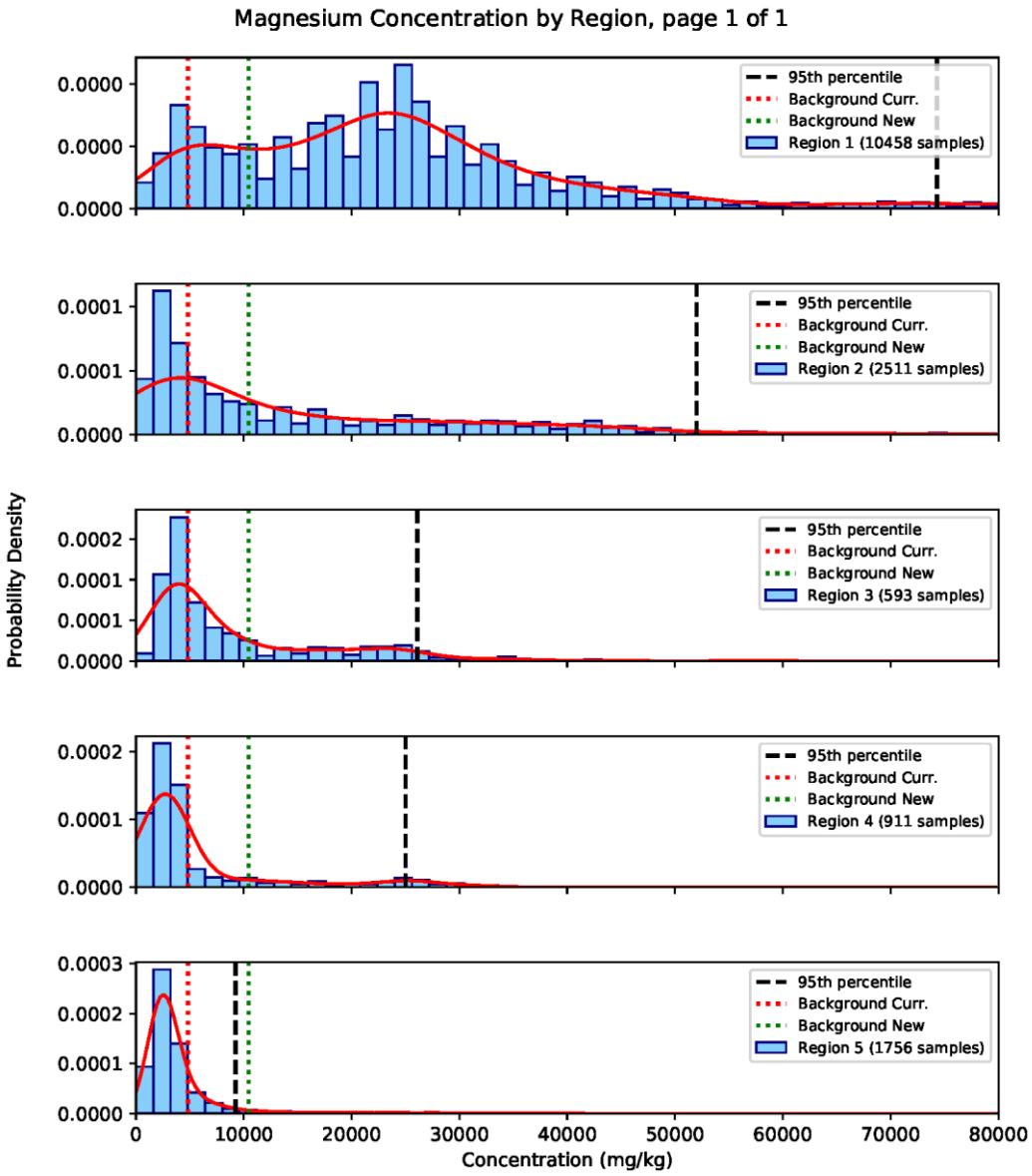


Figure 452. Histogram of RSL magnesium concentrations by IDOT Region, REC (mg/kg)

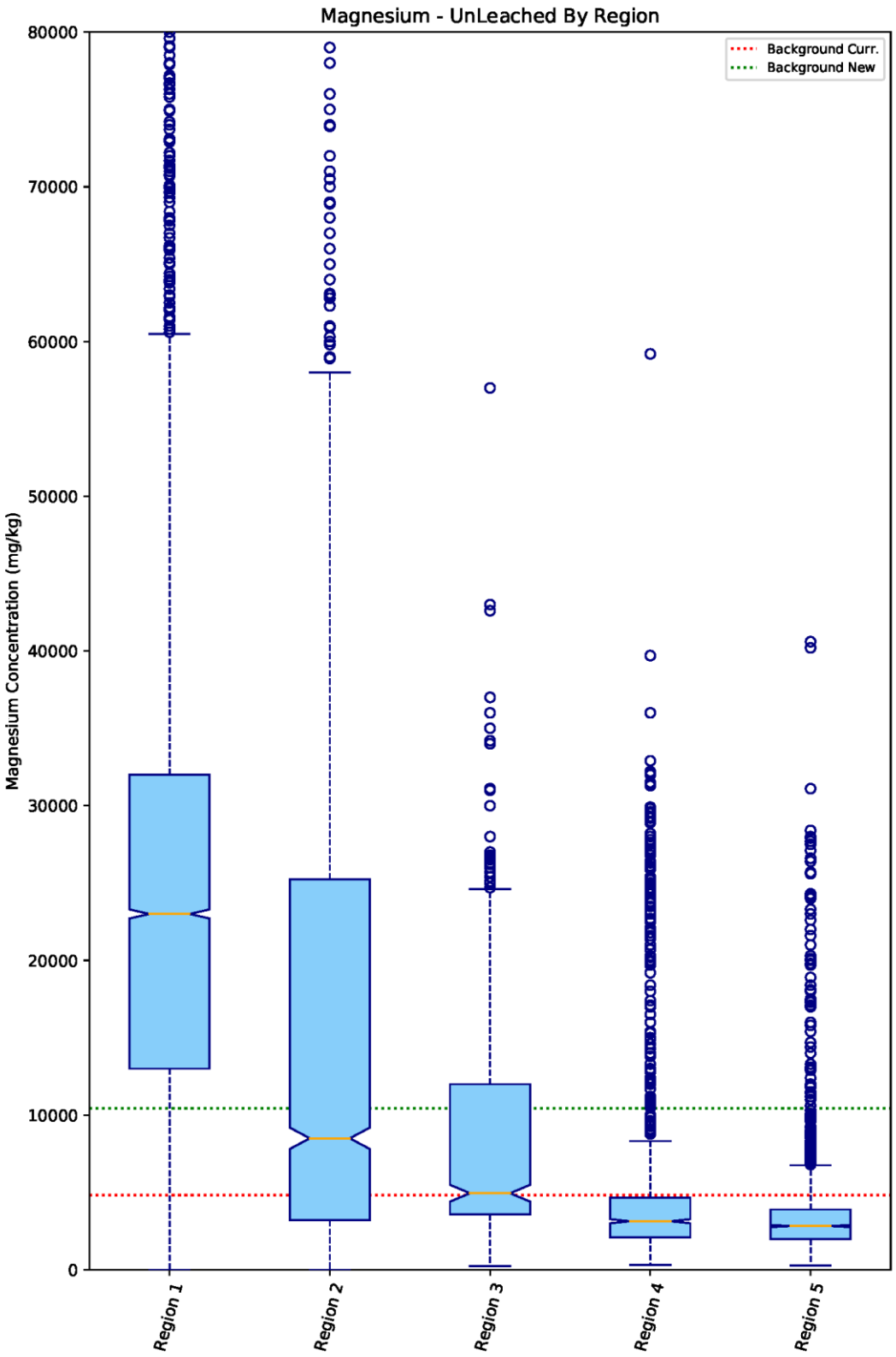


Figure 453. Boxplot of RSL magnesium concentrations by IDOT Region, REC (mg/kg)

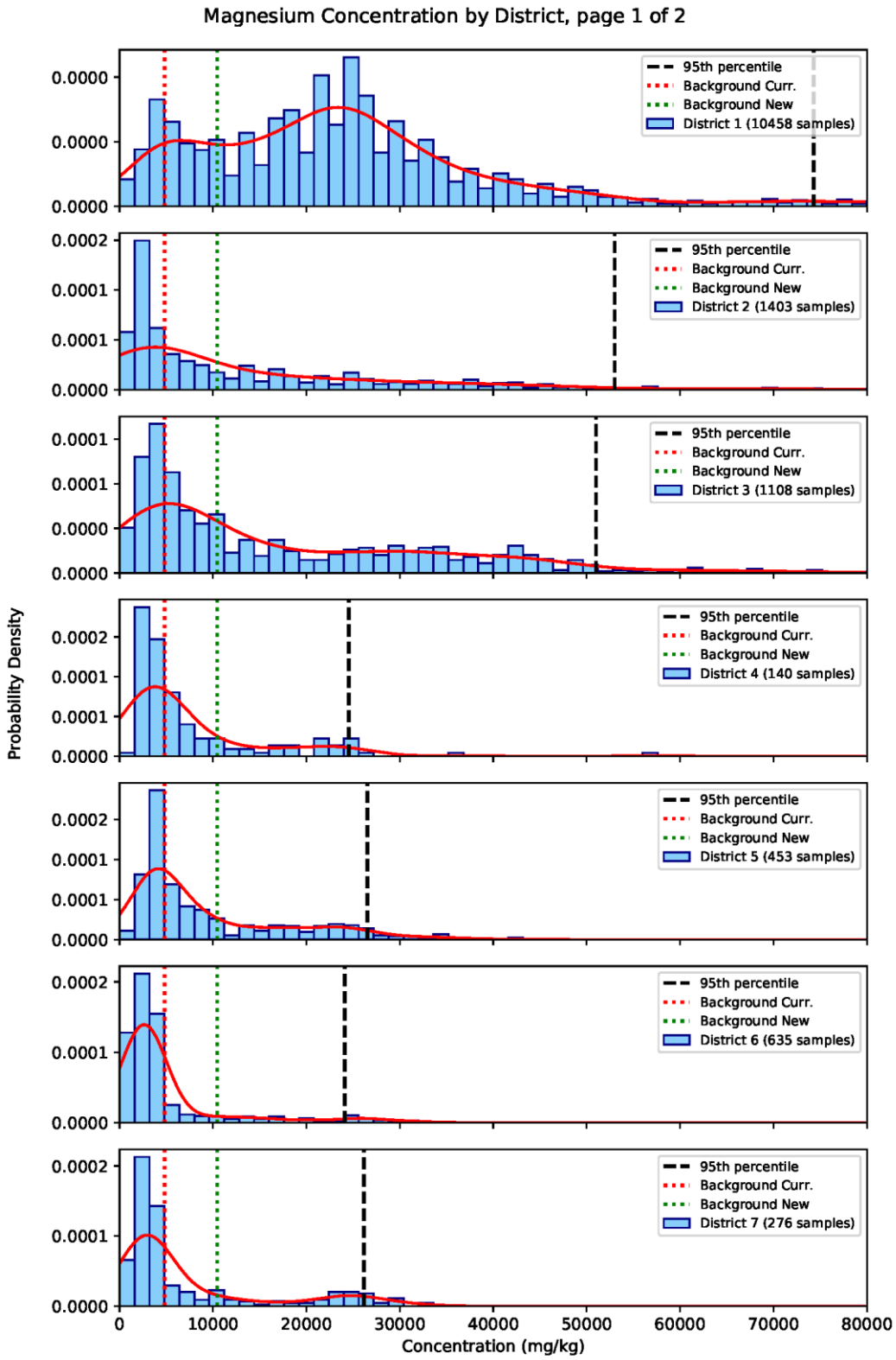


Figure 454. Histogram of RSL magnesium concentrations by IDOT District, REC (mg/kg), part 1

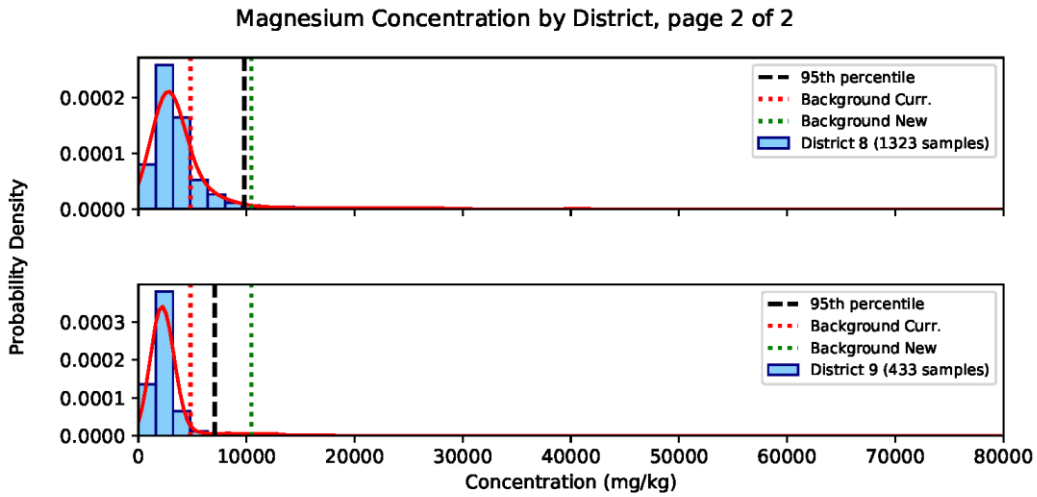


Figure 455. Histogram of RSL magnesium concentrations by IDOT District, REC (mg/kg), part 2

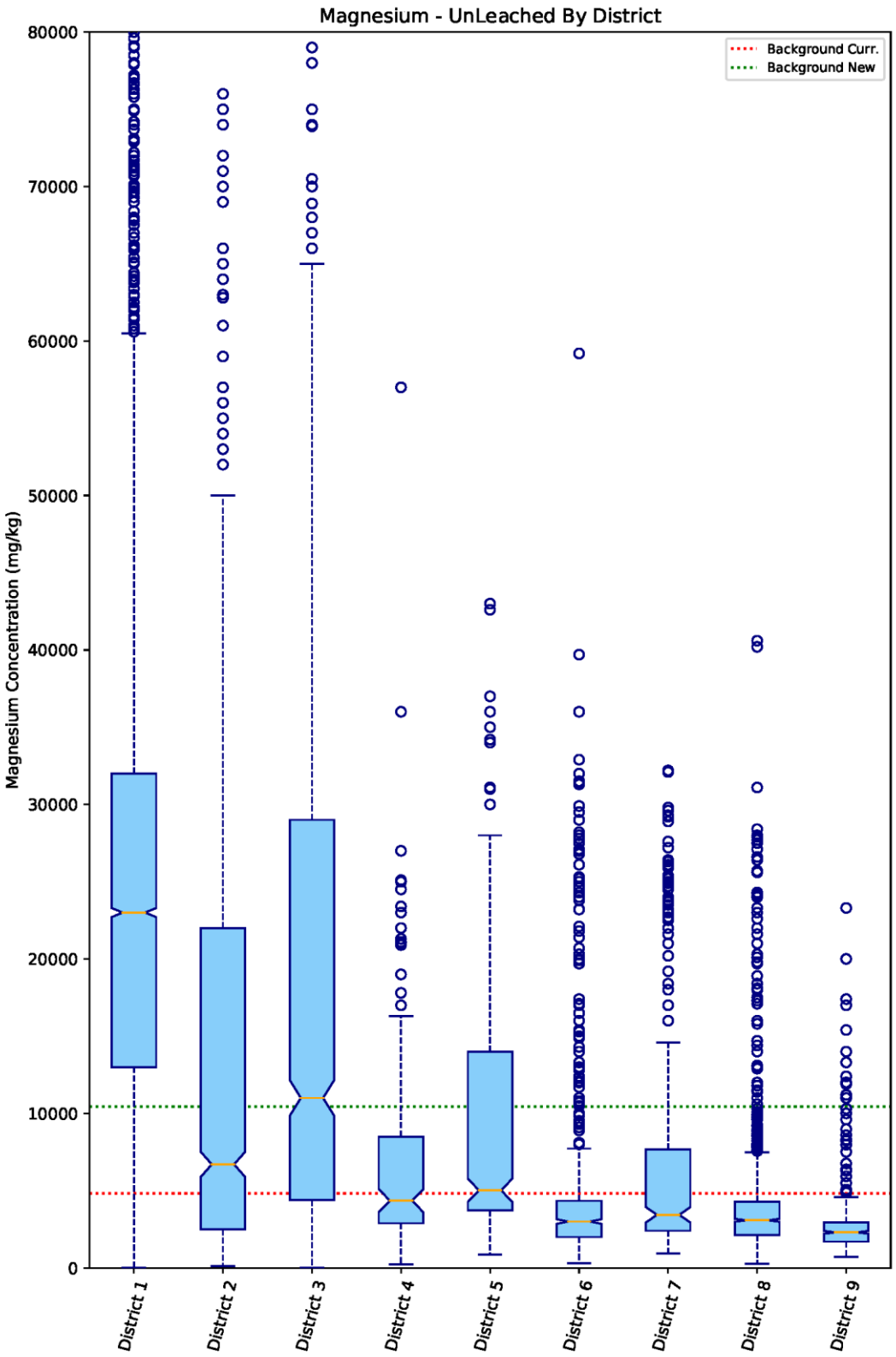


Figure 456. Boxplot of RSL magnesium concentrations by IDOT District, REC (mg/kg)

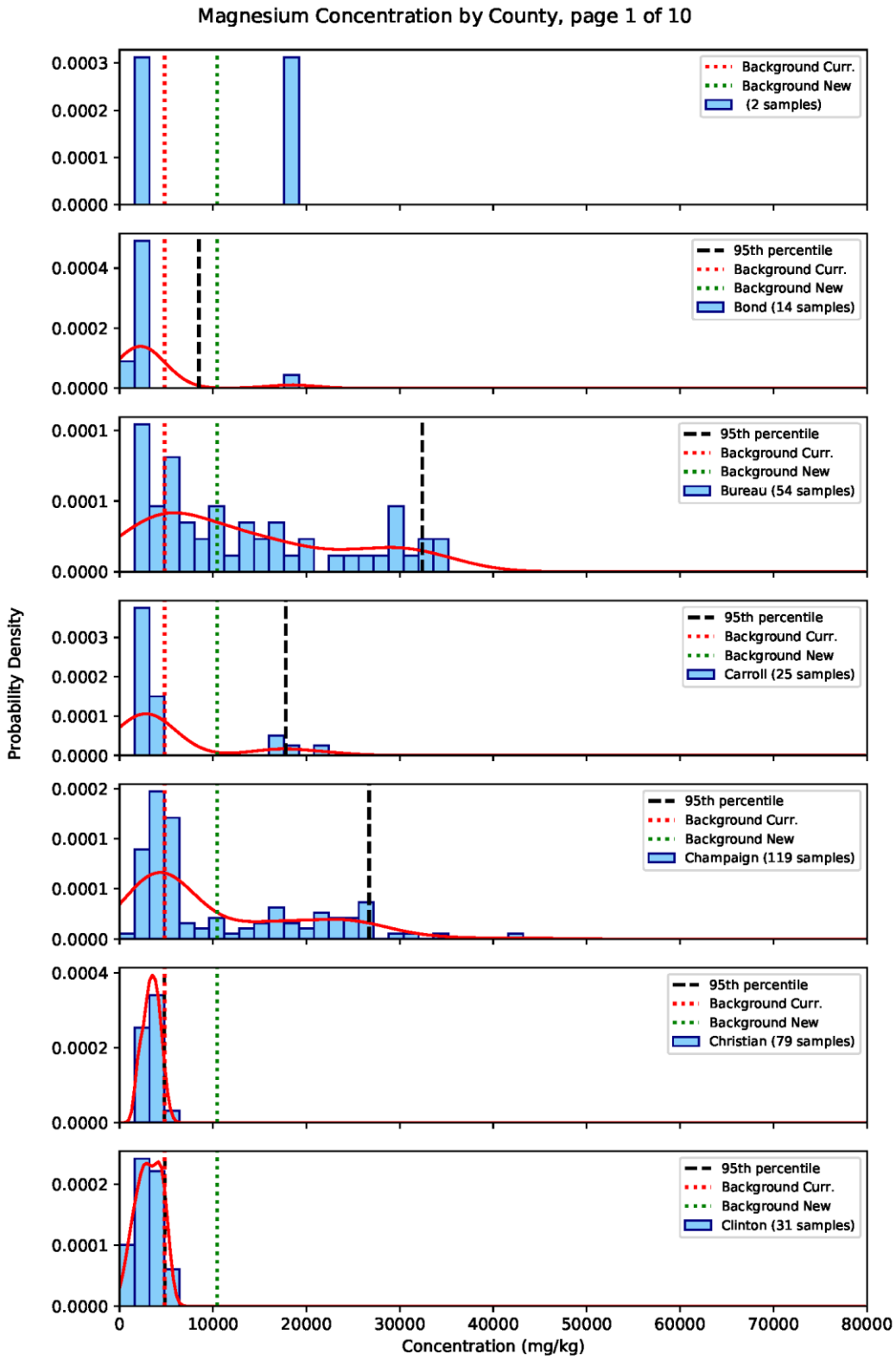


Figure 457. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 1

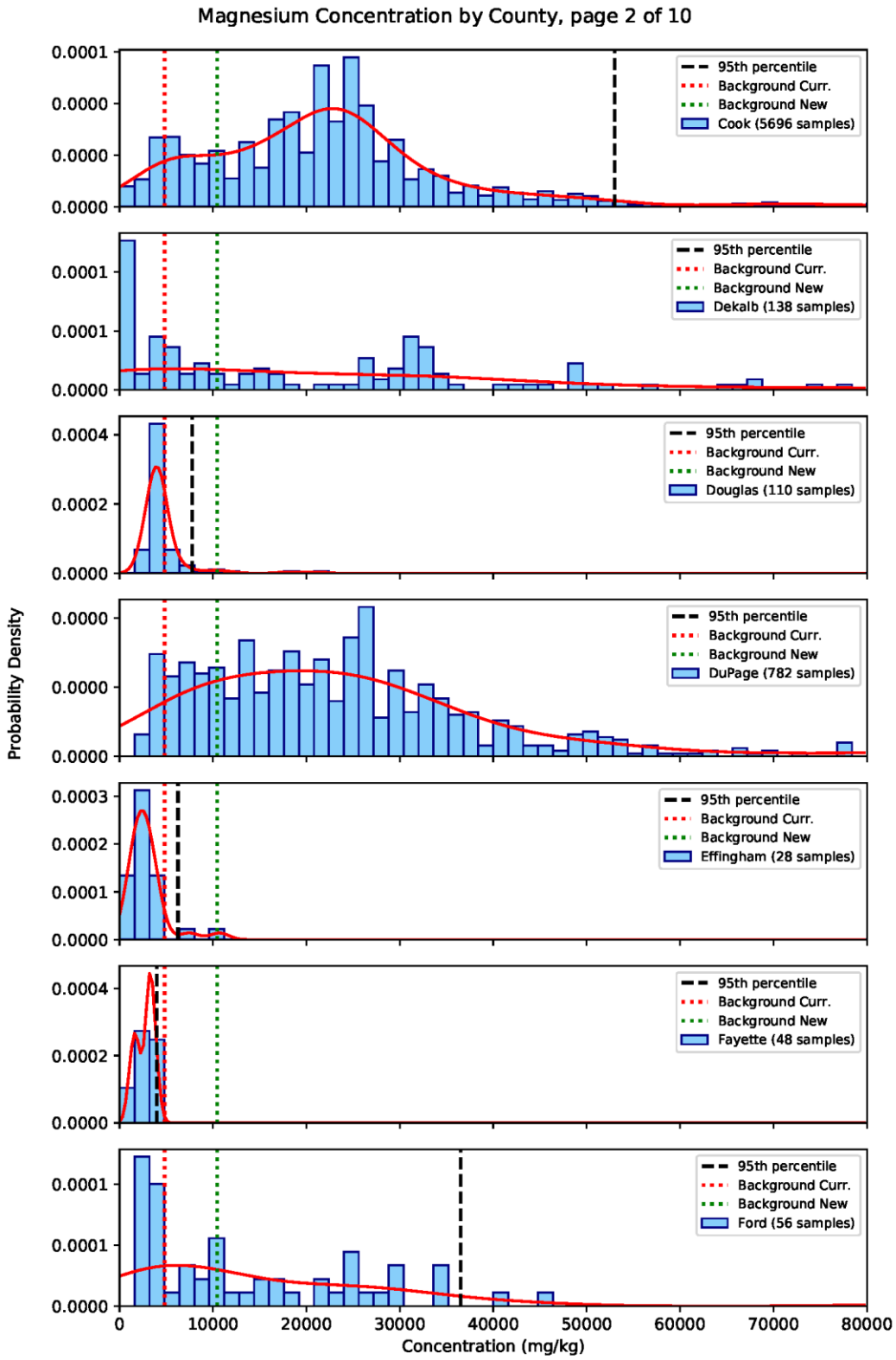


Figure 458. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 2

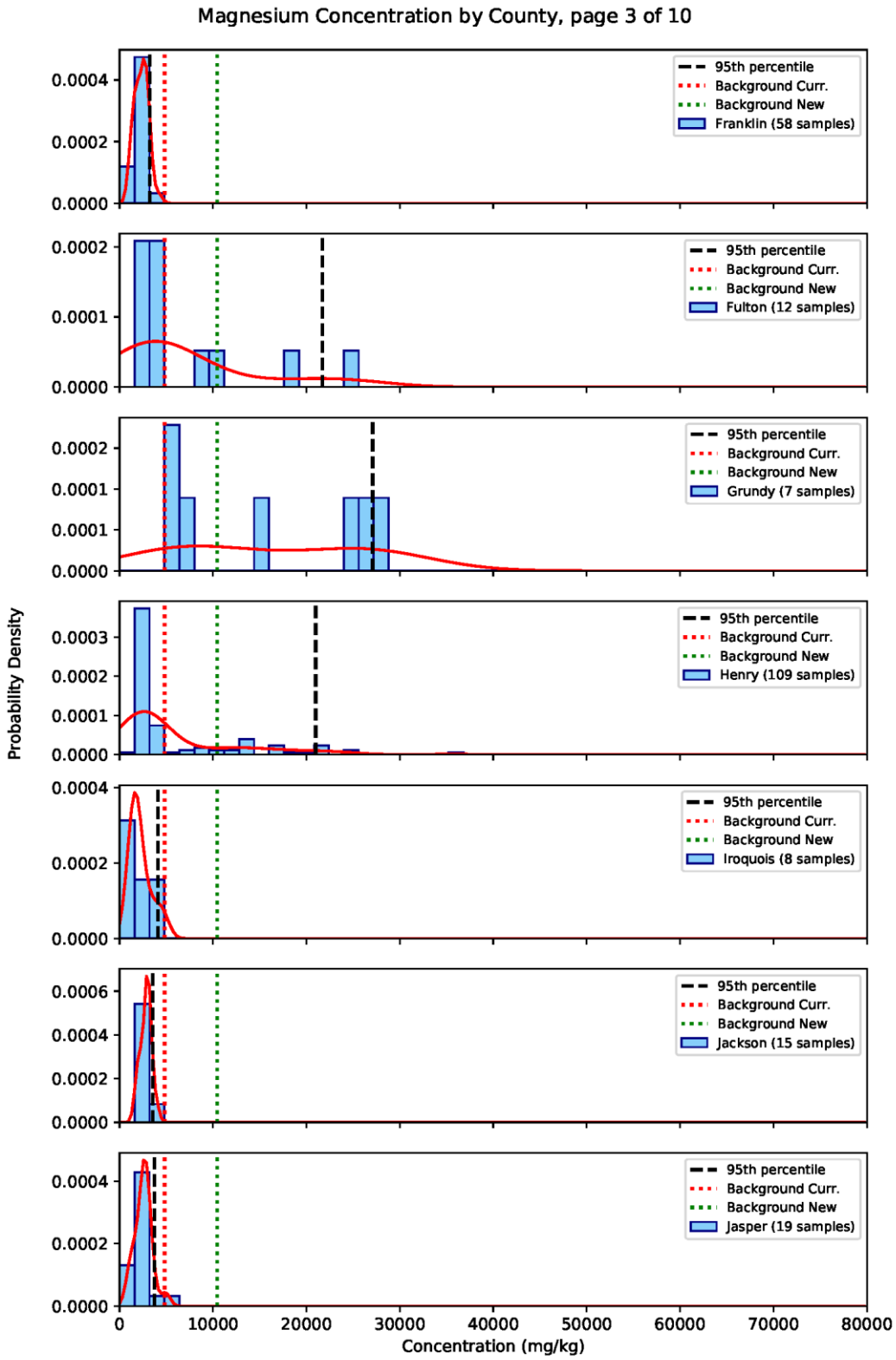


Figure 459. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 3

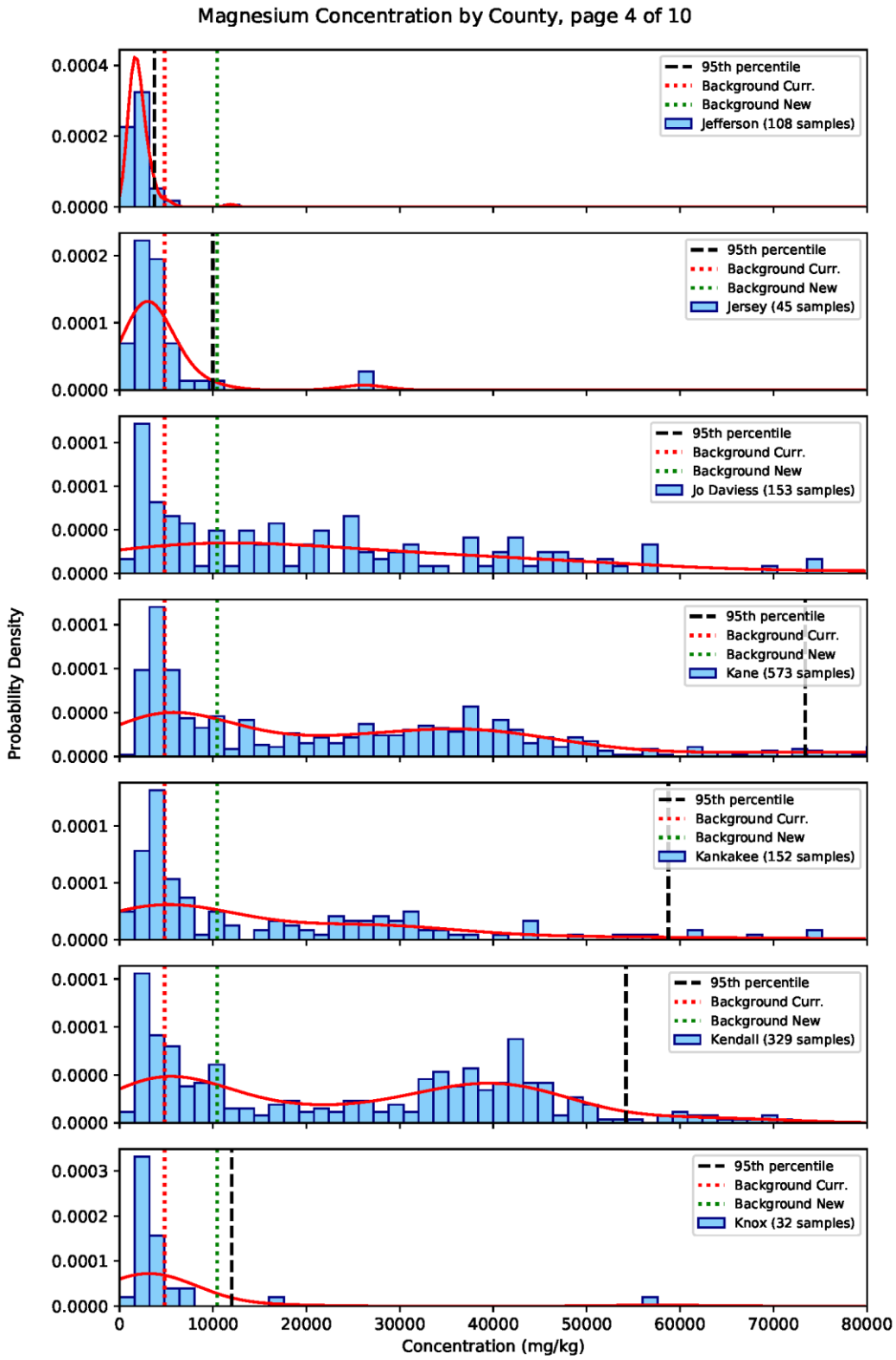


Figure 460. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 4

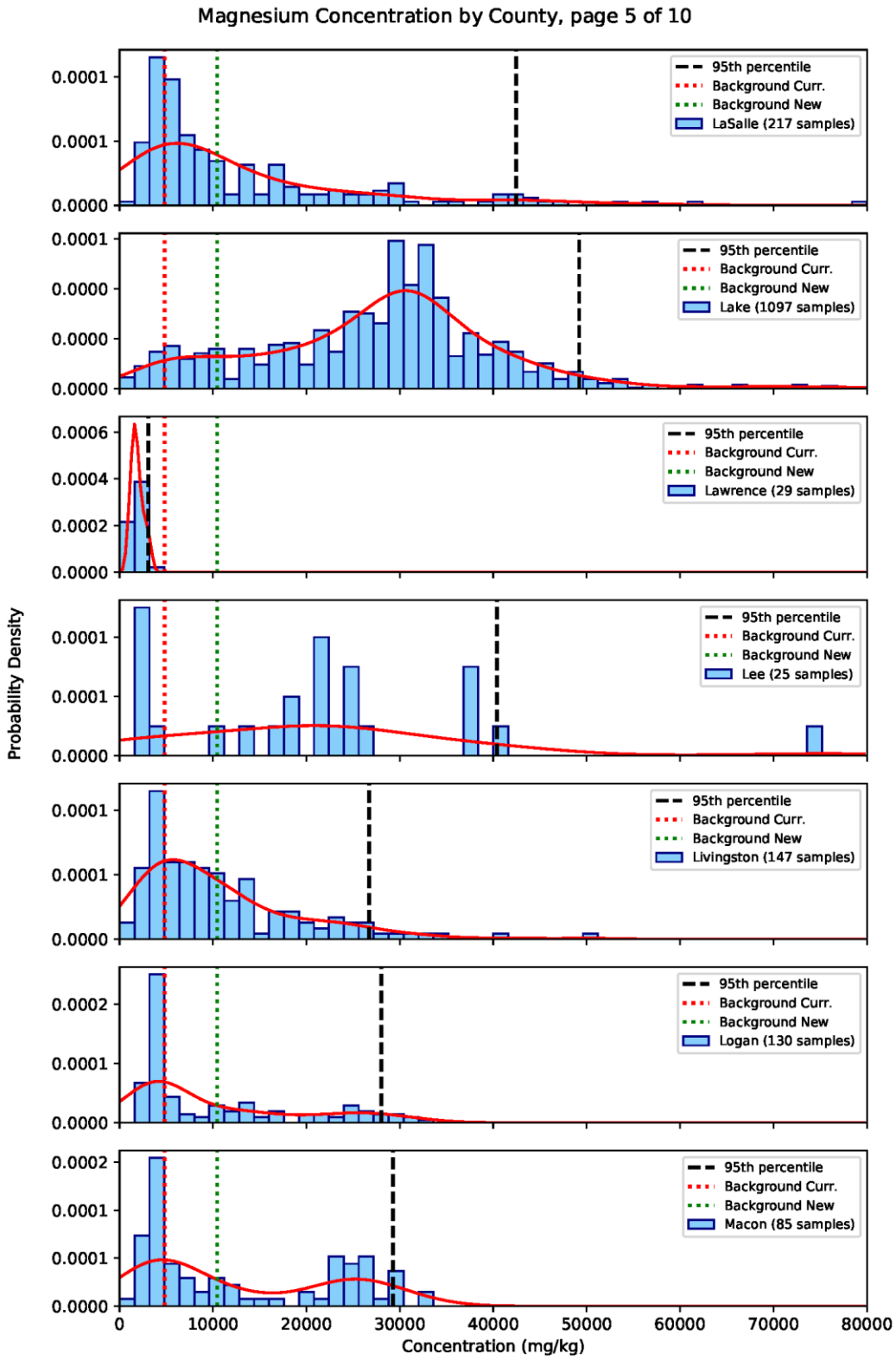


Figure 461. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 5

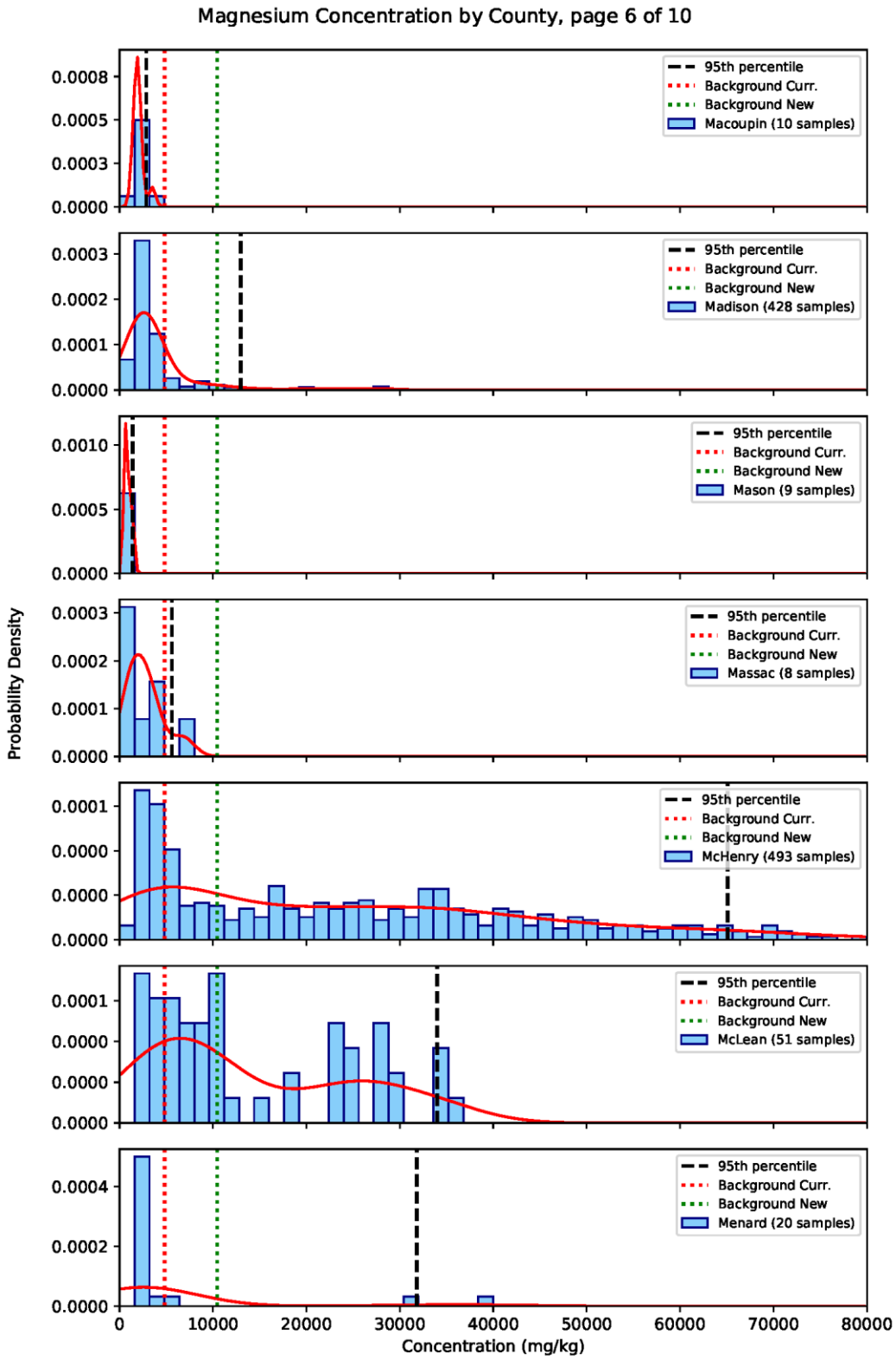


Figure 462. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 6

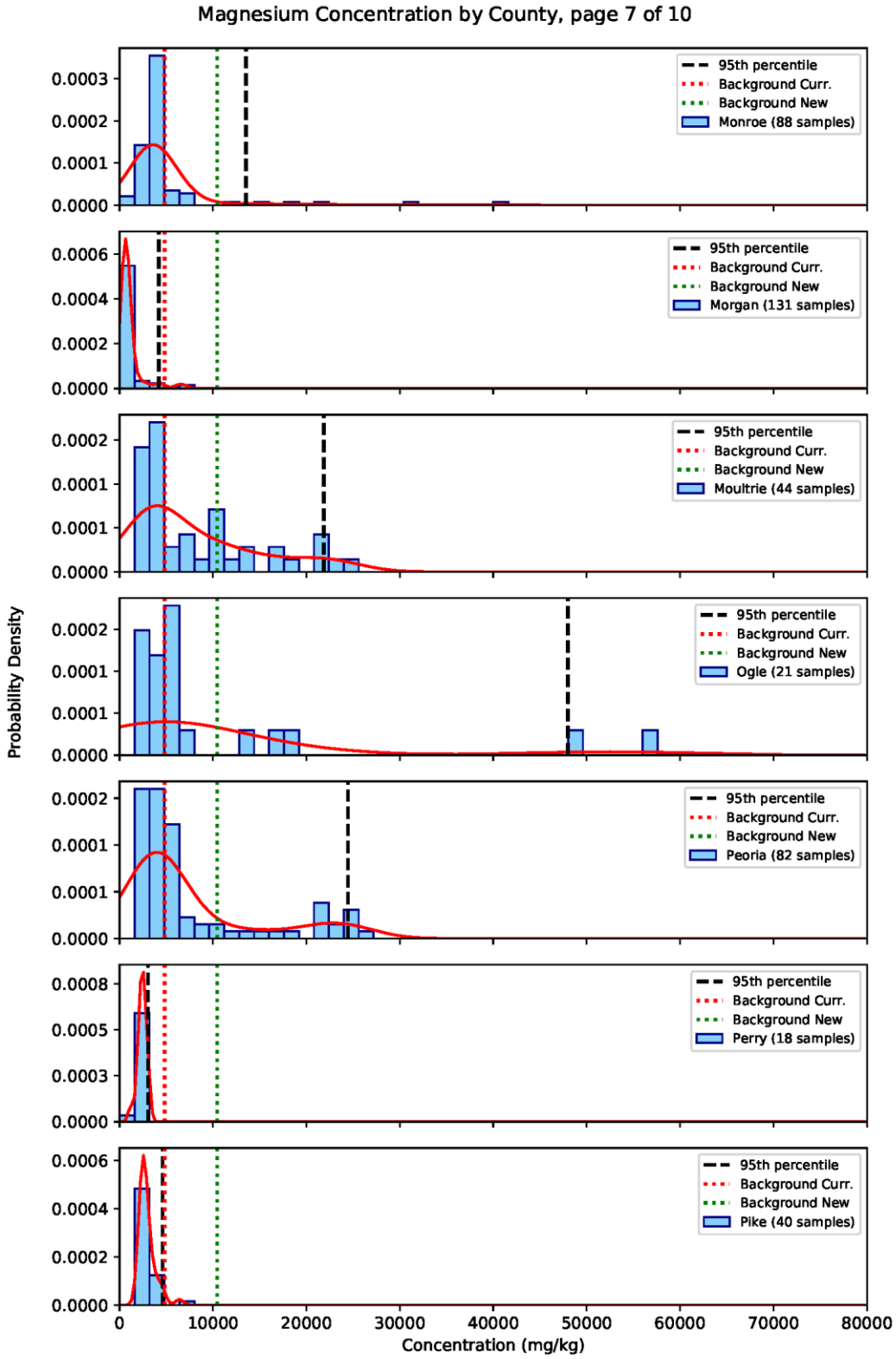


Figure 463. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 7

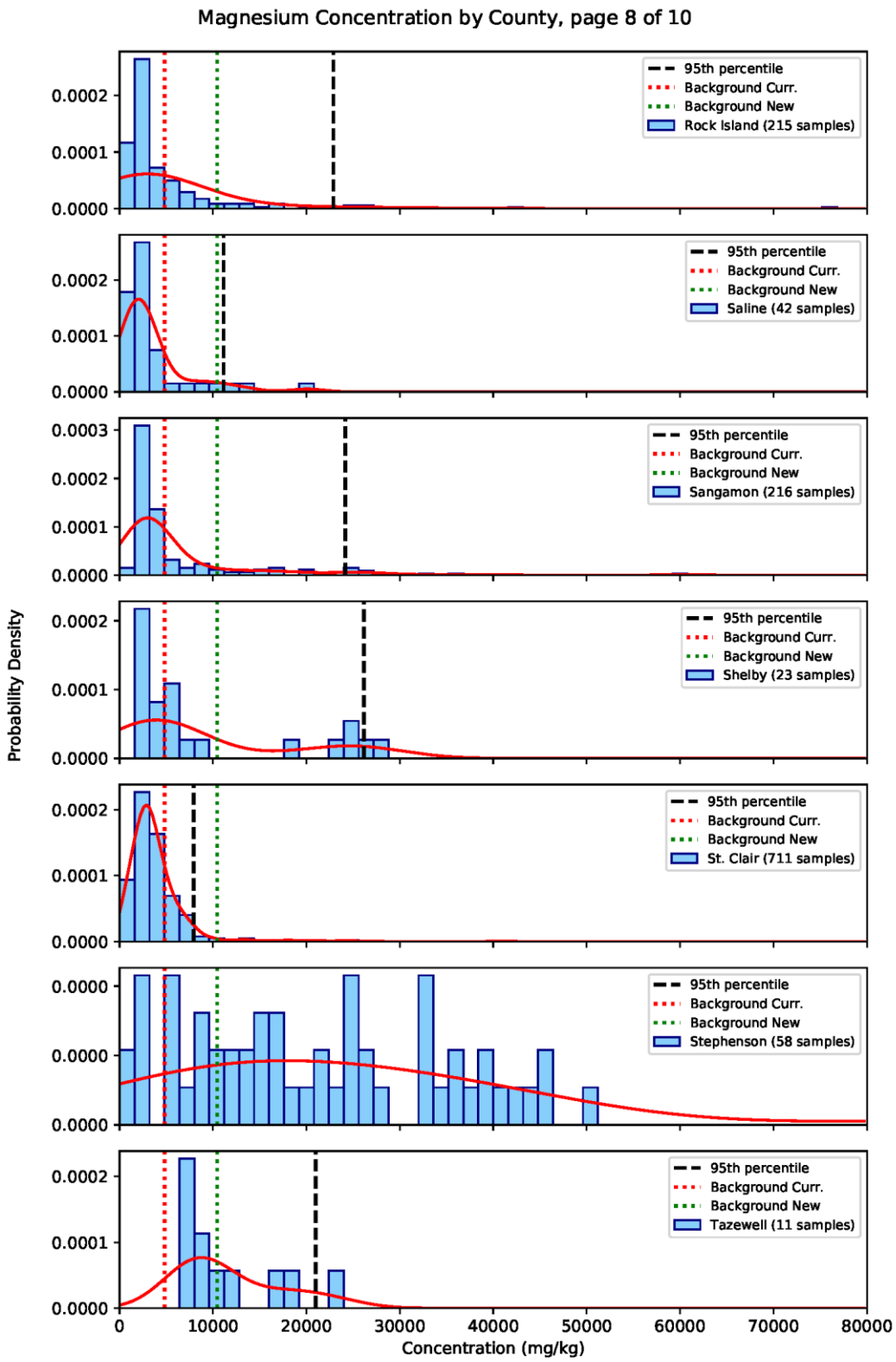


Figure 464. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 8

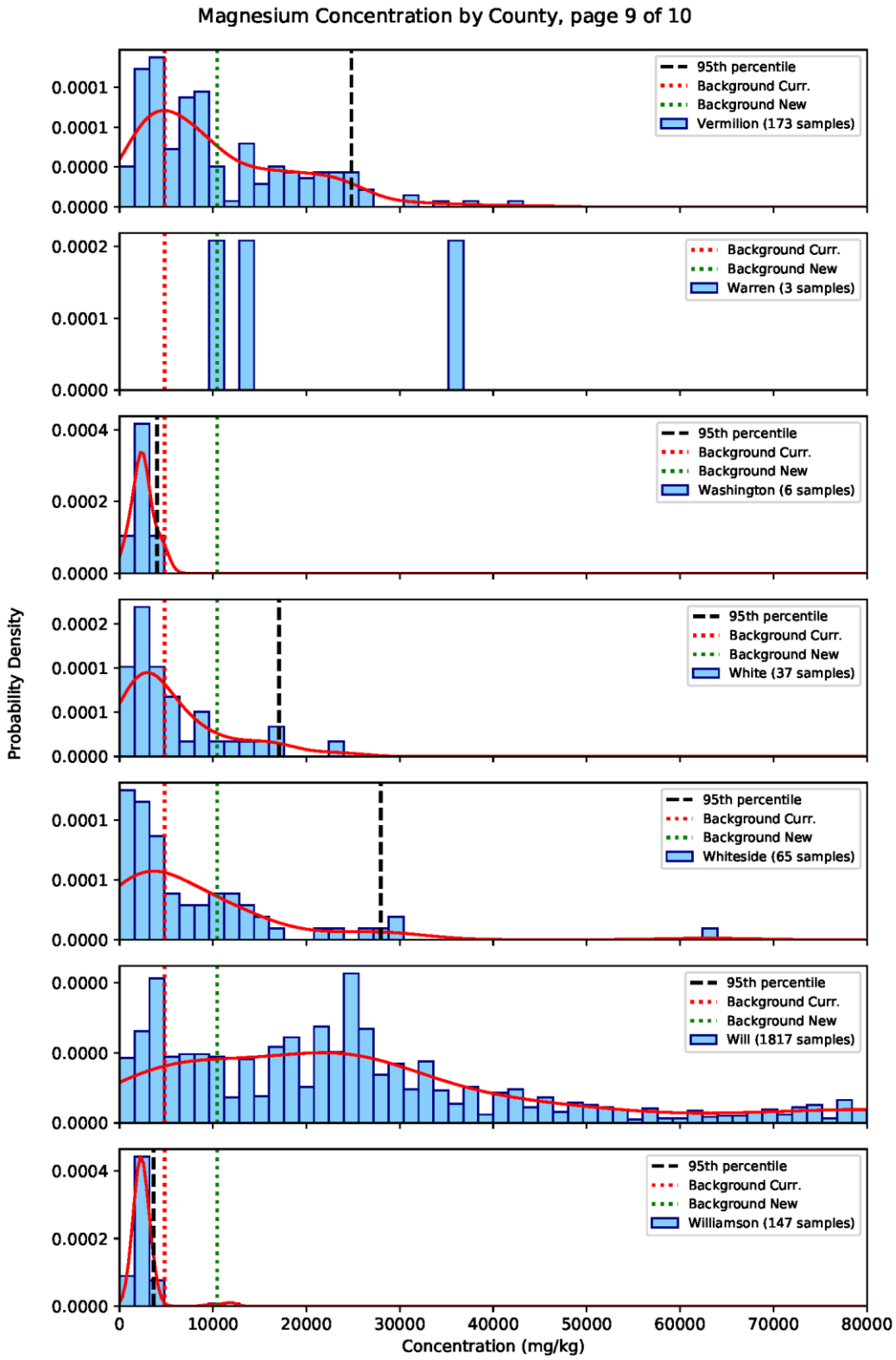


Figure 465. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 9

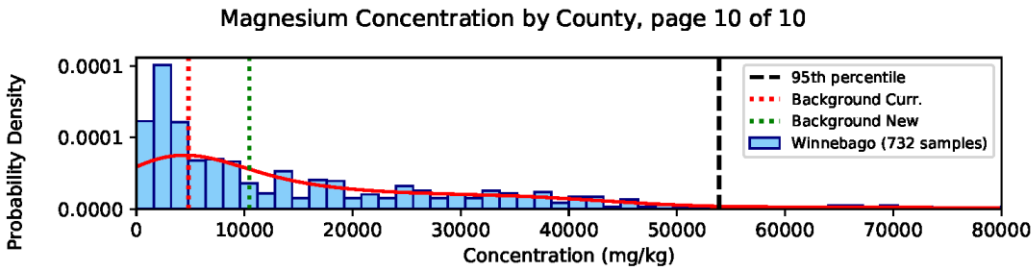


Figure 466. Histogram of RSL magnesium concentrations by Illinois county, REC (mg/kg), part 10

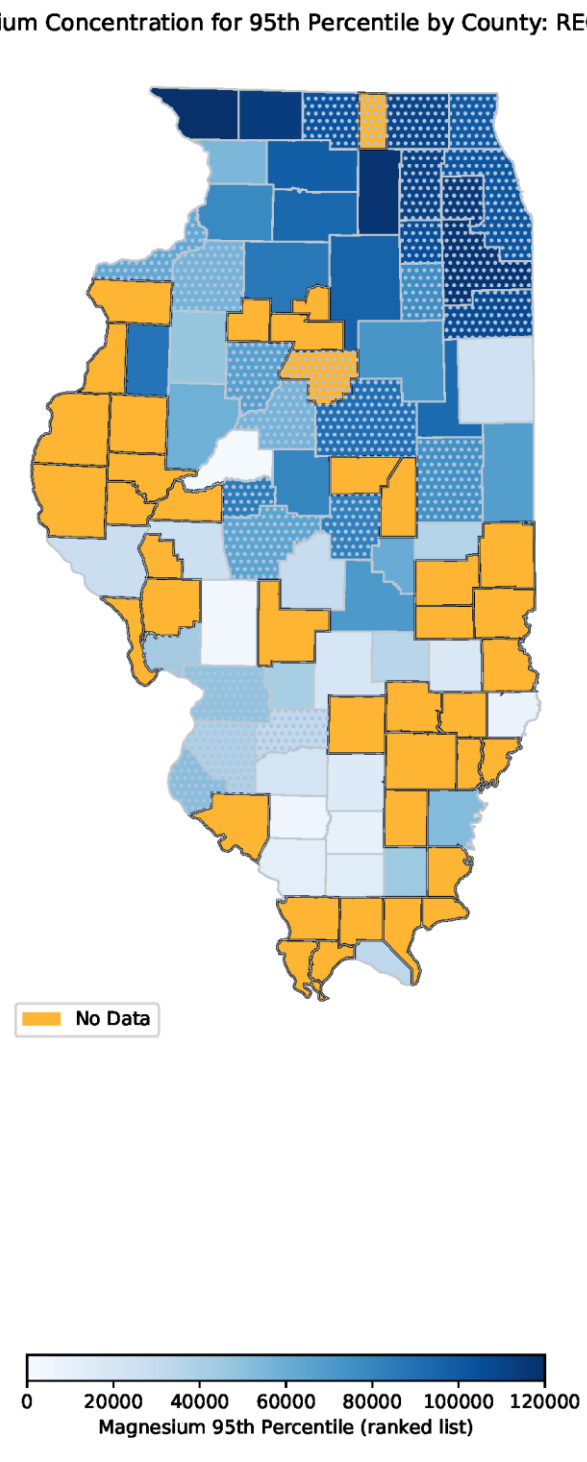


Figure 467. Map of RSL magnesium 95th percentile concentration by Illinois county, REC (mg/kg)

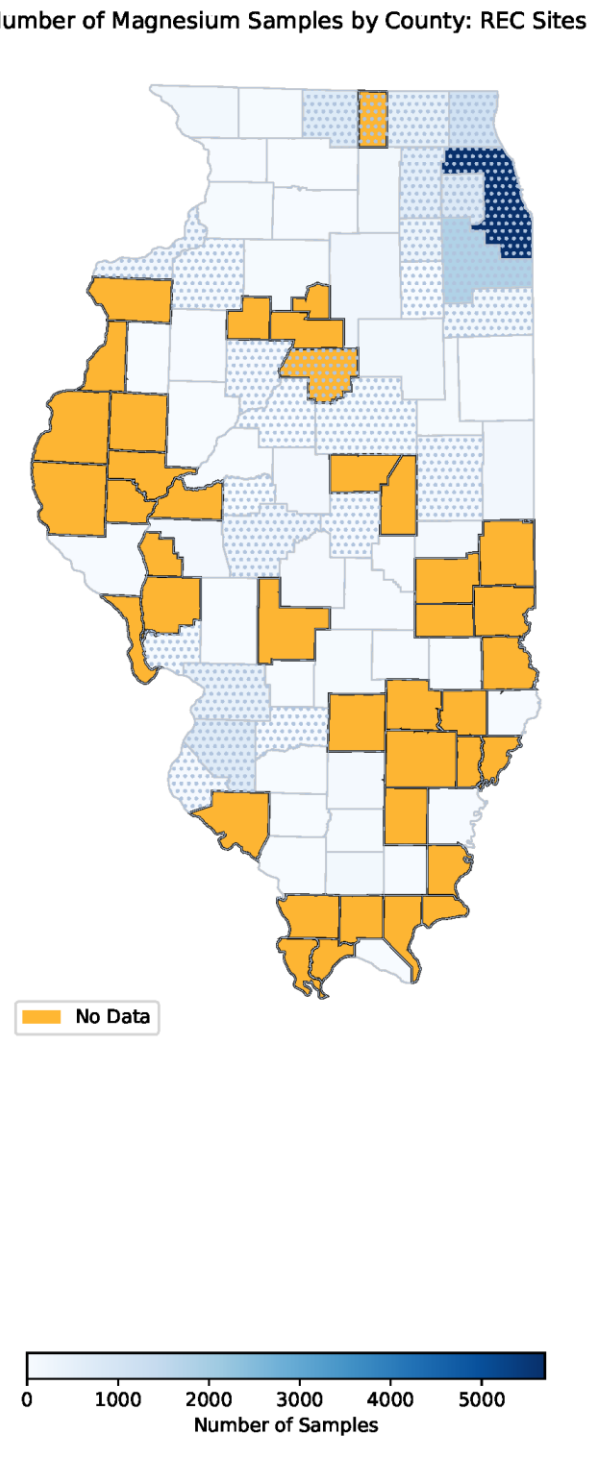


Figure 468. Map of RSL magnesium sample quantity by Illinois county, REC (mg/kg)

M.2 MAGNESIUM NON-REC

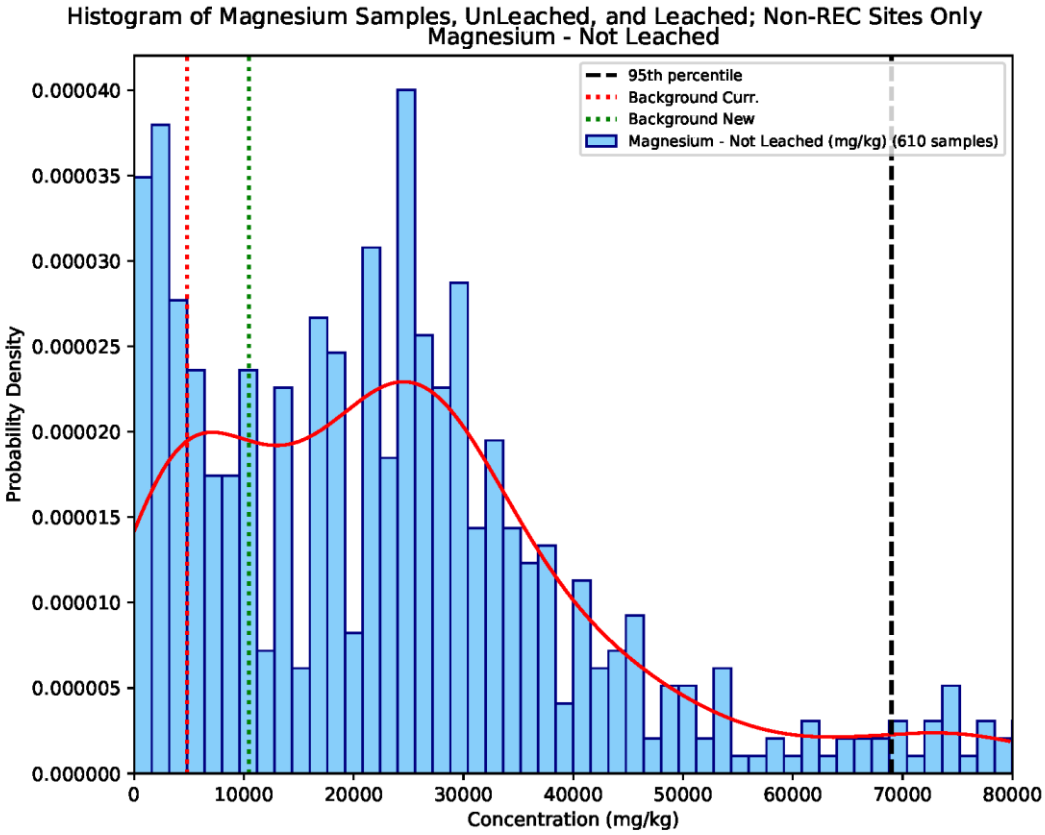


Figure 469. Histogram of RSL magnesium concentrations, Non-REC (mg/kg)

Magnesium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

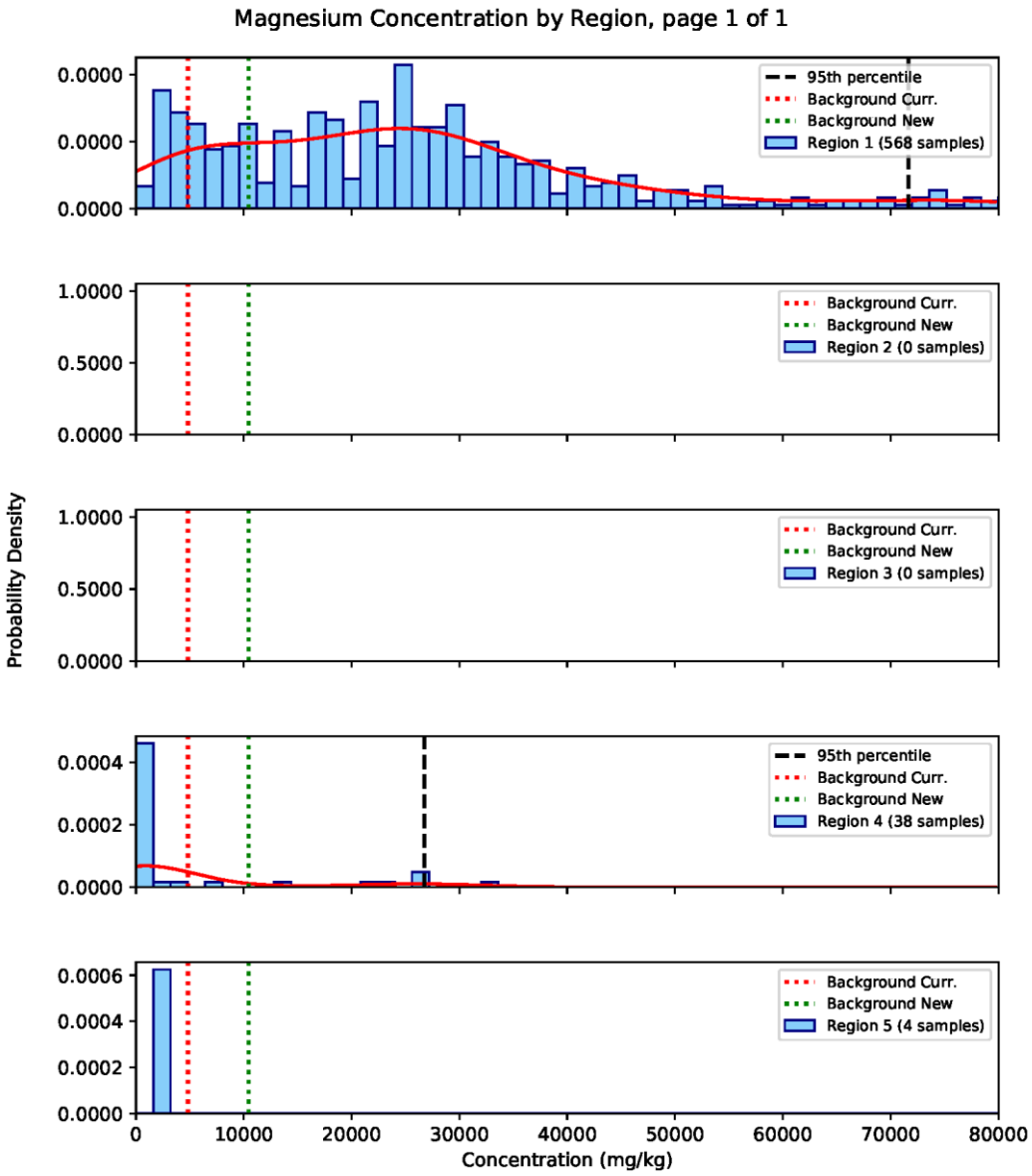


Figure 470. Histogram of RSL magnesium concentrations by IDOT Region, Non-REC (mg/kg)

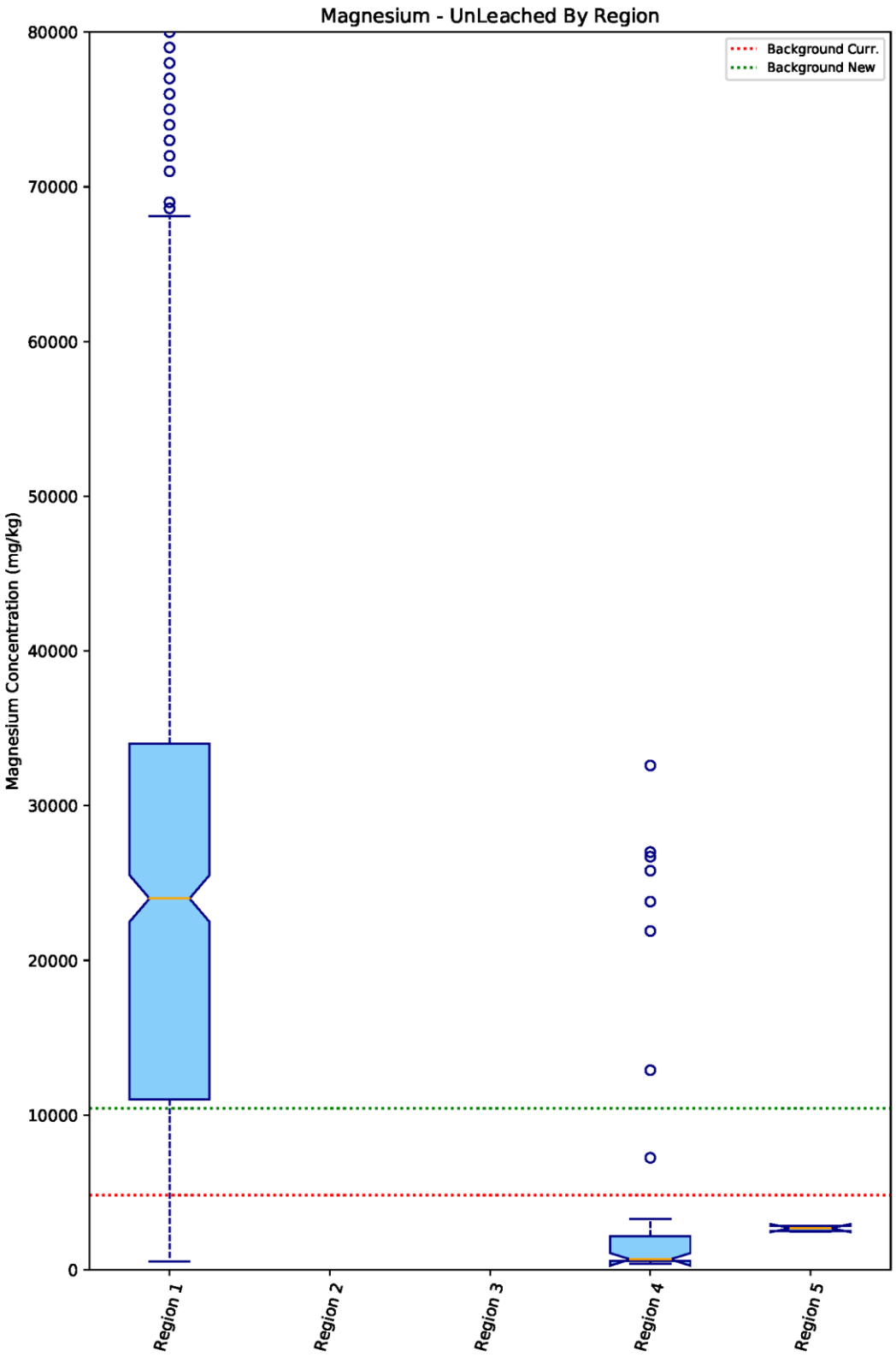


Figure 471. Boxplot of RSL magnesium concentrations by IDOT Region, Non-REC (mg/kg)

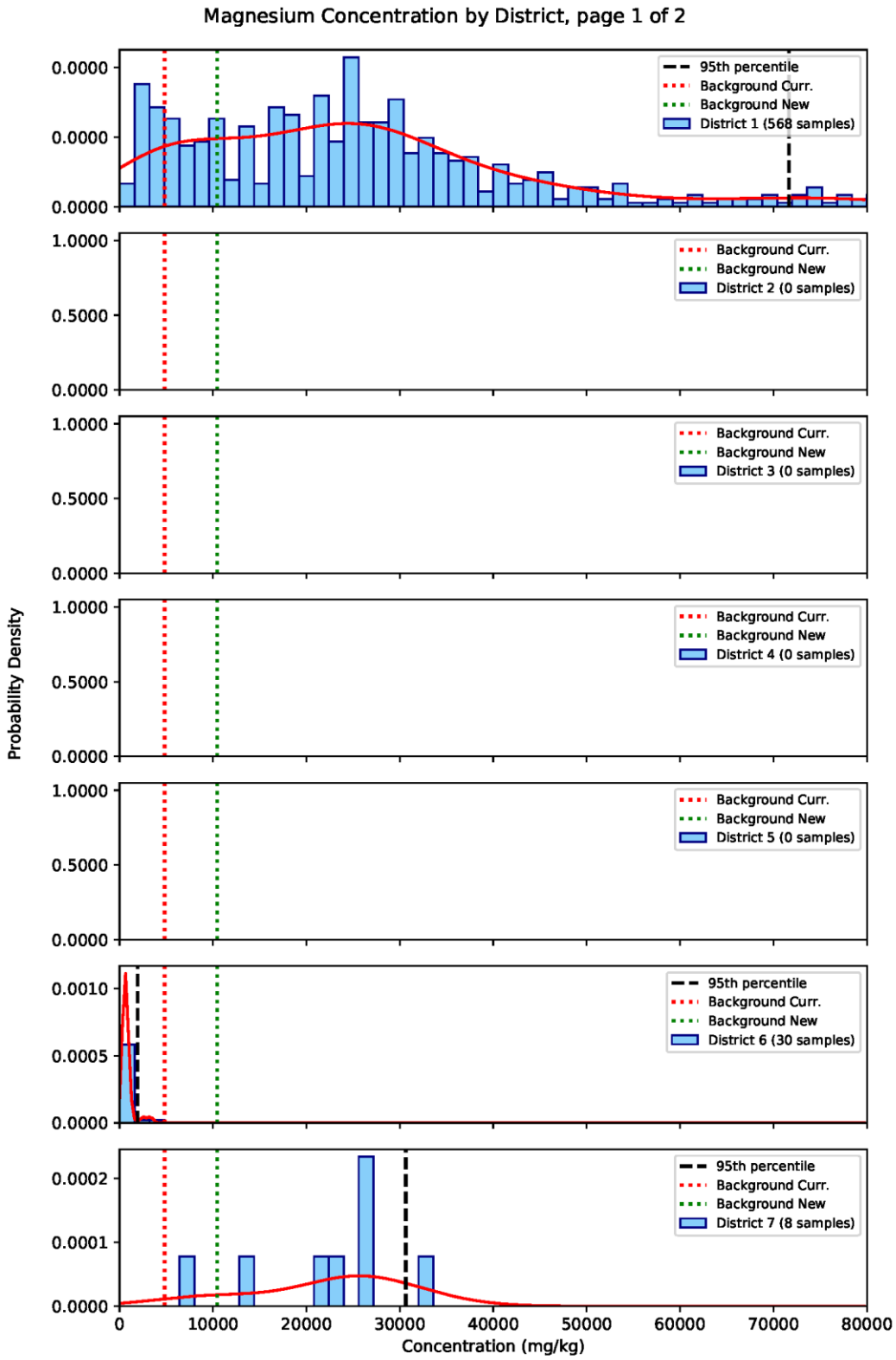


Figure 472. Histogram of RSL magnesium concentrations by IDOT District, Non-REC (mg/kg), part 1

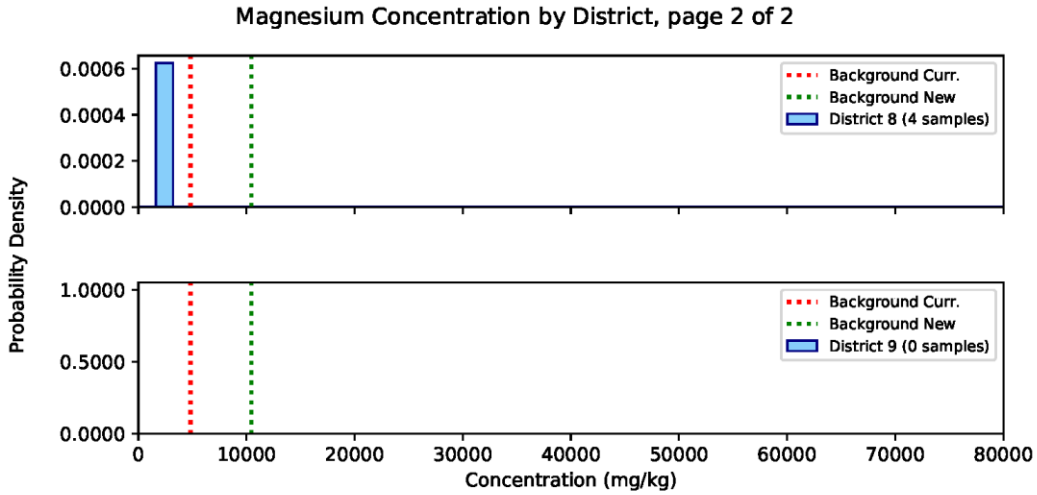


Figure 473. Histogram of RSL magnesium concentrations by IDOT District, Non-REC (mg/kg), part 2

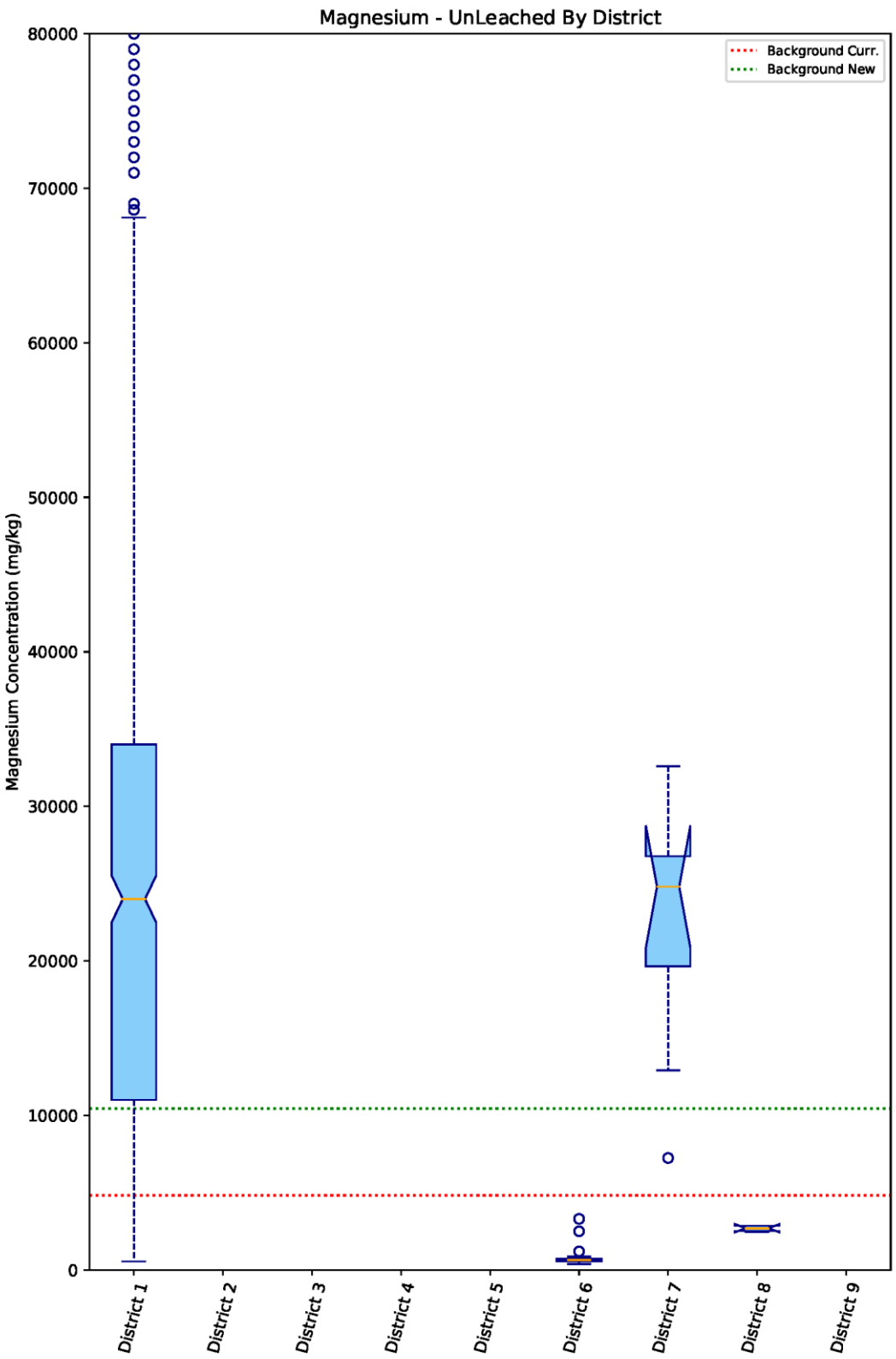


Figure 474. Boxplot of RSL magnesium concentrations by IDOT District, Non-REC (mg/kg)

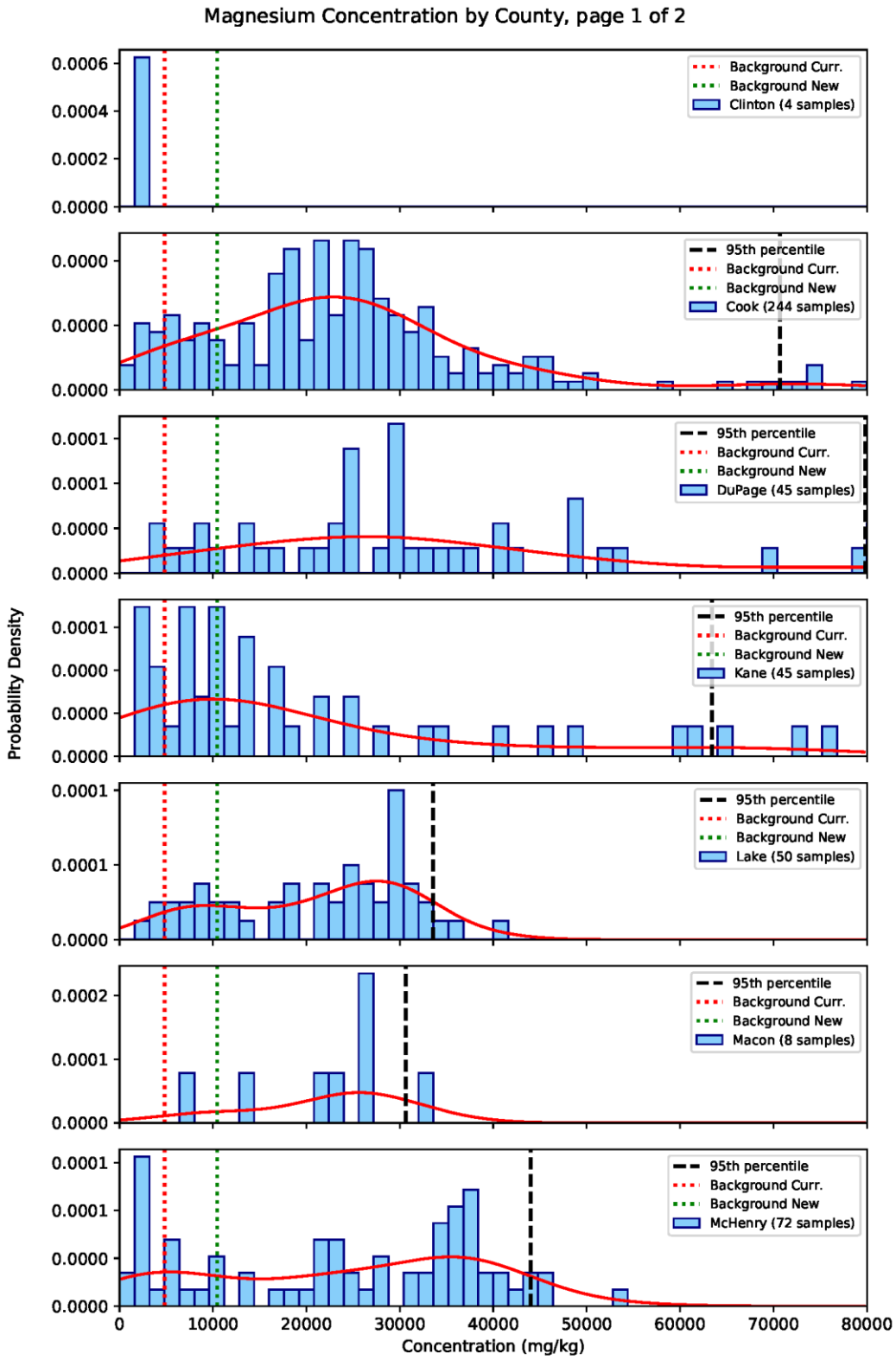


Figure 475. Histogram of RSL magnesium concentrations by Illinois county, Non-REC (mg/kg), part 1

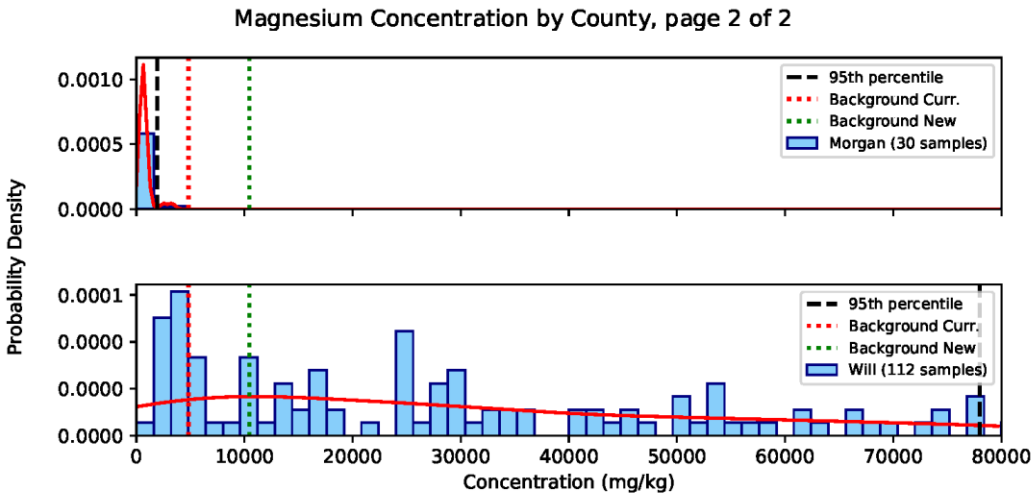


Figure 476. Histogram of RSL magnesium concentrations by Illinois county, Non-REC (mg/kg), part 2

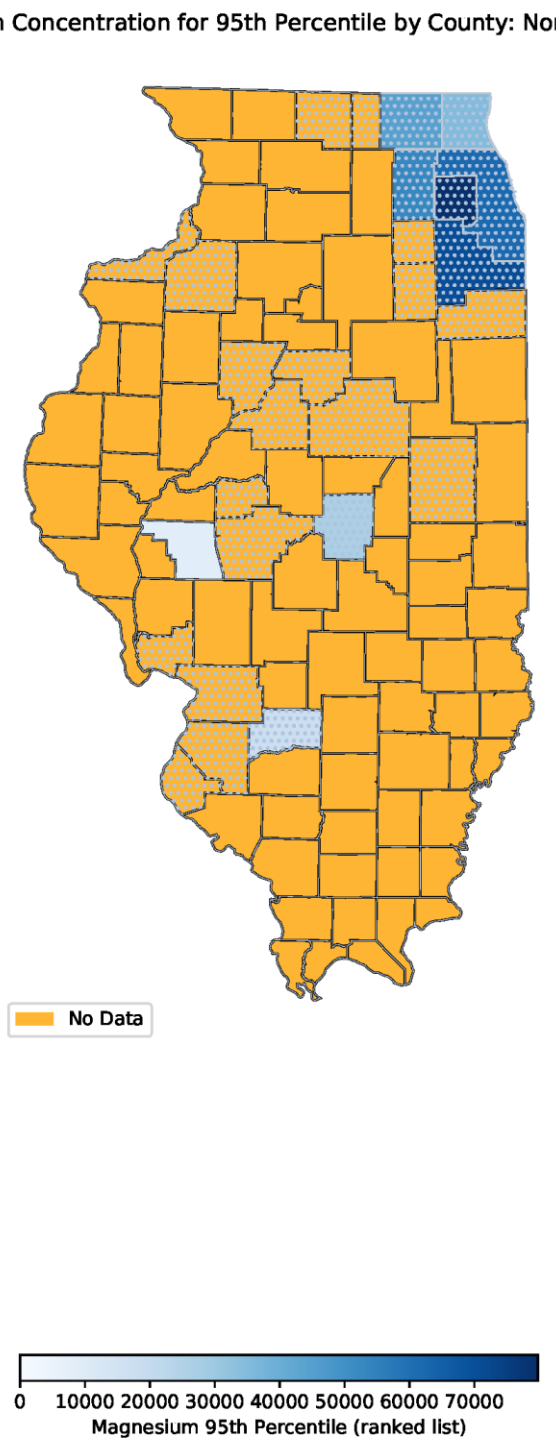


Figure 477. Map of RSL magnesium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

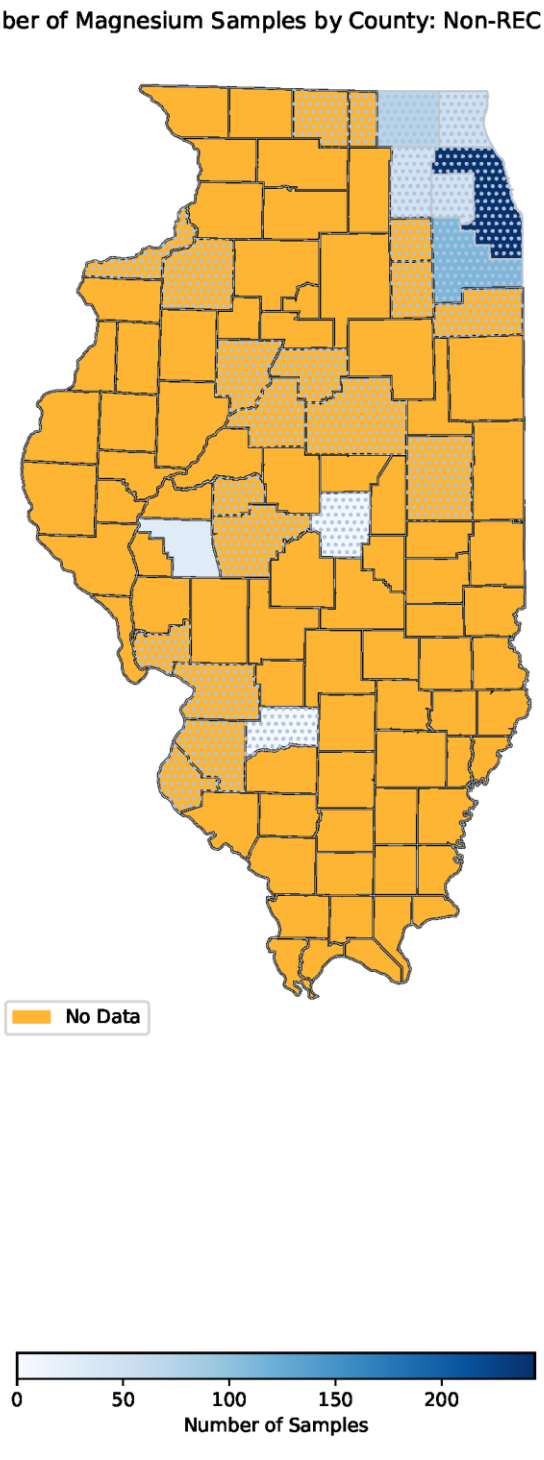


Figure 478. Map of RSL magnesium sample quantity by Illinois county, Non-REC (mg/kg)

M.3 MAGNESIUM DE MINIMIS

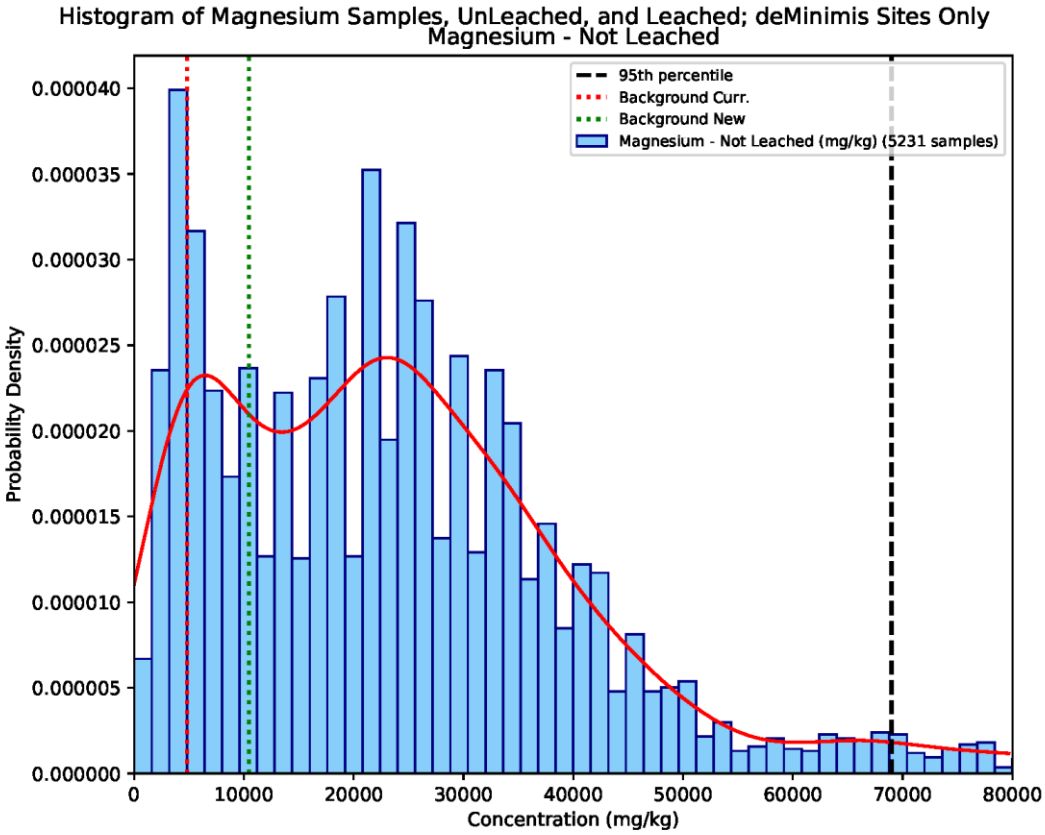


Figure 479. Histogram of RSL magnesium concentrations, de minimis (mg/kg)

Magnesium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

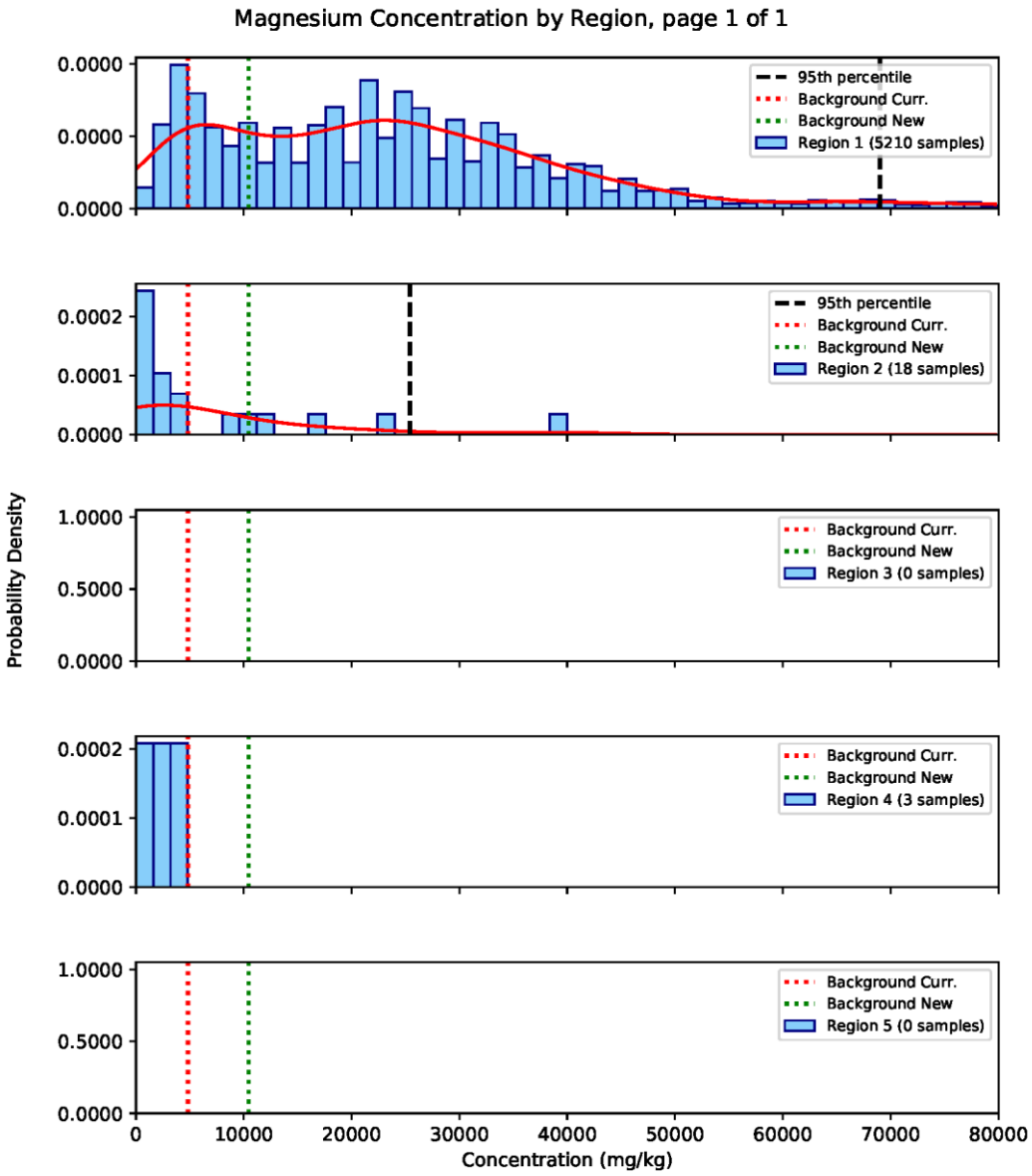


Figure 480. Histogram of RSL magnesium concentrations by IDOT Region, de minimis (mg/kg)

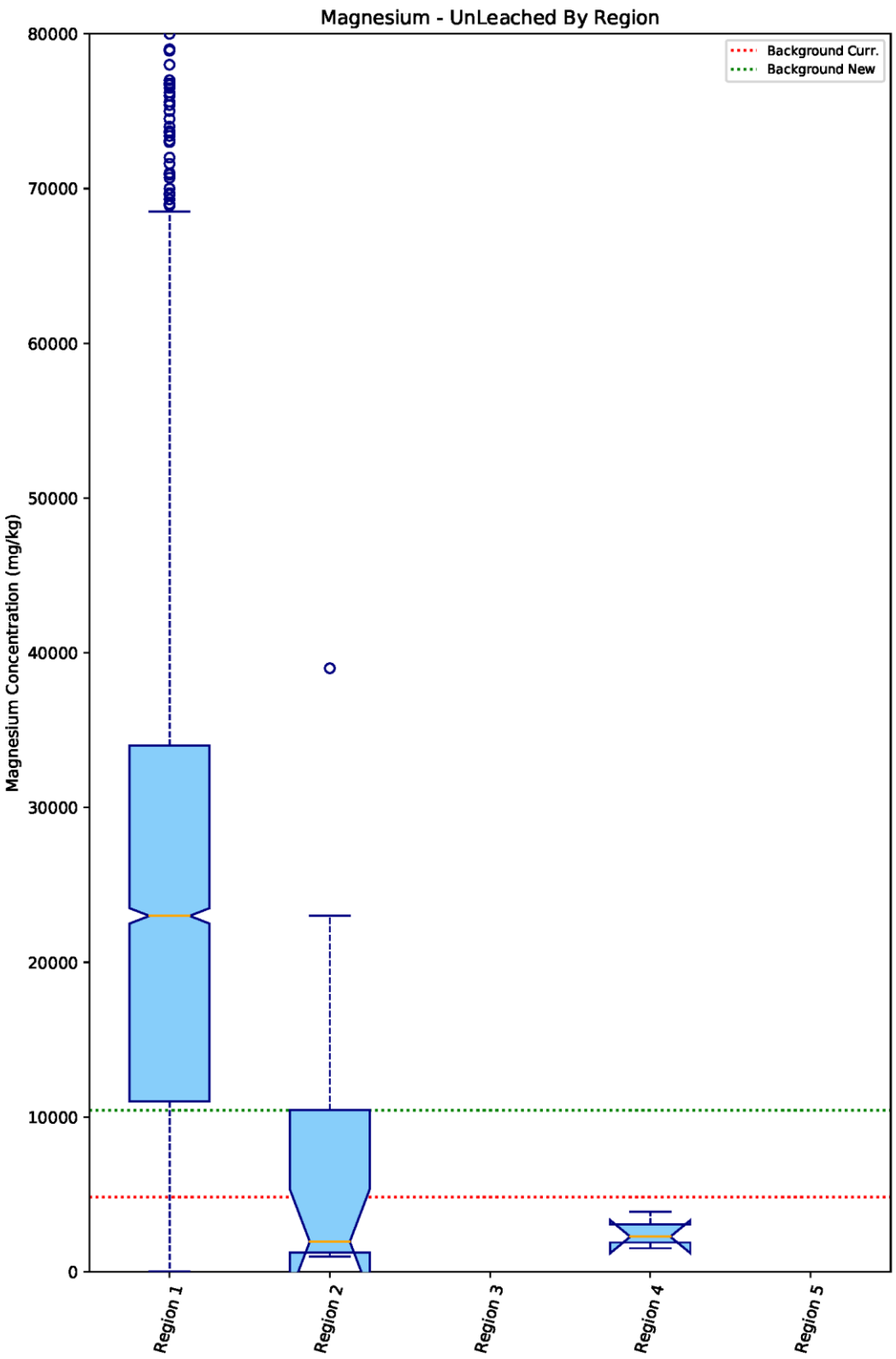


Figure 481. Boxplot of RSL magnesium concentrations by IDOT Region, de minimis (mg/kg)

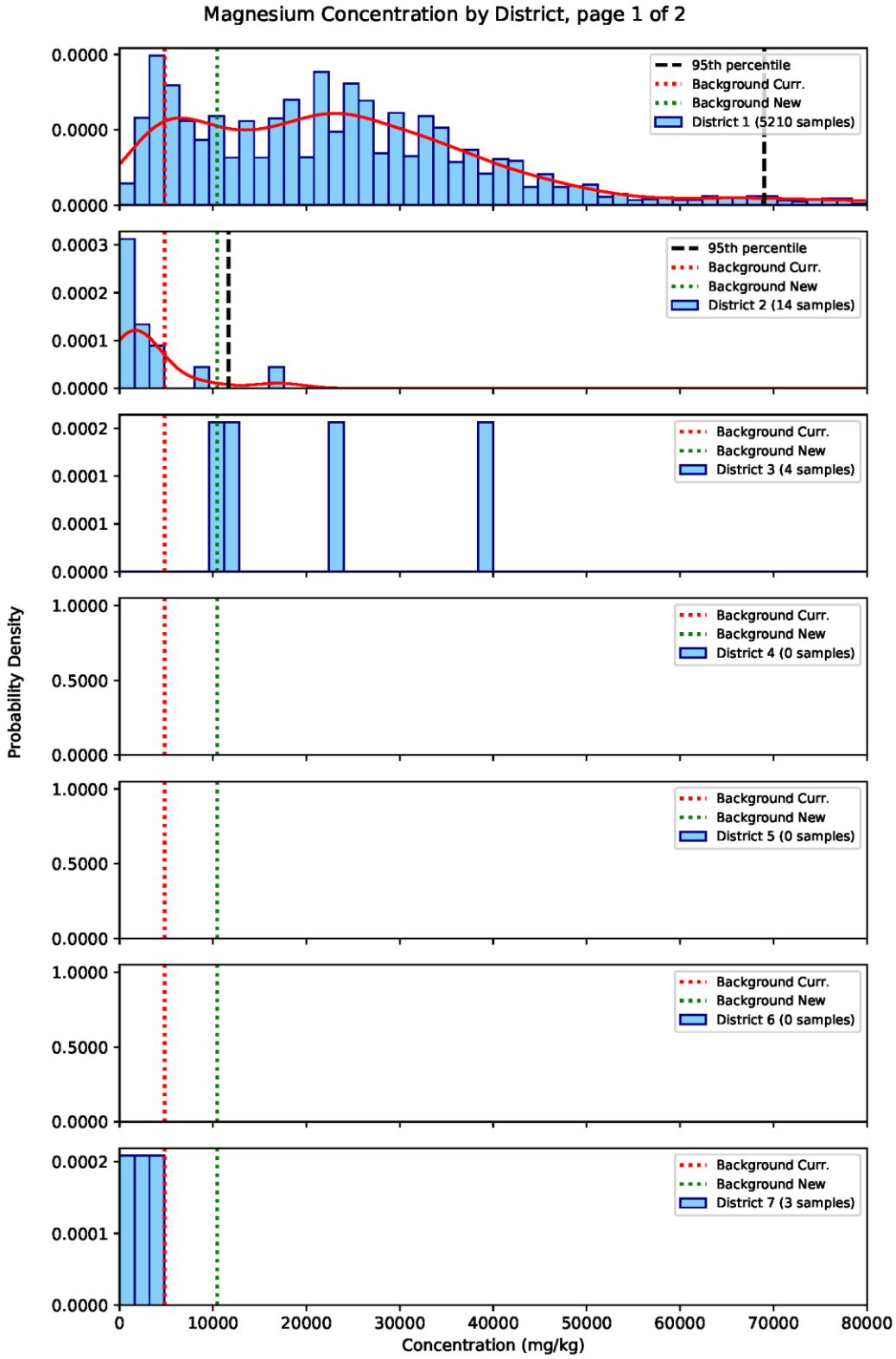


Figure 482. Histogram of RSL magnesium concentrations by IDOT District, de minimis (mg/kg), part 1

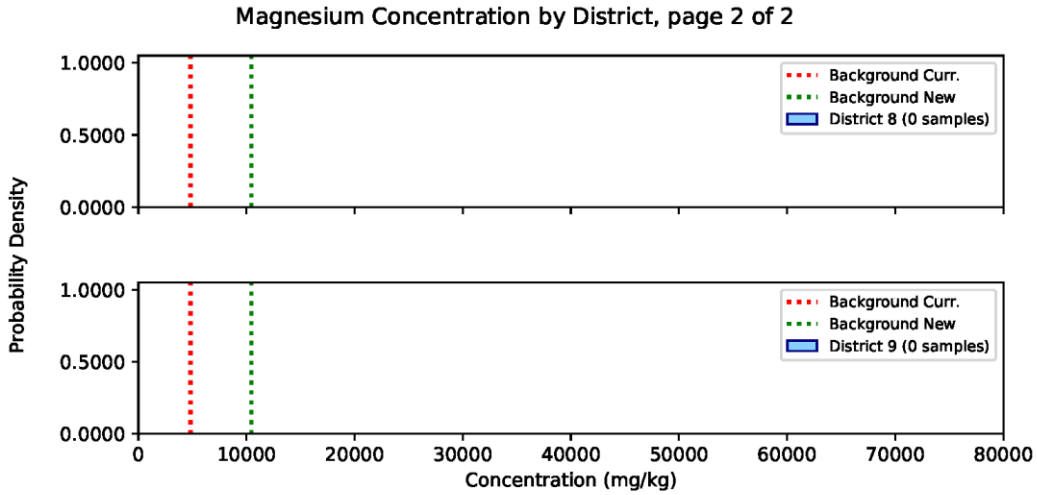


Figure 483. Histogram of RSL magnesium concentrations by IDOT District, de minimis (mg/kg), part 2

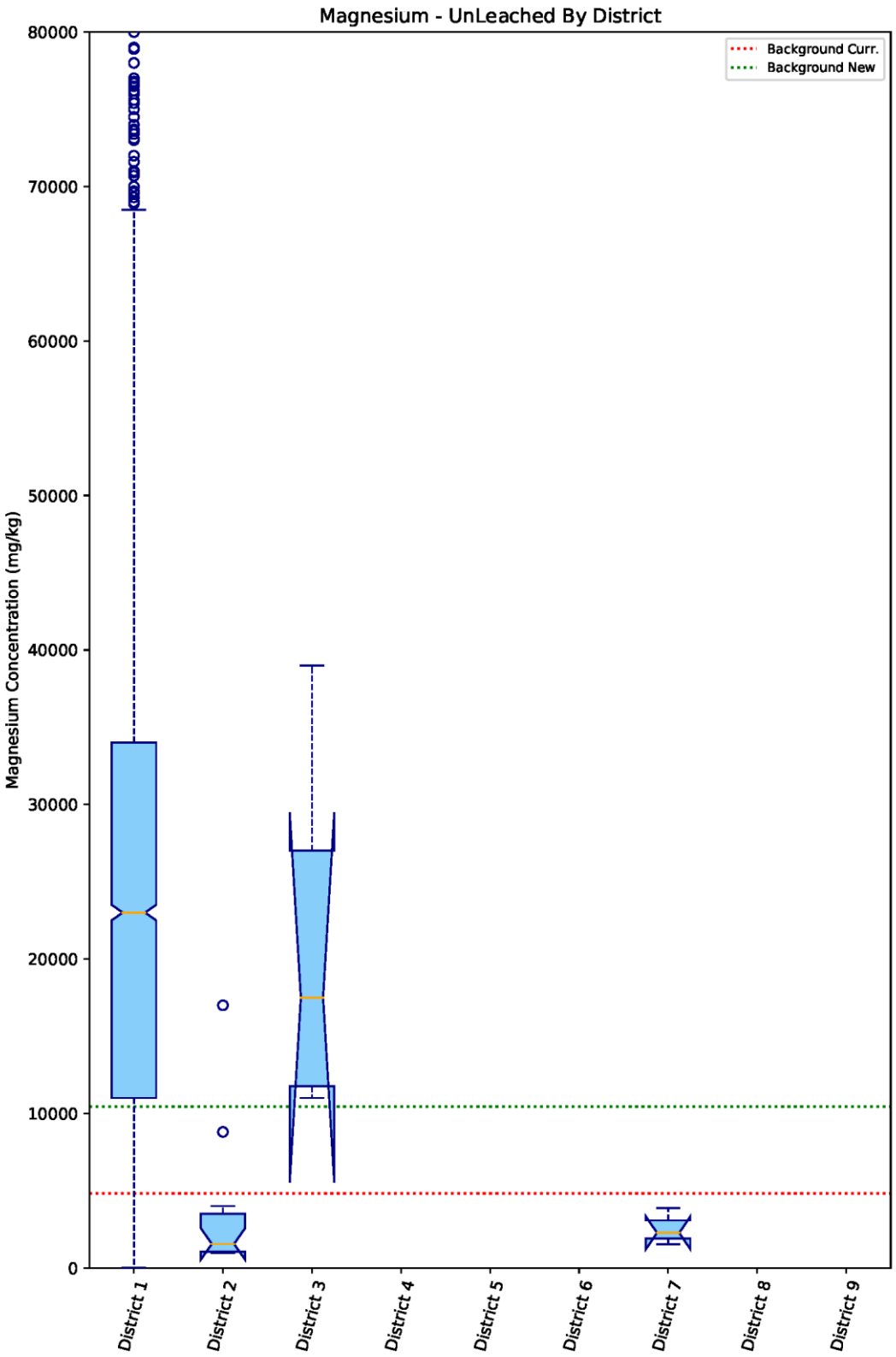


Figure 484. Boxplot of RSL magnesium concentrations by IDOT District, de minimis (mg/kg)

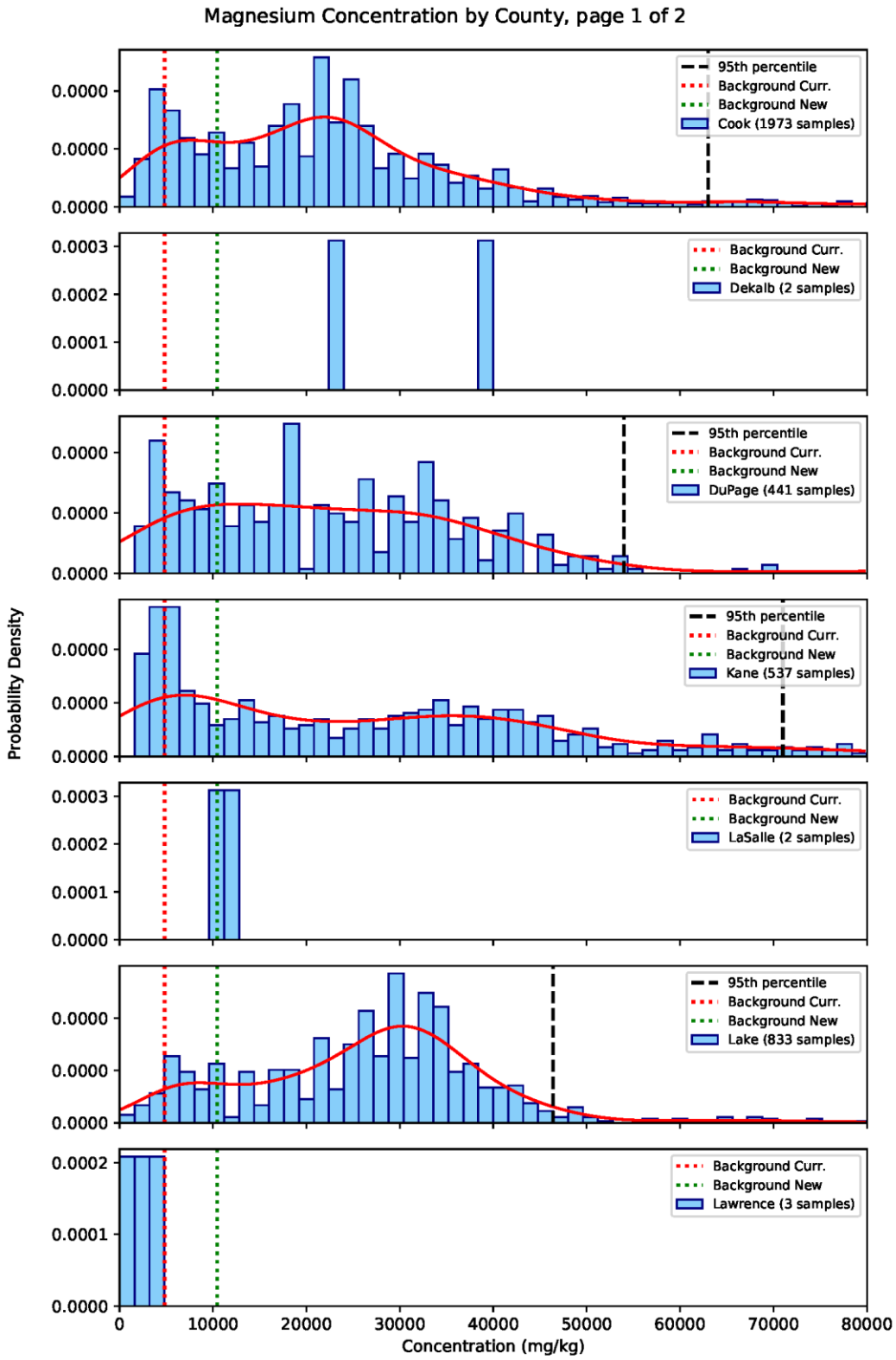


Figure 485. Histogram of RSL magnesium concentrations by Illinois county, de minimis (mg/kg), part 1

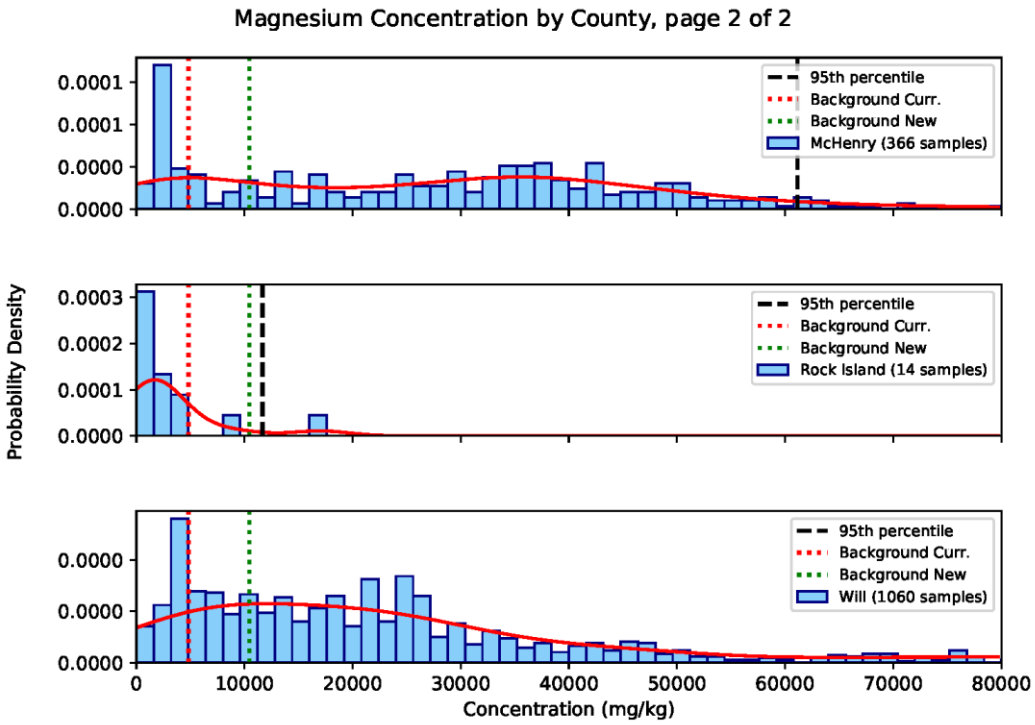


Figure 486. Histogram of RSL magnesium concentrations by Illinois county, de minimis (mg/kg), part 2

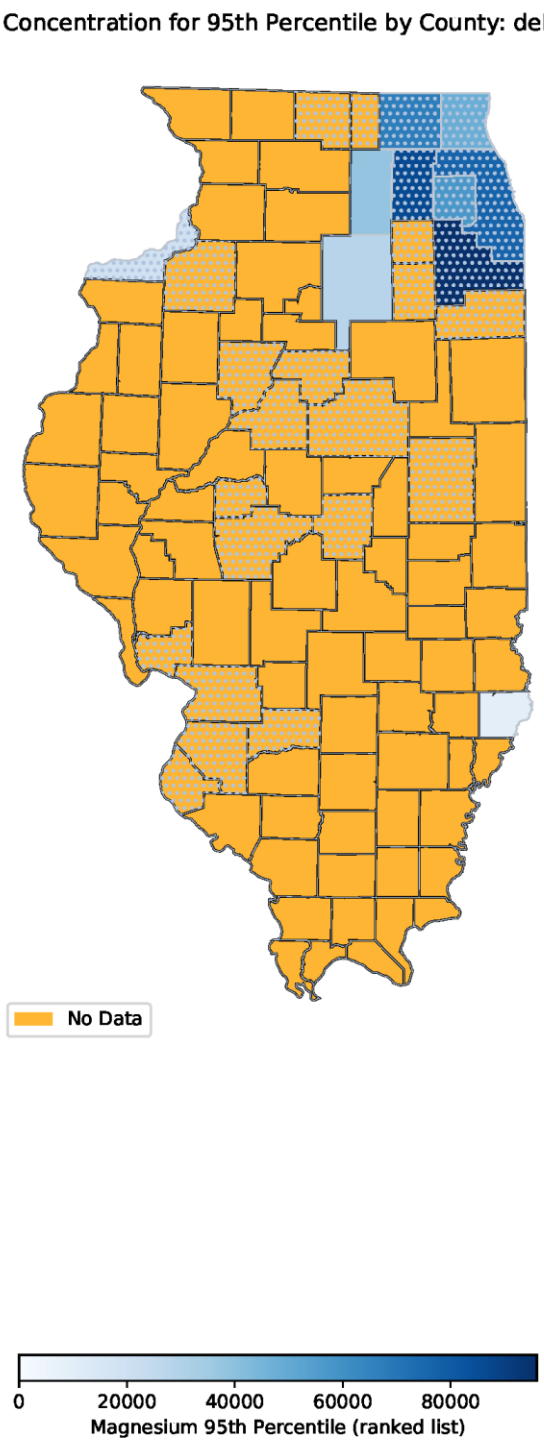


Figure 487. Map of RSL magnesium 95th percentile concentration by Illinois county, de minimis (mg/kg)

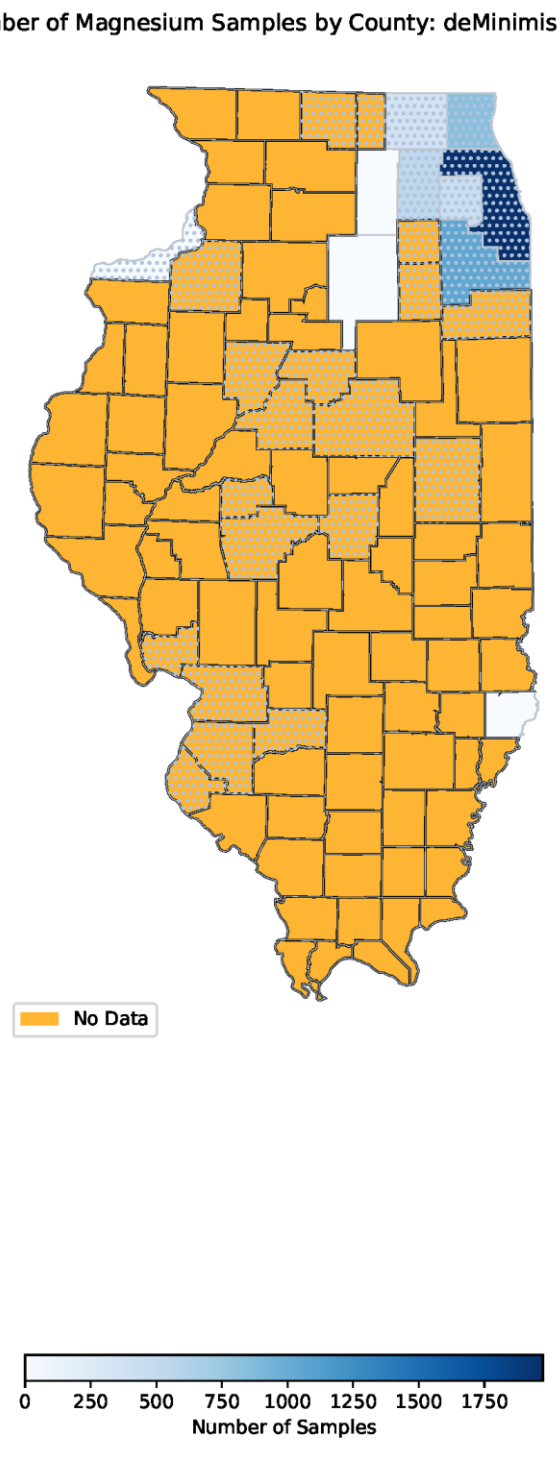


Figure 488. Map of RSL magnesium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX N. ANALYTE ANALYSIS: MANGANESE

N.1 MANGANESE REC

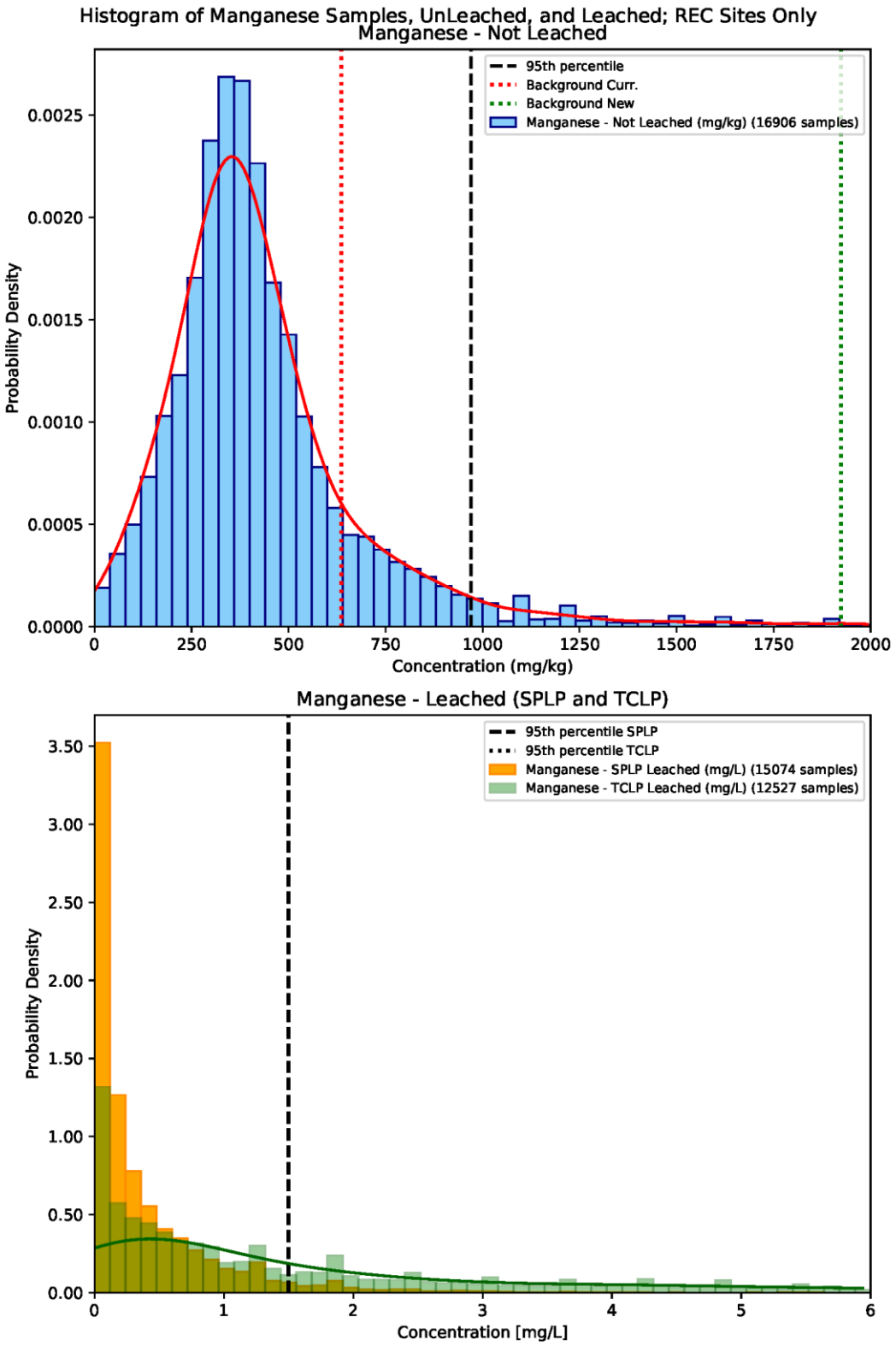


Figure 489. Histogram of RSL manganese concentrations, REC (mg/kg)

Manganese Unleached Concentration (mg/kg)

1) Region

2) District

3) County

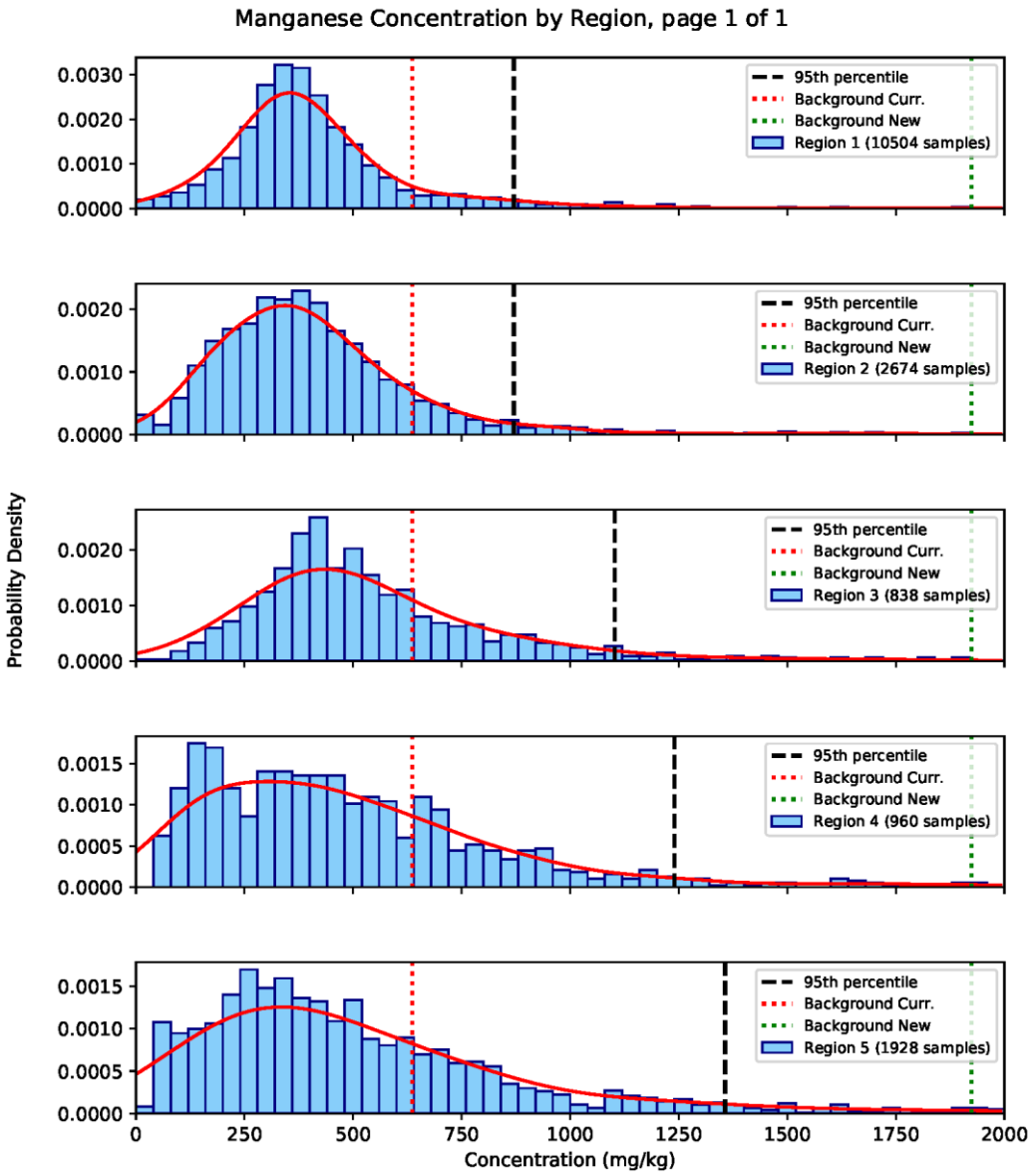


Figure 490. Histogram of RSL manganese concentrations by IDOT Region, REC (mg/kg)

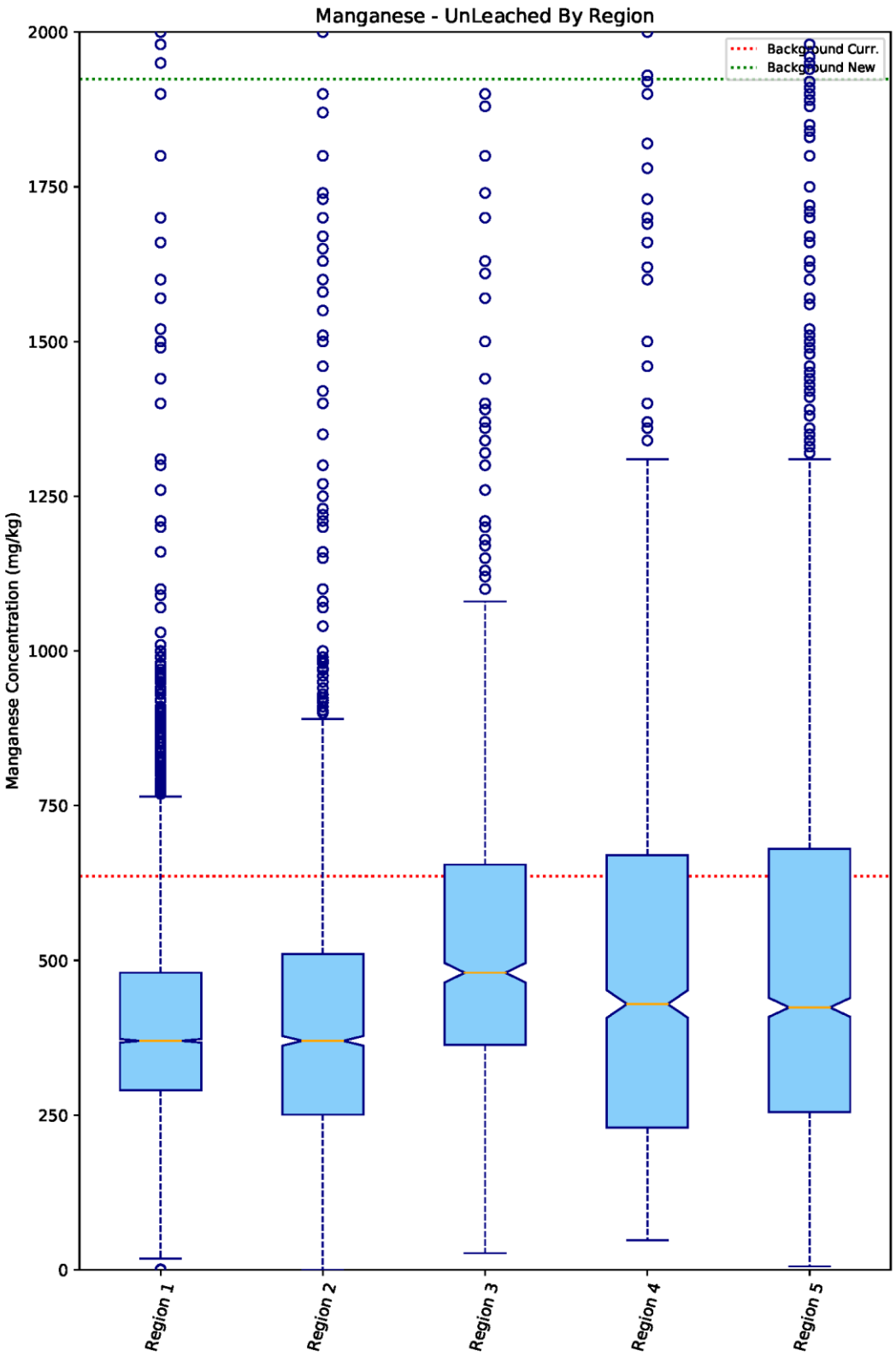


Figure 491. Boxplot of RSL manganese concentrations by IDOT Region, REC (mg/kg)

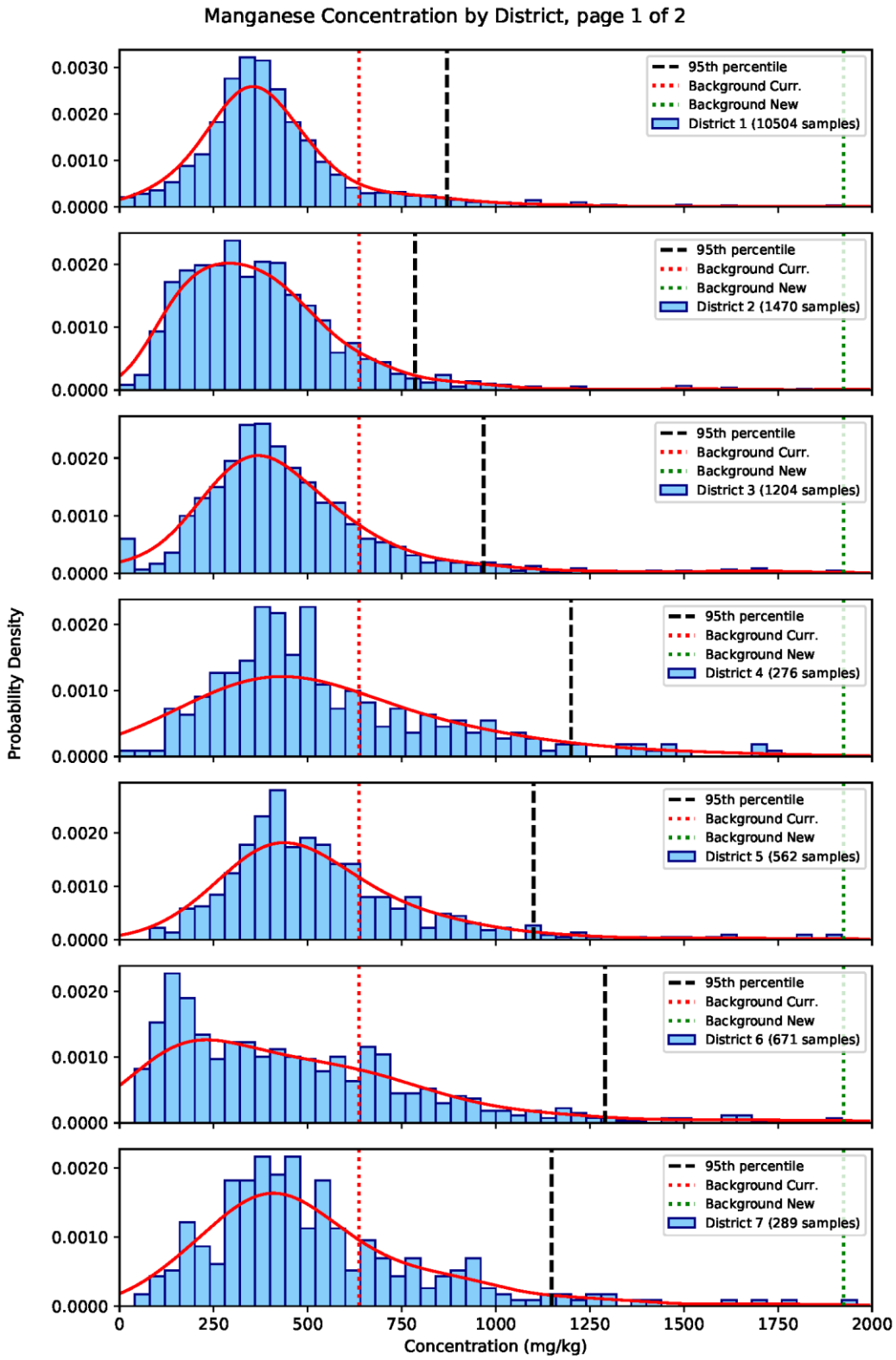


Figure 492. Histogram of RSL manganese concentrations by IDOT District, REC (mg/kg), part 1

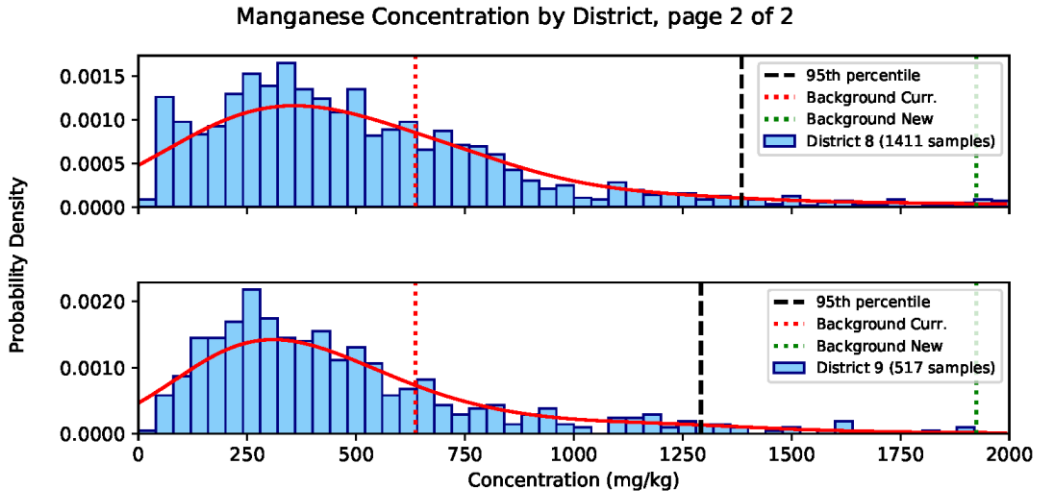


Figure 493. Histogram of RSL manganese concentrations by IDOT District, REC (mg/kg), part 2

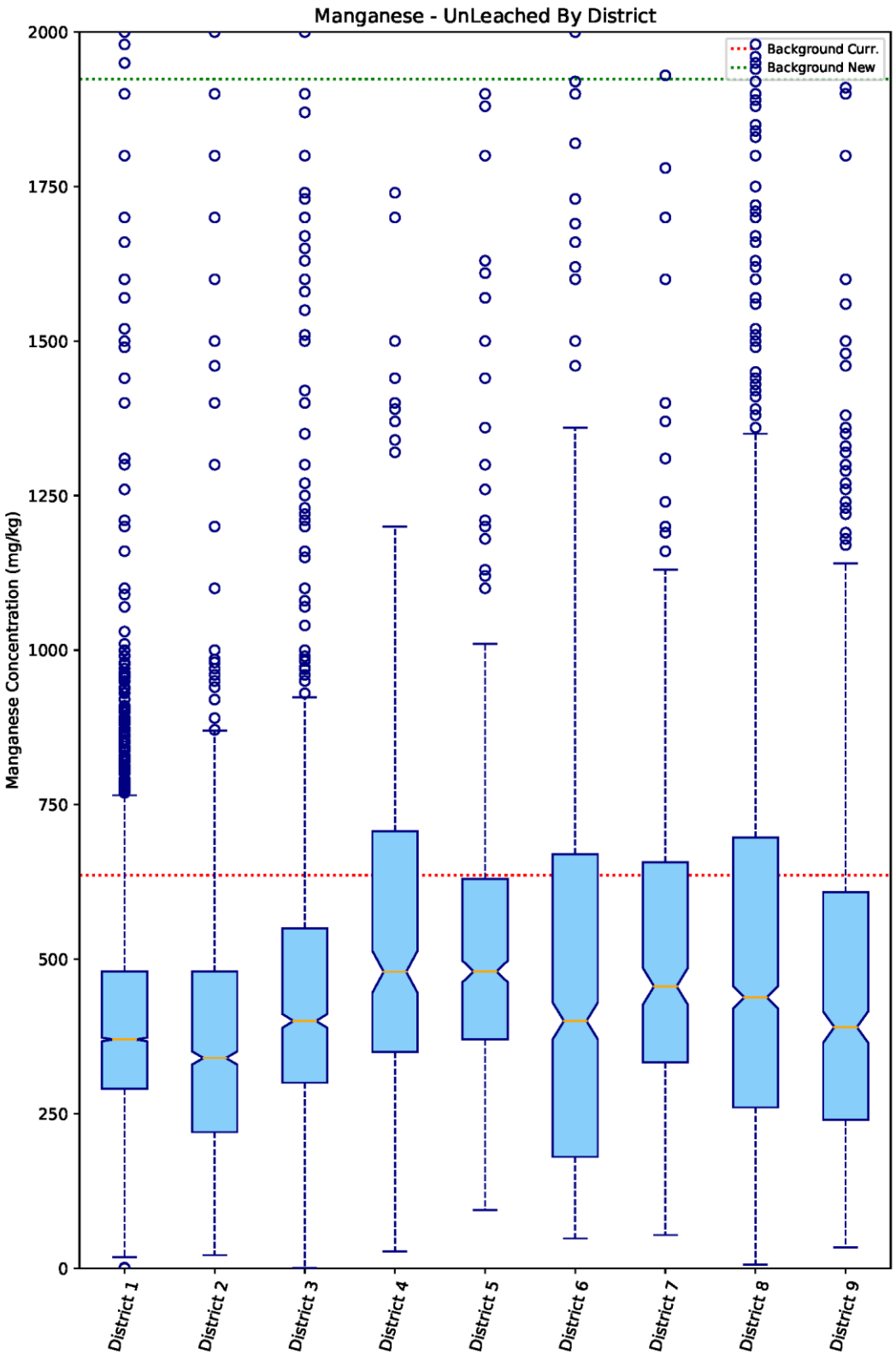


Figure 494. Boxplot of RSL manganese concentrations by IDOT District, REC (mg/kg)

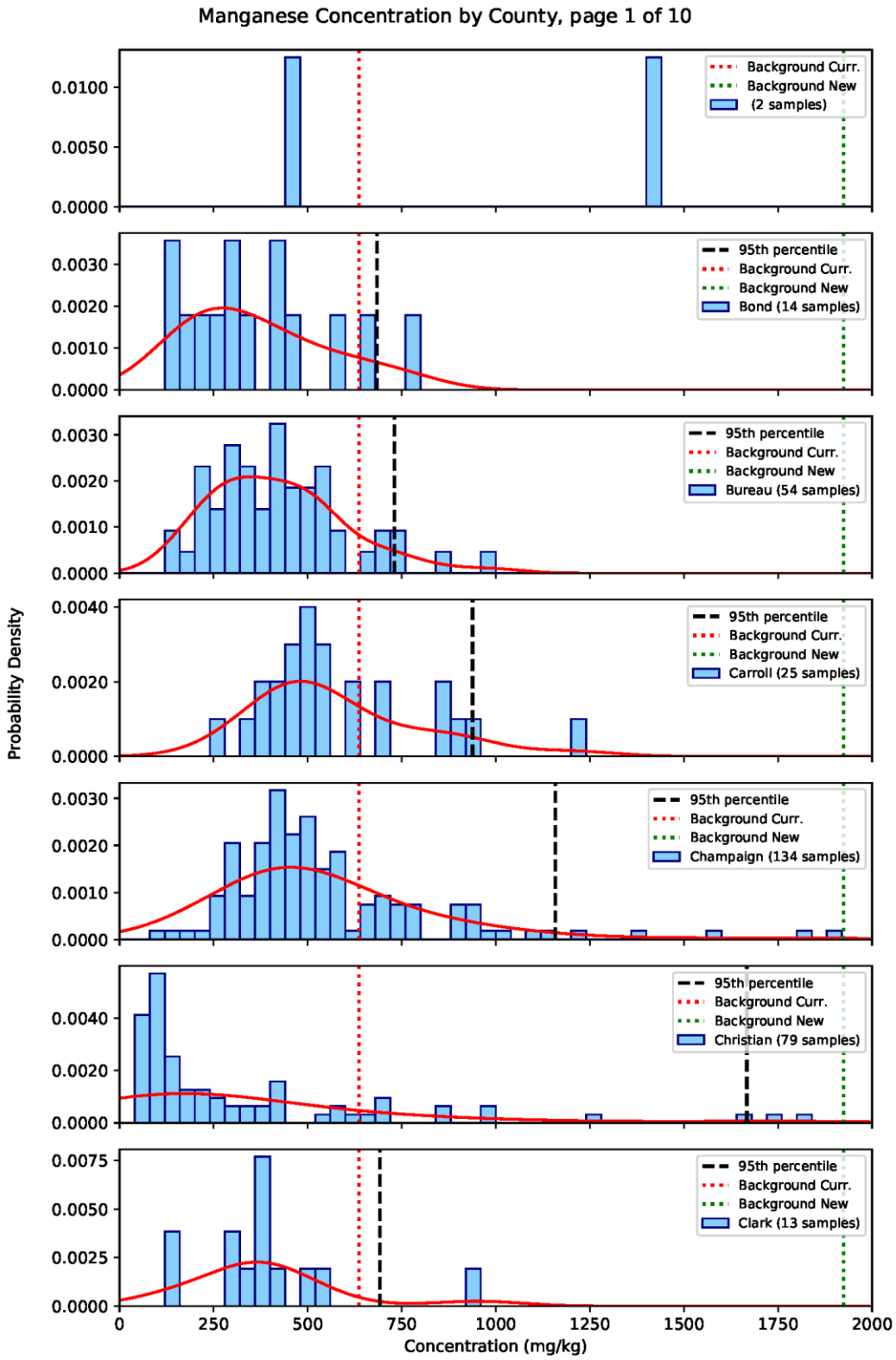


Figure 495. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 1

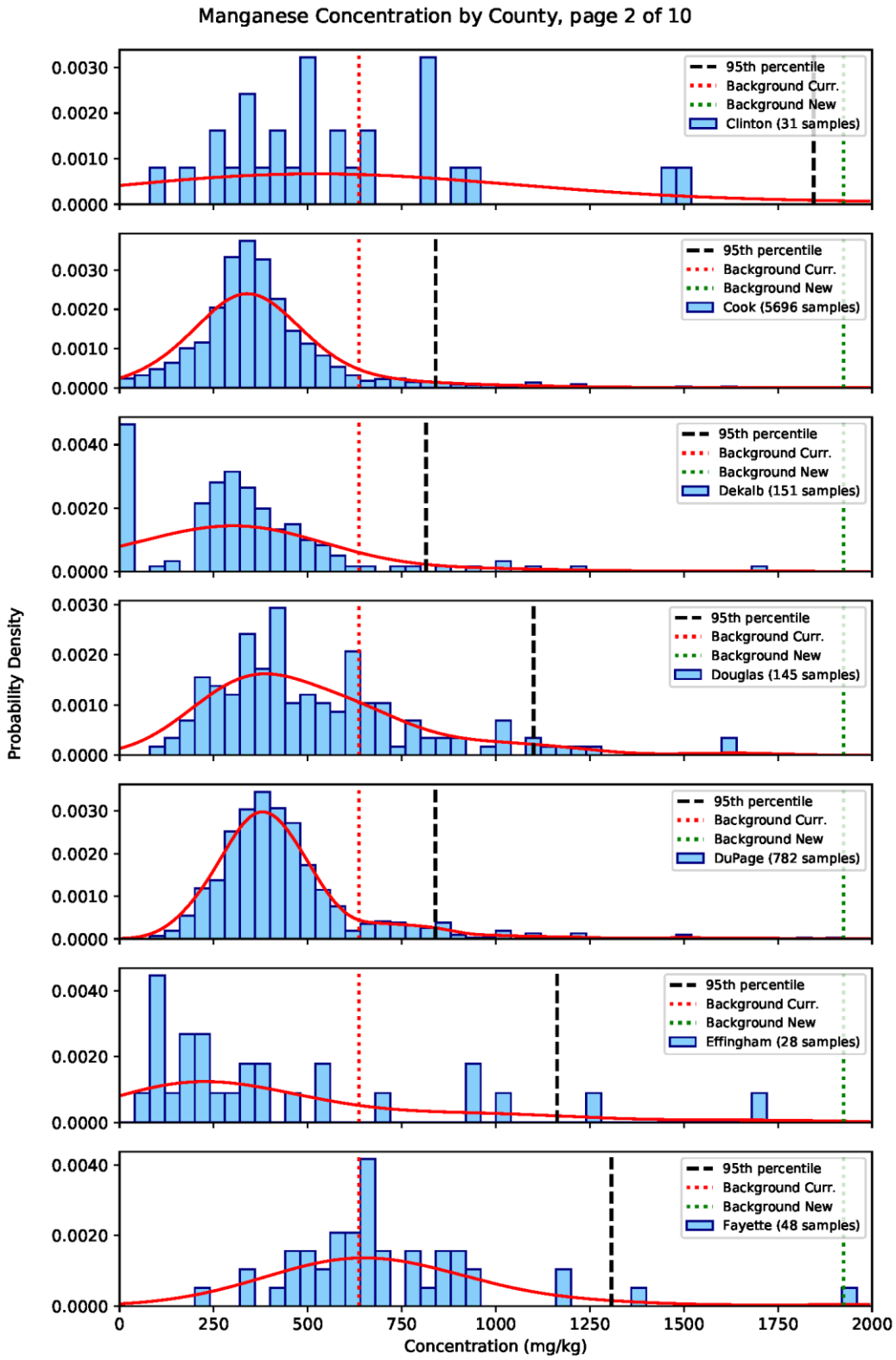


Figure 496. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 2

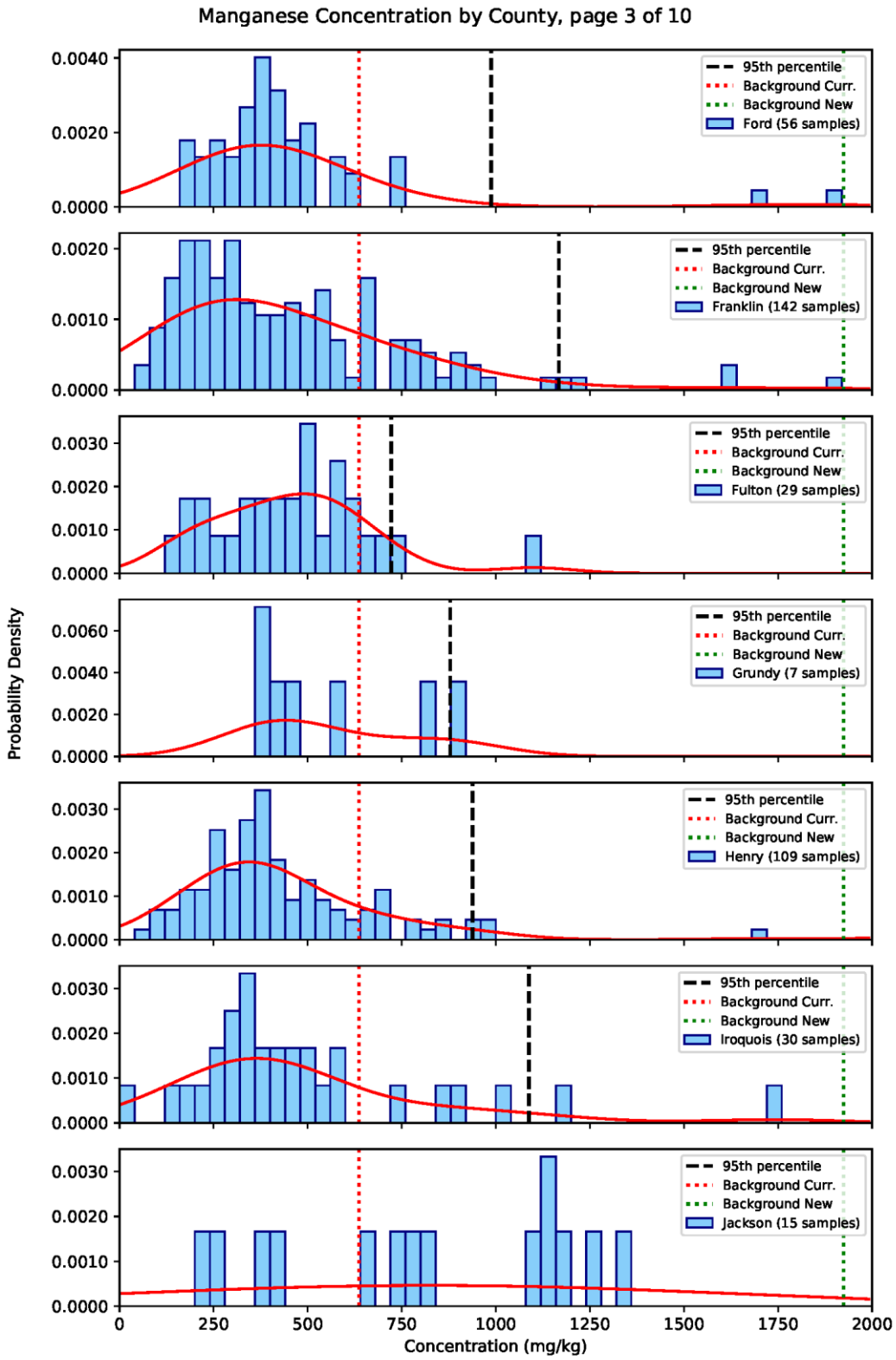


Figure 497. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 3

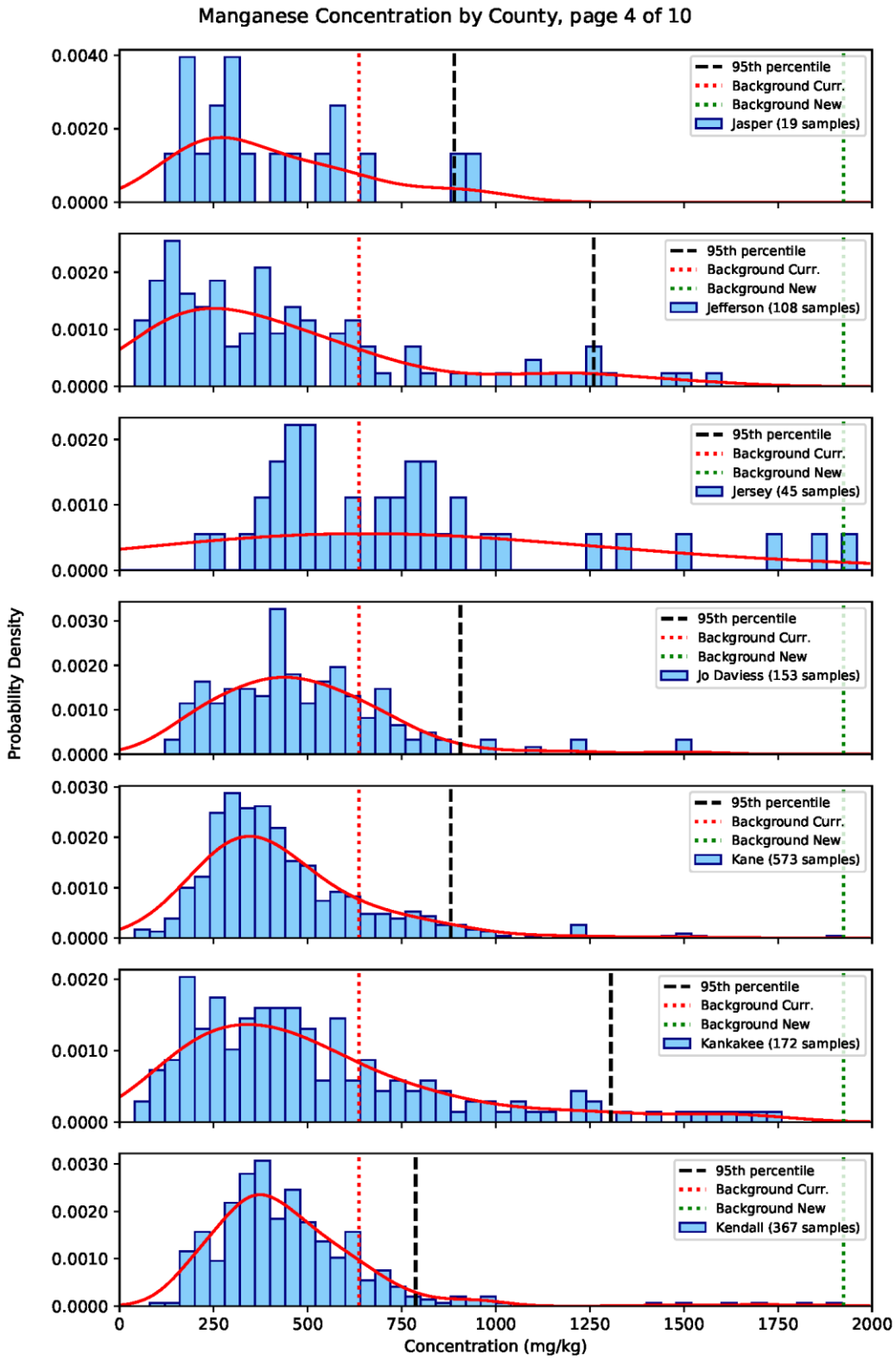


Figure 498. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 4

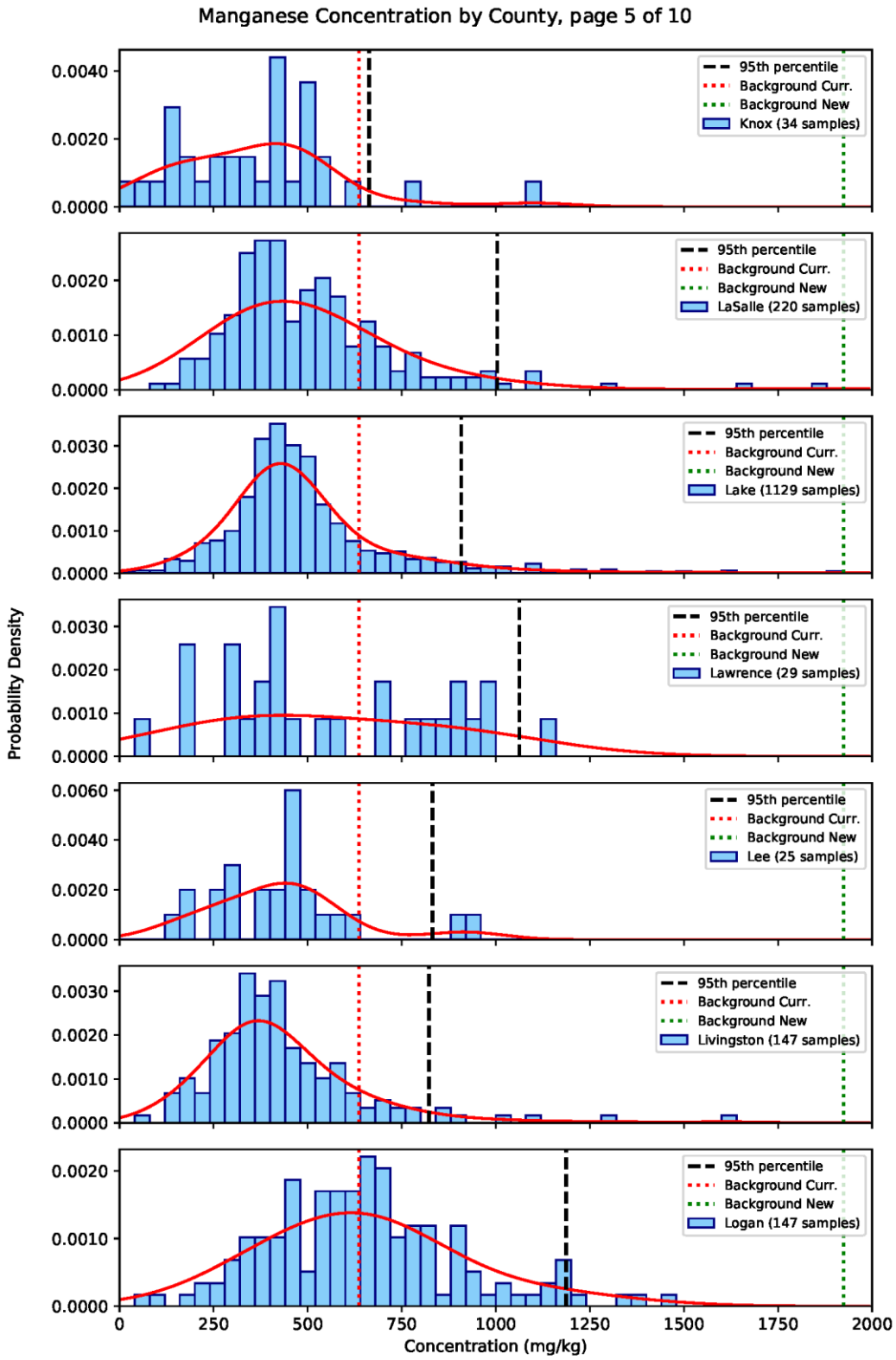


Figure 499. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 5

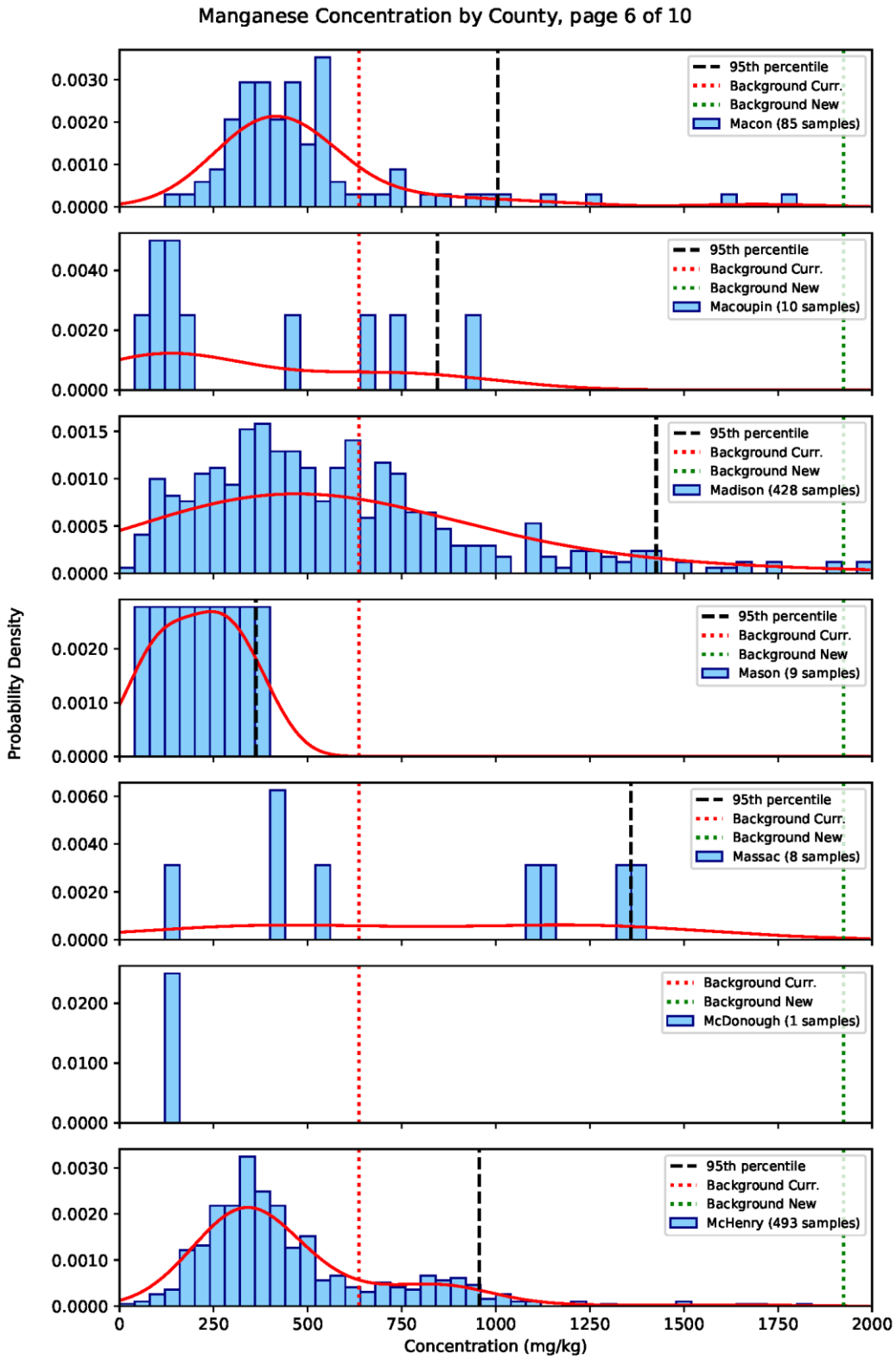


Figure 500. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 6

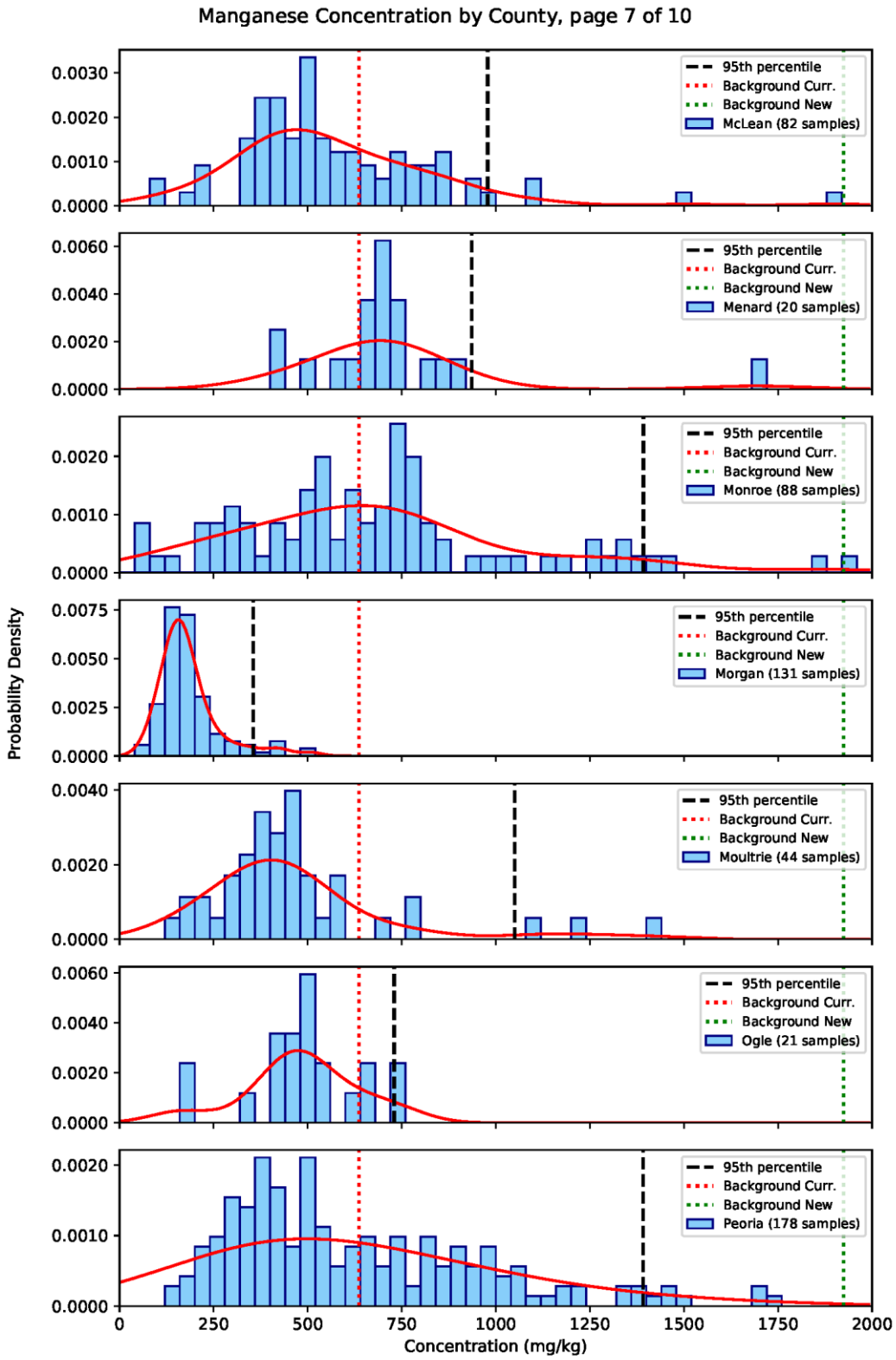


Figure 501. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 7

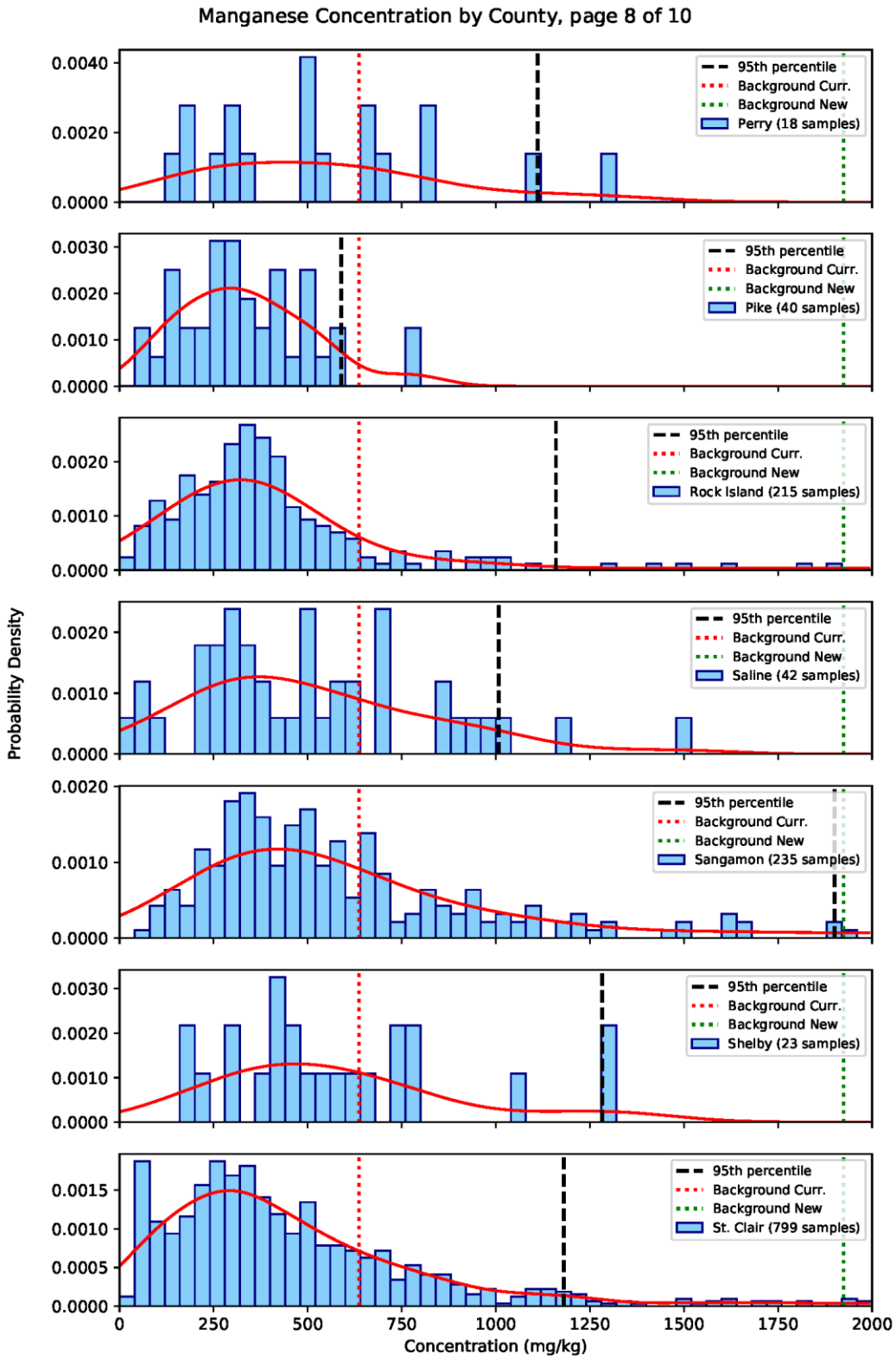


Figure 502. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 8

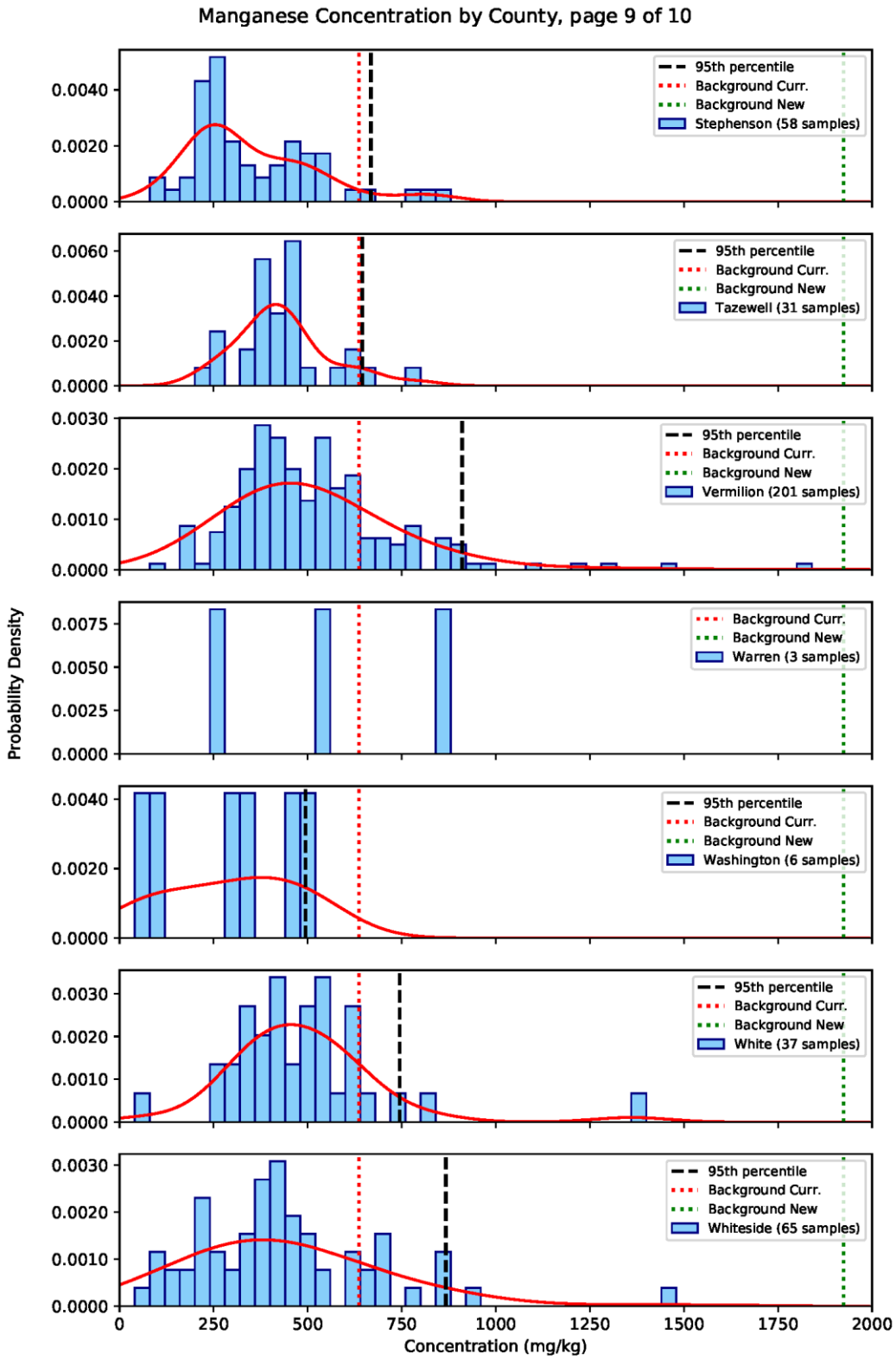


Figure 503. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 9

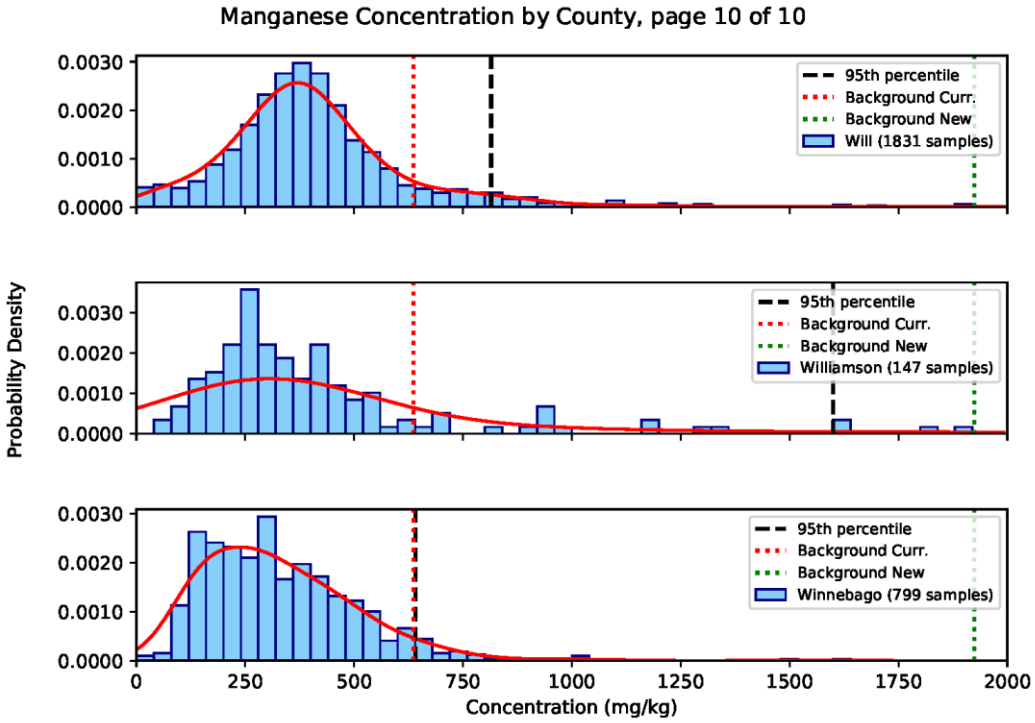


Figure 504. Histogram of RSL manganese concentrations by Illinois county, REC (mg/kg), part 10

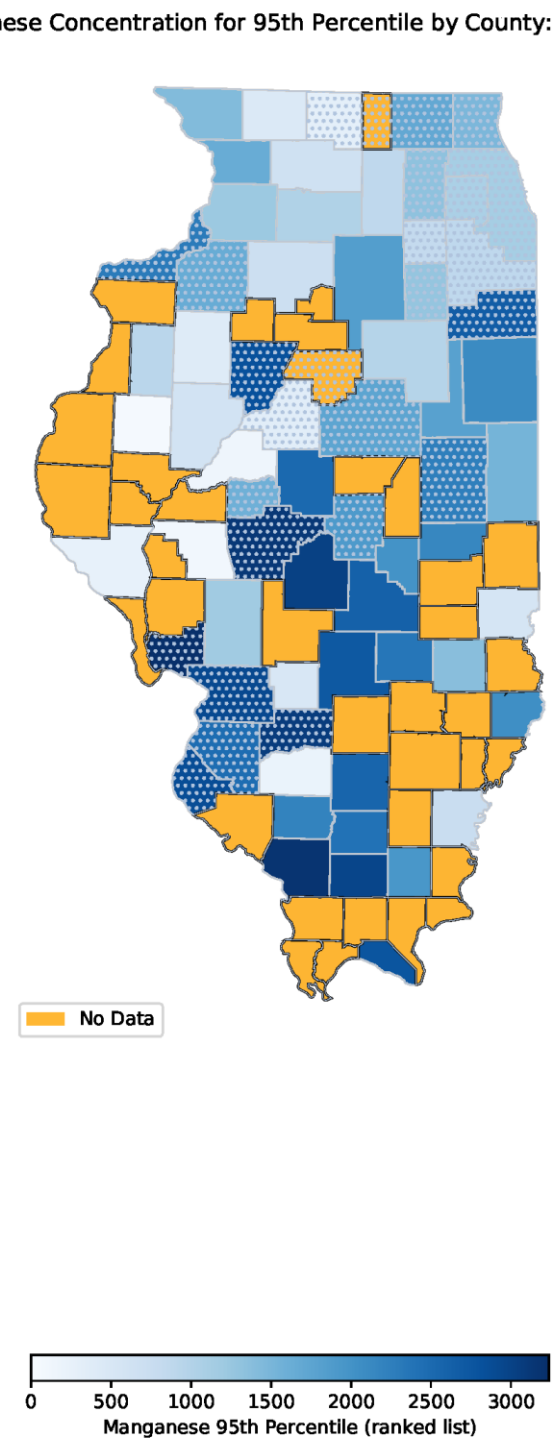


Figure 505. Map of RSL manganese 95th percentile concentration by Illinois county, REC (mg/kg)

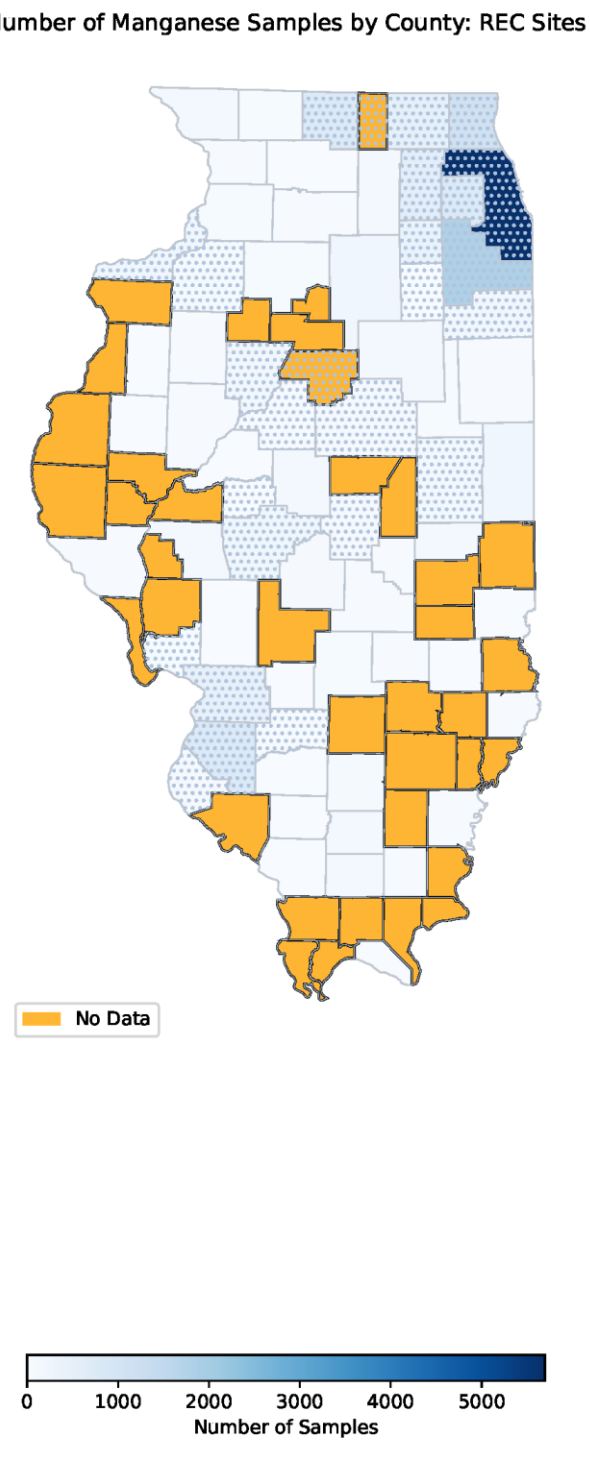


Figure 506. Map of RSL manganese sample quantity by Illinois county, REC (mg/kg)

N.2 MANGANESE NON-REC

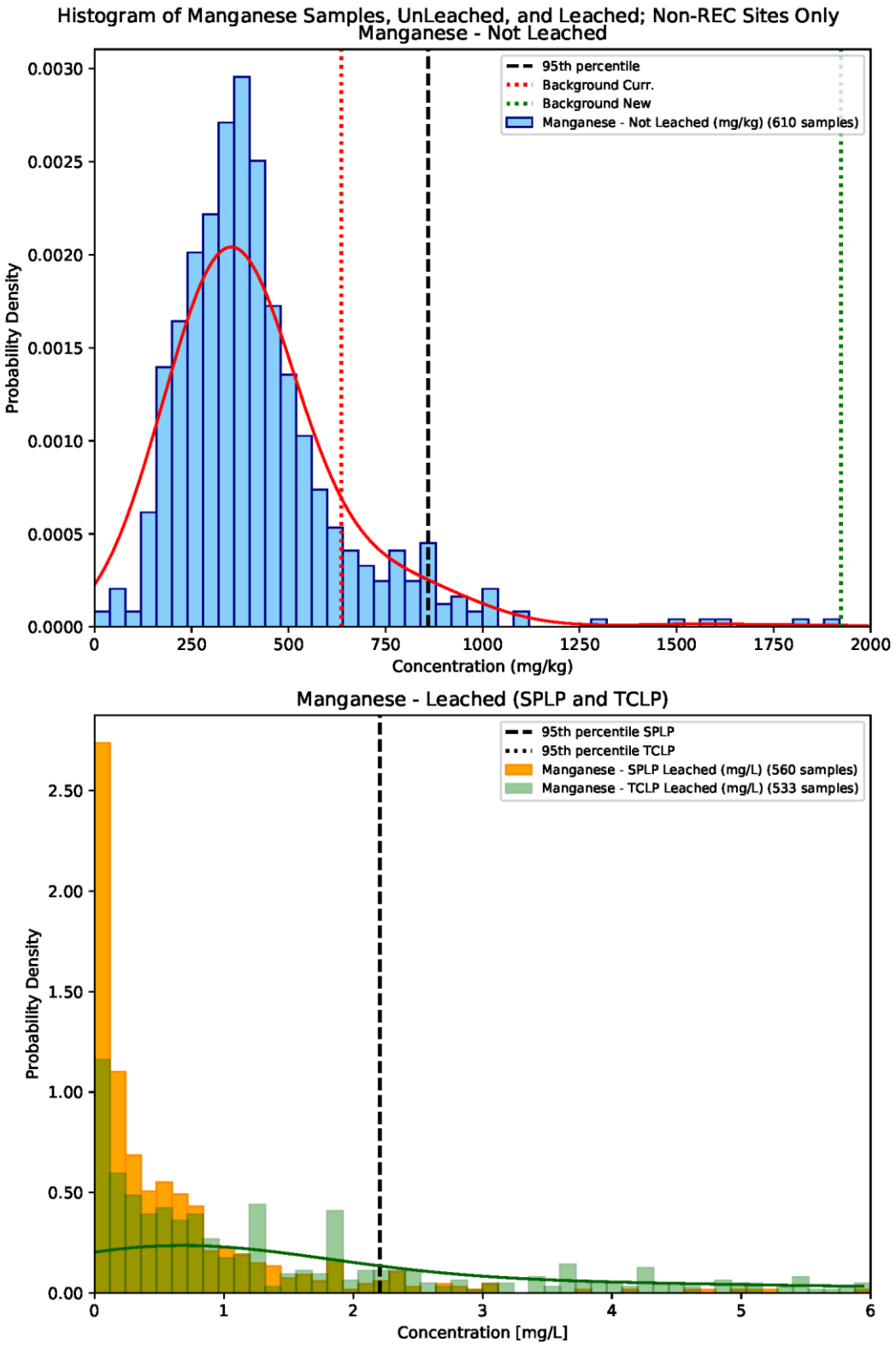


Figure 507. Histogram of RSL manganese concentrations, Non-REC (mg/kg)

Manganese Unleached Concentration (mg/kg)

1) Region

2) District

3) County

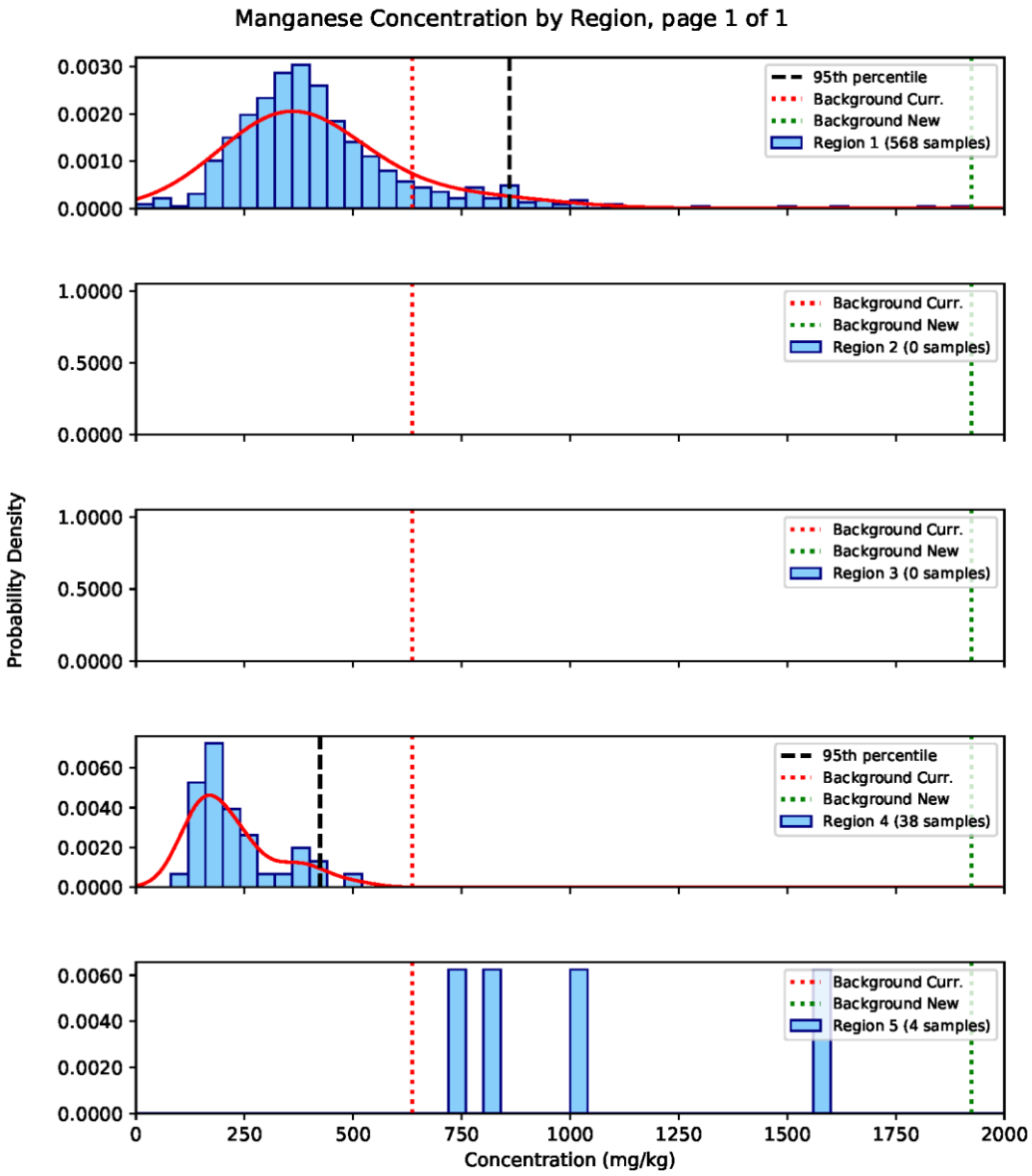


Figure 508. Histogram of RSL manganese concentrations by IDOT Region, Non-REC (mg/kg)

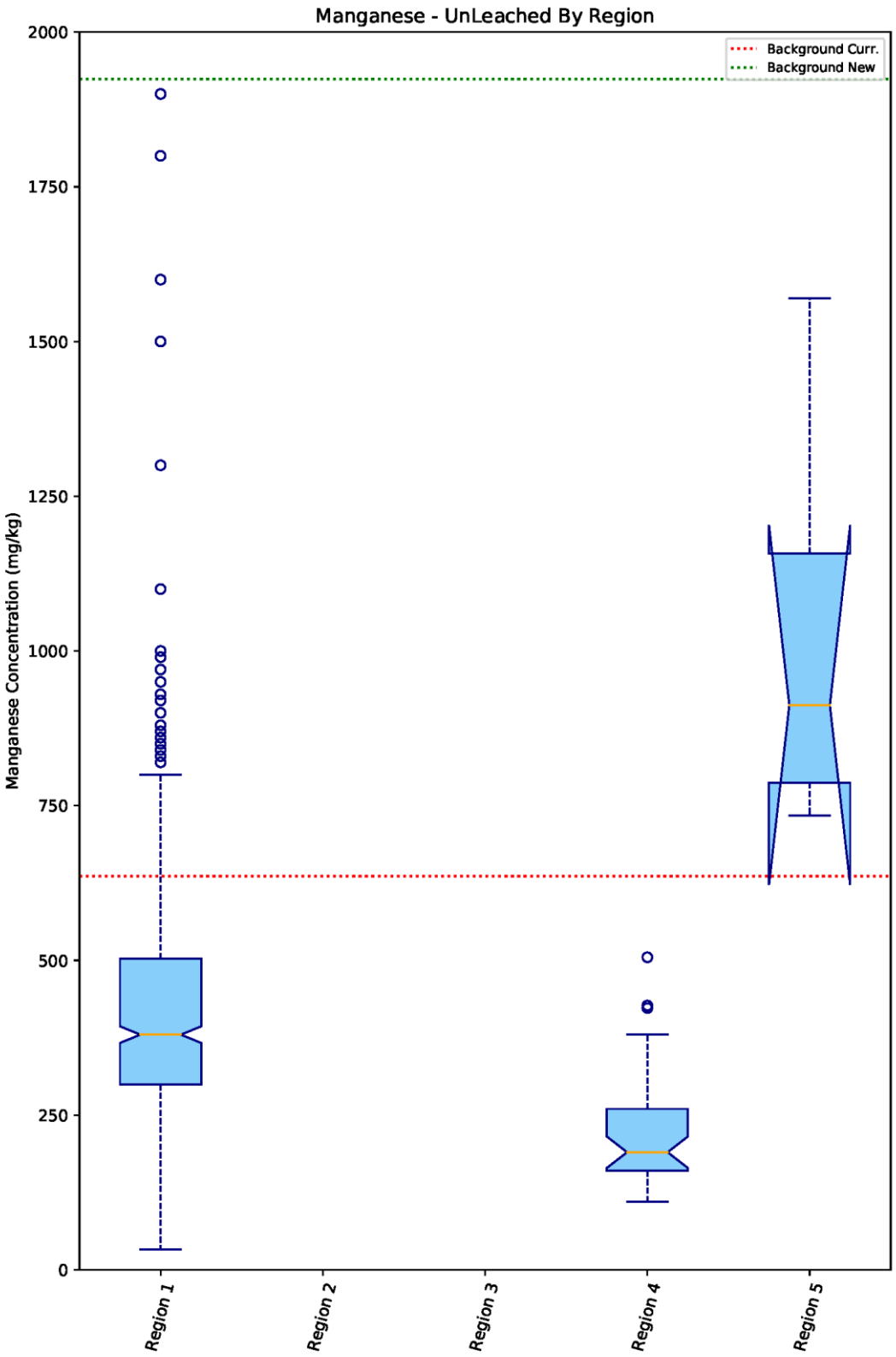


Figure 509. Boxplot of RSL manganese concentrations by IDOT Region, Non-REC (mg/kg)

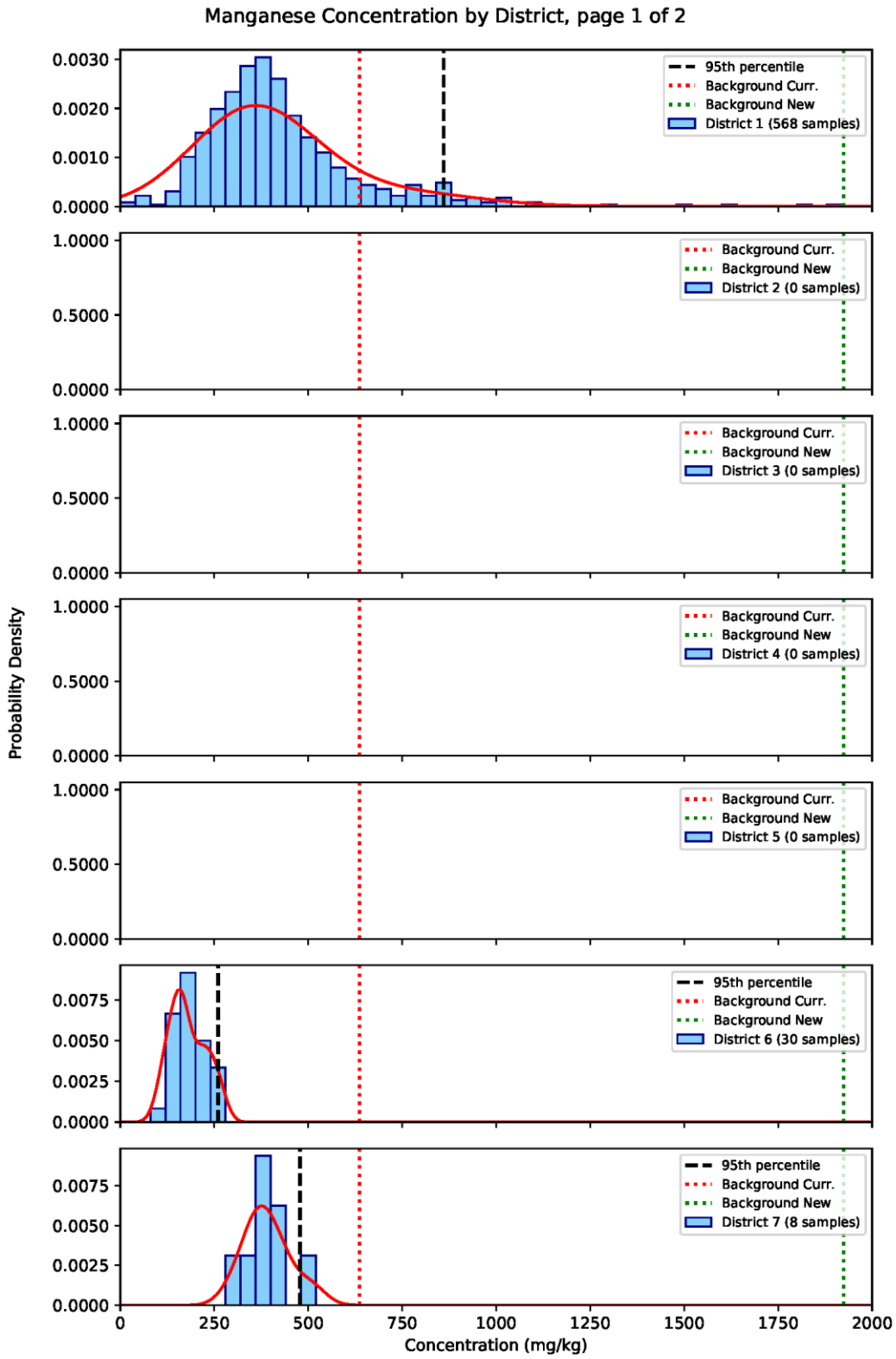


Figure 510. Histogram of RSL manganese concentrations by IDOT District, Non-REC (mg/kg), part 1

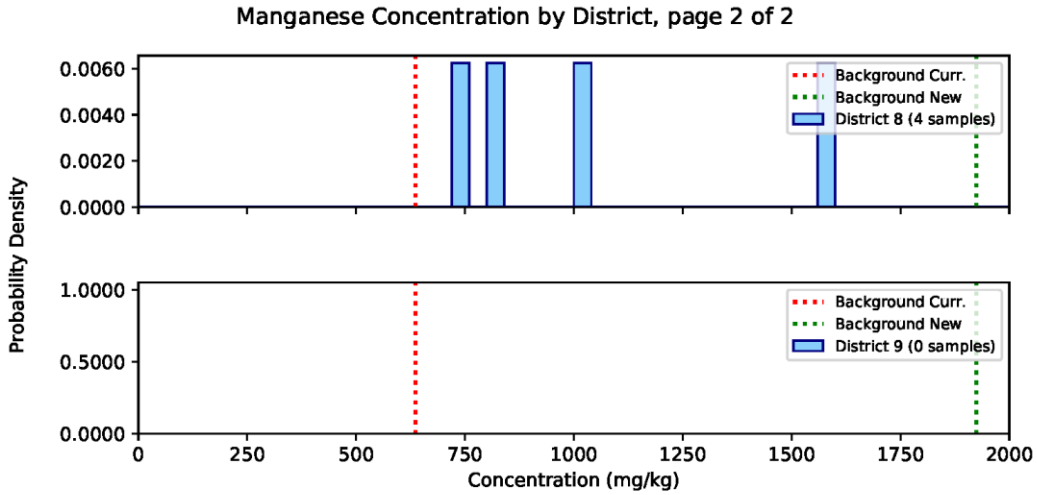


Figure 511. Histogram of RSL manganese concentrations by IDOT District, Non-REC (mg/kg), part 2

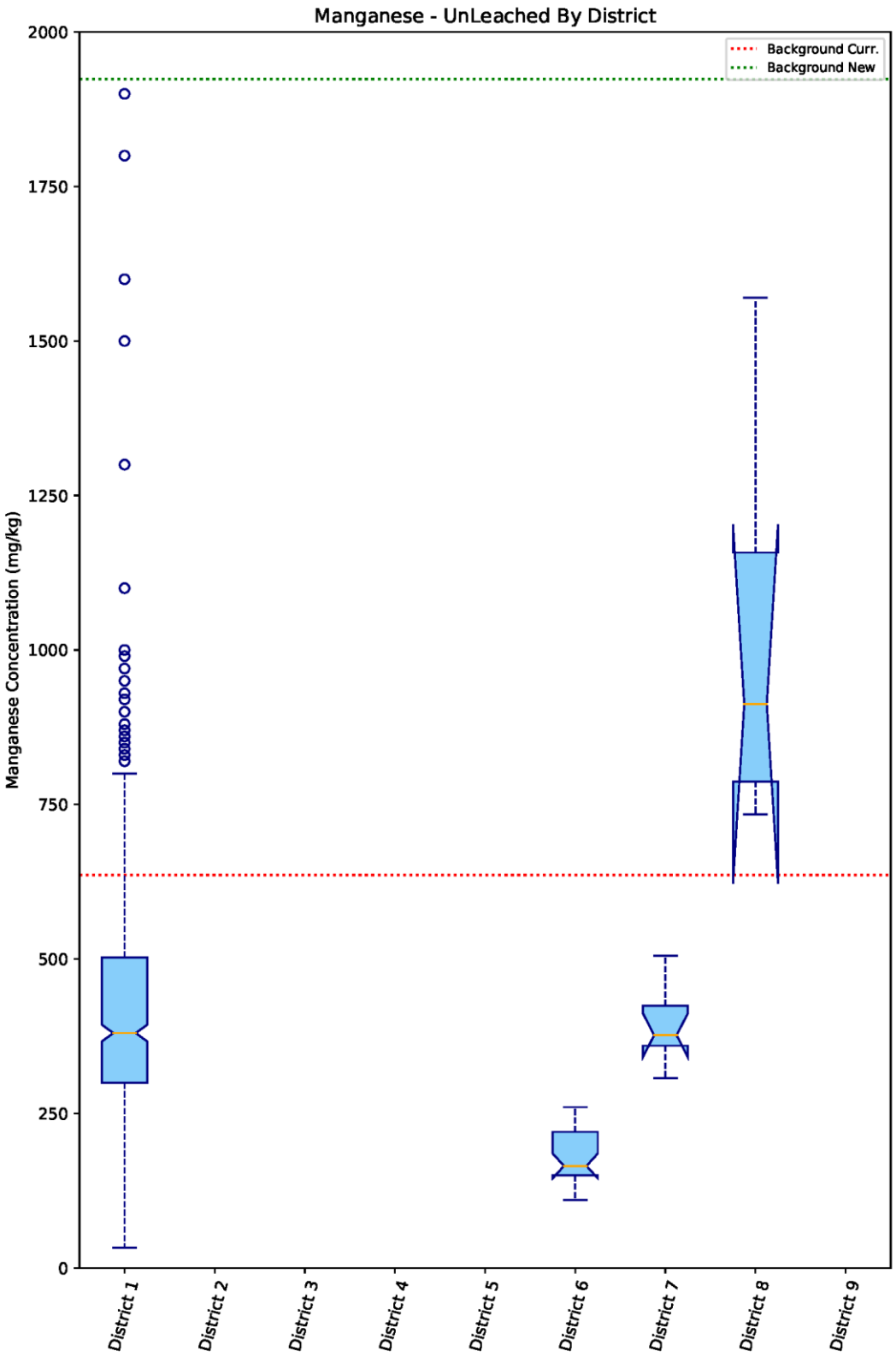


Figure 512. Boxplot of RSL manganese concentrations by IDOT District, Non-REC (mg/kg)

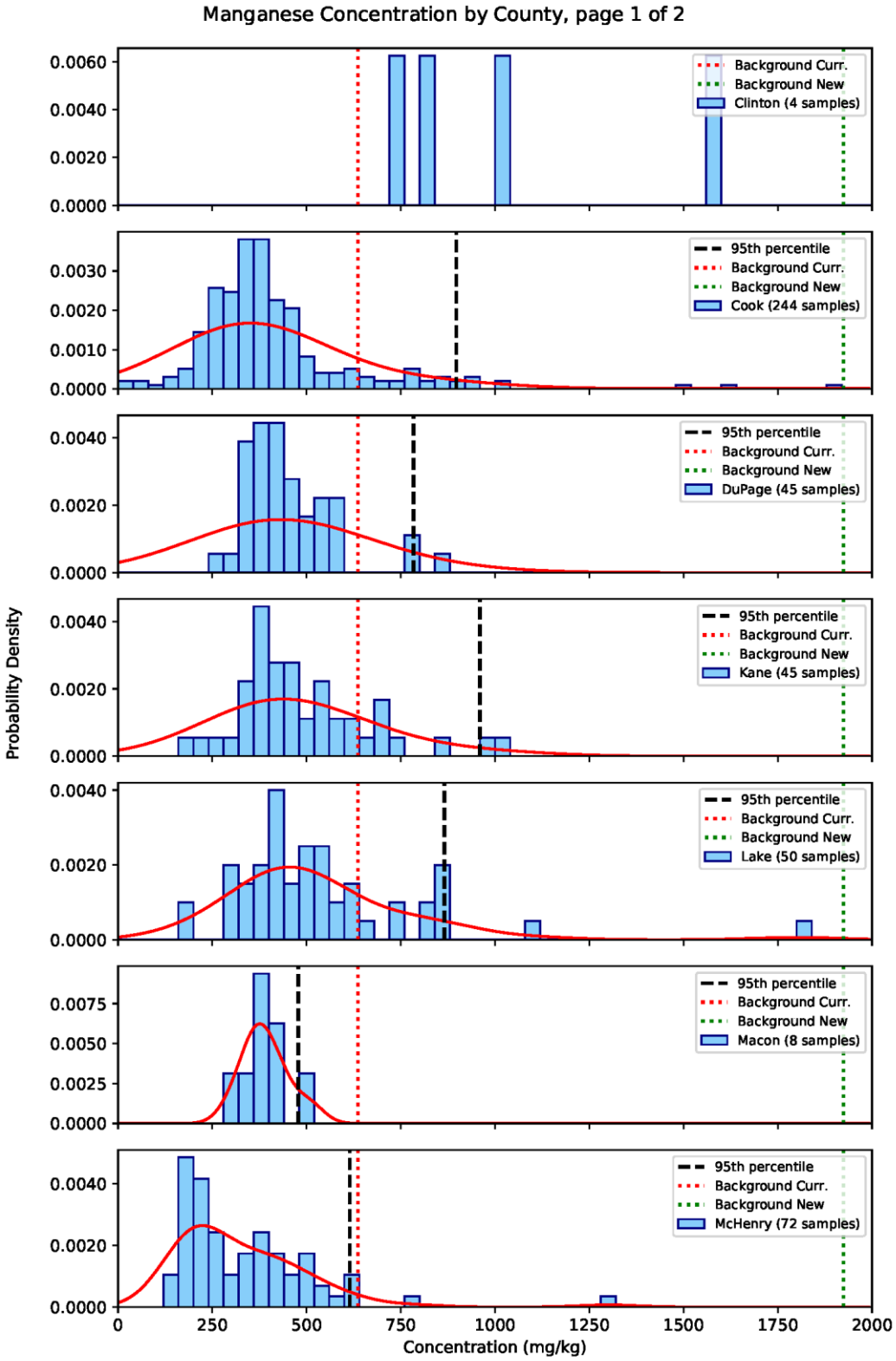


Figure 513. Histogram of RSL manganese concentrations by Illinois county, Non-REC (mg/kg), part 1

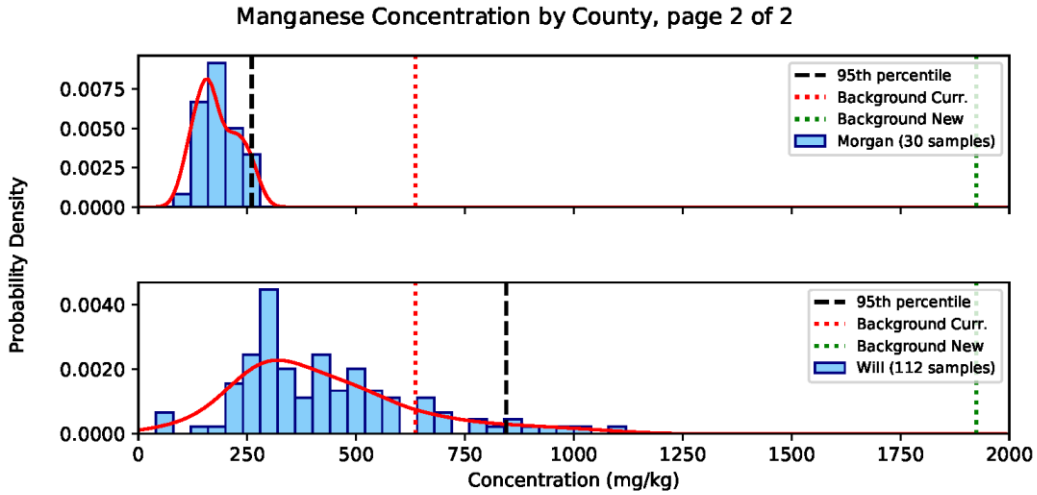


Figure 514. Histogram of RSL manganese concentrations by Illinois county, Non-REC (mg/kg), part 2

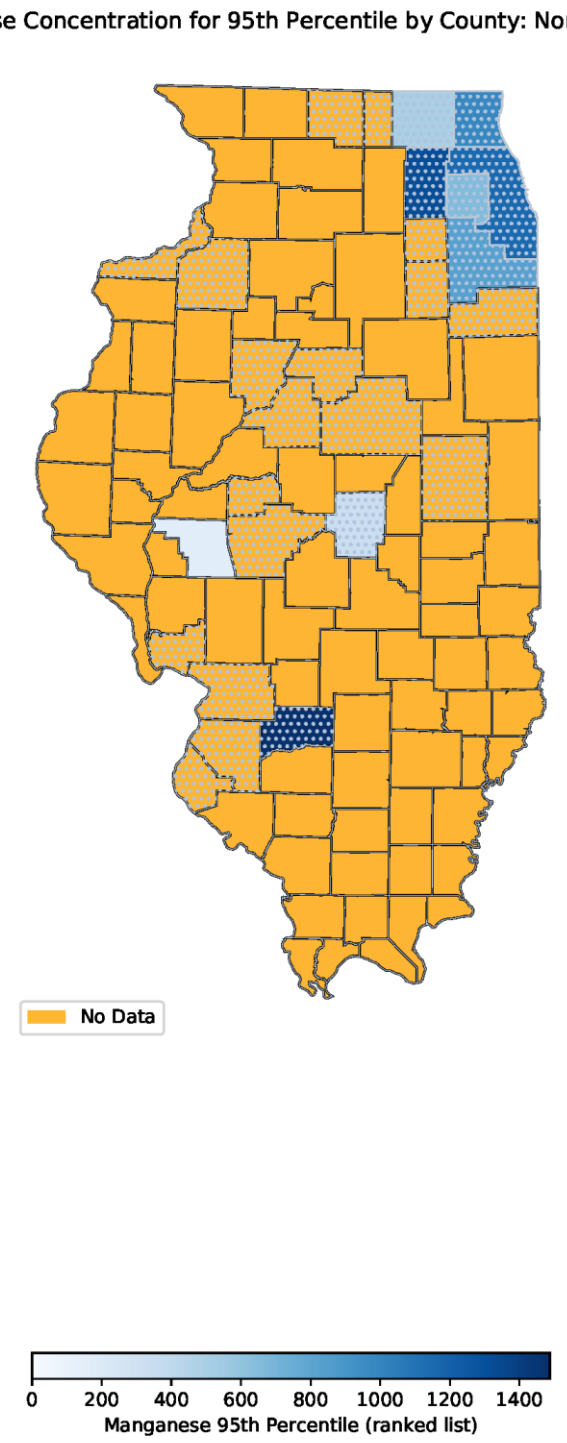


Figure 515. Map of RSL manganese 95th percentile concentration by Illinois county, Non-REC (mg/kg)

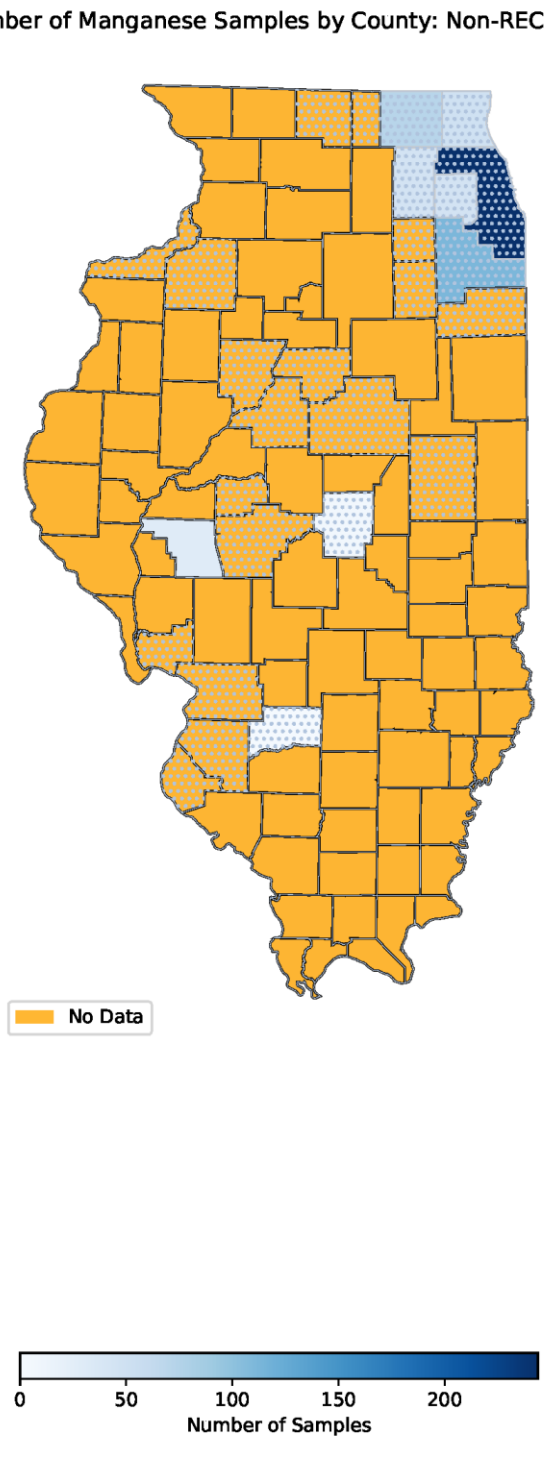


Figure 516. Map of RSL manganese sample quantity by Illinois county, Non-REC (mg/kg)

N.3 MANGANESE DE MINIMIS

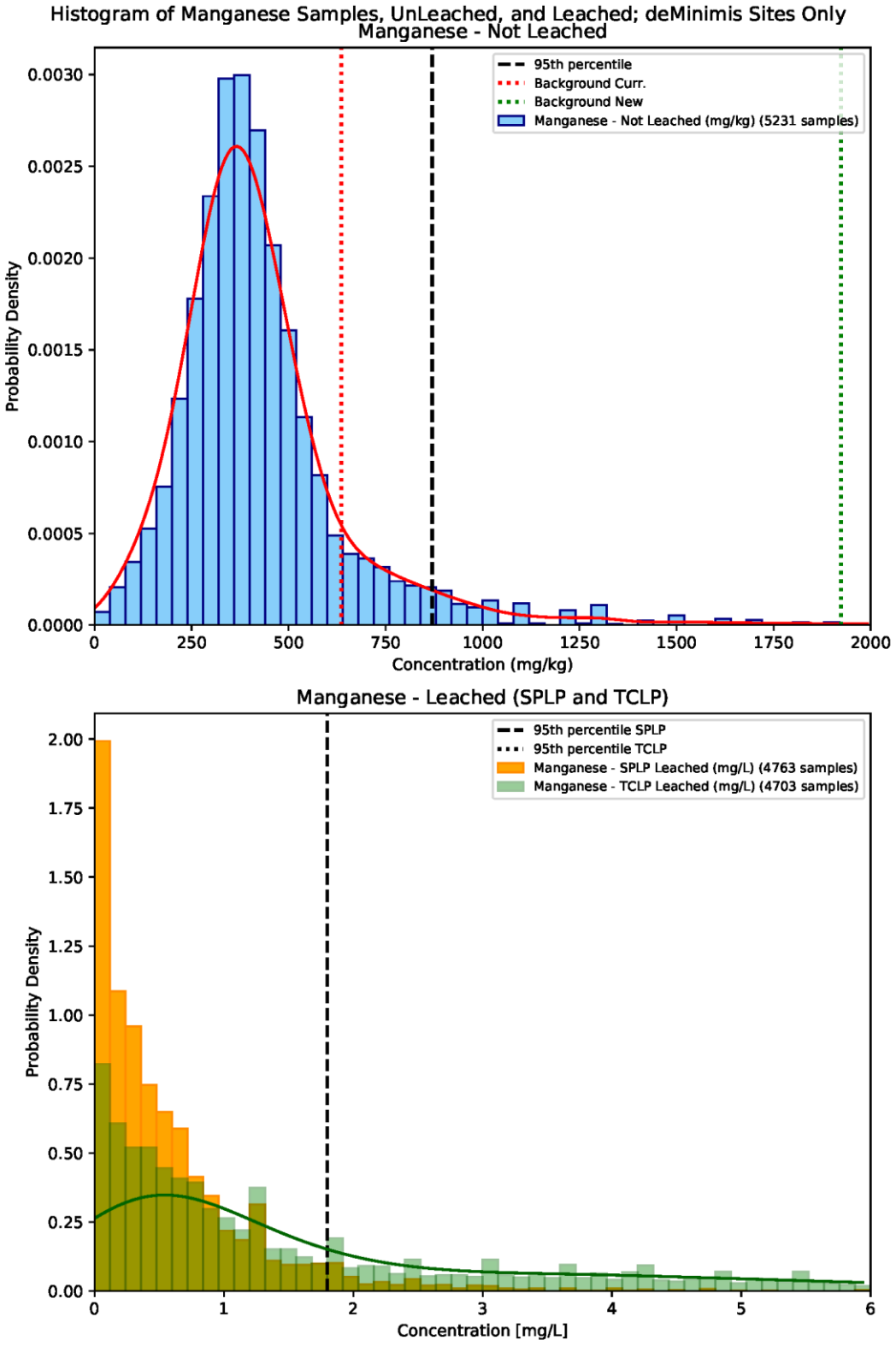


Figure 517. Histogram of RSL manganese concentrations, de minimis (mg/kg)

Manganese Unleached Concentration (mg/kg)

1) Region

2) District

3) County

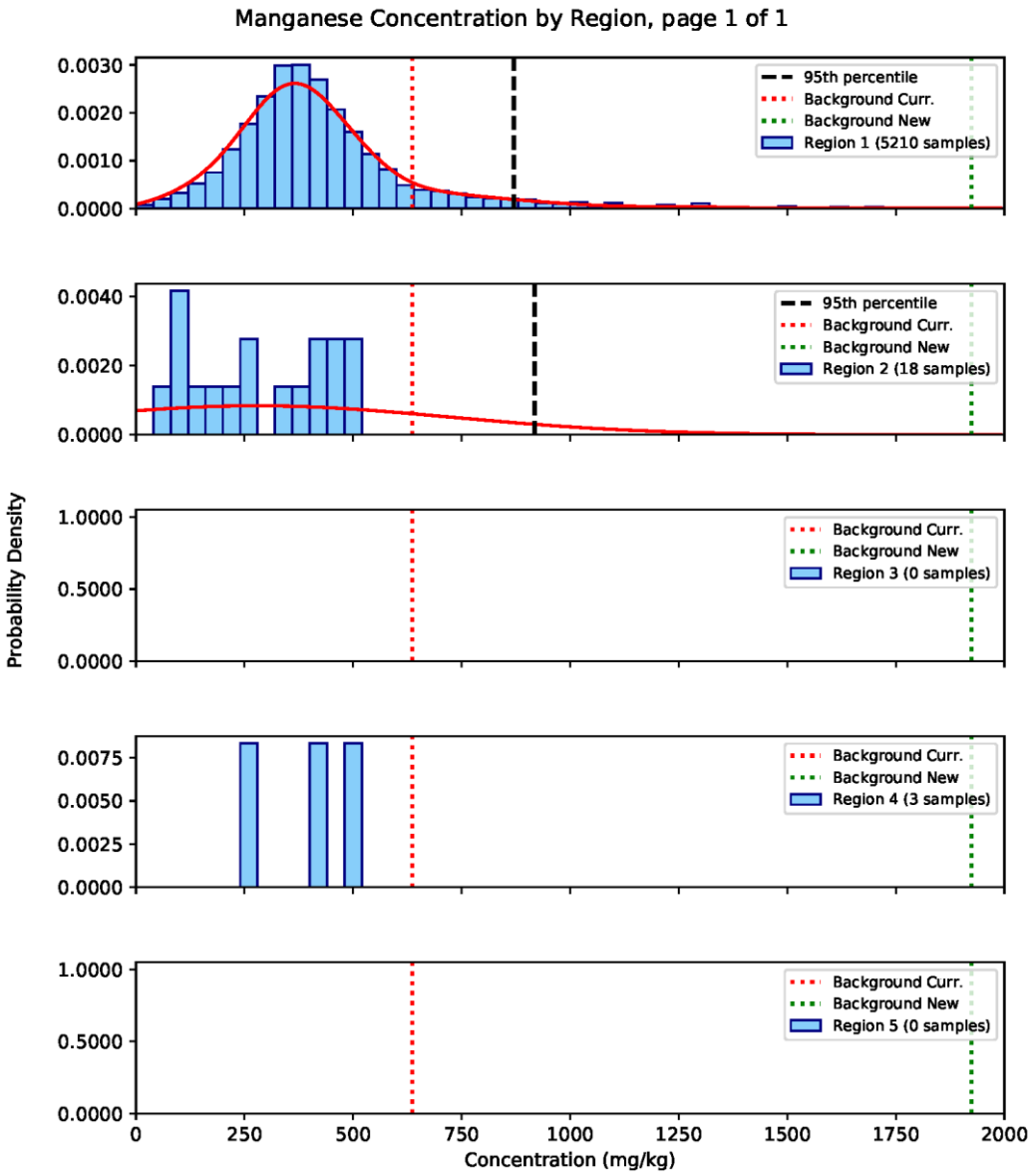


Figure 518. Histogram of RSL manganese concentrations by IDOT Region, de minimis (mg/kg)

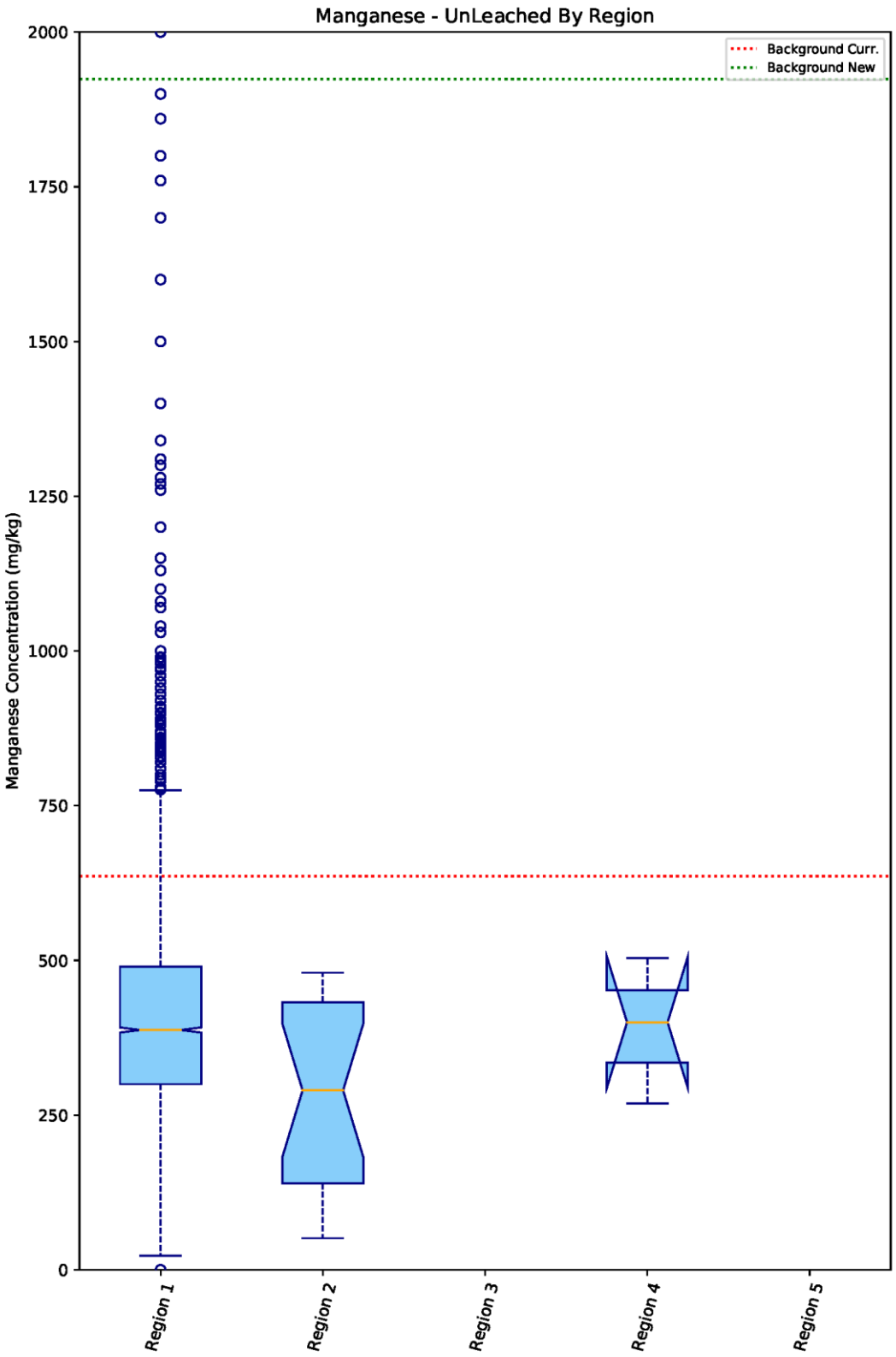


Figure 519. Boxplot of RSL manganese concentrations by IDOT Region, de minimis (mg/kg)

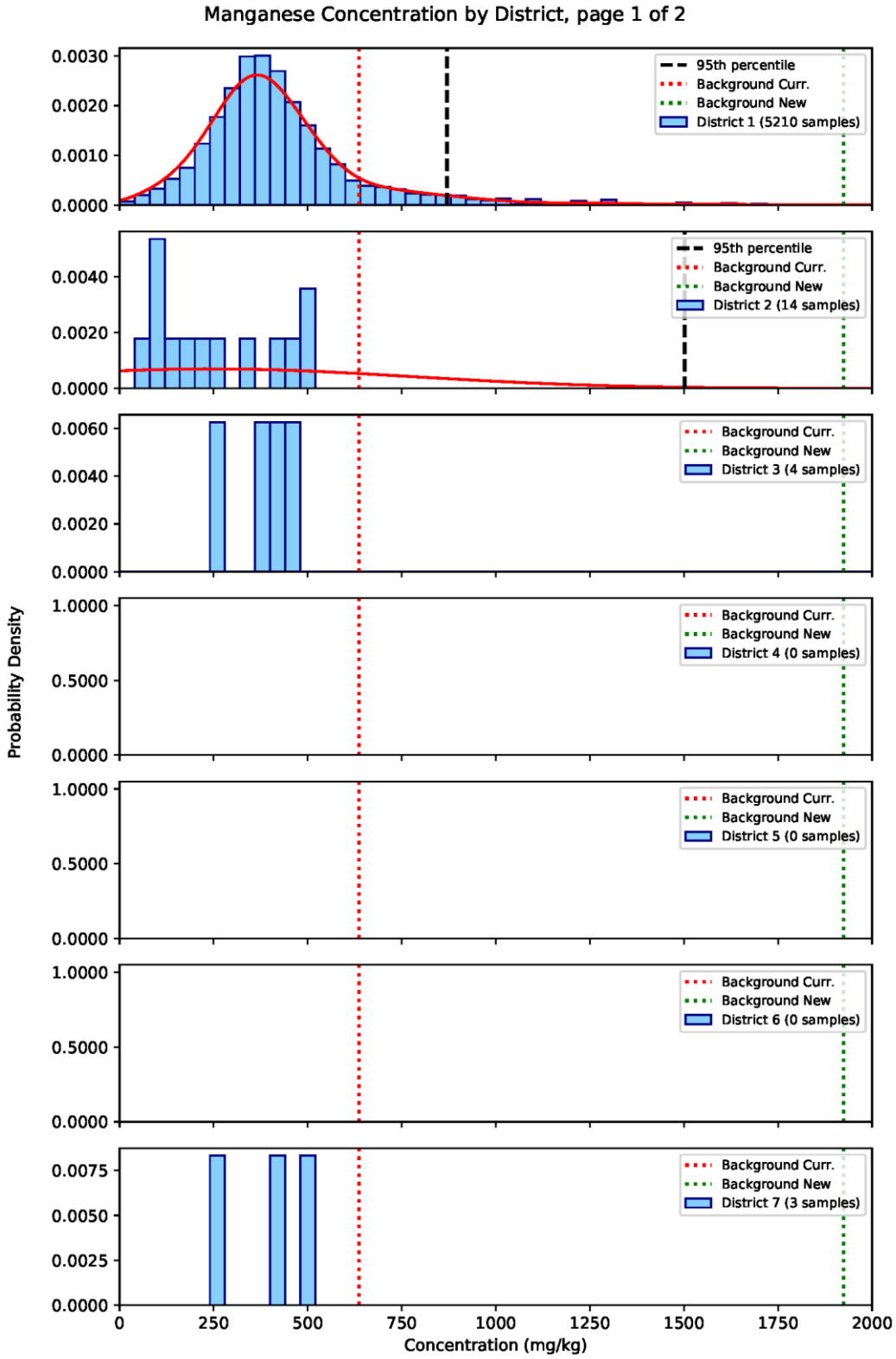


Figure 520. Histogram of RSL manganese concentrations by IDOT District, de minimis (mg/kg), part 1

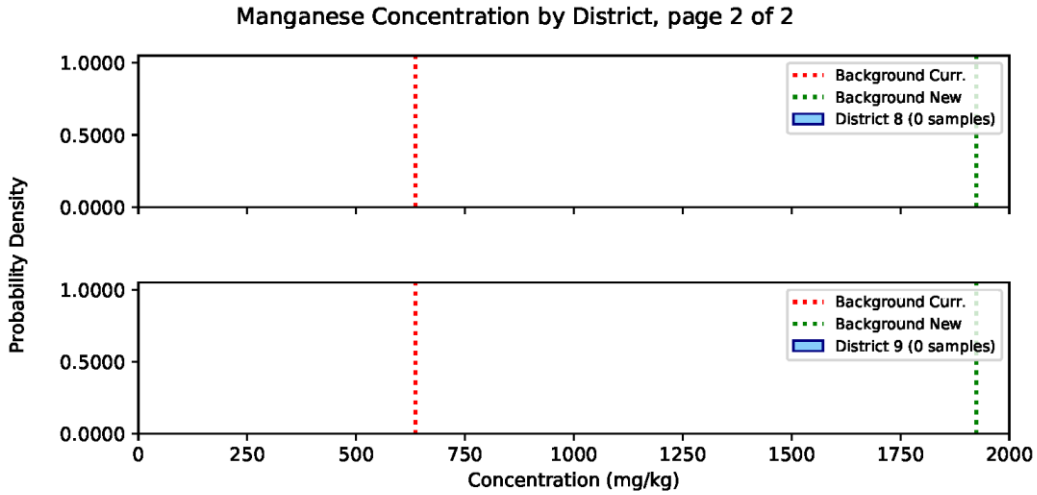


Figure 521. Histogram of RSL manganese concentrations by IDOT District, de minimis (mg/kg), part 2

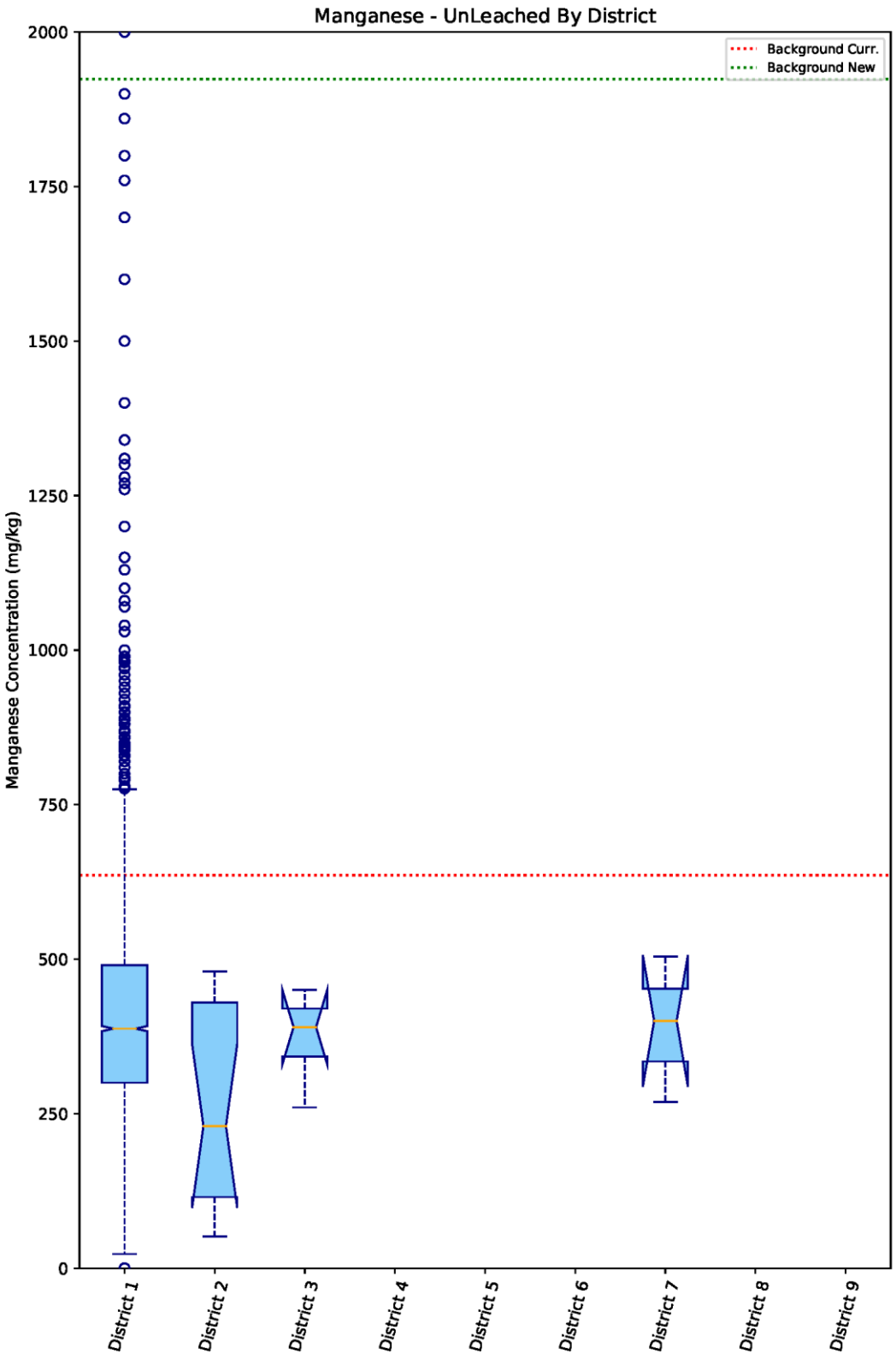


Figure 522. Boxplot of RSL manganese concentrations by IDOT District, de minimis (mg/kg)

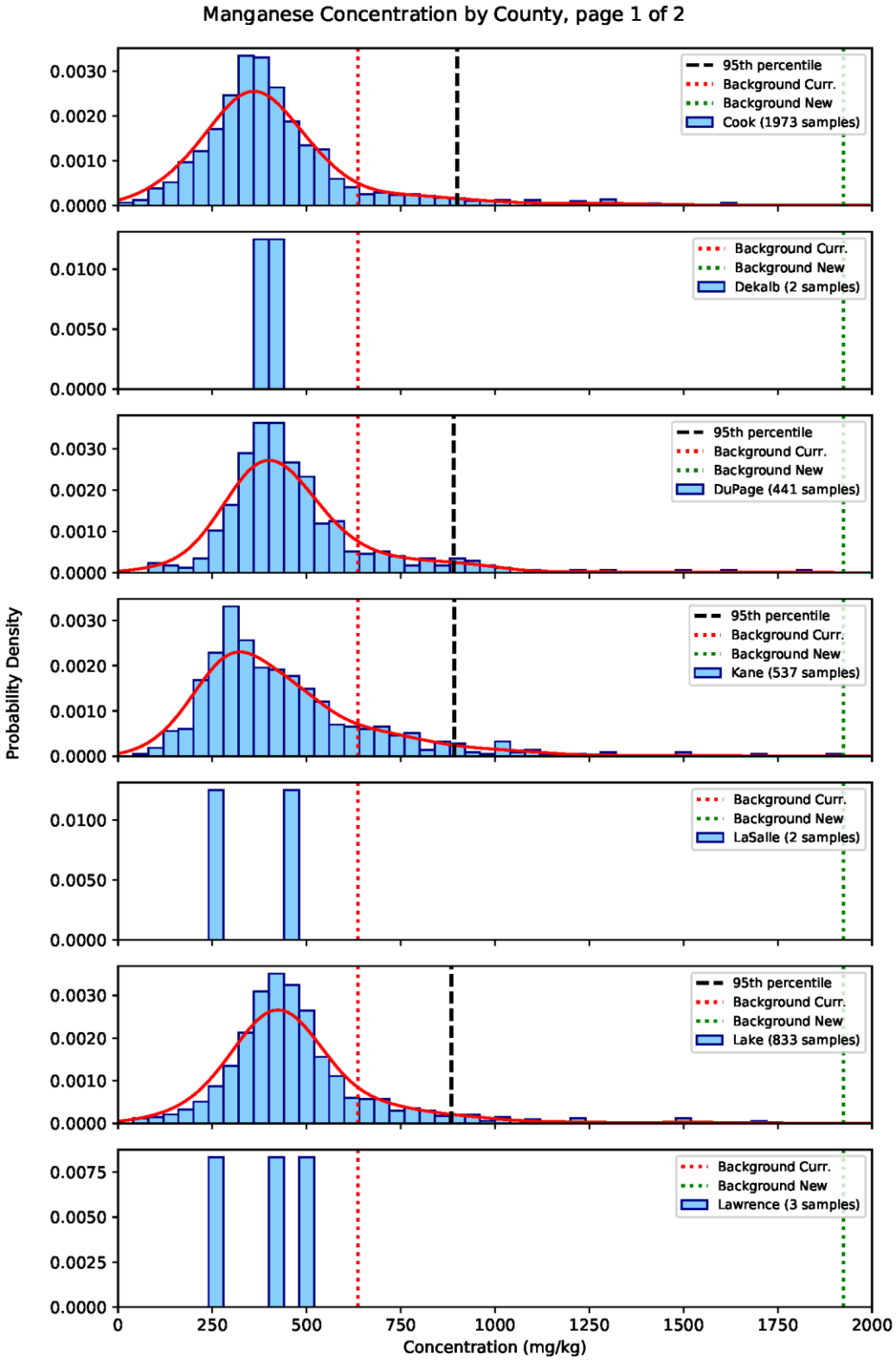


Figure 523. Histogram of RSL manganese concentrations by Illinois county, de minimis (mg/kg), part 1

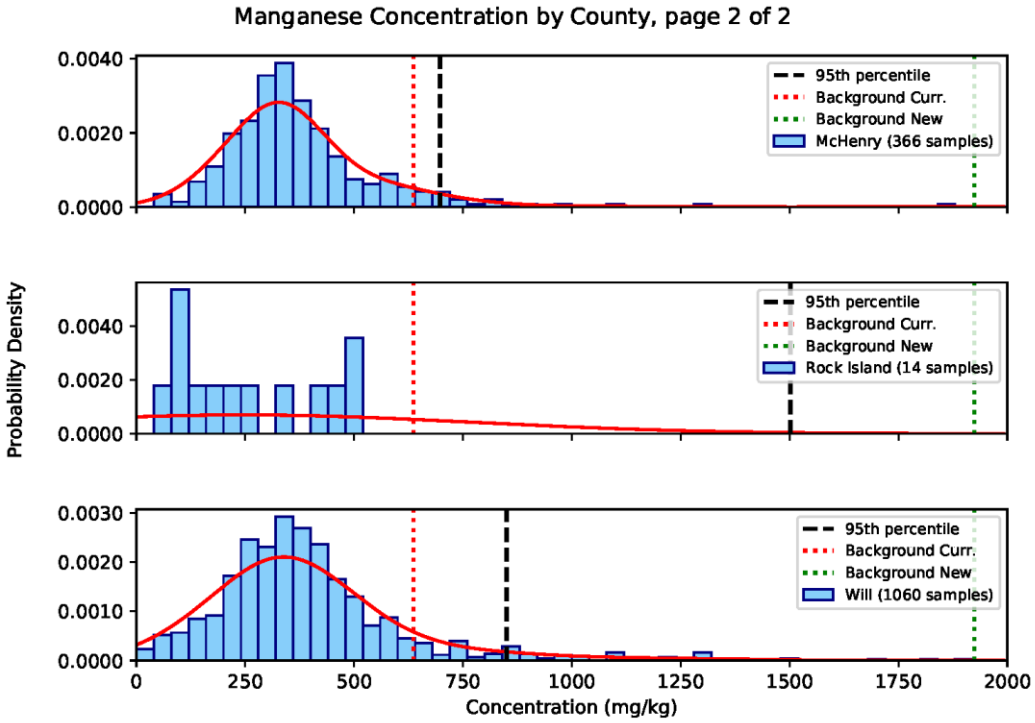


Figure 524. Histogram of RSL manganese concentrations by Illinois county, de minimis (mg/kg), part 2

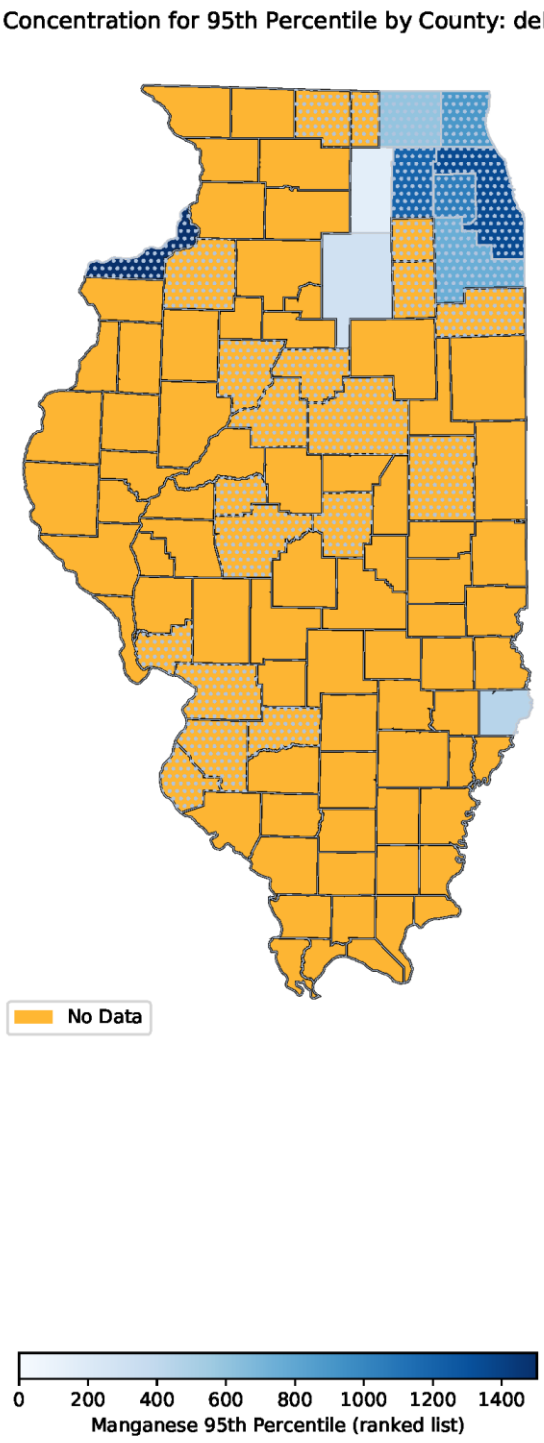


Figure 525. Map of RSL manganese 95th percentile concentration by Illinois county, de minimis (mg/kg)

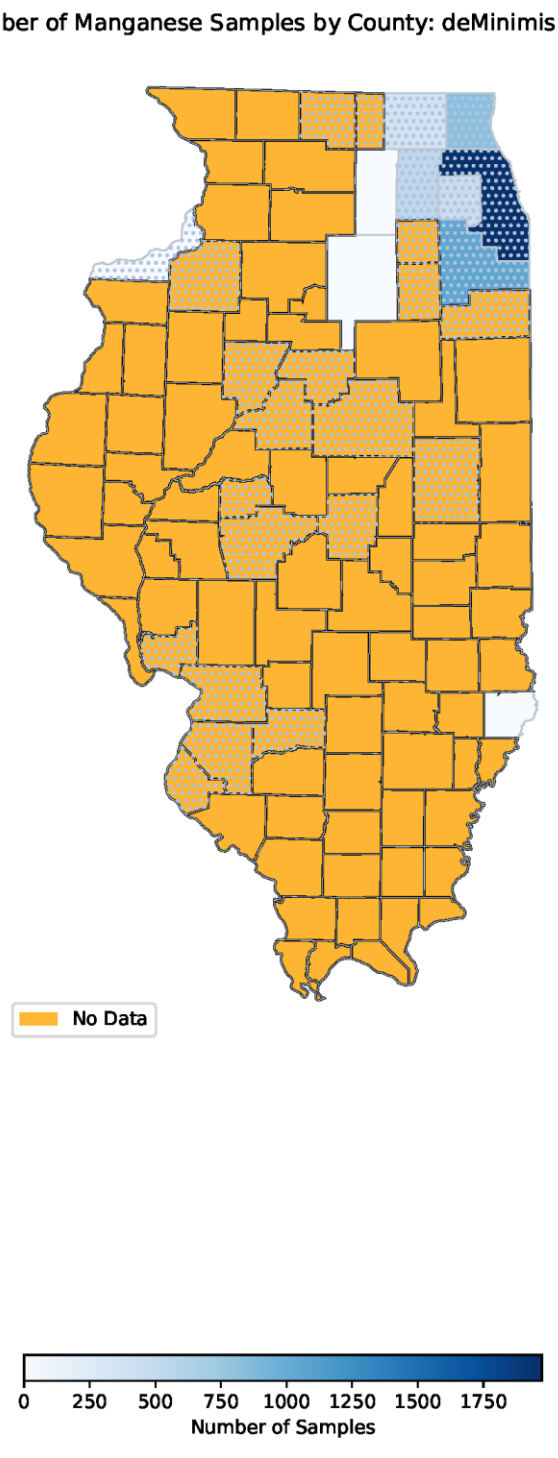


Figure 526. Map of RSL manganese sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX O. ANALYTE ANALYSIS: MERCURY

O.1 MERCURY REC

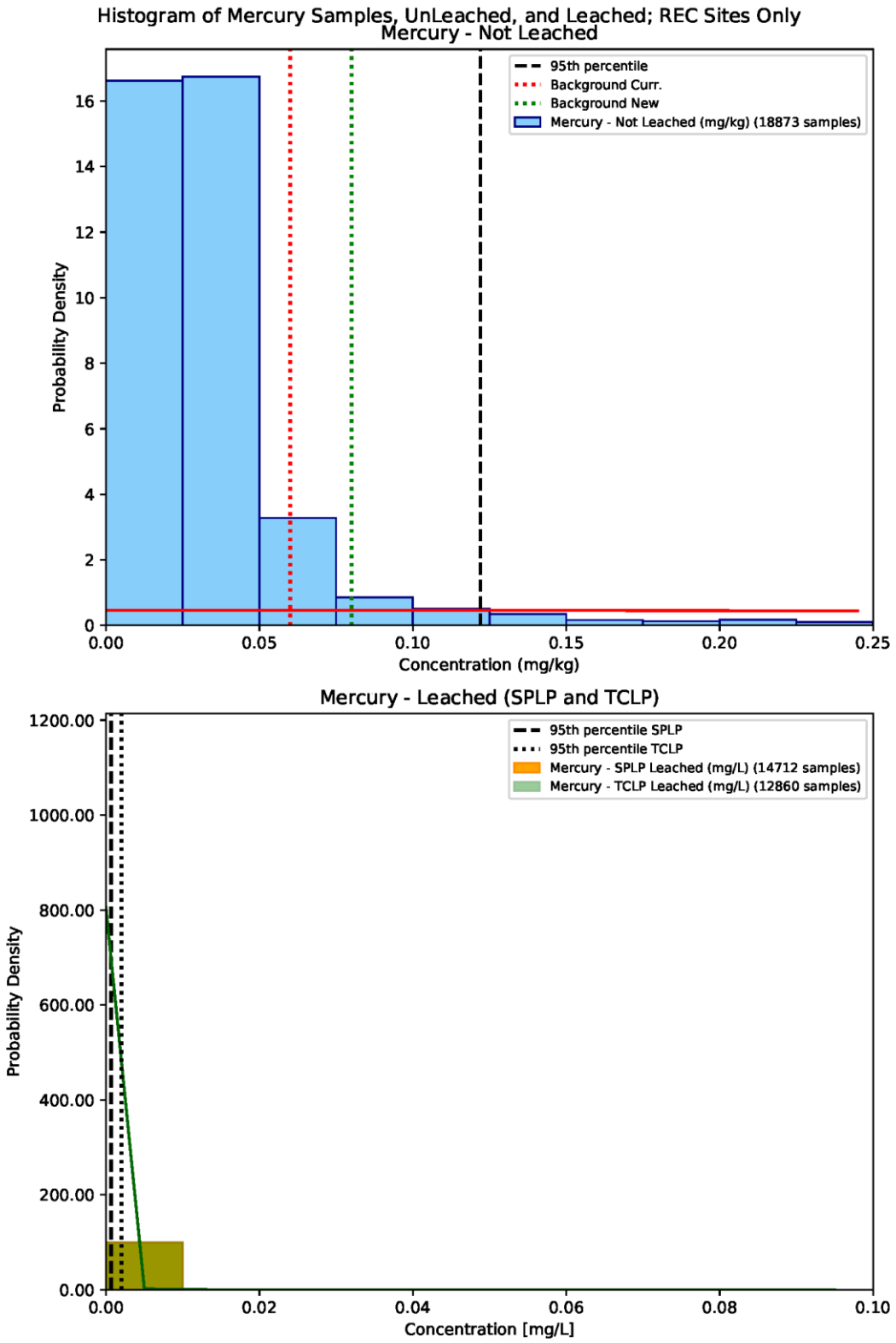


Figure 527. Histogram of RSL mercury concentrations, REC (mg/kg)

Mercury Unleached Concentration (mg/kg)

1) Region

2) District

3) County

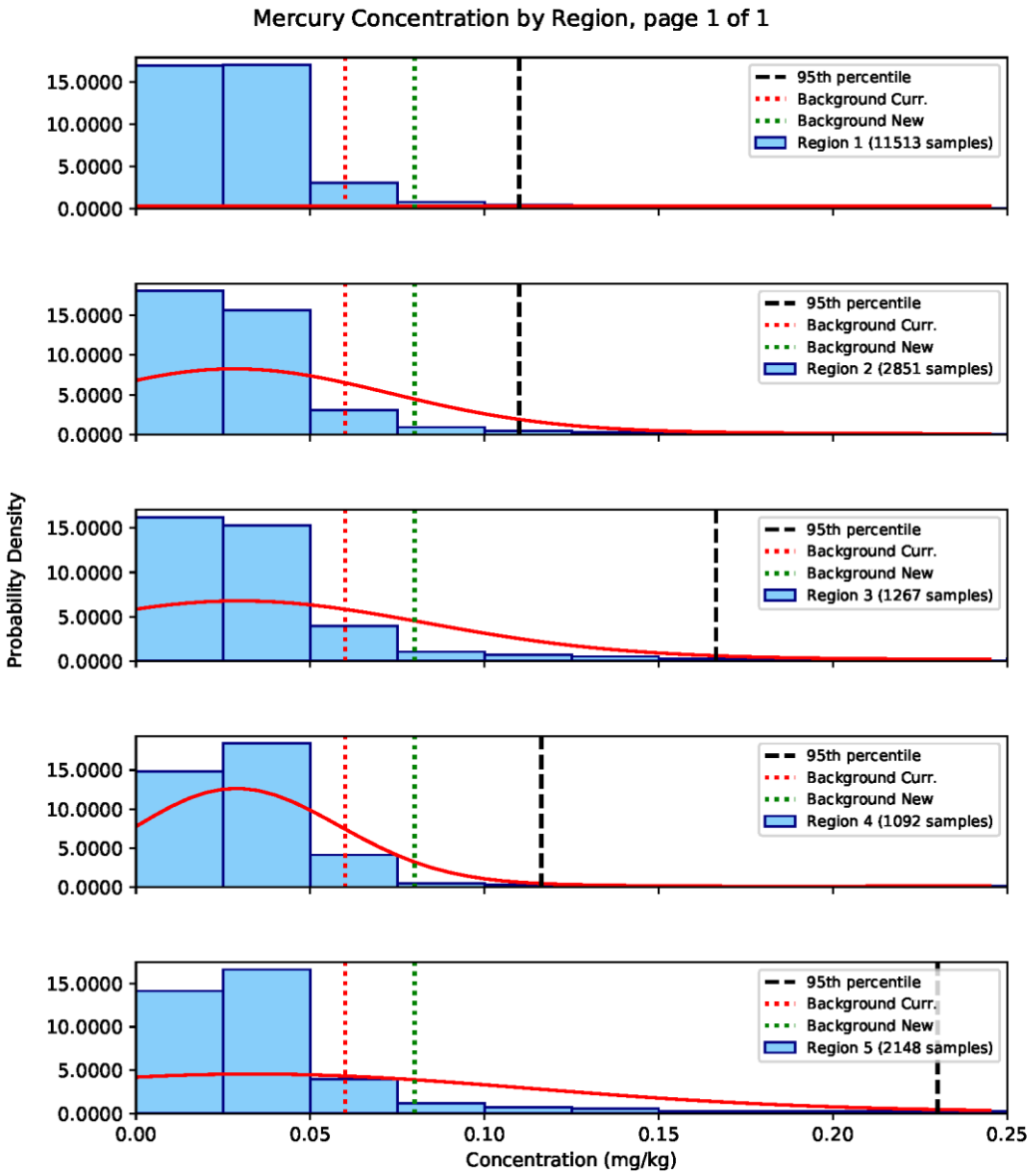


Figure 528. Histogram of RSL mercury concentrations by IDOT Region, REC (mg/kg)

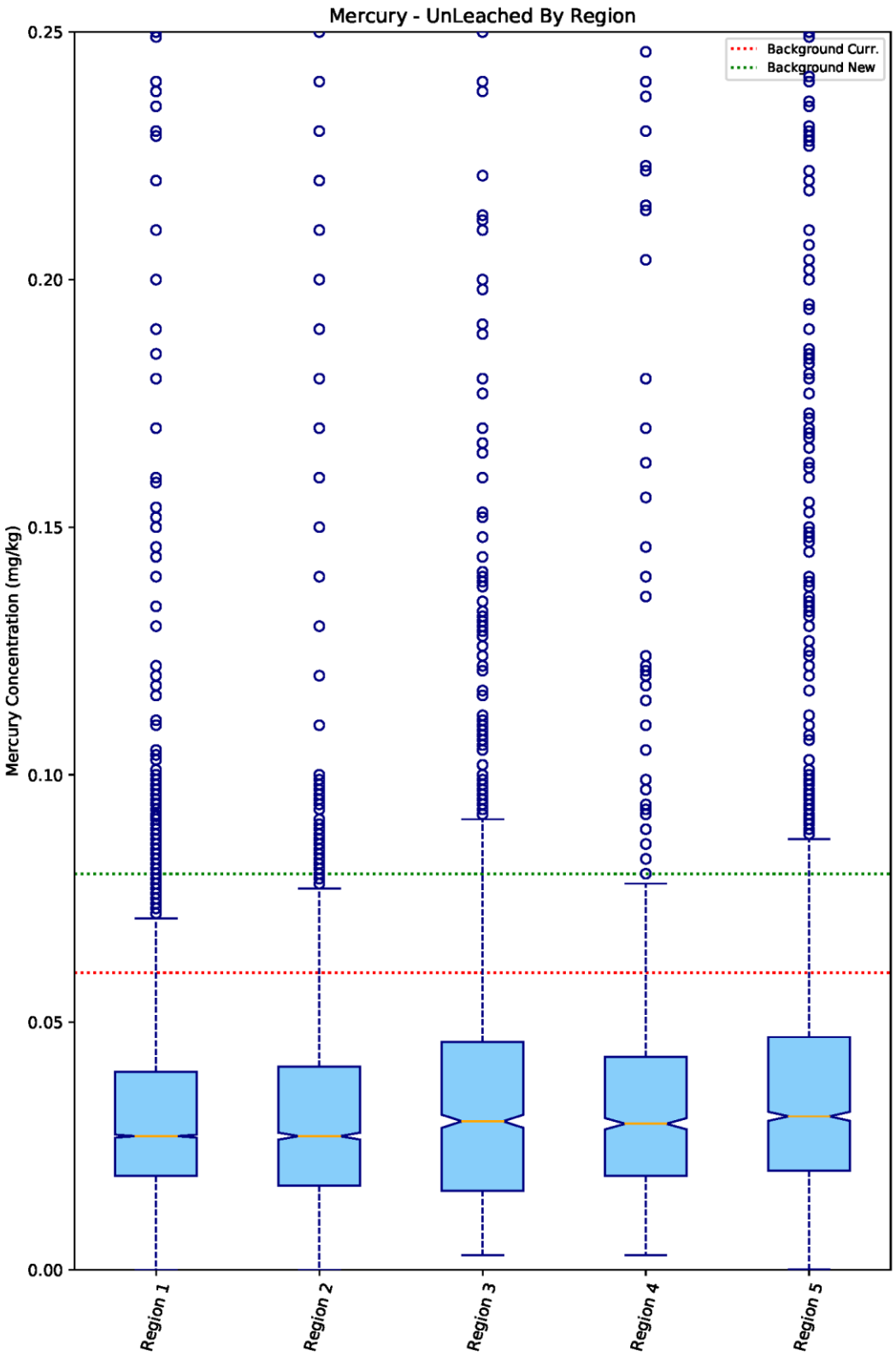


Figure 529. Boxplot of RSL mercury concentrations by IDOT Region, REC (mg/kg)

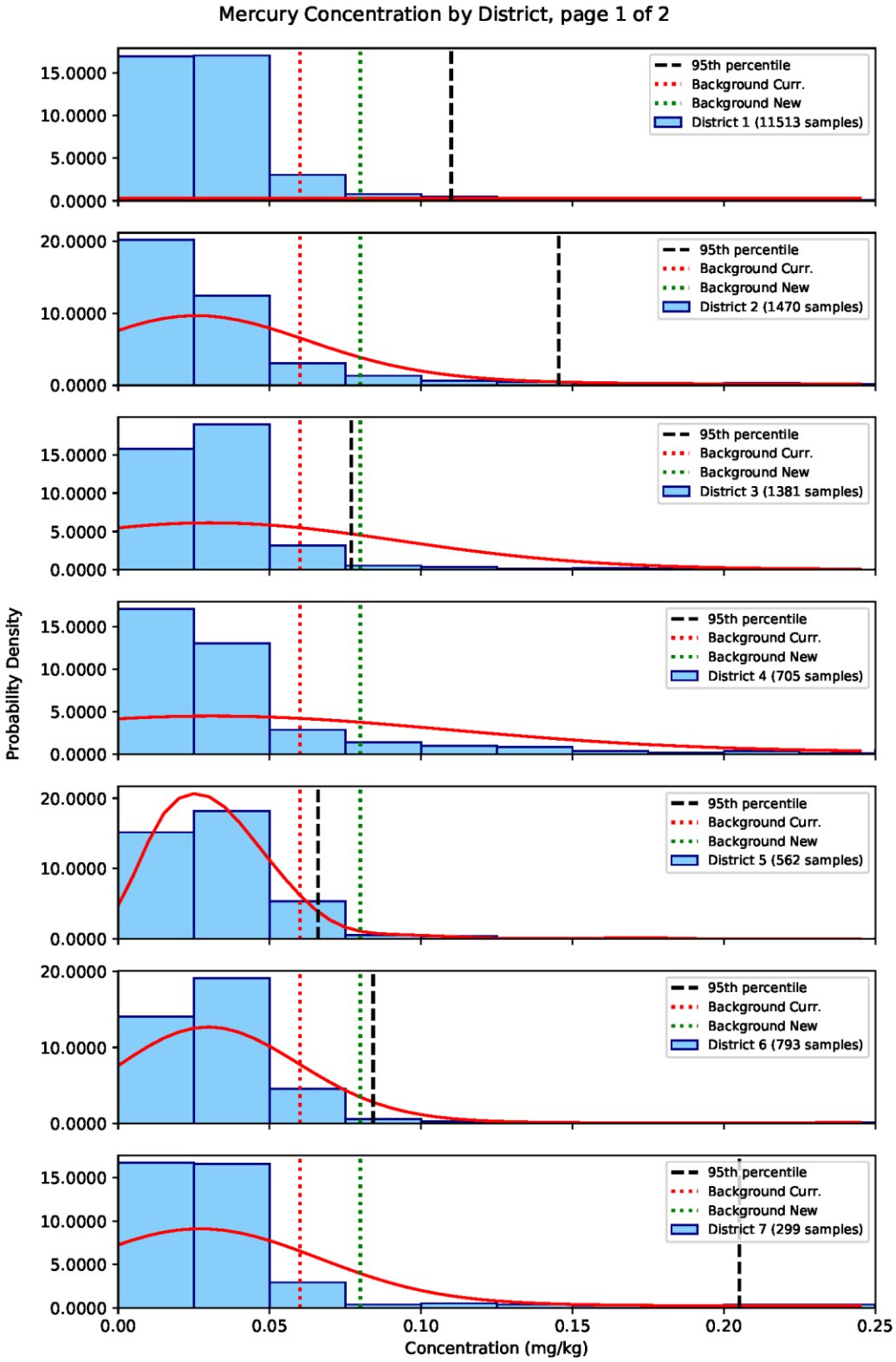


Figure 530. Histogram of RSL mercury concentrations by IDOT District, REC (mg/kg), part 1

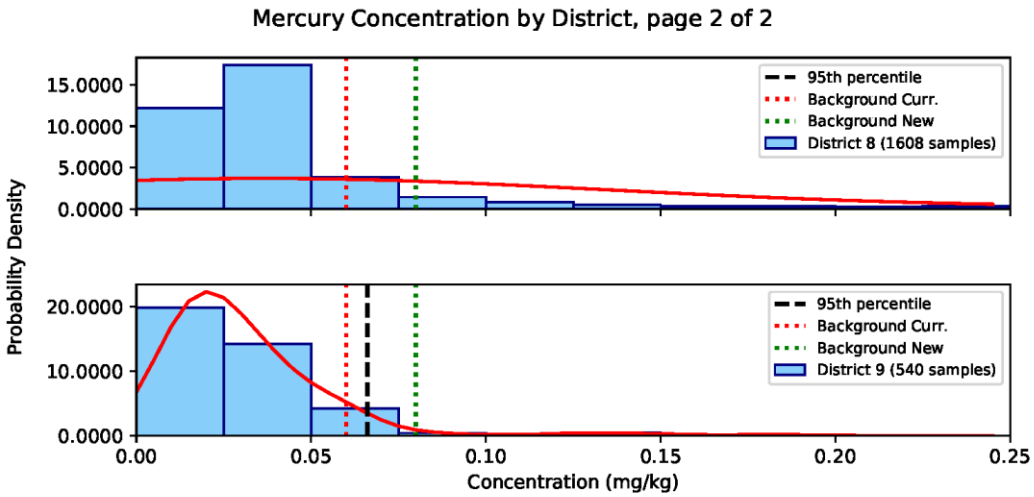


Figure 531. Histogram of RSL mercury concentrations by IDOT District, REC (mg/kg), part 2

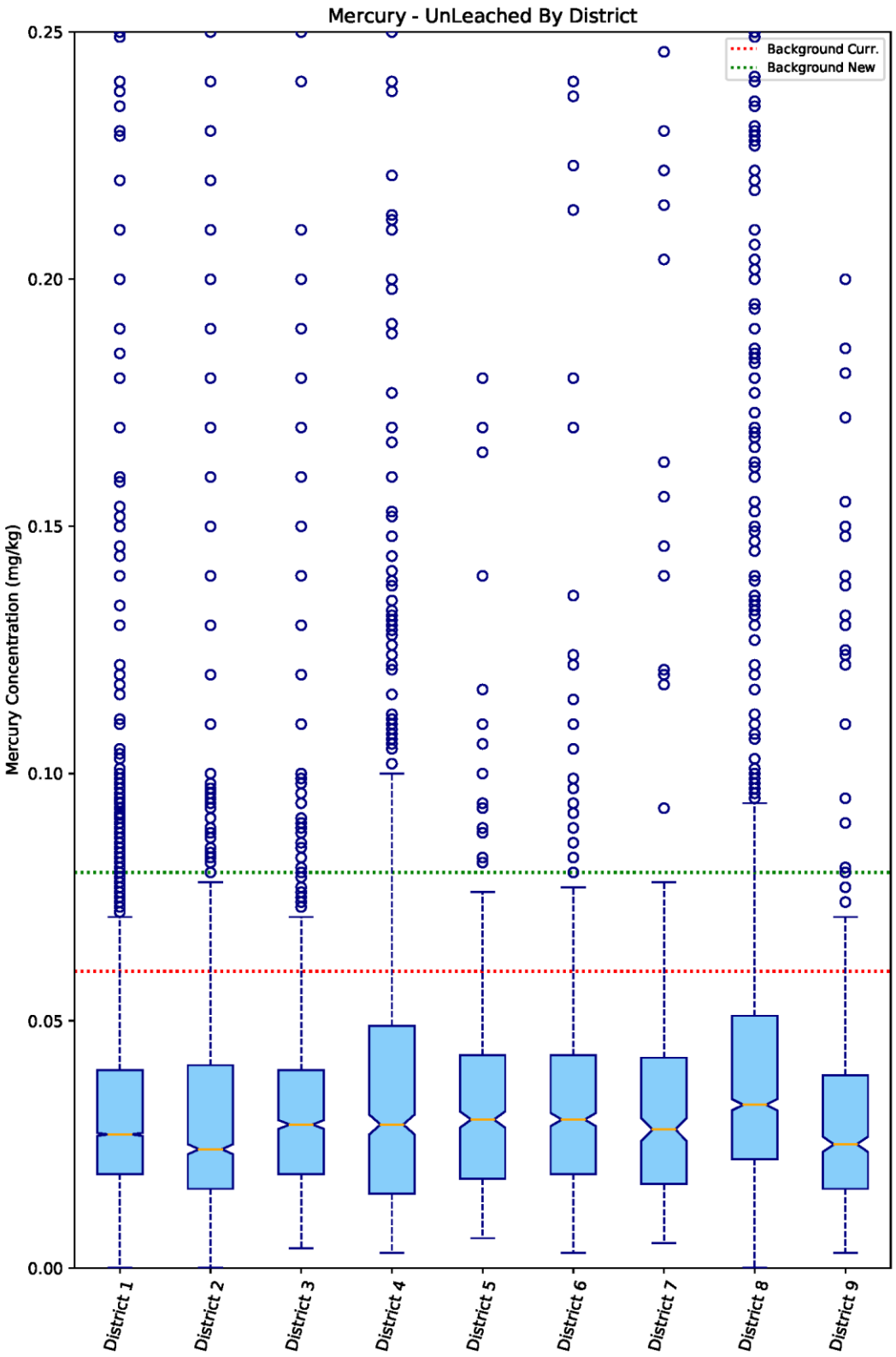


Figure 532. Boxplot of RSL mercury concentrations by IDOT District, REC (mg/kg)

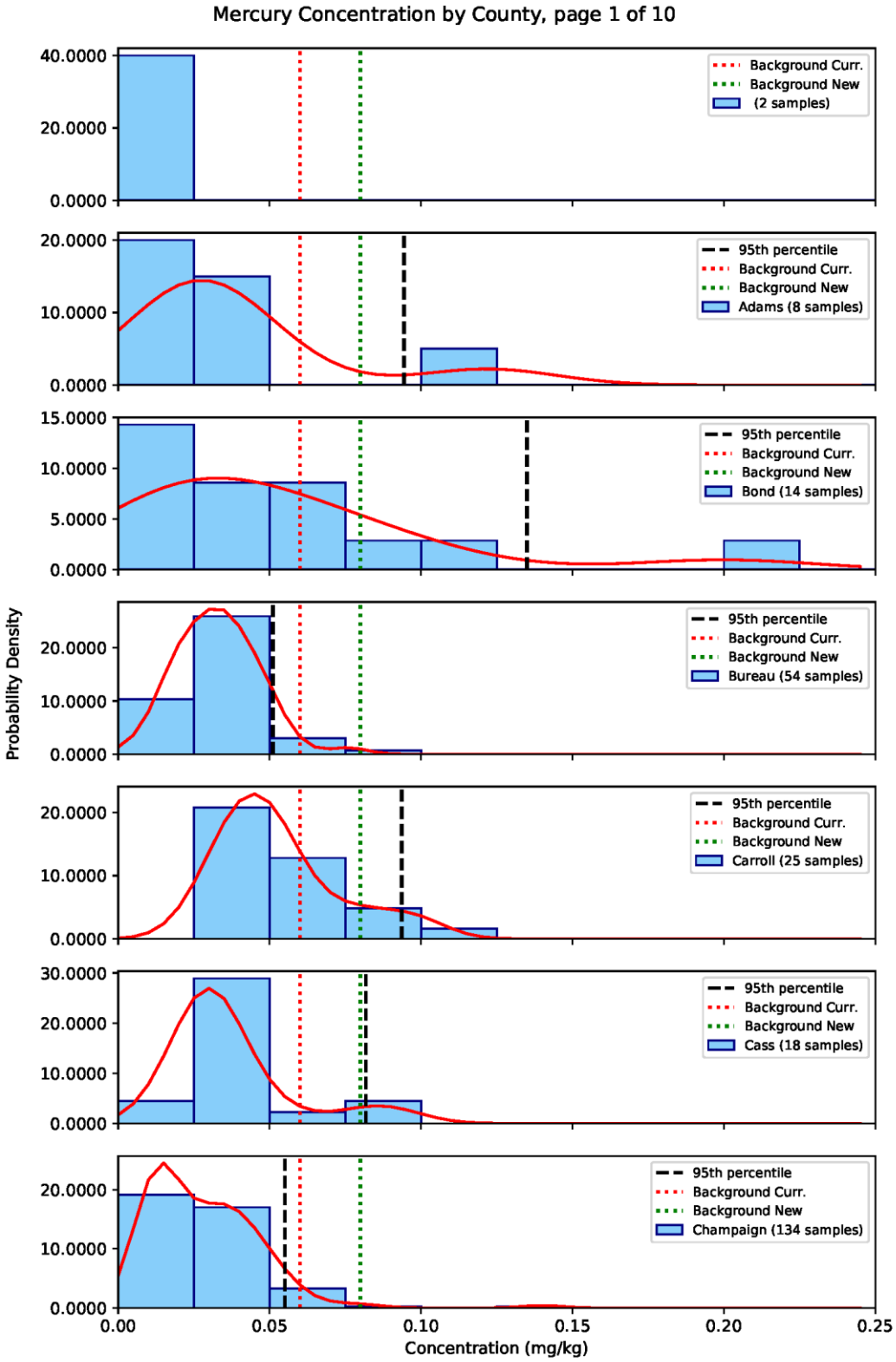


Figure 533. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 1

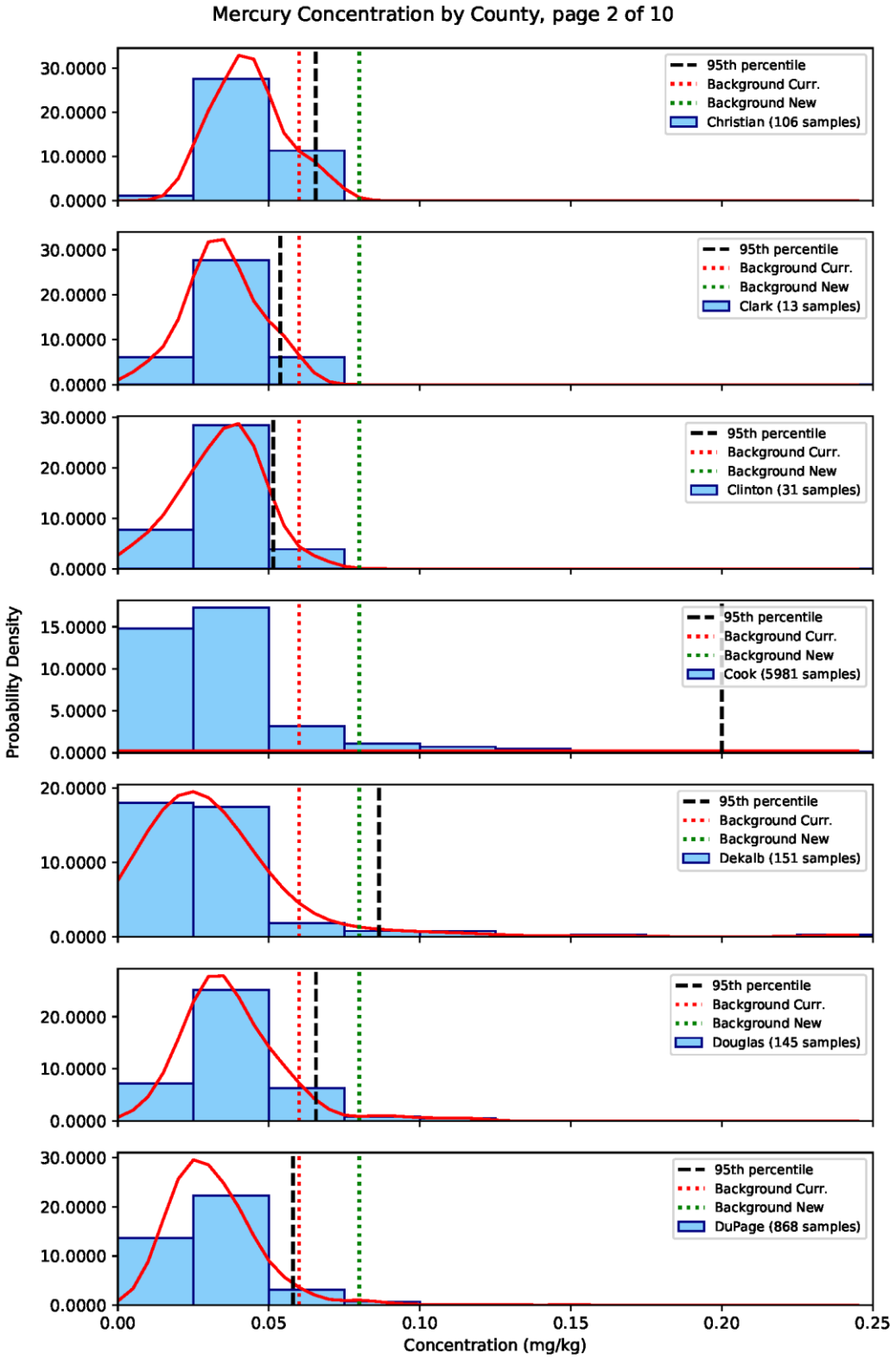


Figure 534. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 2

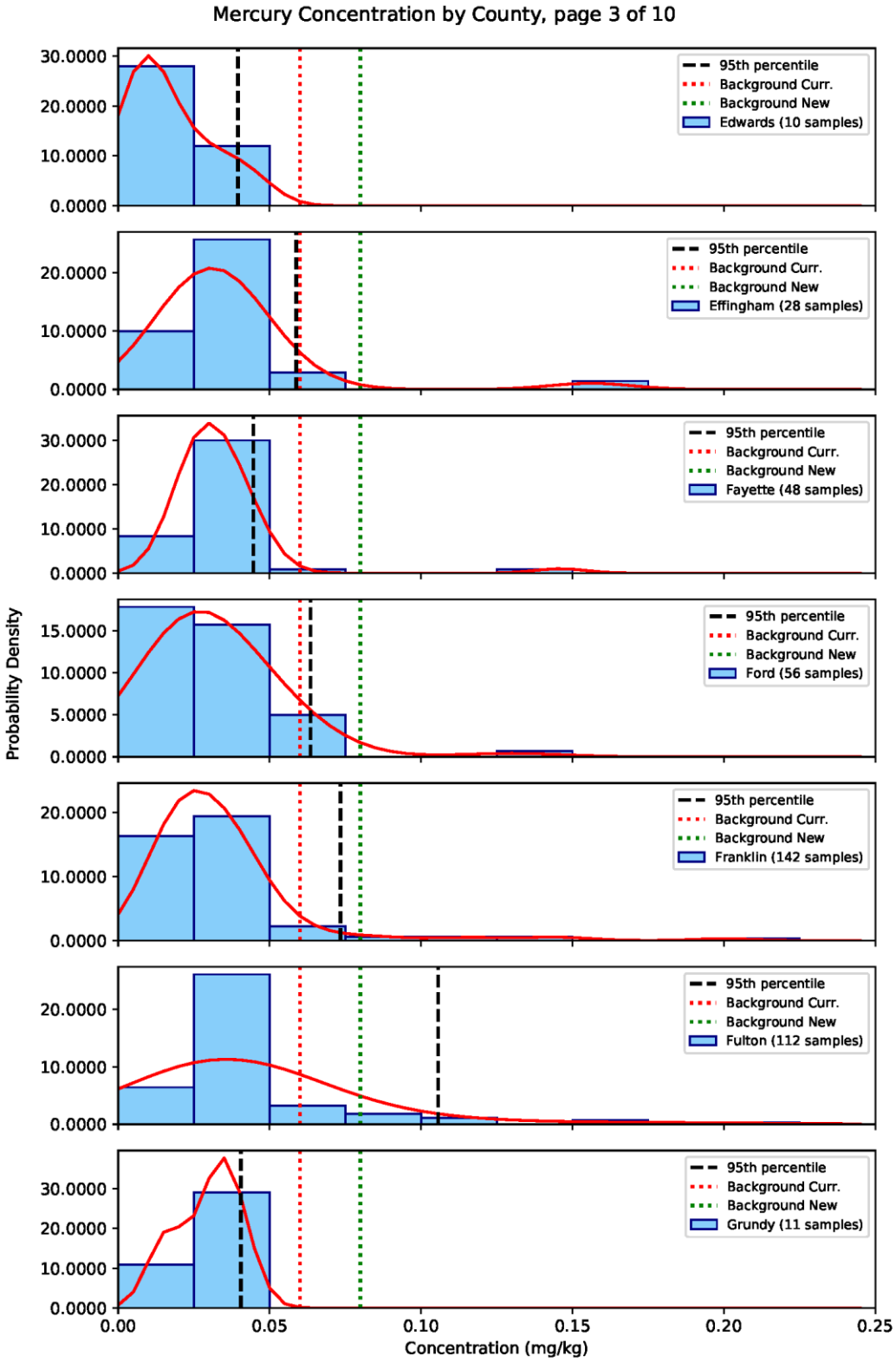


Figure 535. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 3

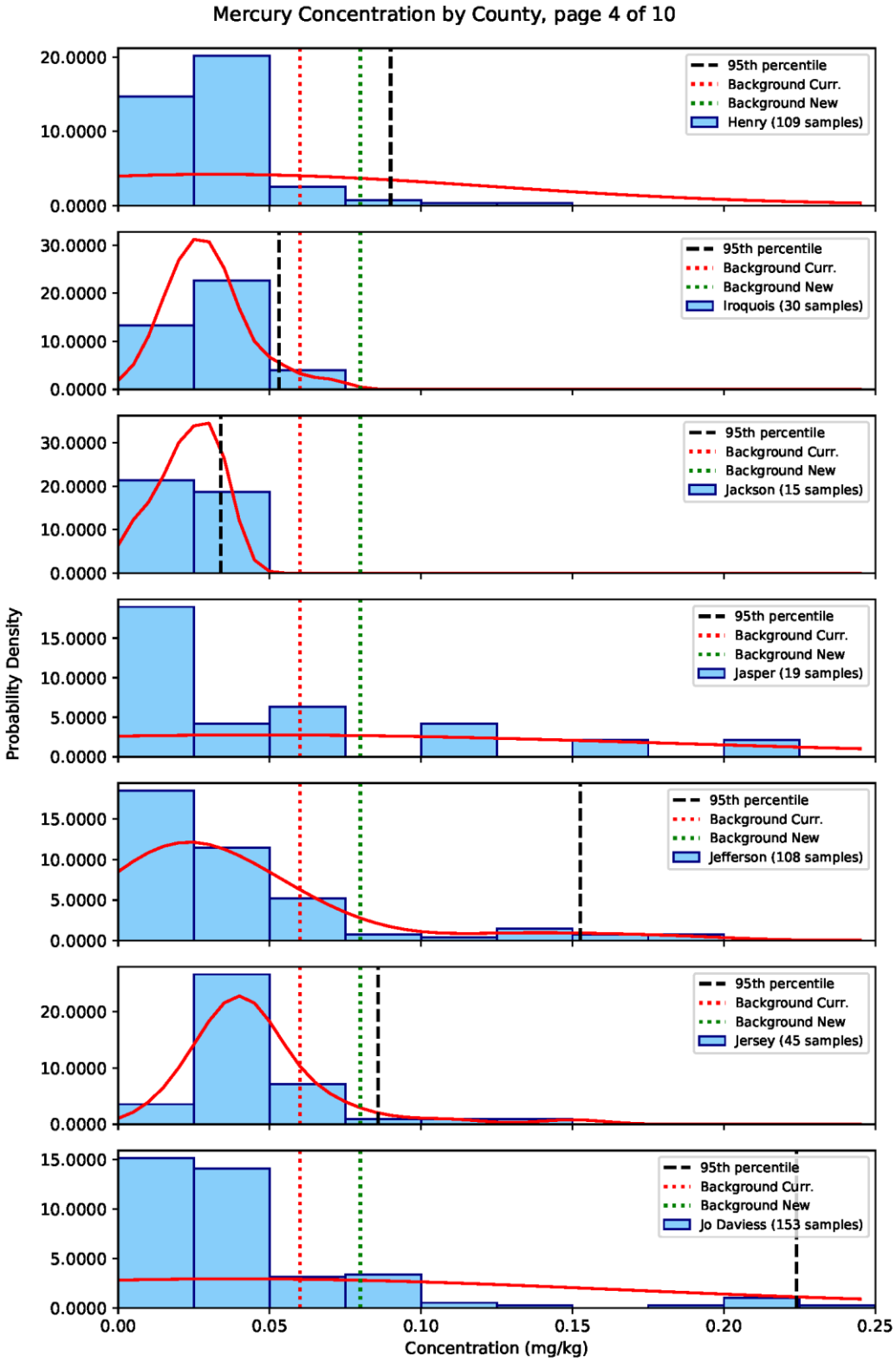


Figure 536. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 4

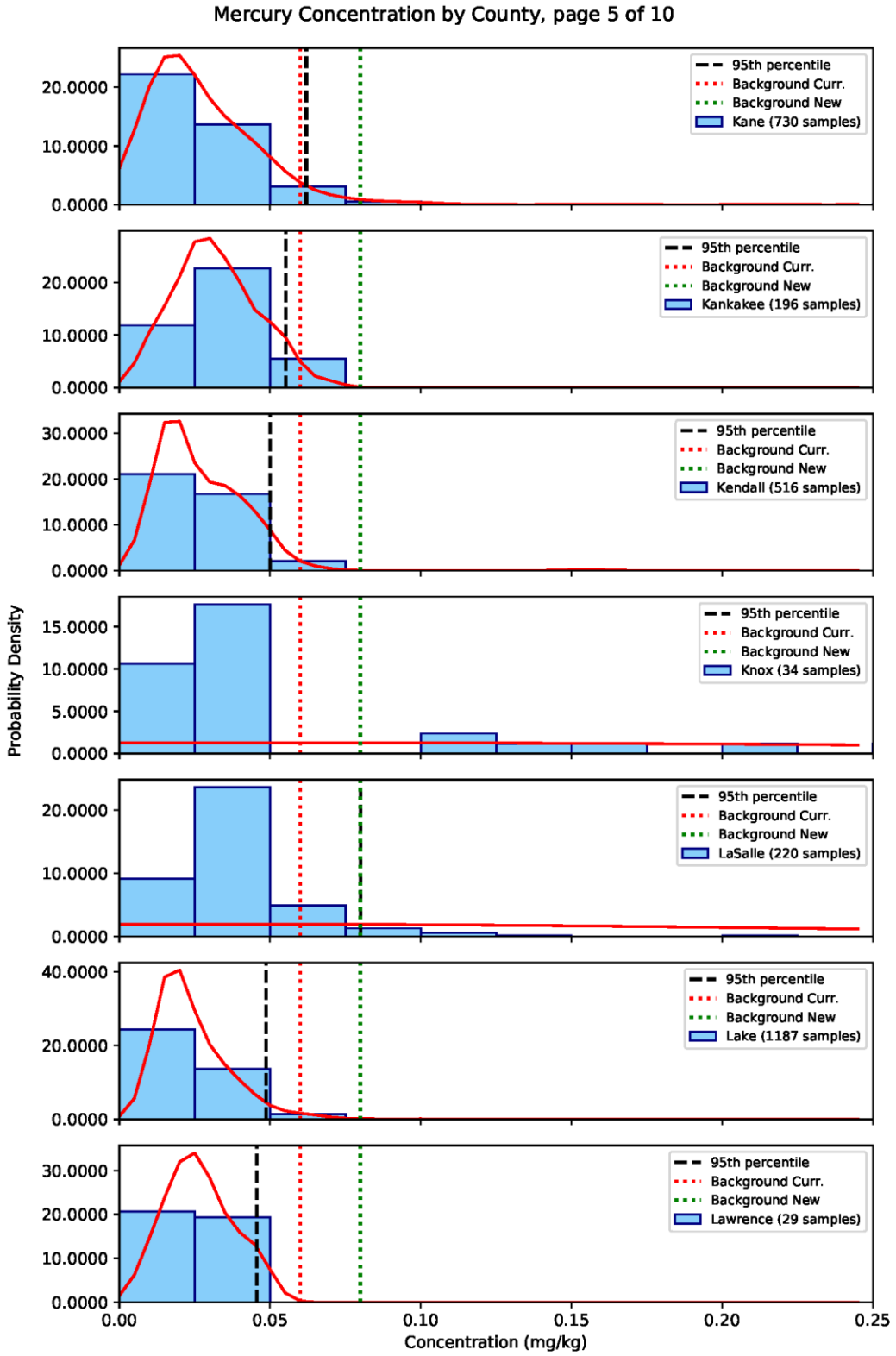


Figure 537. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 5

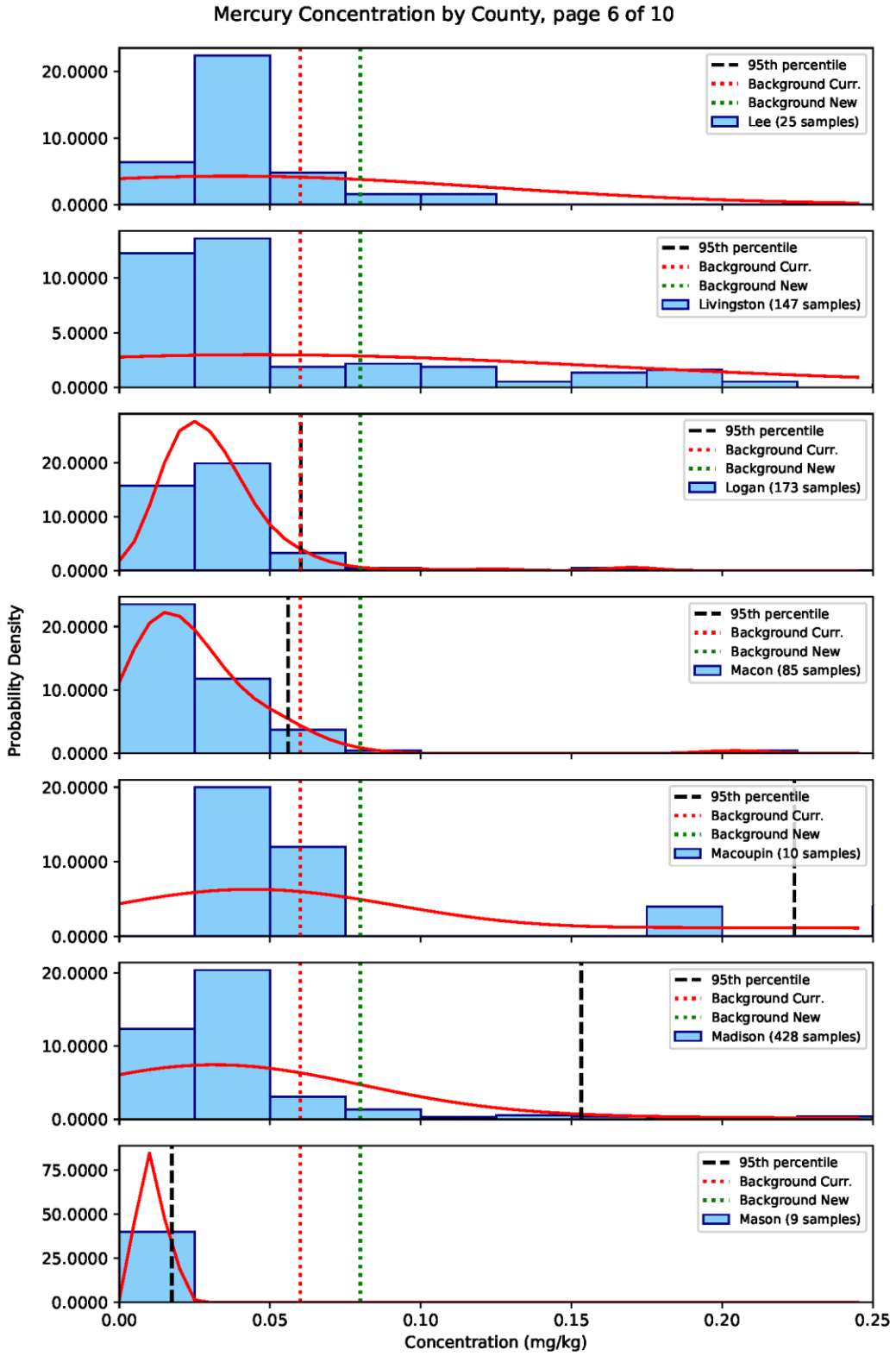


Figure 538. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 6

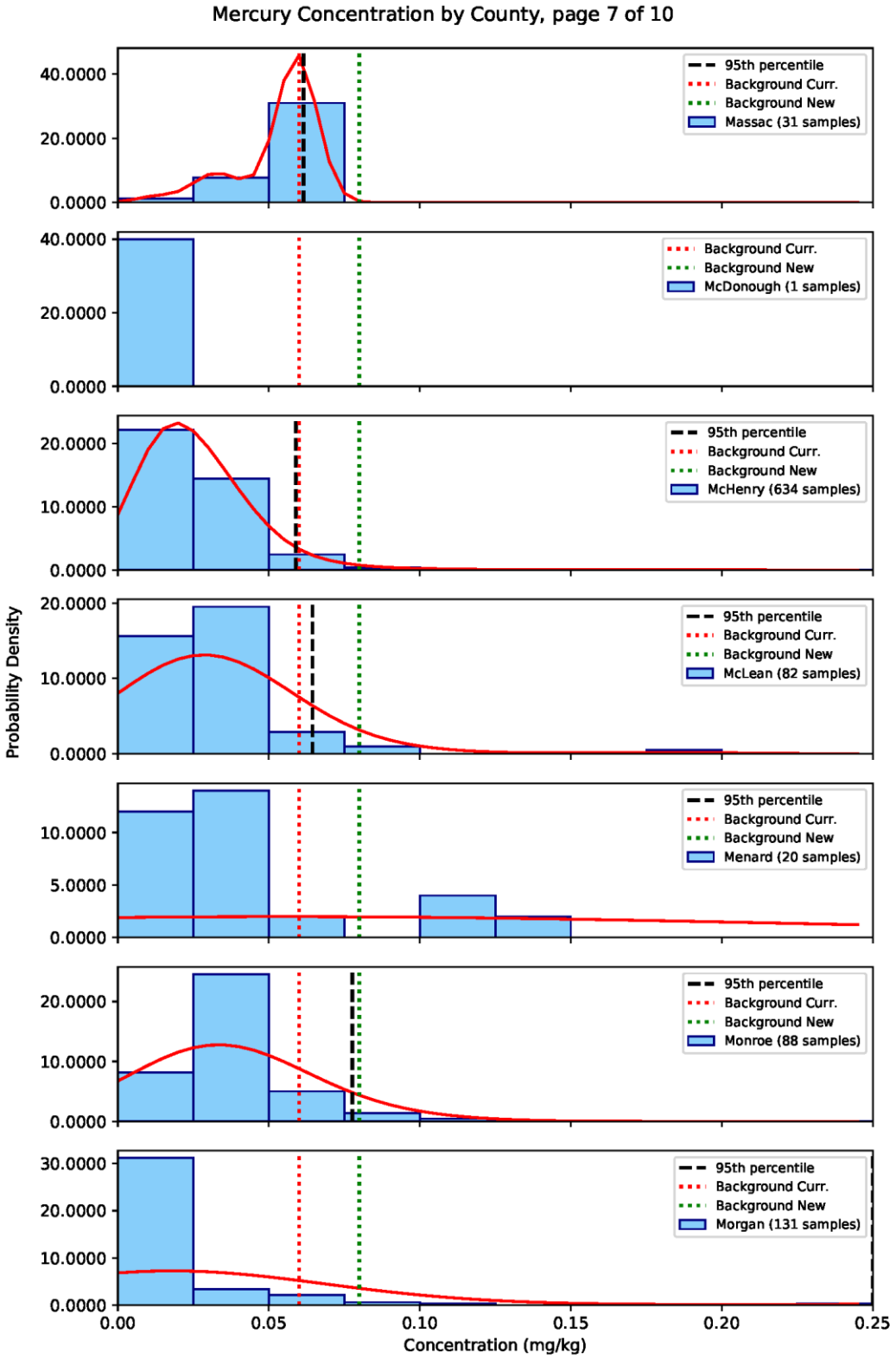


Figure 539. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 7

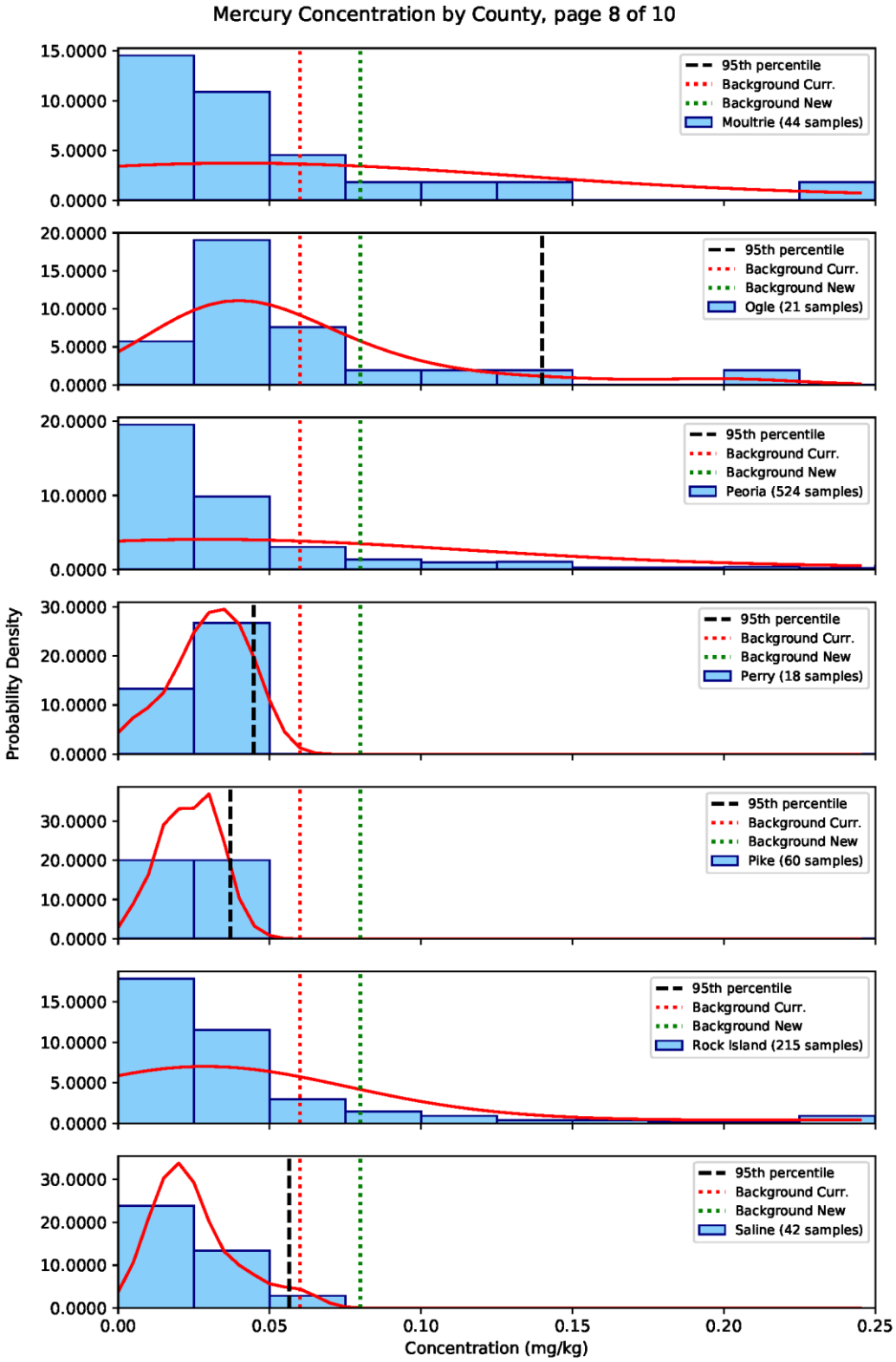


Figure 540. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 8

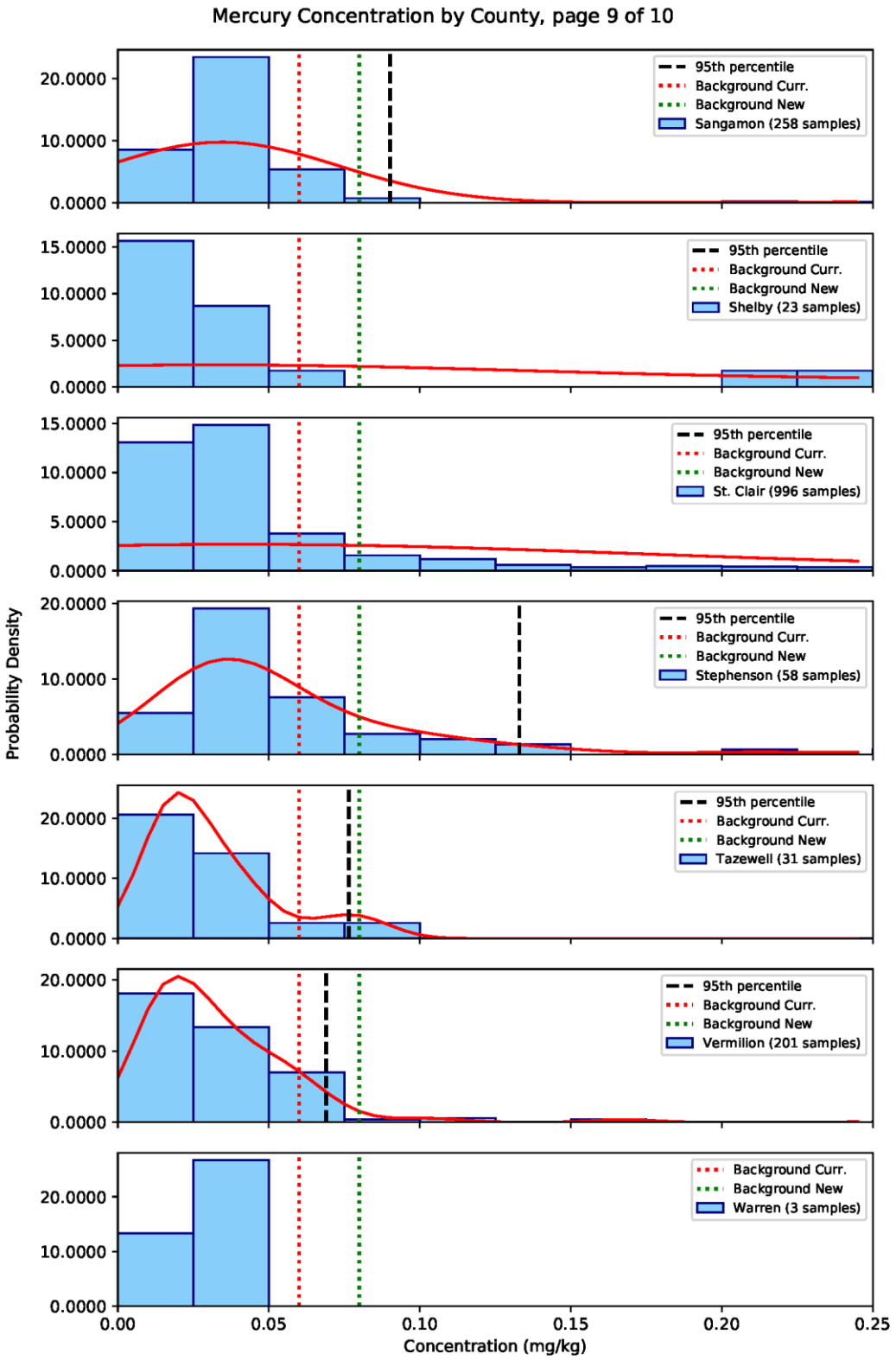


Figure 541. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 9

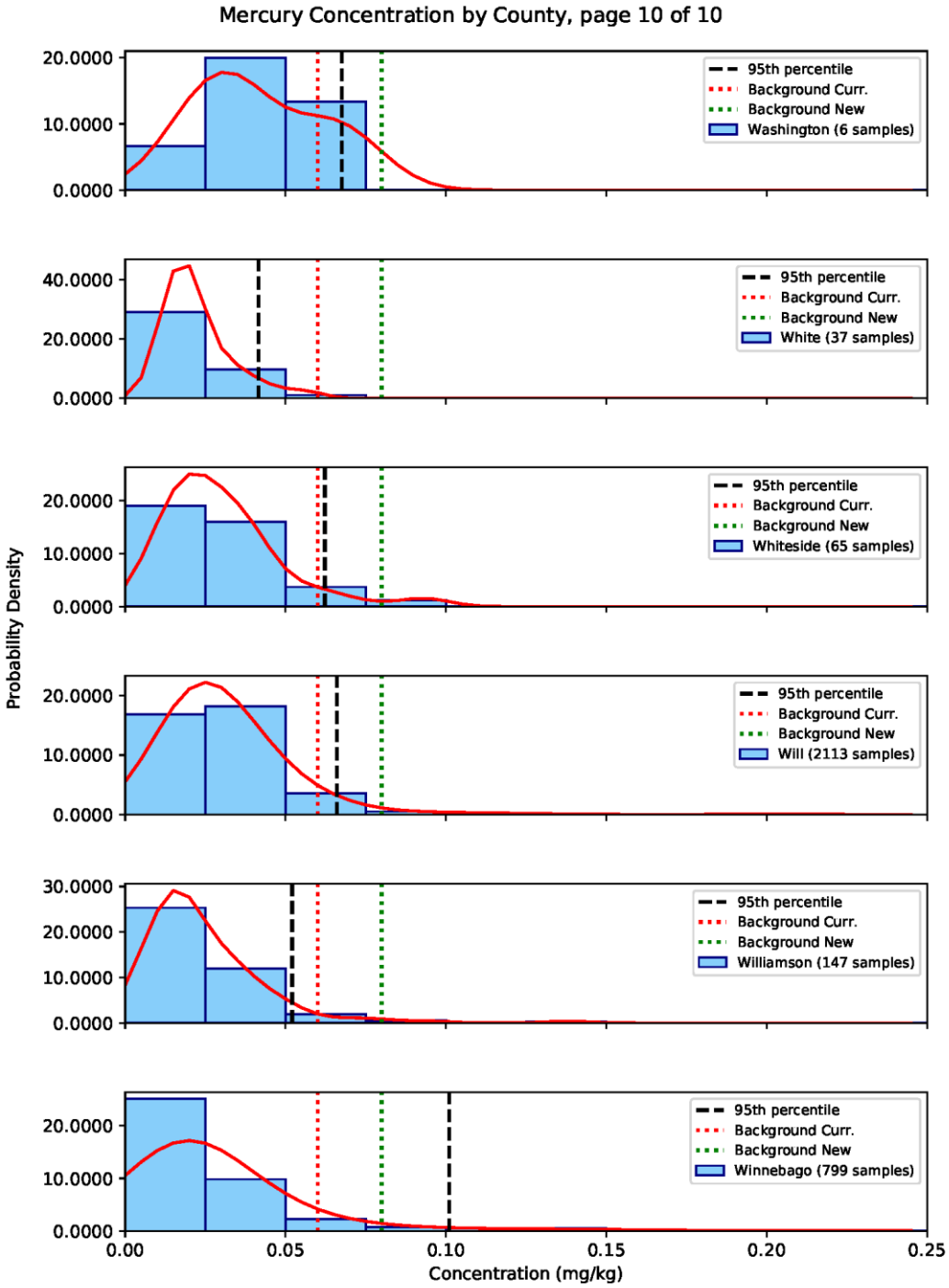


Figure 542. Histogram of RSL mercury concentrations by Illinois county, REC (mg/kg), part 10

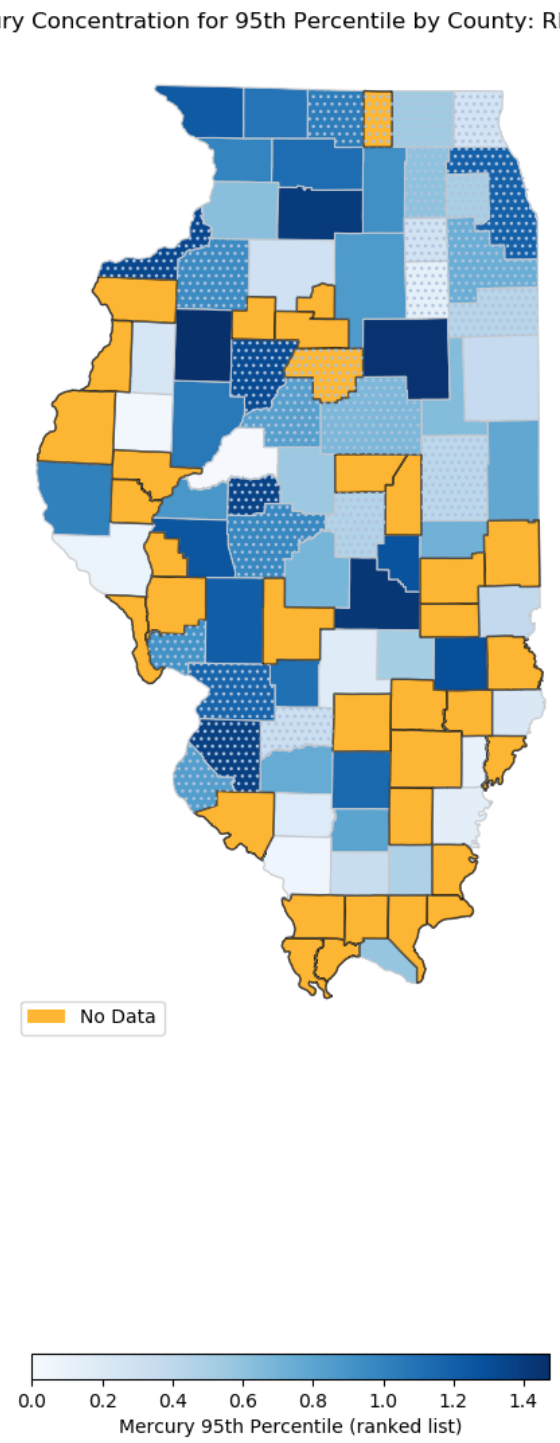


Figure 543. Map of RSL mercury 95th percentile concentration by Illinois county, REC (mg/kg)

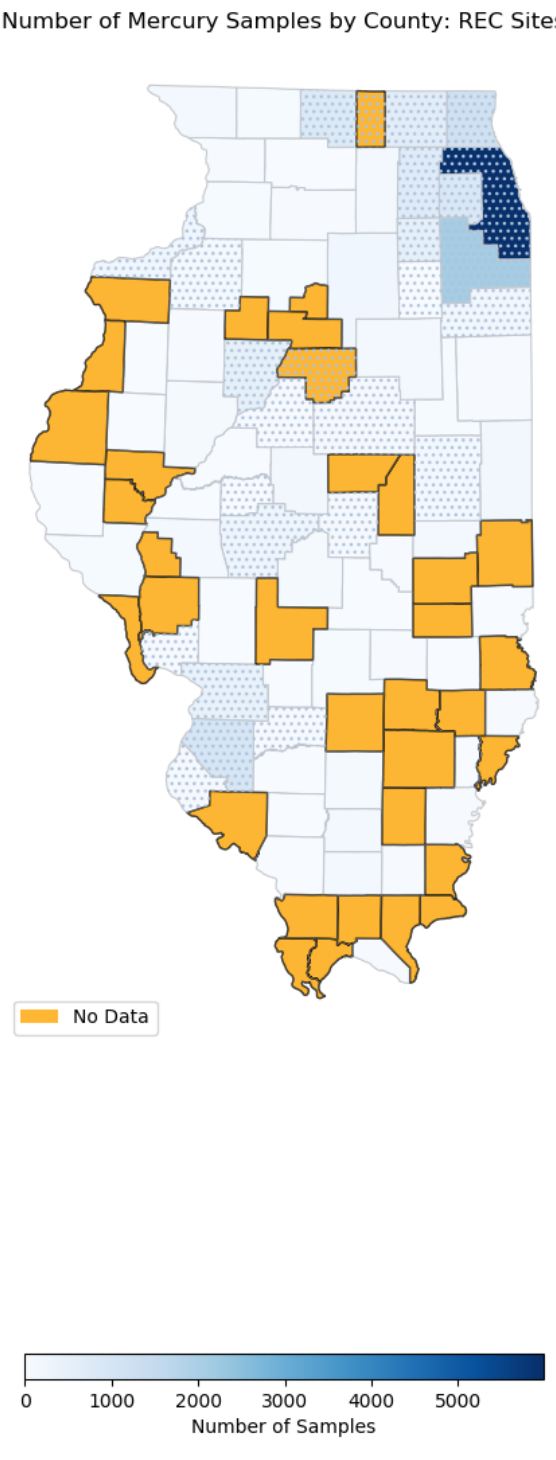


Figure 544. Map of RSL mercury sample quantity by Illinois county, REC (mg/kg)

O.2 MERCURY NON-REC

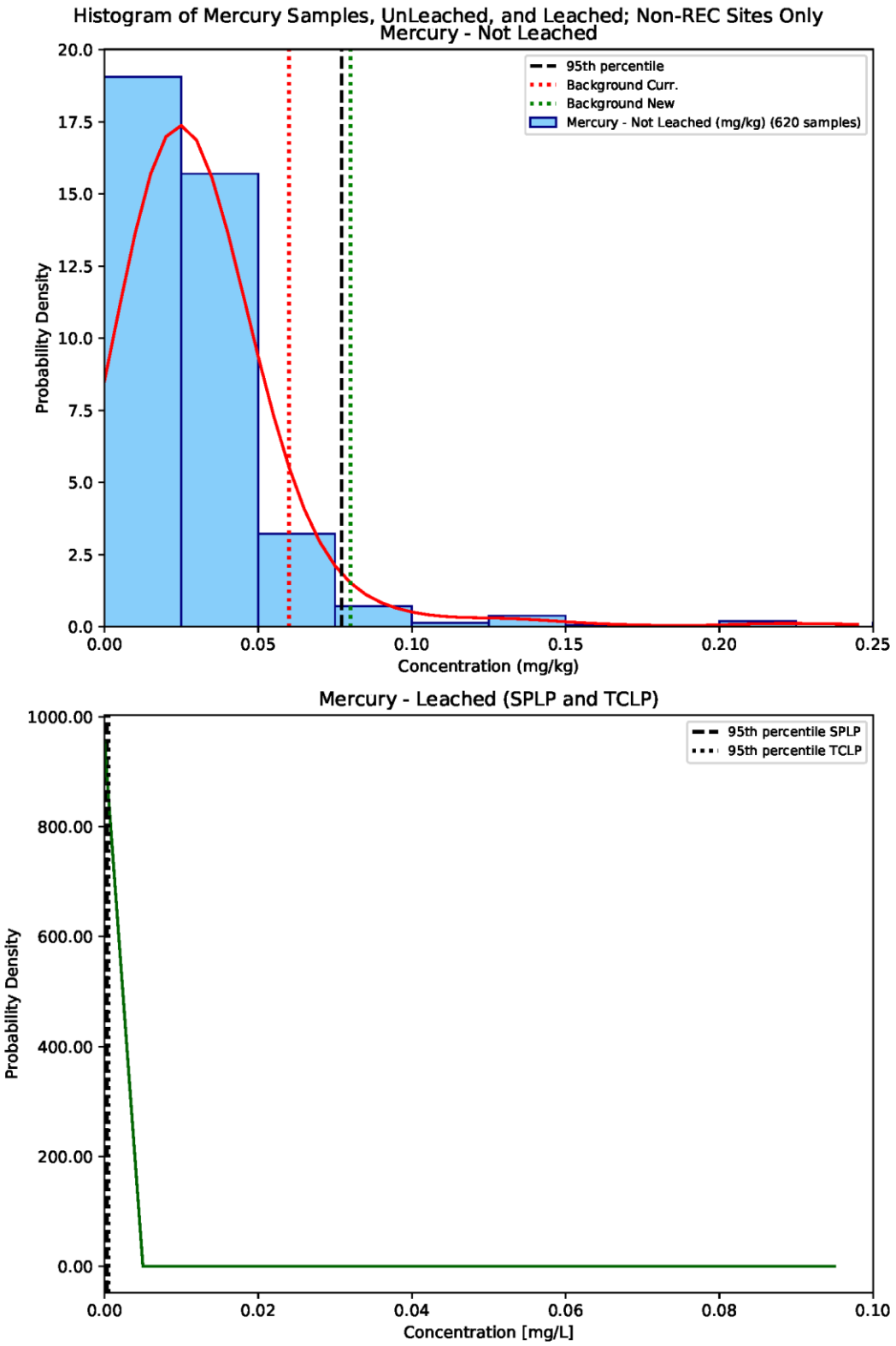


Figure 545. Histogram of RSL mercury concentrations, Non-REC (mg/kg)

Mercury Unleached Concentration (mg/kg)

1) Region

2) District

3) County

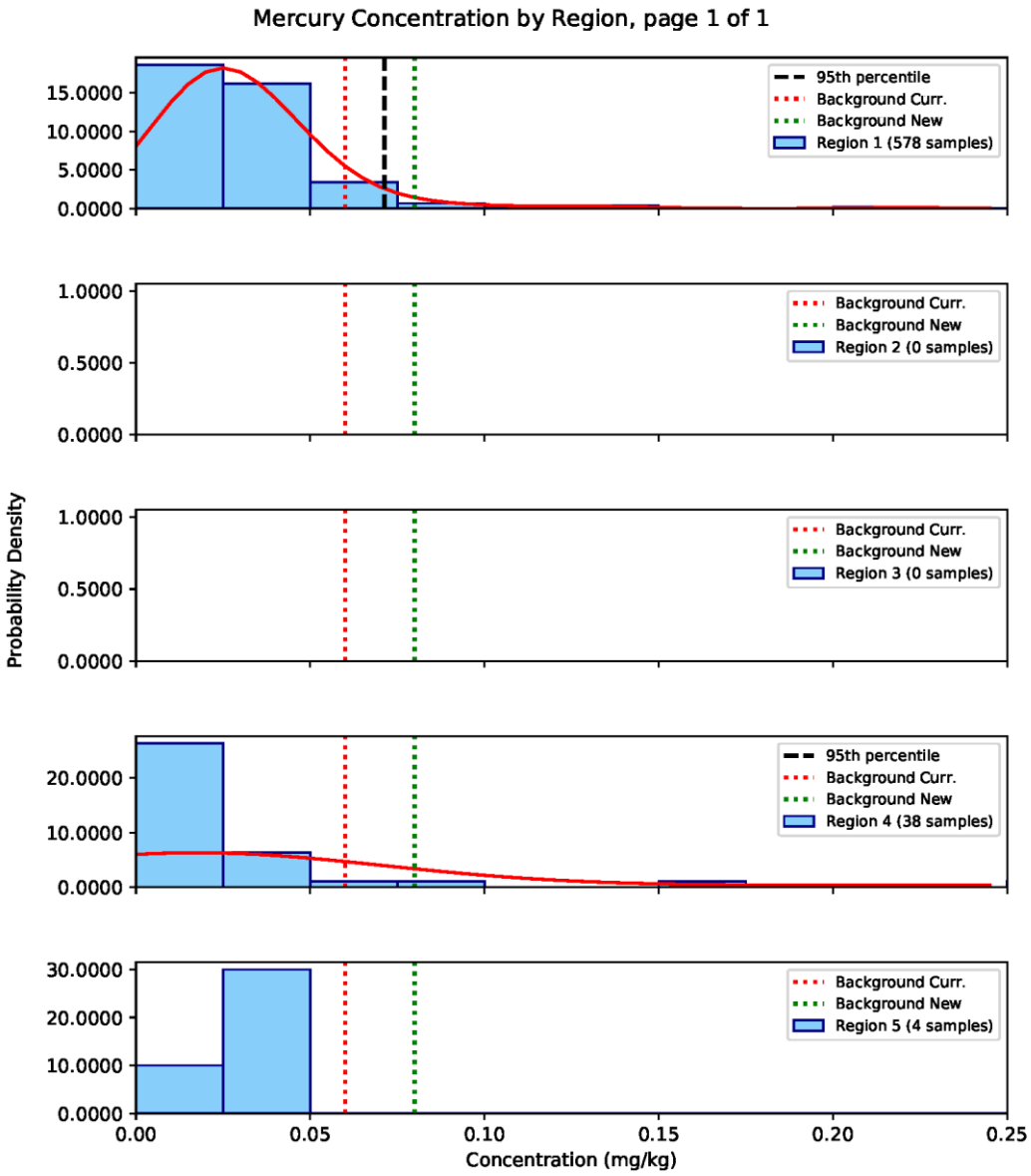


Figure 546. Histogram of RSL mercury concentrations by IDOT Region, Non-REC (mg/kg)

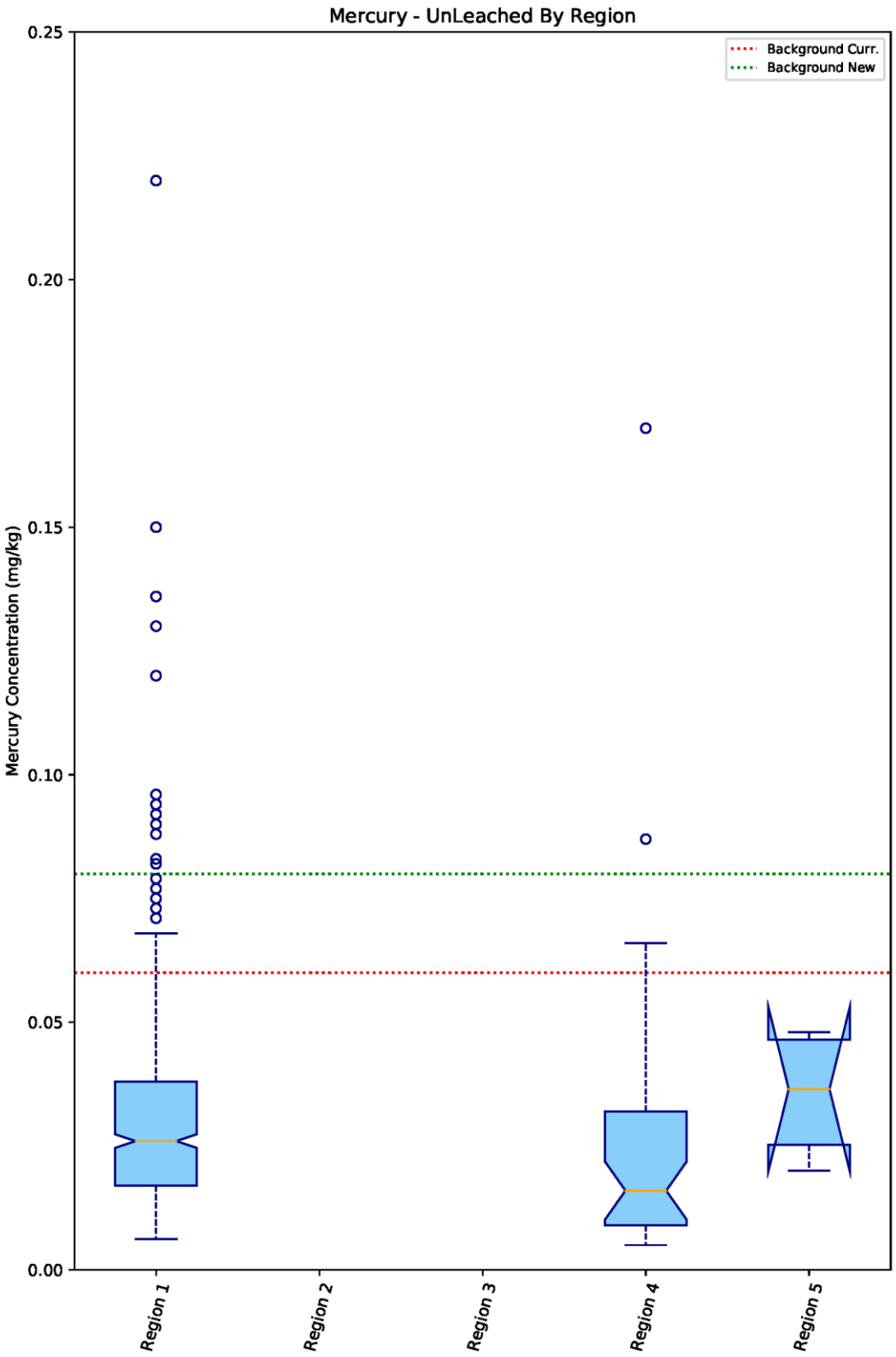


Figure 547. Boxplot of RSL mercury concentrations by IDOT Region, Non-REC (mg/kg)

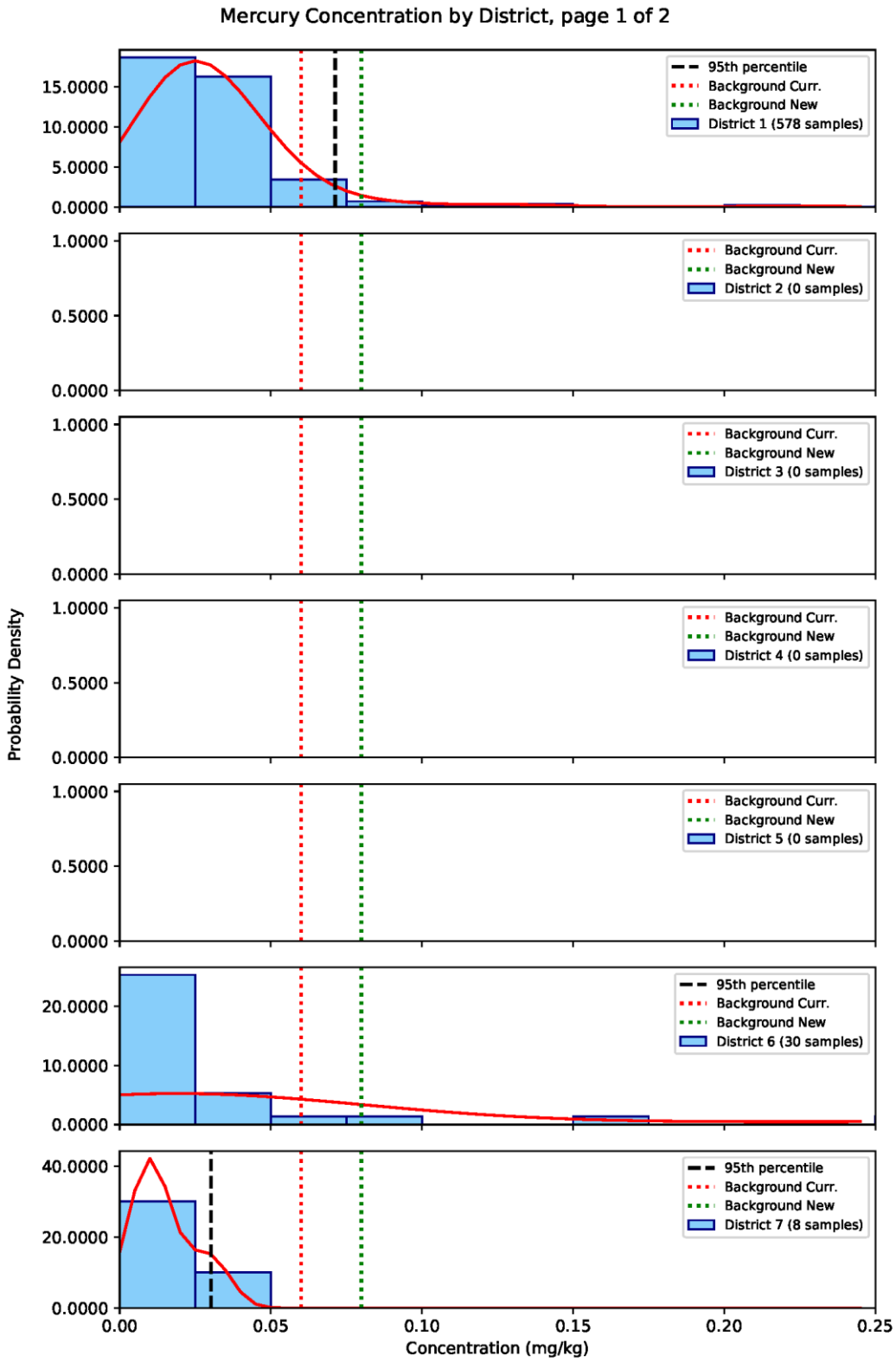


Figure 548. Histogram of RSL mercury concentrations by IDOT District, Non-REC (mg/kg), part 1

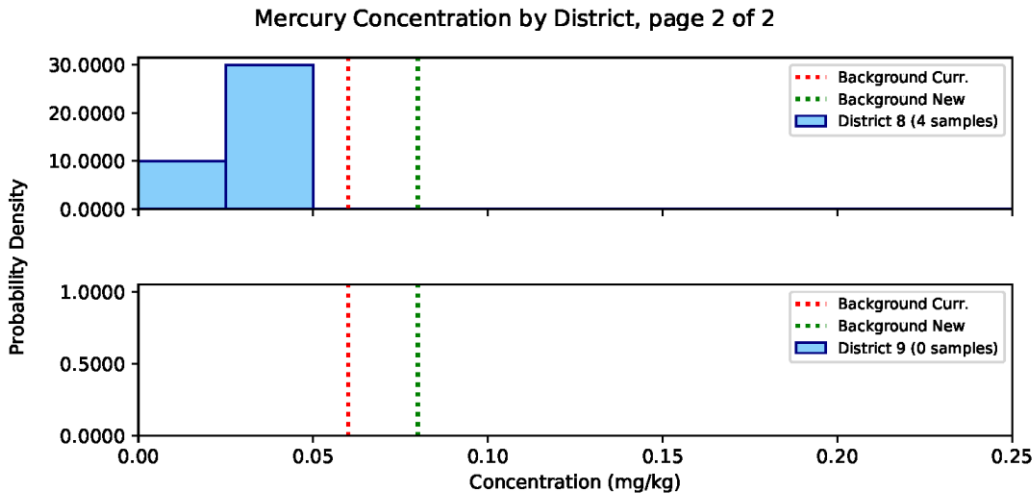


Figure 549. Histogram of RSL mercury concentrations by IDOT District, Non-REC (mg/kg), part 2

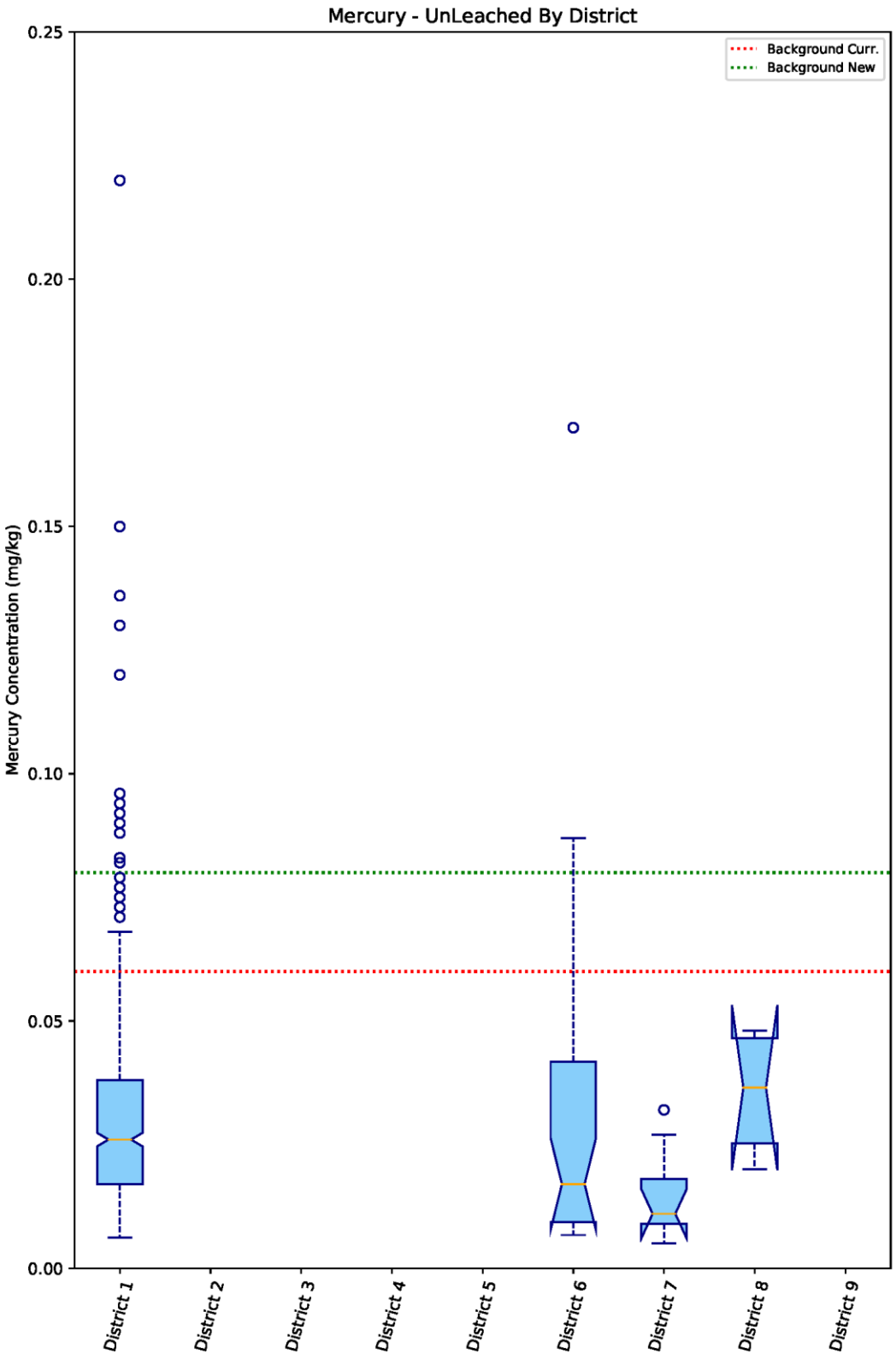


Figure 550. Boxplot of RSL mercury concentrations by IDOT District, Non-REC (mg/kg)

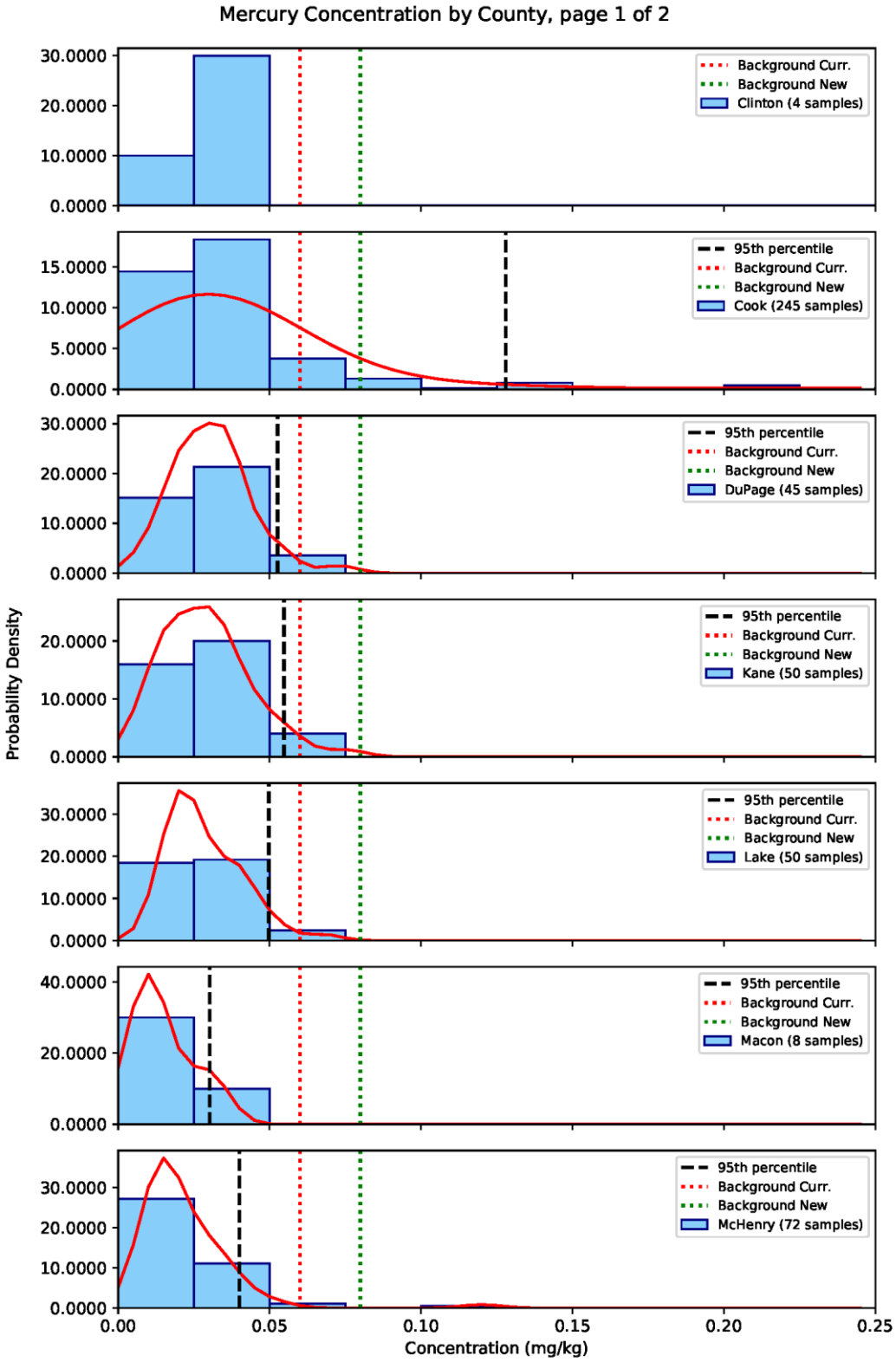


Figure 551. Histogram of RSL mercury concentrations by Illinois county, Non-REC (mg/kg), part 1

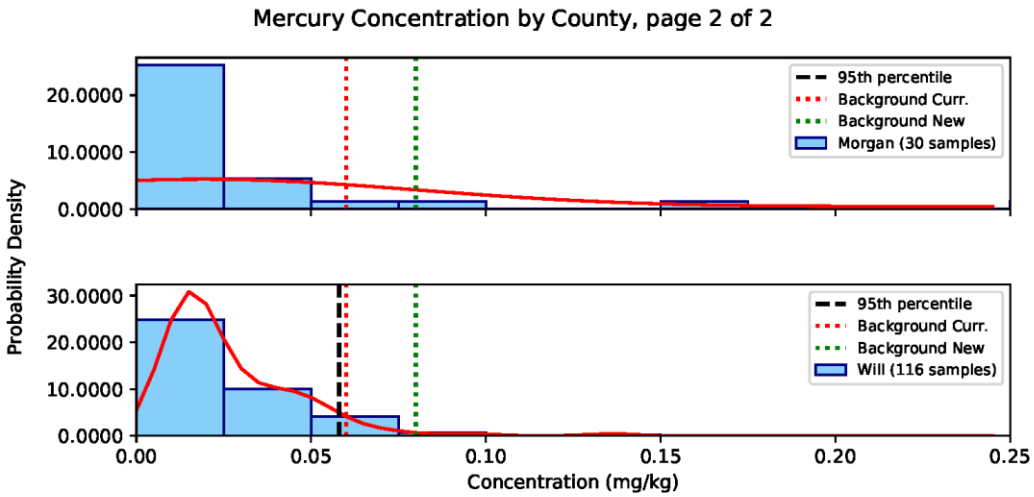


Figure 552. Histogram of RSL mercury concentrations by Illinois county, Non-REC (mg/kg), part 2

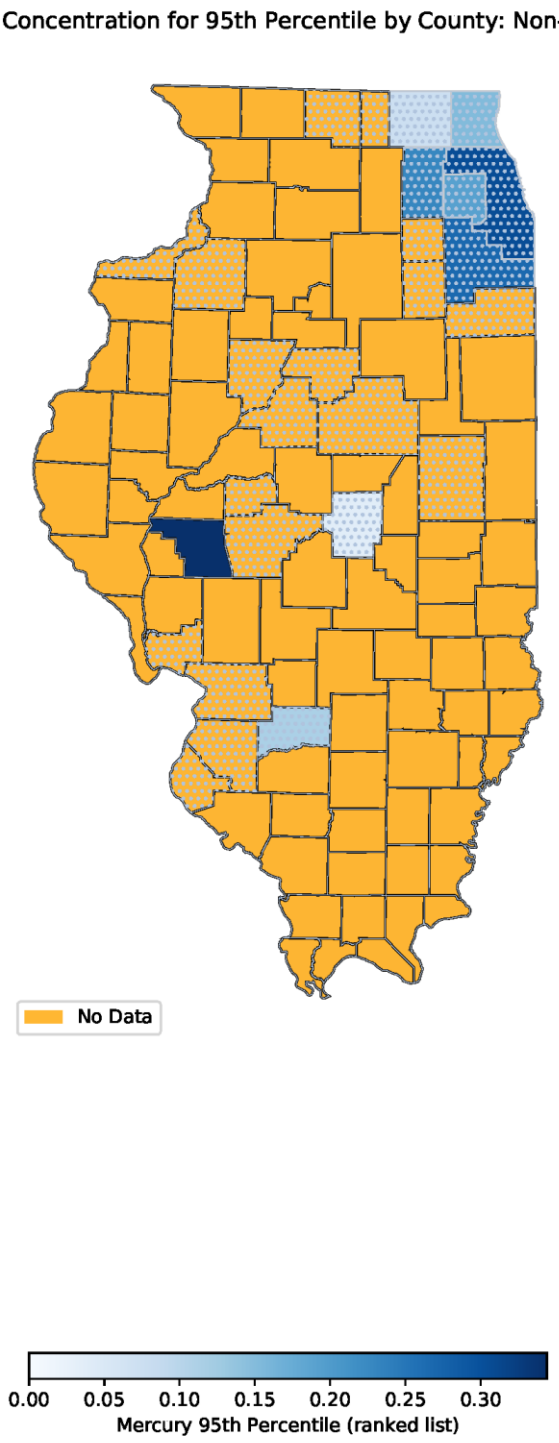


Figure 553. Map of RSL mercury 95th percentile concentration by Illinois county, Non-REC (mg/kg)

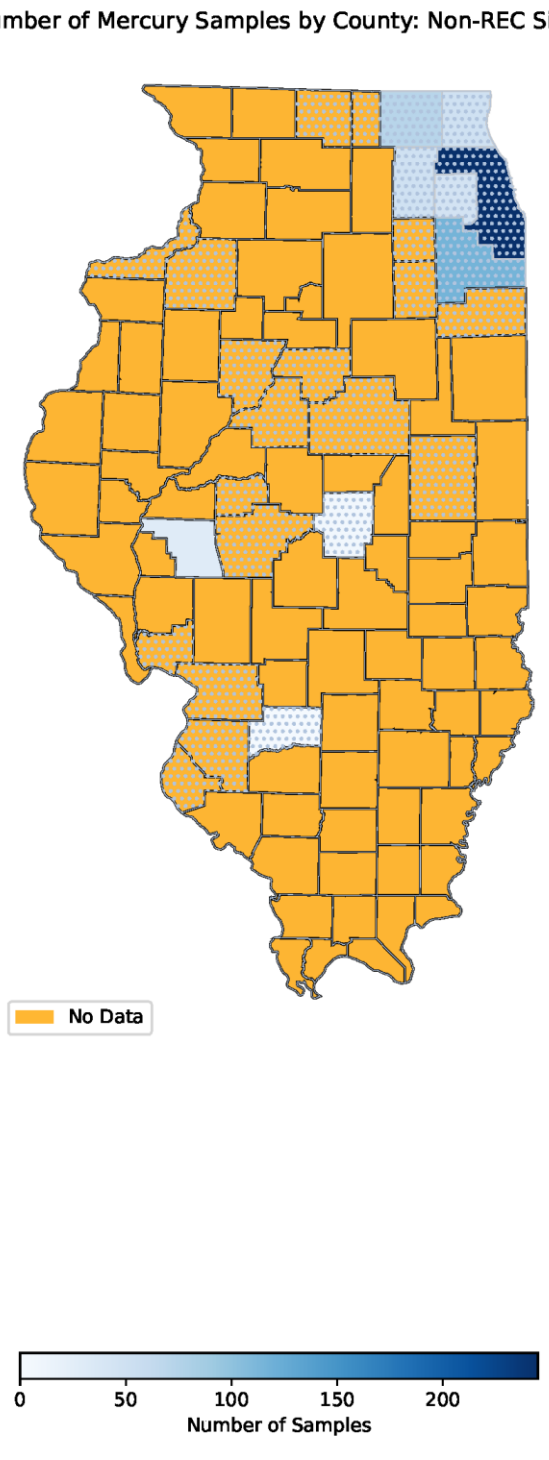


Figure 554. Map of RSL mercury sample quantity by Illinois county, Non-REC (mg/kg)

O.3 MERCURY DE MINIMIS

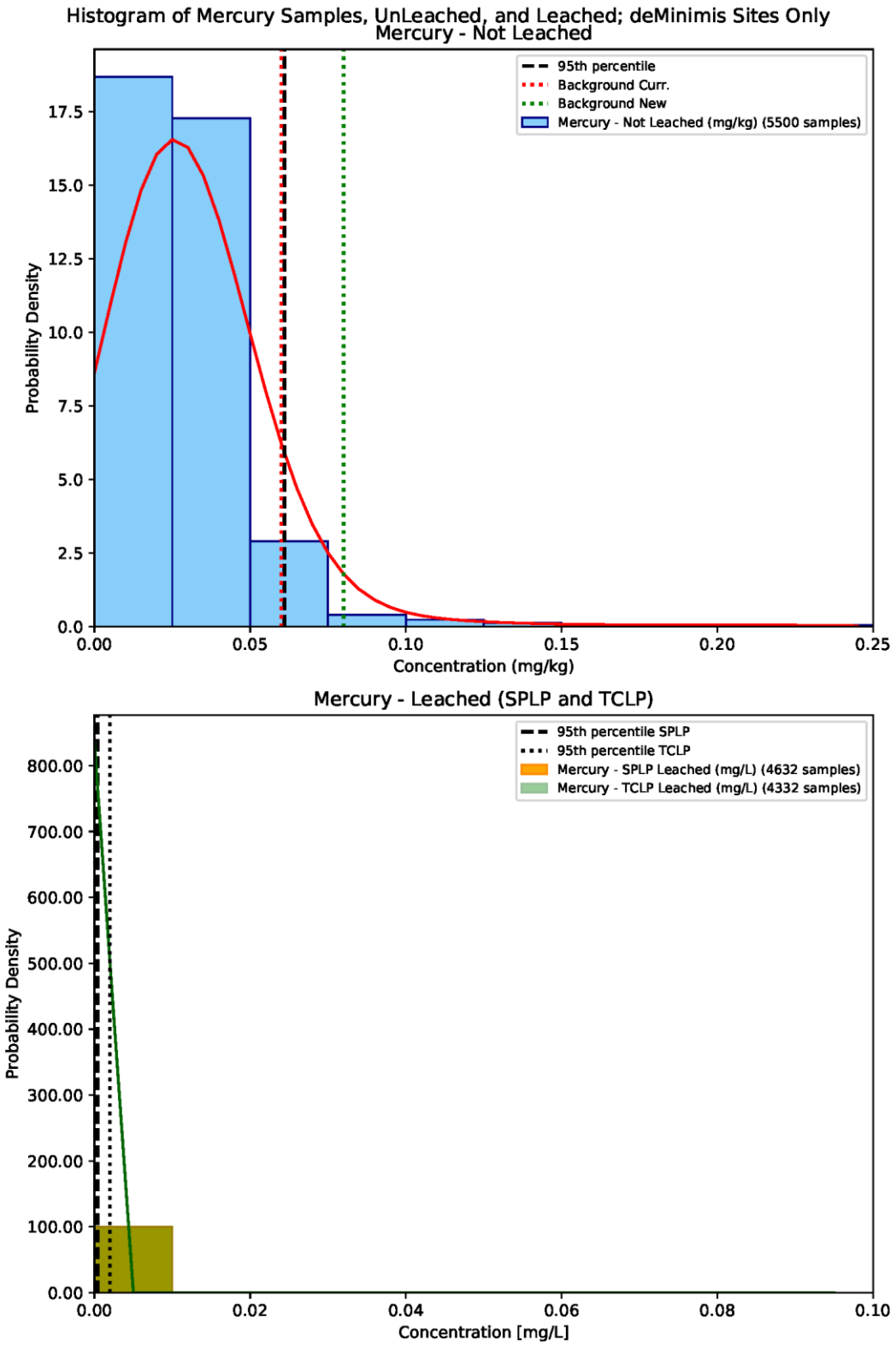


Figure 555. Histogram of RSL mercury concentrations, de minimis (mg/kg)

Mercury Unleached Concentration (mg/kg)

1) Region

2) District

3) County

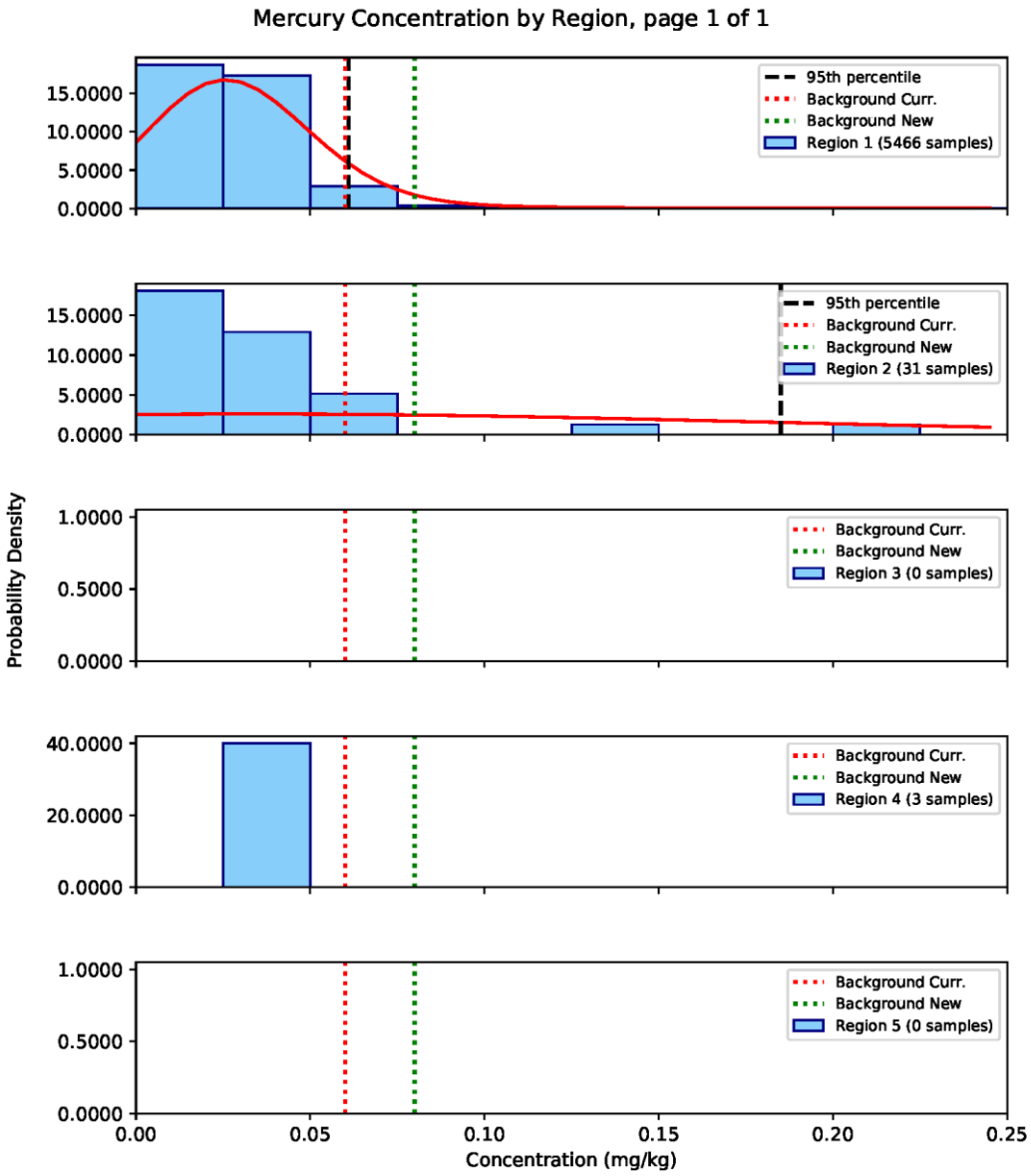


Figure 556. Histogram of RSL mercury concentrations by IDOT Region, de minimis (mg/kg)

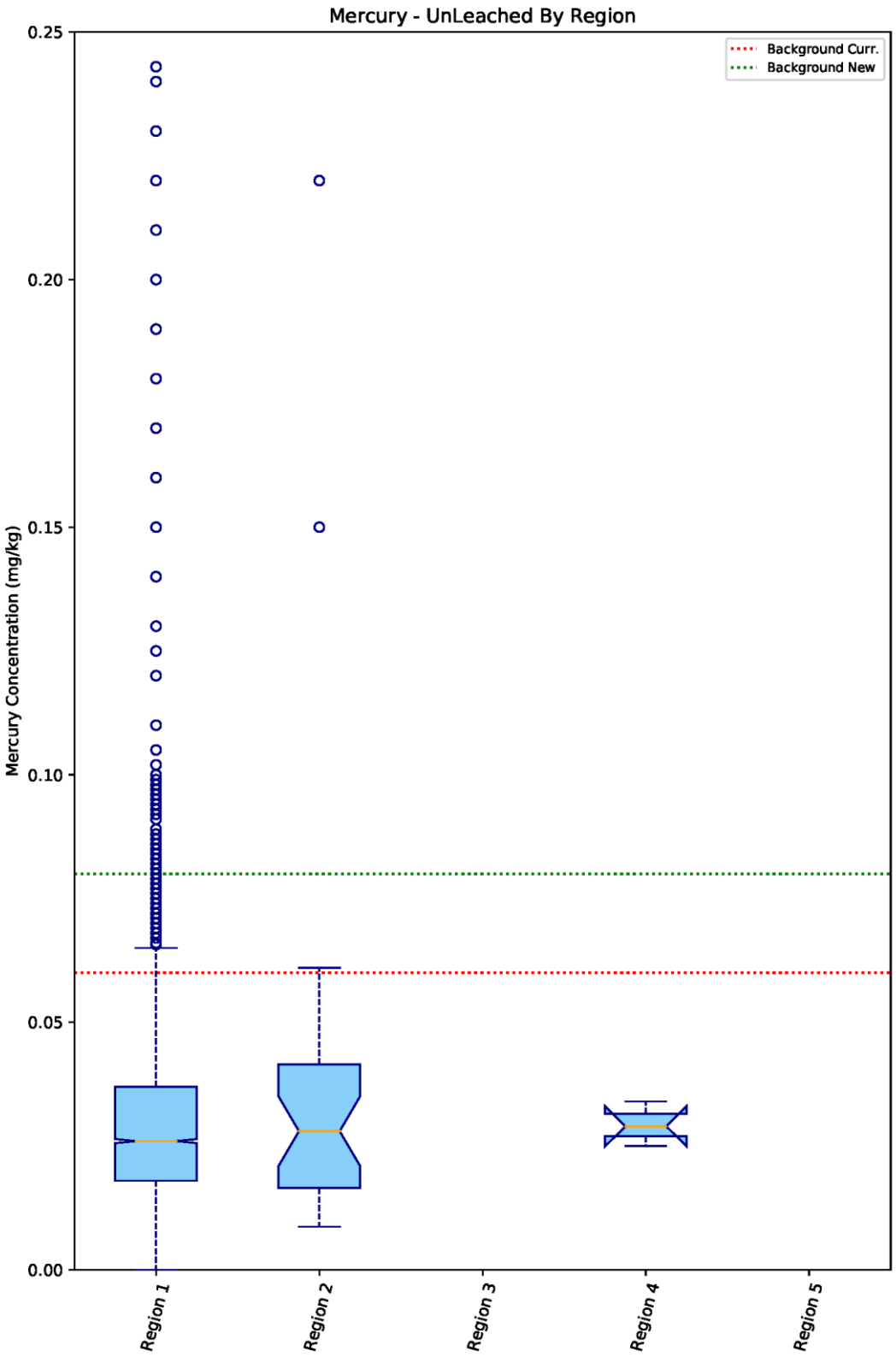


Figure 557. Boxplot of RSL mercury concentrations by IDOT Region, de minimis (mg/kg)

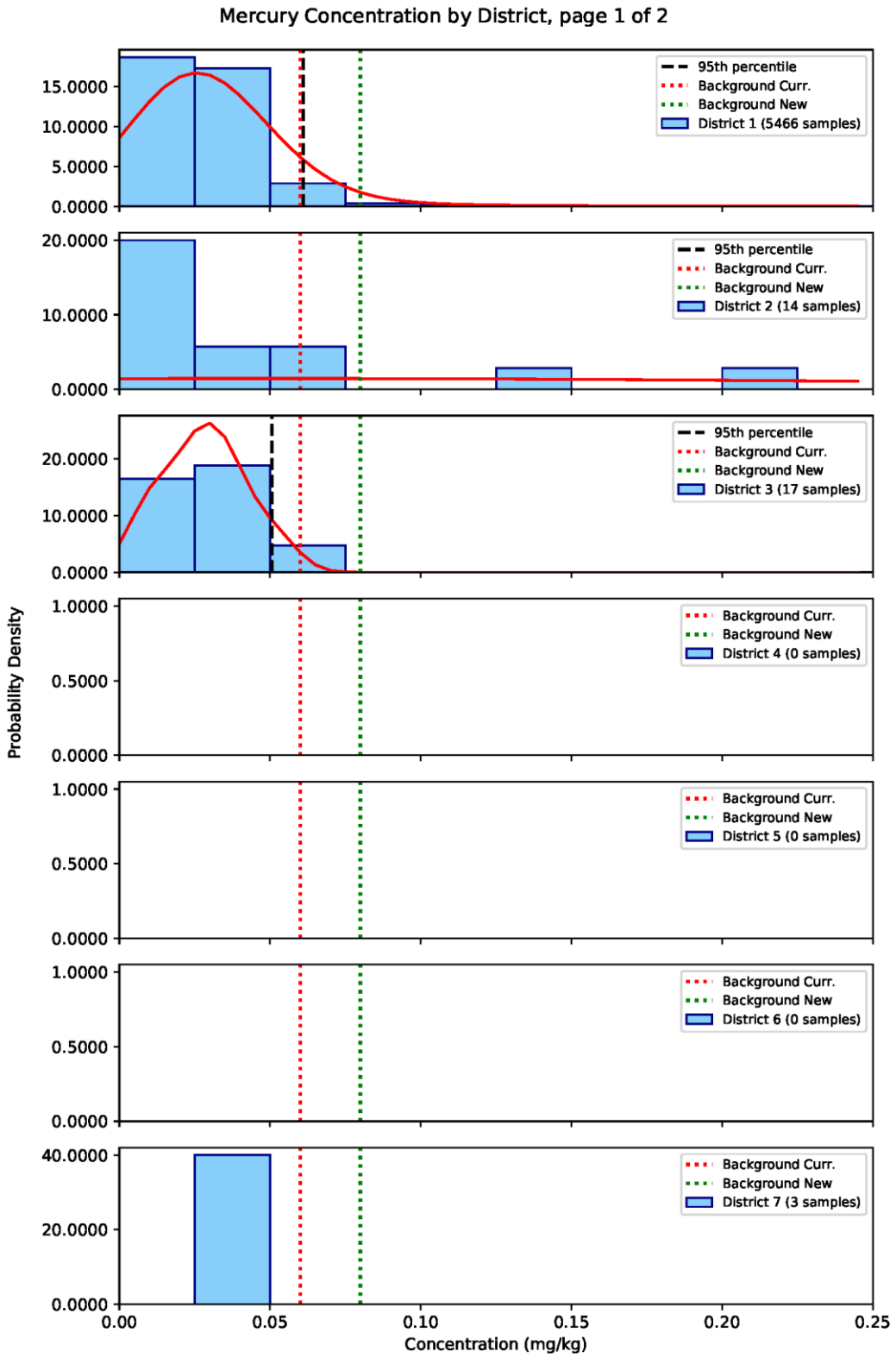


Figure 558. Histogram of RSL mercury concentrations by IDOT District, de minimis (mg/kg), part 1

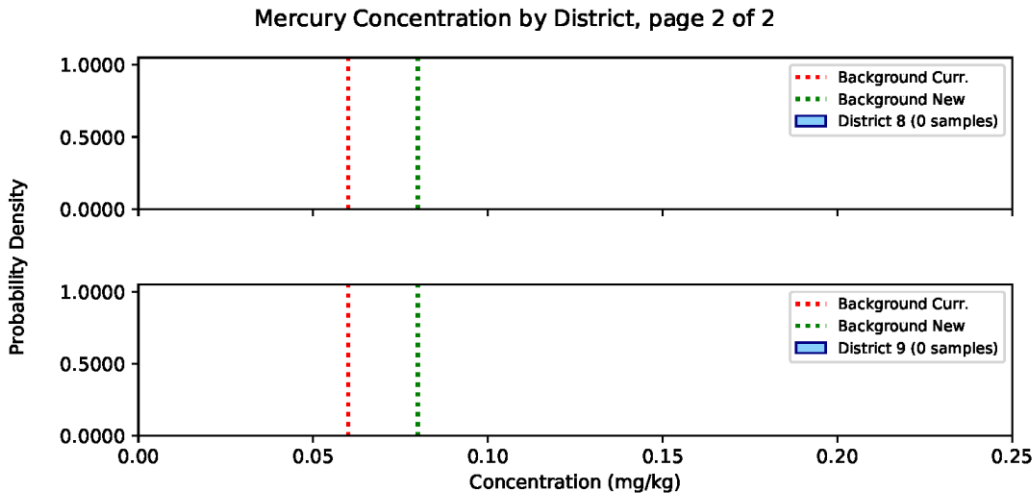


Figure 559. Histogram of RSL mercury concentrations by IDOT District, de minimis (mg/kg), part 2

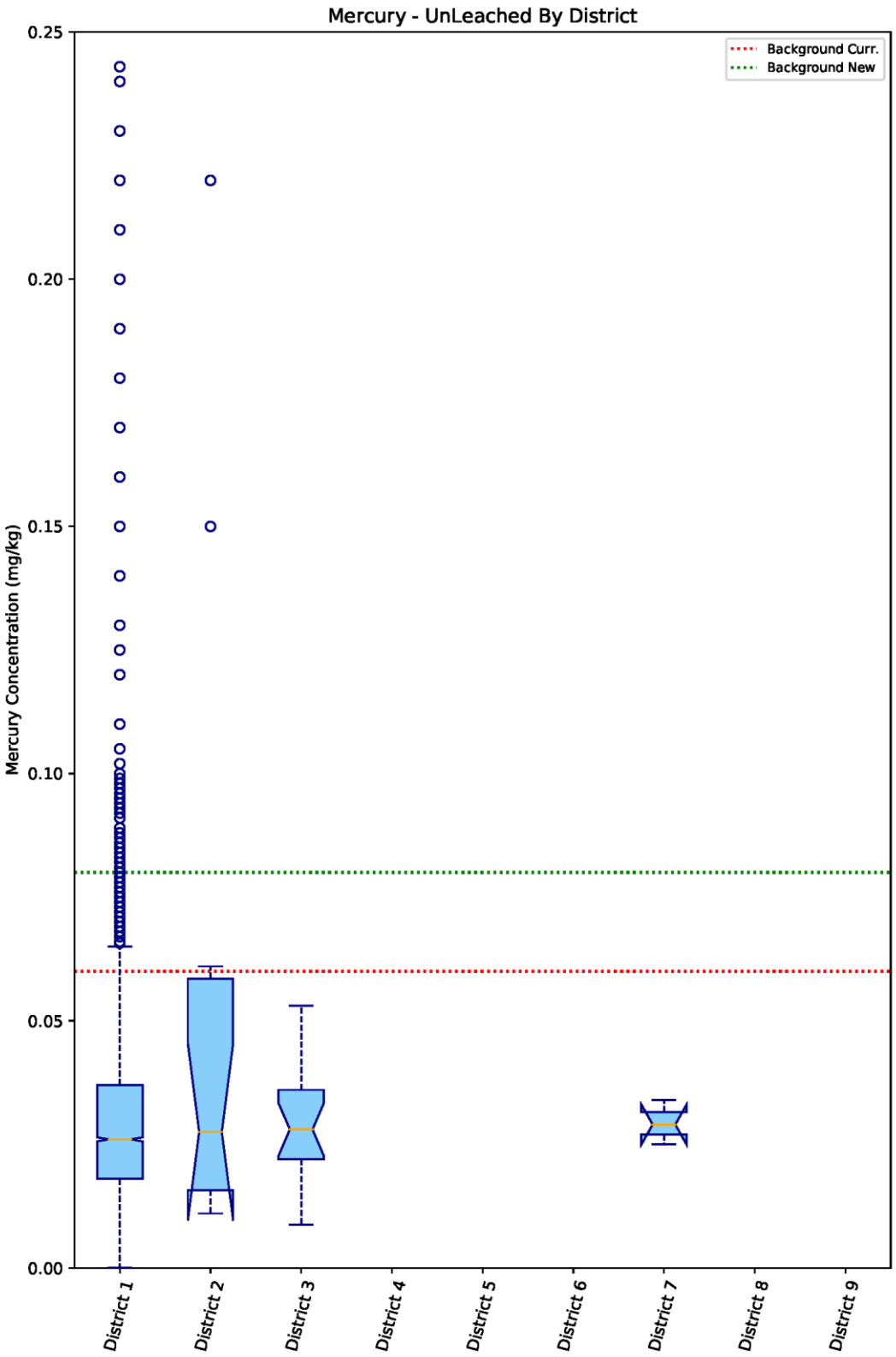


Figure 560. Boxplot of RSL mercury concentrations by IDOT District, de minimis (mg/kg)

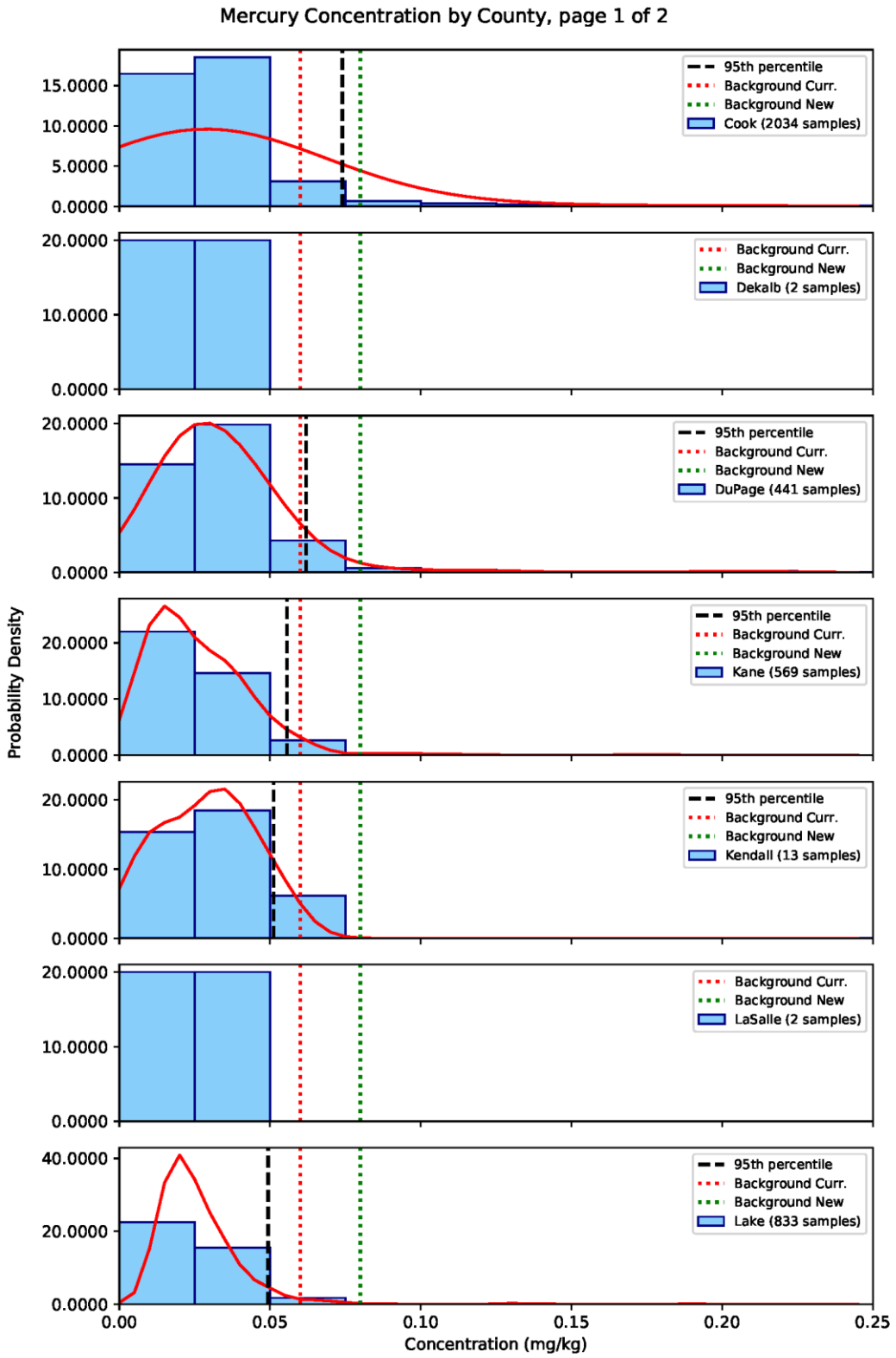


Figure 561. Histogram of RSL mercury concentrations by Illinois county, de minimis (mg/kg), part 1

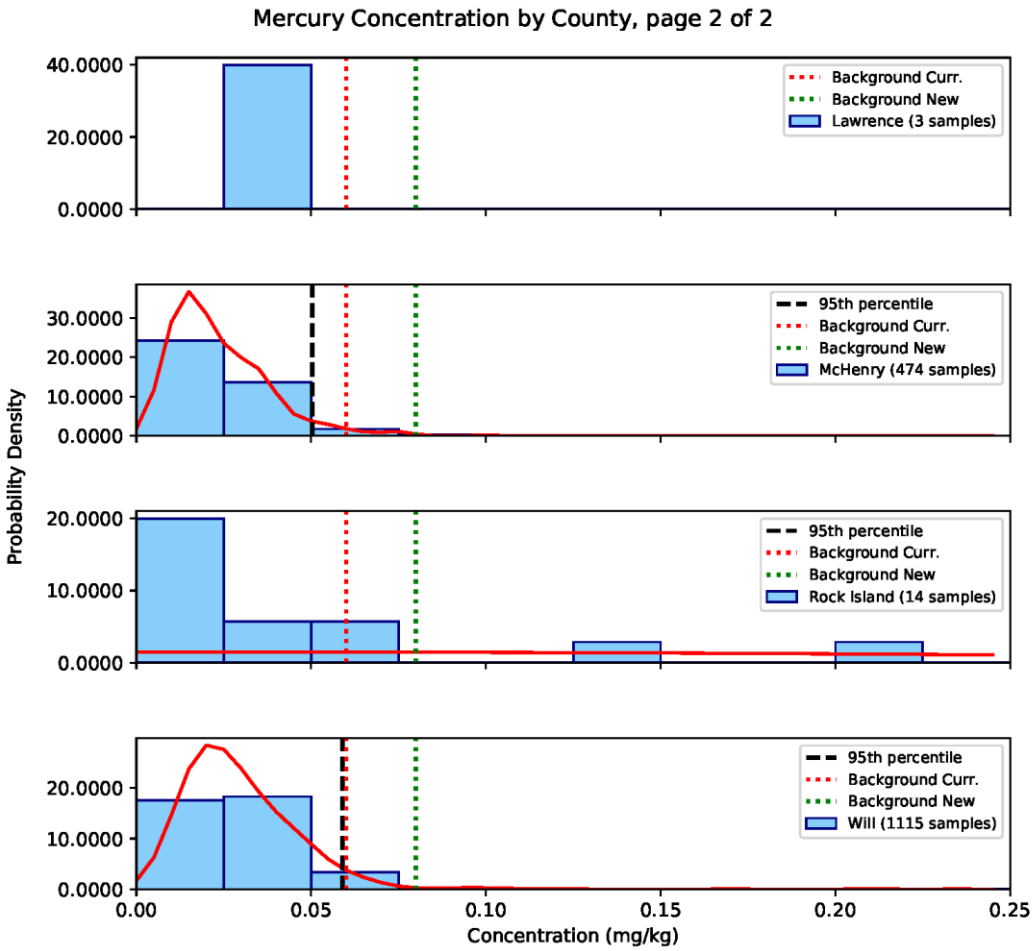


Figure 562. Histogram of RSL mercury concentrations by Illinois county, de minimis (mg/kg), part 2

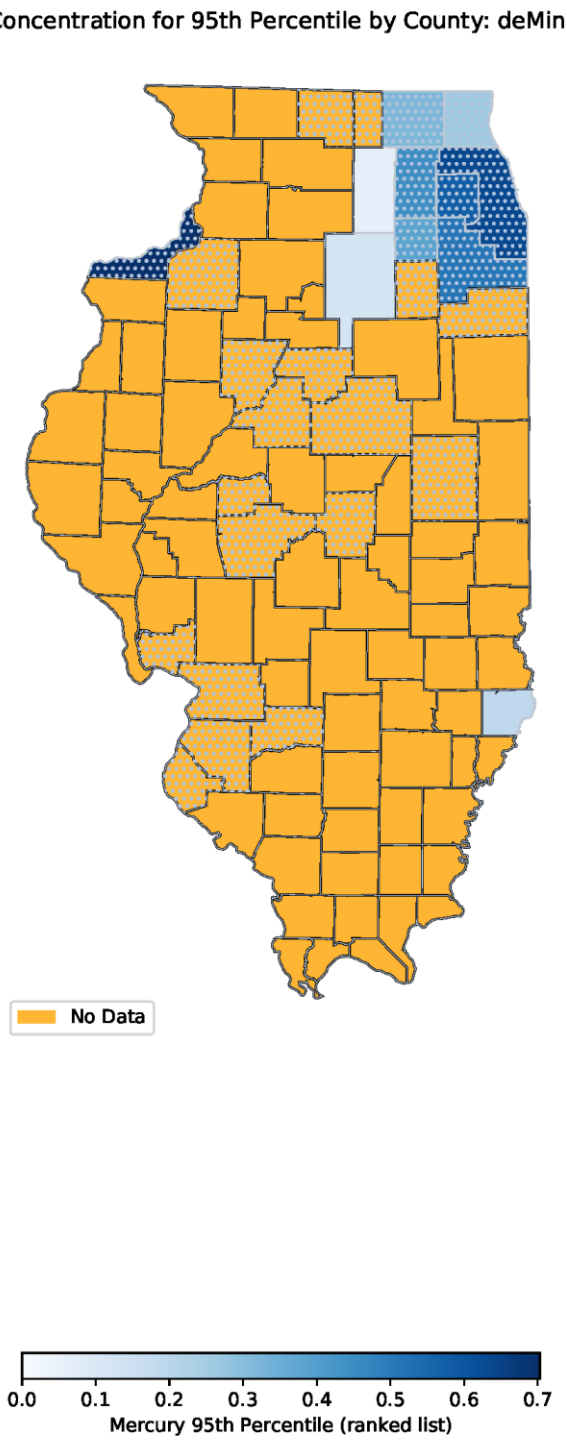


Figure 563. Map of RSL mercury 95th percentile concentration by Illinois county, de minimis (mg/kg)

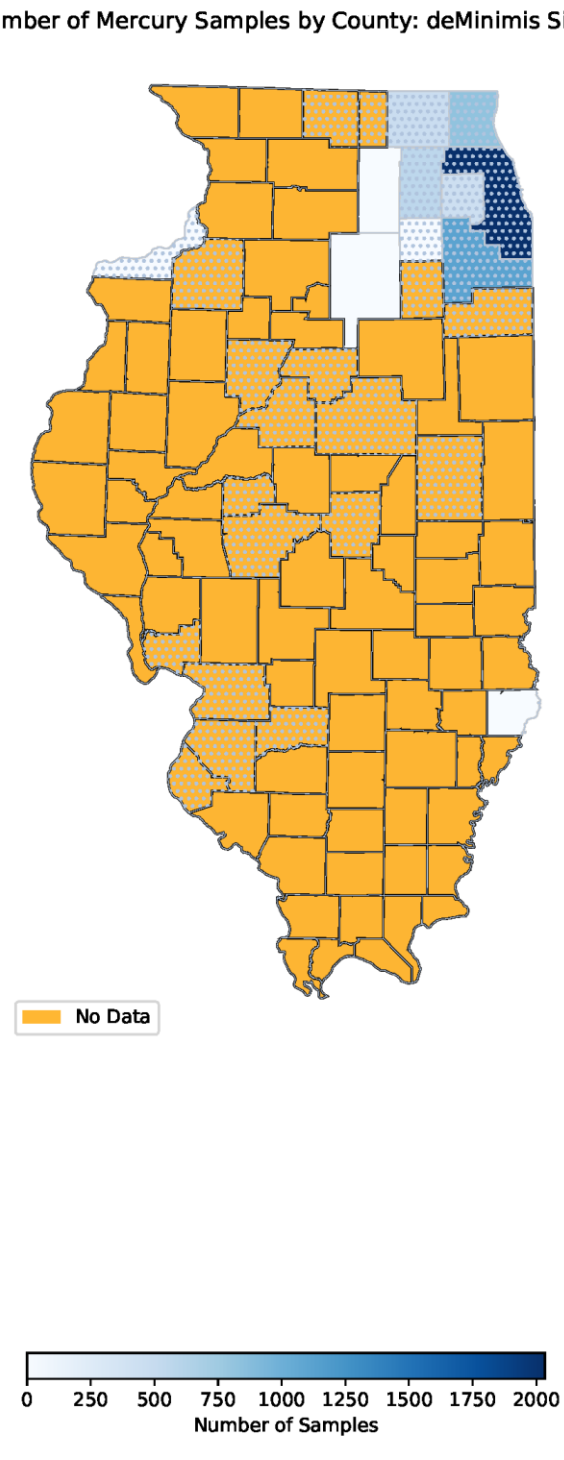


Figure 564. Map of RSL mercury sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX P. ANALYTE ANALYSIS: NICKEL

P.1 NICKEL REC

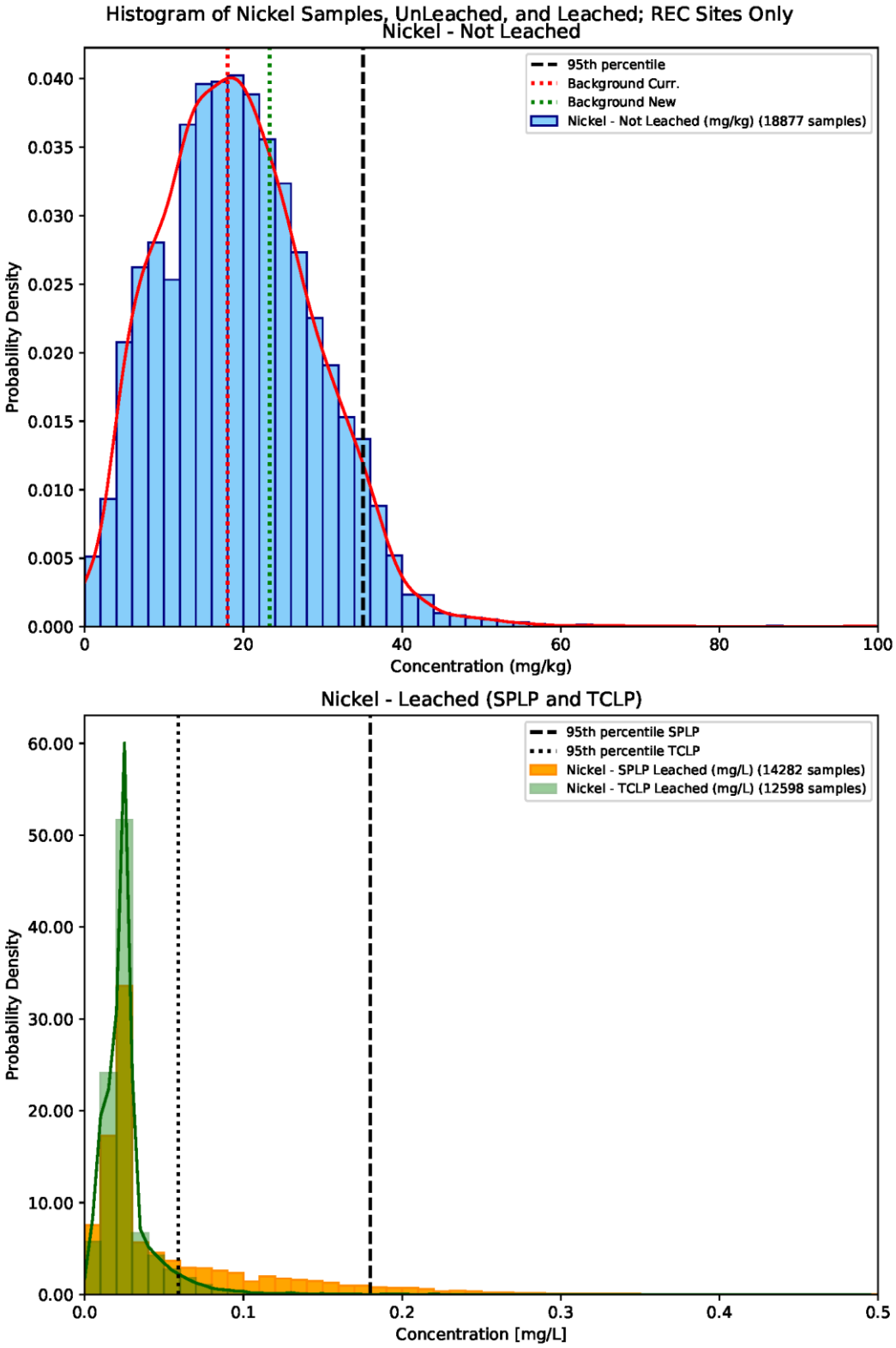


Figure 565. Histogram of RSL nickel concentrations, REC (mg/kg)

Nickel Unleached Concentration (mg/kg)

1) Region

2) District

3) County

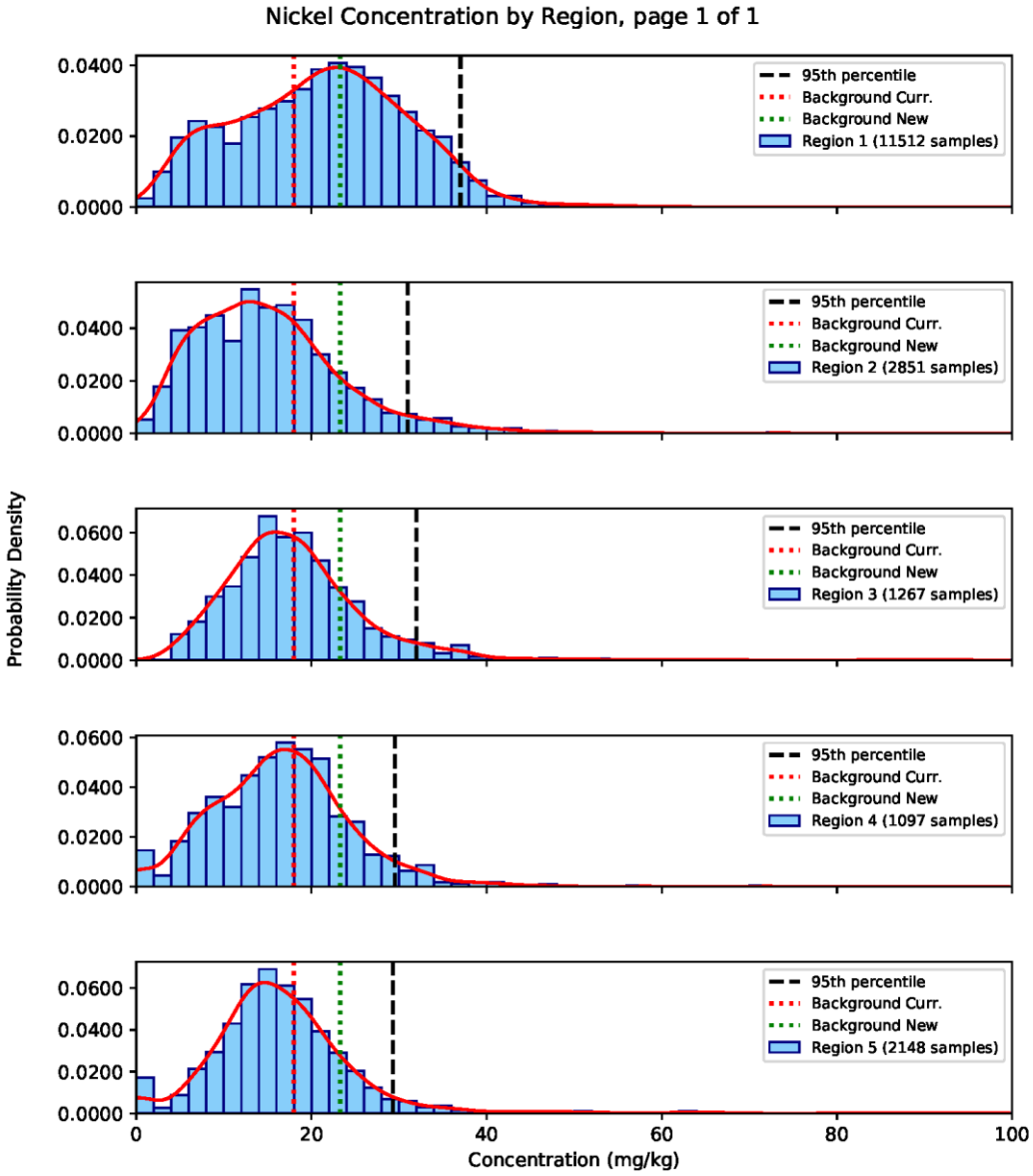


Figure 566. Histogram of RSL nickel concentrations by IDOT Region, REC (mg/kg)

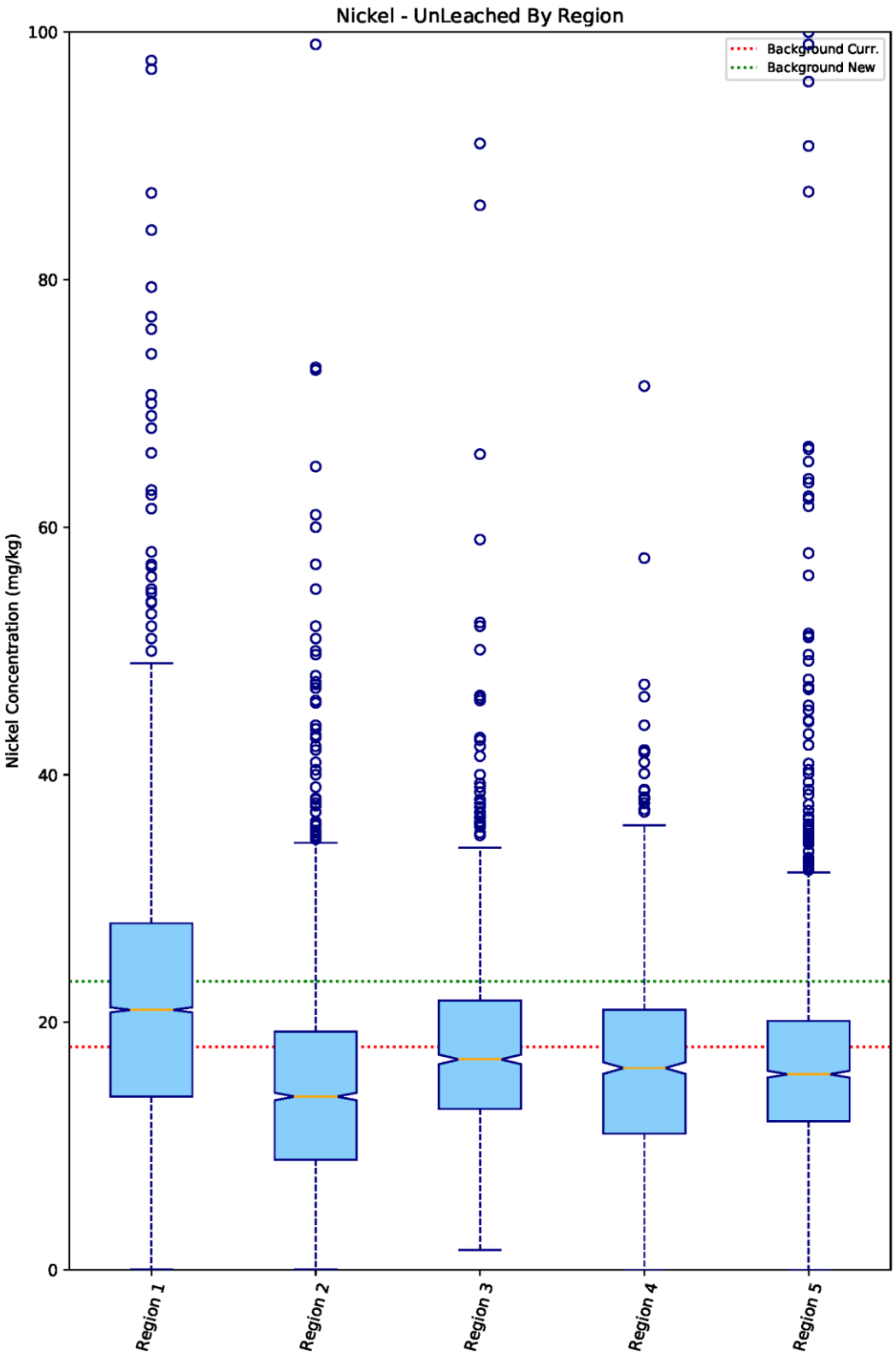


Figure 567. Boxplot of RSL nickel concentrations by IDOT Region, REC (mg/kg)

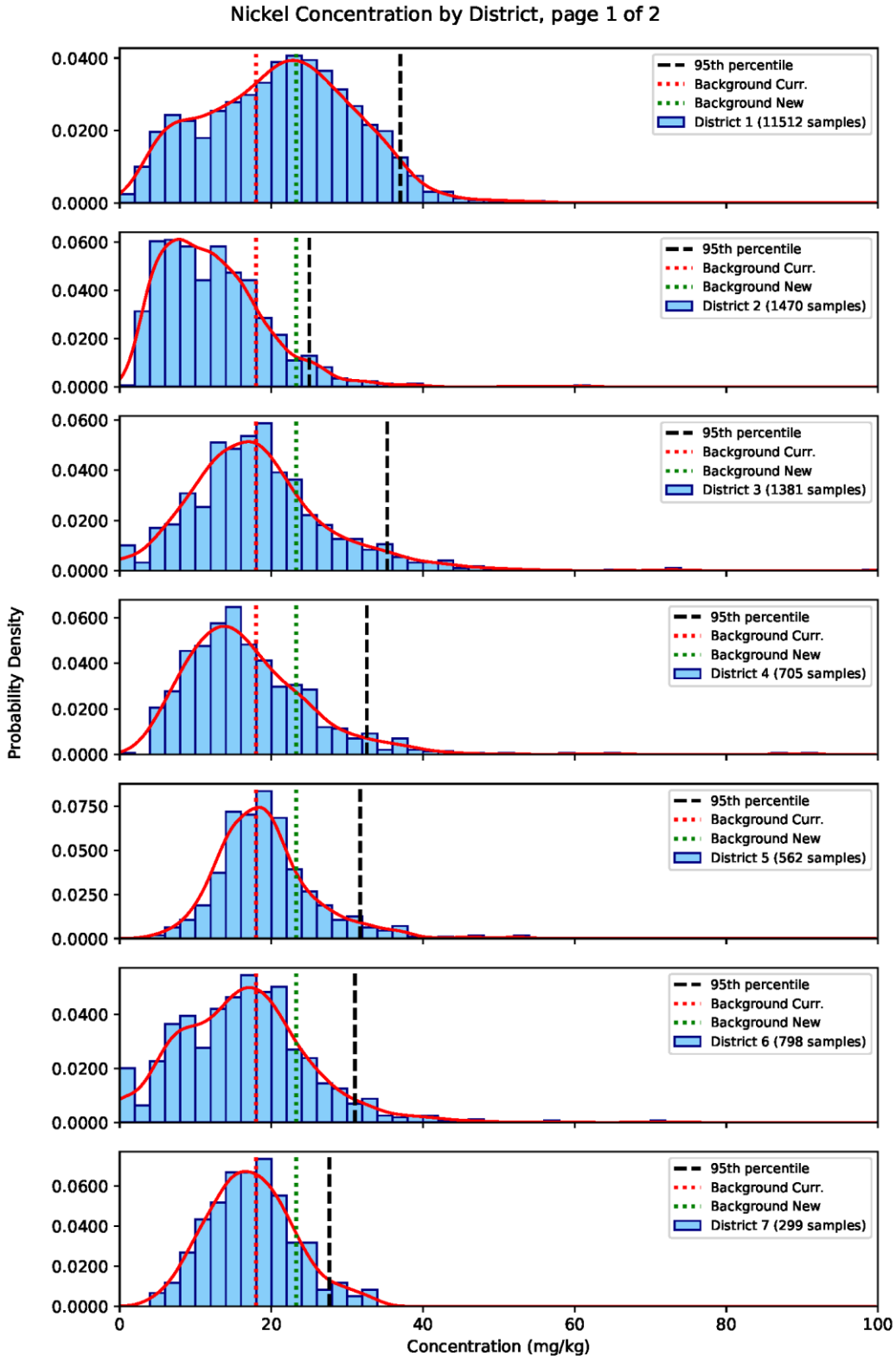


Figure 568. Histogram of RSL nickel concentrations by IDOT District, REC (mg/kg), part 1

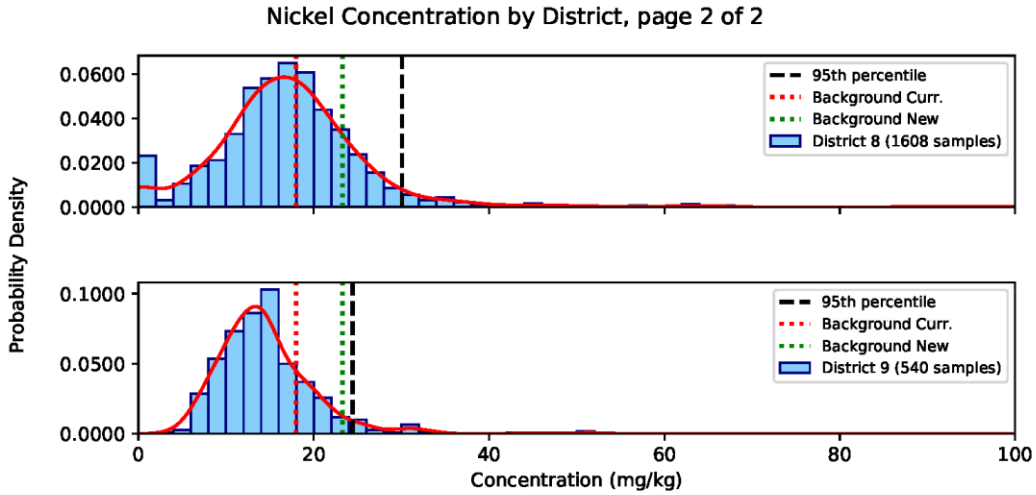


Figure 569. Histogram of RSL nickel concentrations by IDOT District, REC (mg/kg), part 2

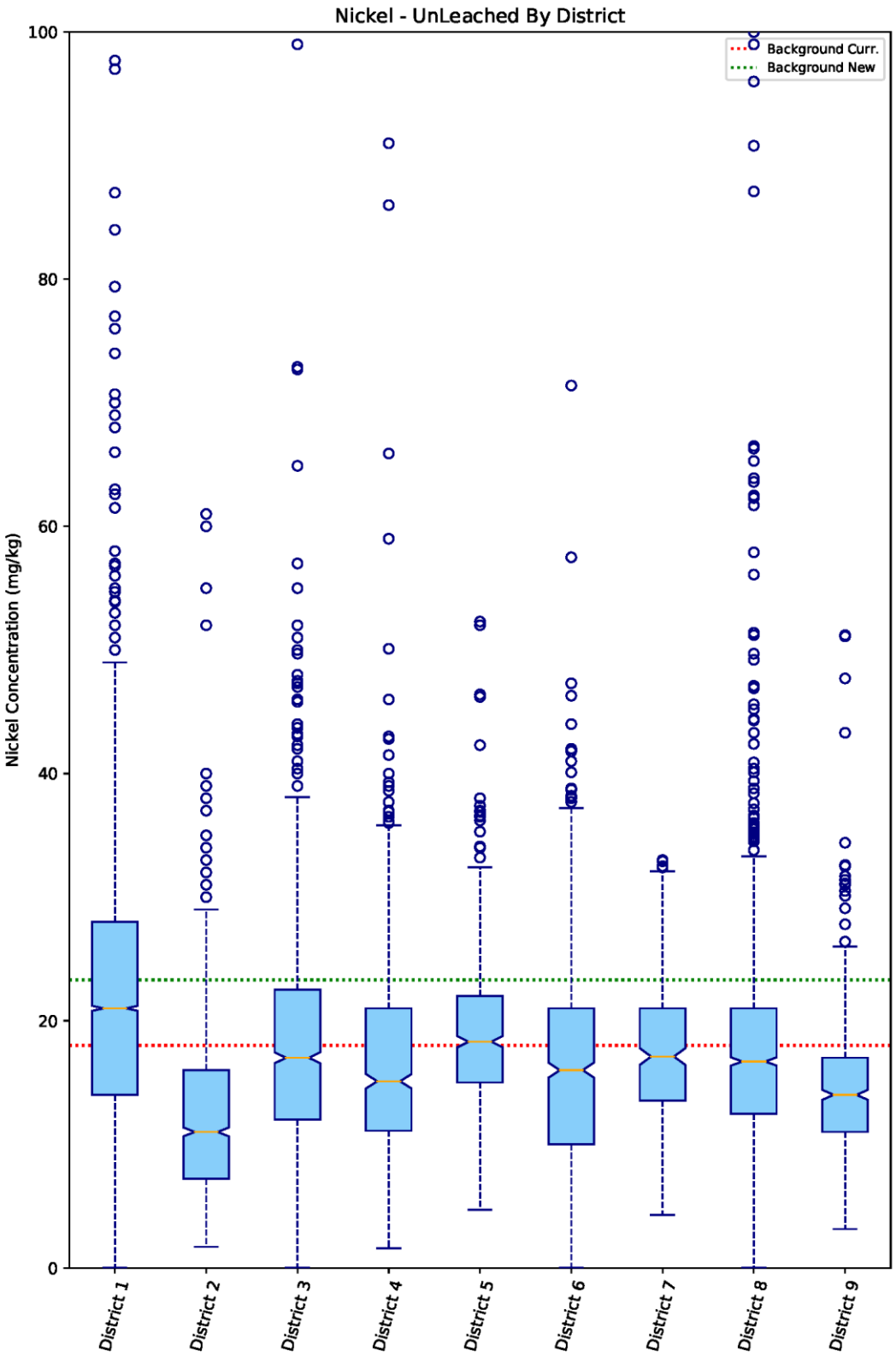


Figure 570. Boxplot of RSL nickel concentrations by IDOT District, REC (mg/kg)

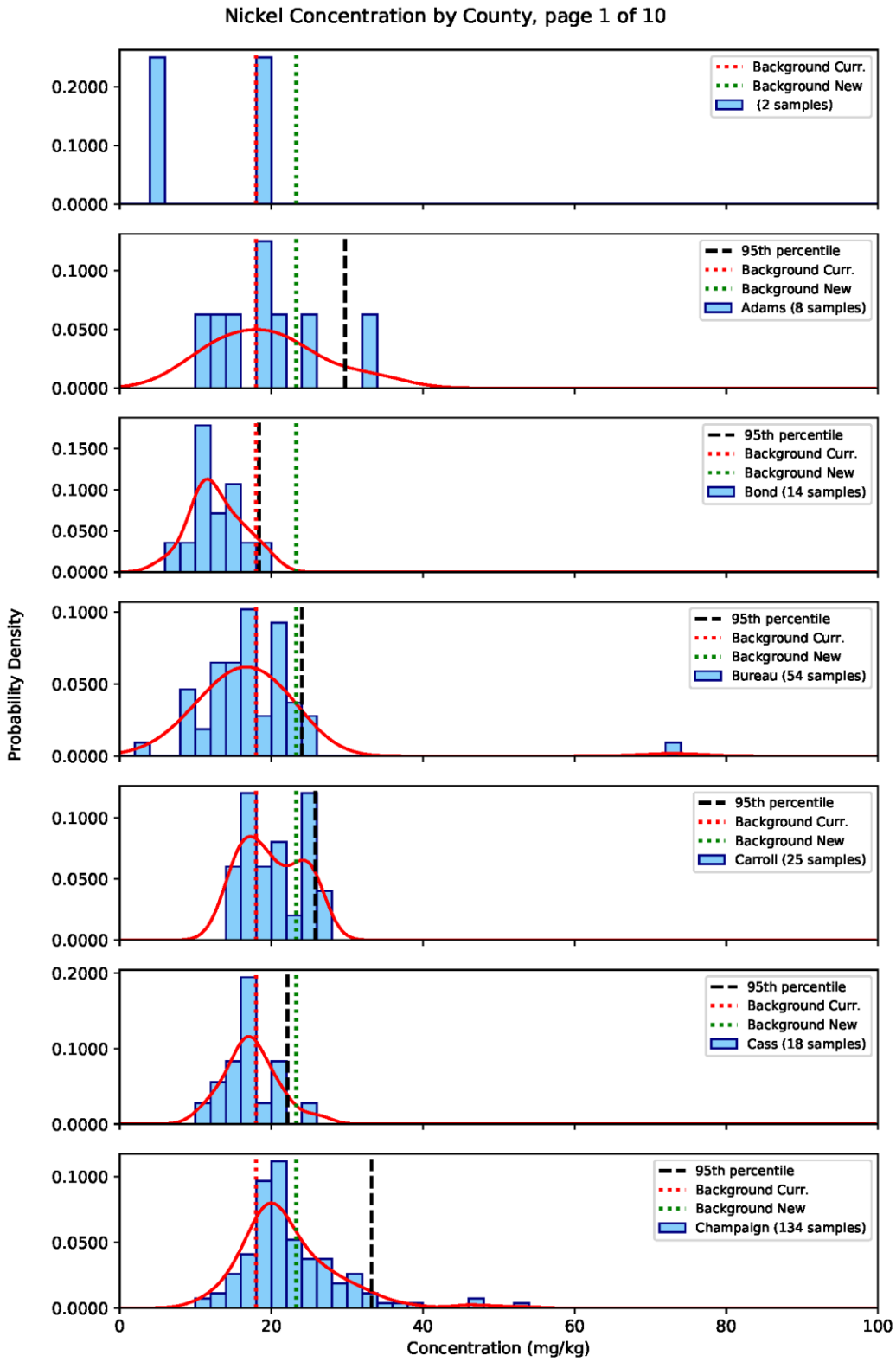


Figure 571. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 1

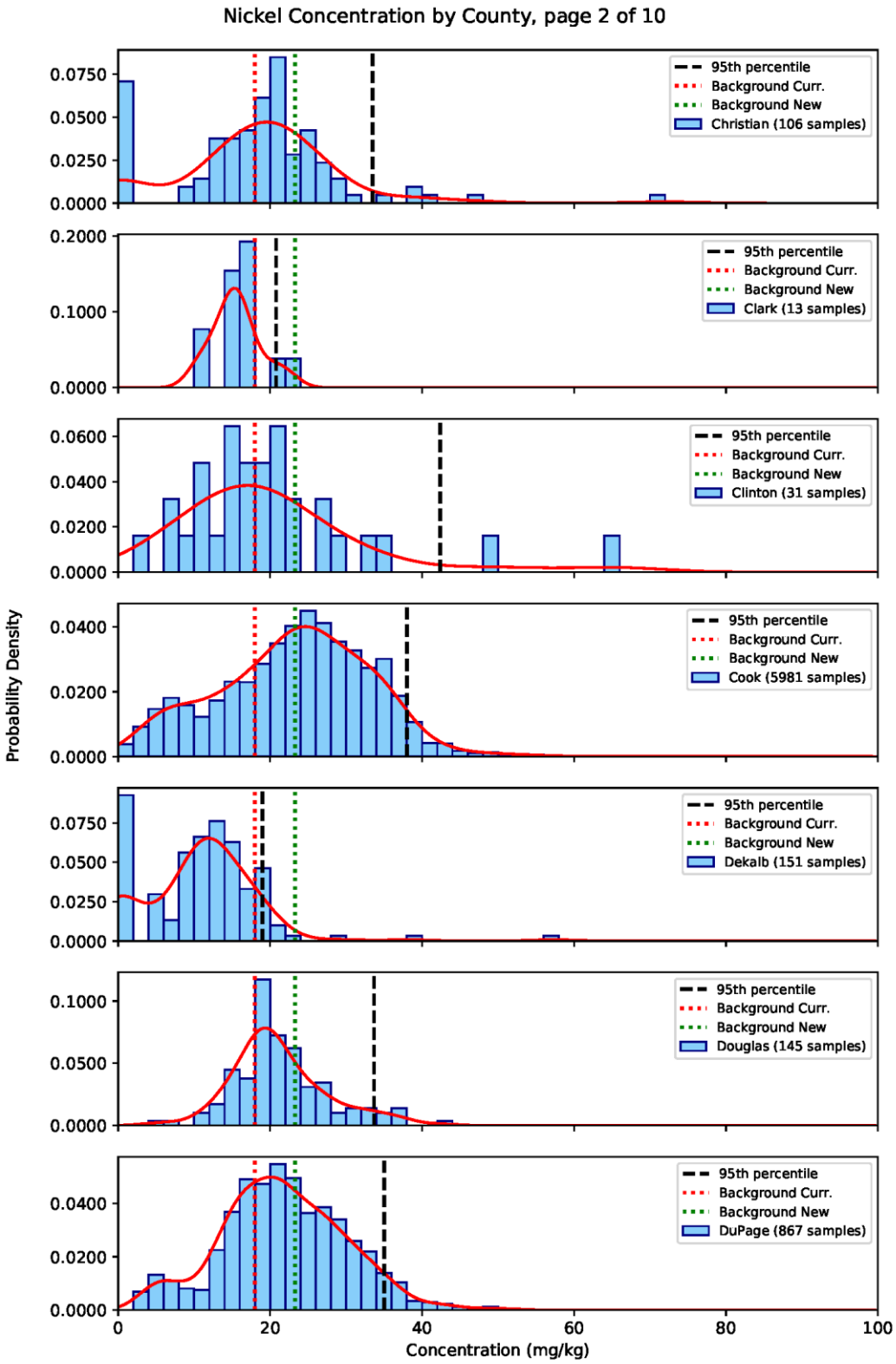


Figure 572. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 2

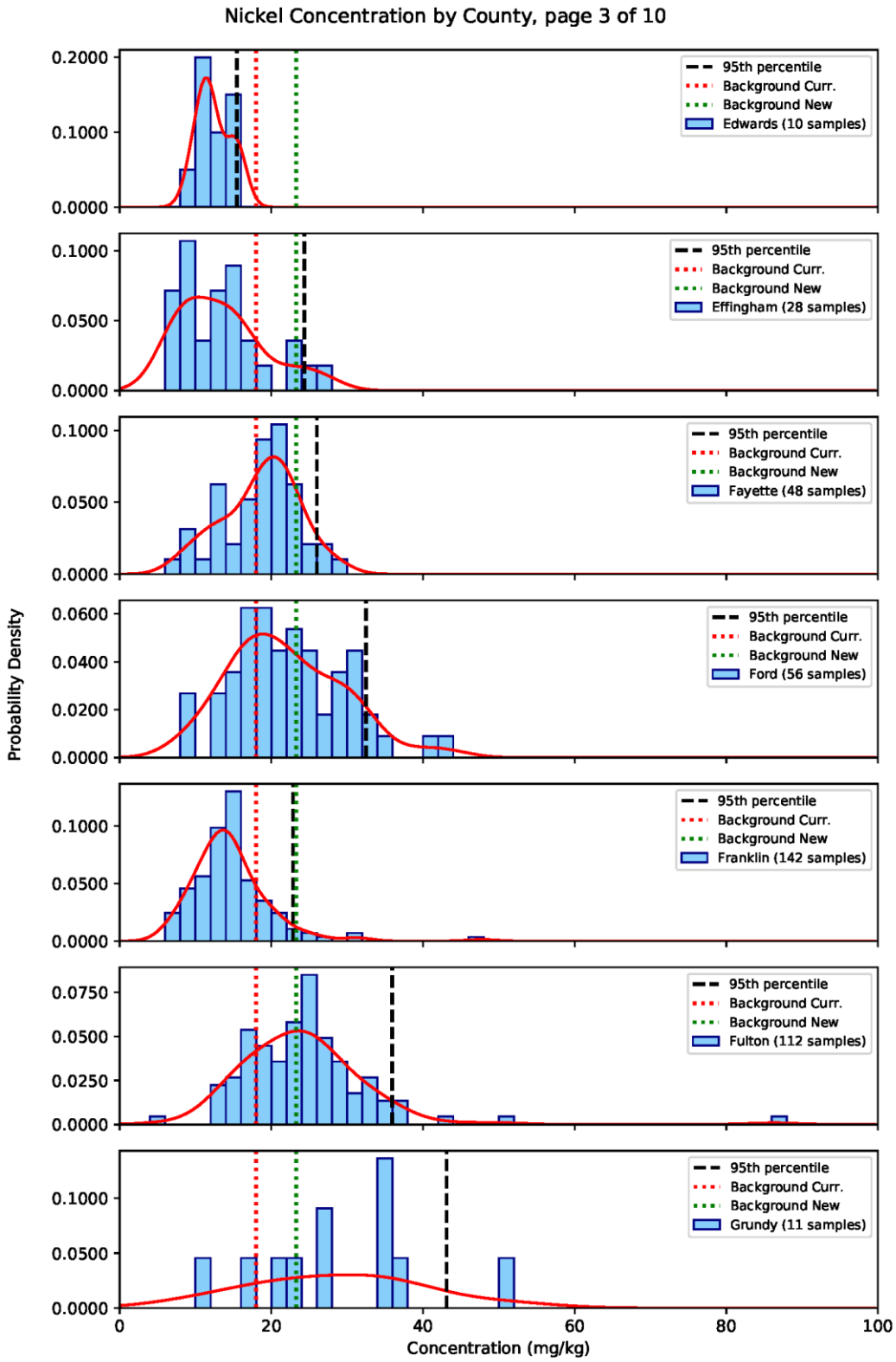


Figure 573. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 3

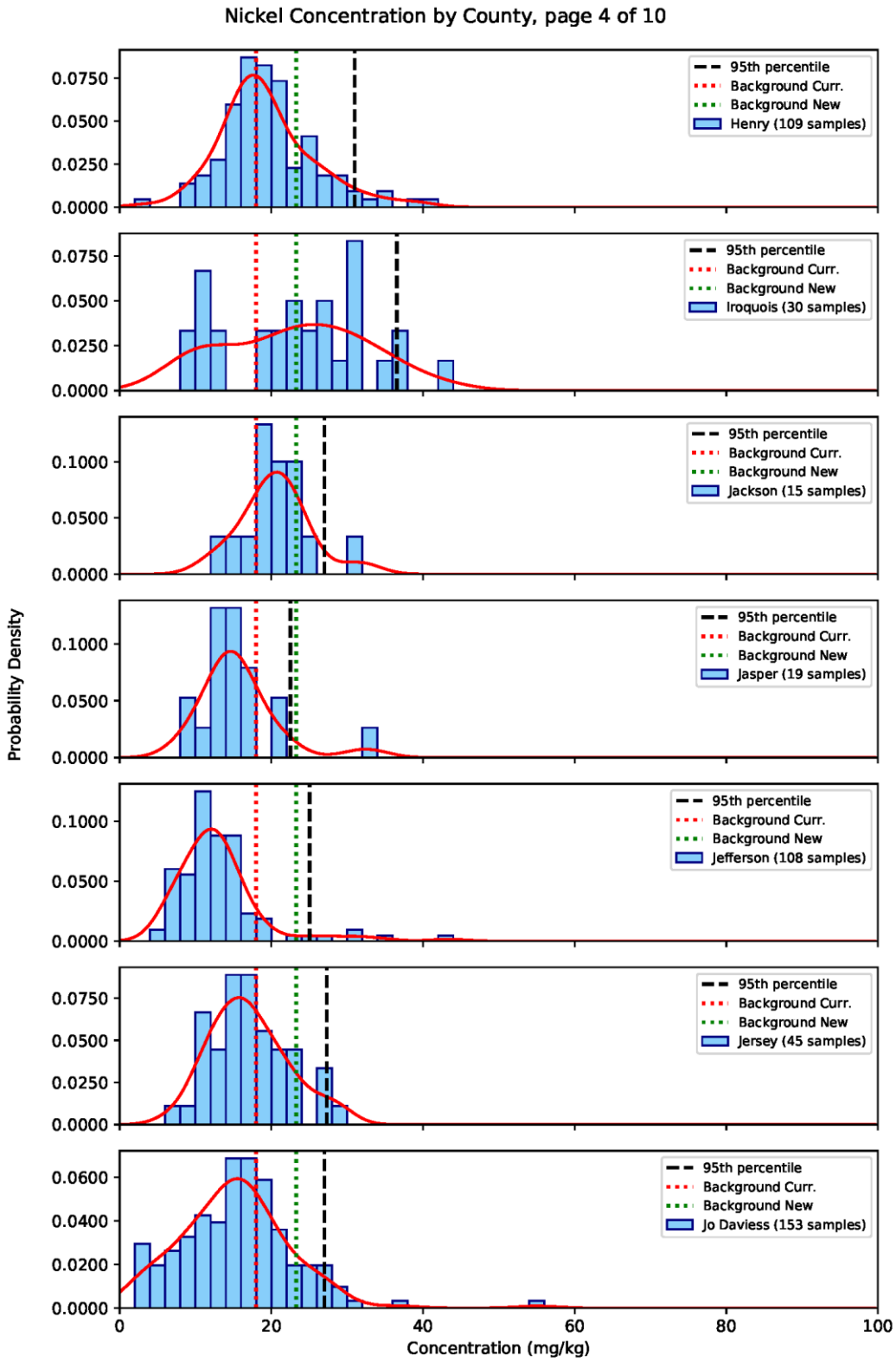


Figure 574. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 4

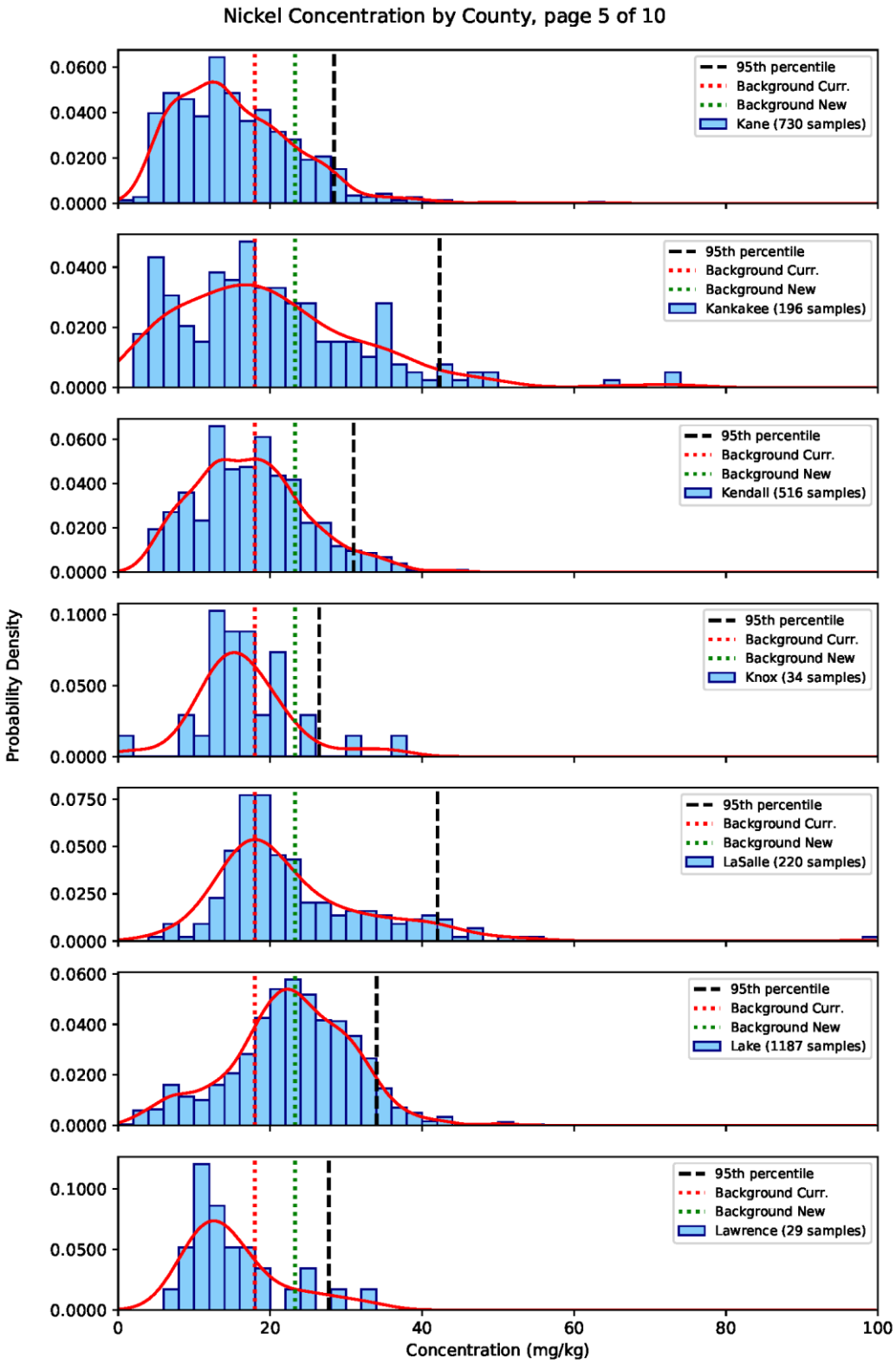


Figure 575. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 5

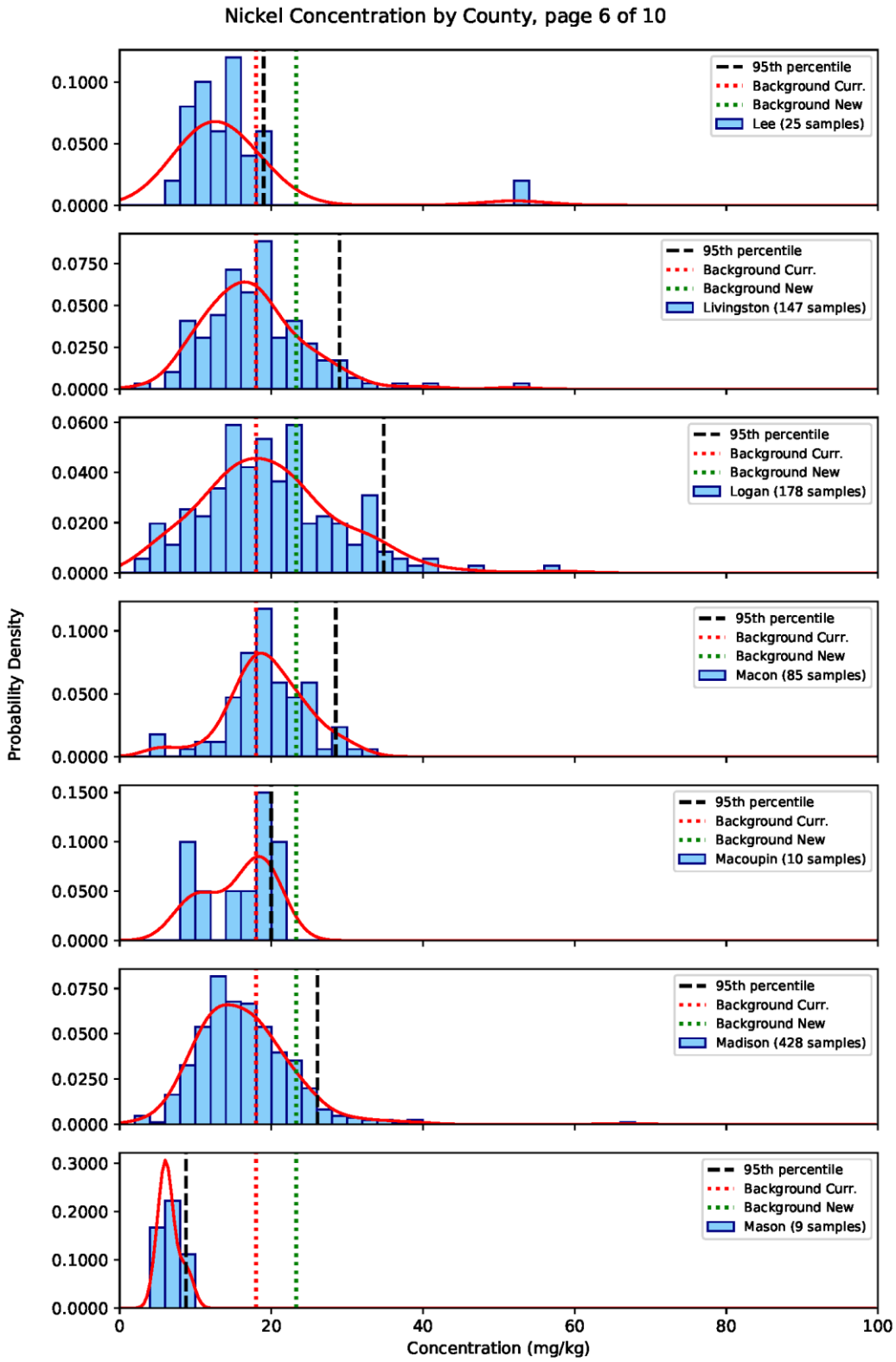


Figure 576. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 6

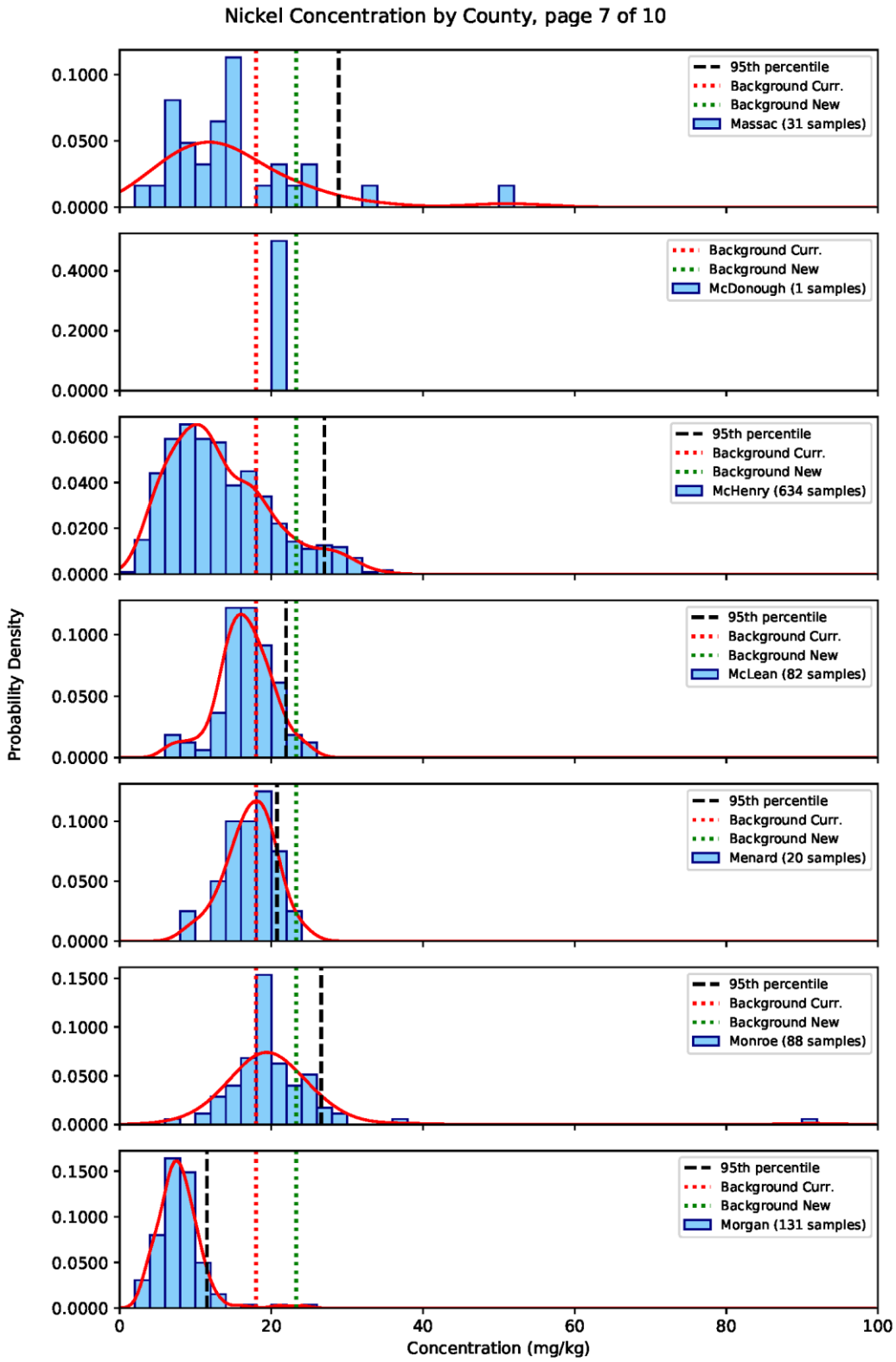


Figure 577. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 7

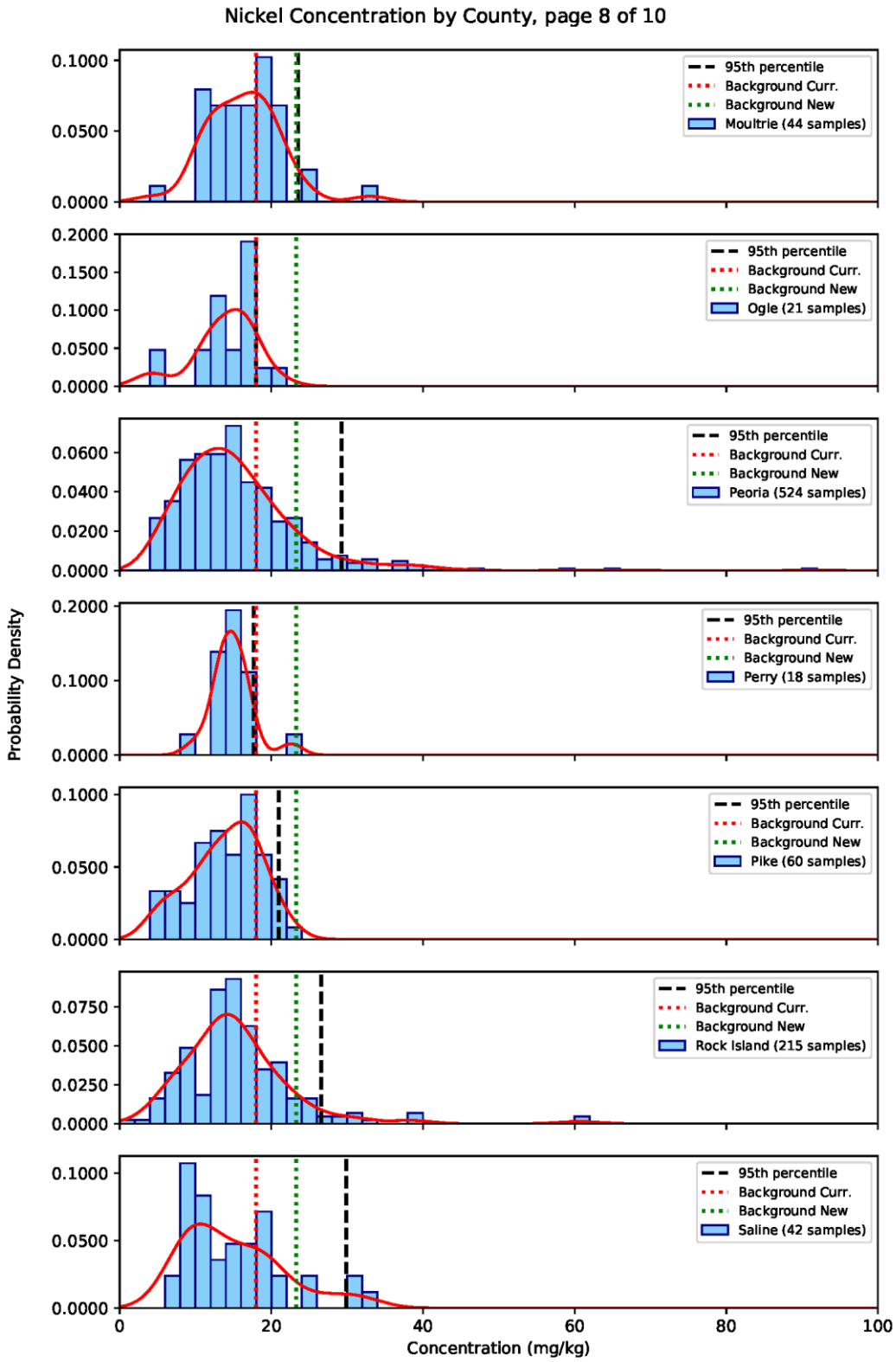


Figure 578. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 8

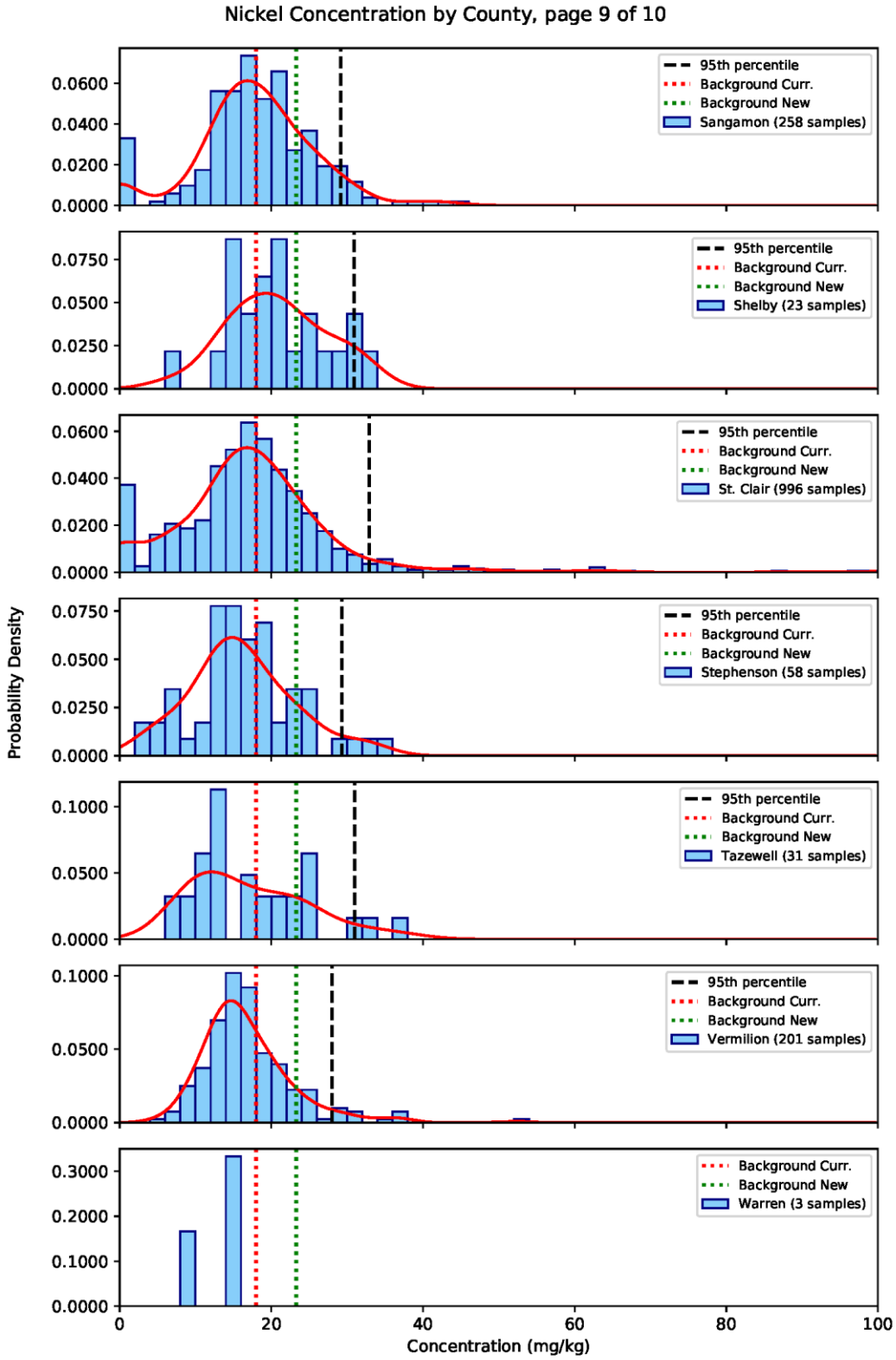


Figure 579. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 9

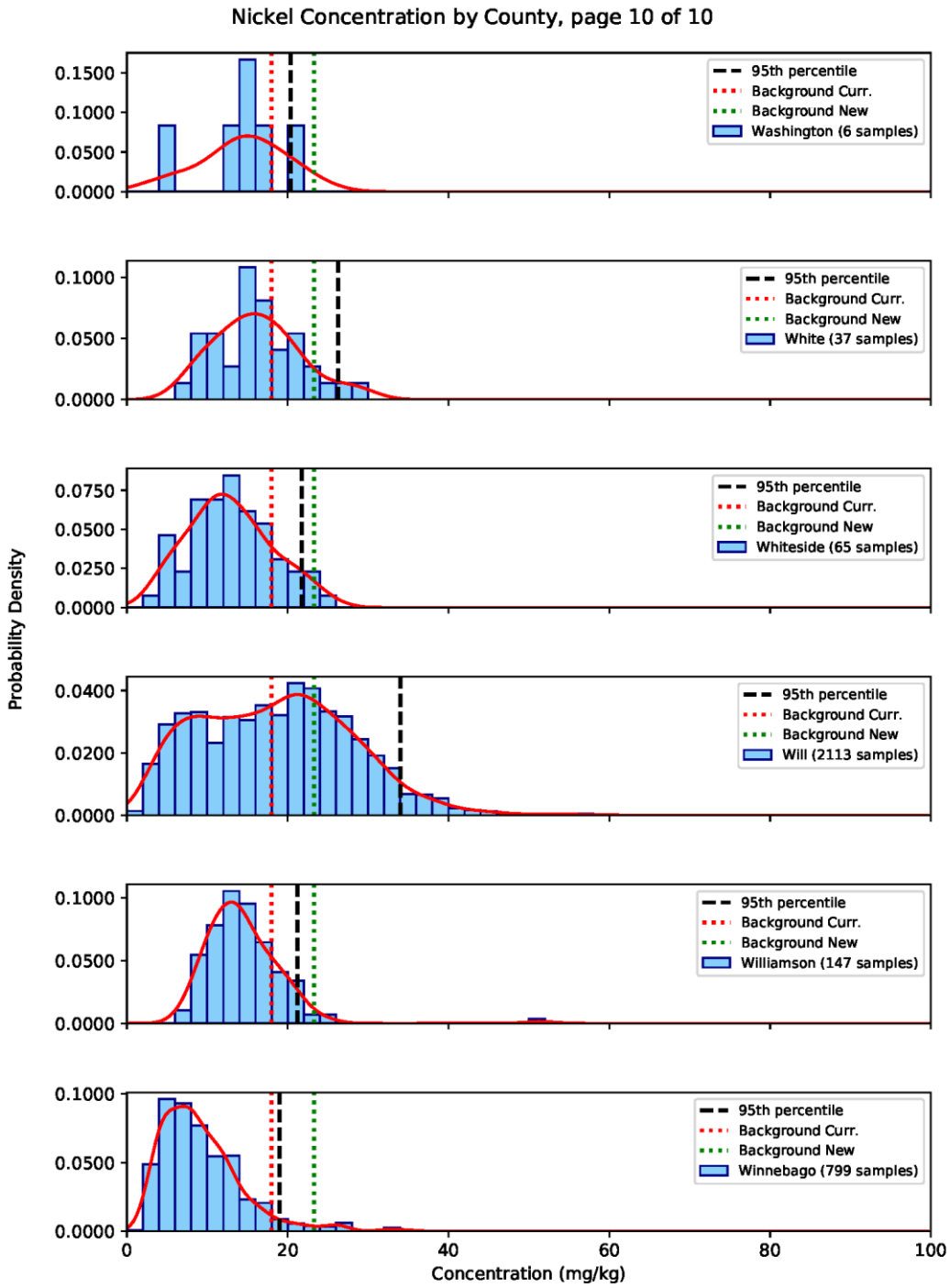


Figure 580. Histogram of RSL nickel concentrations by Illinois county, REC (mg/kg), part 10

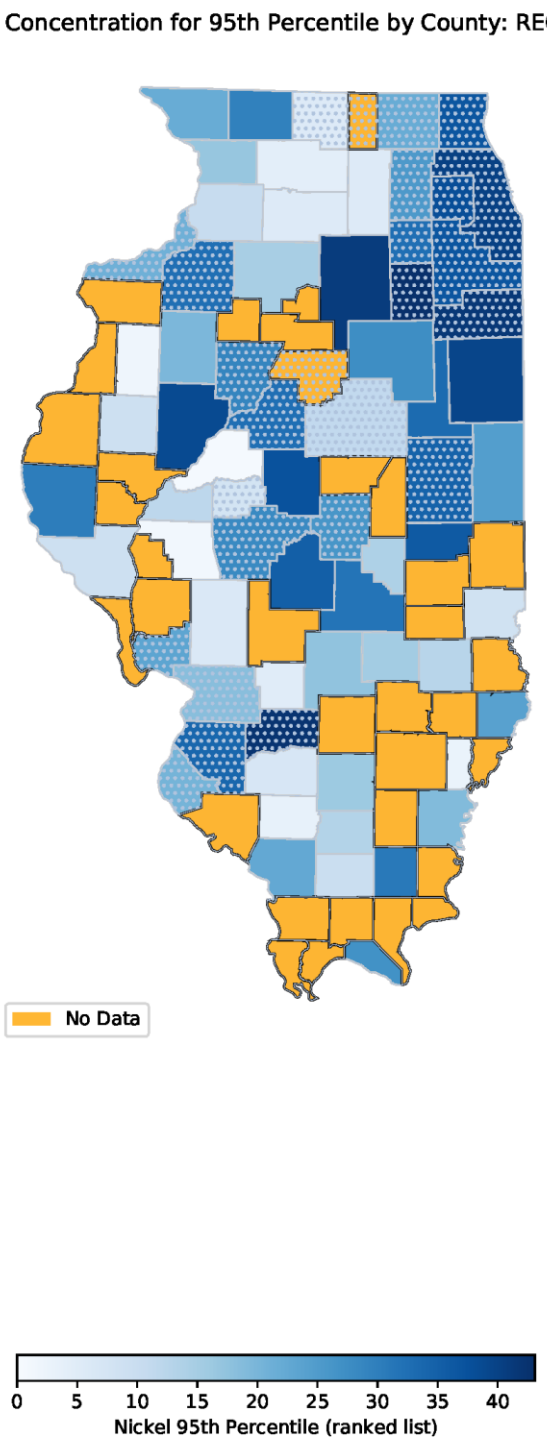


Figure 581. Map of RSL nickel 95th percentile concentration by Illinois county, REC (mg/kg)

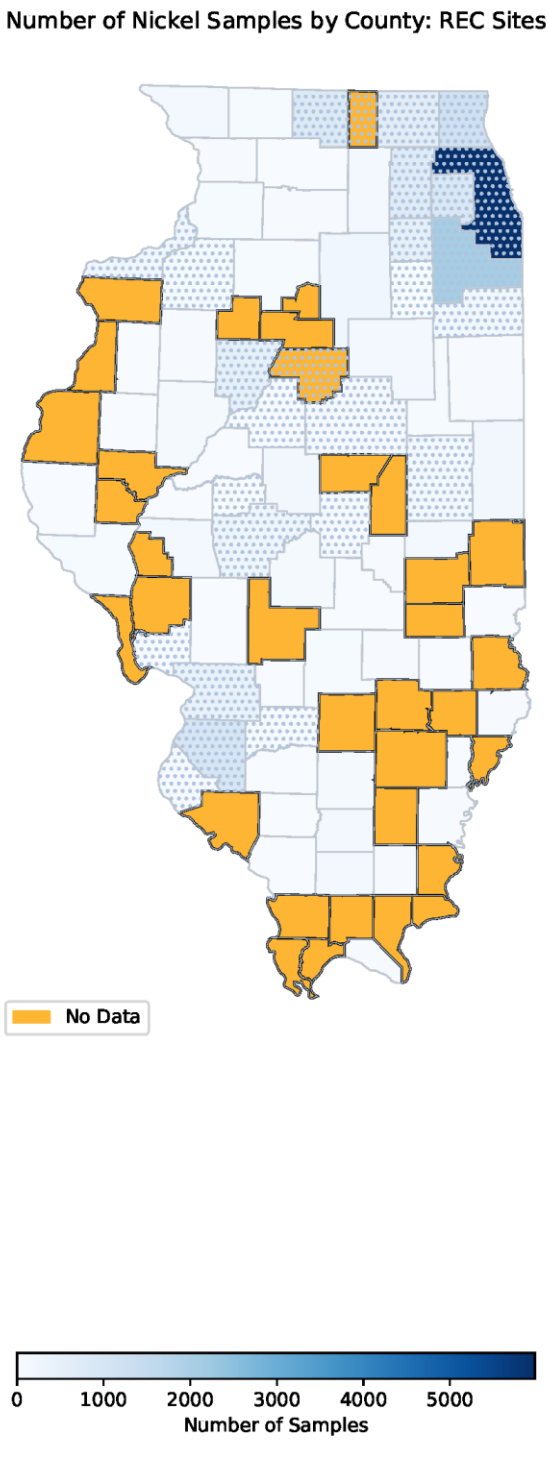


Figure 582. Map of RSL nickel sample quantity by Illinois county, REC (mg/kg)

P.2 NICKEL NON-REC

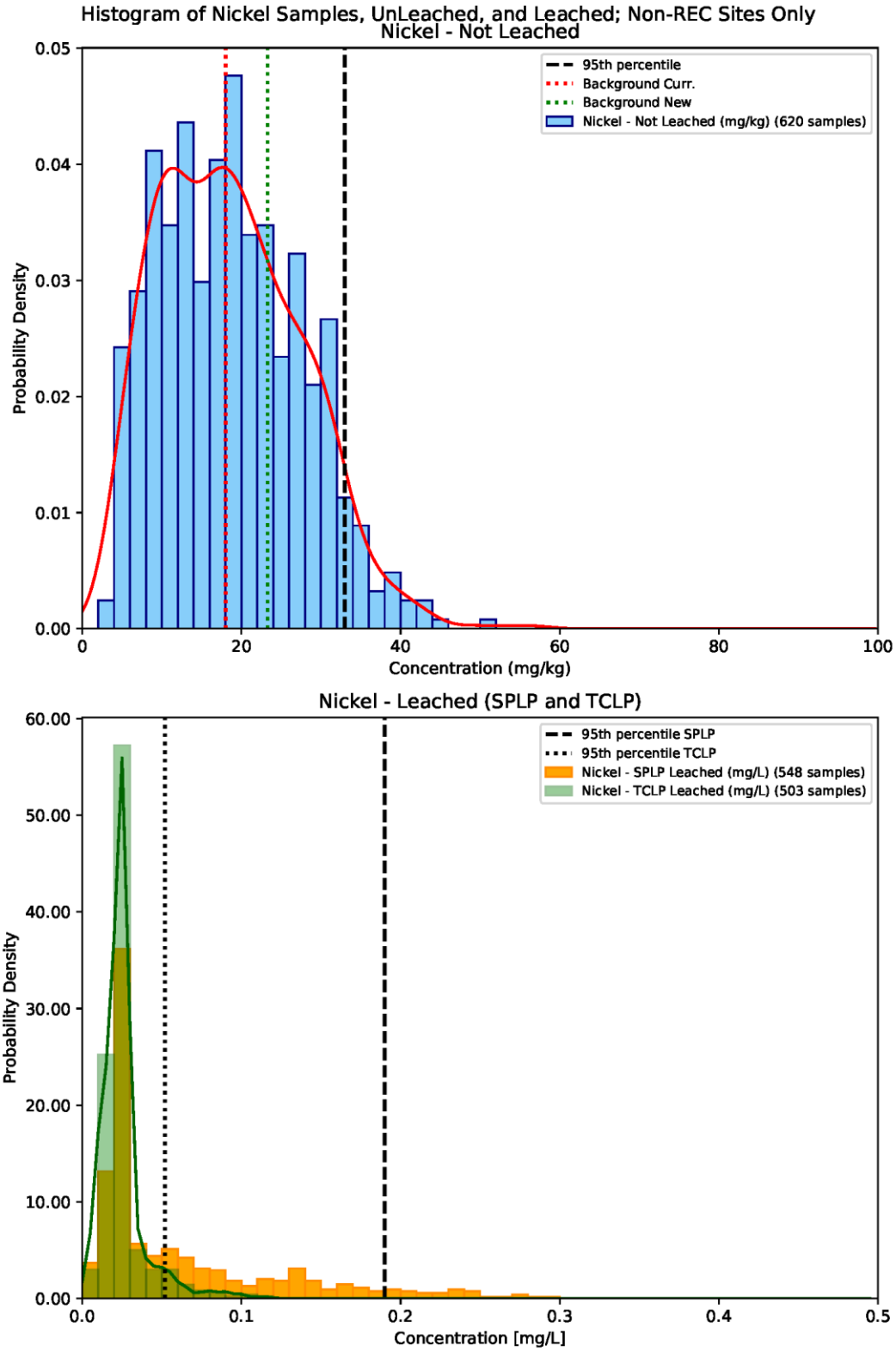


Figure 583. Histogram of RSL nickel concentrations, Non-REC (mg/kg)

Nickel Unleached Concentration (mg/kg)

1) Region

2) District

3) County

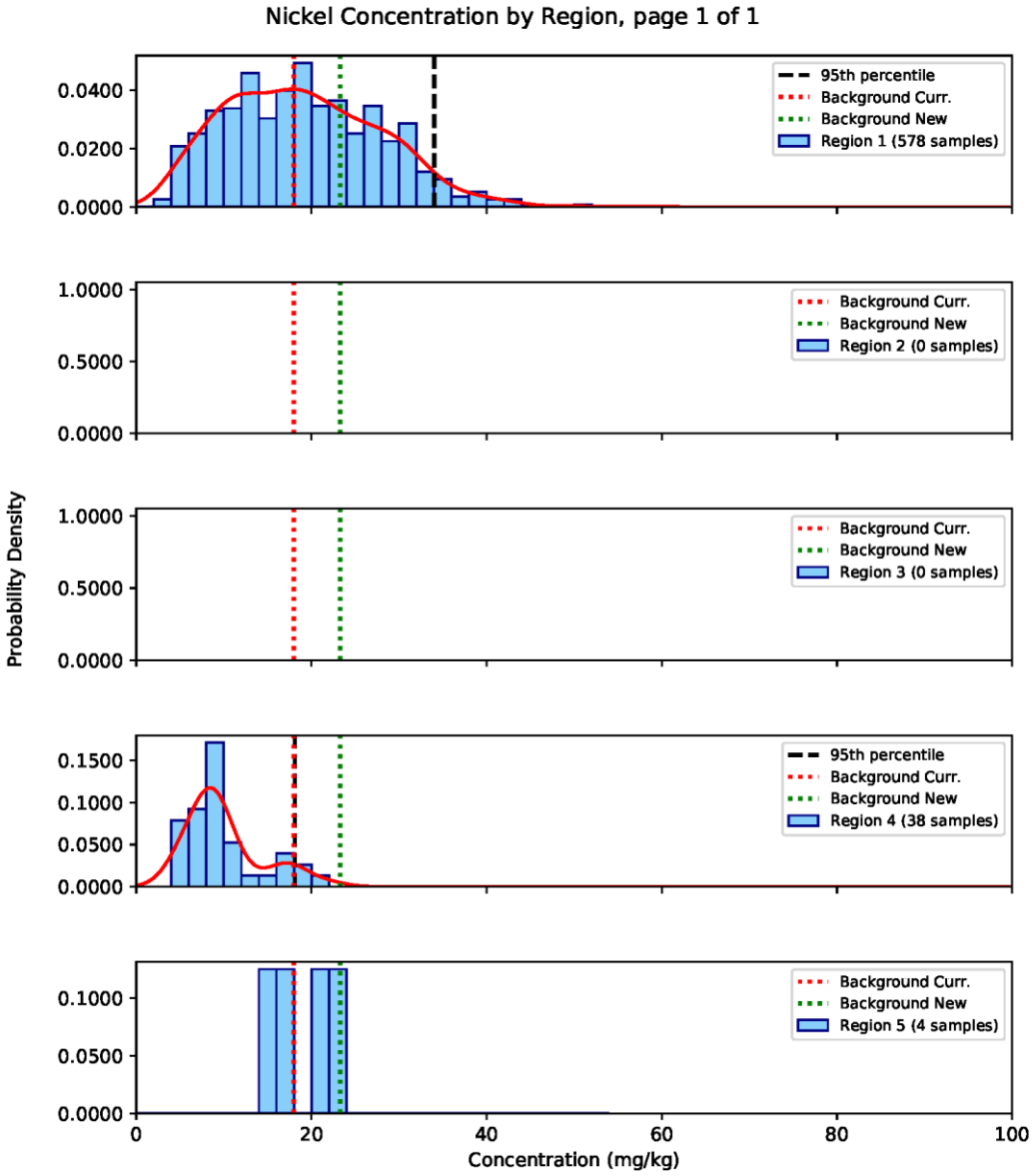


Figure 584. Histogram of RSL nickel concentrations by IDOT Region, Non-REC (mg/kg)

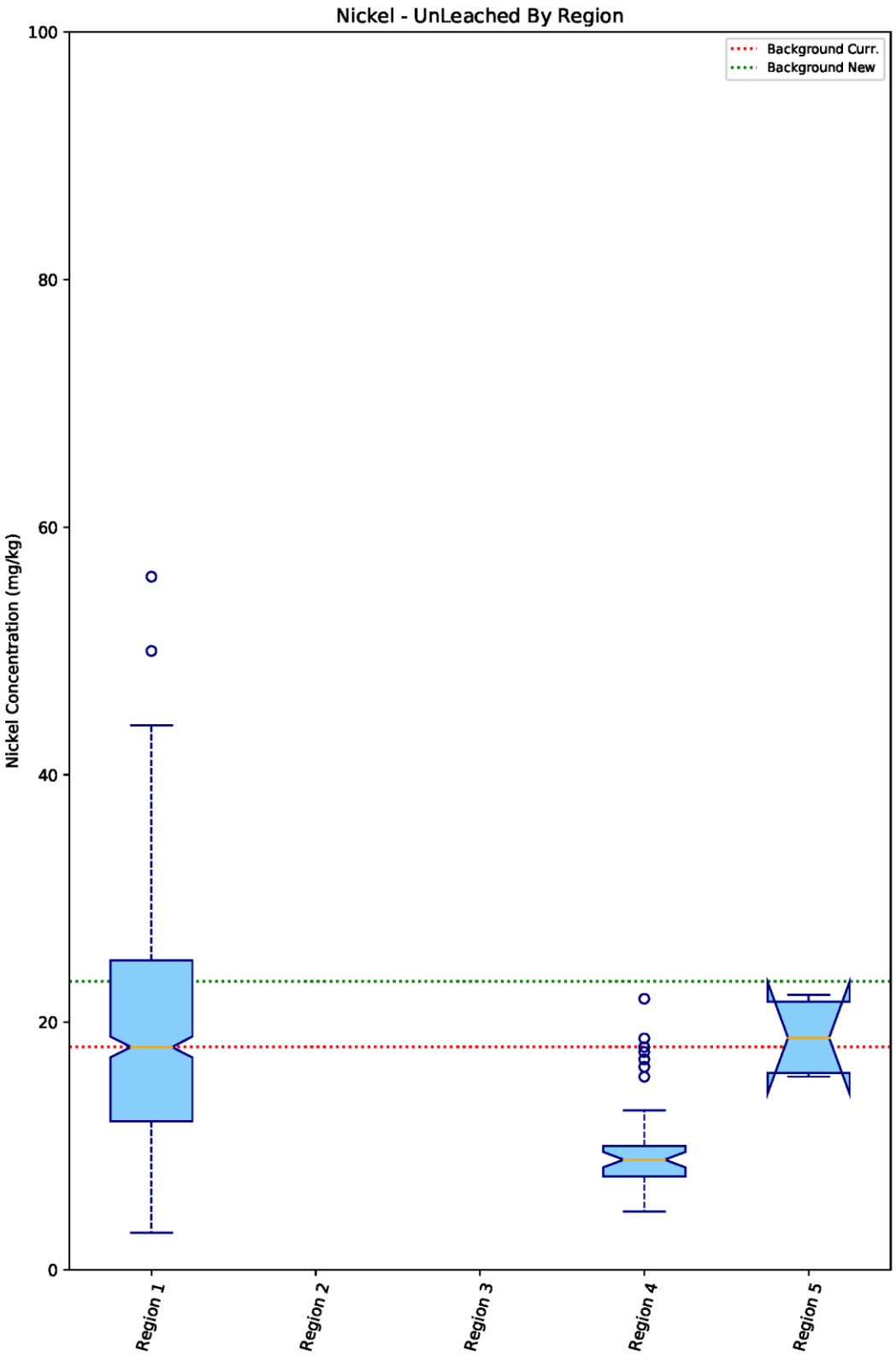


Figure 585. Boxplot of RSL nickel concentrations by IDOT Region, Non-REC (mg/kg)

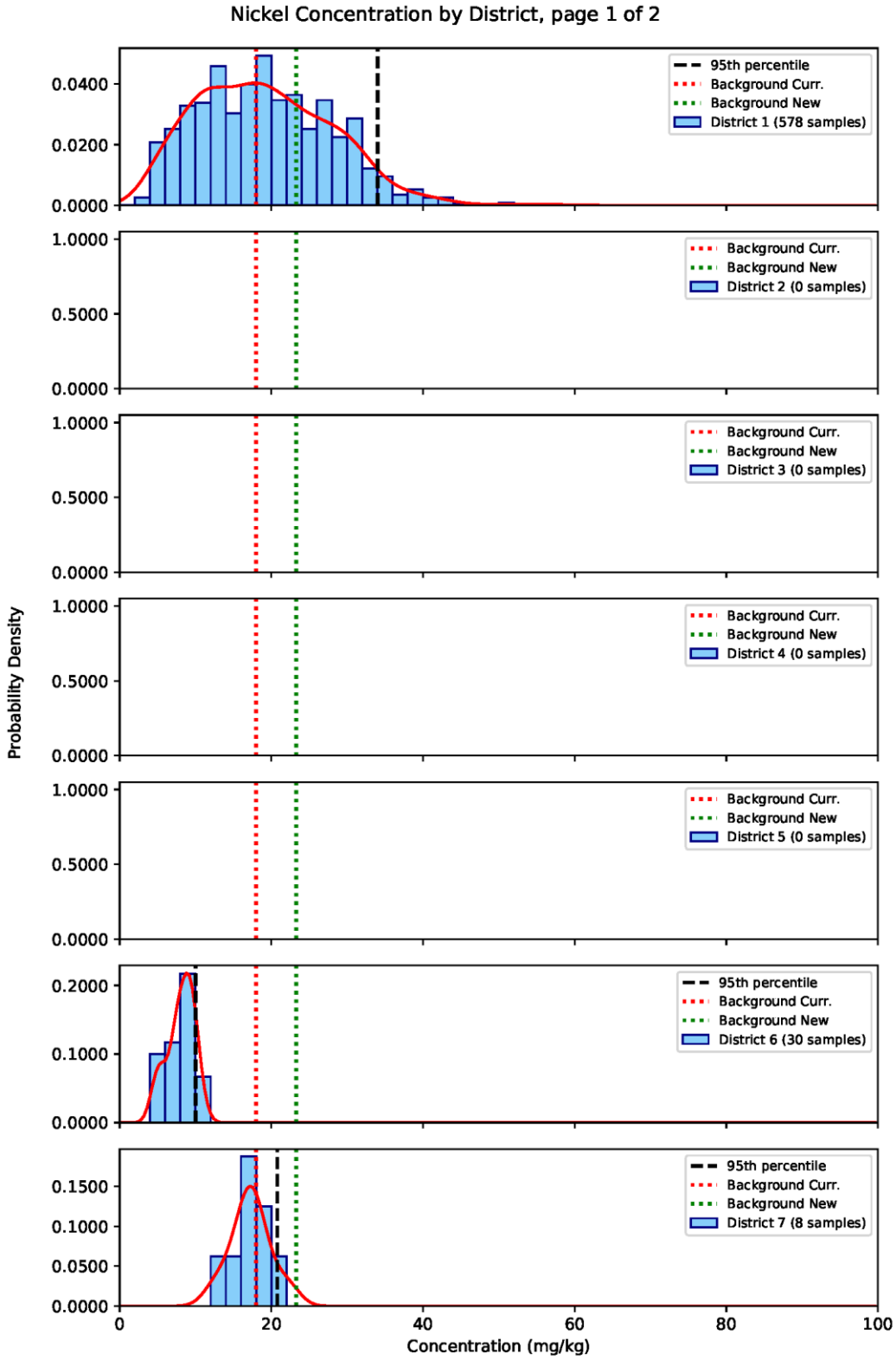


Figure 586. Histogram of RSL nickel concentrations by IDOT District, Non-REC (mg/kg), part 1

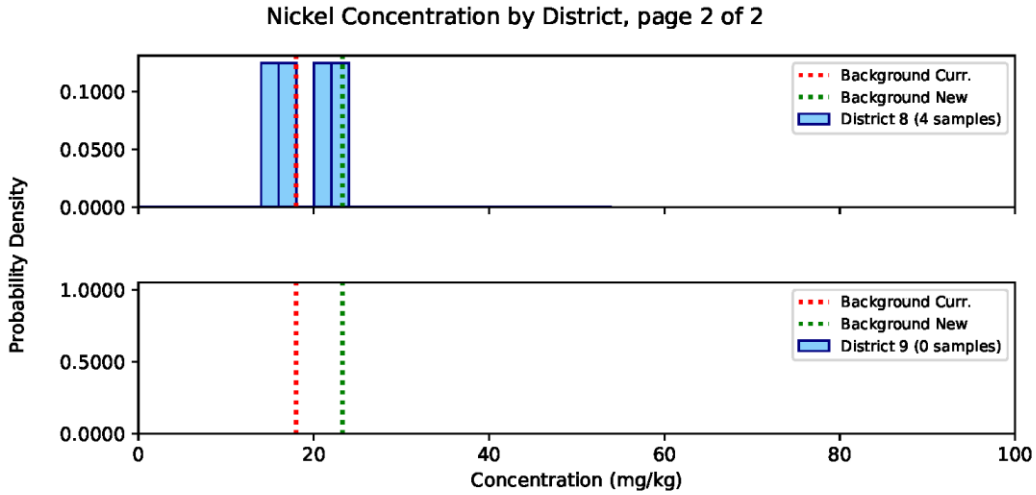


Figure 587. Histogram of RSL nickel concentrations by IDOT District, Non-REC (mg/kg), part 2

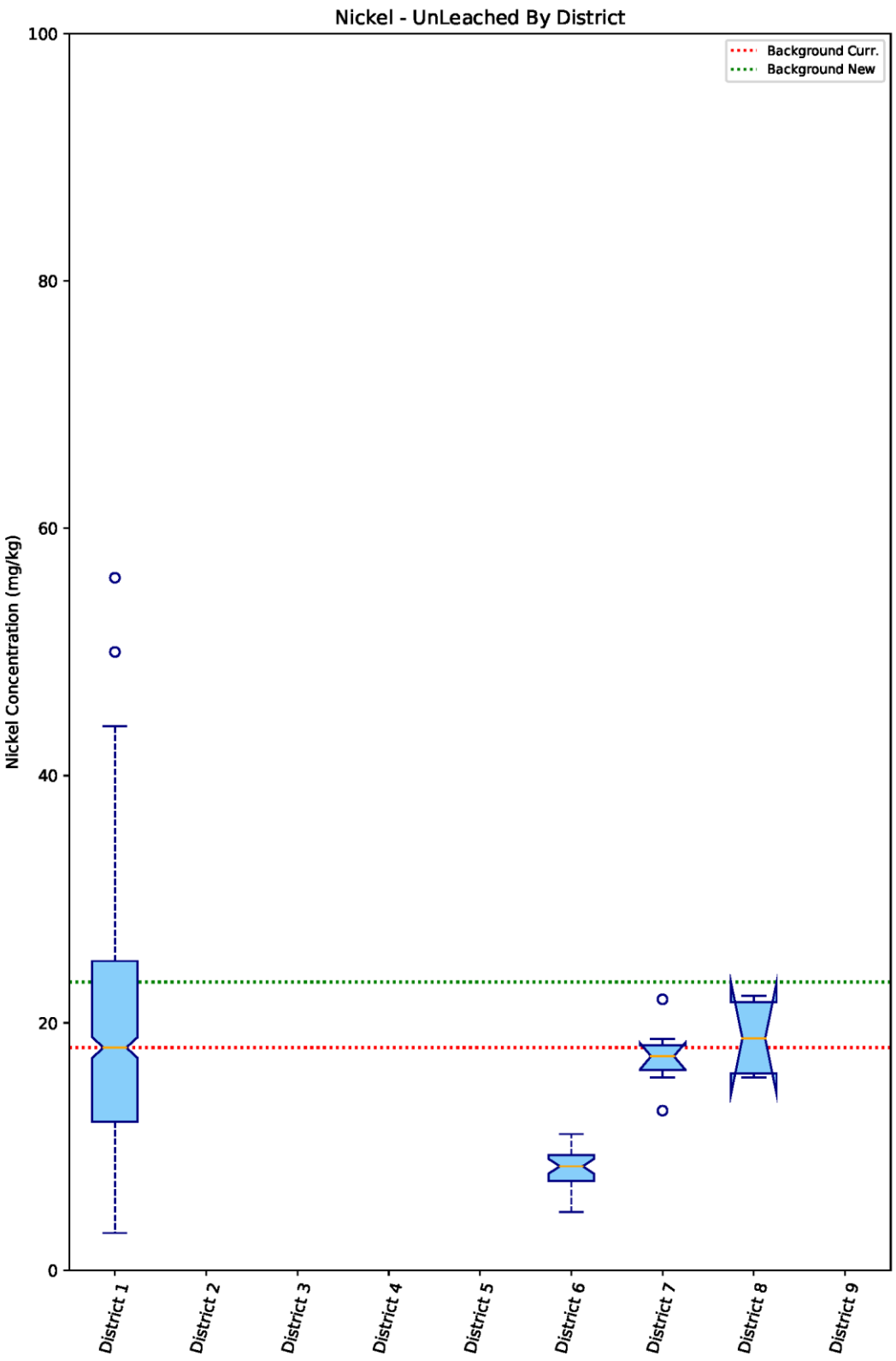


Figure 588. Boxplot of RSL nickel concentrations by IDOT District, Non-REC (mg/kg)

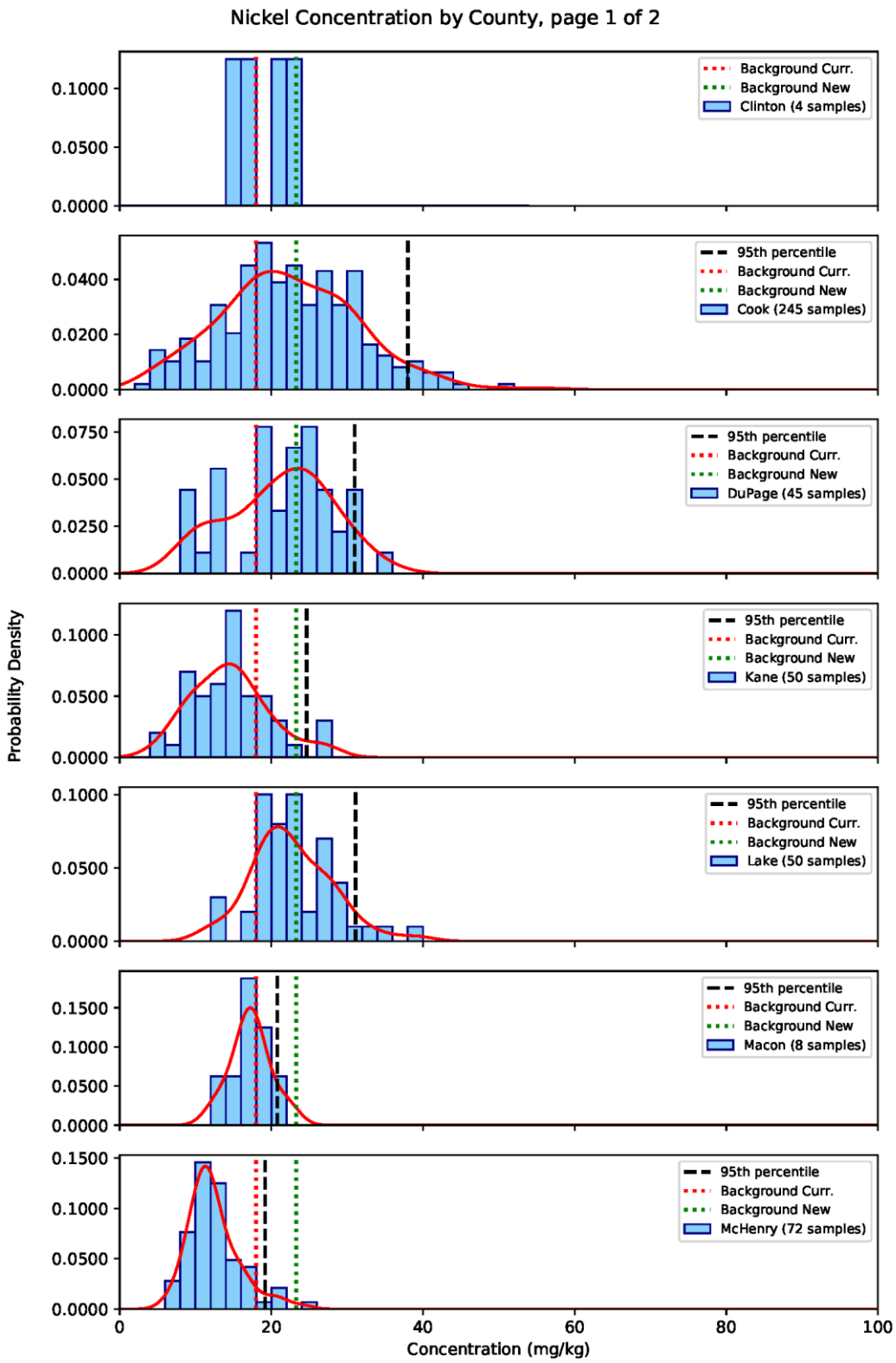


Figure 589. Histogram of RSL nickel concentrations by Illinois county, Non-REC (mg/kg), part 1

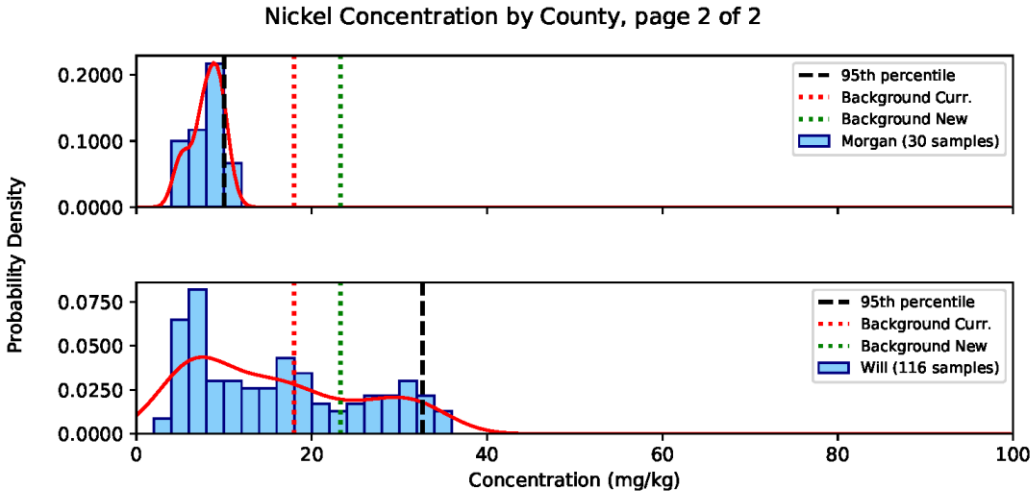


Figure 590. Histogram of RSL nickel concentrations by Illinois county, Non-REC (mg/kg), part 2

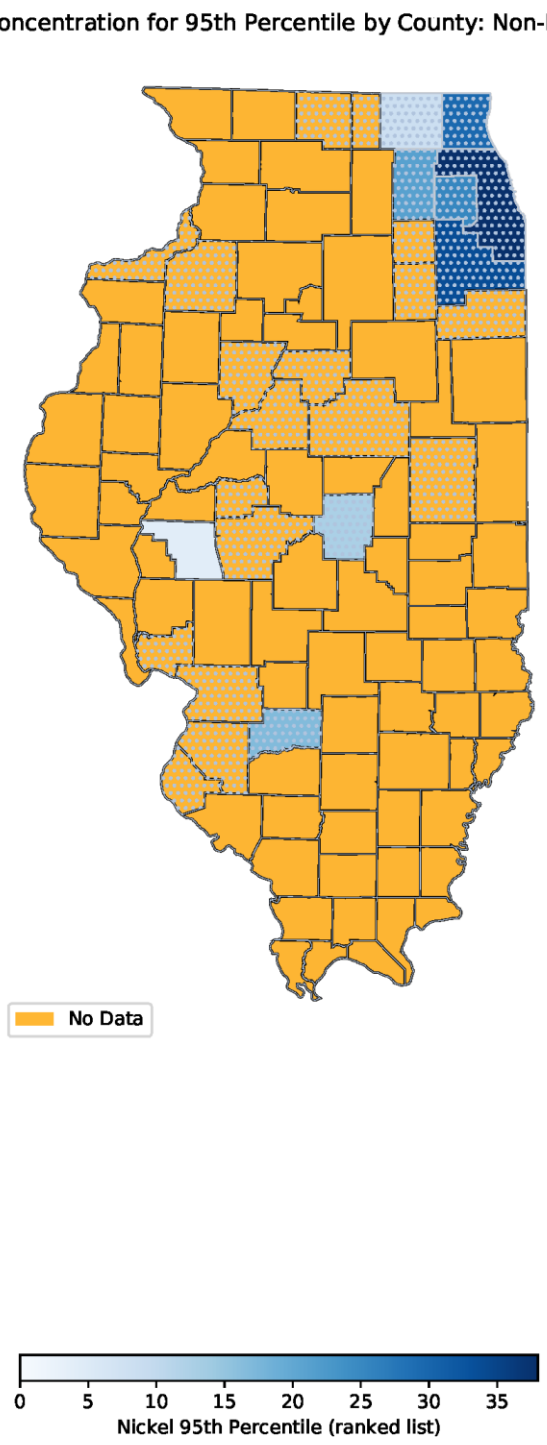


Figure 591. Map of RSL nickel 95th percentile concentration by Illinois county, Non-REC (mg/kg)

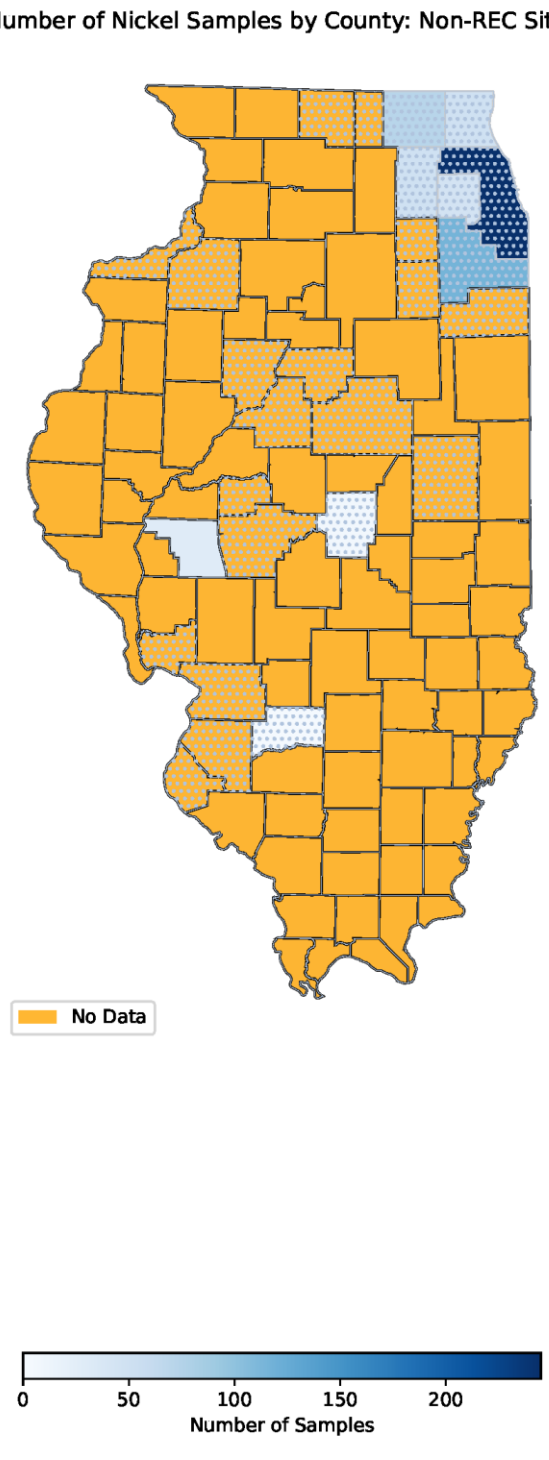


Figure 592. Map of RSL nickel sample quantity by Illinois county, Non-REC (mg/kg)

P.3 NICKEL DE MINIMIS

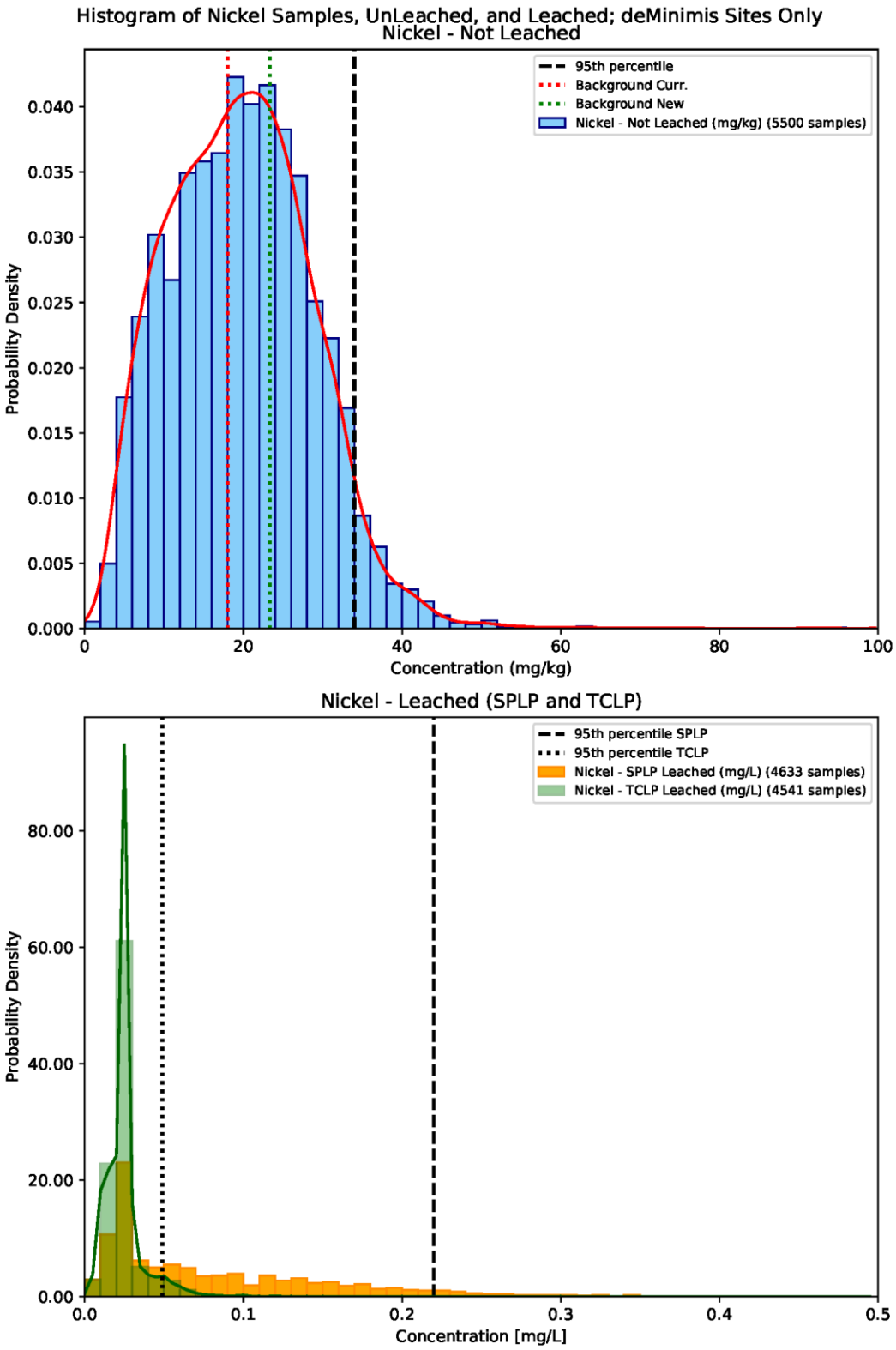


Figure 593. Histogram of RSL nickel concentrations, de minimis (mg/kg)

Nickel Unleached Concentration (mg/kg)

1) Region

2) District

3) County

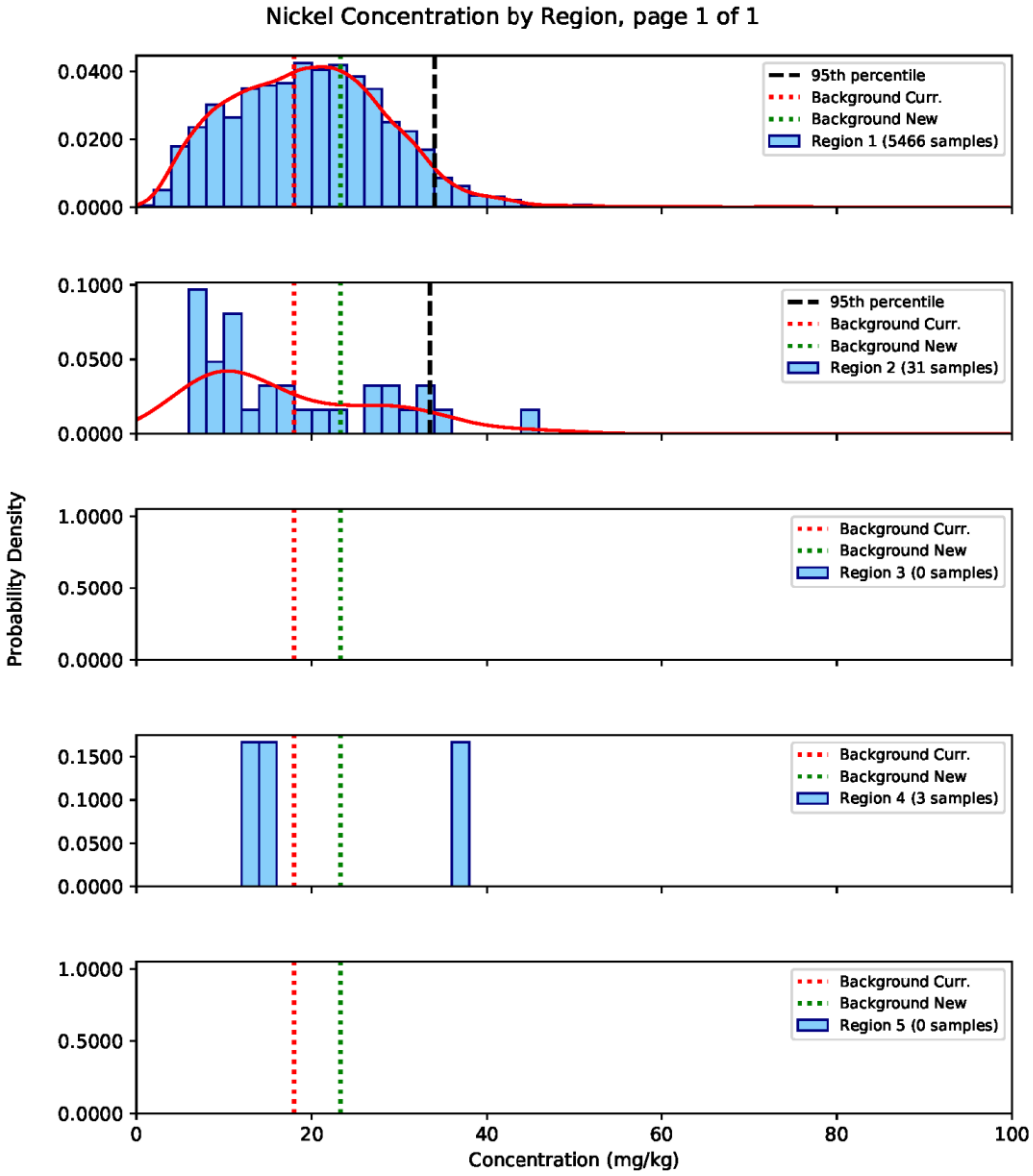


Figure 594. Histogram of RSL nickel concentrations by IDOT Region, de minimis (mg/kg)

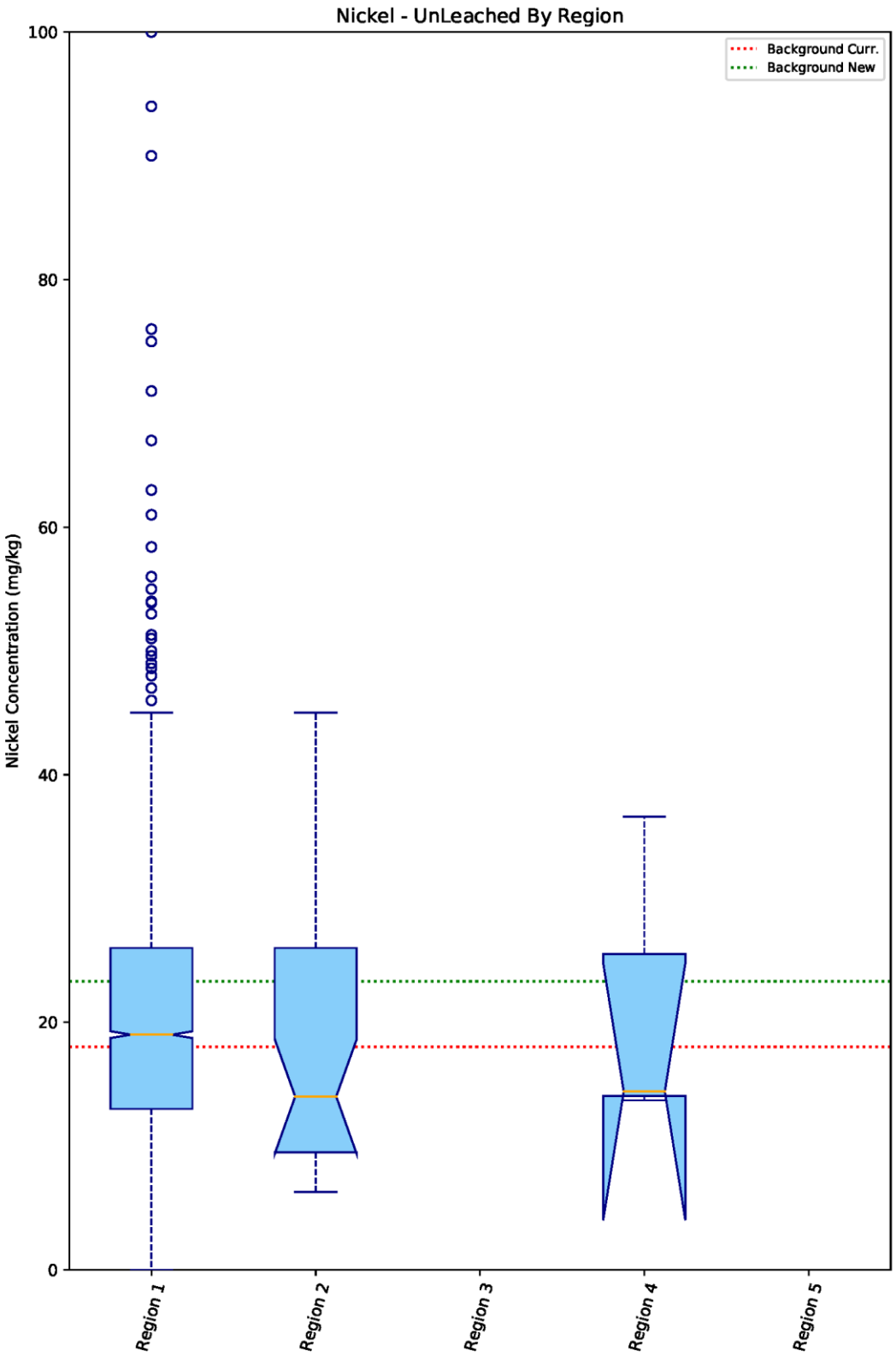


Figure 595. Boxplot of RSL nickel concentrations by IDOT Region, de minimis (mg/kg)

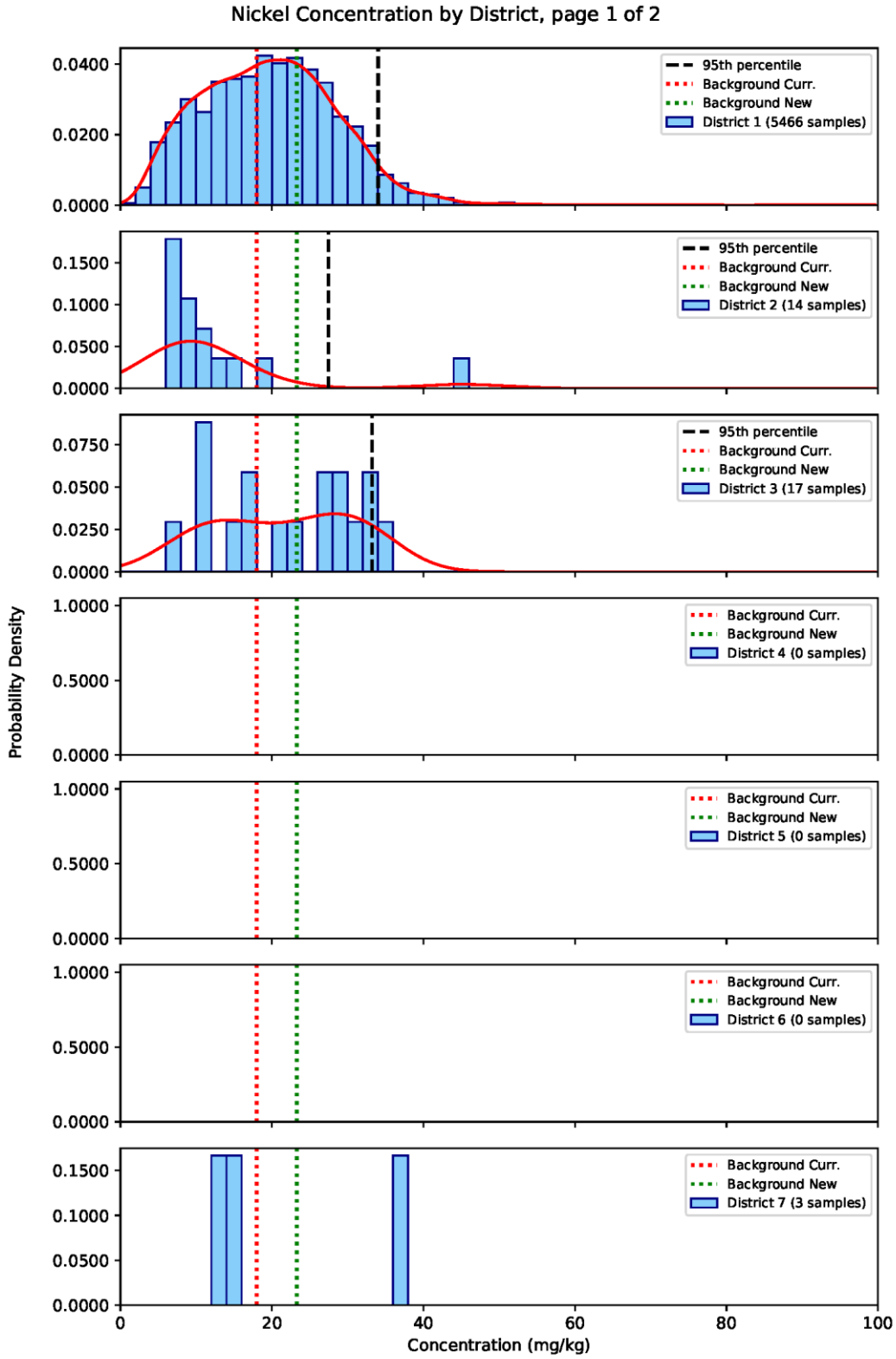


Figure 596. Histogram of RSL nickel concentrations by IDOT District, de minimis (mg/kg), part 1

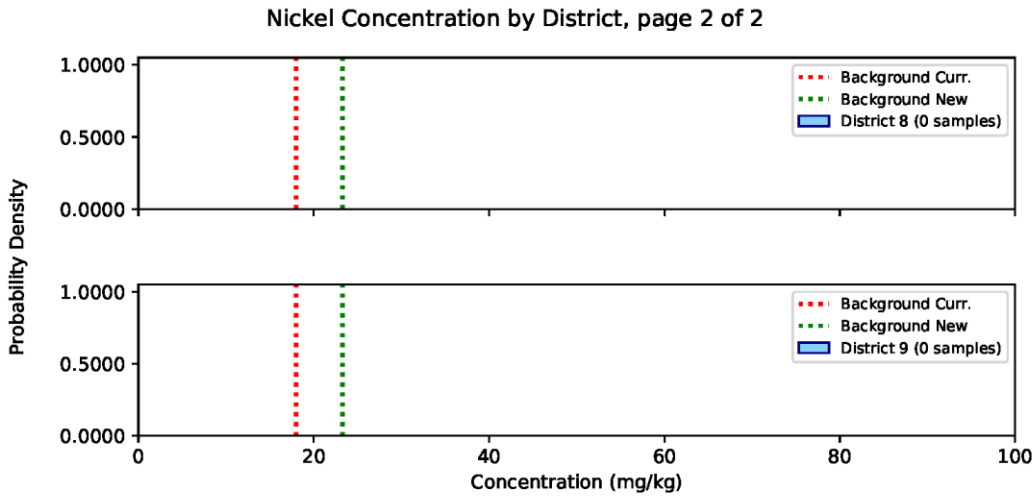


Figure 597. Histogram of RSL nickel concentrations by IDOT District, de minimis (mg/kg), part 2

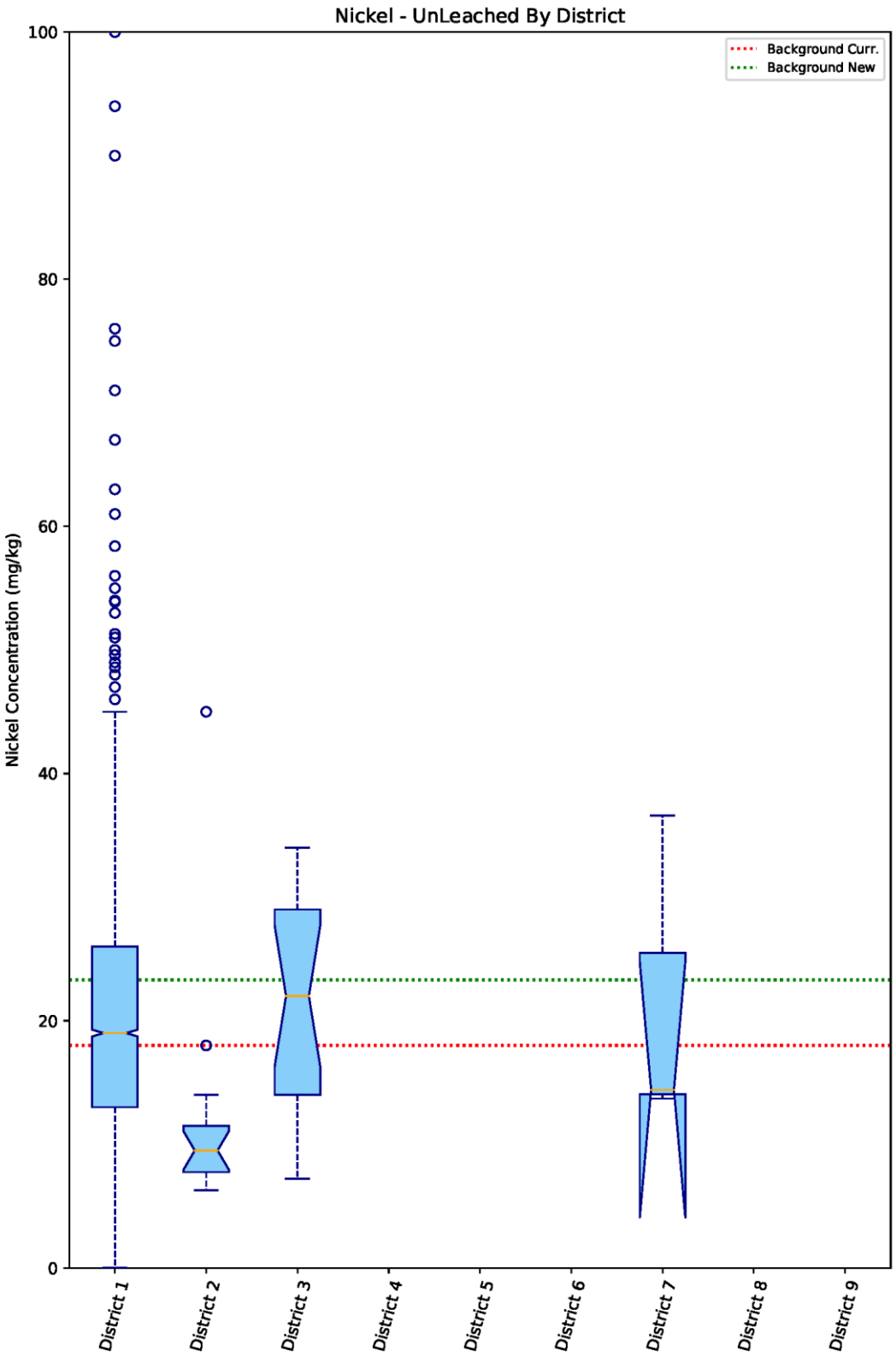


Figure 598. Boxplot of RSL nickel concentrations by IDOT District, de minimis (mg/kg)

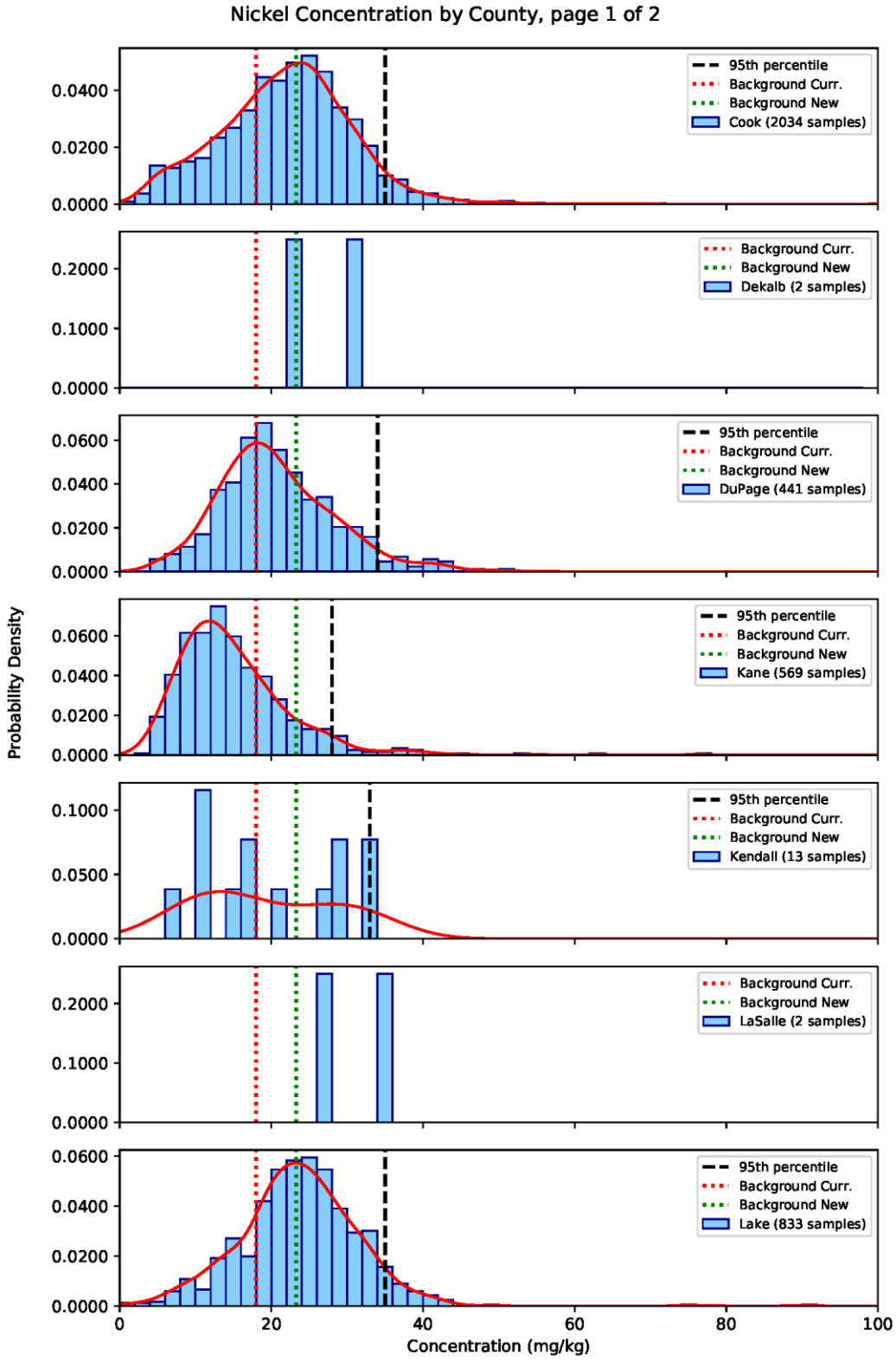


Figure 599. Histogram of RSL nickel concentrations by Illinois county, de minimis (mg/kg), part 1

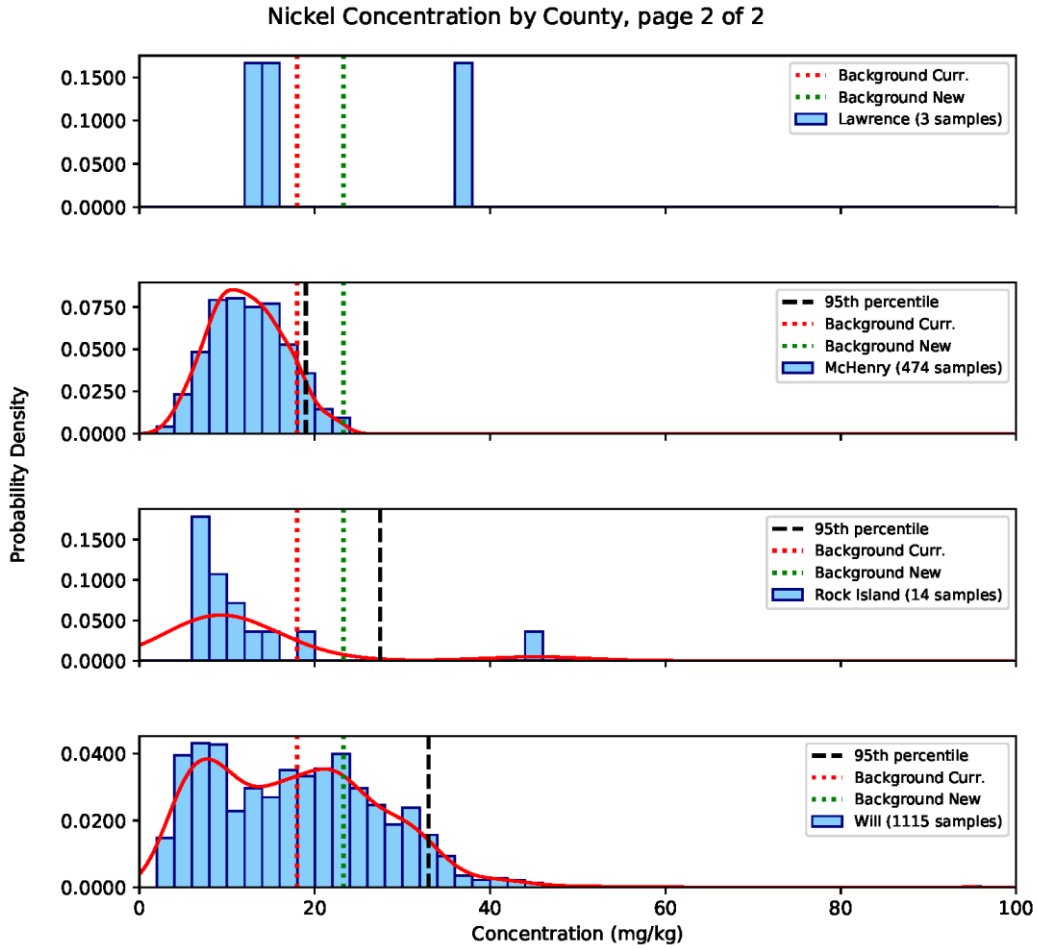


Figure 600. Histogram of RSL nickel concentrations by Illinois county, de minimis (mg/kg), part 2

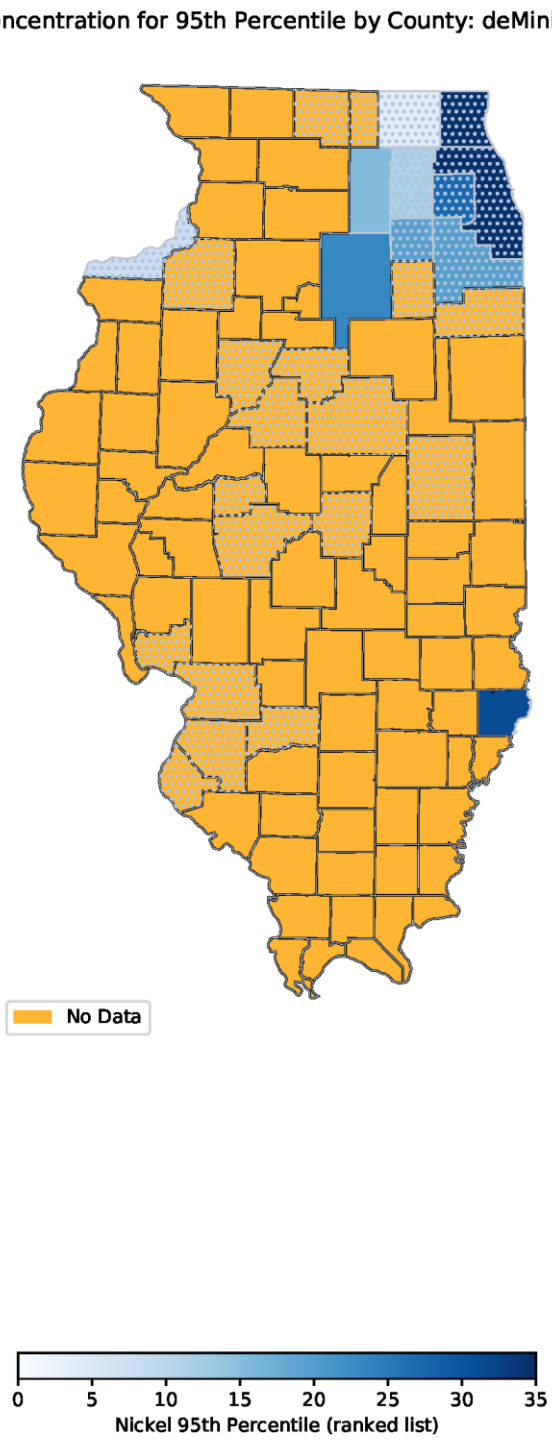


Figure 601. Map of RSL nickel 95th percentile concentration by Illinois county, de minimis (mg/kg)

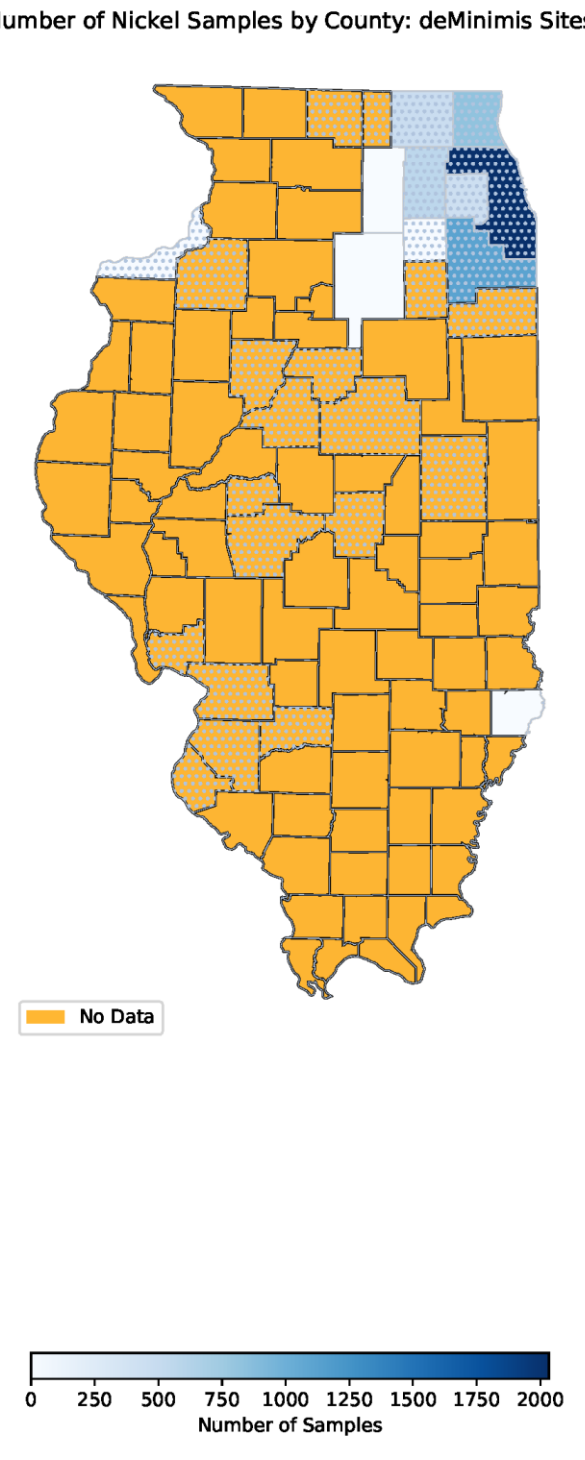


Figure 602. Map of RSL nickel sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX Q. ANALYTE ANALYSIS: POTASSIUM

Q.1 POTASSIUM REC

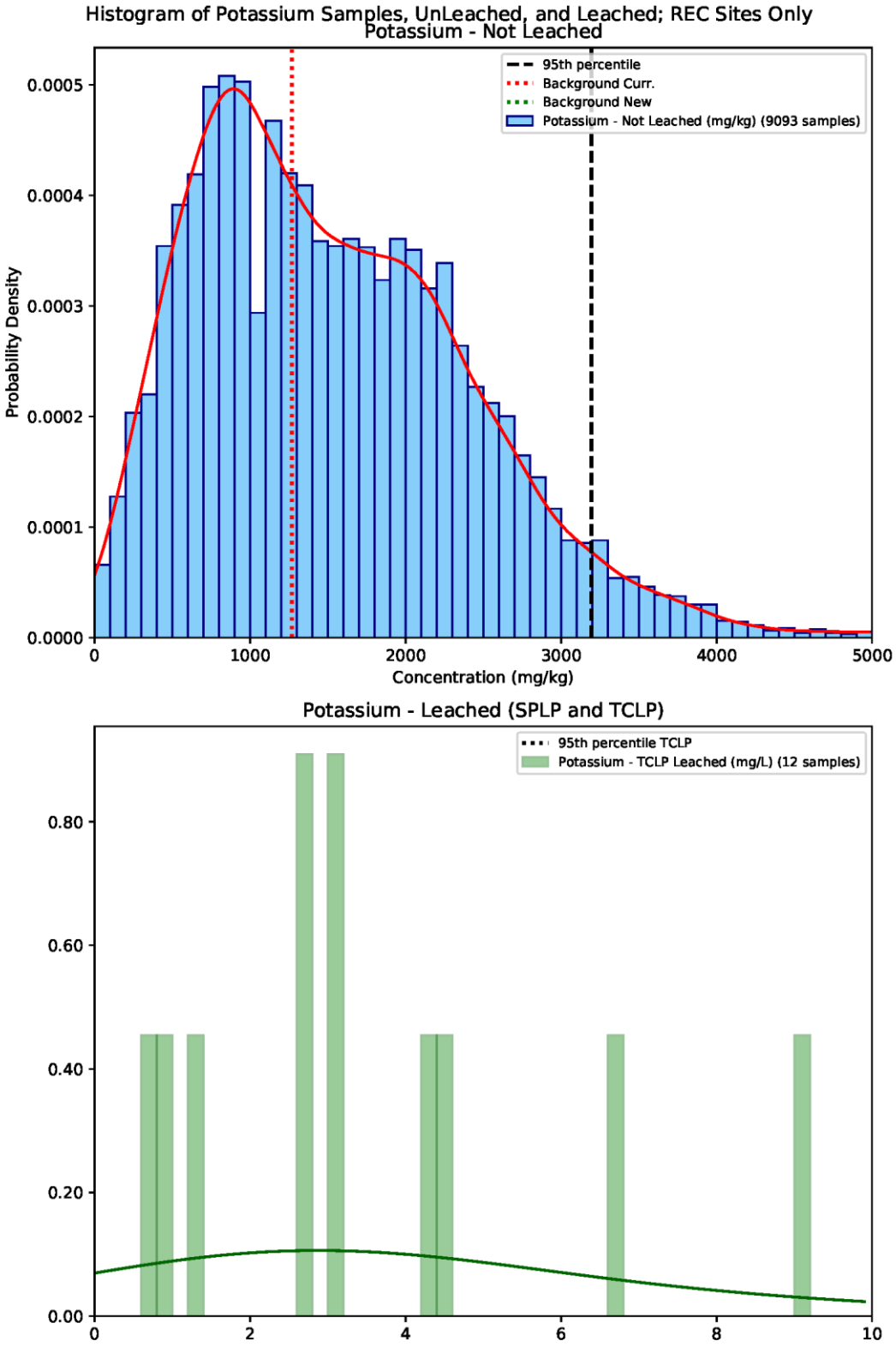


Figure 603. Histogram of RSL potassium concentrations, REC (mg/kg)

Potassium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

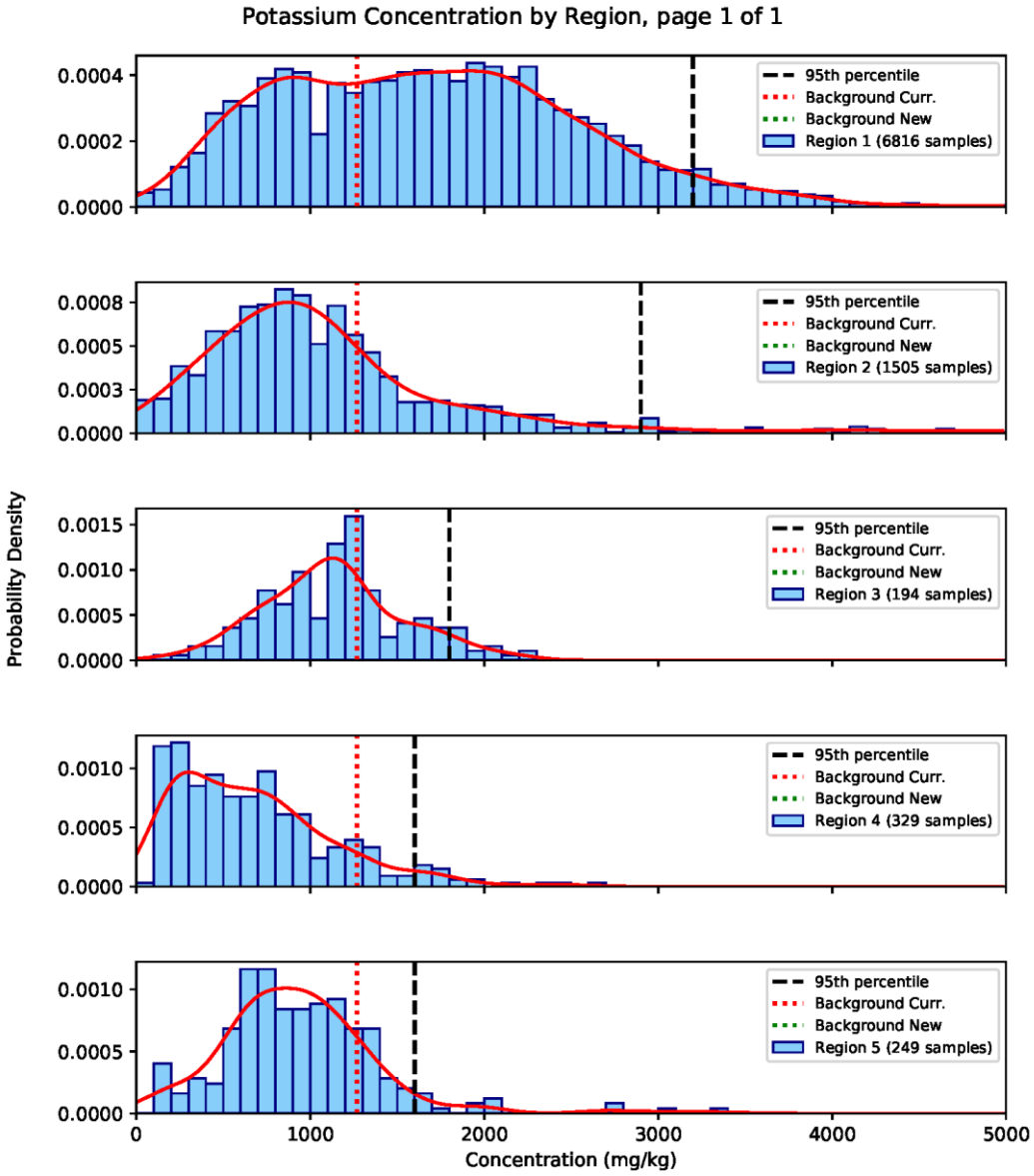


Figure 604. Histogram of RSL potassium concentrations by IDOT Region, REC (mg/kg)

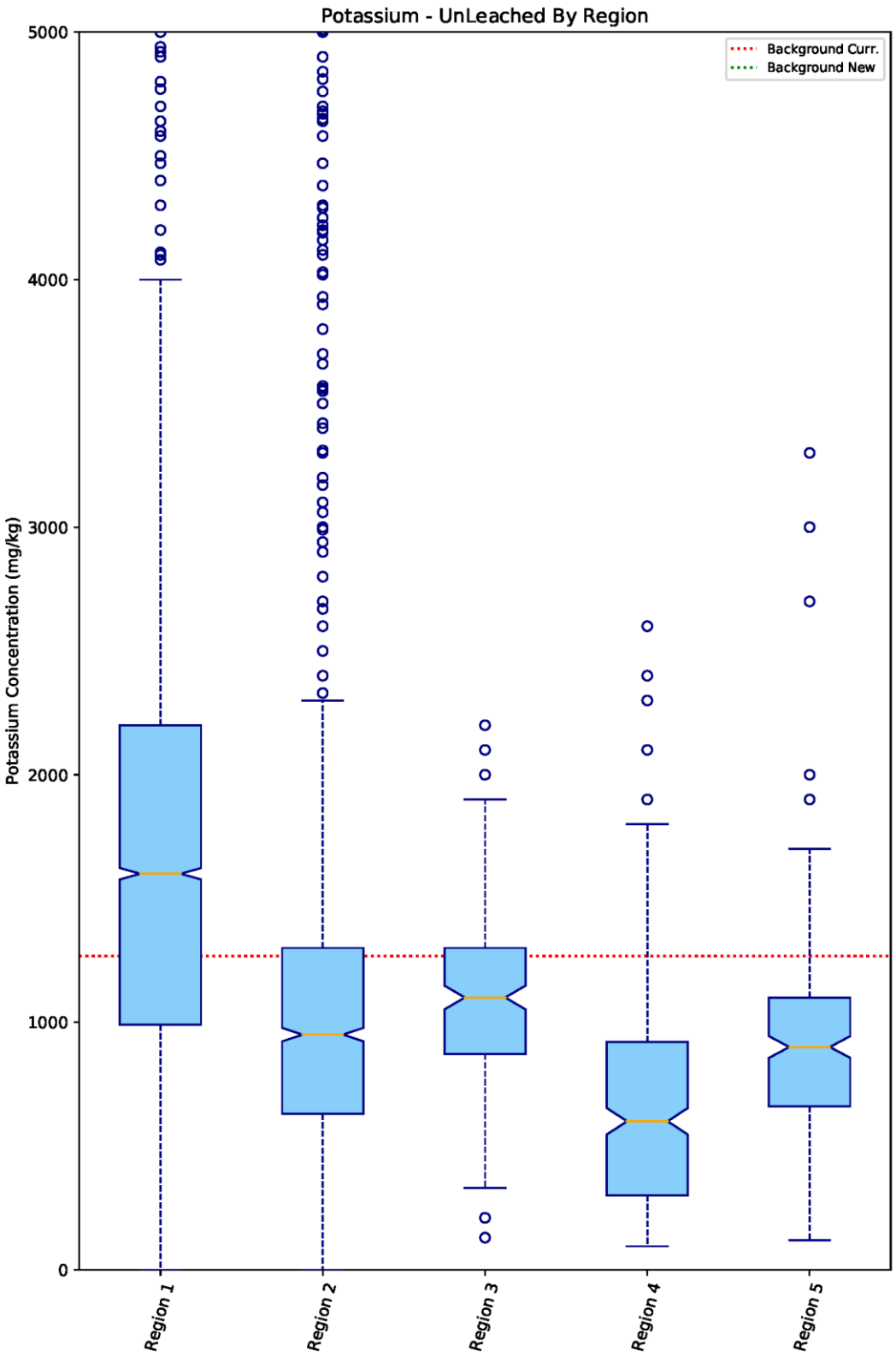


Figure 605. Boxplot of RSL potassium concentrations by IDOT Region, REC (mg/kg)

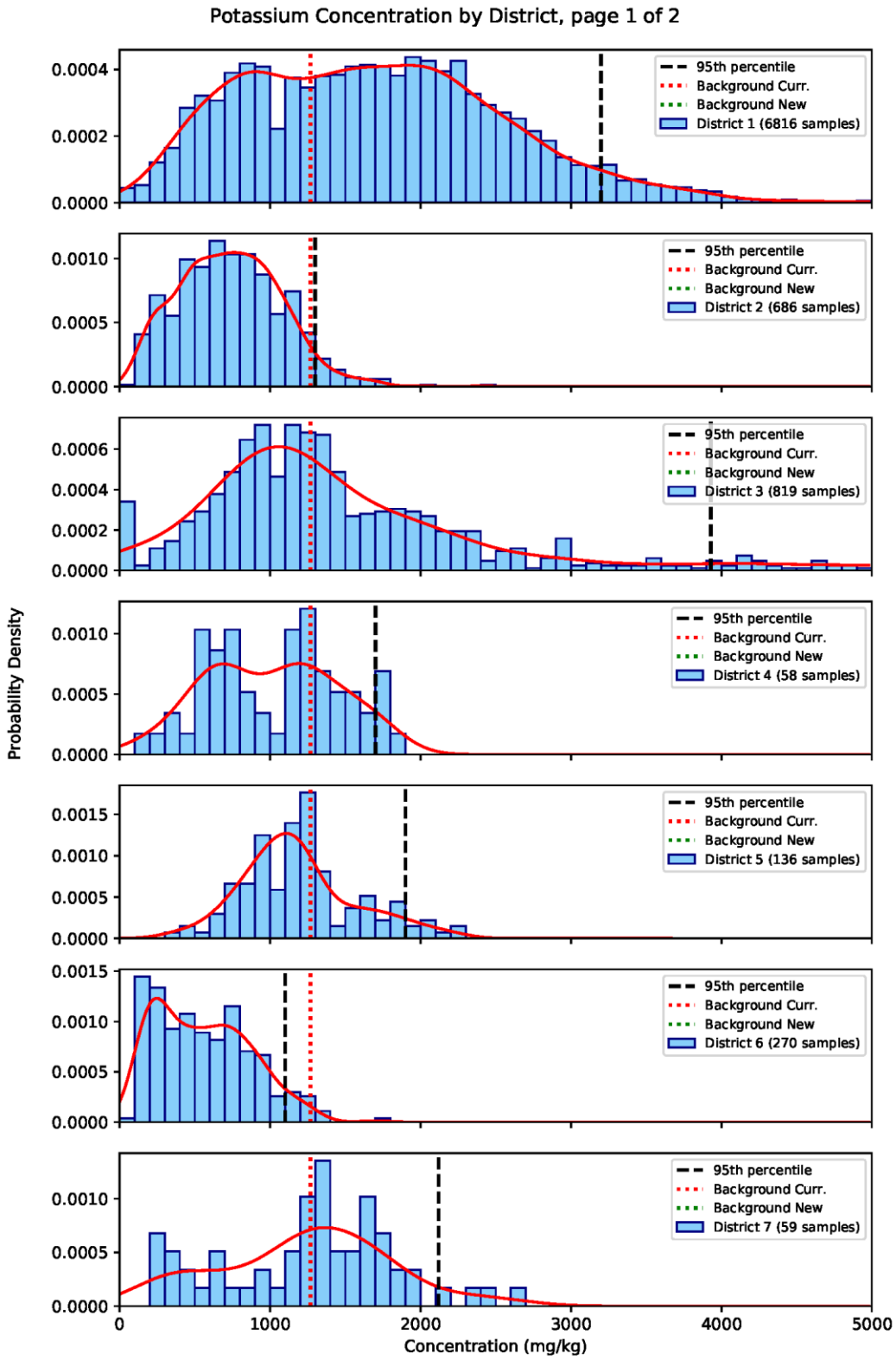


Figure 606. Histogram of RSL potassium concentrations by IDOT District, REC (mg/kg), part 1

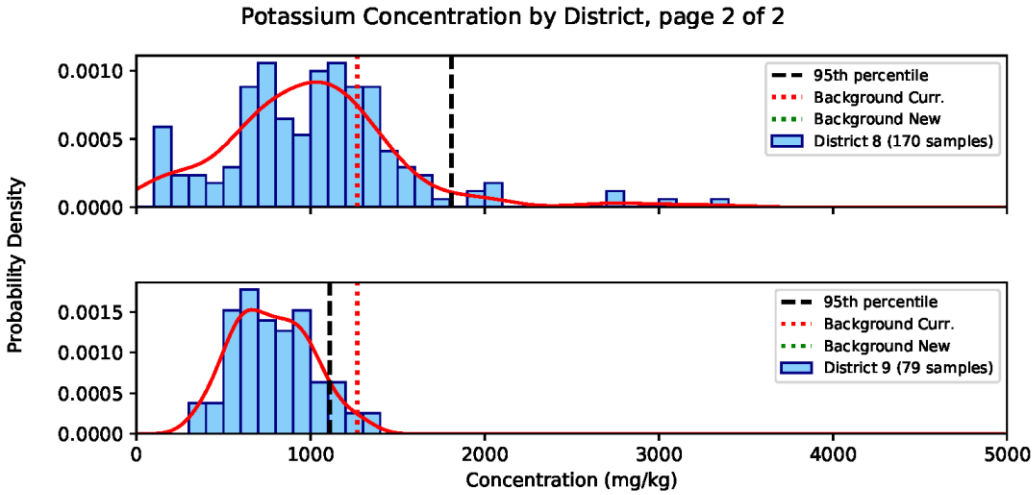


Figure 607. Histogram of RSL potassium concentrations by IDOT District, REC (mg/kg), part 2

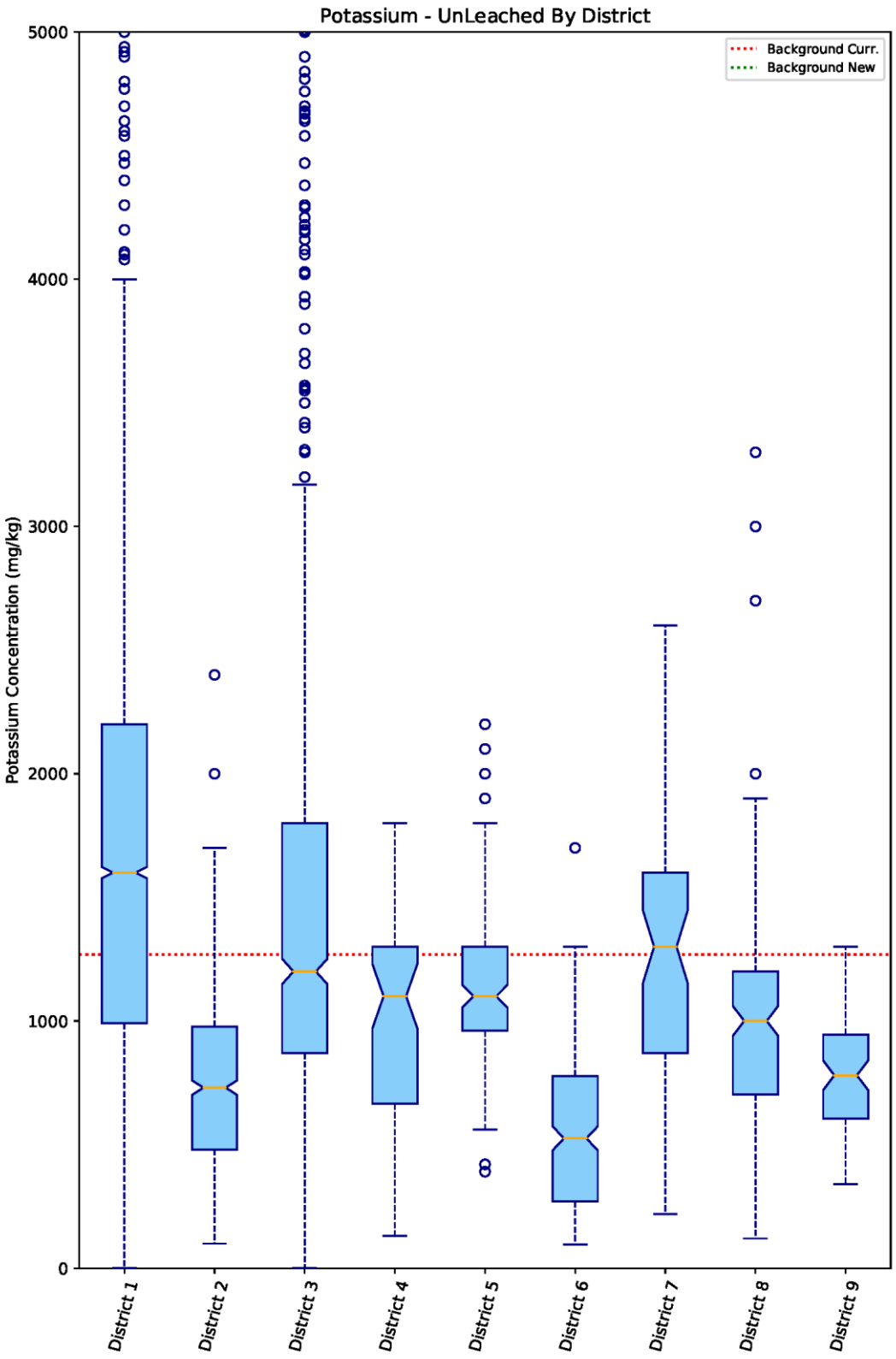


Figure 608. Boxplot of RSL potassium concentrations by IDOT District, REC (mg/kg)

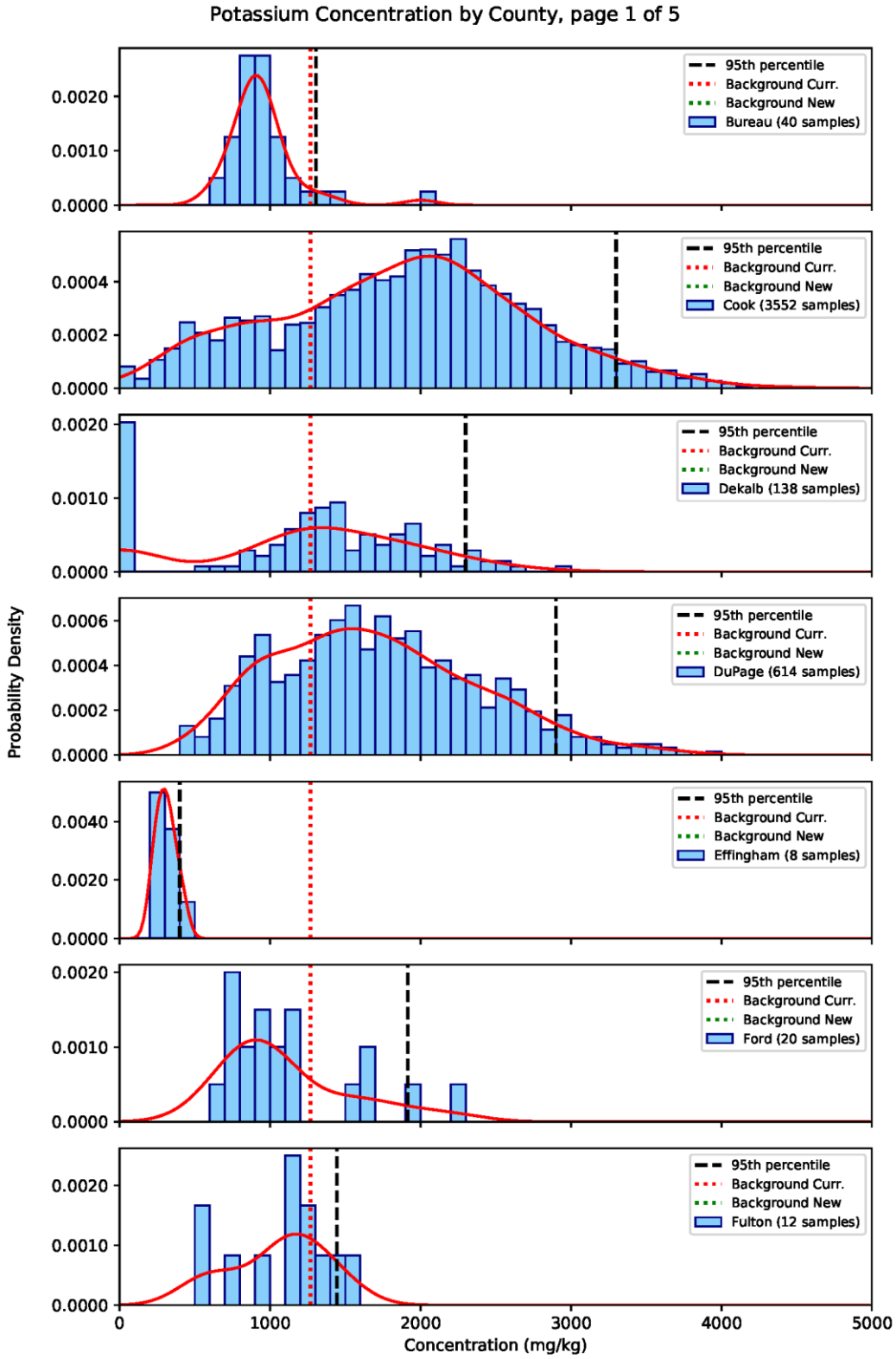


Figure 609. Histogram of RSL potassium concentrations by Illinois county, REC (mg/kg), part 1

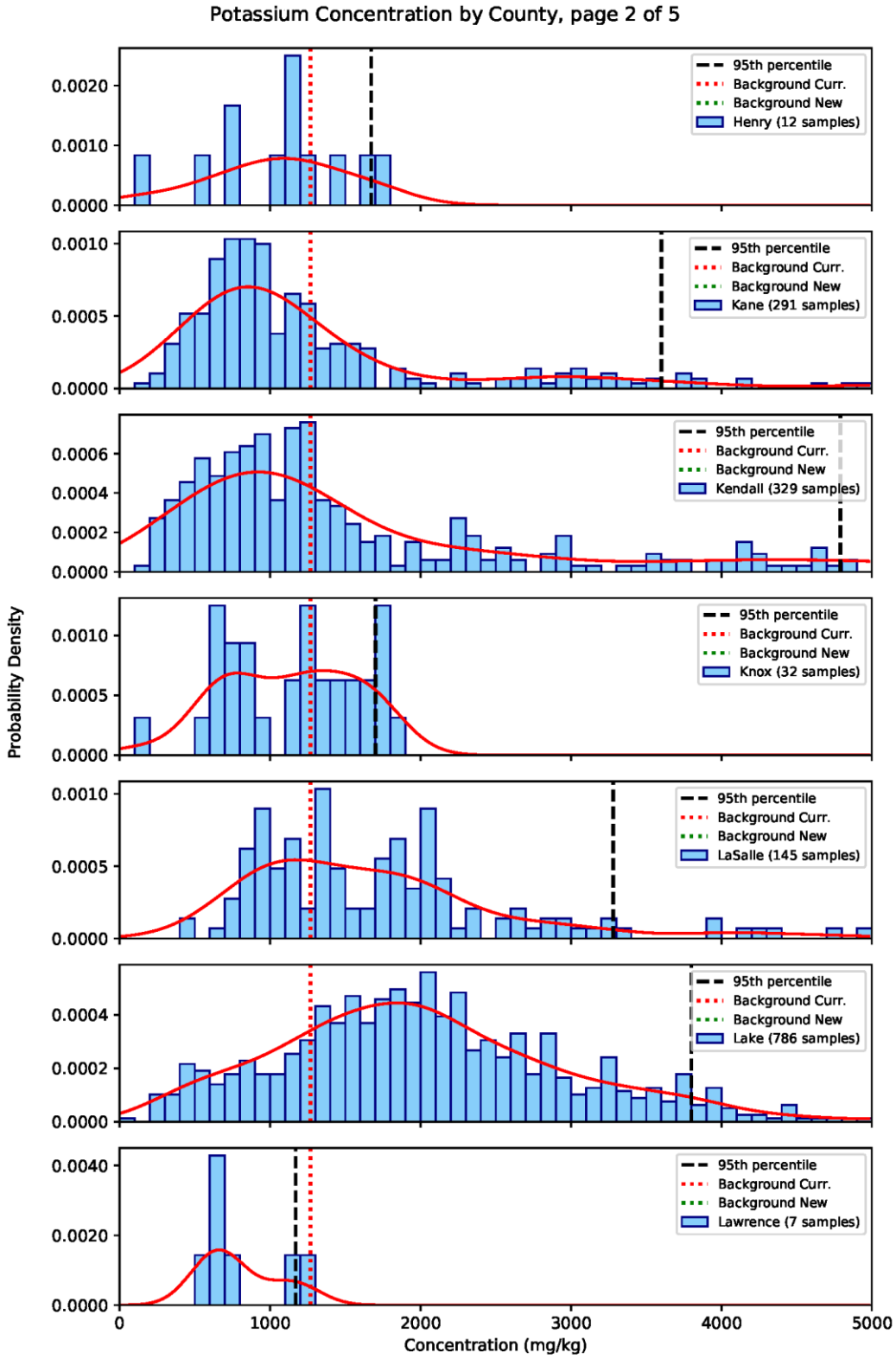


Figure 610. Histogram of RSL potassium concentrations by Illinois county, REC (mg/kg), part 2

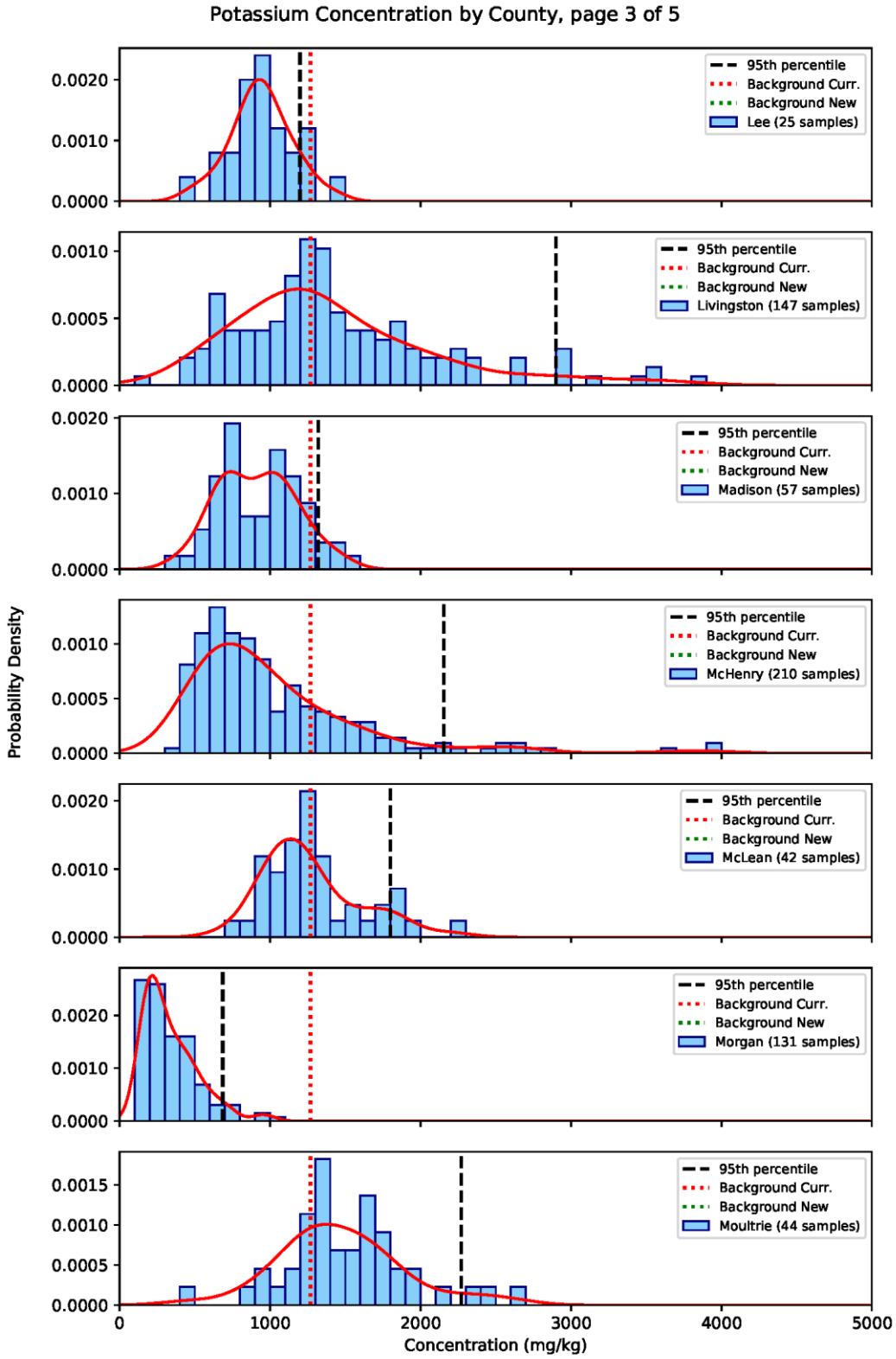


Figure 611. Histogram of RSL potassium concentrations by Illinois county, REC (mg/kg), part 3

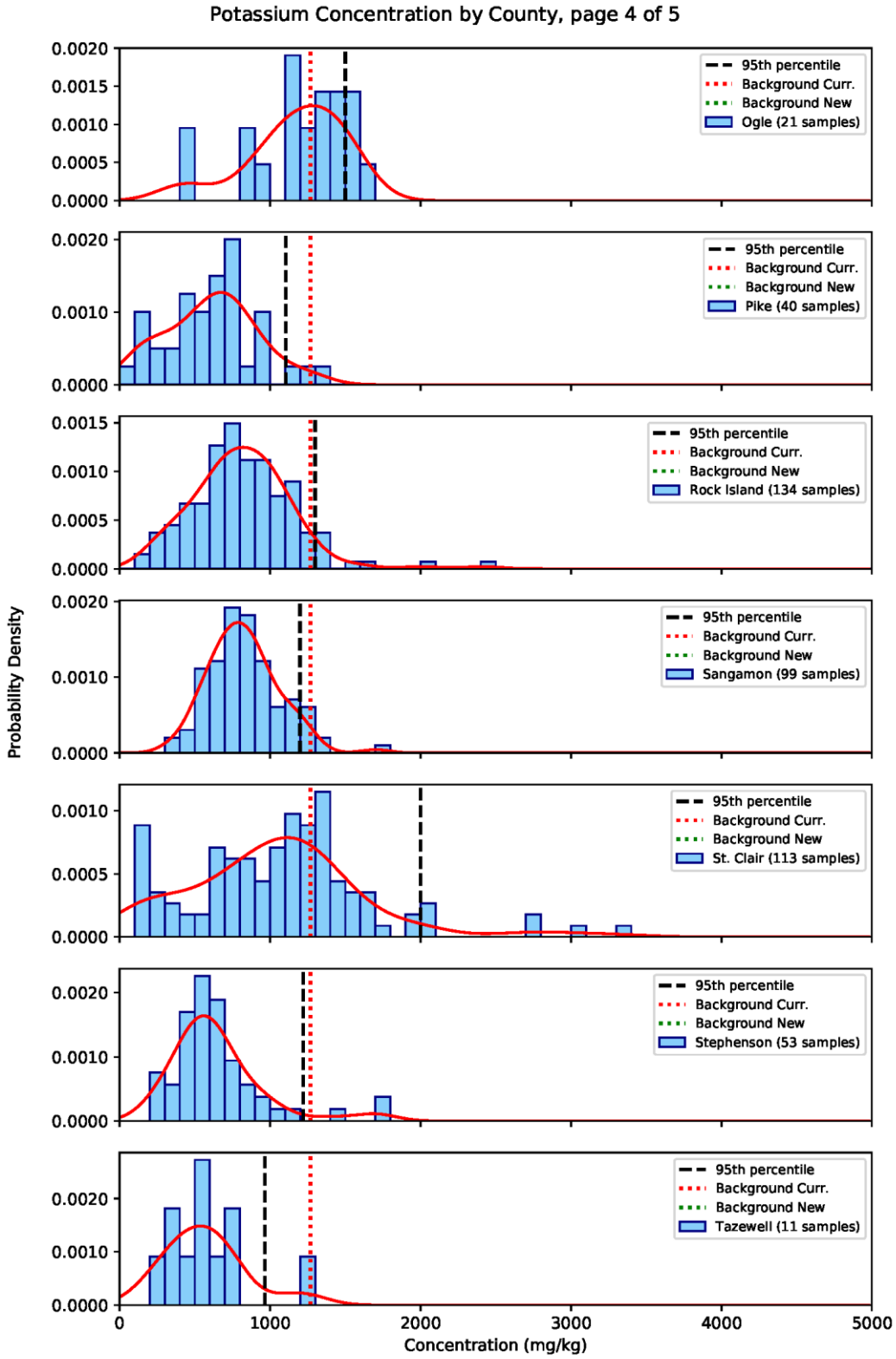


Figure 612. Histogram of RSL potassium concentrations by Illinois county, REC (mg/kg), part 4

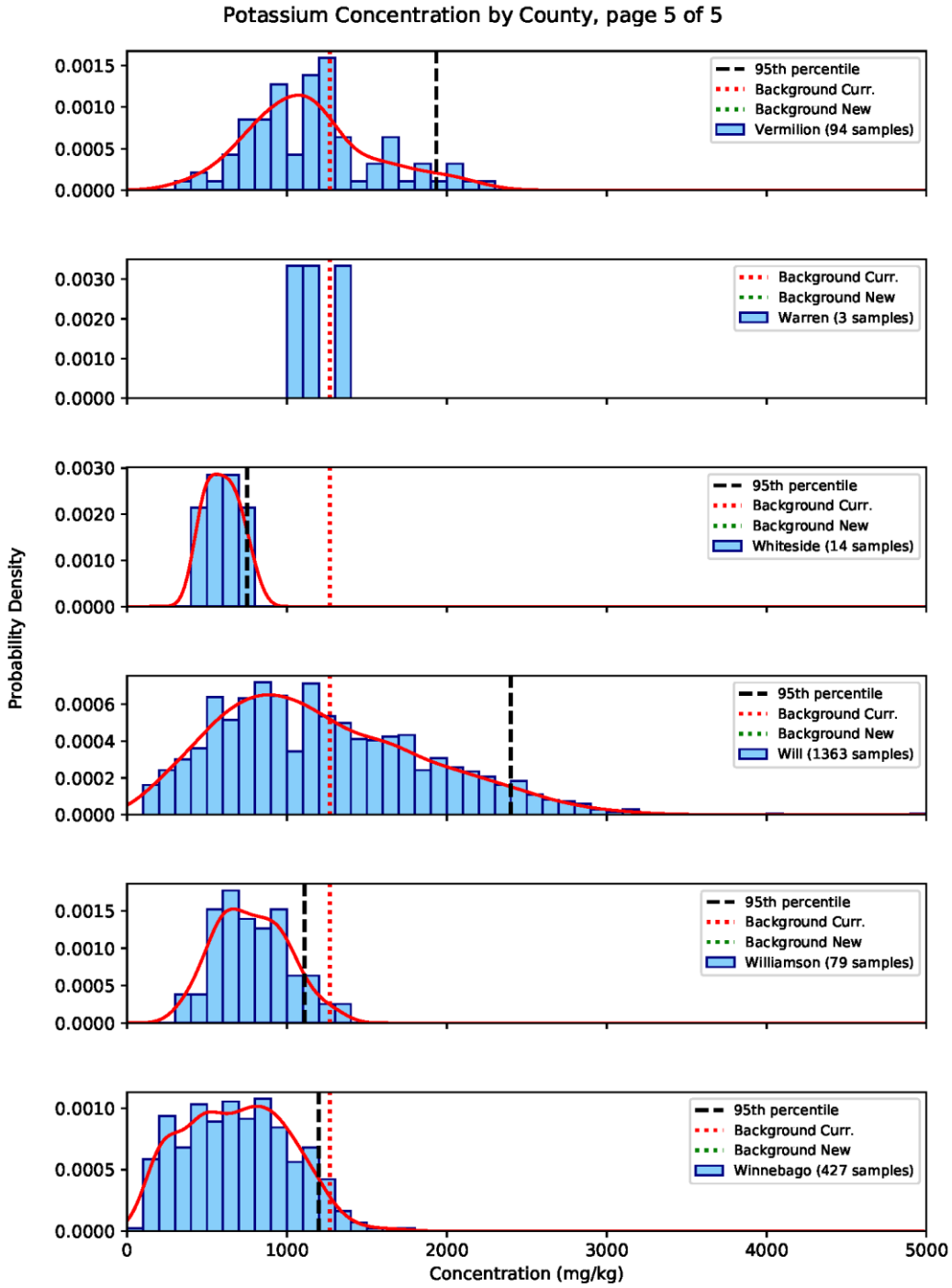


Figure 613. Histogram of RSL potassium concentrations by Illinois county, REC (mg/kg), part 5

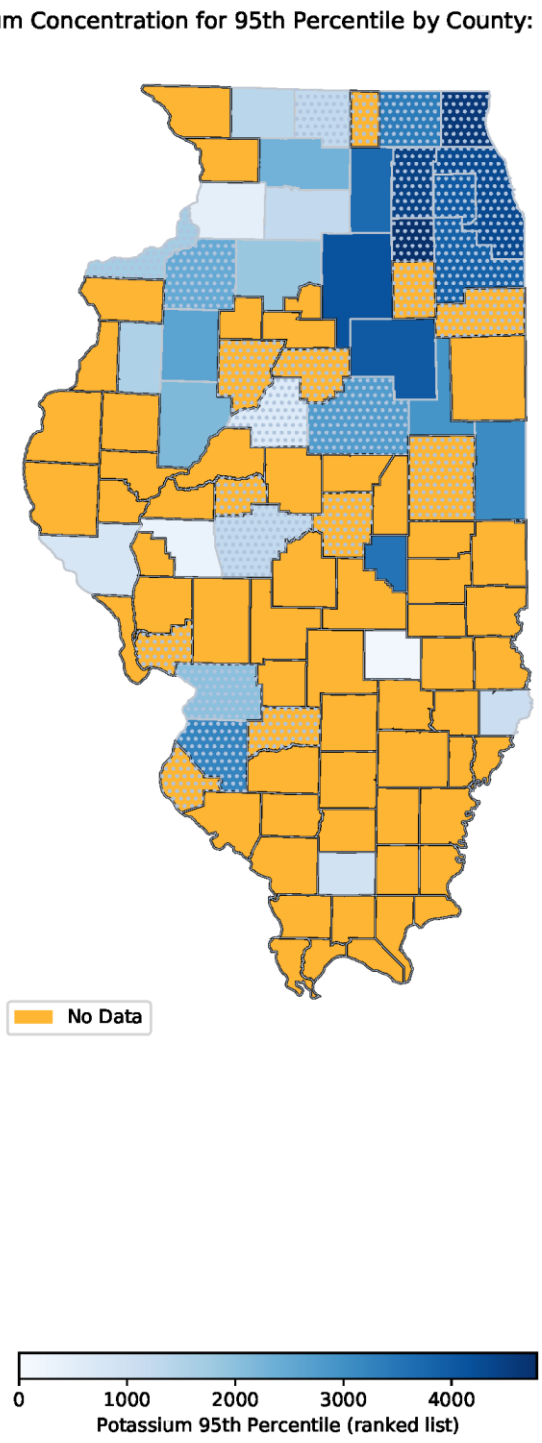


Figure 614. Map of RSL potassium 95th percentile concentration by Illinois county, REC (mg/kg)

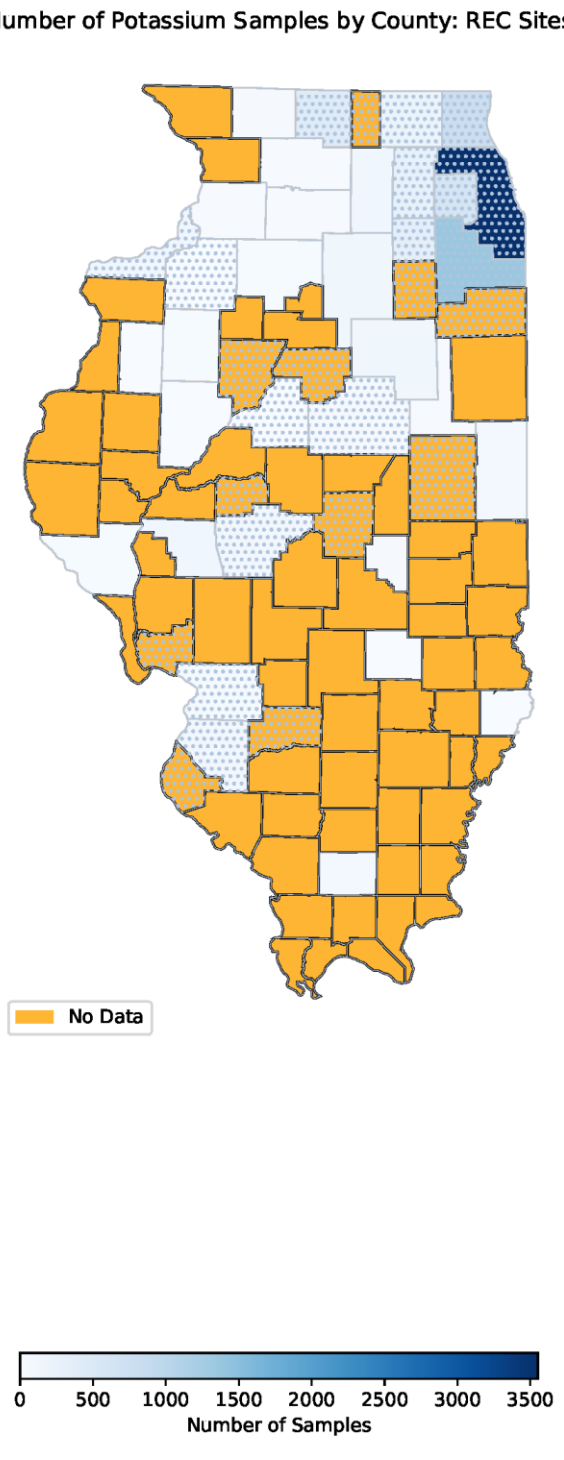


Figure 615. Map of RSL potassium sample quantity by Illinois county, REC (mg/kg)

Q.2 POTASSIUM NON-REC

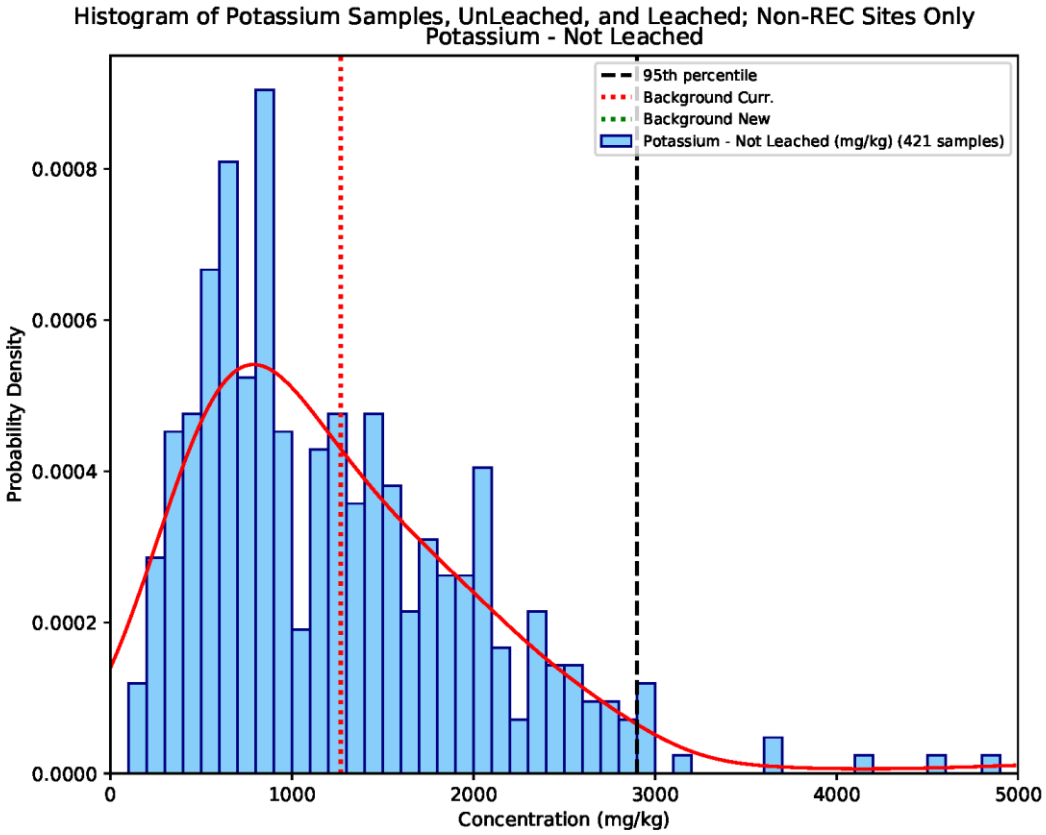


Figure 616. Histogram of RSL potassium concentrations, Non-REC (mg/kg)

Potassium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

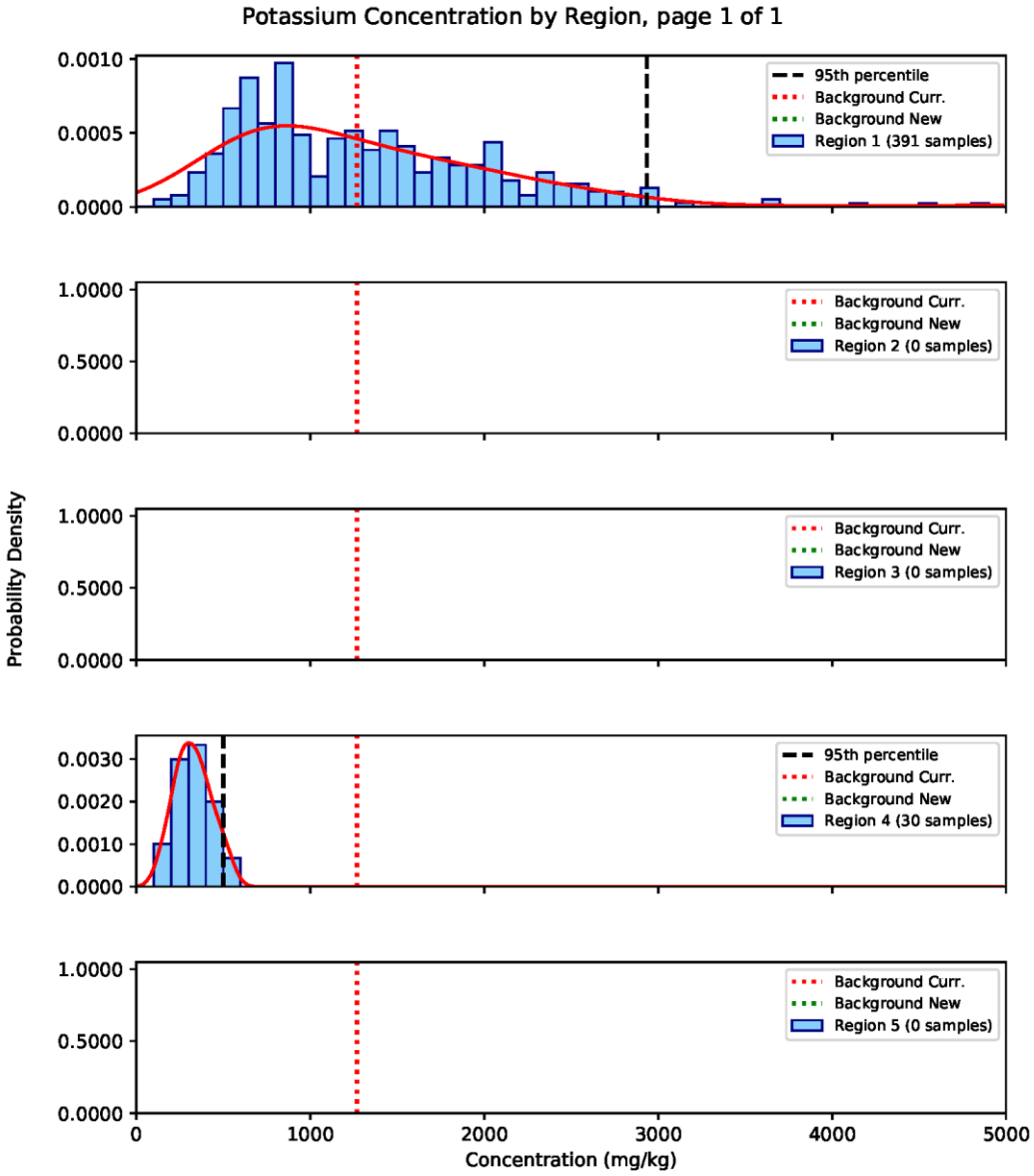


Figure 617. Histogram of RSL potassium concentrations by IDOT Region, Non-REC (mg/kg)

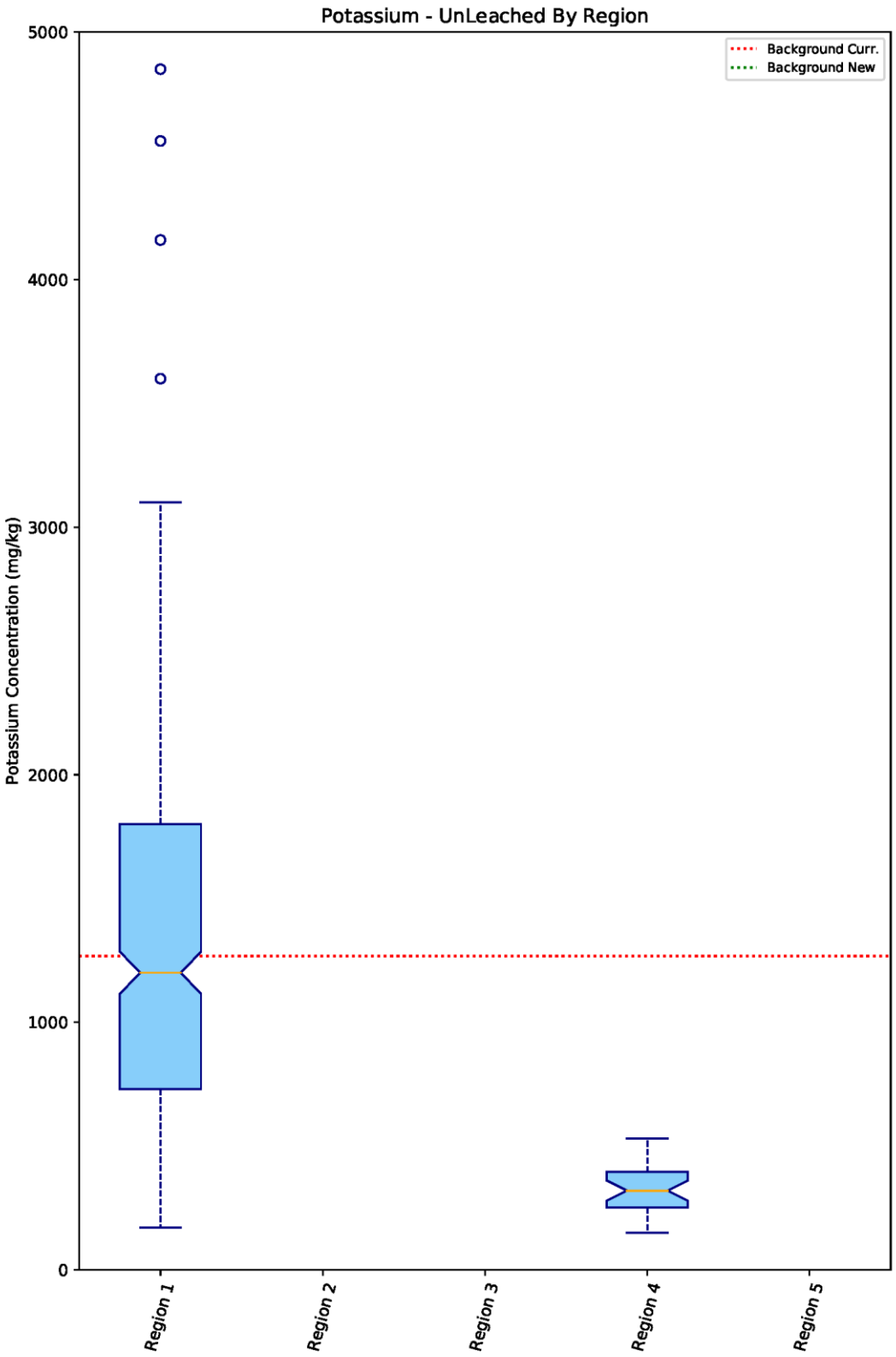


Figure 618. Boxplot of RSL potassium concentrations by IDOT Region, Non-REC (mg/kg)

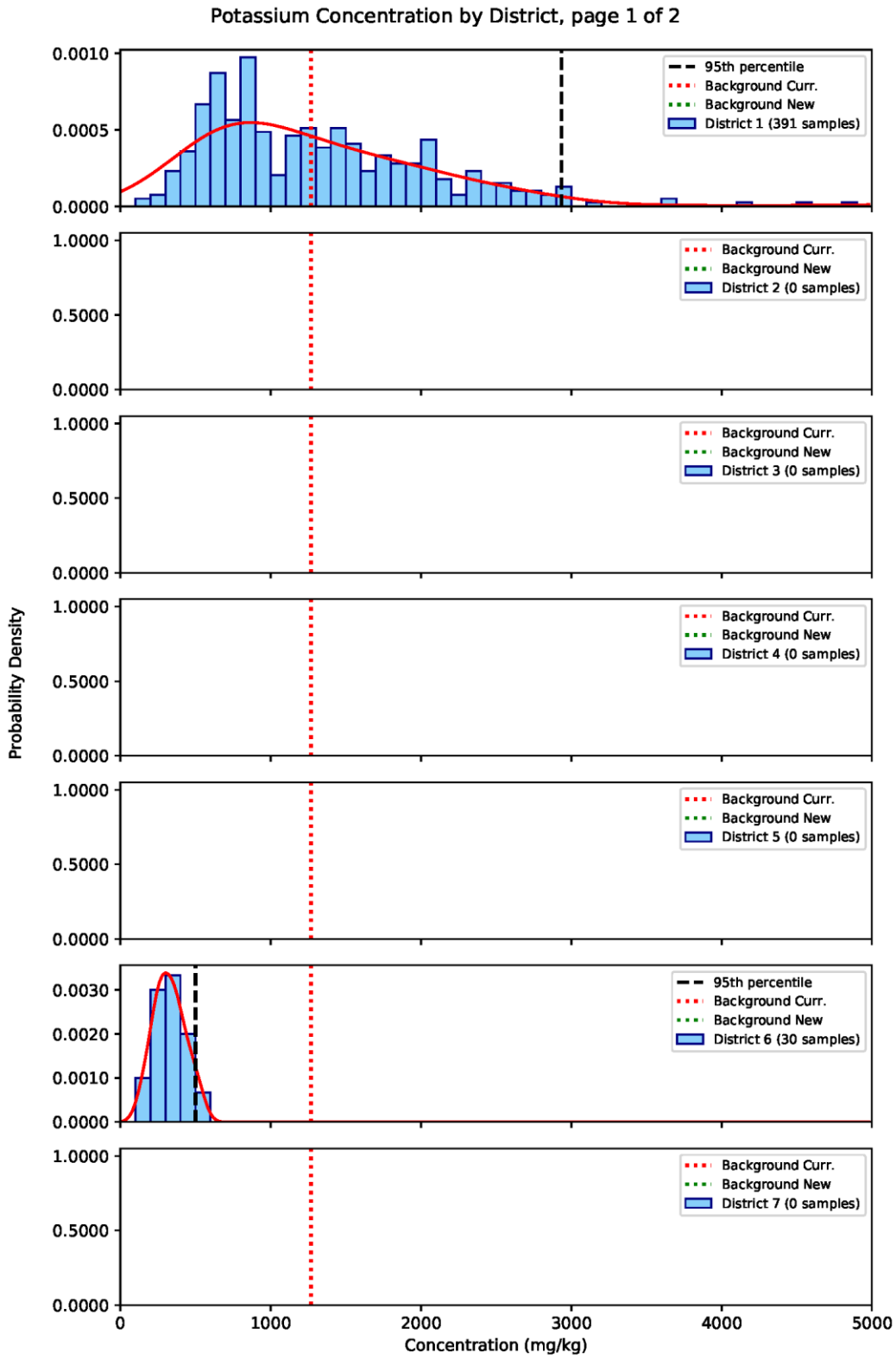


Figure 619. Histogram of RSL potassium concentrations by IDOT District, Non-REC (mg/kg), part 1

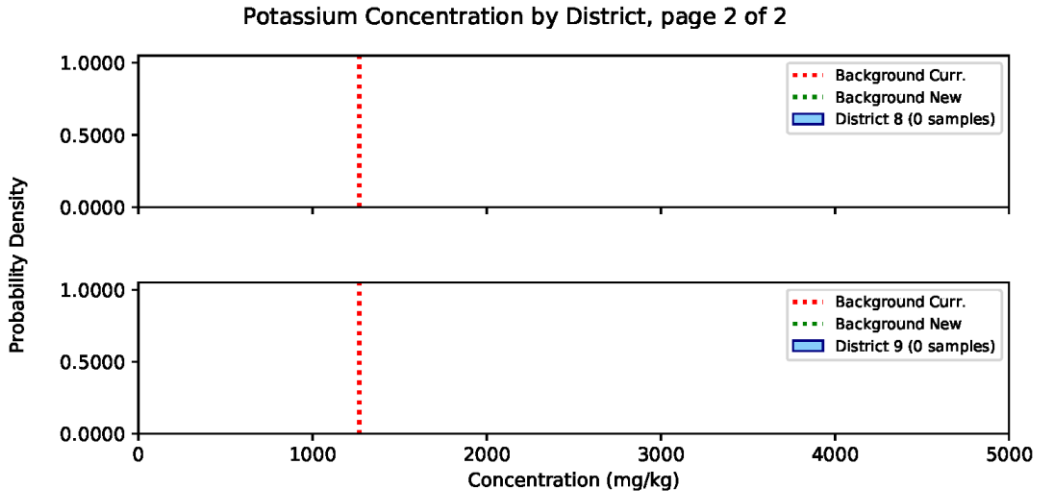


Figure 620. Histogram of RSL potassium concentrations by IDOT District, Non-REC (mg/kg), part 2

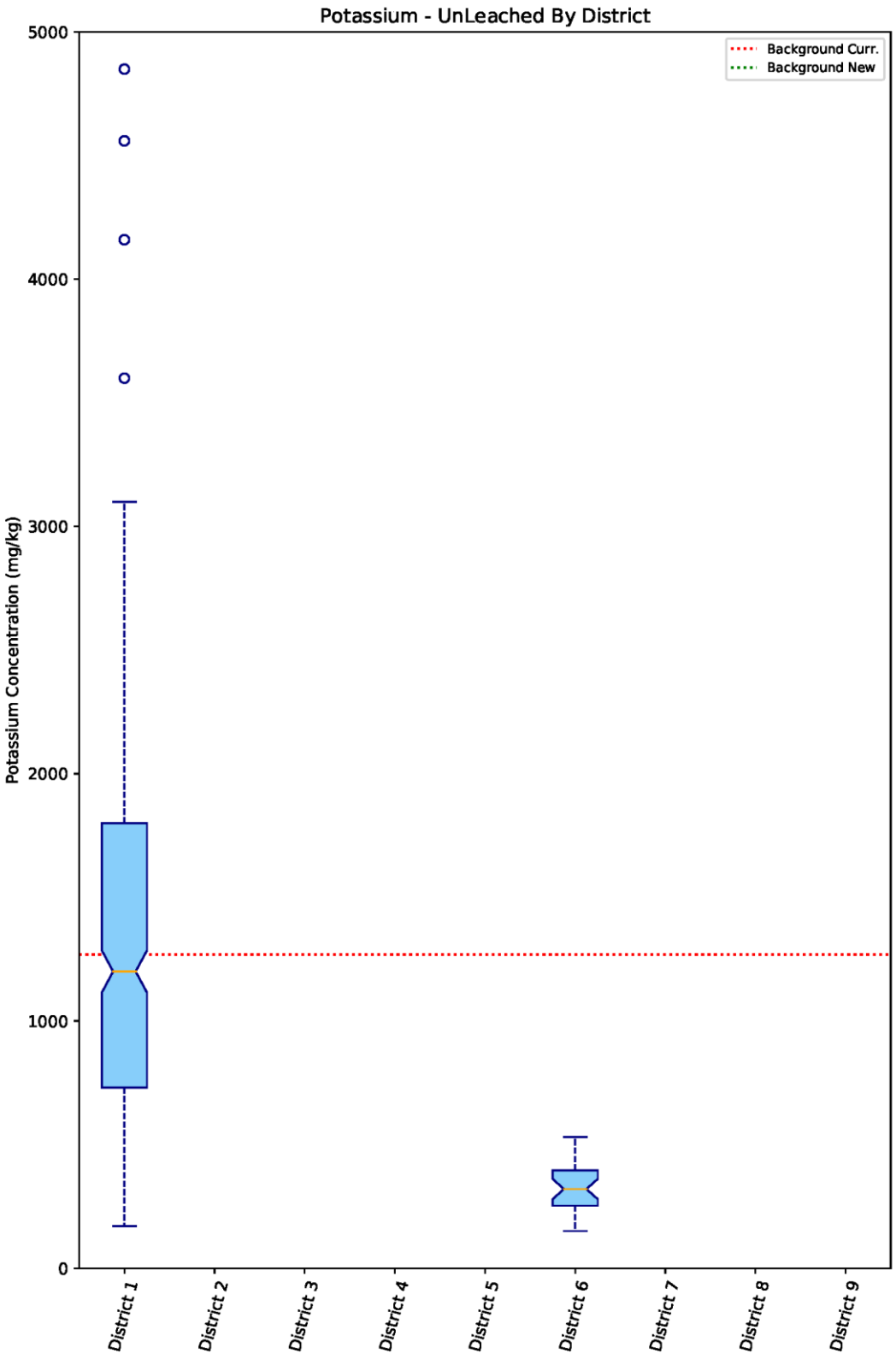


Figure 621. Boxplot of RSL potassium concentrations by IDOT District, Non-REC (mg/kg)

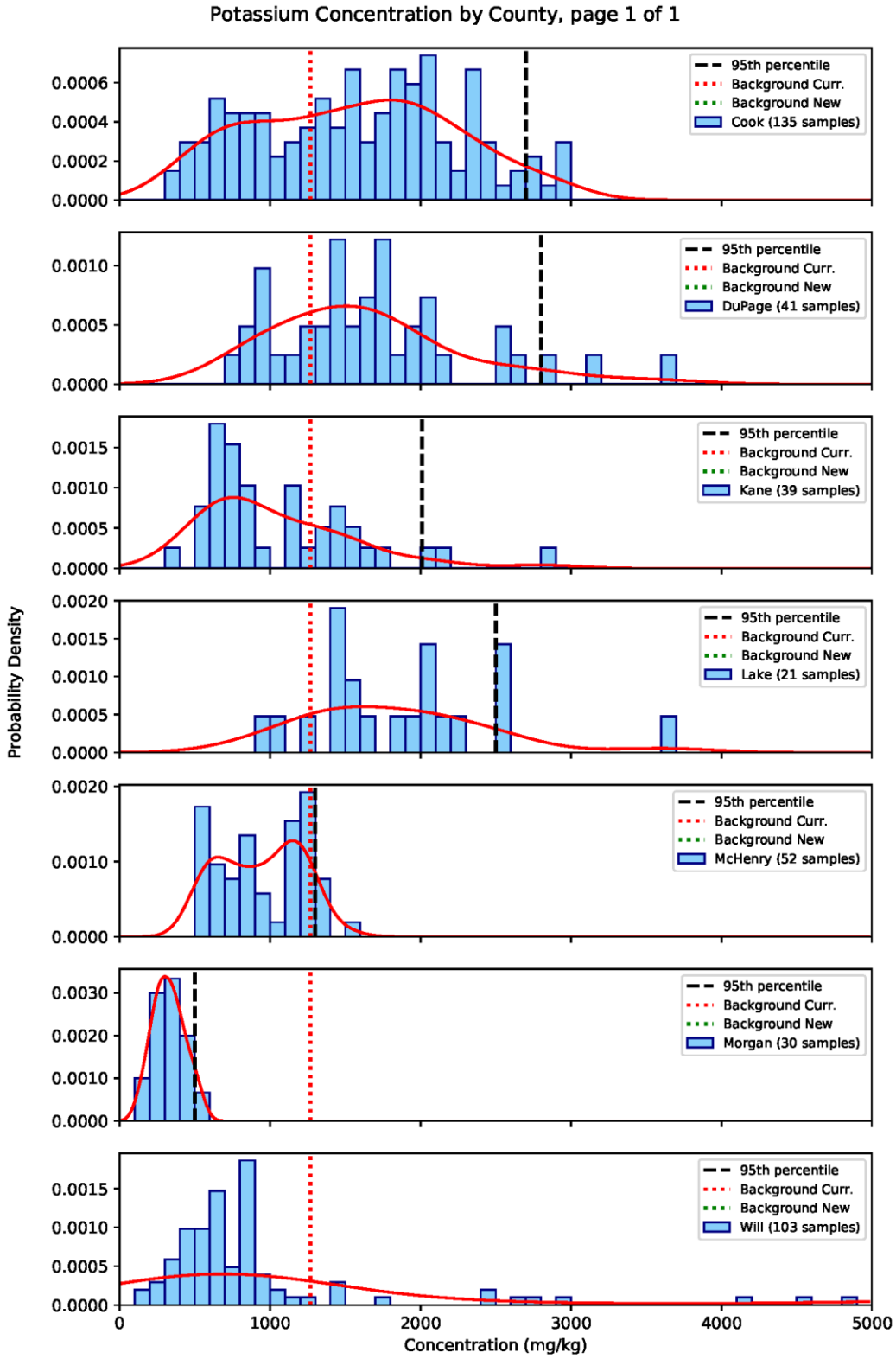


Figure 622. Histogram of RSL potassium concentrations by Illinois county, Non-REC (mg/kg)

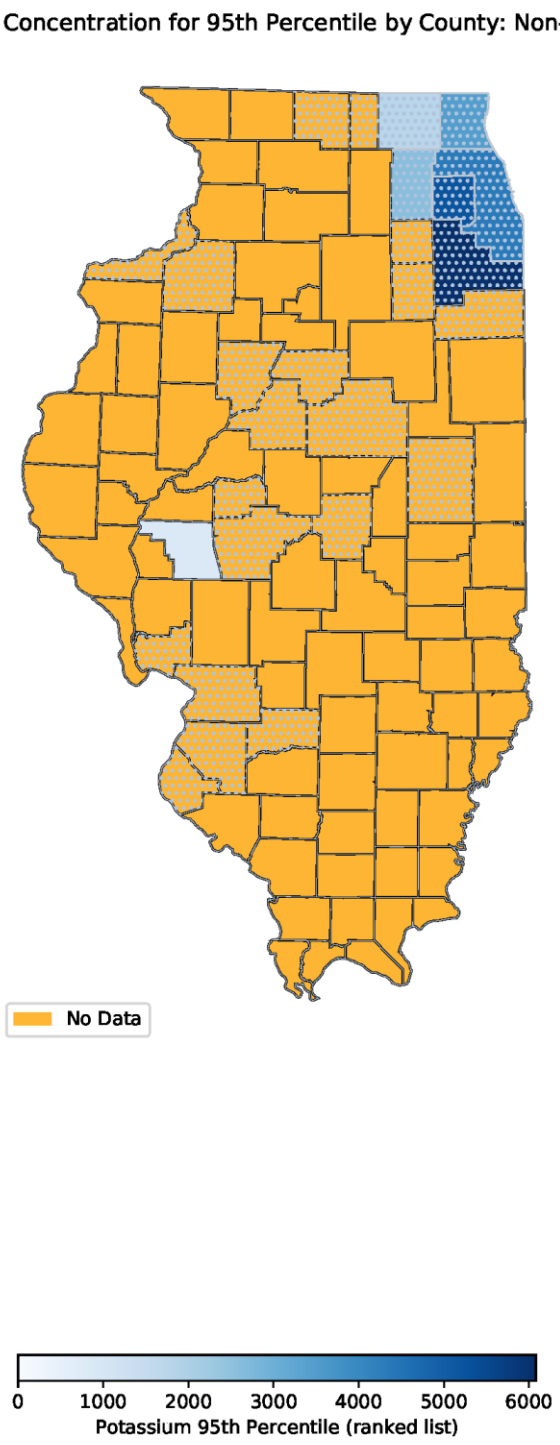


Figure 623. Map of RSL potassium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

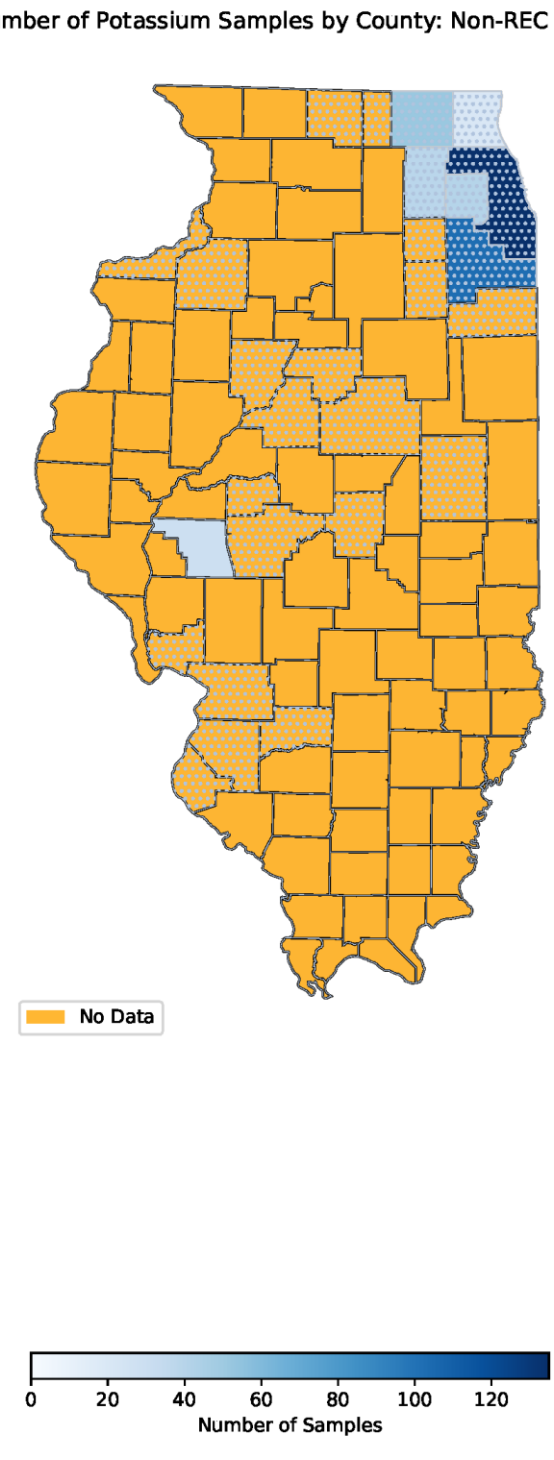


Figure 624. Map of RSL potassium sample quantity by Illinois county, Non-REC (mg/kg)

Q.3 POTASSIUM DE MINIMIS

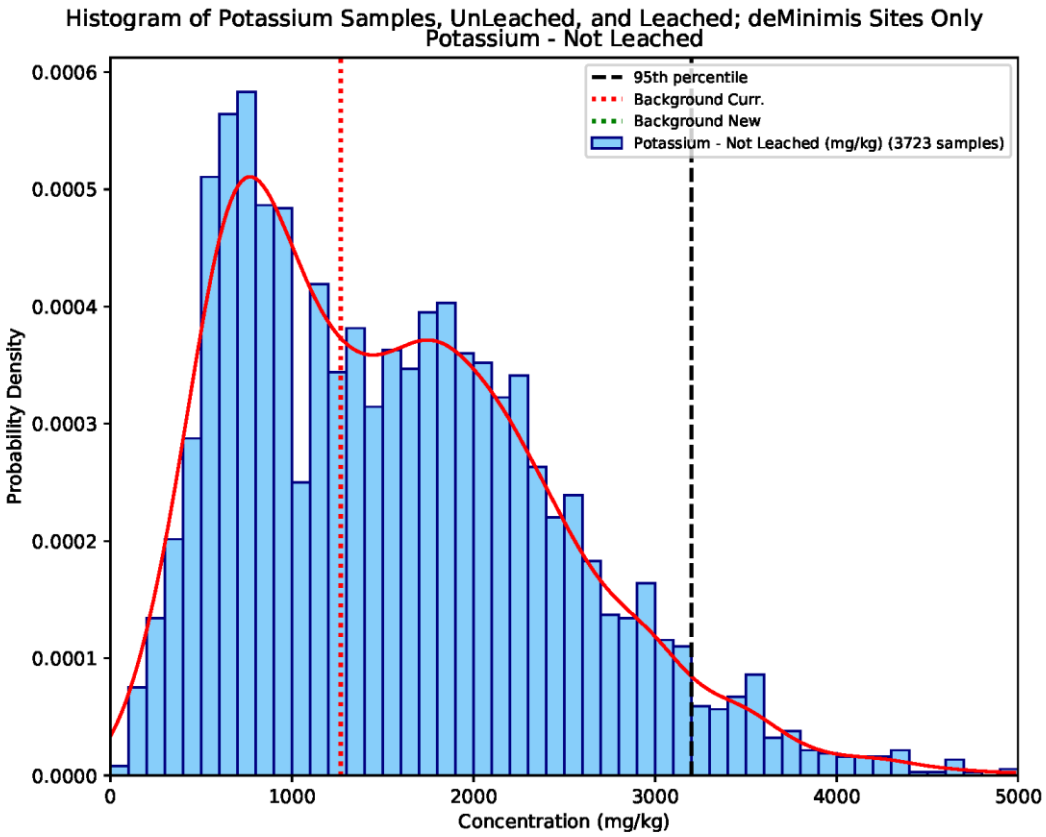


Figure 625. Histogram of RSL potassium concentrations, de minimis (mg/kg)

Potassium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

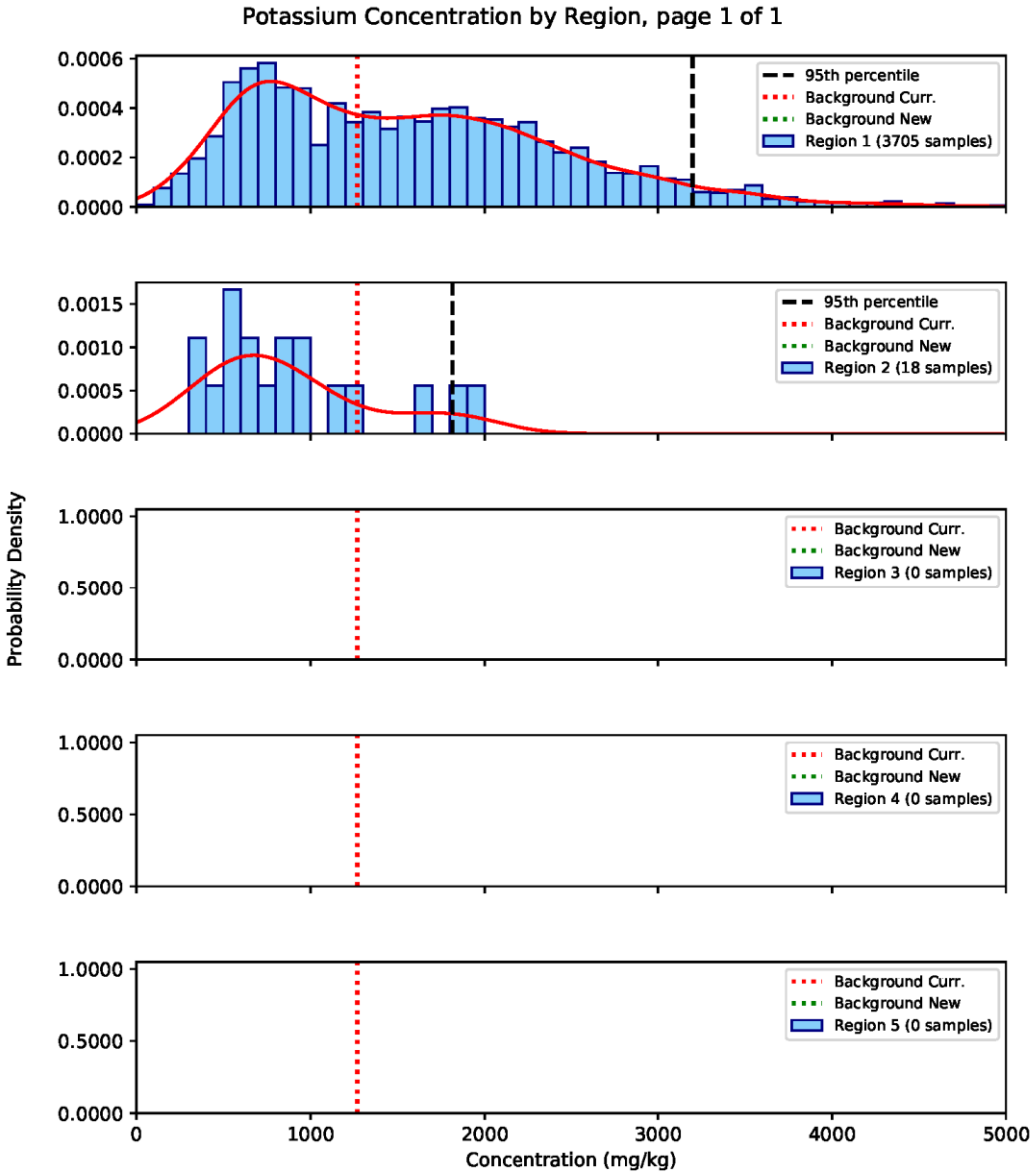


Figure 626. Histogram of RSL potassium concentrations by IDOT Region, de minimis (mg/kg)

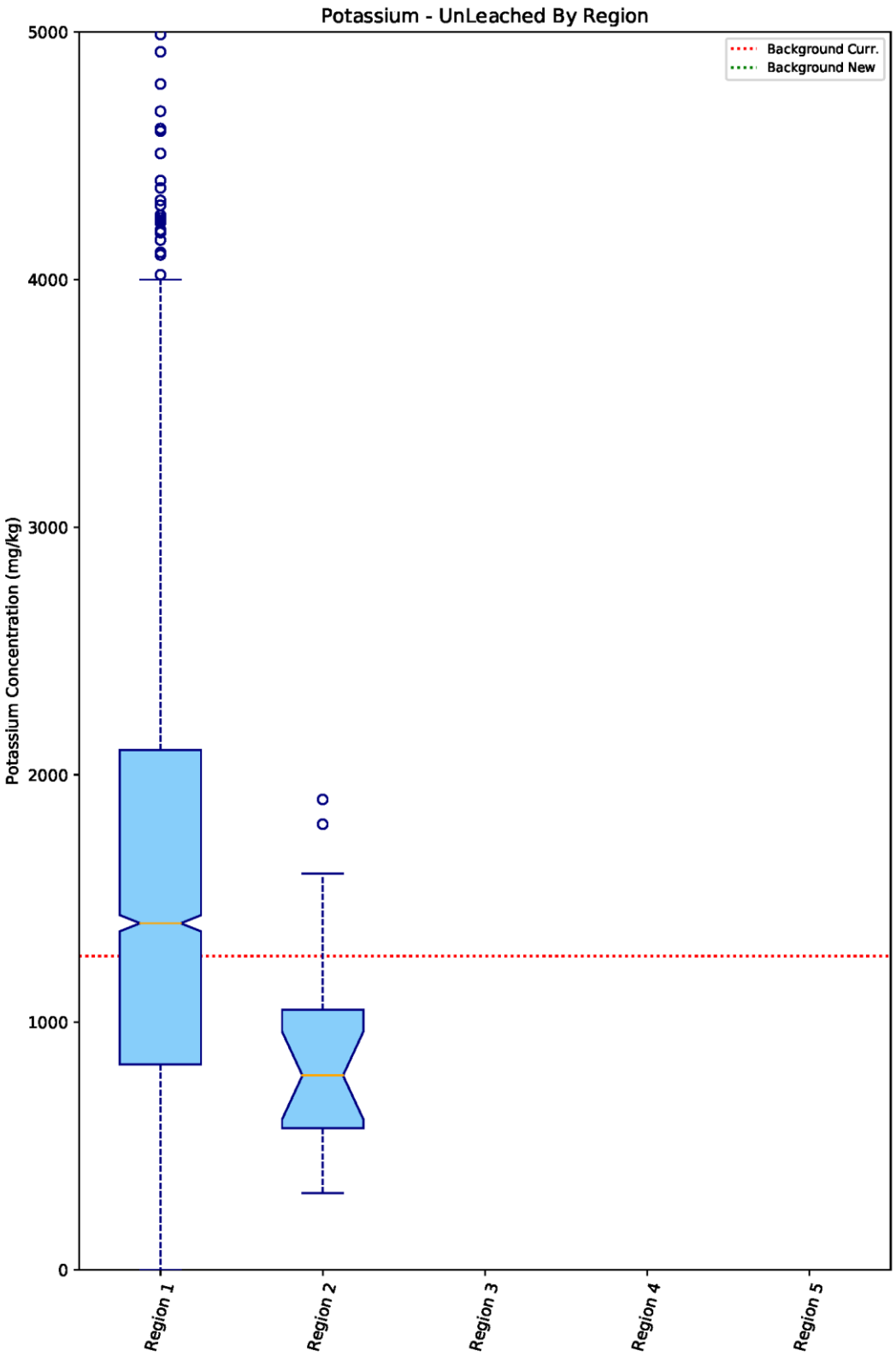


Figure 627. Boxplot of RSL potassium concentrations by IDOT Region, de minimis (mg/kg)

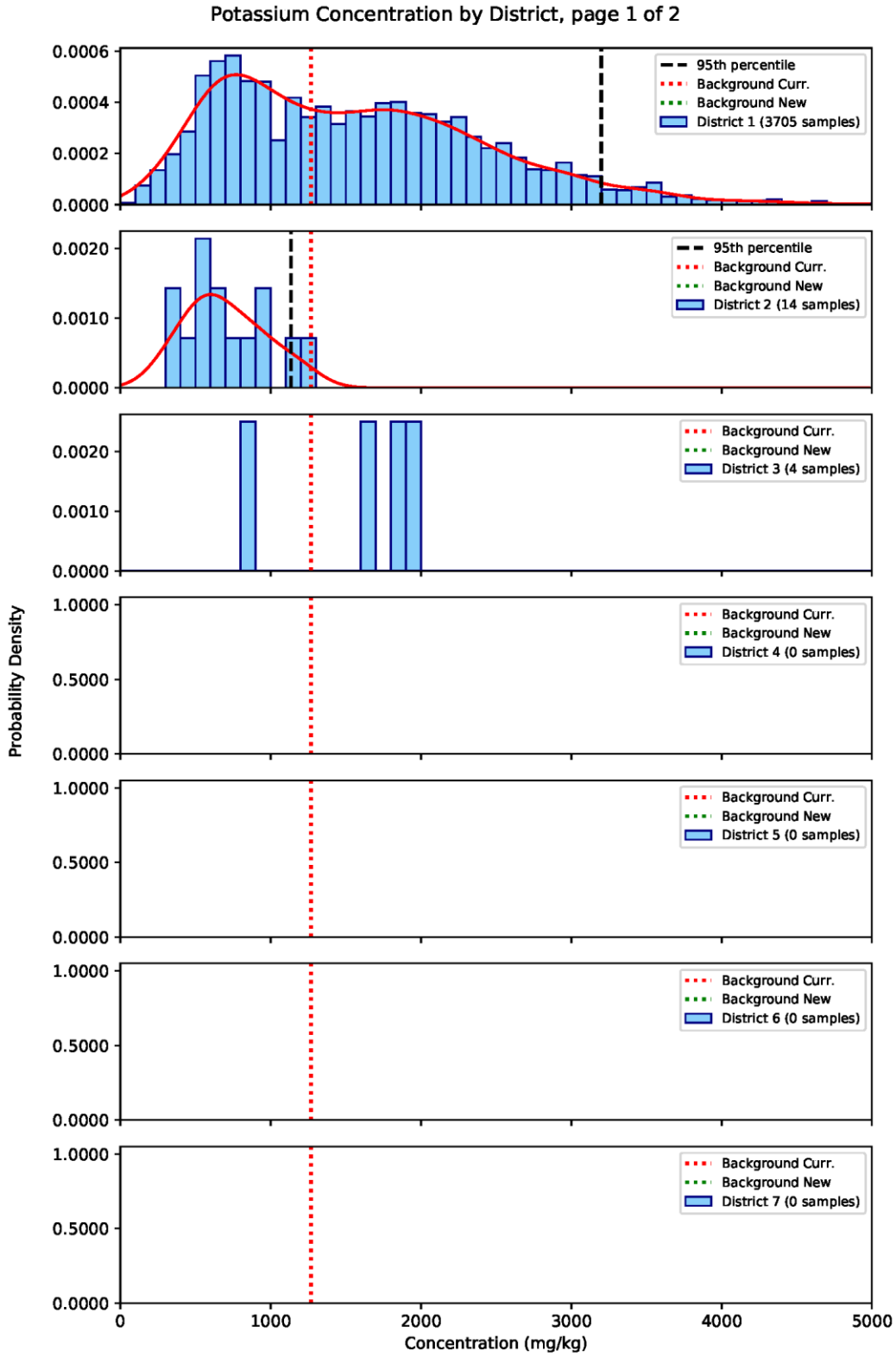


Figure 628. Histogram of RSL potassium concentrations by IDOT District, de minimis (mg/kg), part 1

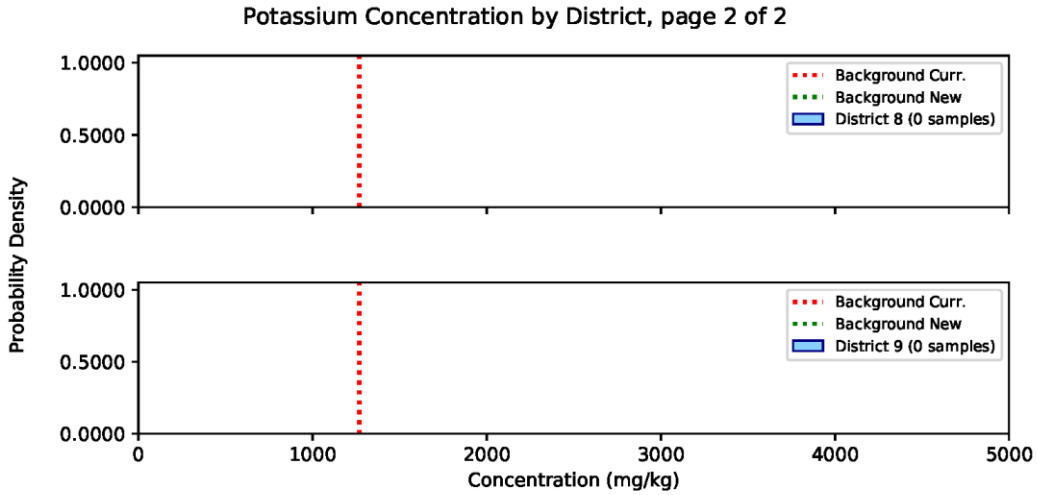


Figure 629. Histogram of RSL potassium concentrations by IDOT District, de minimis (mg/kg), part 2

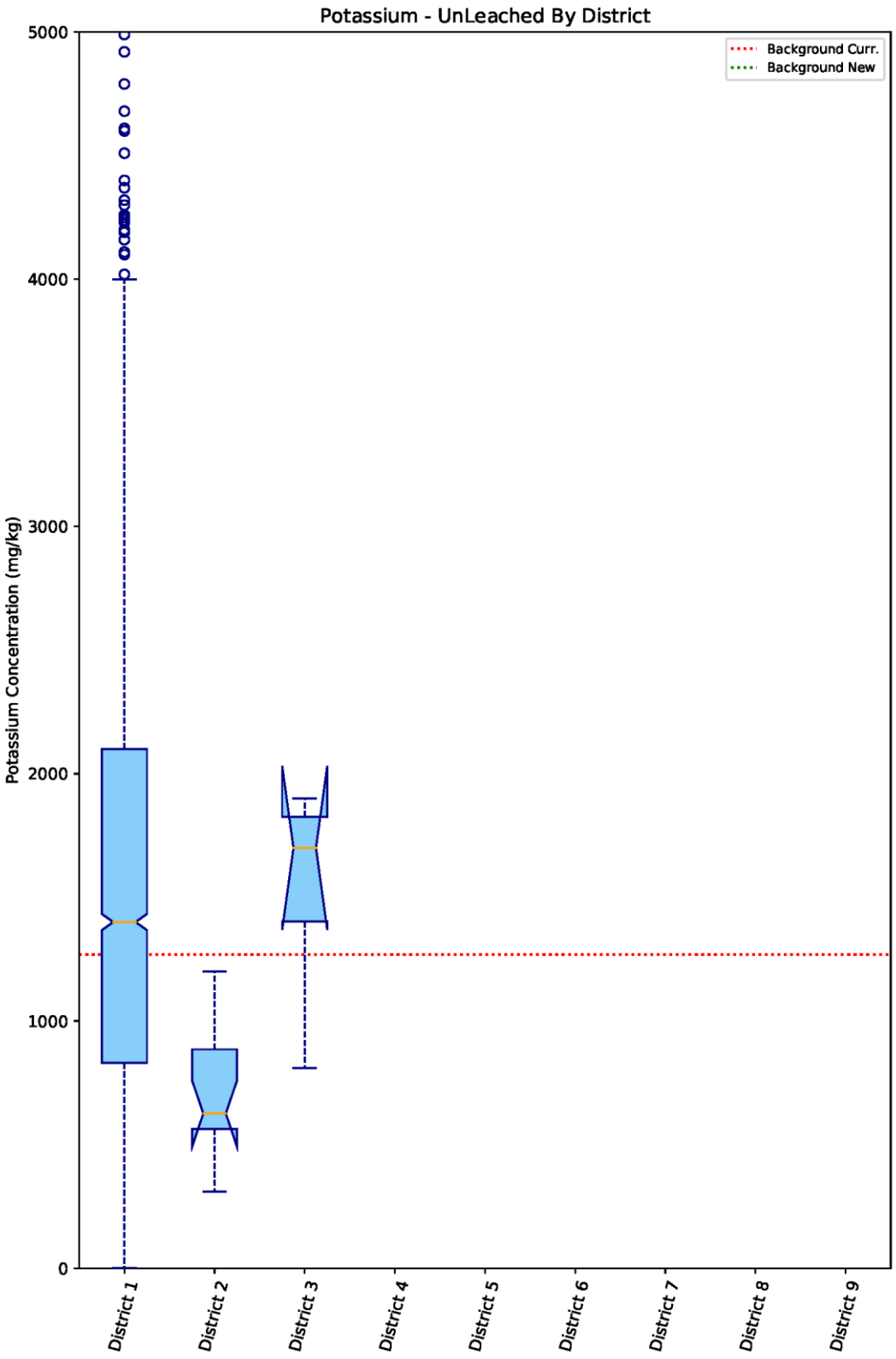


Figure 630. Boxplot of RSL potassium concentrations by IDOT District, de minimis (mg/kg)

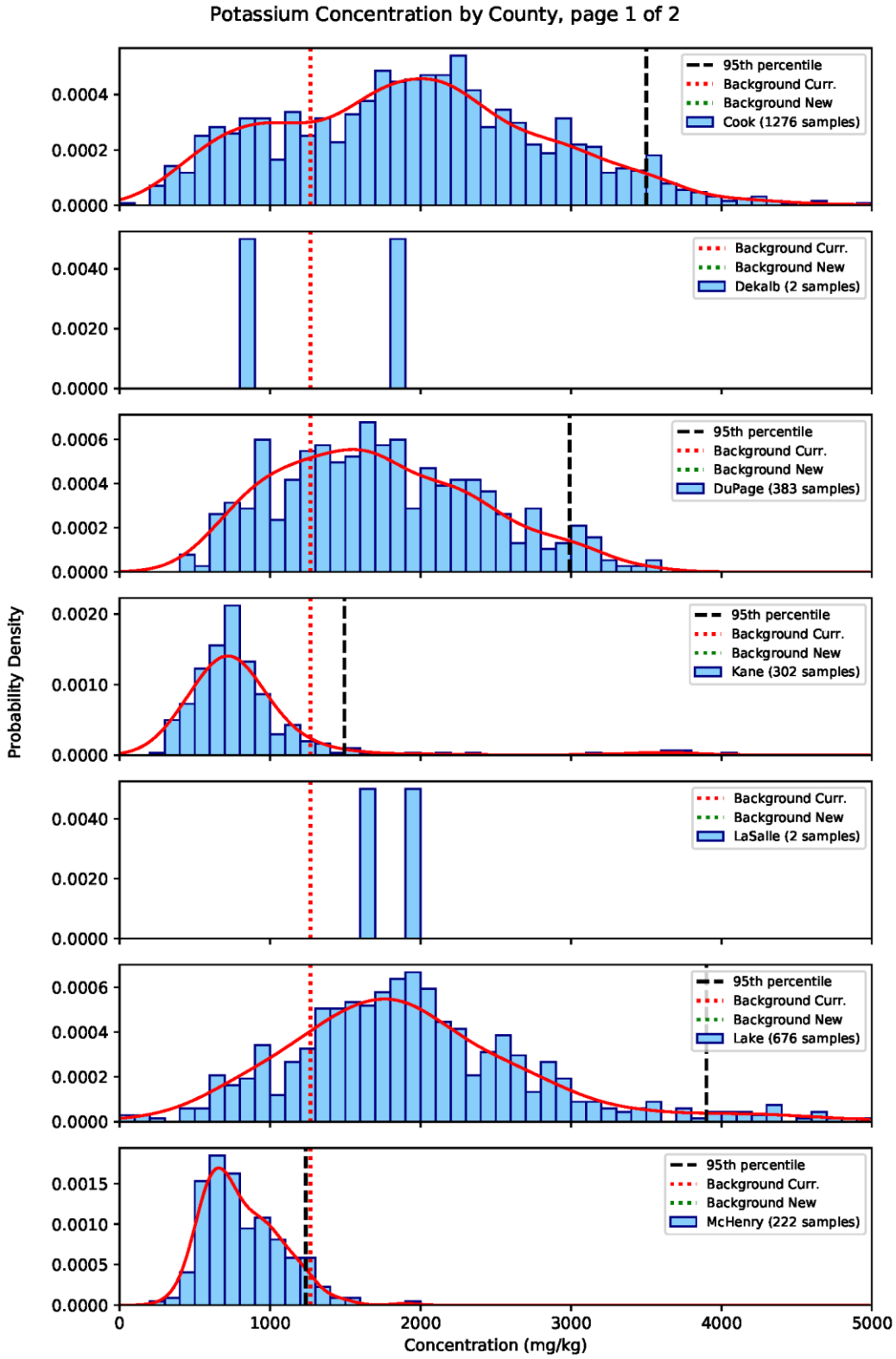


Figure 631. Histogram of RSL potassium concentrations by Illinois county, de minimis (mg/kg), part 1

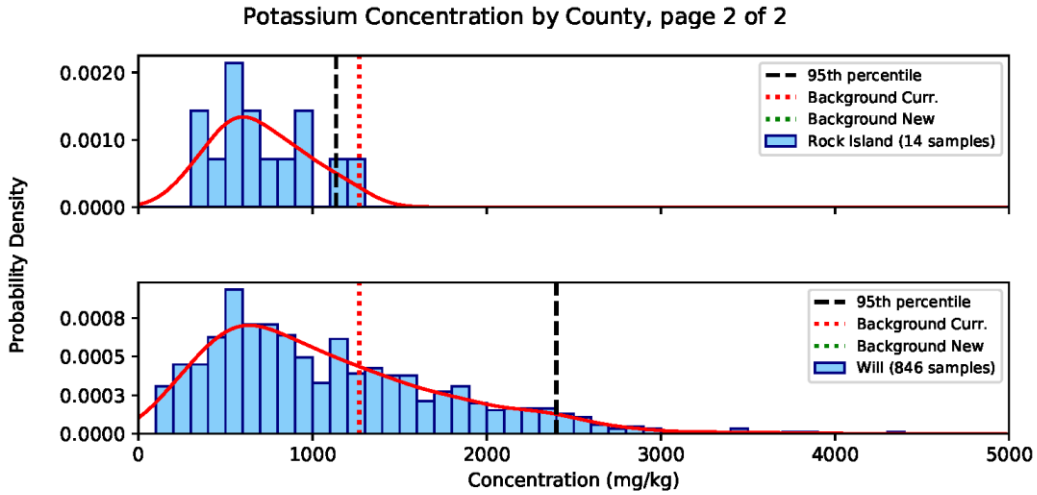


Figure 632. Histogram of RSL potassium concentrations by Illinois county, de minimis (mg/kg), part 2

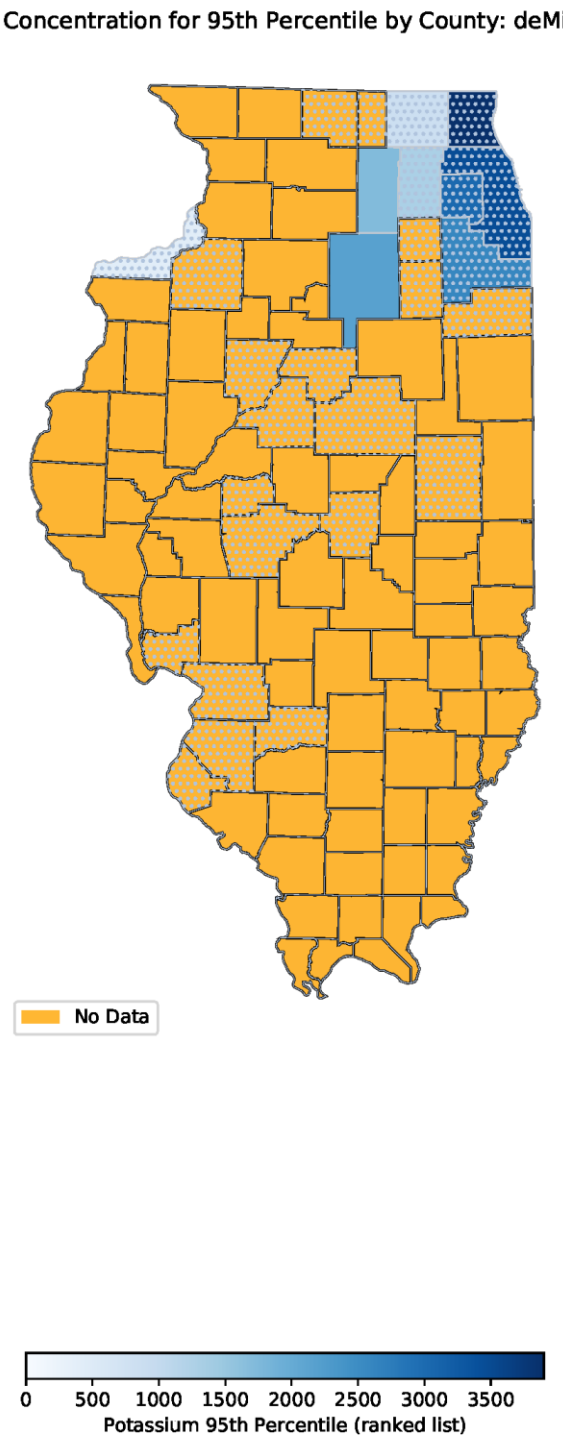


Figure 633. Map of RSL potassium 95th percentile concentration by Illinois county, de minimis (mg/kg)

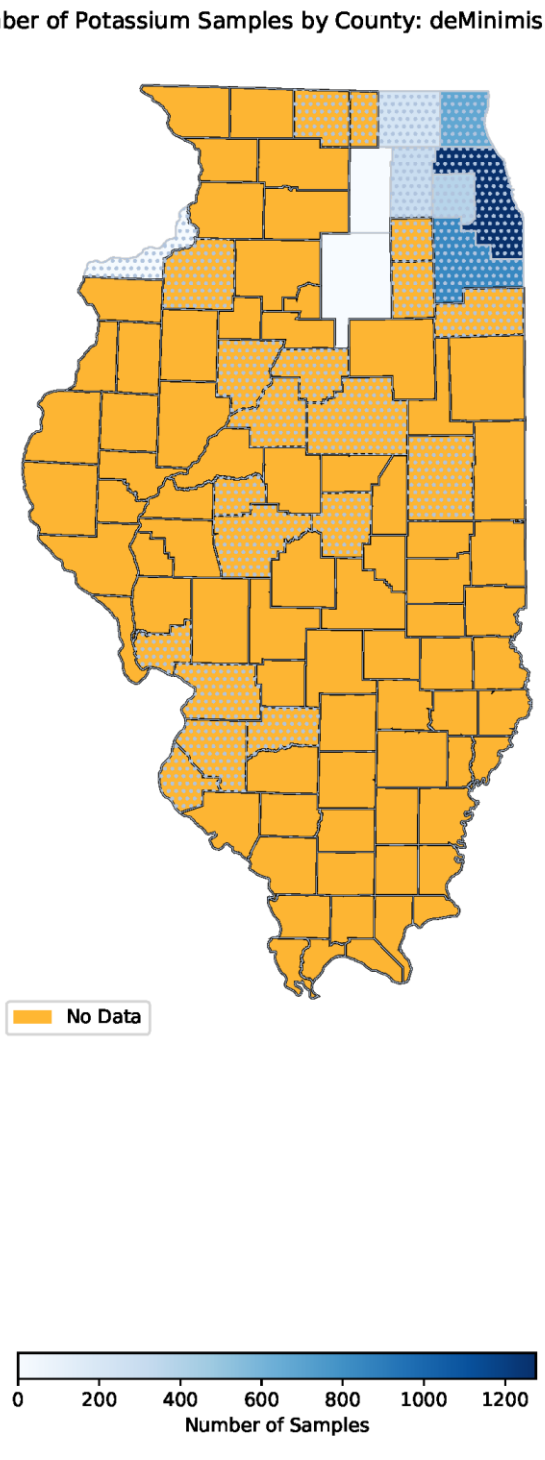


Figure 634. Map of RSL potassium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX R. ANALYTE ANALYSIS: SELENIUM

R.1 SELENIUM REC

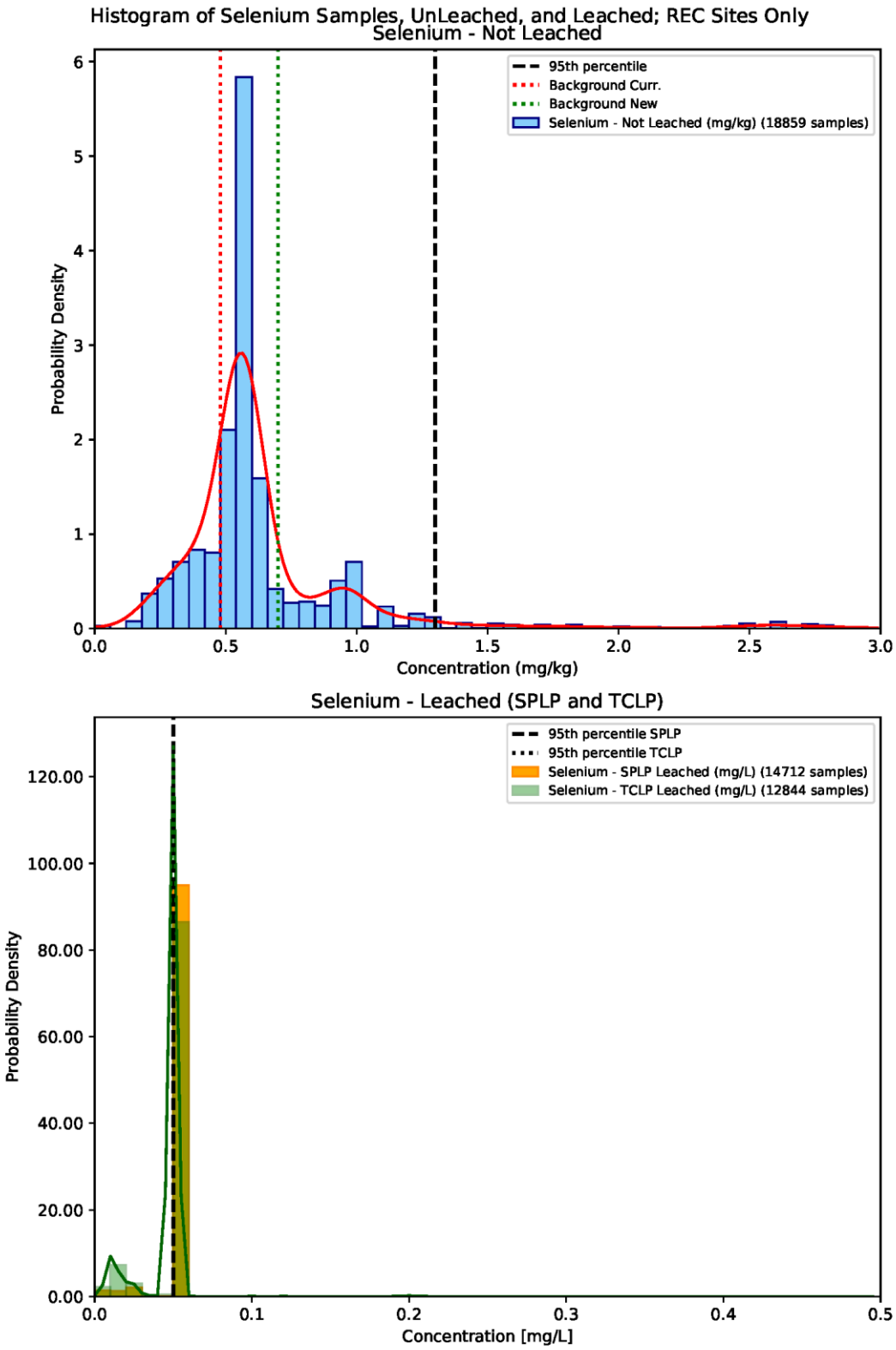


Figure 635. Histogram of RSL selenium concentrations, REC (mg/kg)

Selenium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

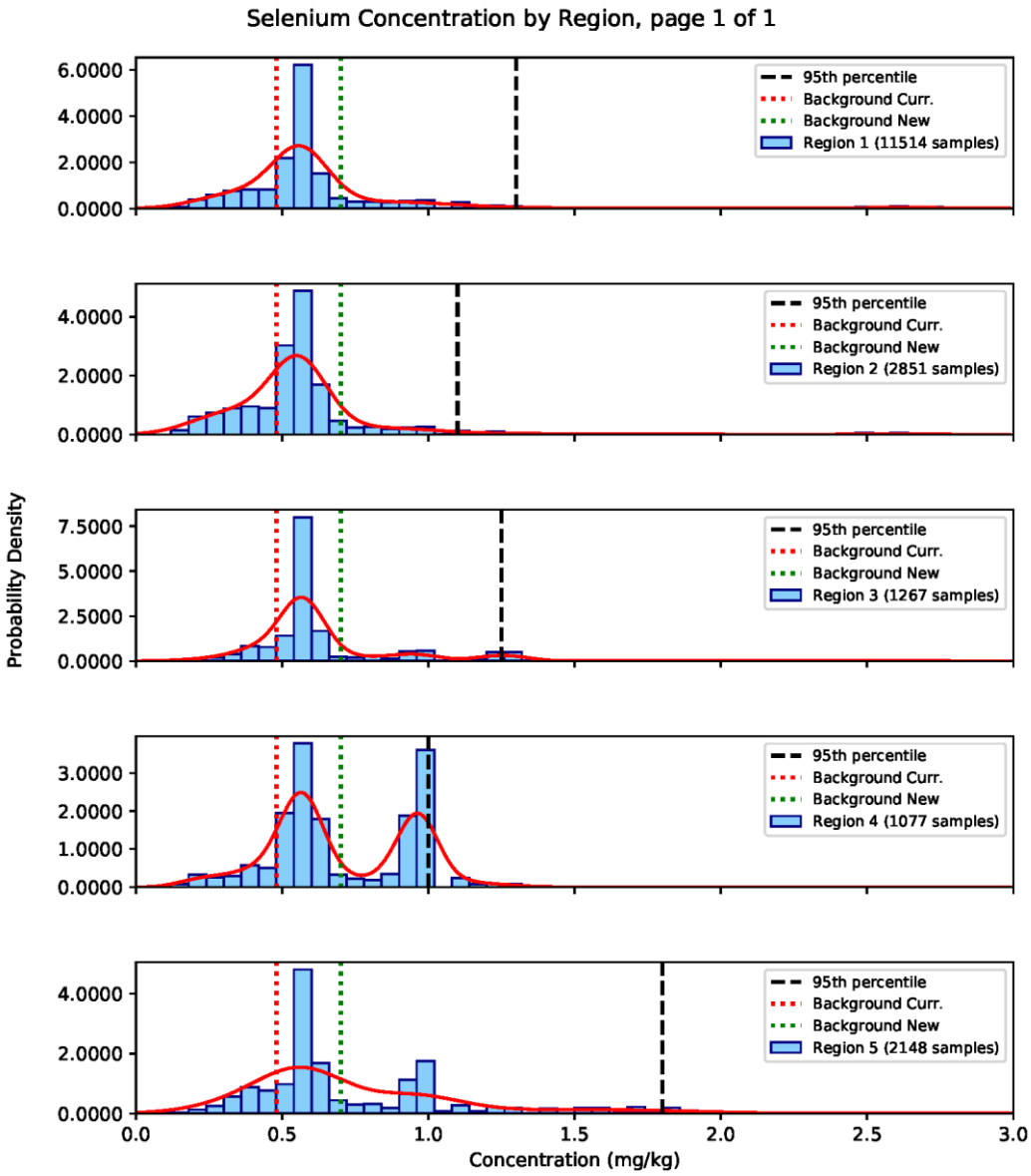


Figure 636. Histogram of RSL selenium concentrations by IDOT Region, REC (mg/kg)

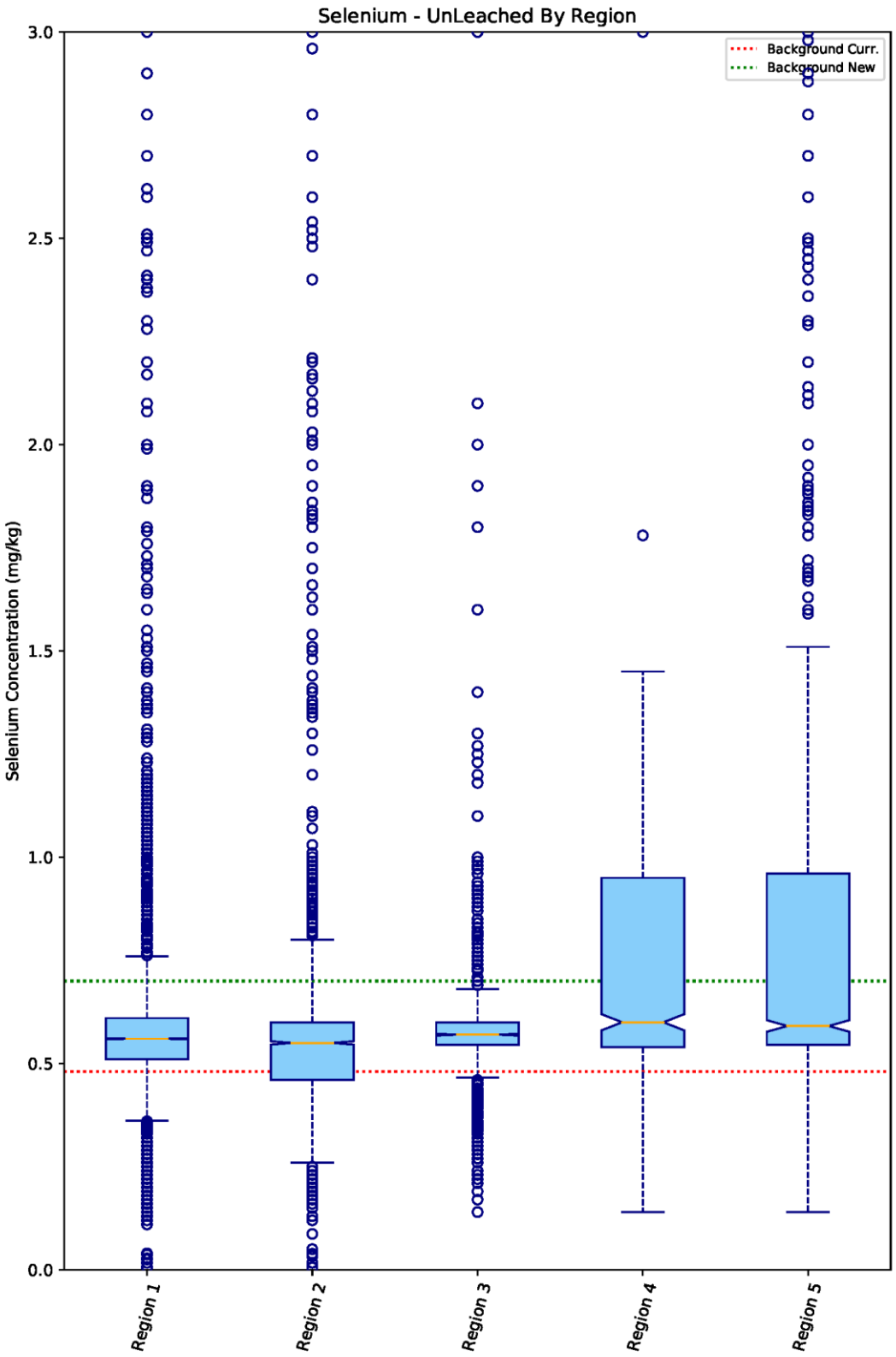


Figure 637. Boxplot of RSL selenium concentrations by IDOT Region, REC (mg/kg)

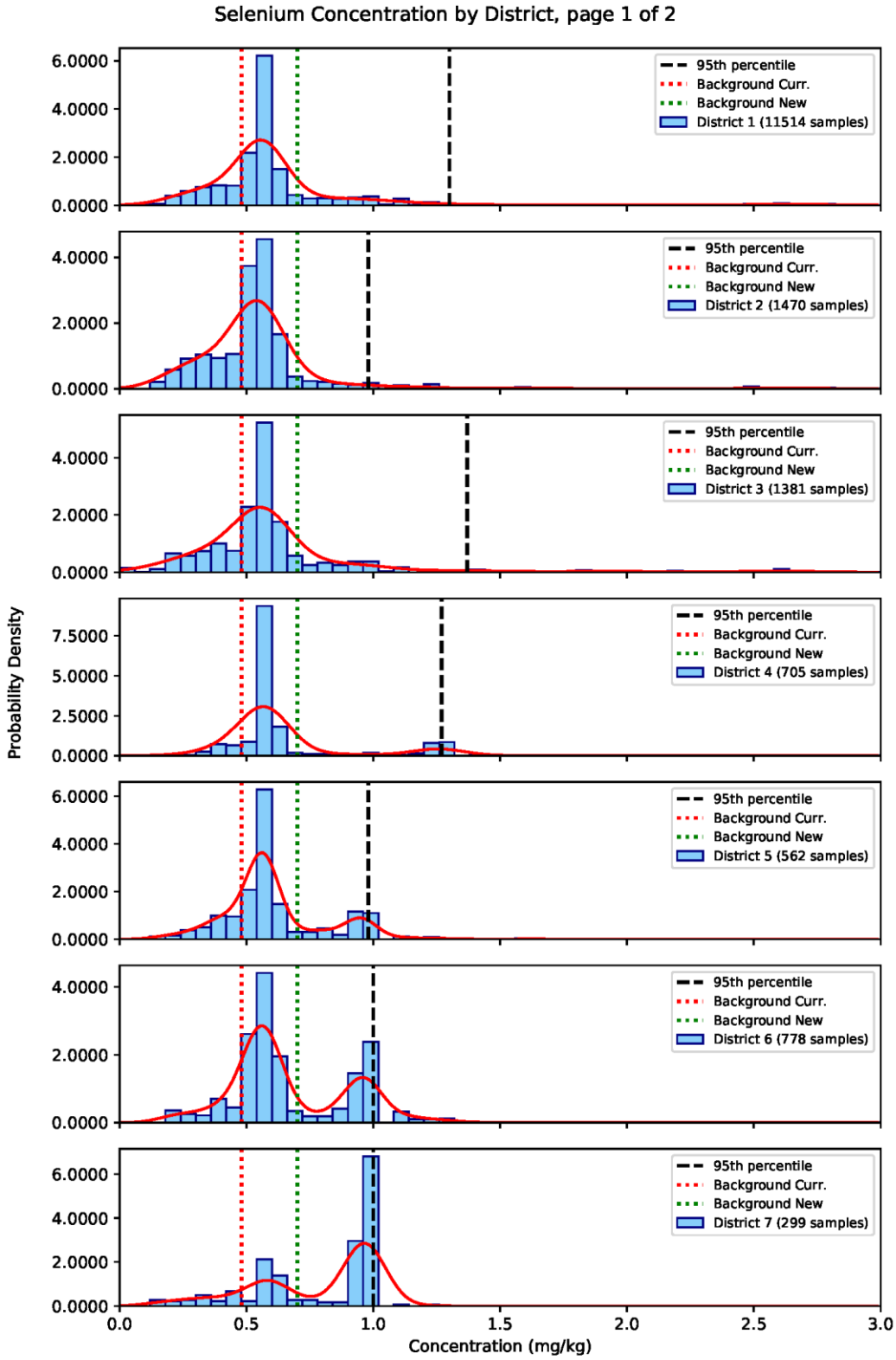


Figure 638. Histogram of RSL selenium concentrations by IDOT District, REC (mg/kg), part 1

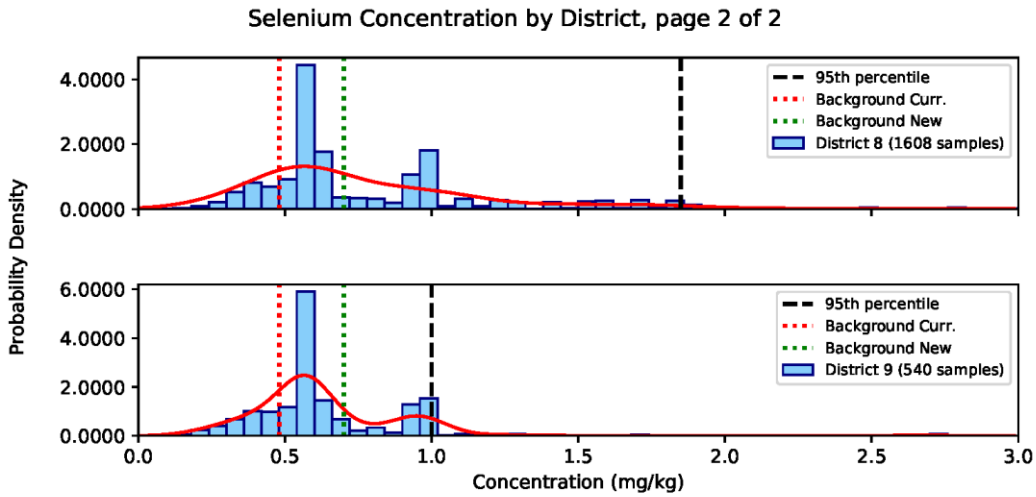


Figure 639. Histogram of RSL selenium concentrations by IDOT District, REC (mg/kg), part 2

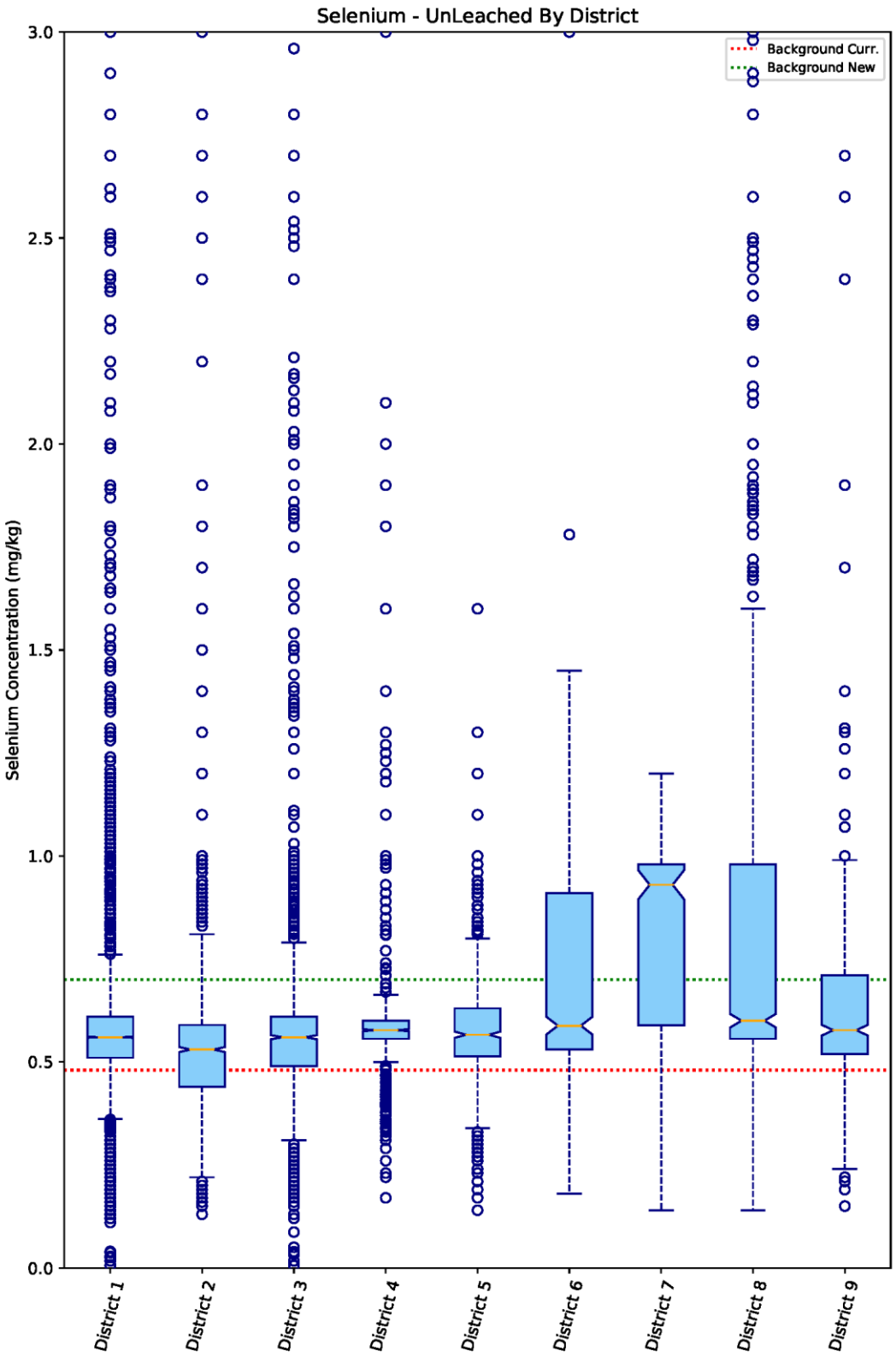


Figure 640. Boxplot of RSL selenium concentrations by IDOT District, REC (mg/kg)

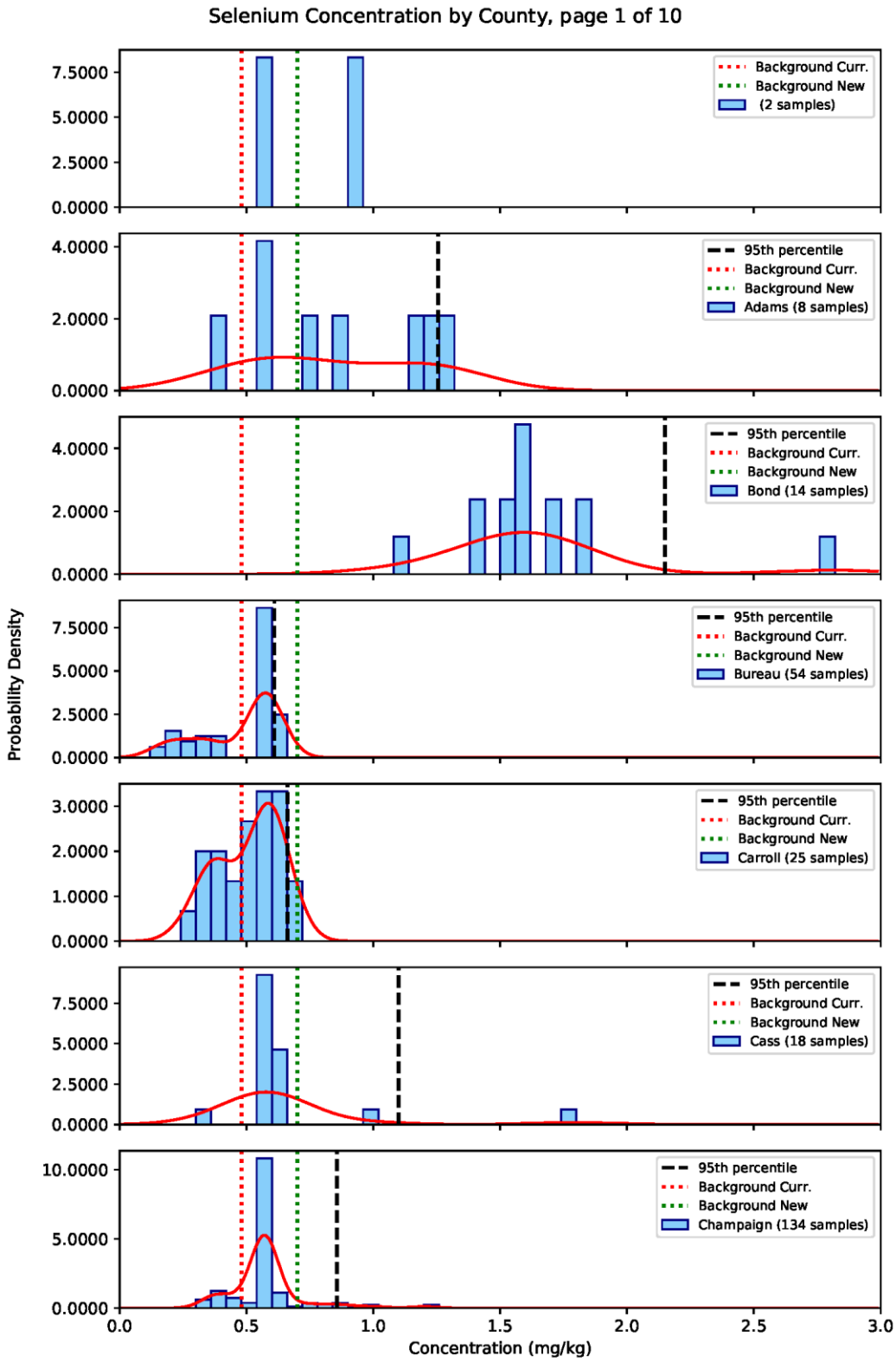


Figure 641. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 1

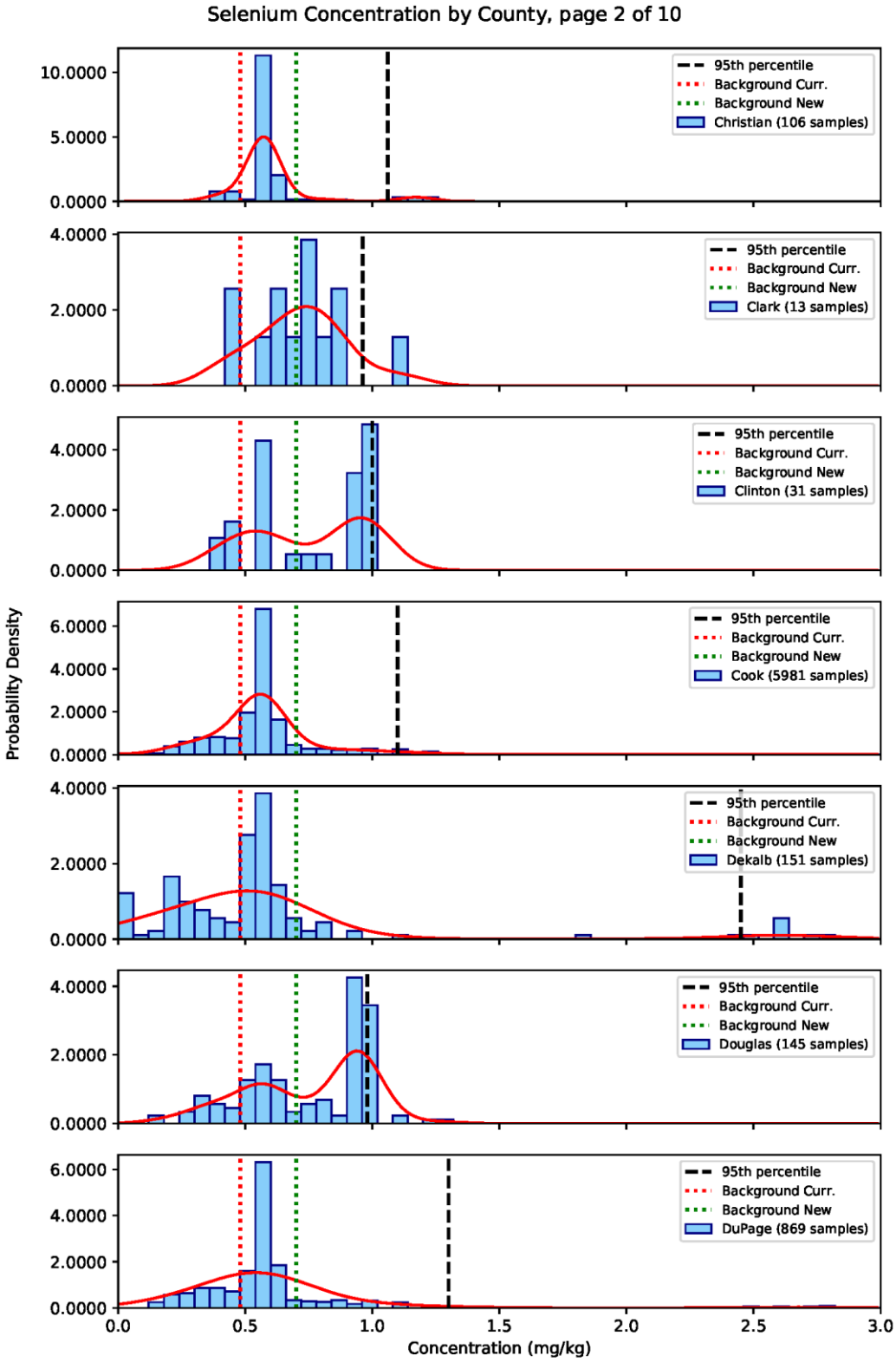


Figure 642. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 2

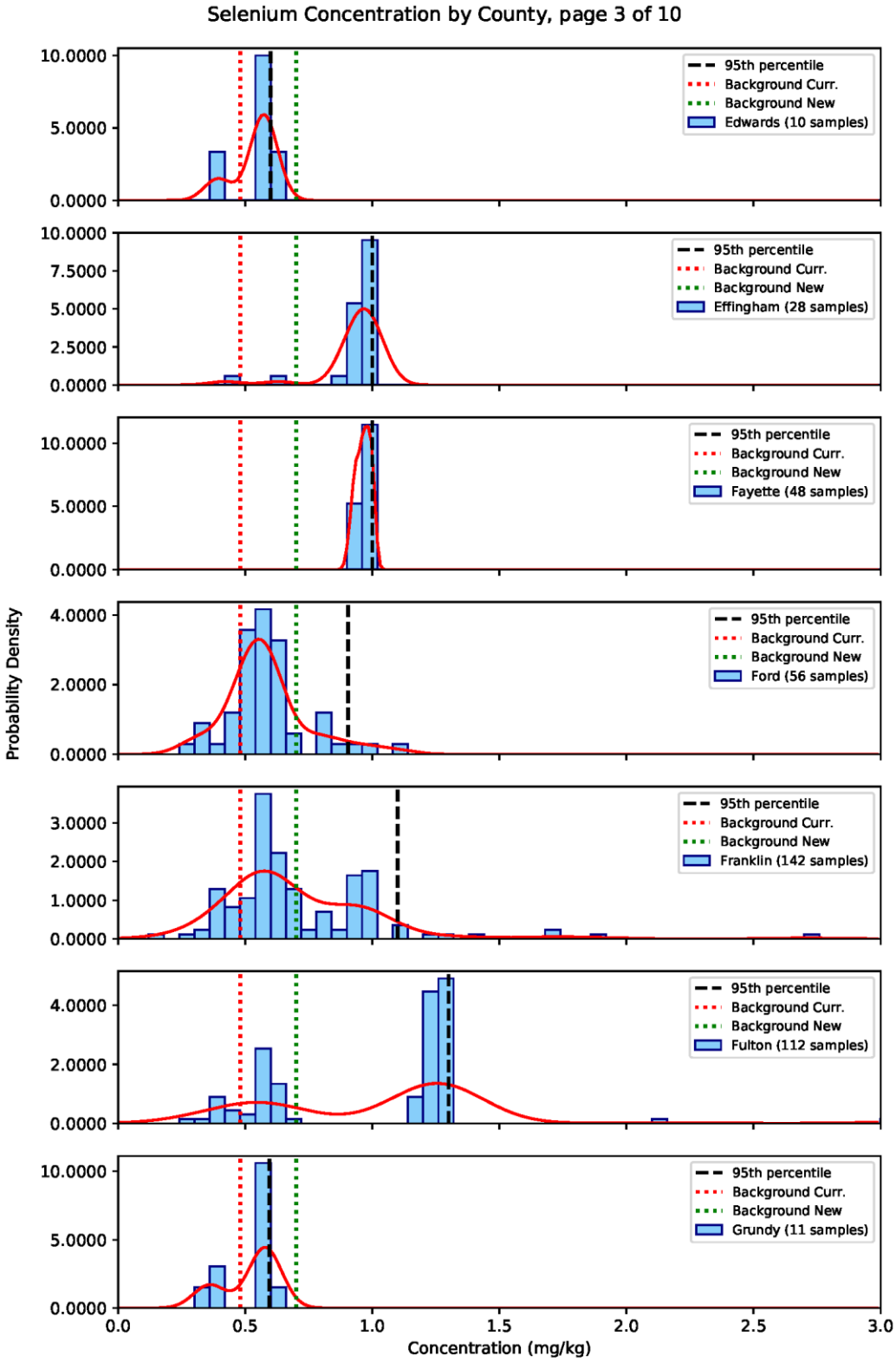


Figure 643. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 3

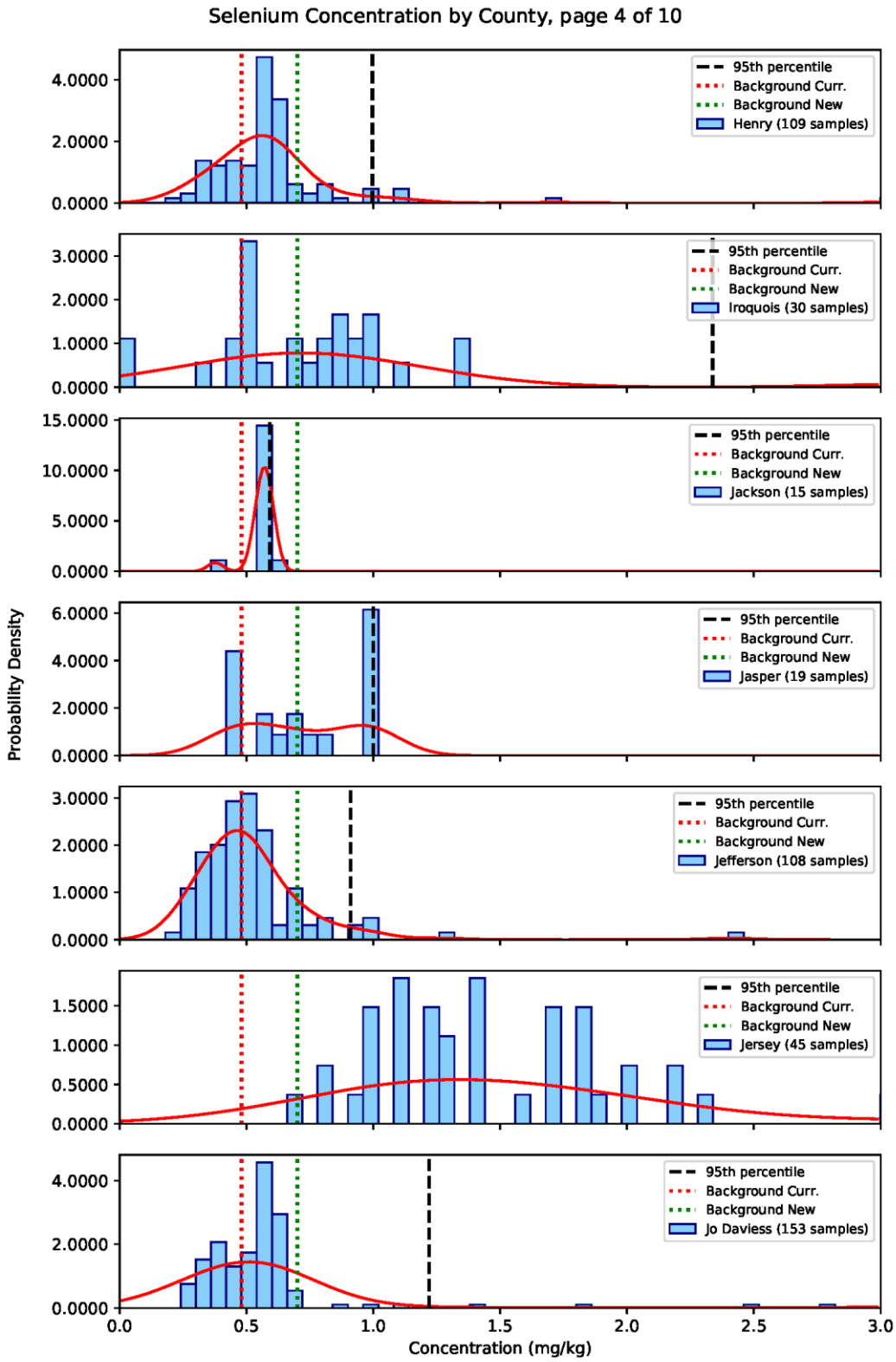


Figure 644. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 4

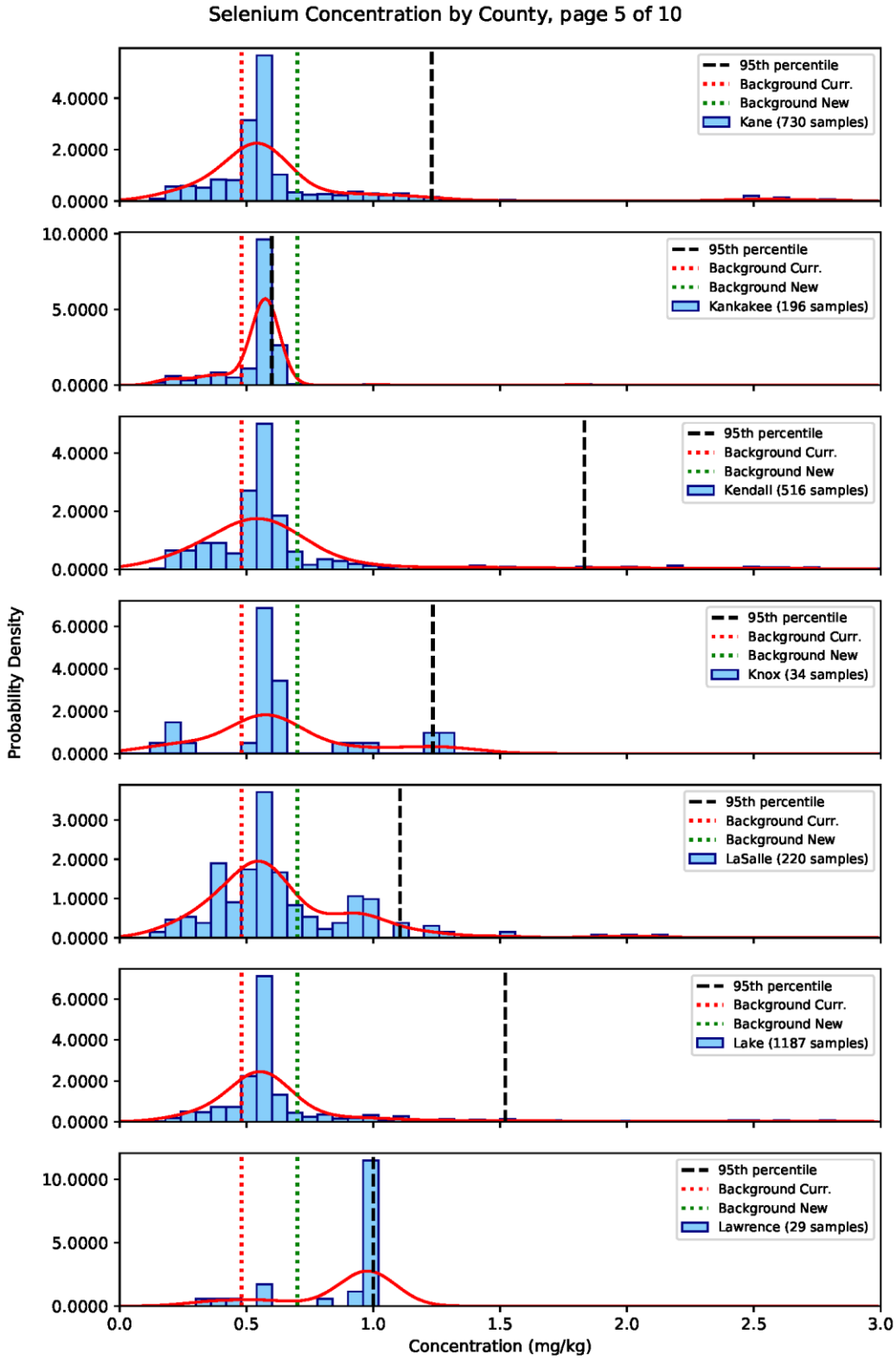


Figure 645. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 5

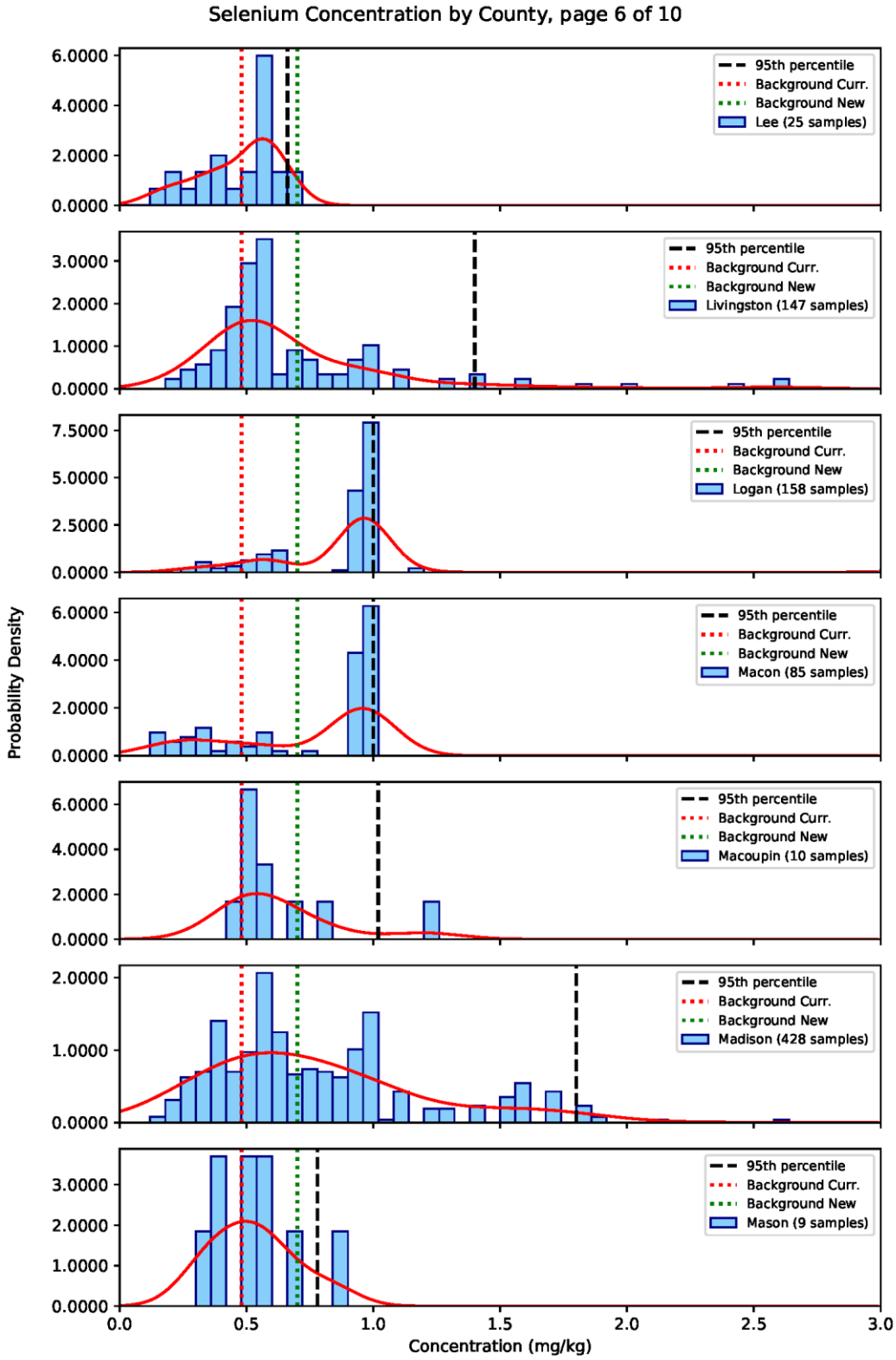


Figure 646. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 6

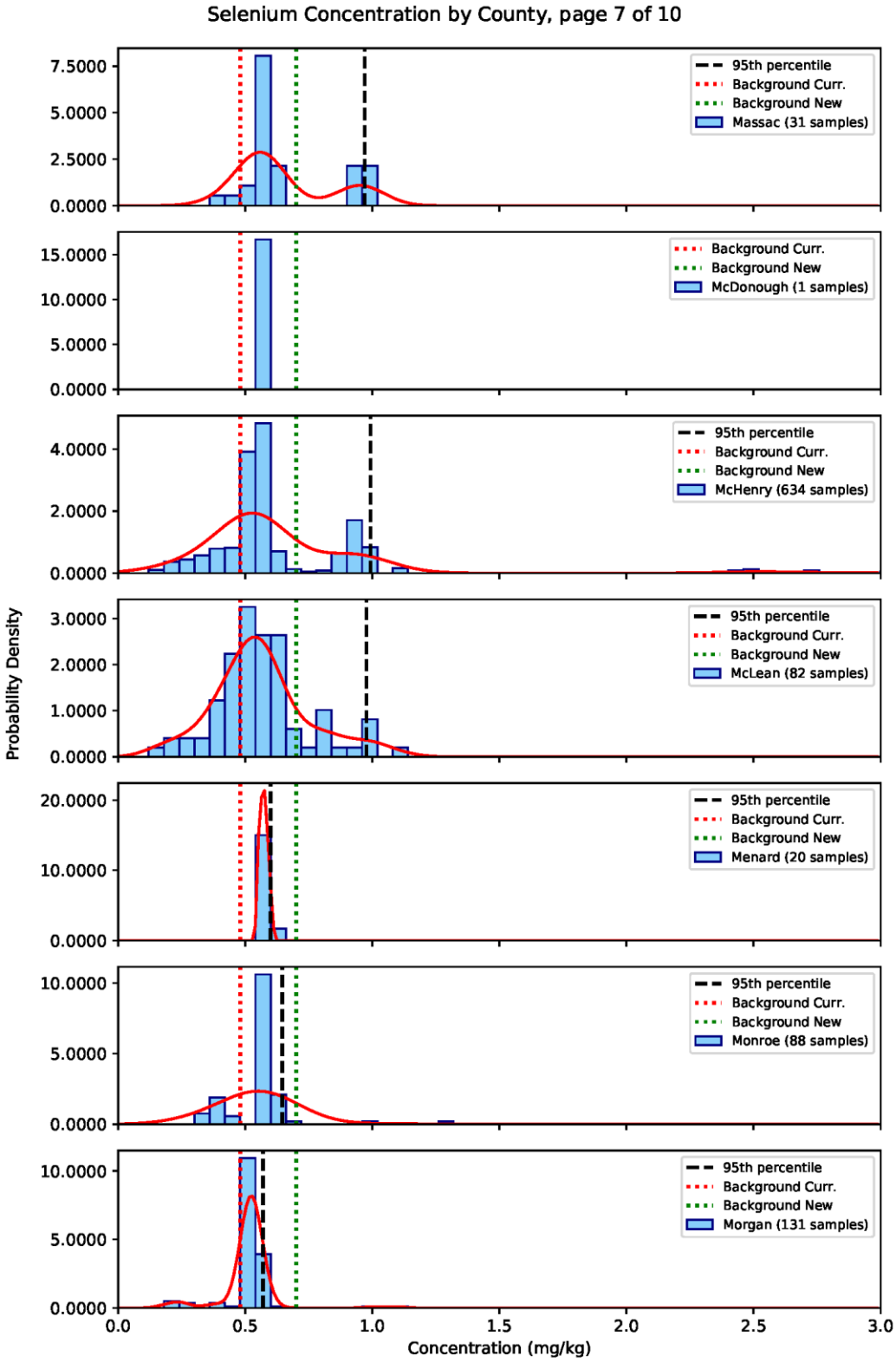


Figure 647. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 7

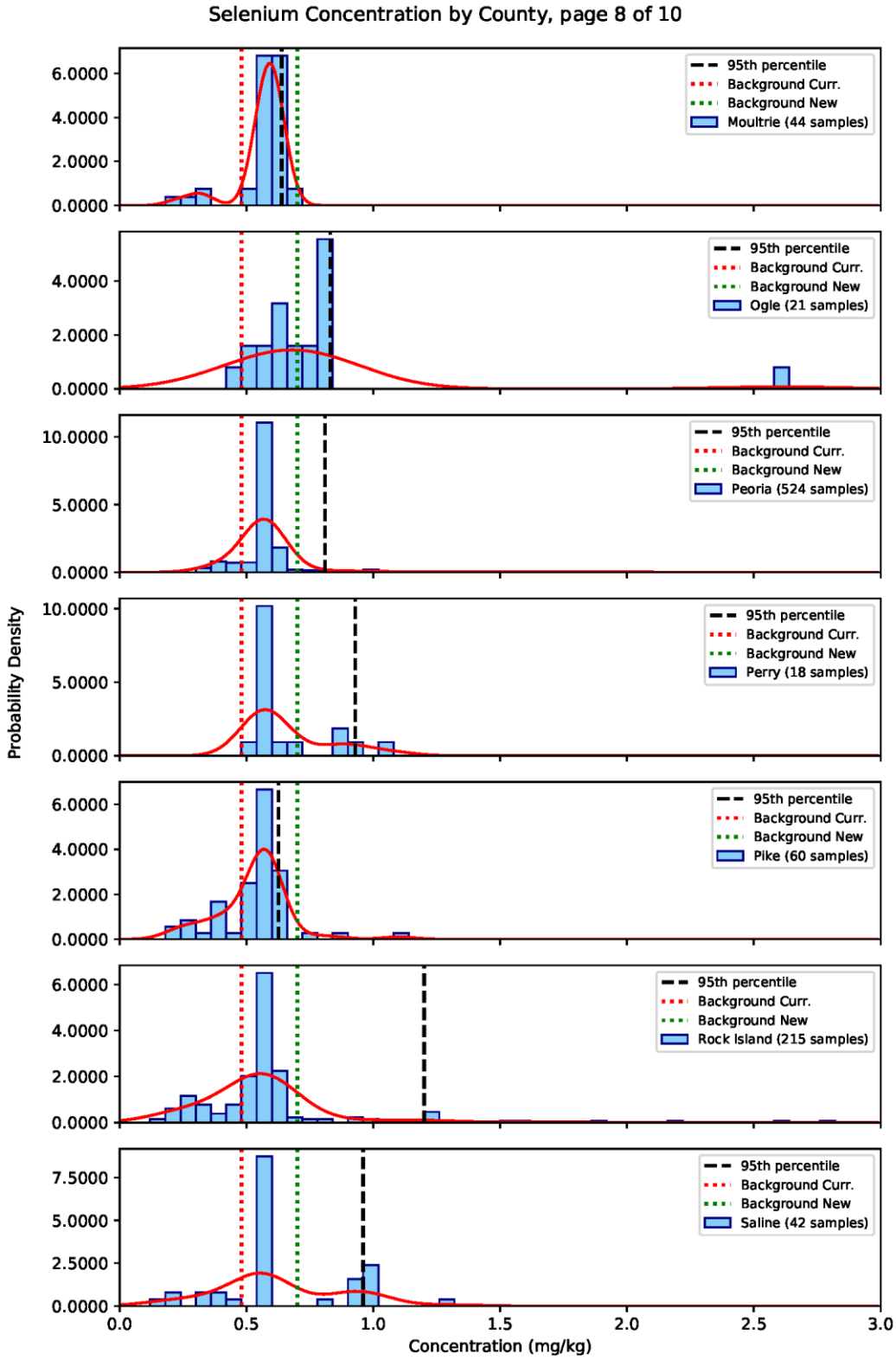


Figure 648. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 8

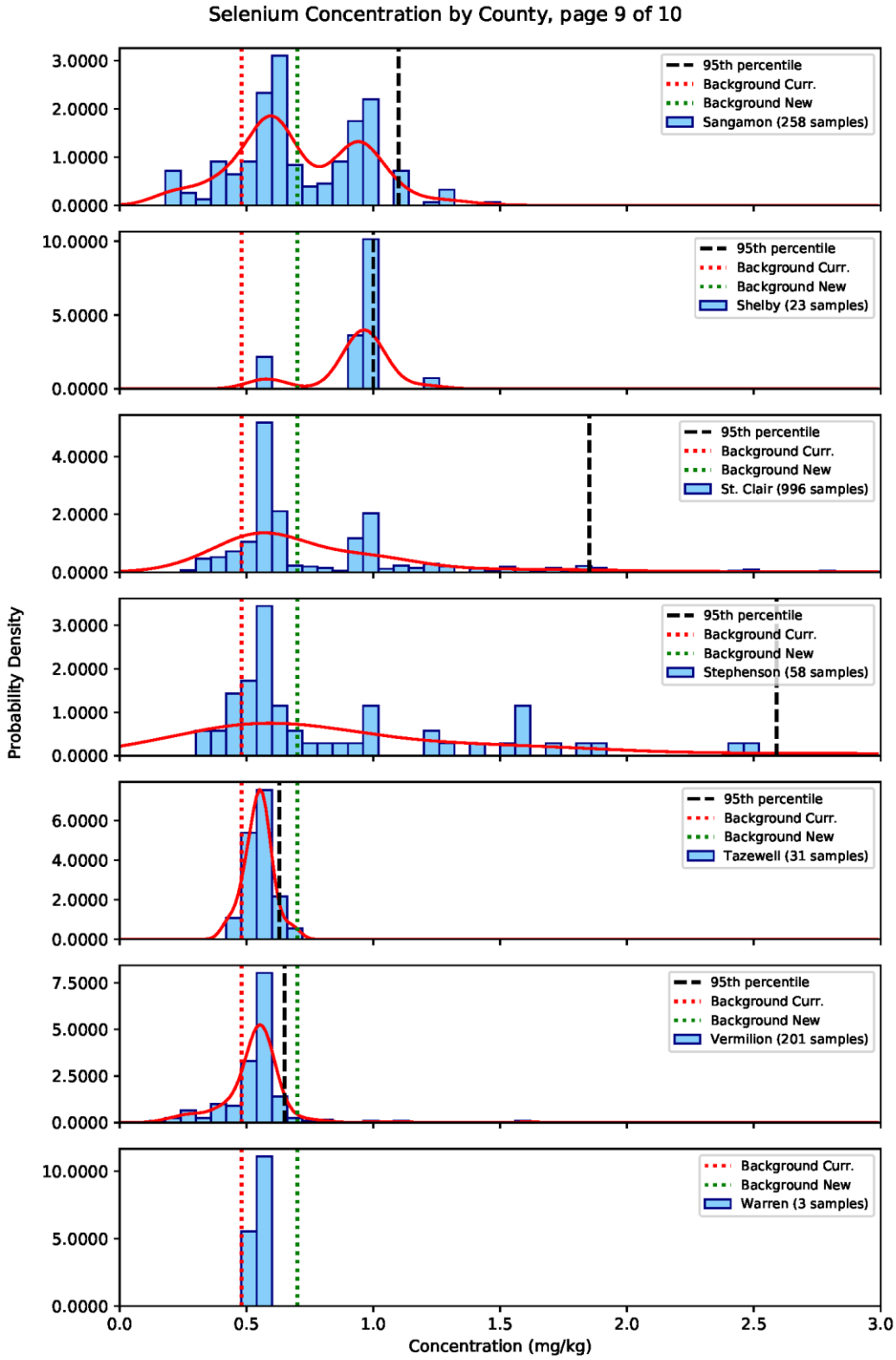


Figure 649. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 9

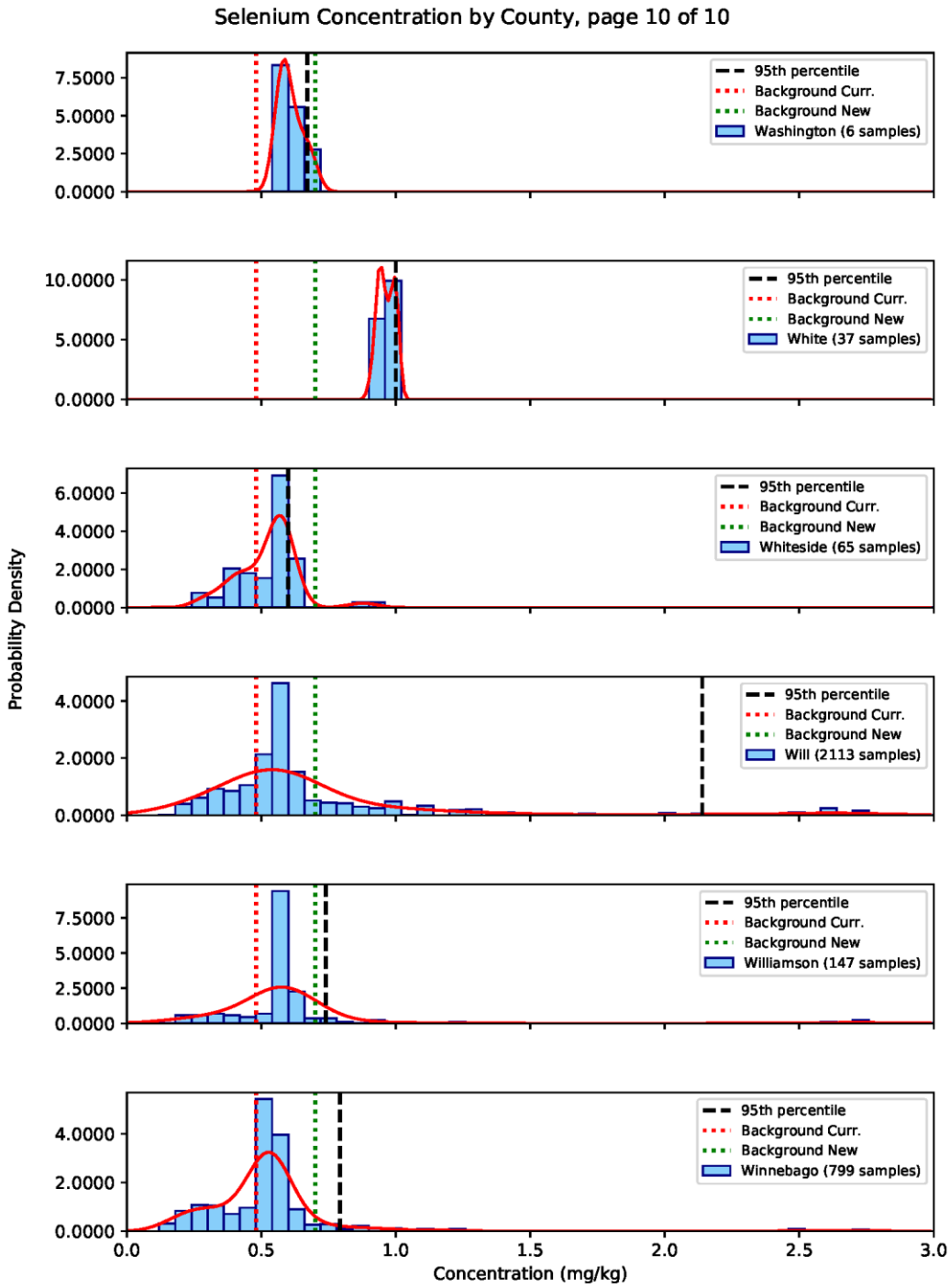


Figure 650. Histogram of RSL selenium concentrations by Illinois county, REC (mg/kg), part 10

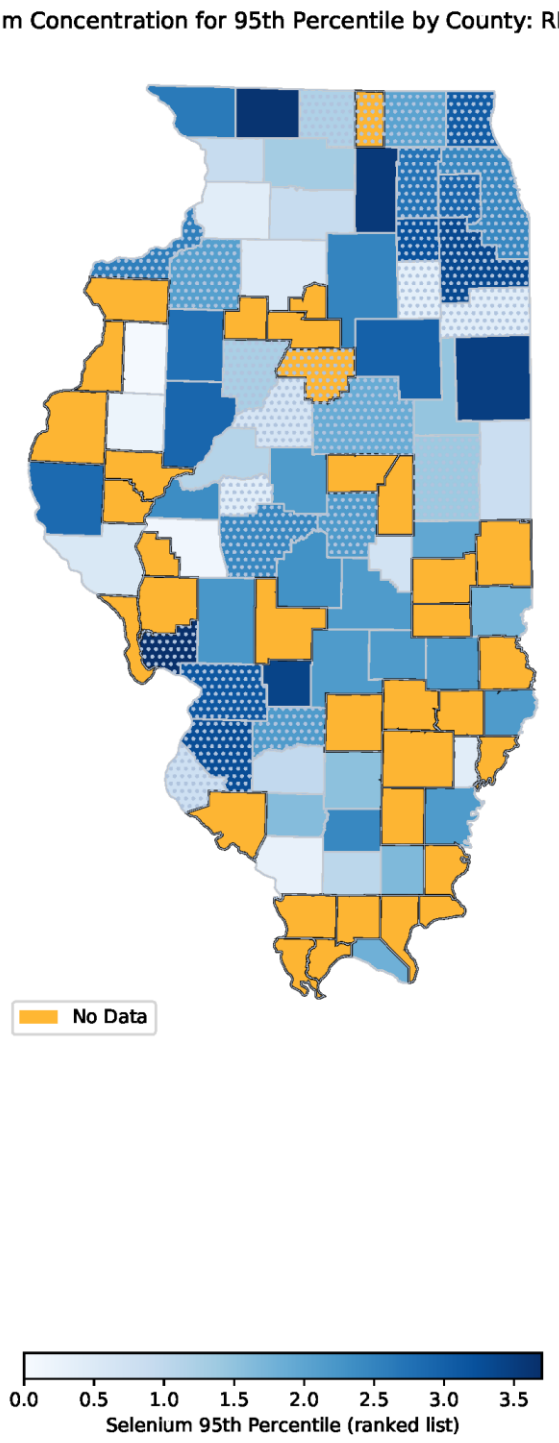


Figure 651. Map of RSL selenium 95th percentile concentration by Illinois county, REC (mg/kg)

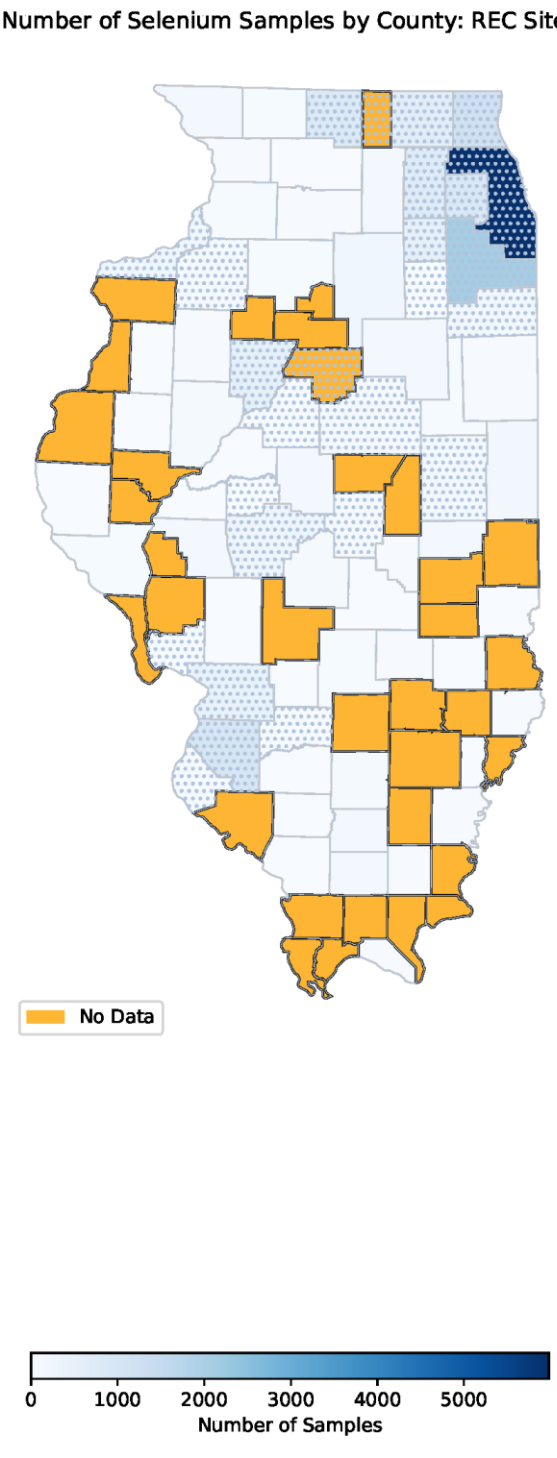


Figure 652. Map of RSL selenium sample quantity by Illinois county, REC (mg/kg)

R.2 SELENIUM NON-REC

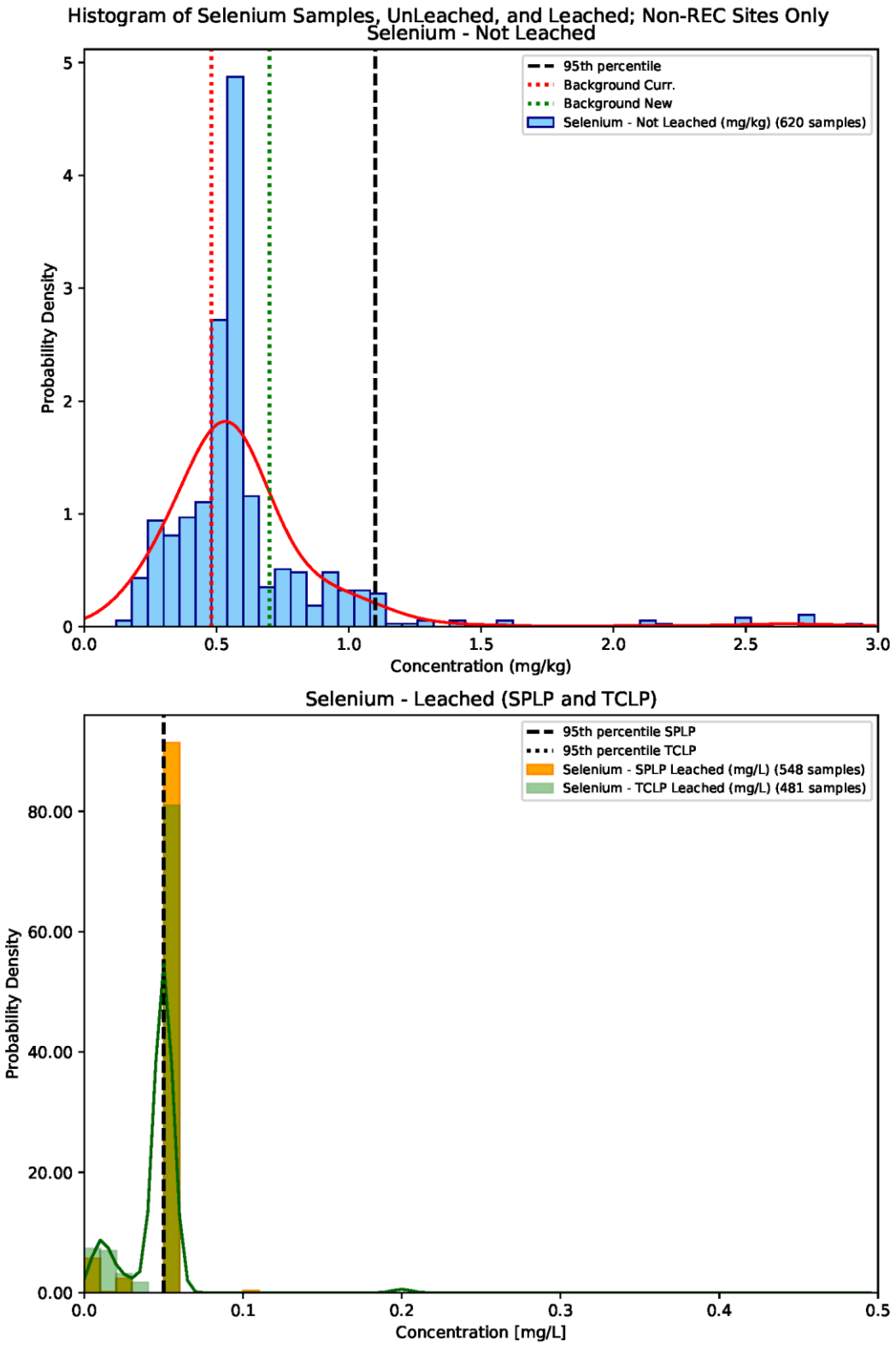


Figure 653. Histogram of RSL selenium concentrations, Non-REC (mg/kg)

Selenium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

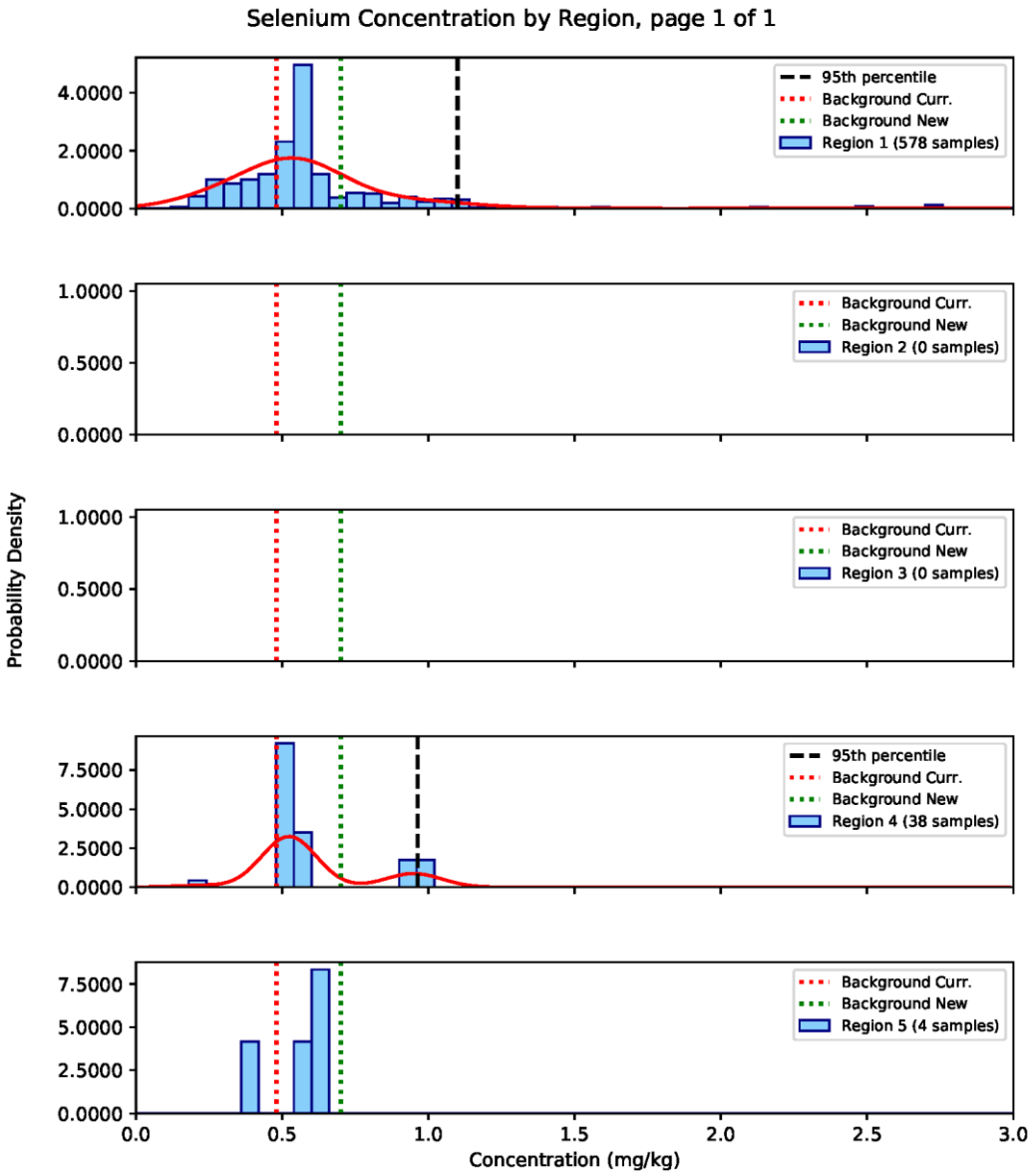


Figure 654. Histogram of RSL selenium concentrations by IDOT Region, Non-REC (mg/kg)

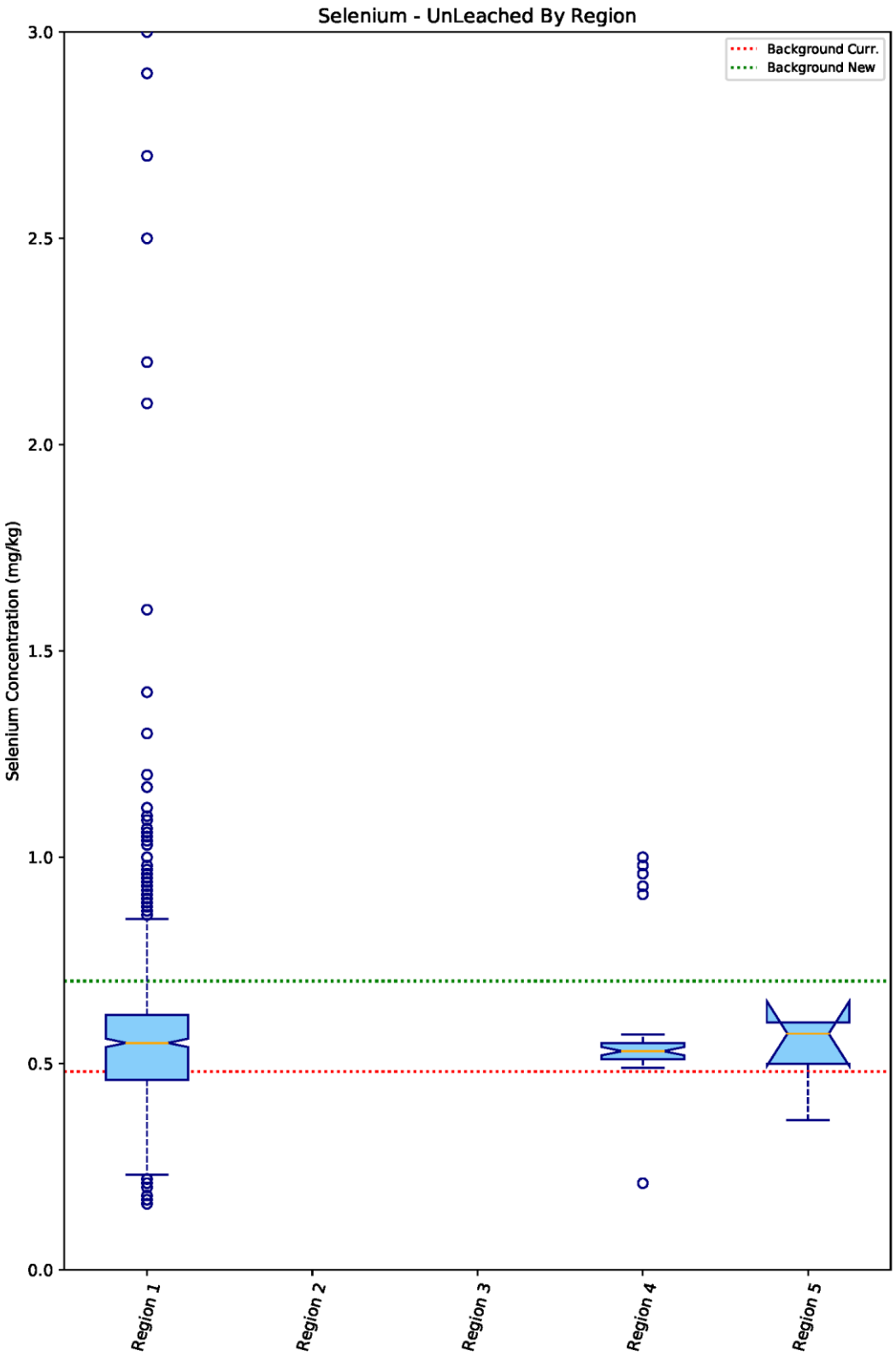


Figure 655. Boxplot of RSL selenium concentrations by IDOT Region, Non-REC (mg/kg)

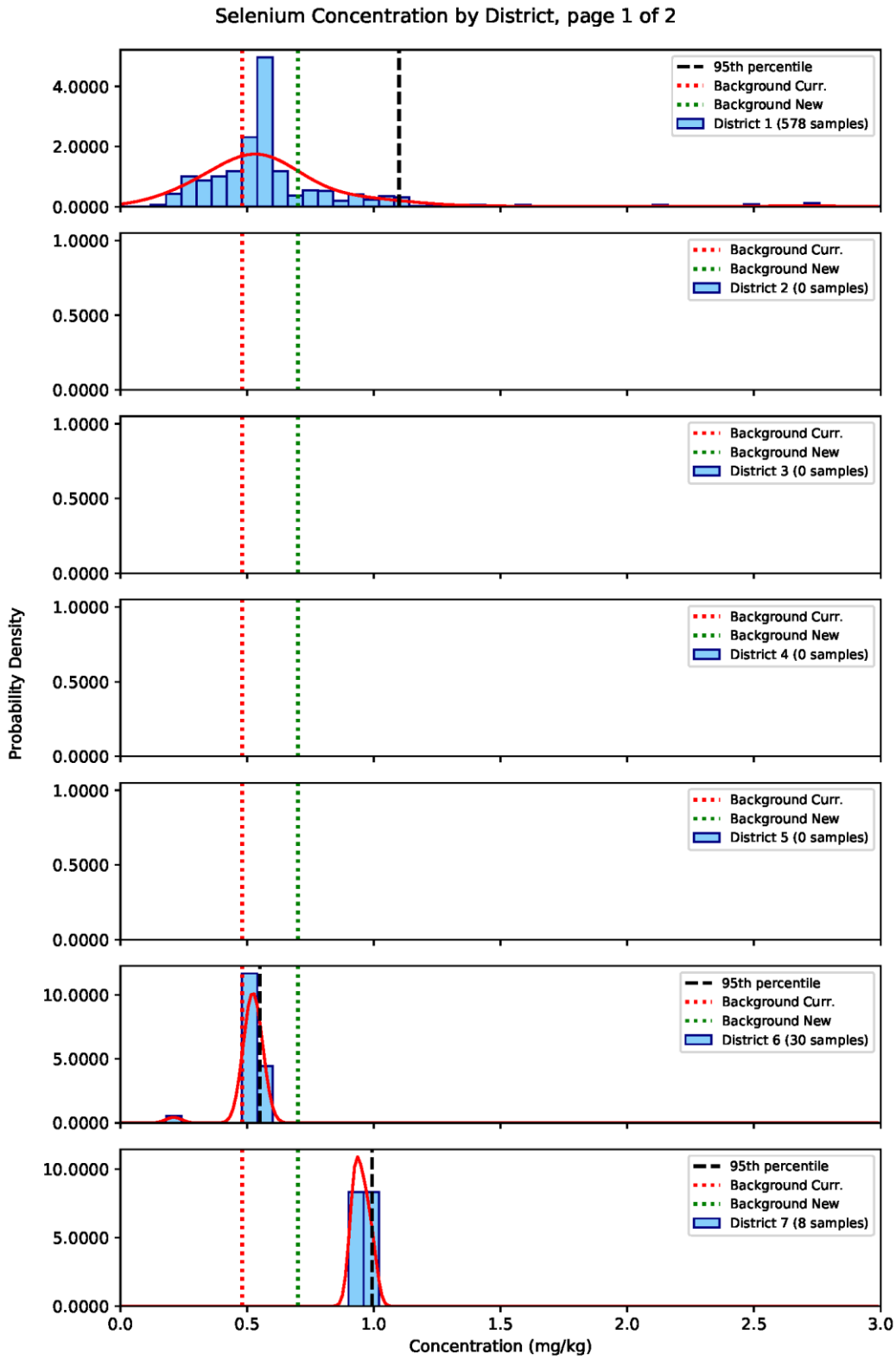


Figure 656. Histogram of RSL selenium concentrations by IDOT District, Non-REC (mg/kg), part 1

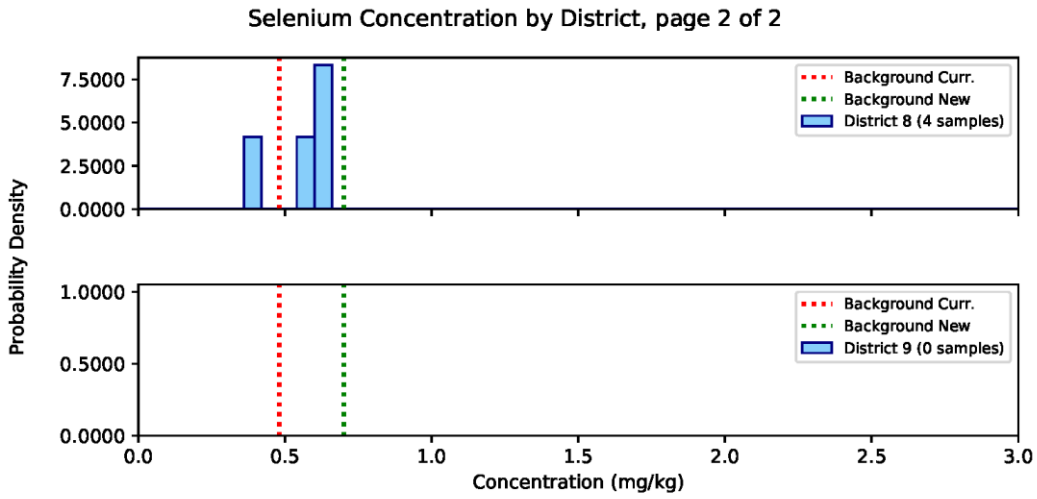


Figure 657. Histogram of RSL selenium concentrations by IDOT District, Non-REC (mg/kg), part 2

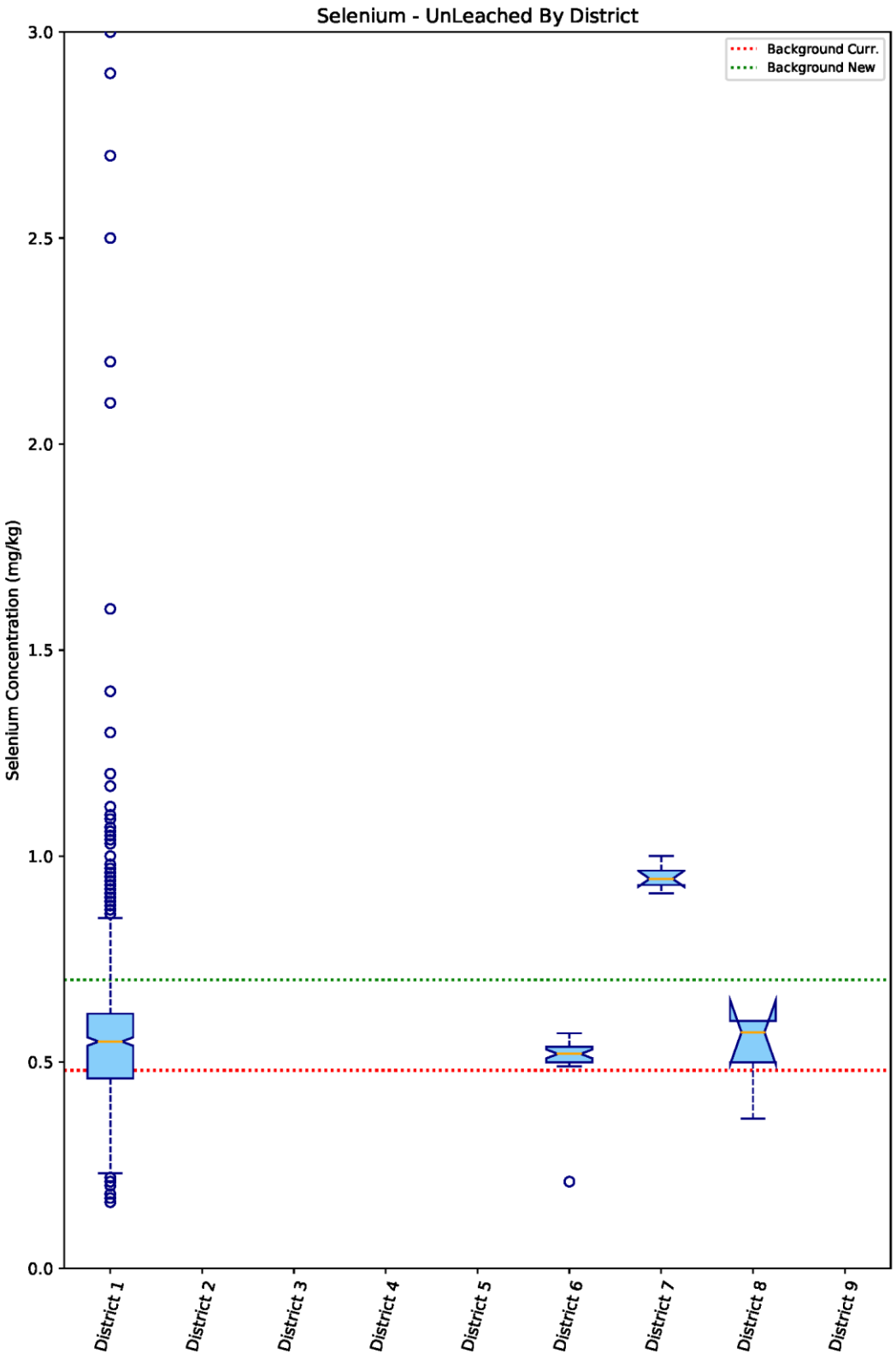


Figure 658. Boxplot of RSL selenium concentrations by IDOT District, Non-REC (mg/kg)

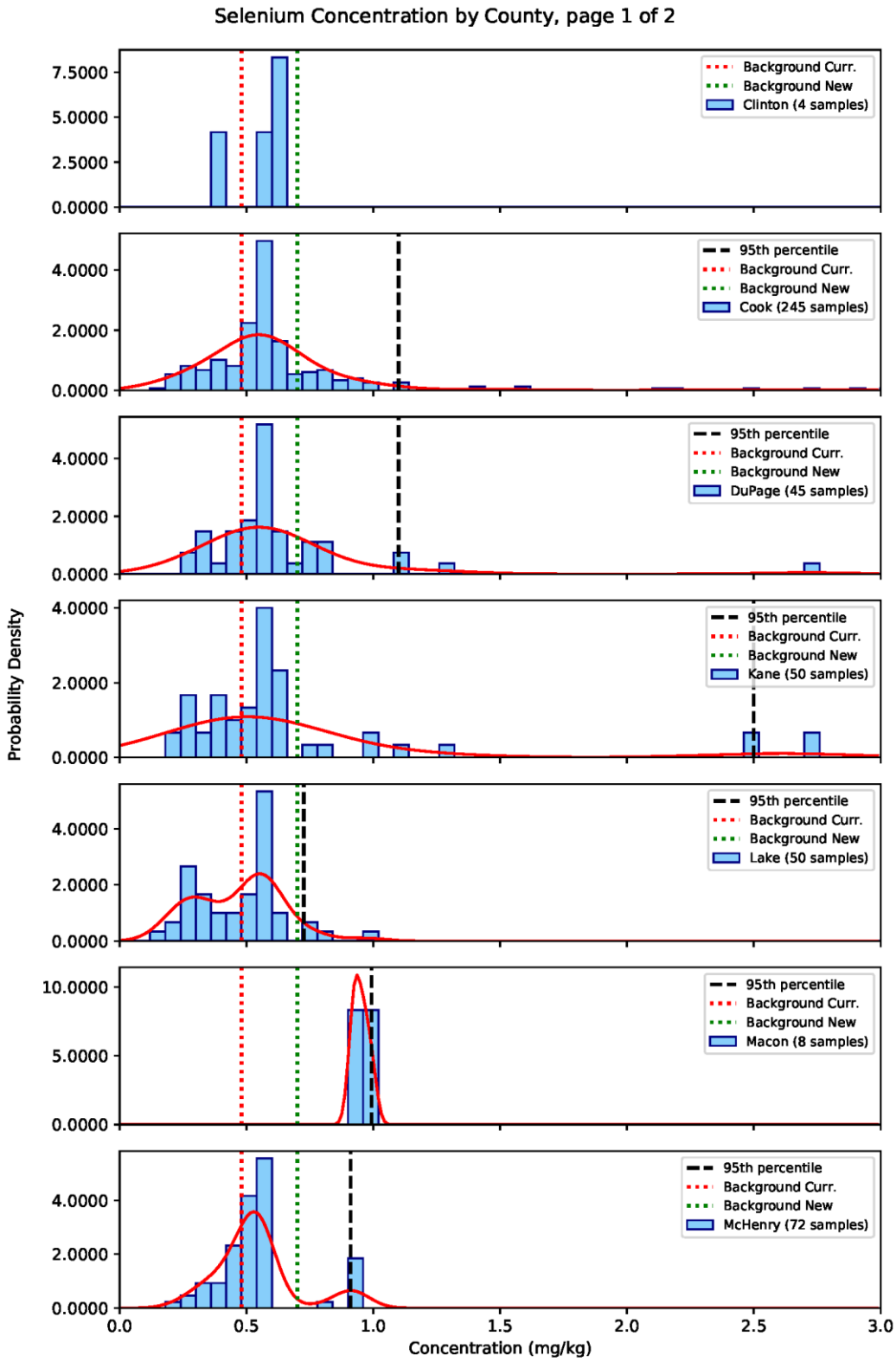


Figure 659. Histogram of RSL selenium concentrations by Illinois county, Non-REC (mg/kg), part 1

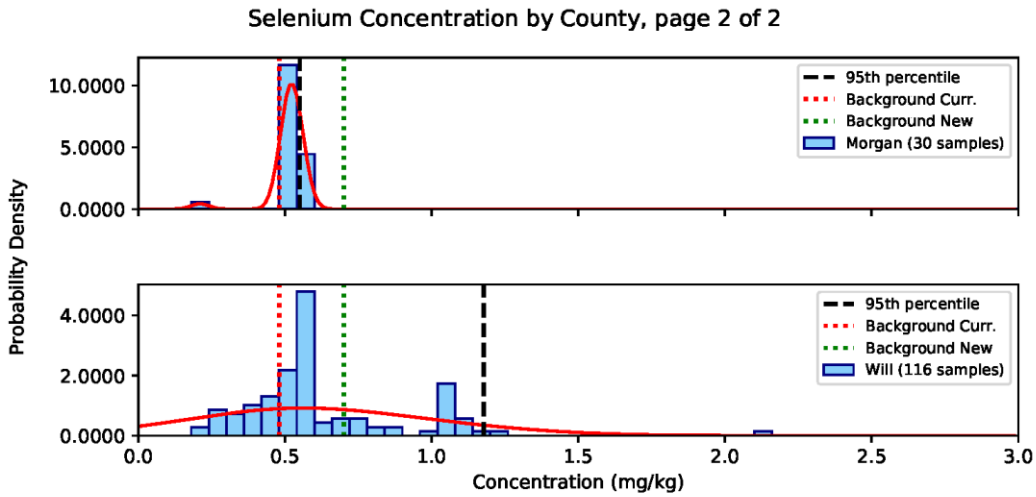


Figure 660. Histogram of RSL selenium concentrations by Illinois county, Non-REC (mg/kg), part 2

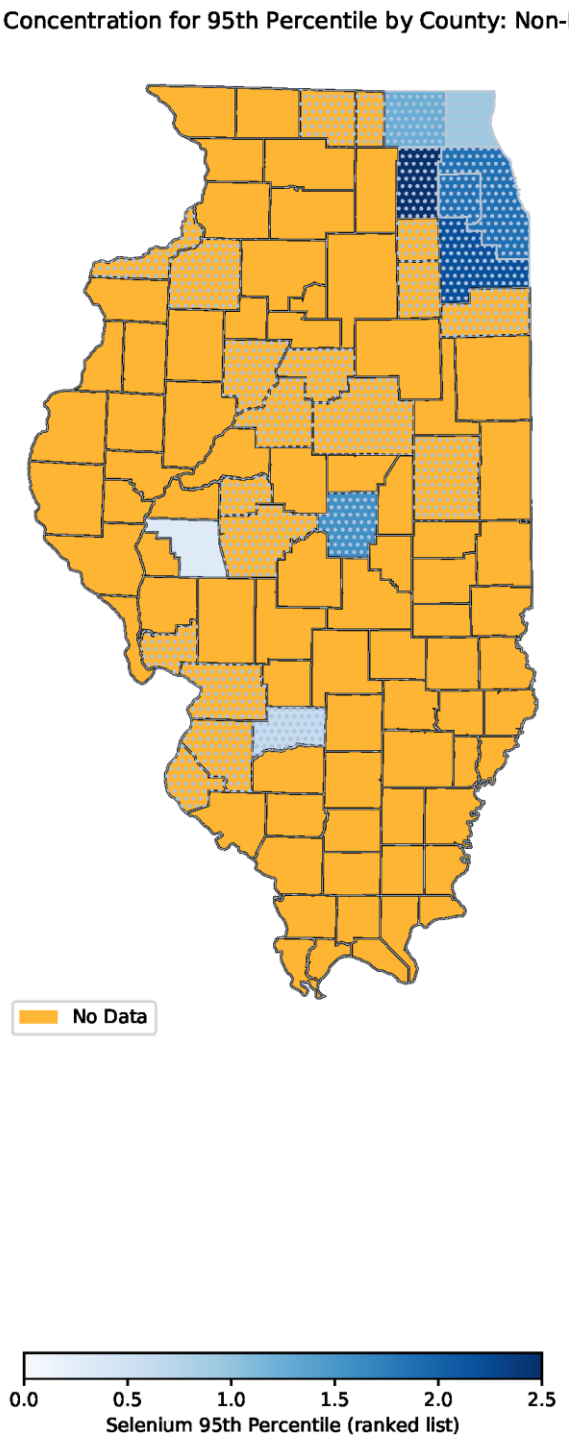


Figure 661. Map of RSL selenium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

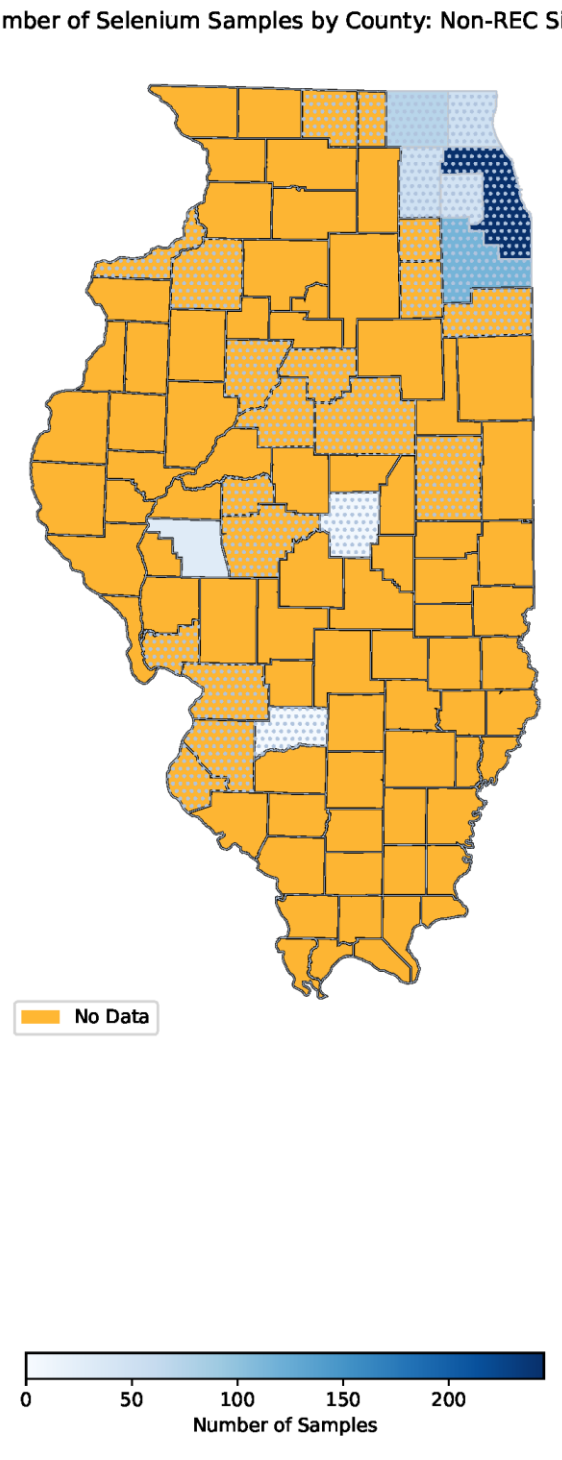


Figure 662. Map of RSL selenium sample quantity by Illinois county, Non-REC (mg/kg)

R.3 SELENIUM DE MINIMIS

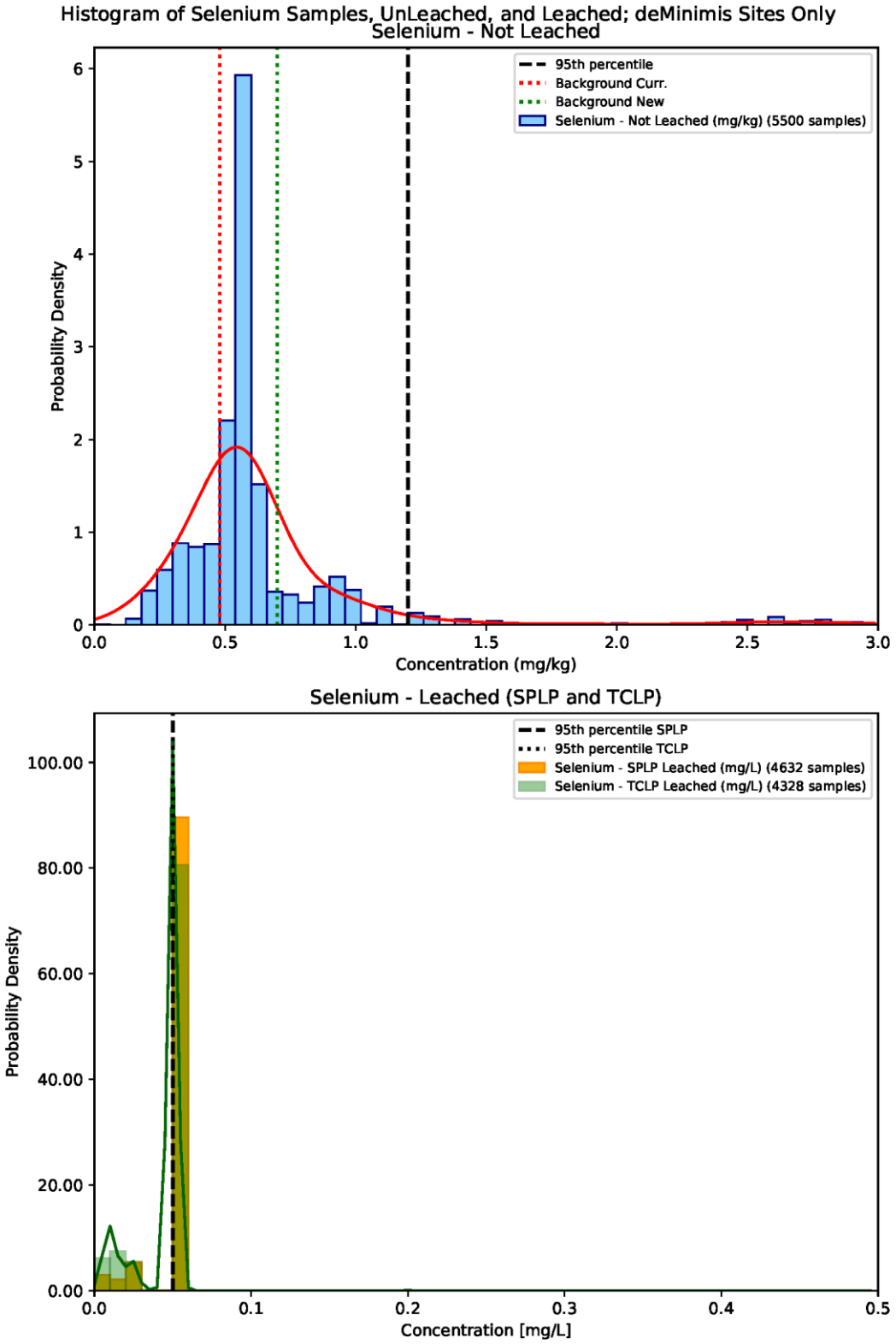


Figure 663. Histogram of RSL selenium concentrations, de minimis (mg/kg)

Selenium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

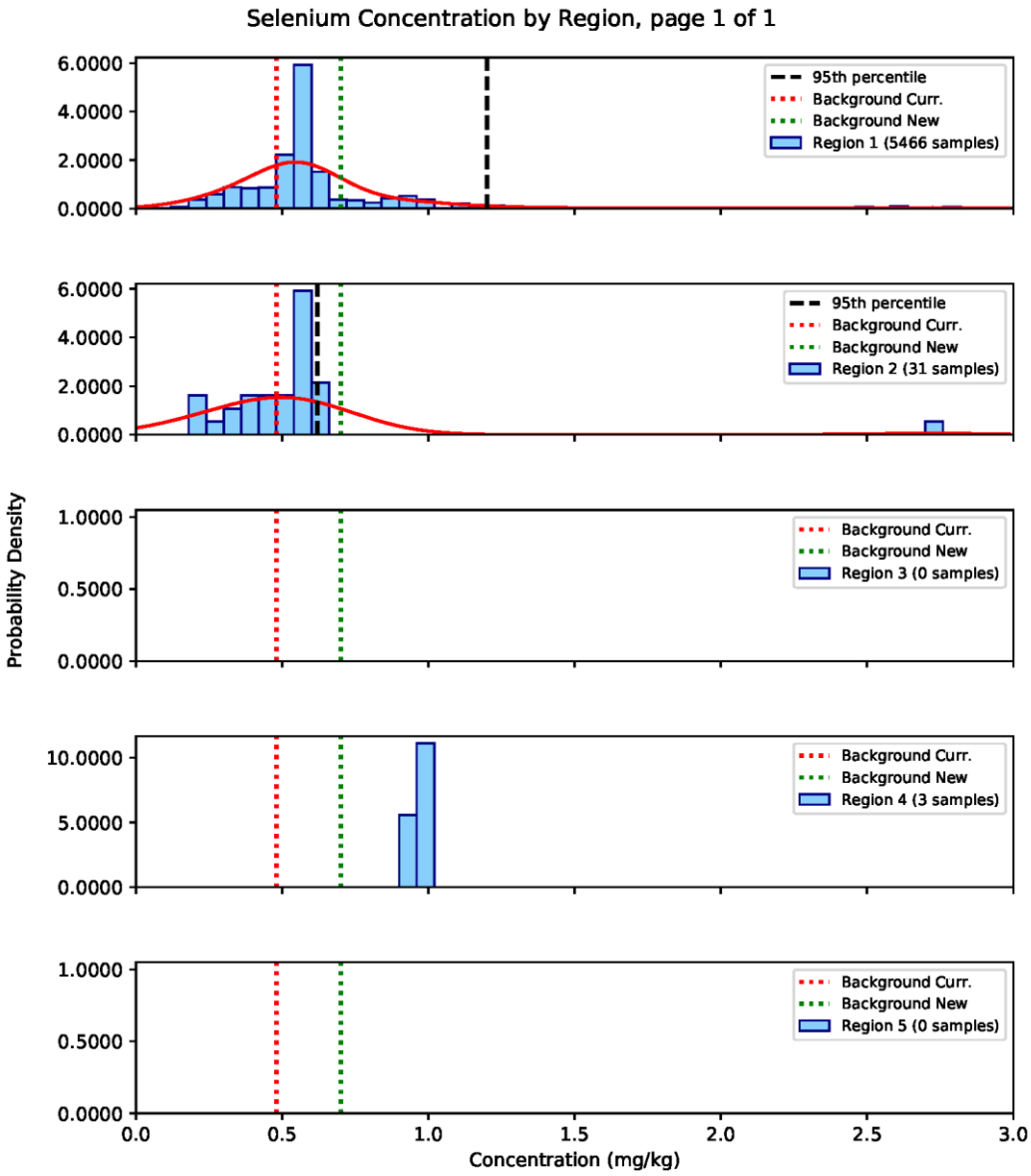


Figure 664. Histogram of RSL selenium concentrations by IDOT Region, de minimis (mg/kg)

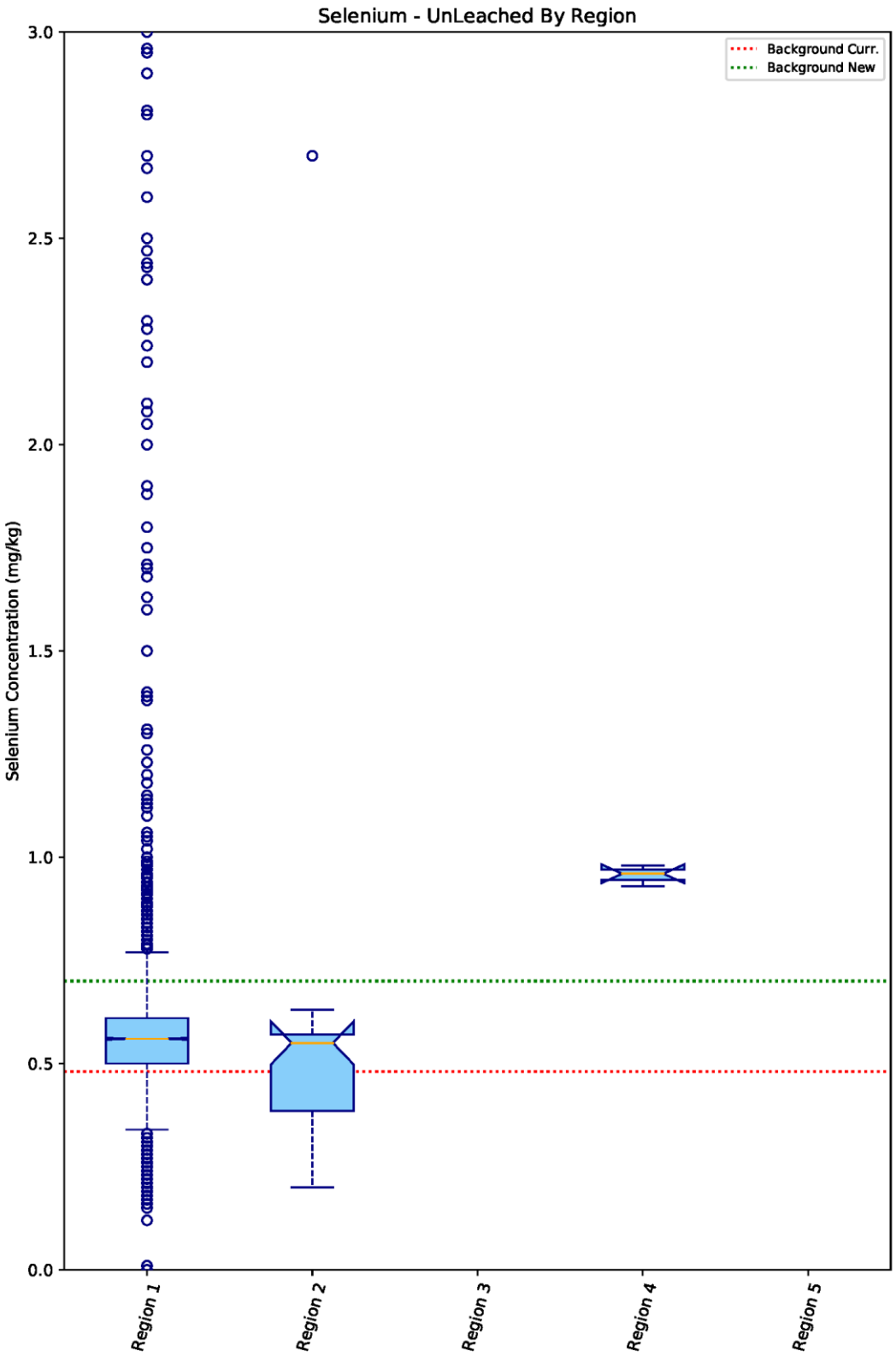


Figure 665. Boxplot of RSL selenium concentrations by IDOT Region, de minimis (mg/kg)

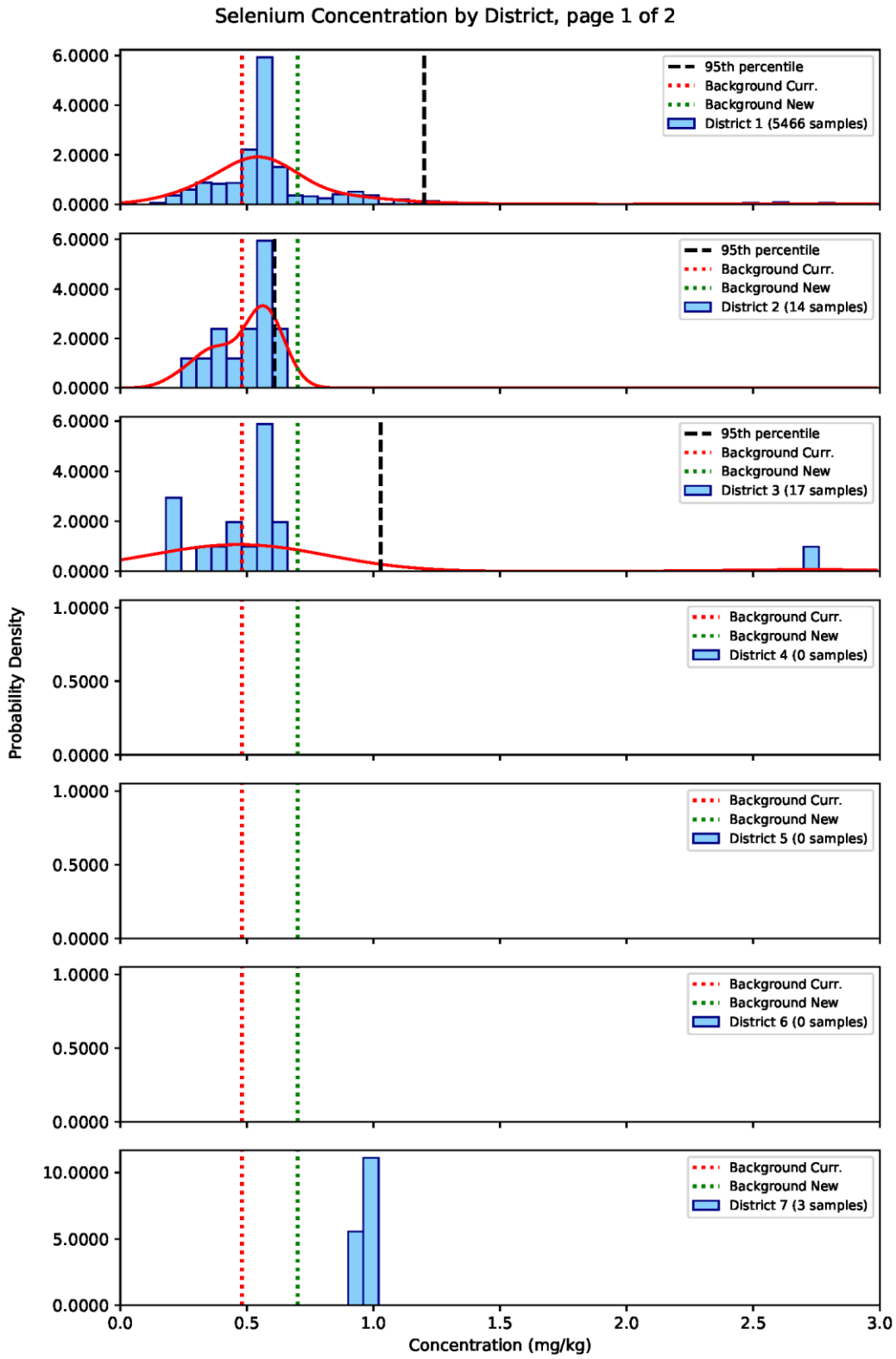


Figure 666. Histogram of RSL selenium concentrations by IDOT District, de minimis (mg/kg), part 1

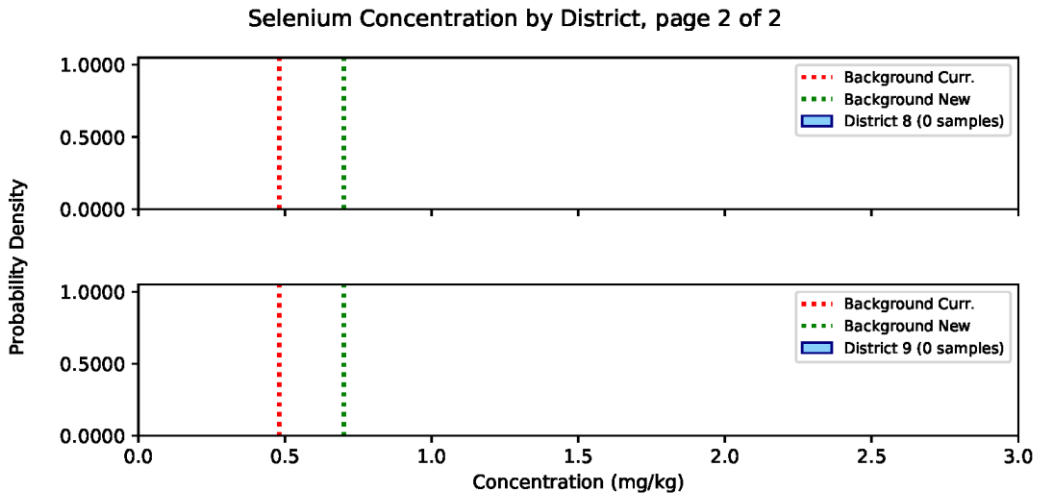


Figure 667. Histogram of RSL selenium concentrations by IDOT District, de minimis (mg/kg), part 2

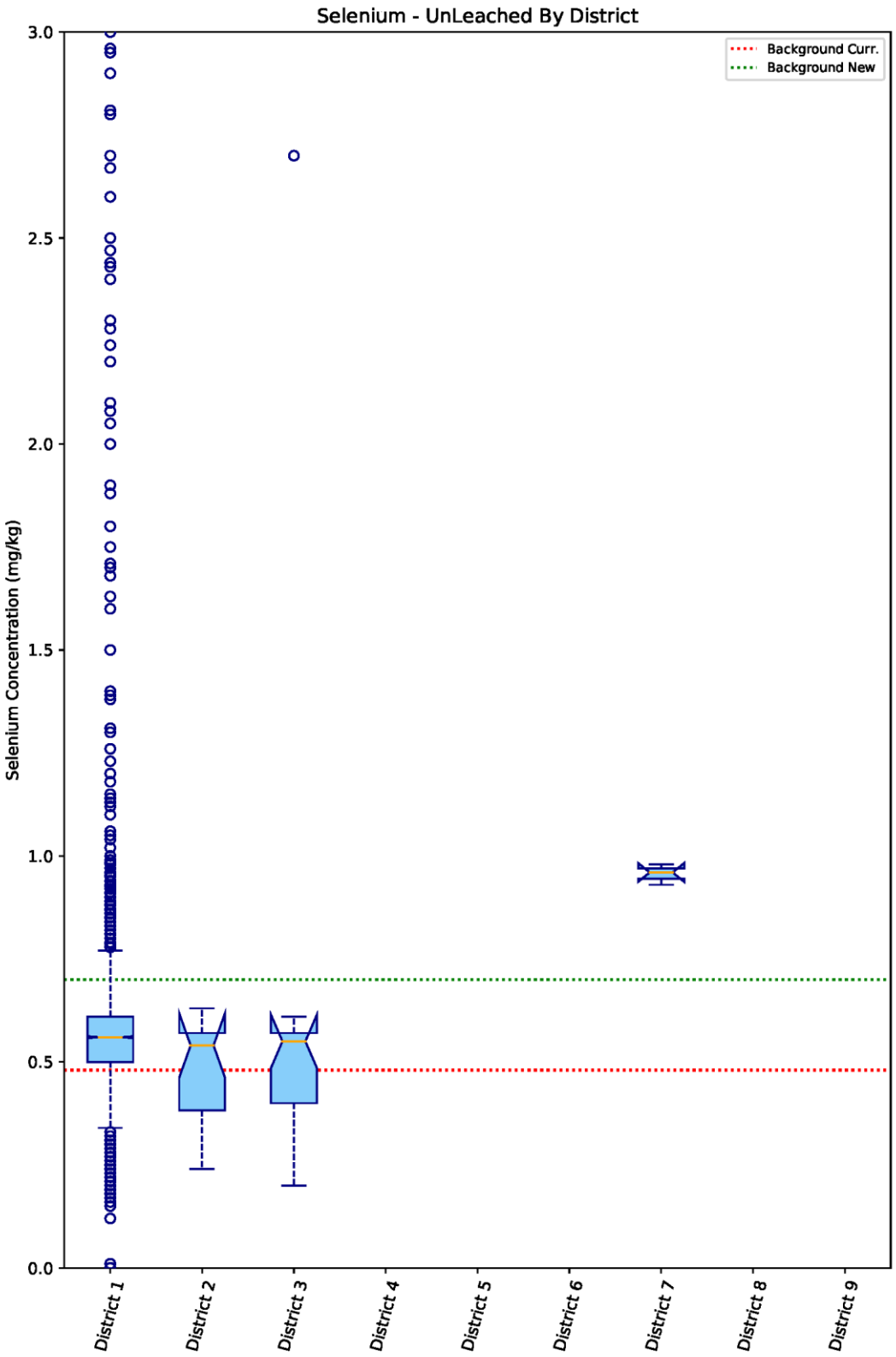


Figure 668. Boxplot of RSL selenium concentrations by IDOT District, de minimis (mg/kg)

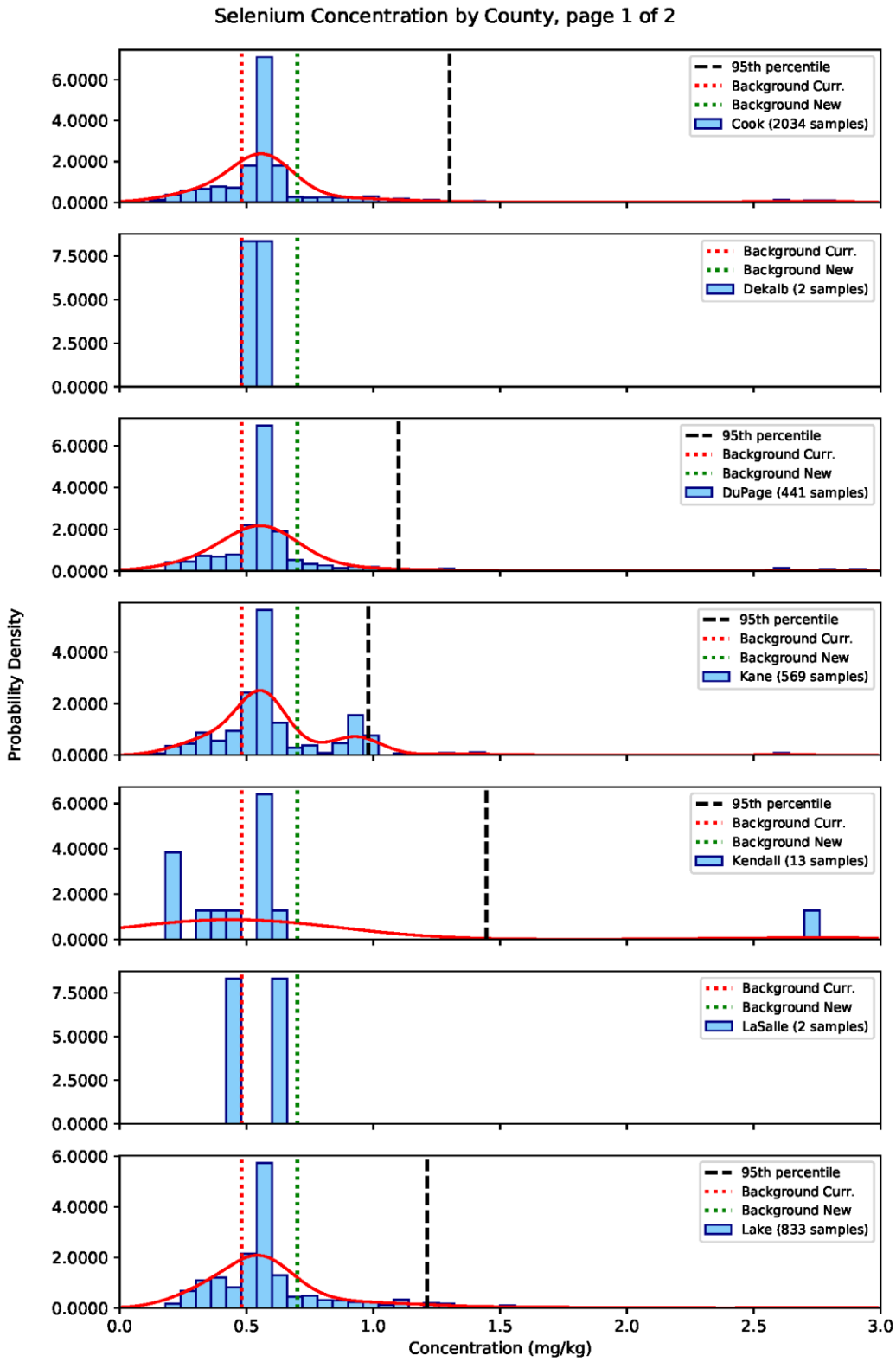


Figure 669. Histogram of RSL selenium concentrations by Illinois county, de minimis (mg/kg), part 1

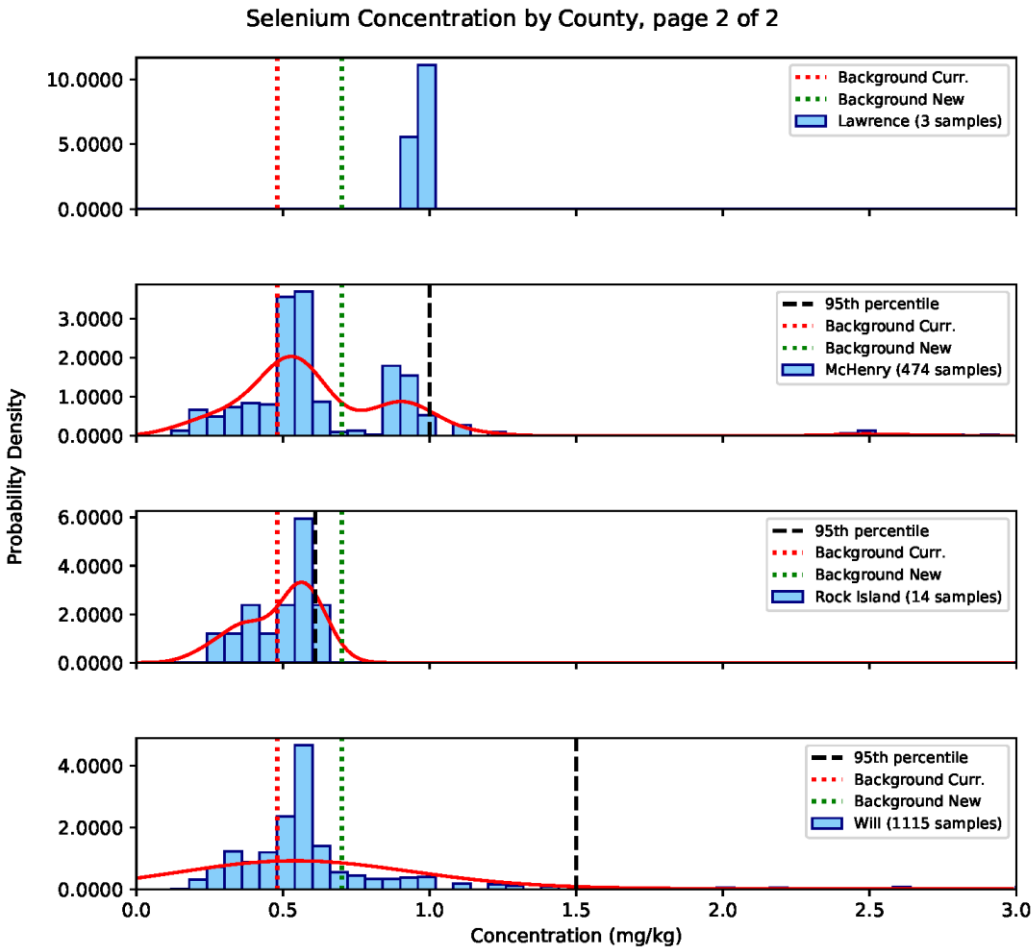


Figure 670. Histogram of RSL selenium concentrations by Illinois county, de minimis (mg/kg), part 2

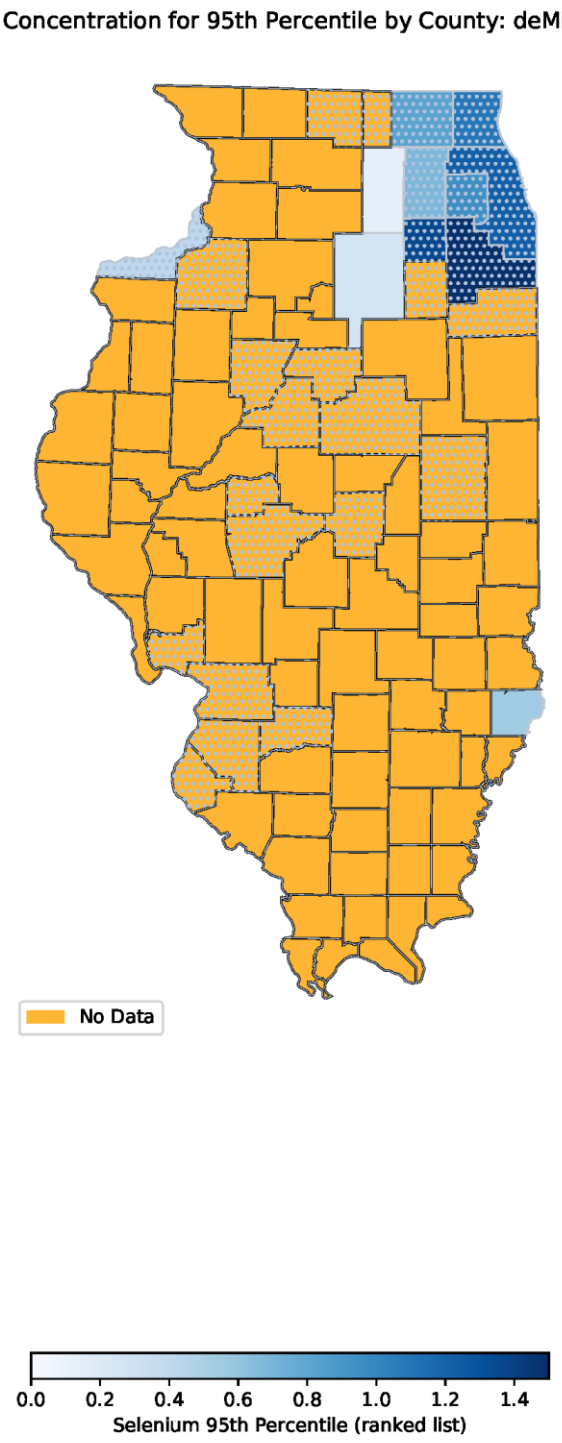


Figure 671. Map of RSL selenium 95th percentile concentration by Illinois county, de minimis (mg/kg)

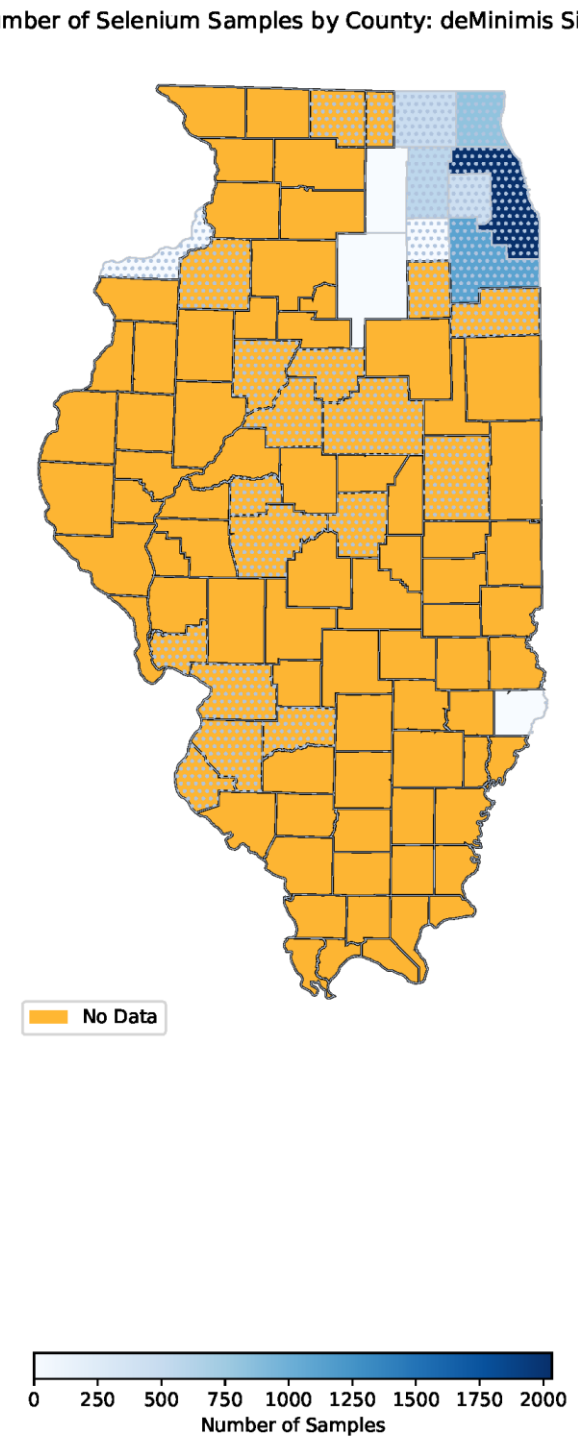


Figure 672. Map of RSL selenium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX S. ANALYTE ANALYSIS: SODIUM

S.1 SODIUM REC

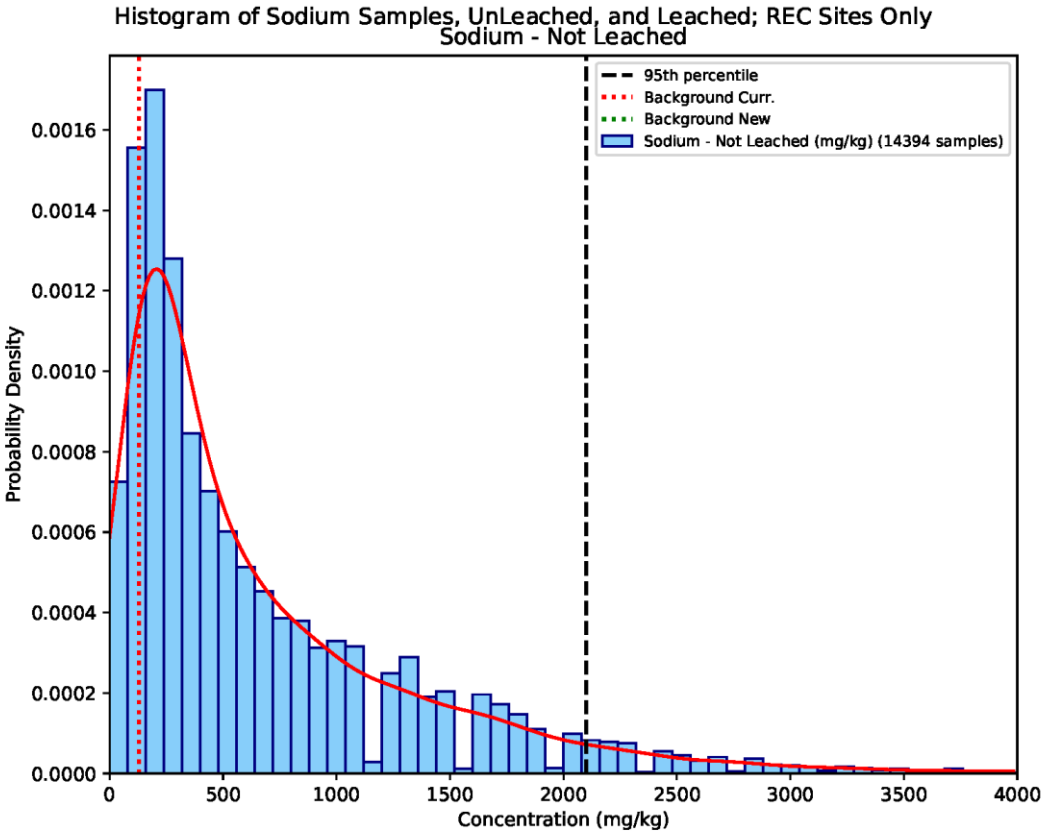


Figure 673. Histogram of RSL sodium concentrations, REC (mg/kg)

Sodium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

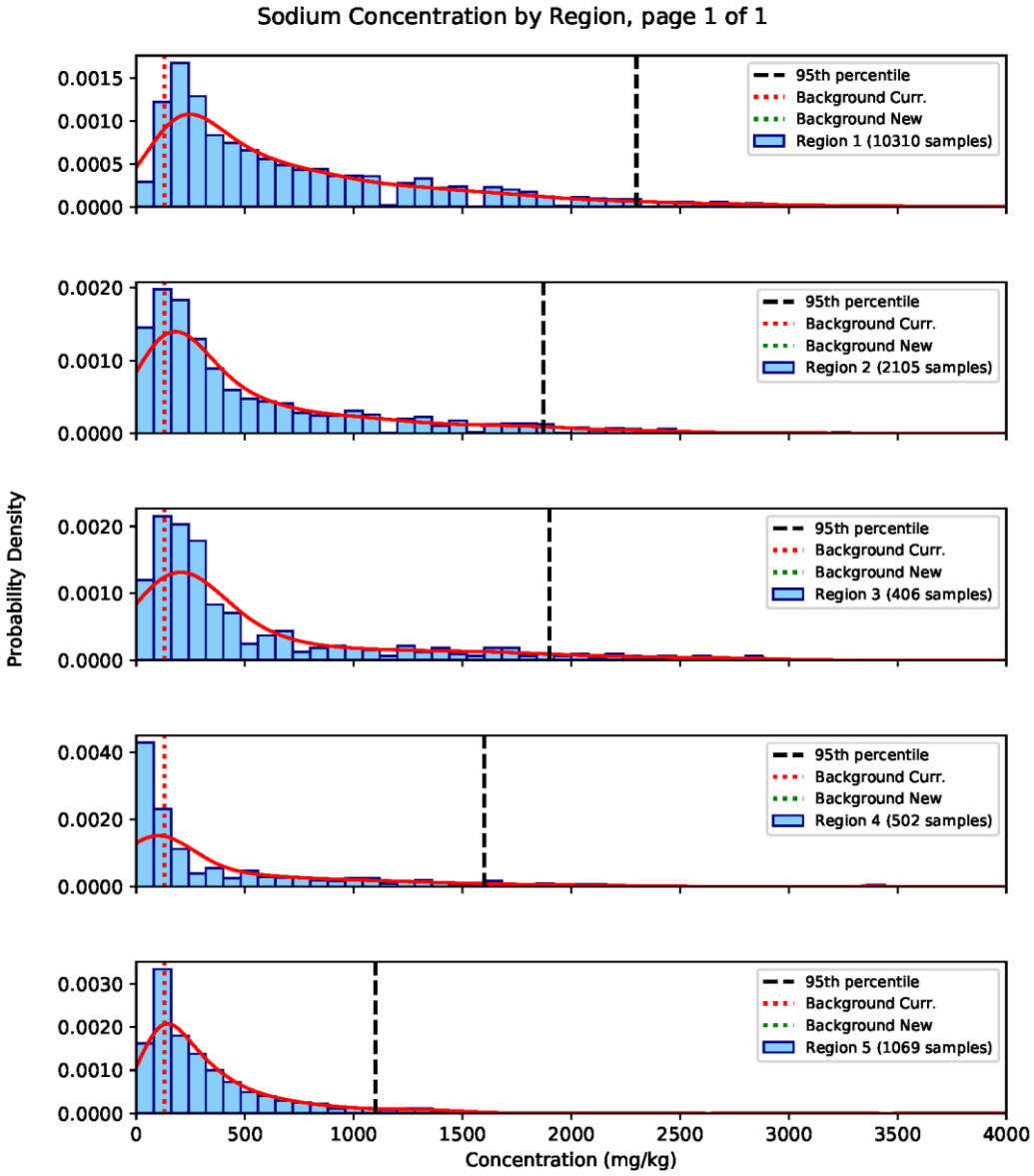


Figure 674. Histogram of RSL sodium concentrations by IDOT Region, REC (mg/kg)

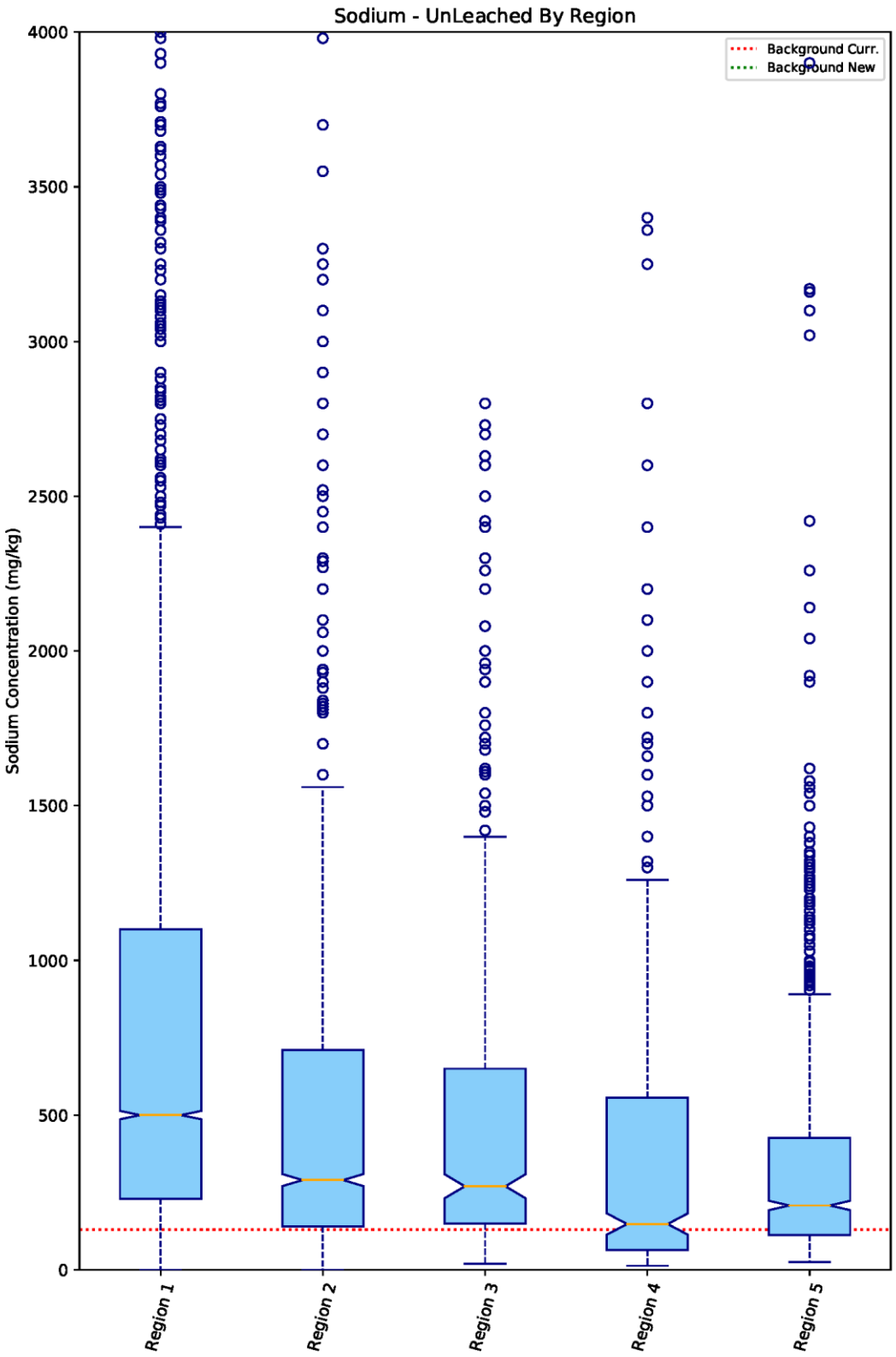


Figure 675. Boxplot of RSL sodium concentrations by IDOT Region, REC (mg/kg)

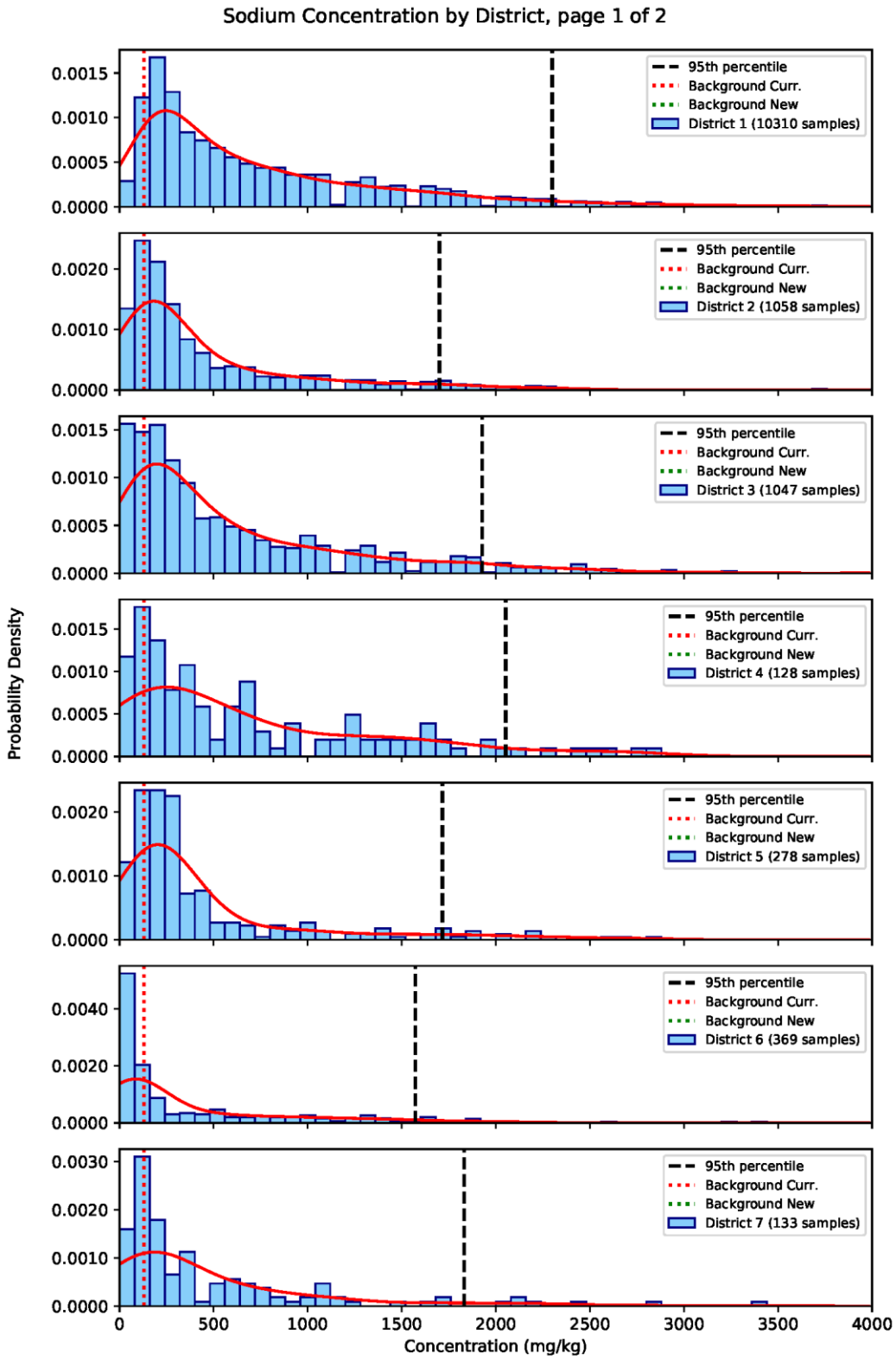


Figure 676. Histogram of RSL sodium concentrations by IDOT District, REC (mg/kg), part 1

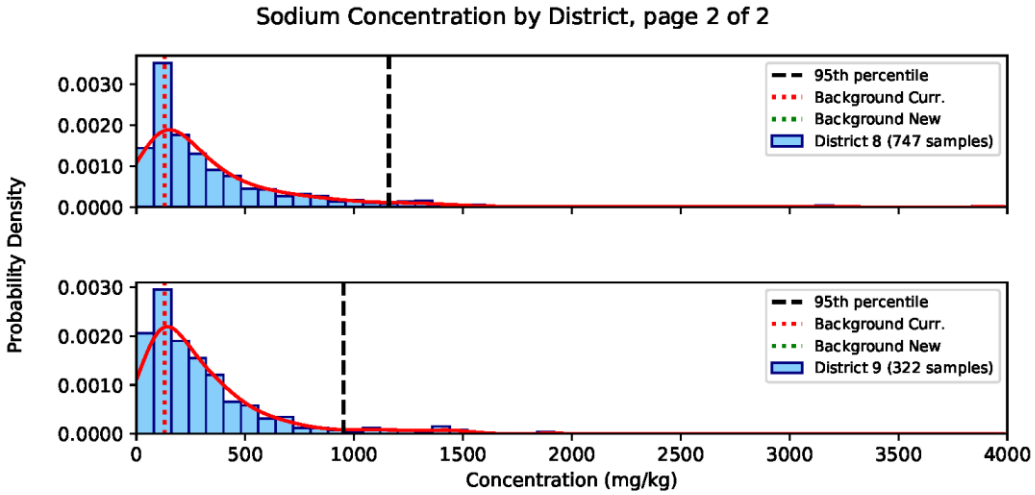


Figure 677. Histogram of RSL sodium concentrations by IDOT District, REC (mg/kg), part 2

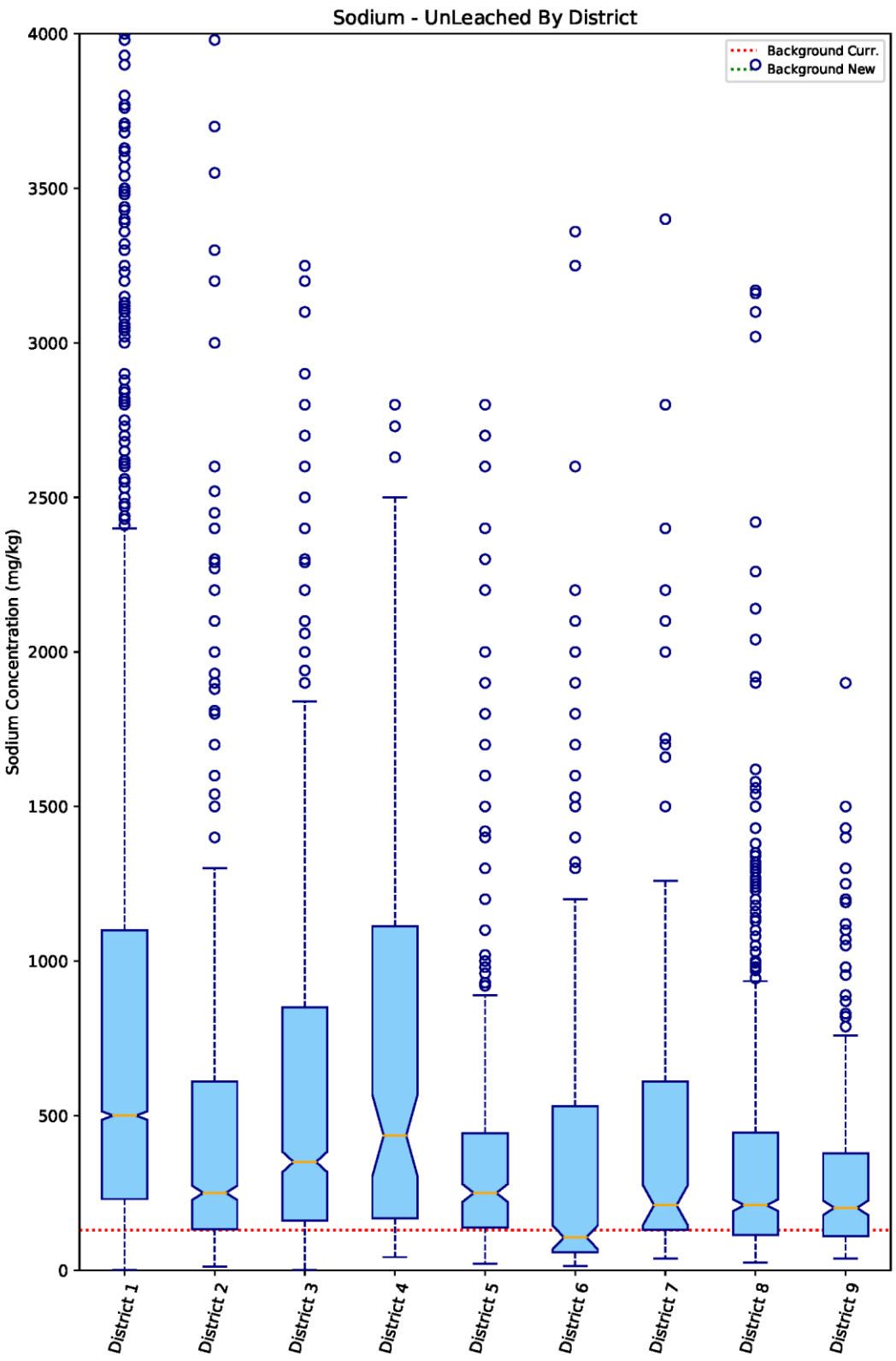


Figure 678. Boxplot of RSL sodium concentrations by IDOT District, REC (mg/kg)

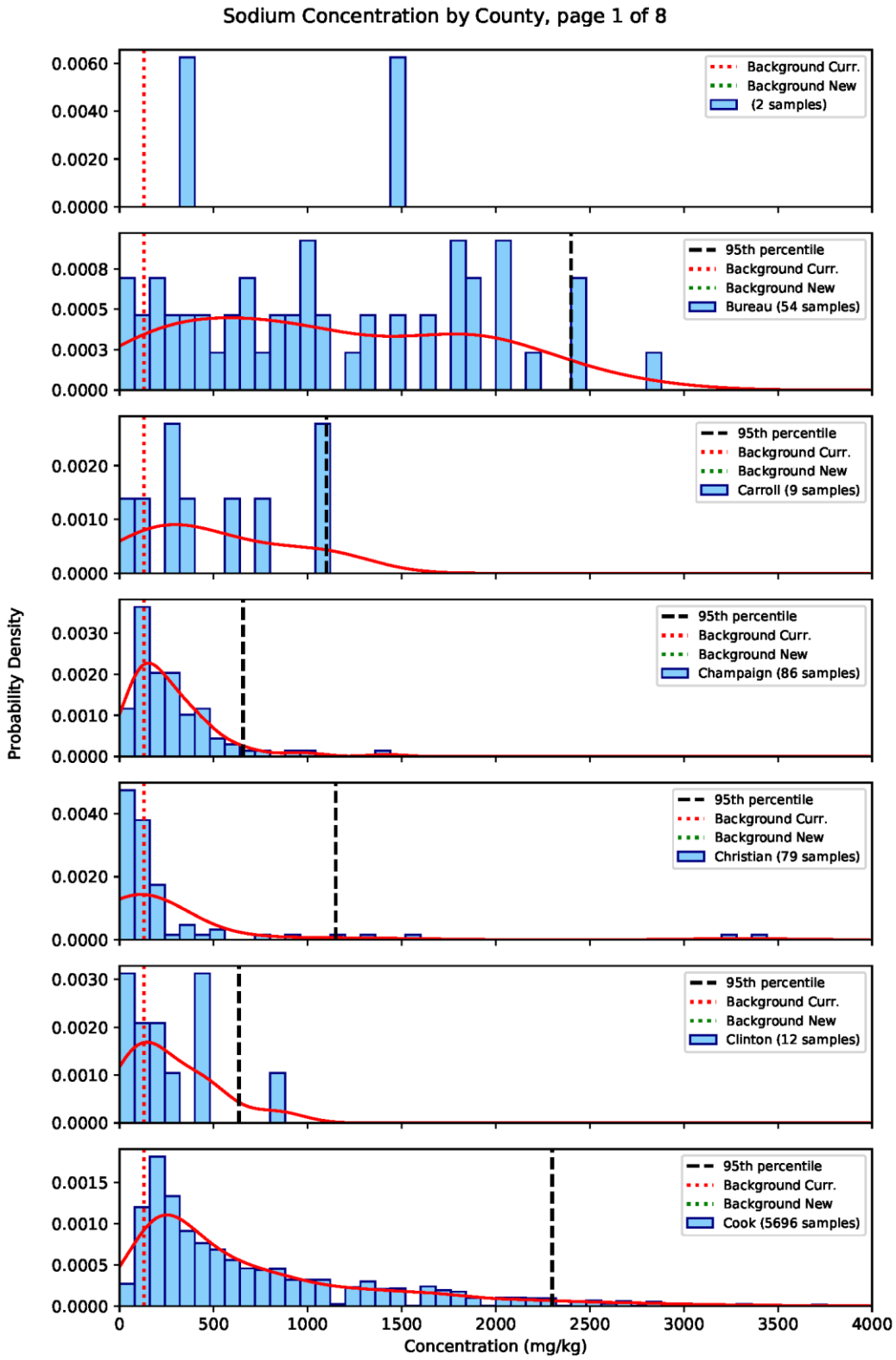


Figure 679. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 1

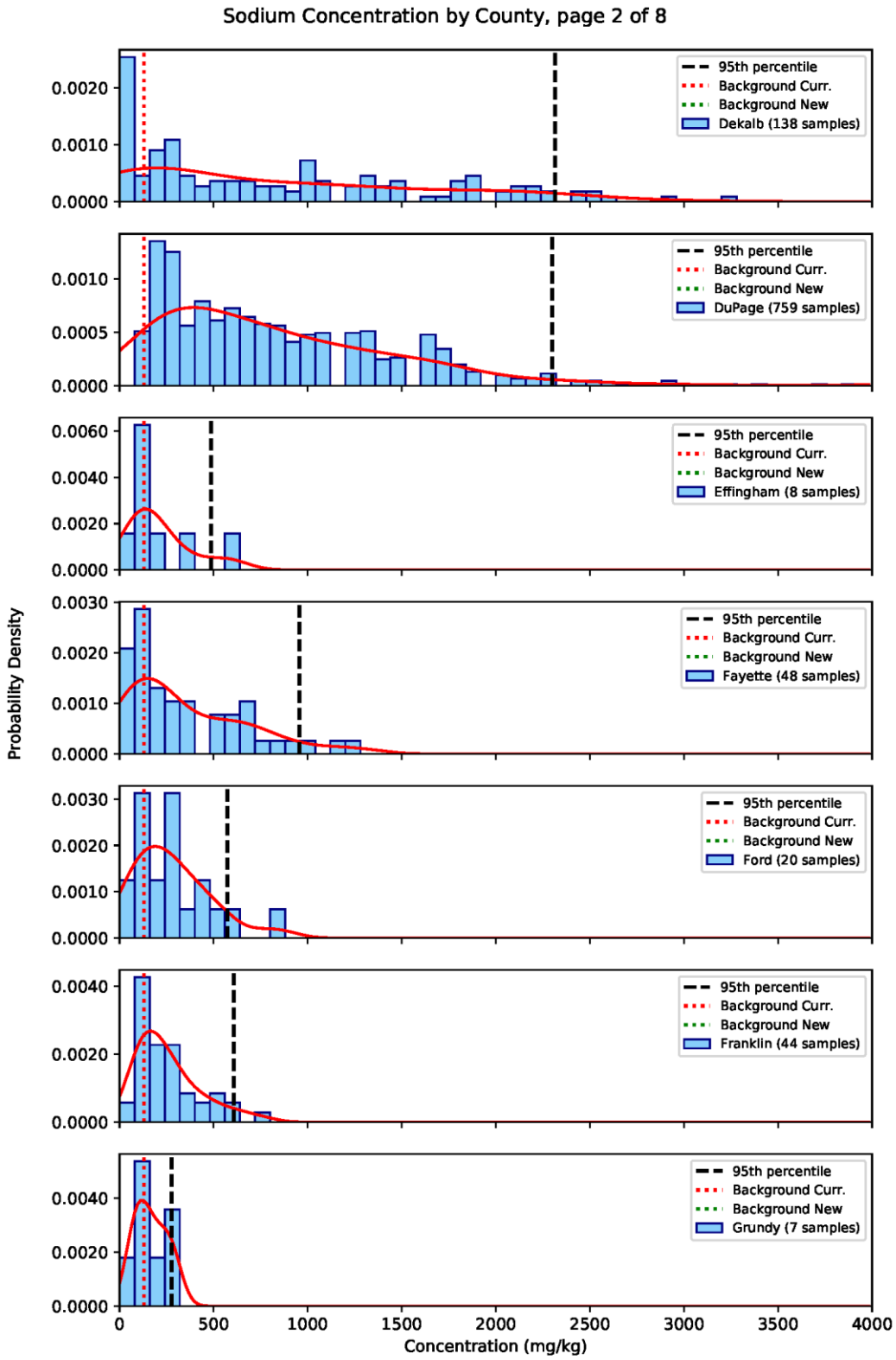


Figure 680. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 2

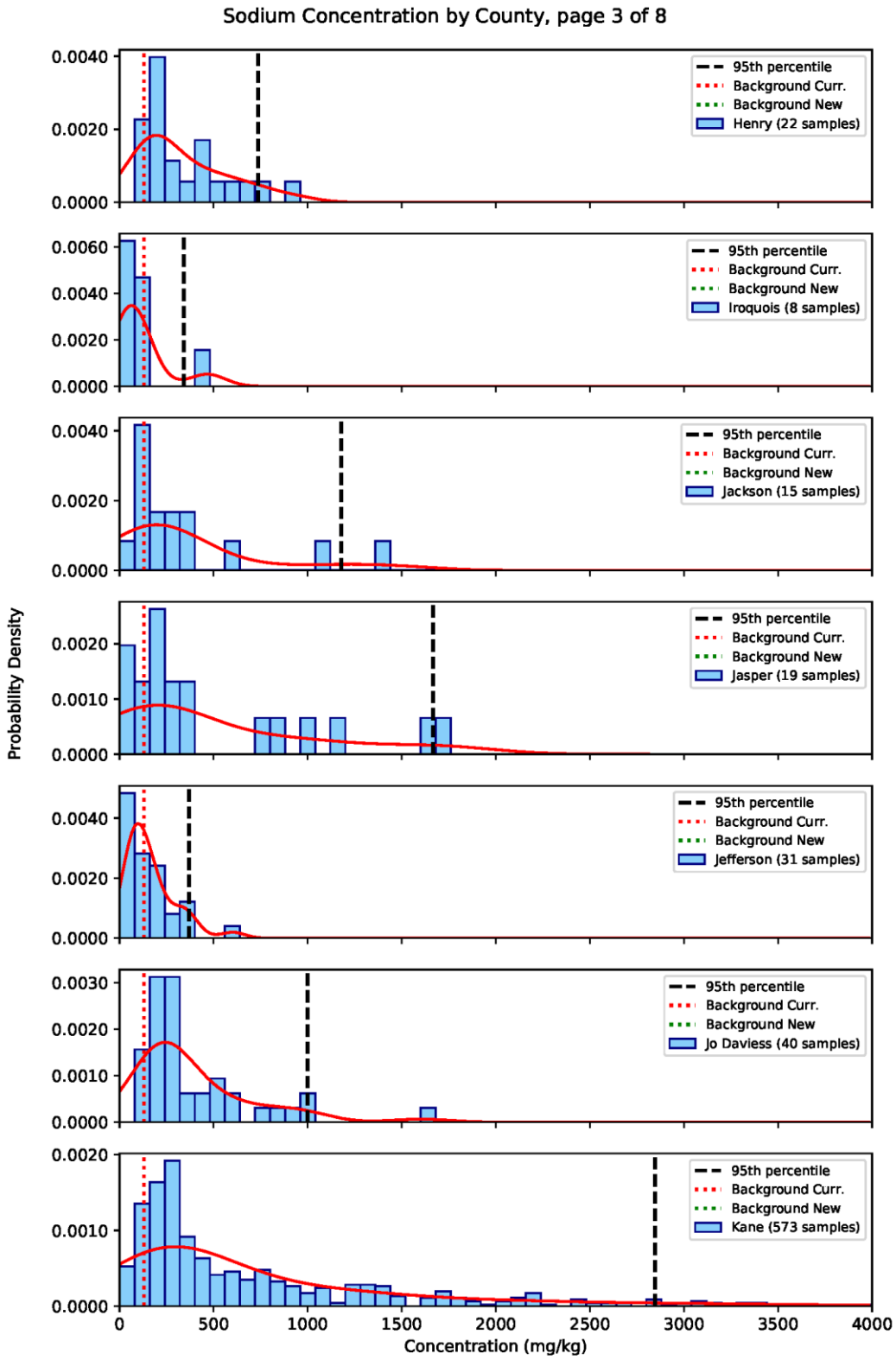


Figure 681. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 3

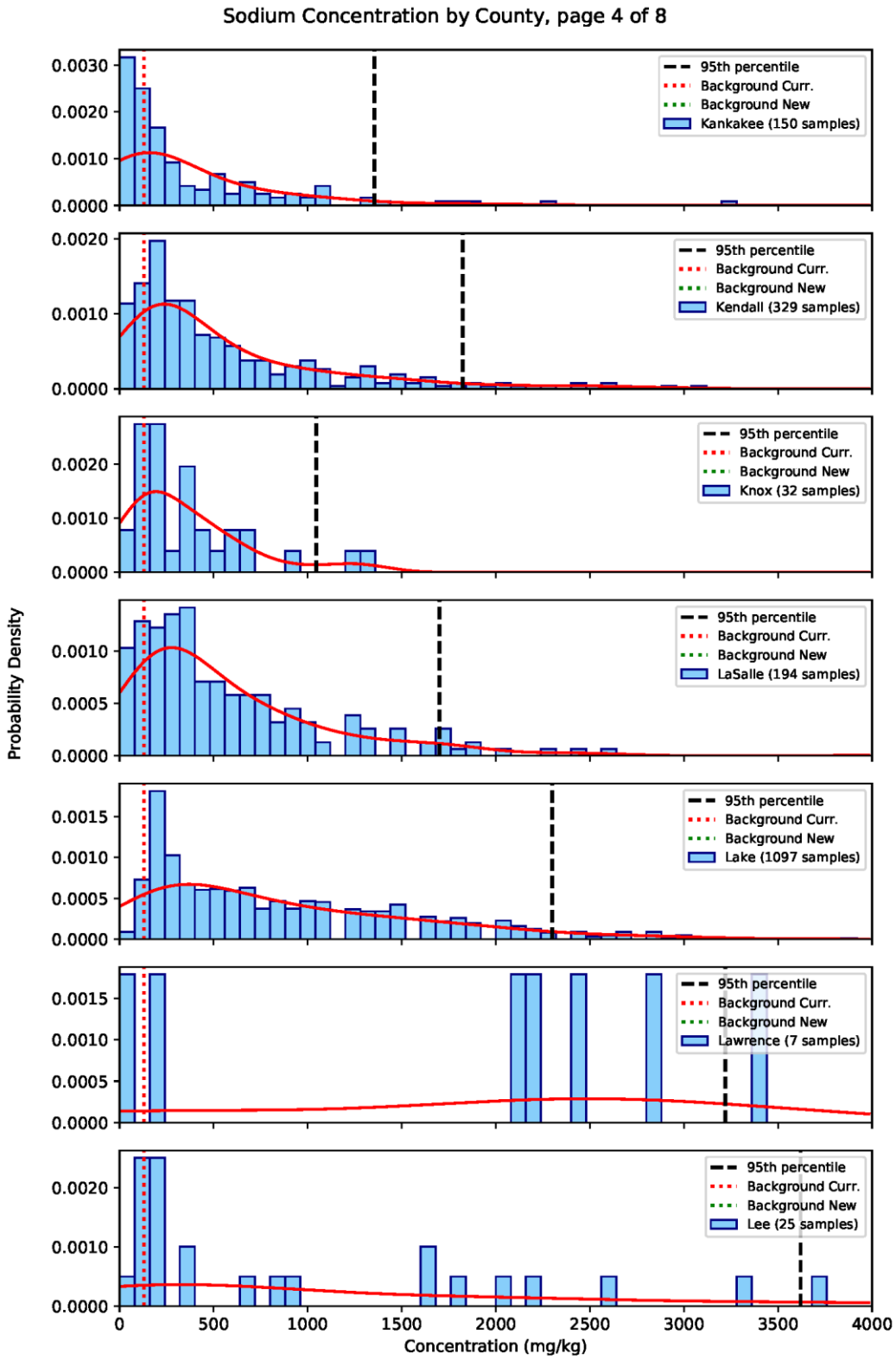


Figure 682. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 4

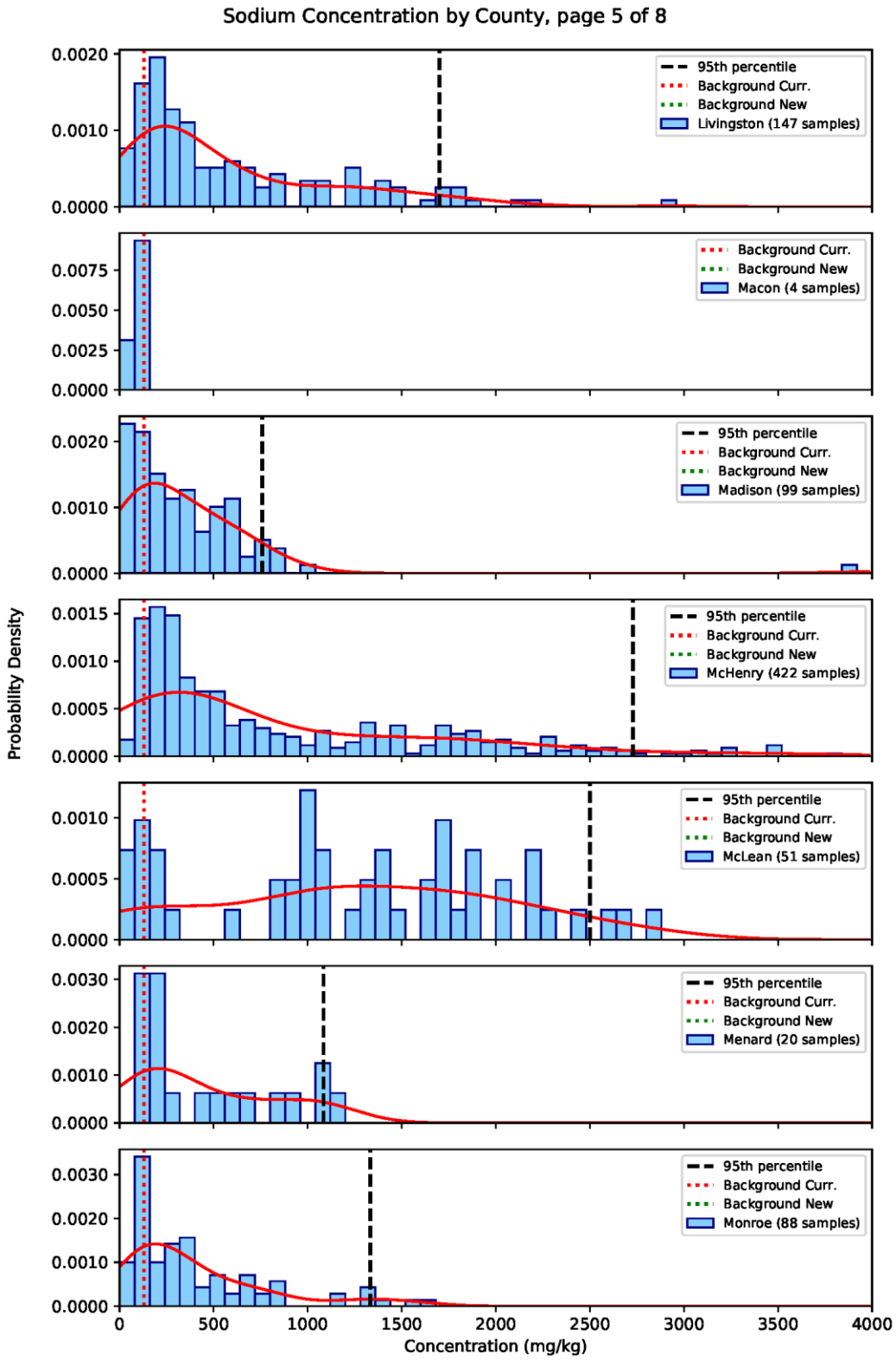


Figure 683. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 5

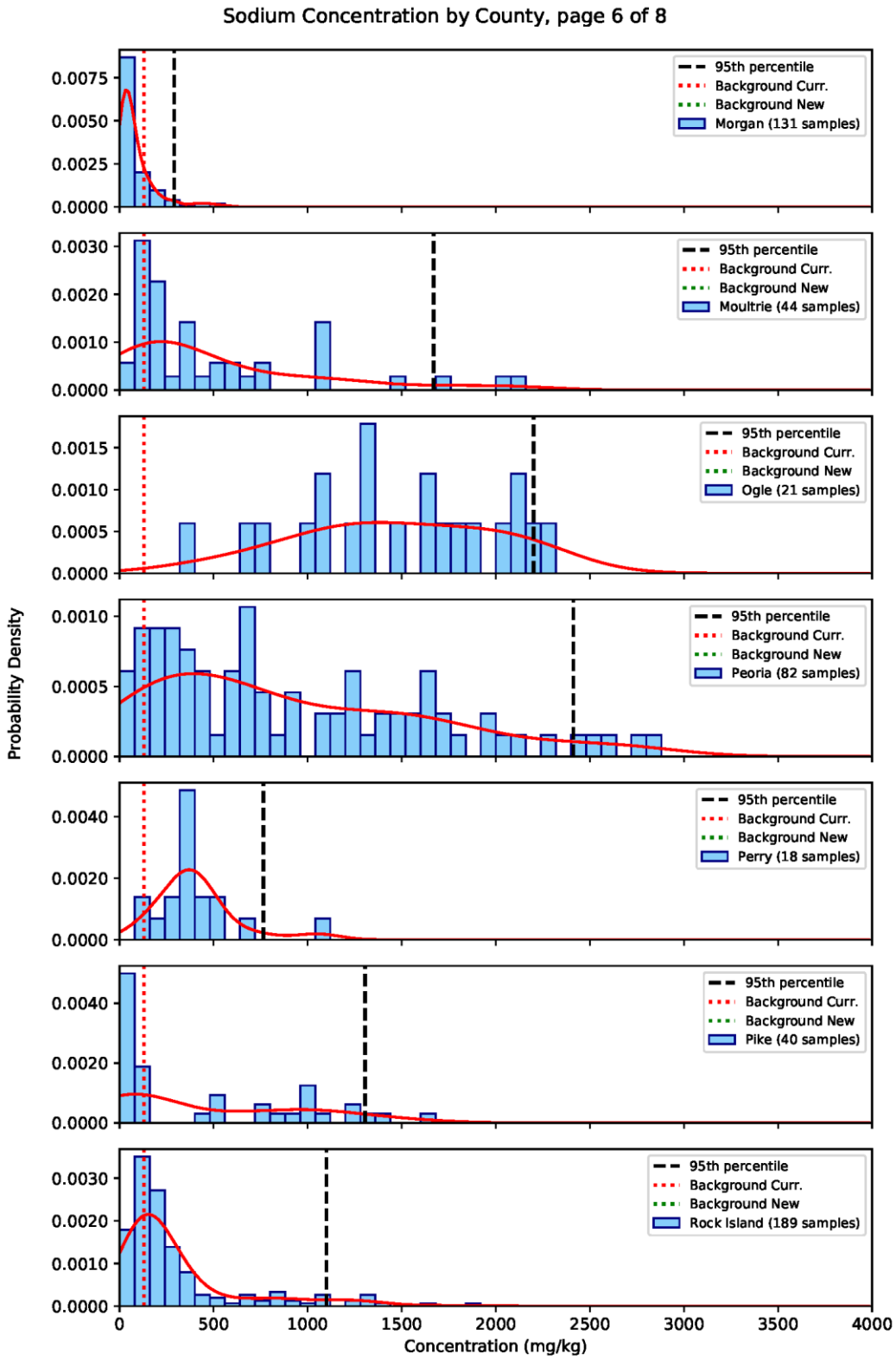


Figure 684. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 6

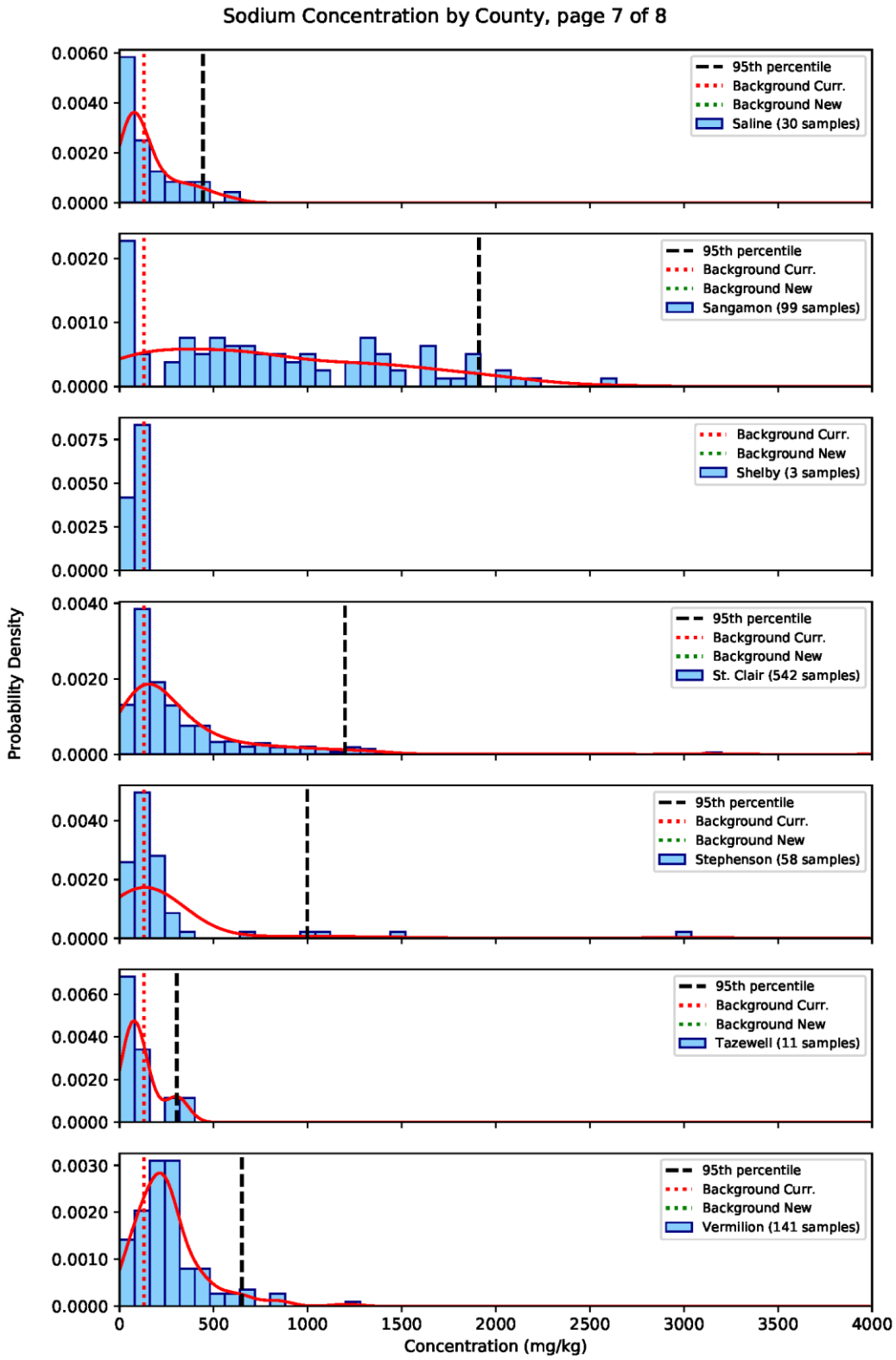


Figure 685. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 7

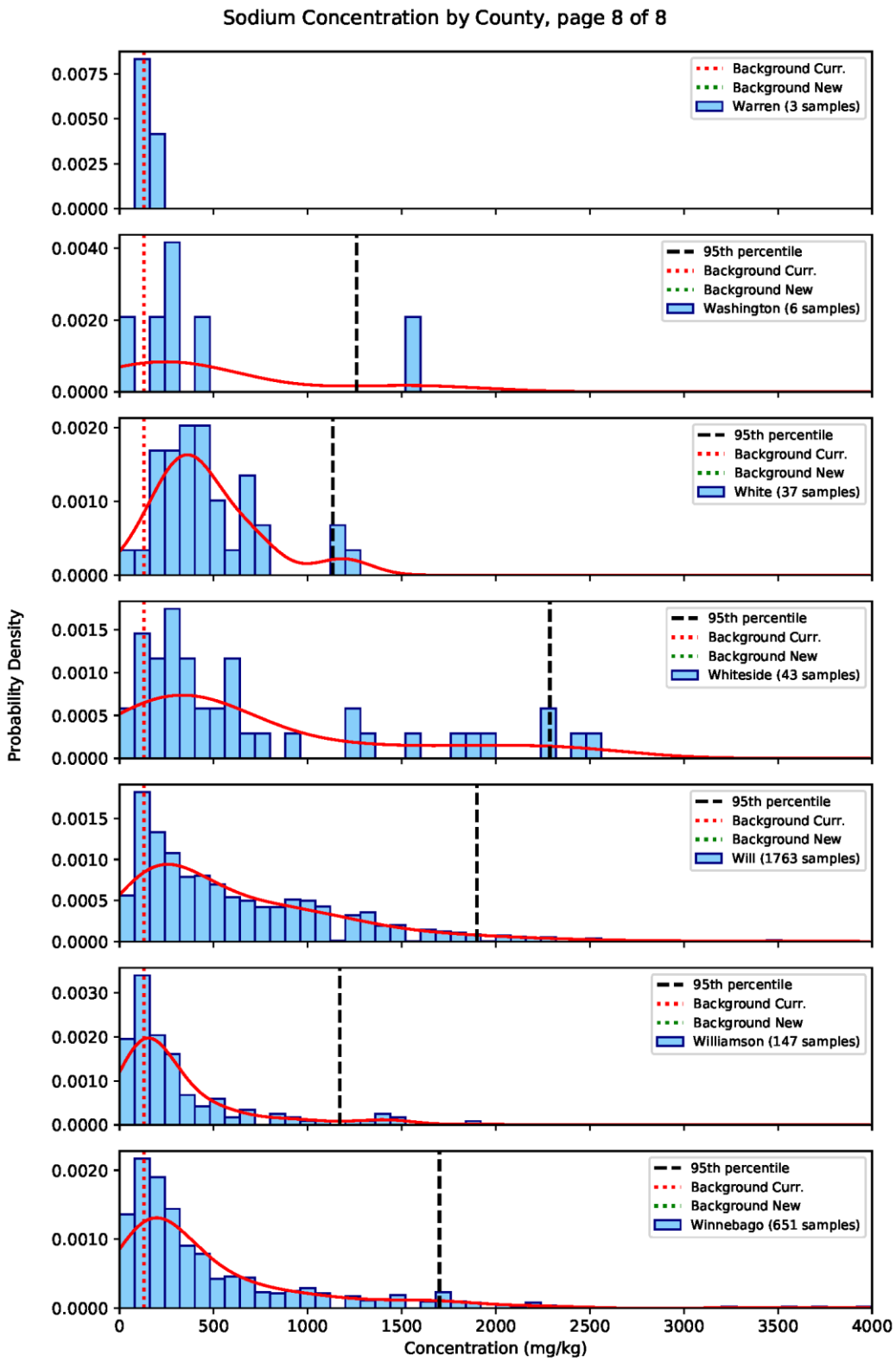


Figure 686. Histogram of RSL sodium concentrations by Illinois county, REC (mg/kg), part 8

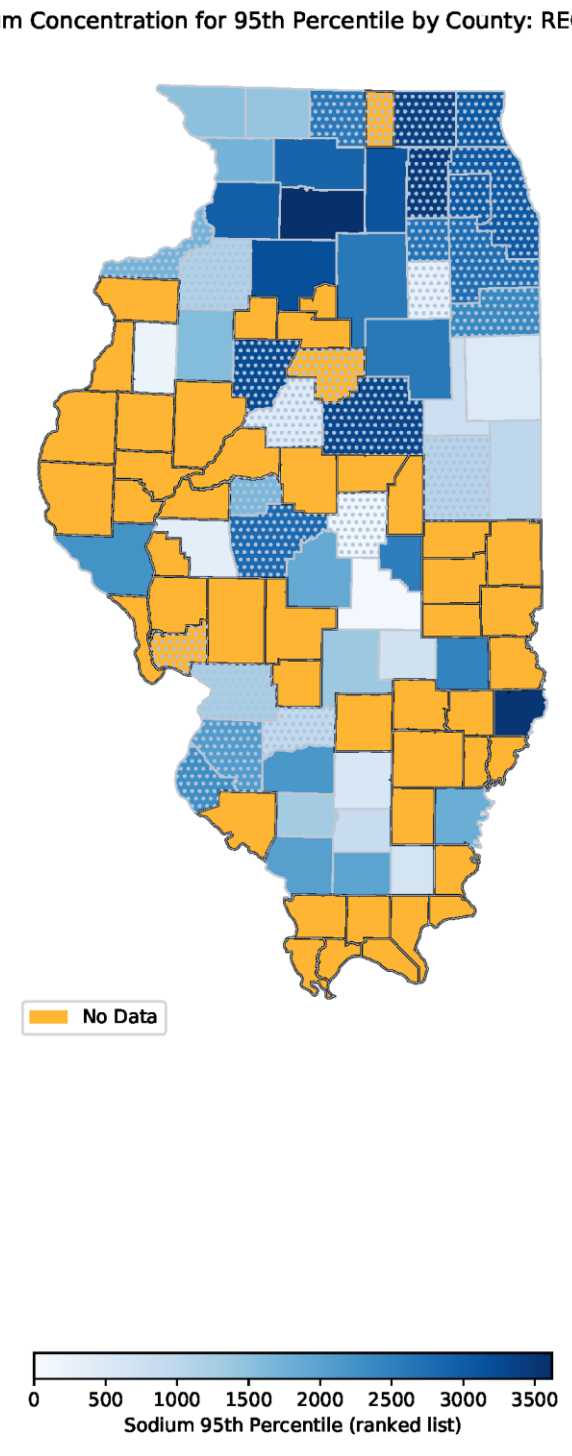


Figure 687. Map of RSL sodium 95th percentile concentration by Illinois county, REC (mg/kg)

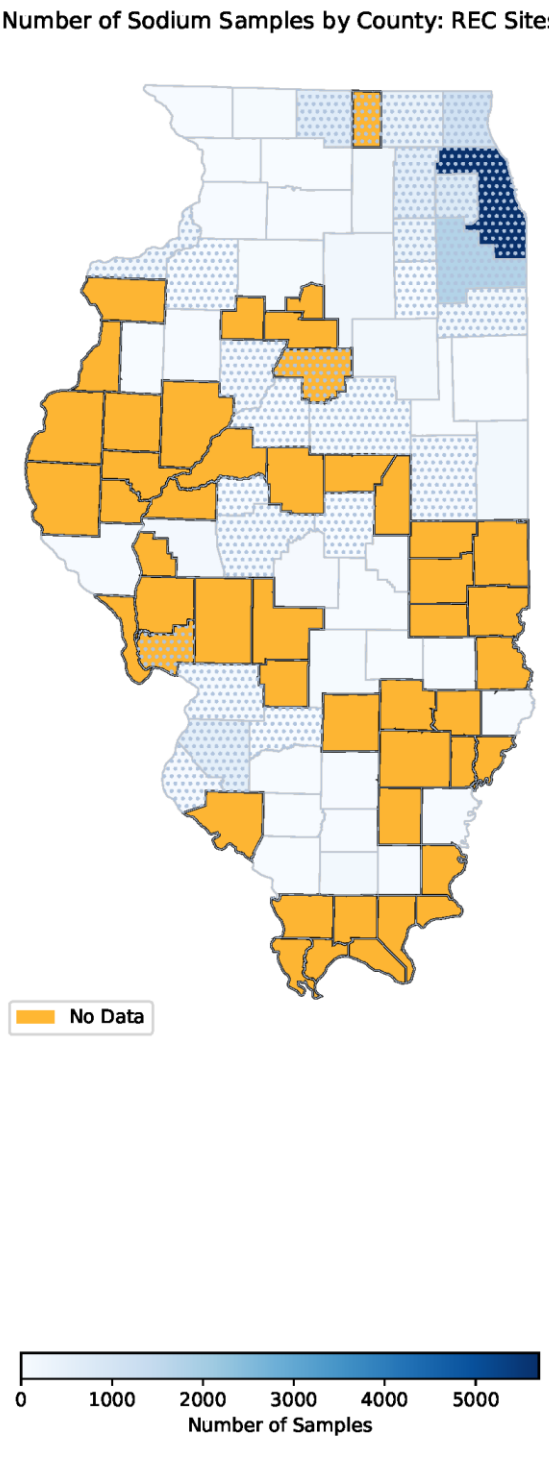


Figure 688. Map of RSL sodium sample quantity by Illinois county, REC (mg/kg)

S.2 SODIUM NON-REC

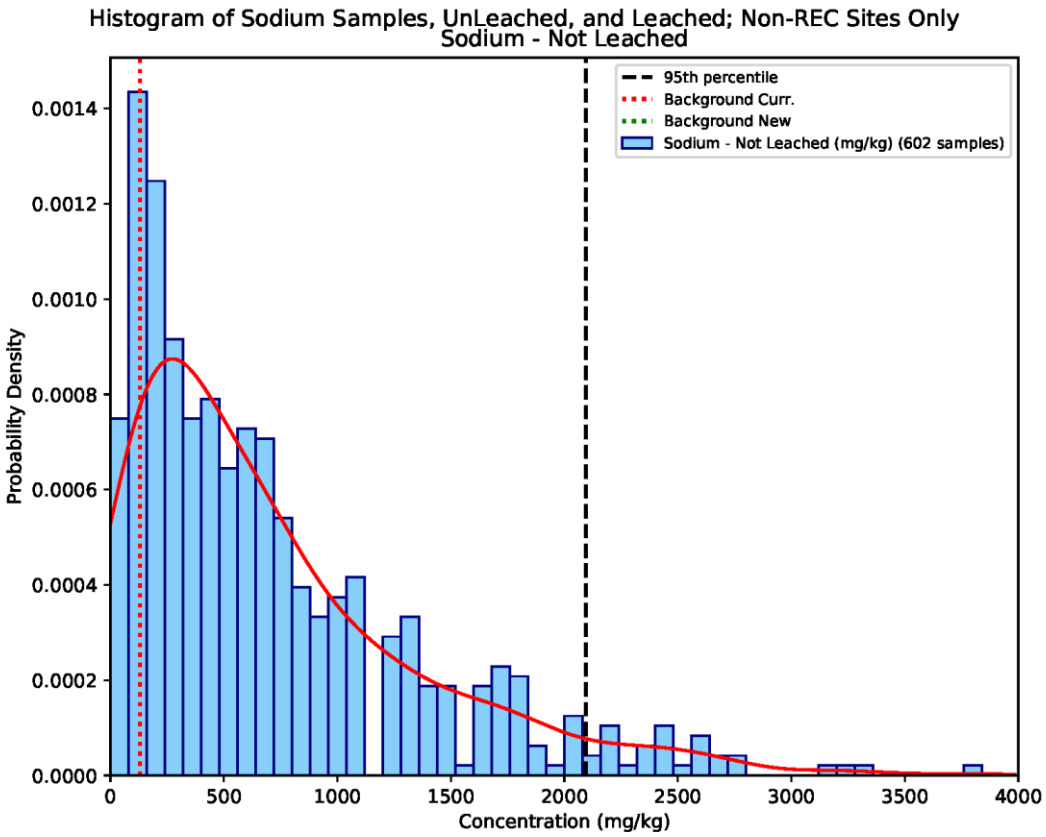


Figure 689. Histogram of RSL sodium concentrations, Non-REC (mg/kg)

Sodium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

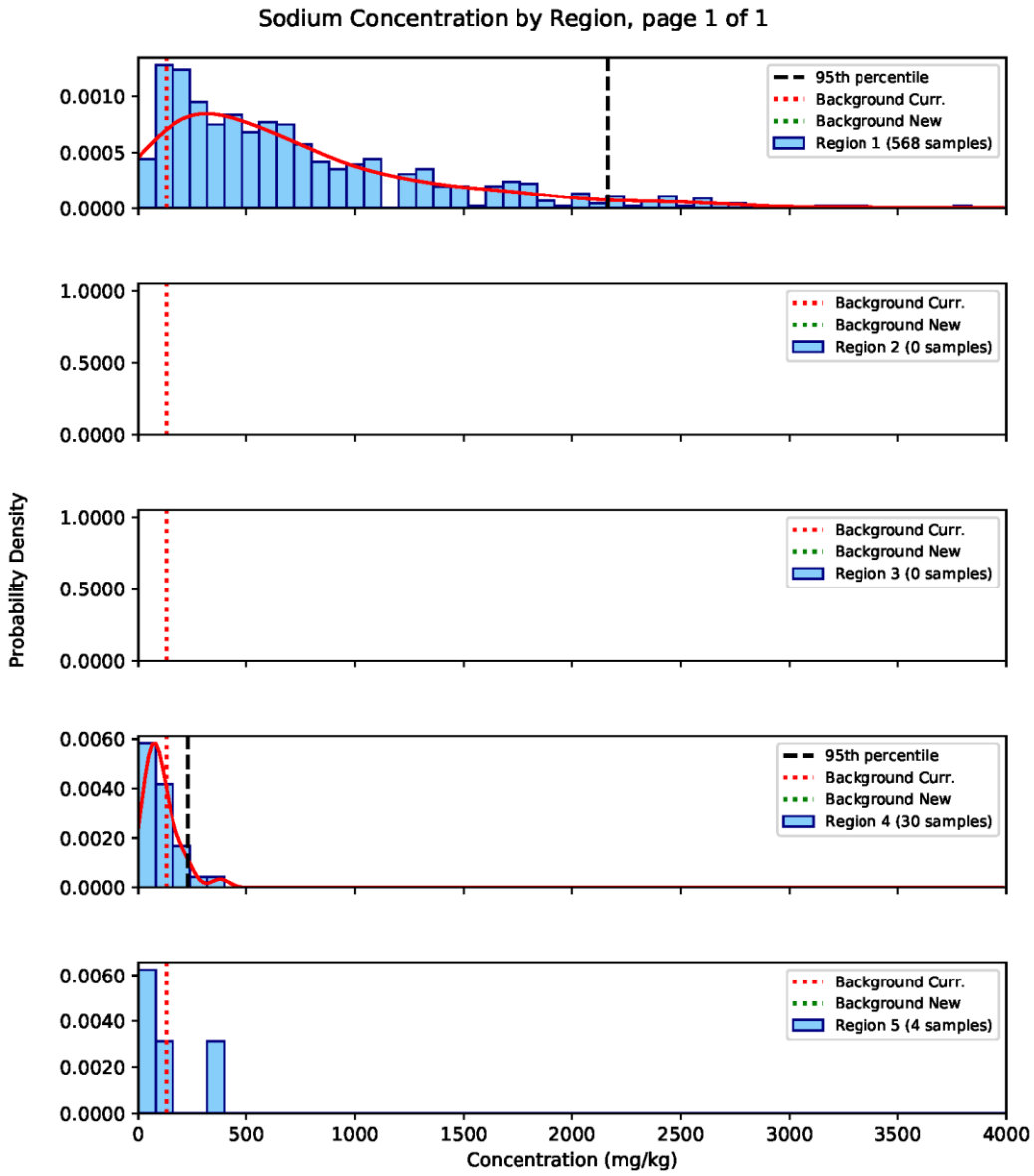


Figure 690. Histogram of RSL sodium concentrations by IDOT Region, Non-REC (mg/kg)

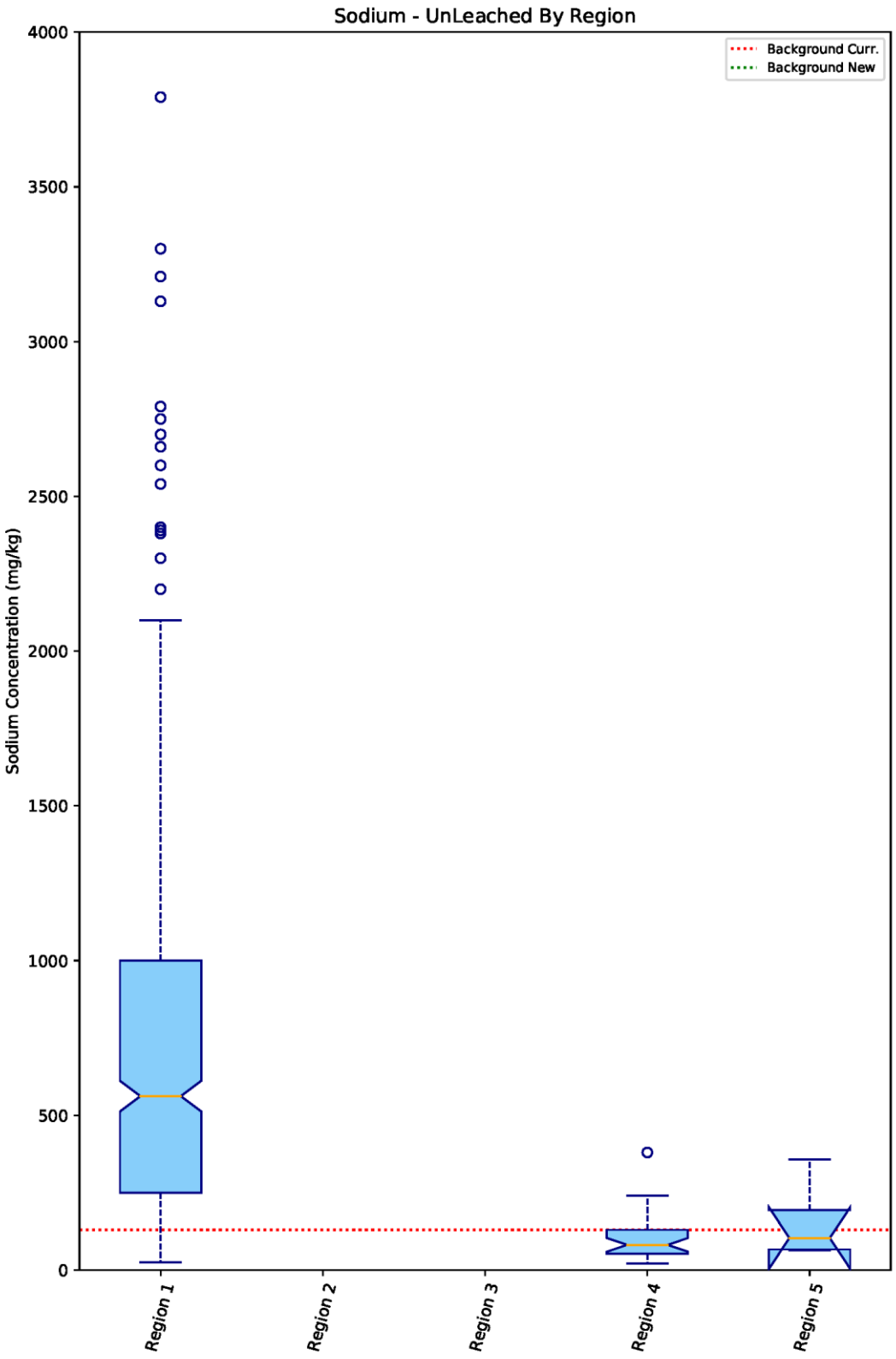


Figure 691. Boxplot of RSL sodium concentrations by IDOT Region, Non-REC (mg/kg)

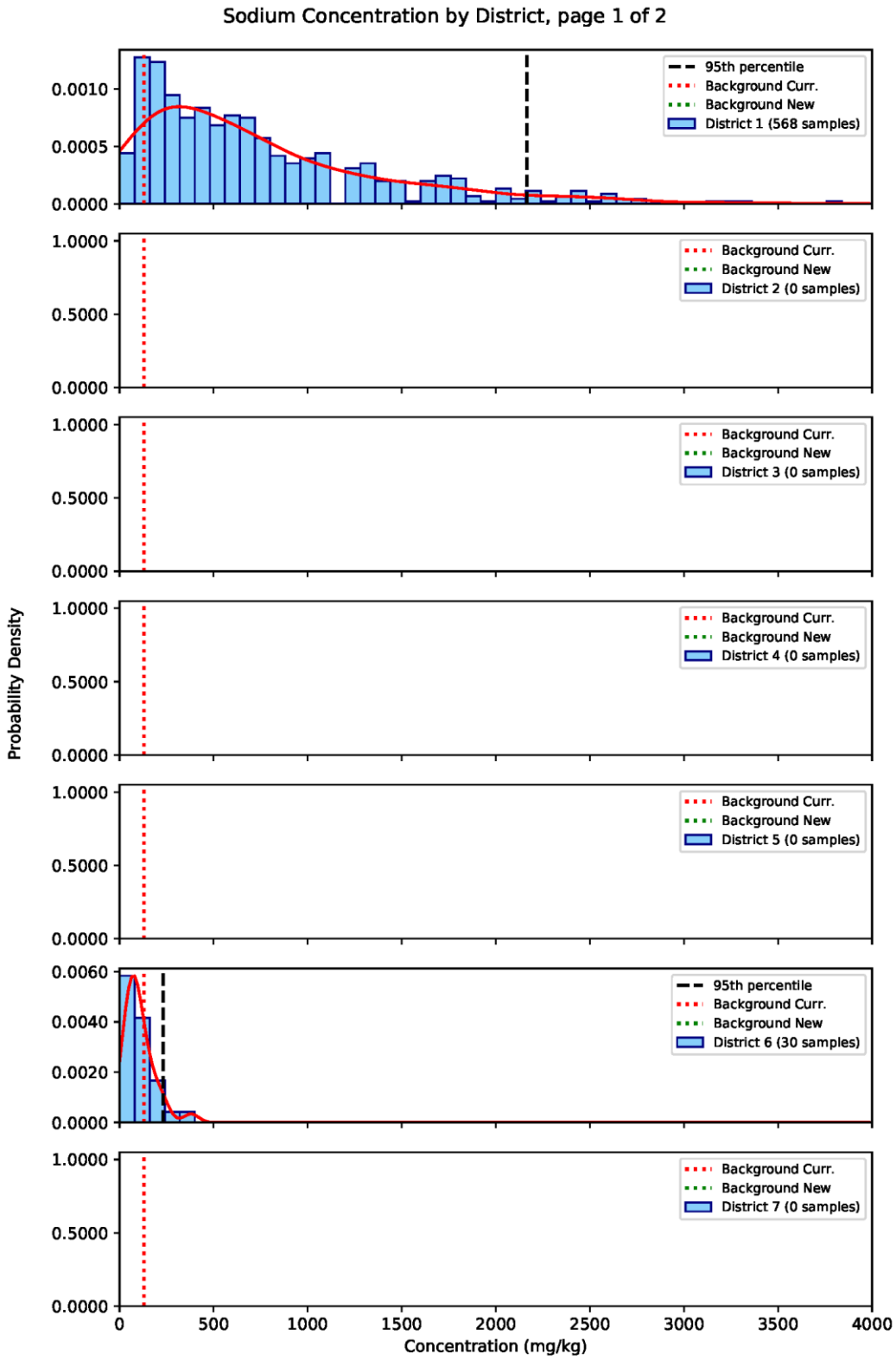


Figure 692. Histogram of RSL sodium concentrations by IDOT District, Non-REC (mg/kg), part 1

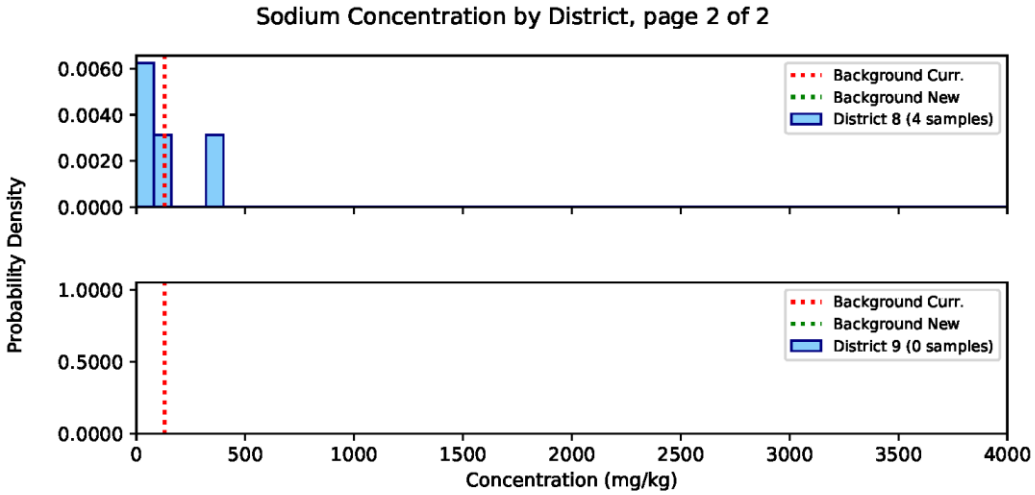


Figure 693. Histogram of RSL sodium concentrations by IDOT District, Non-REC (mg/kg), part 2

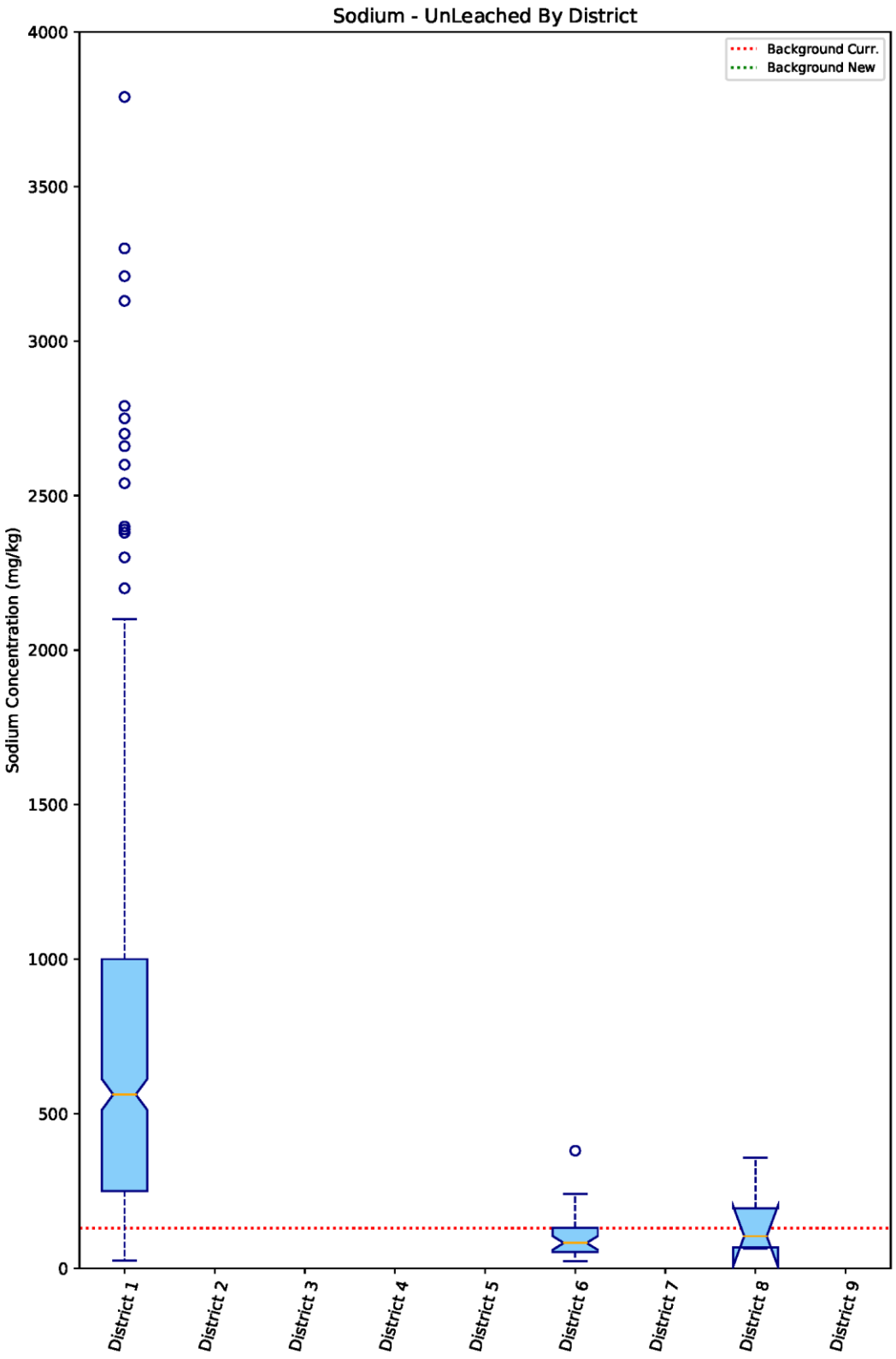


Figure 694. Boxplot of RSL sodium concentrations by IDOT District, Non-REC (mg/kg)

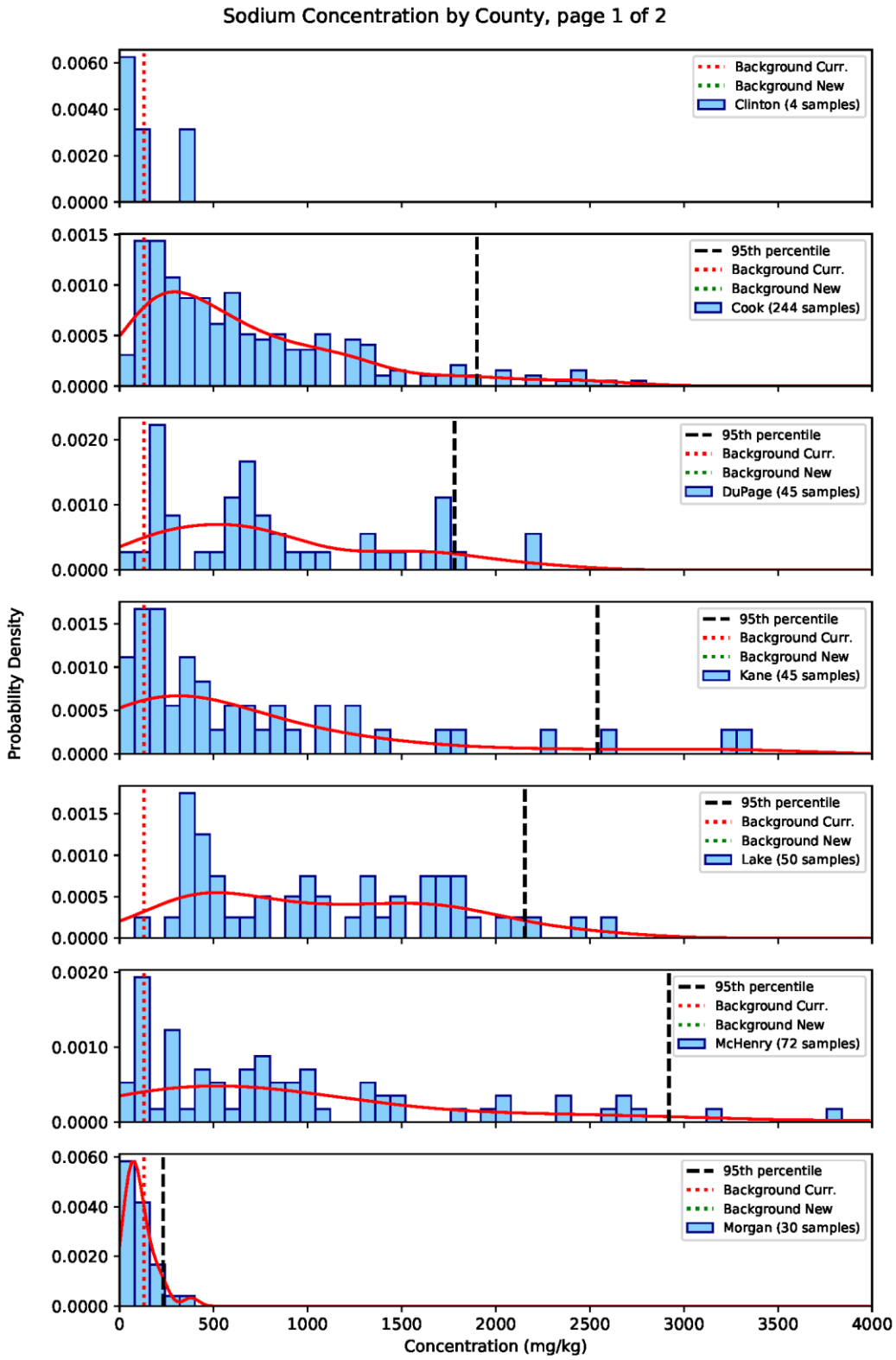


Figure 695. Histogram of RSL sodium concentrations by Illinois county, Non-REC (mg/kg), part 1

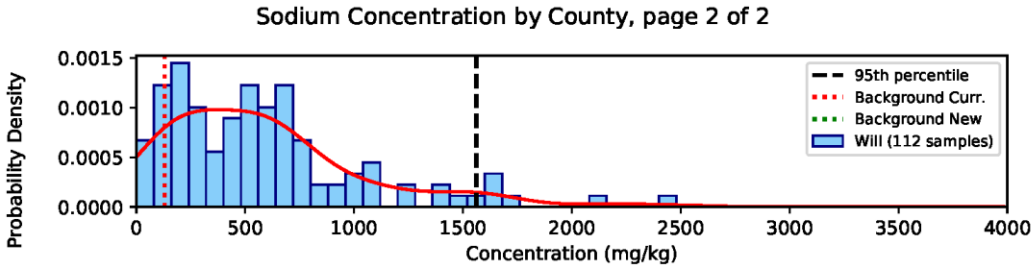


Figure 696. Histogram of RSL sodium concentrations by Illinois county, Non-REC (mg/kg), part 2

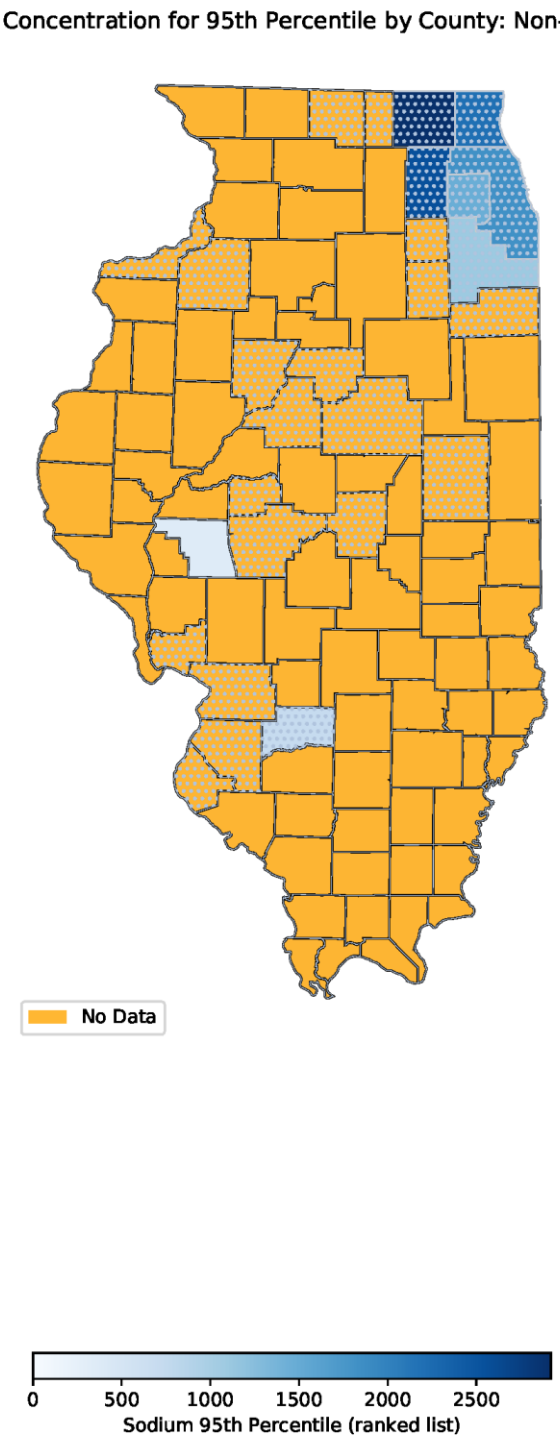


Figure 697. Map of RSL sodium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

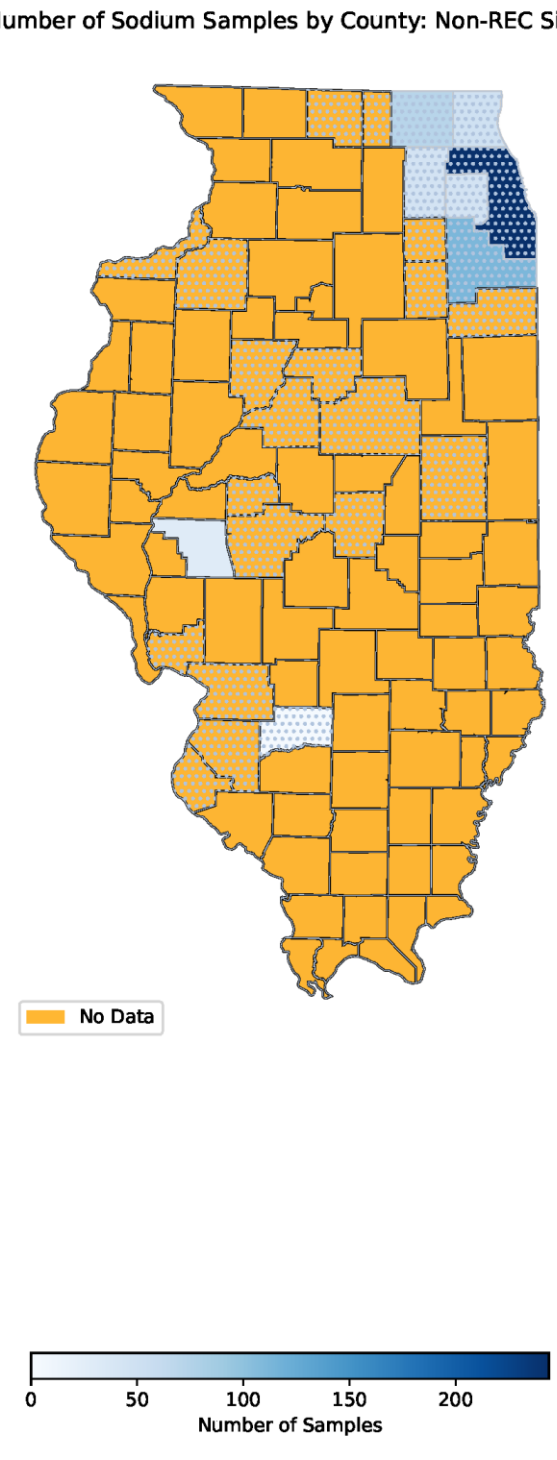


Figure 698. Map of RSL sodium sample quantity by Illinois county, Non-REC (mg/kg)

S.3 SODIUM DE MINIMIS

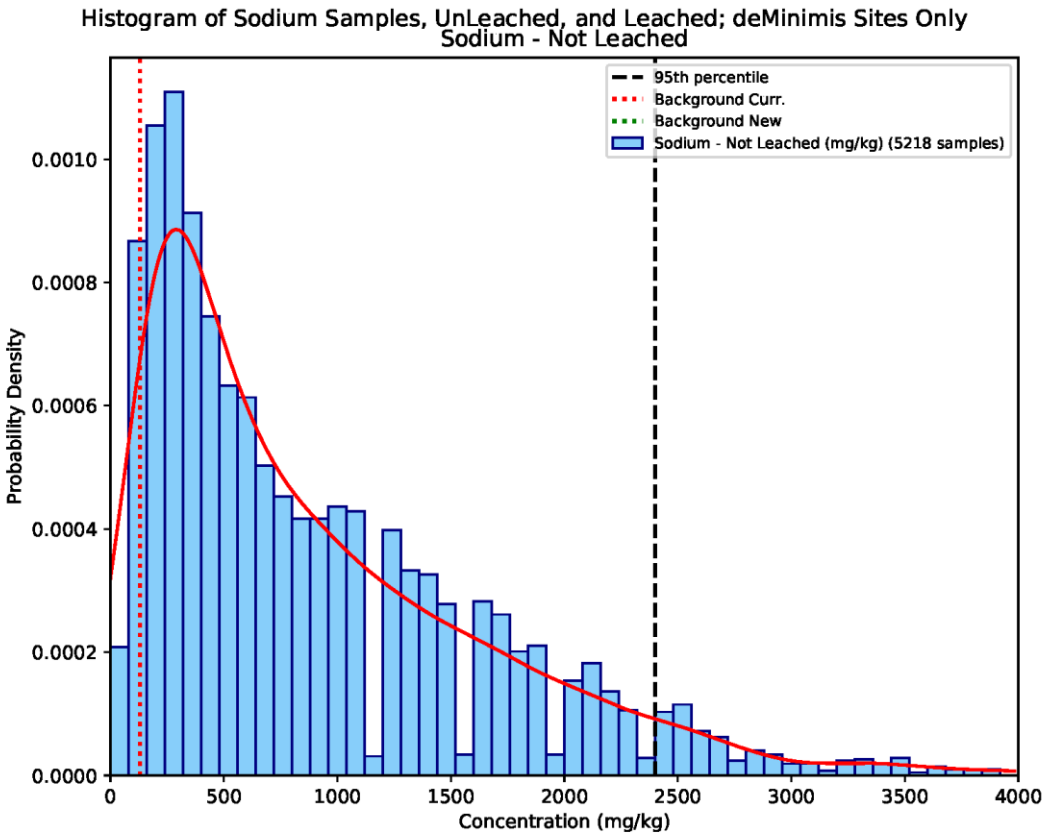


Figure 699. Histogram of RSL sodium concentrations, de minimis (mg/kg)

Sodium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

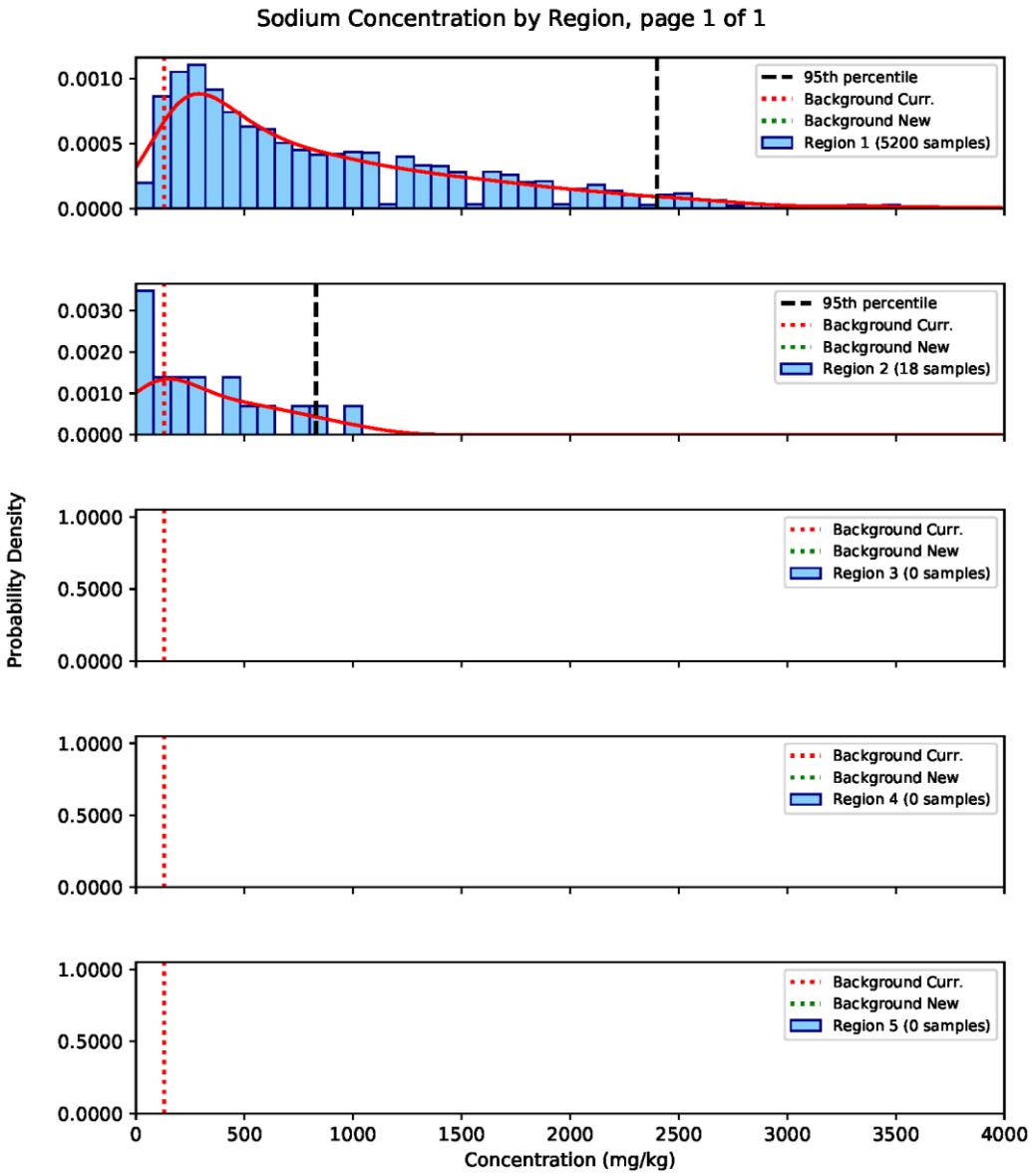


Figure 700. Histogram of RSL sodium concentrations by IDOT Region, de minimis (mg/kg)

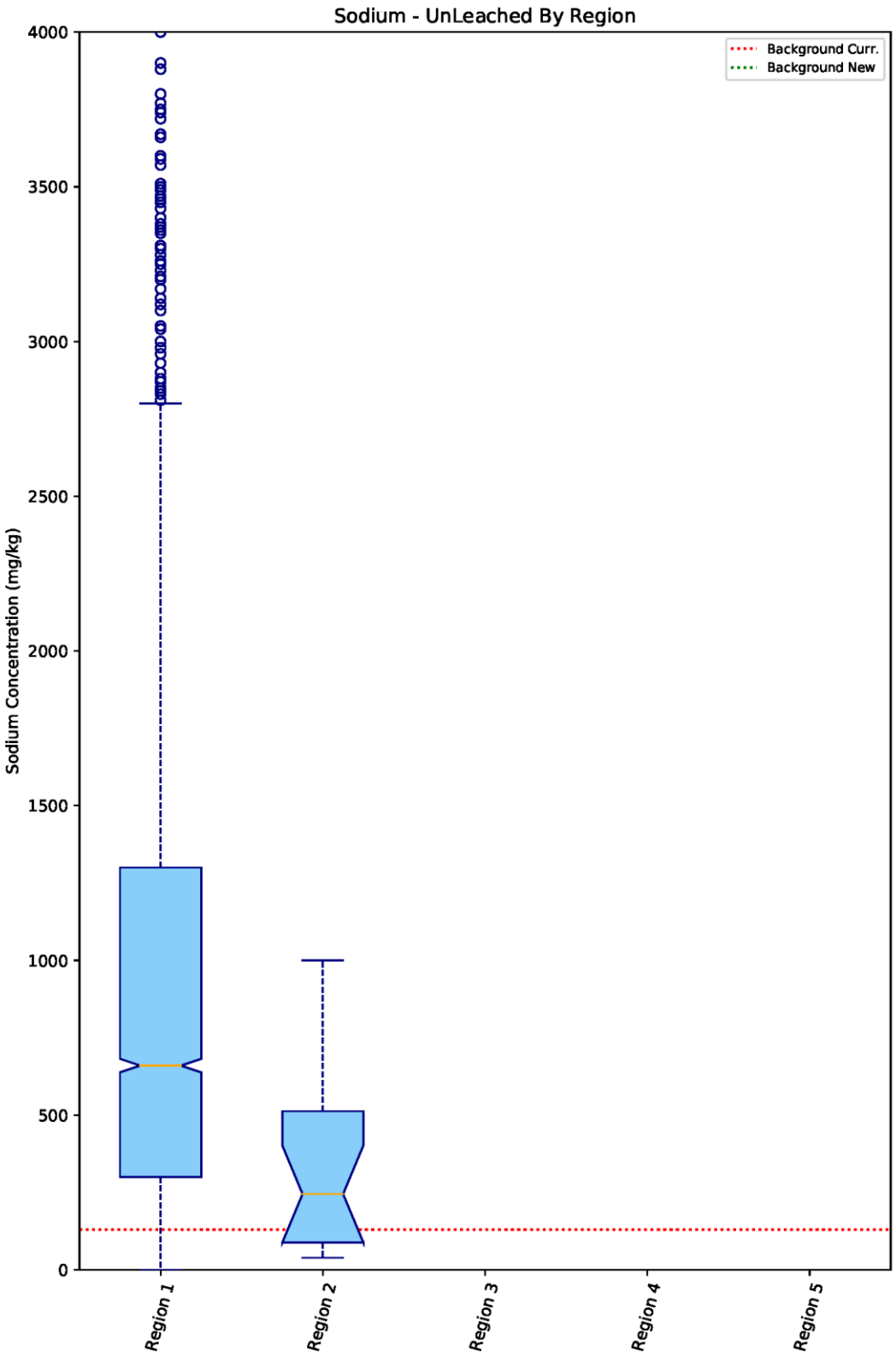


Figure 701. Boxplot of RSL sodium concentrations by IDOT Region, de minimis (mg/kg)

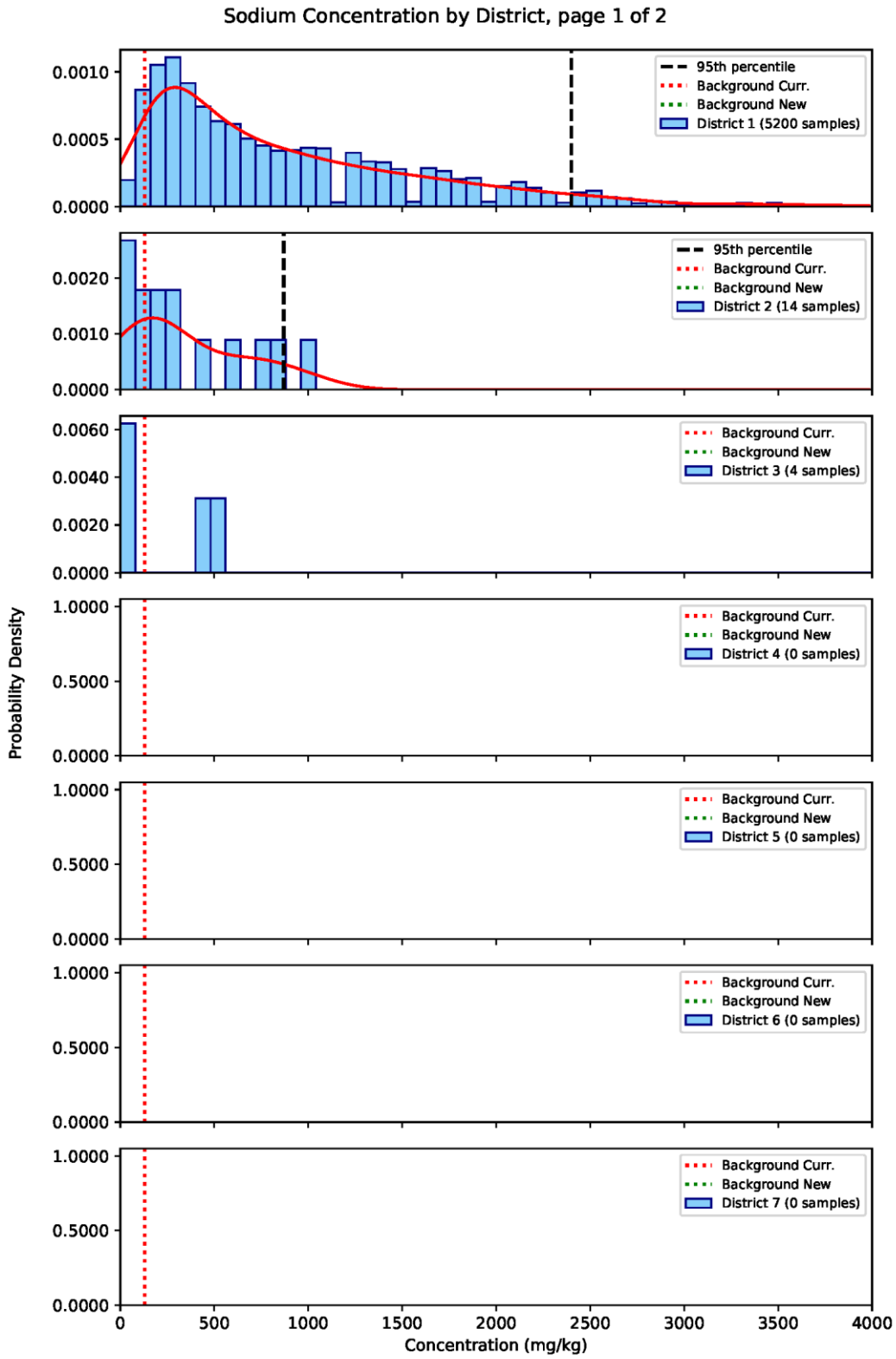


Figure 702. Histogram of RSL sodium concentrations by IDOT District, de minimis (mg/kg), part 1

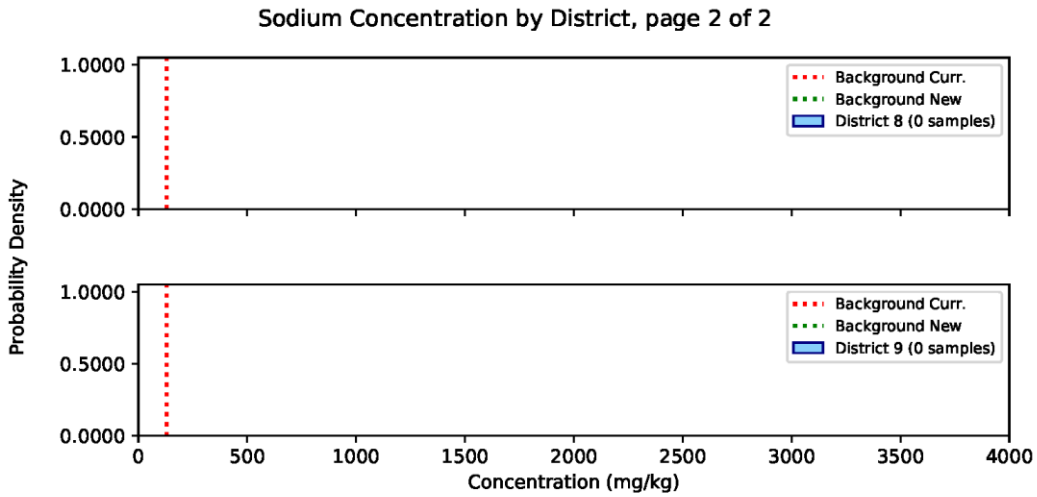


Figure 703. Histogram of RSL sodium concentrations by IDOT District, de minimis (mg/kg), part 2

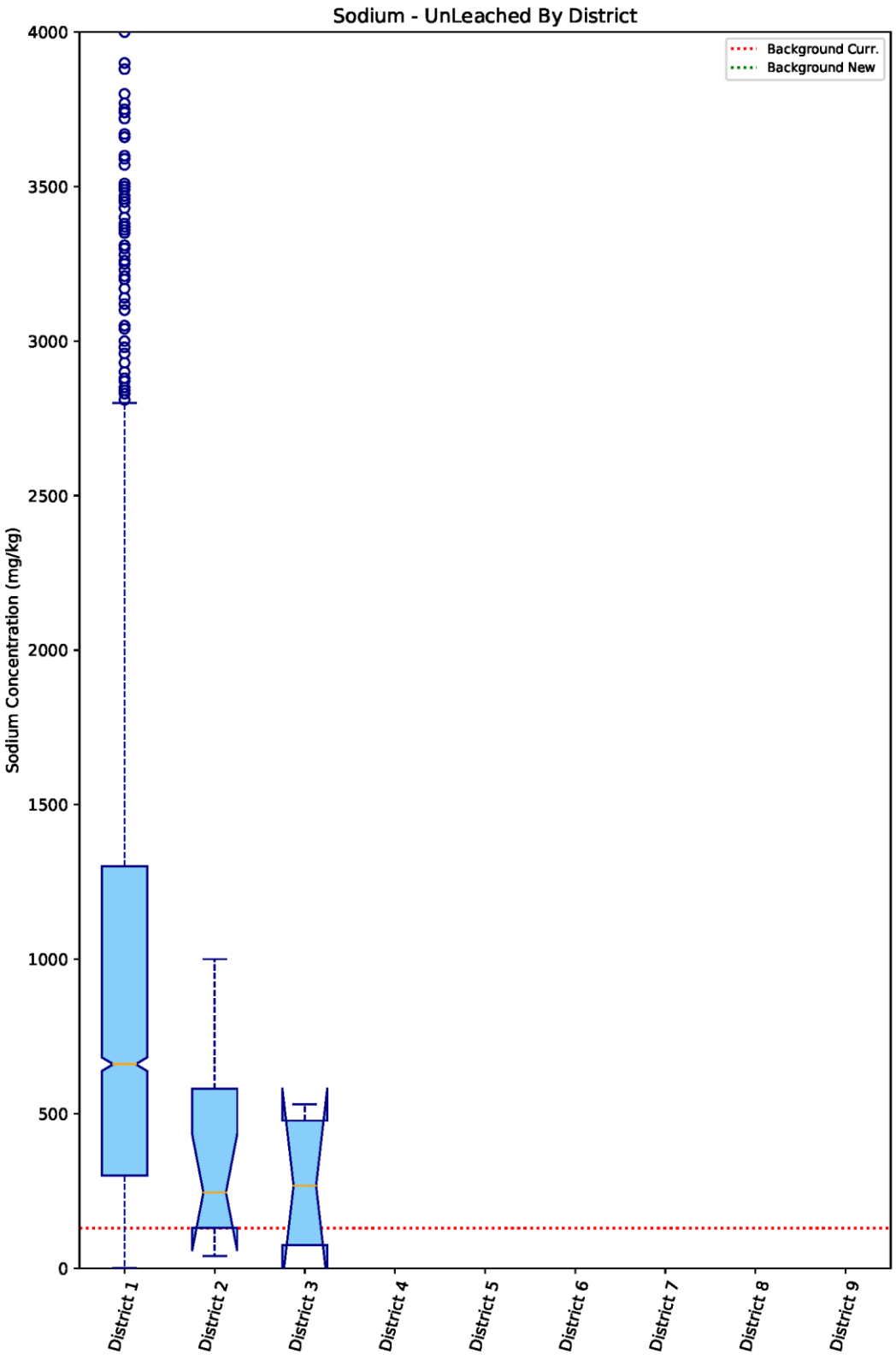


Figure 704. Boxplot of RSL sodium concentrations by IDOT District, de minimis (mg/kg)

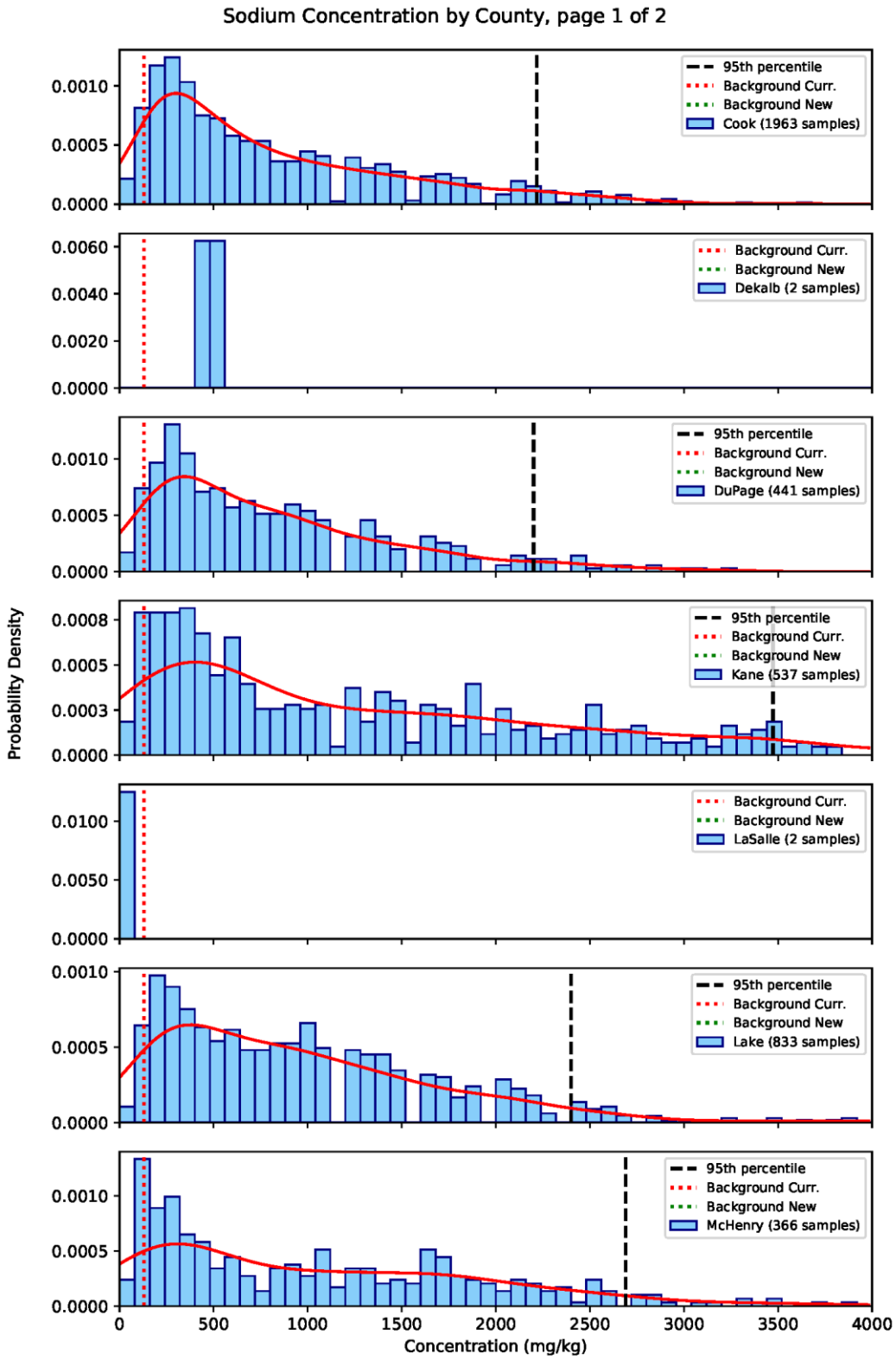


Figure 705. Histogram of RSL sodium concentrations by Illinois county, de minimis (mg/kg), part 1

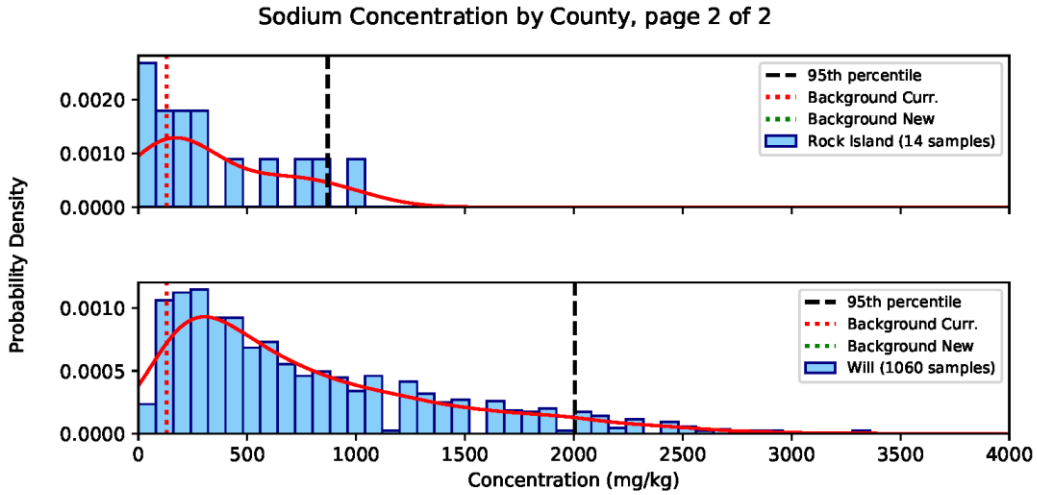


Figure 706. Histogram of RSL sodium concentrations by Illinois county, de minimis (mg/kg), part 2

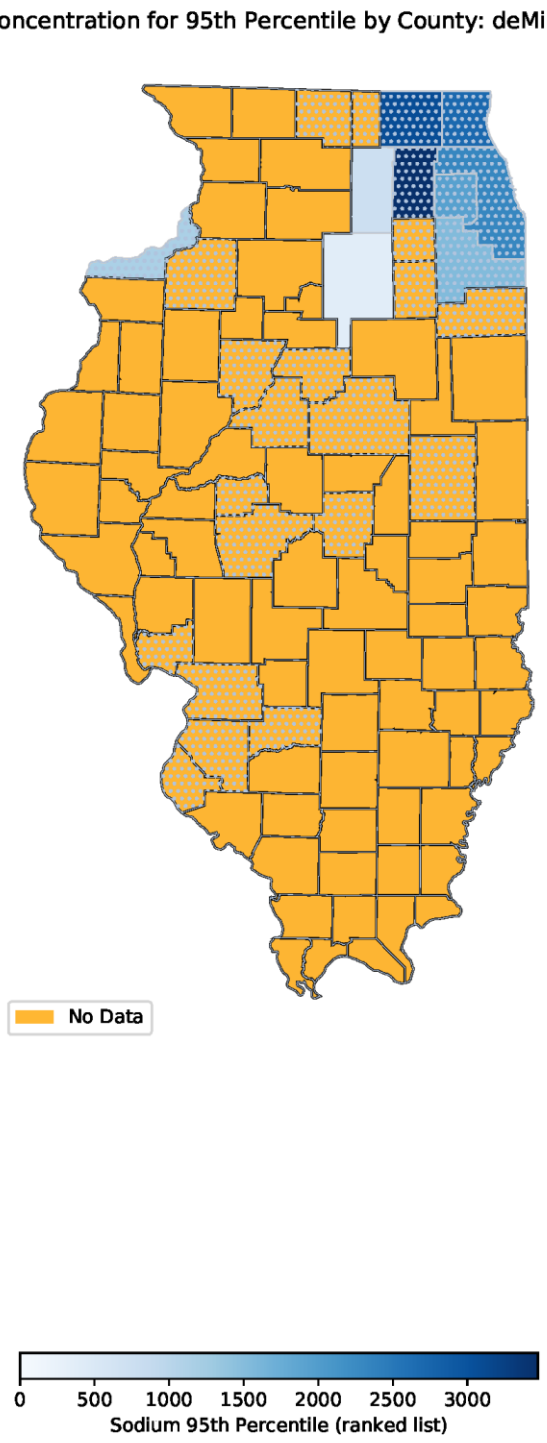


Figure 707. Map of RSL sodium 95th percentile concentration by Illinois county, de minimis (mg/kg)

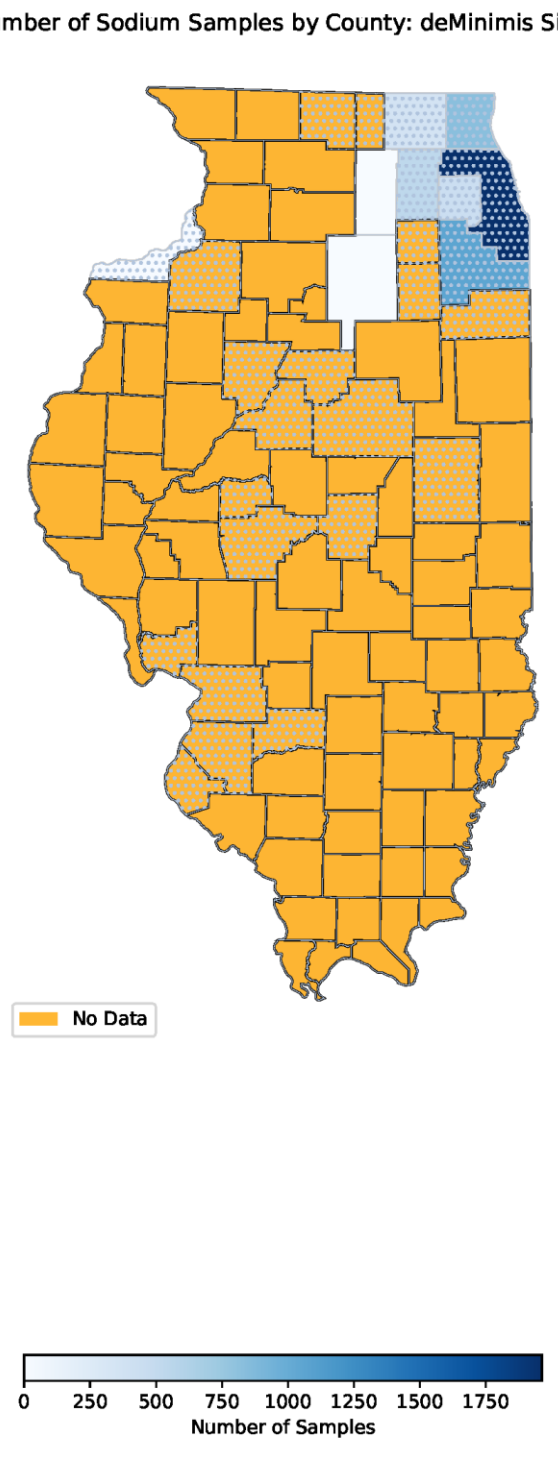


Figure 708. Map of RSL sodium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX T. ANALYTE ANALYSIS: THALLIUM

T.1 THALLIUM REC

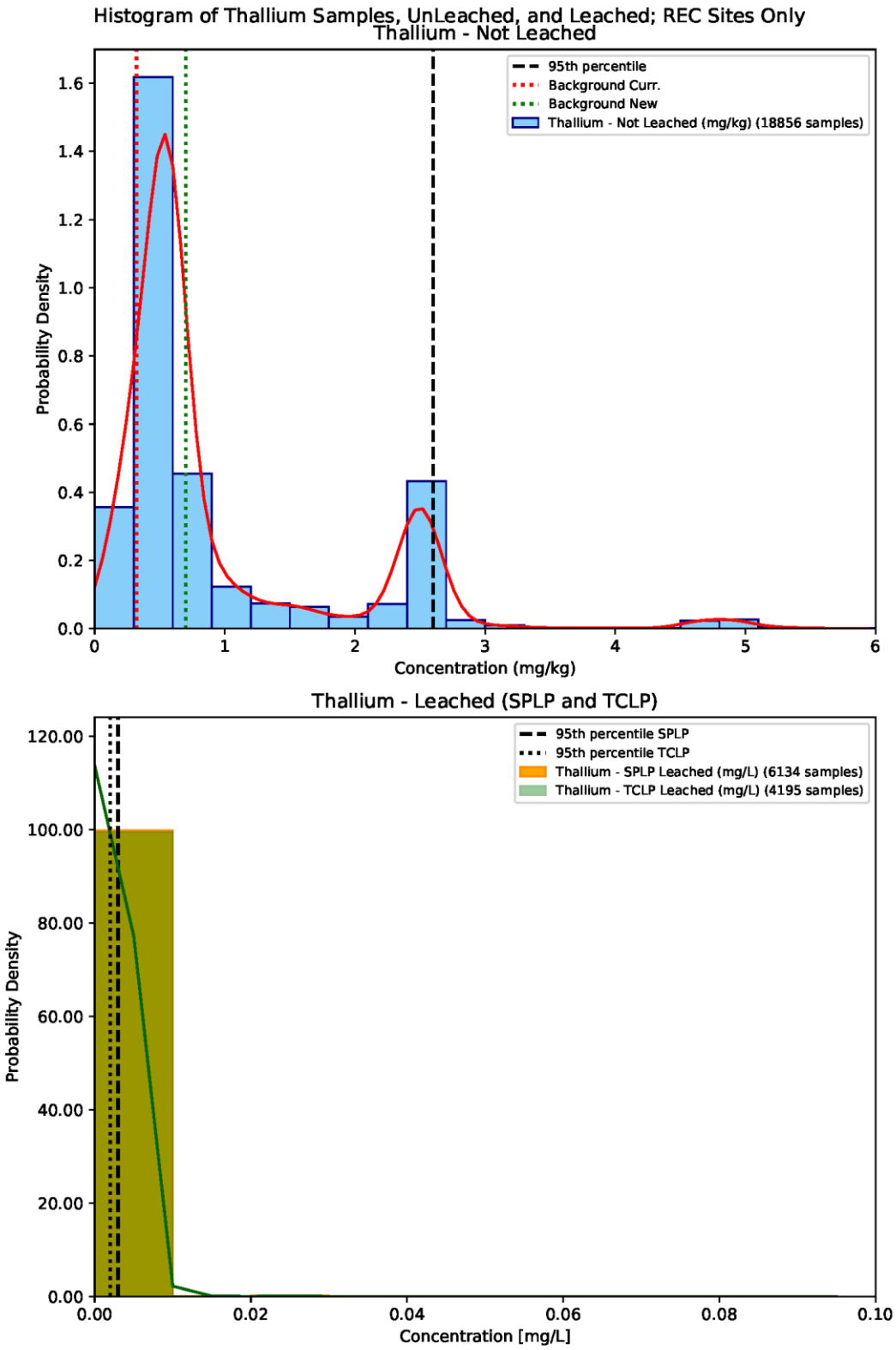


Figure 709. Histogram of RSL thallium concentrations, REC (mg/kg)

Thallium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

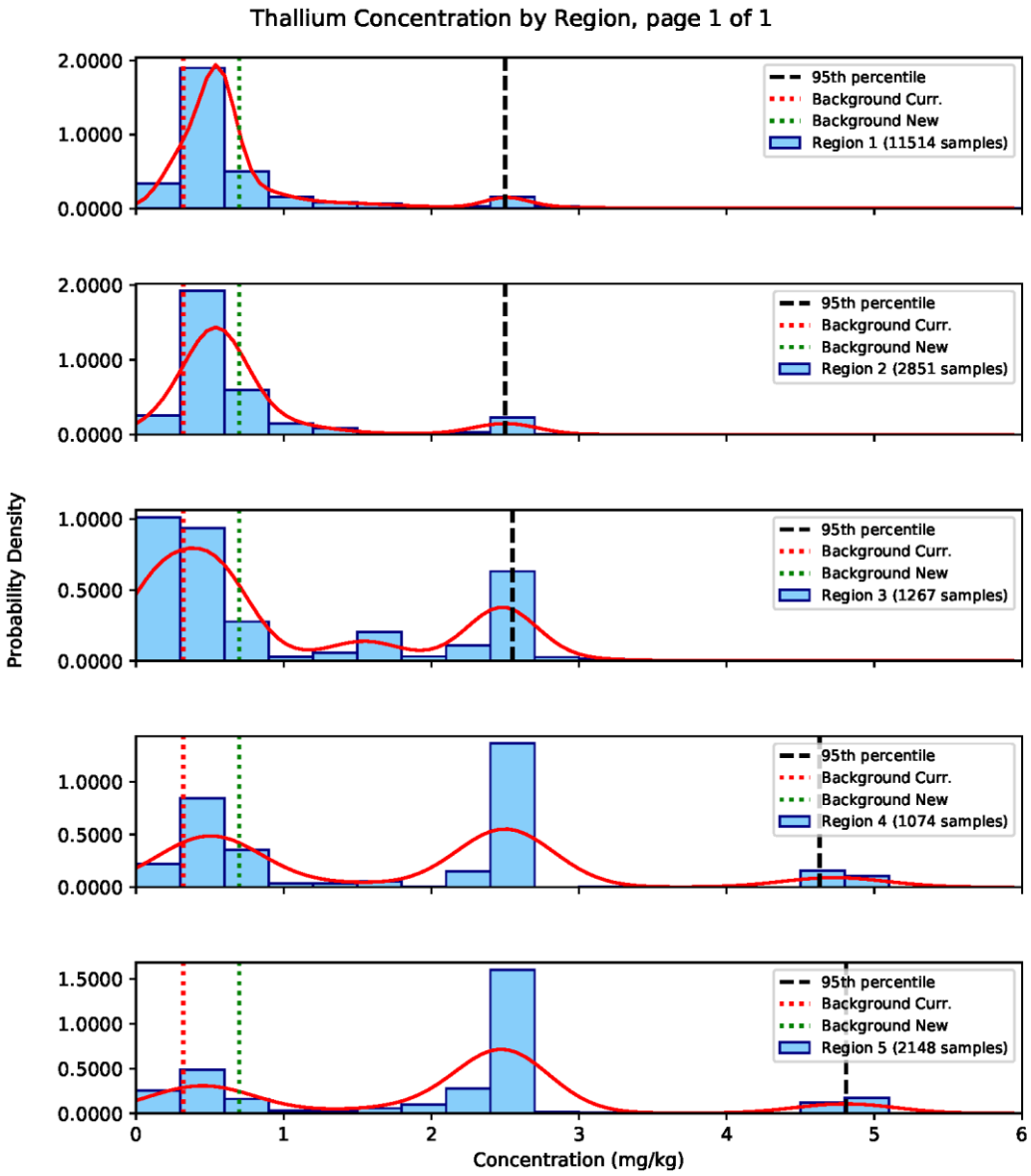


Figure 710. Histogram of RSL thallium concentrations by IDOT Region, REC (mg/kg)

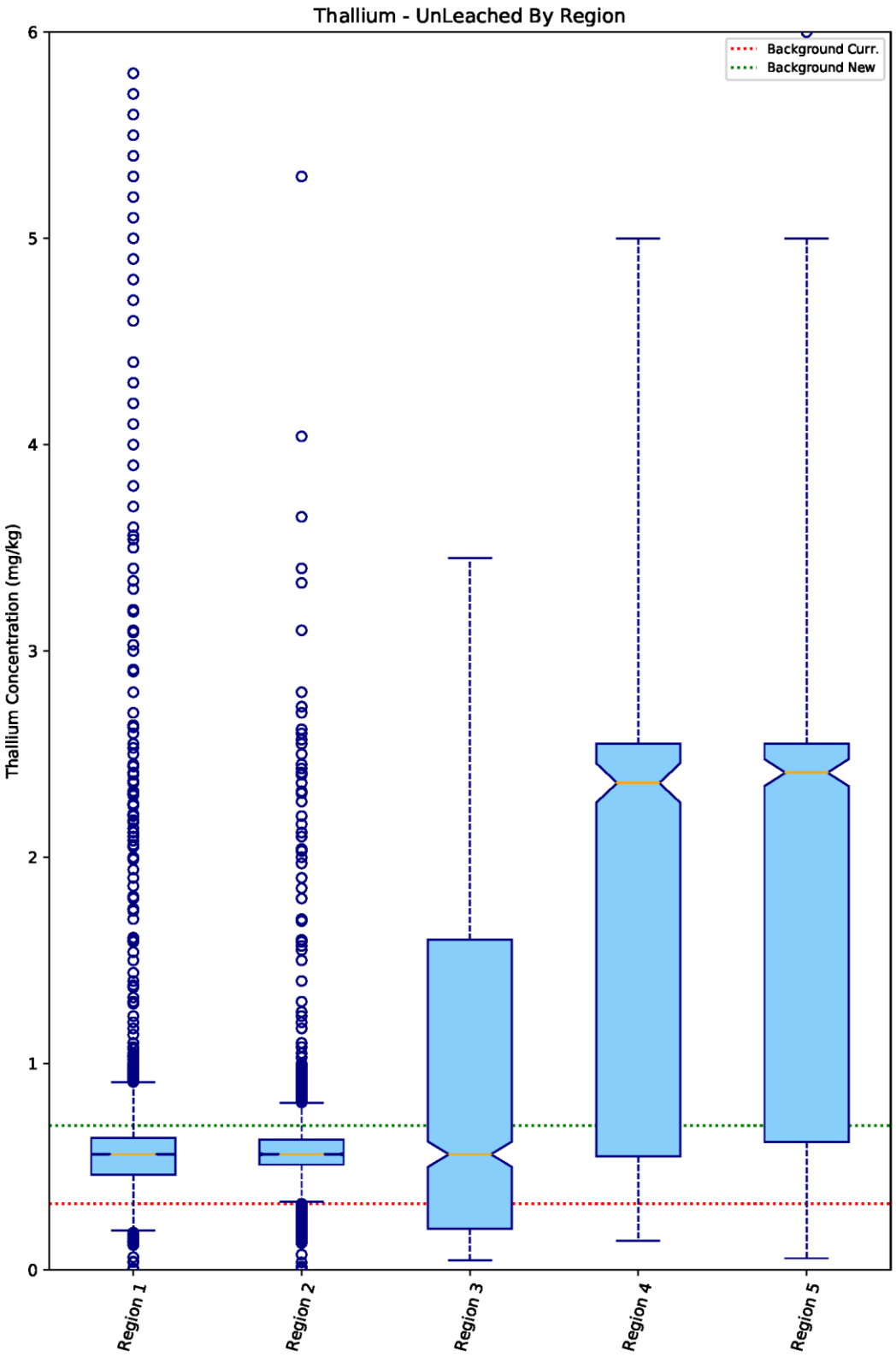


Figure 711. Boxplot of RSL thallium concentrations by IDOT Region, REC (mg/kg)

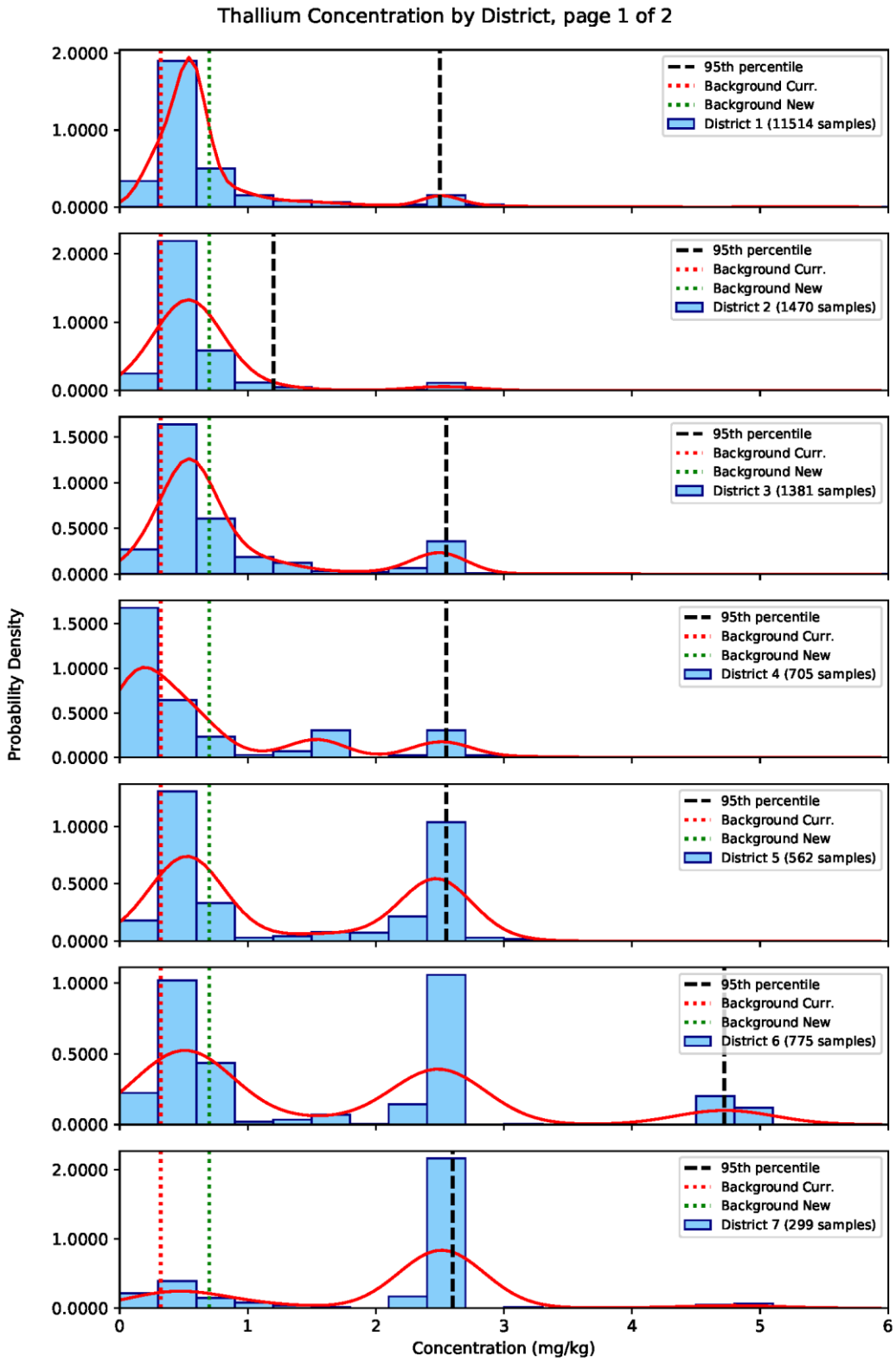


Figure 712. Histogram of RSL thallium concentrations by IDOT District, REC (mg/kg), part 1

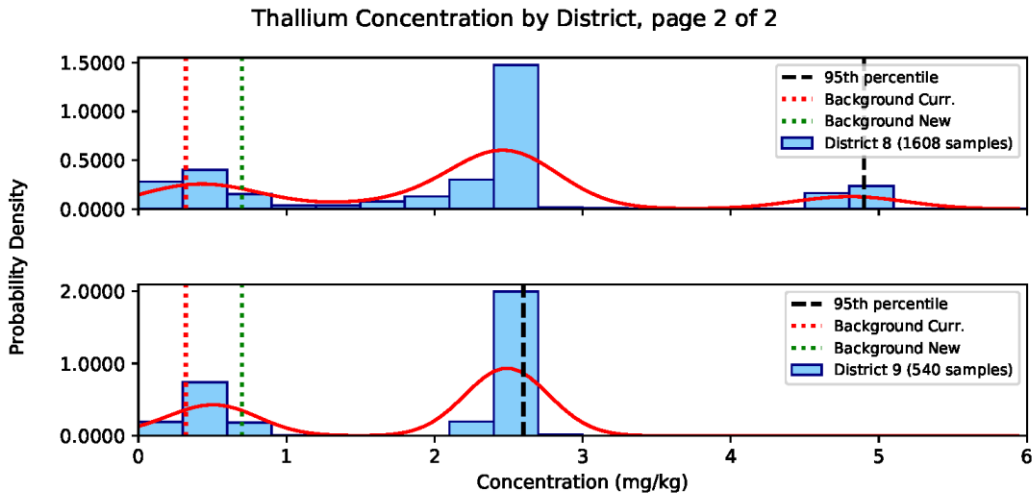


Figure 713. Histogram of RSL thallium concentrations by IDOT District, REC (mg/kg), part 2

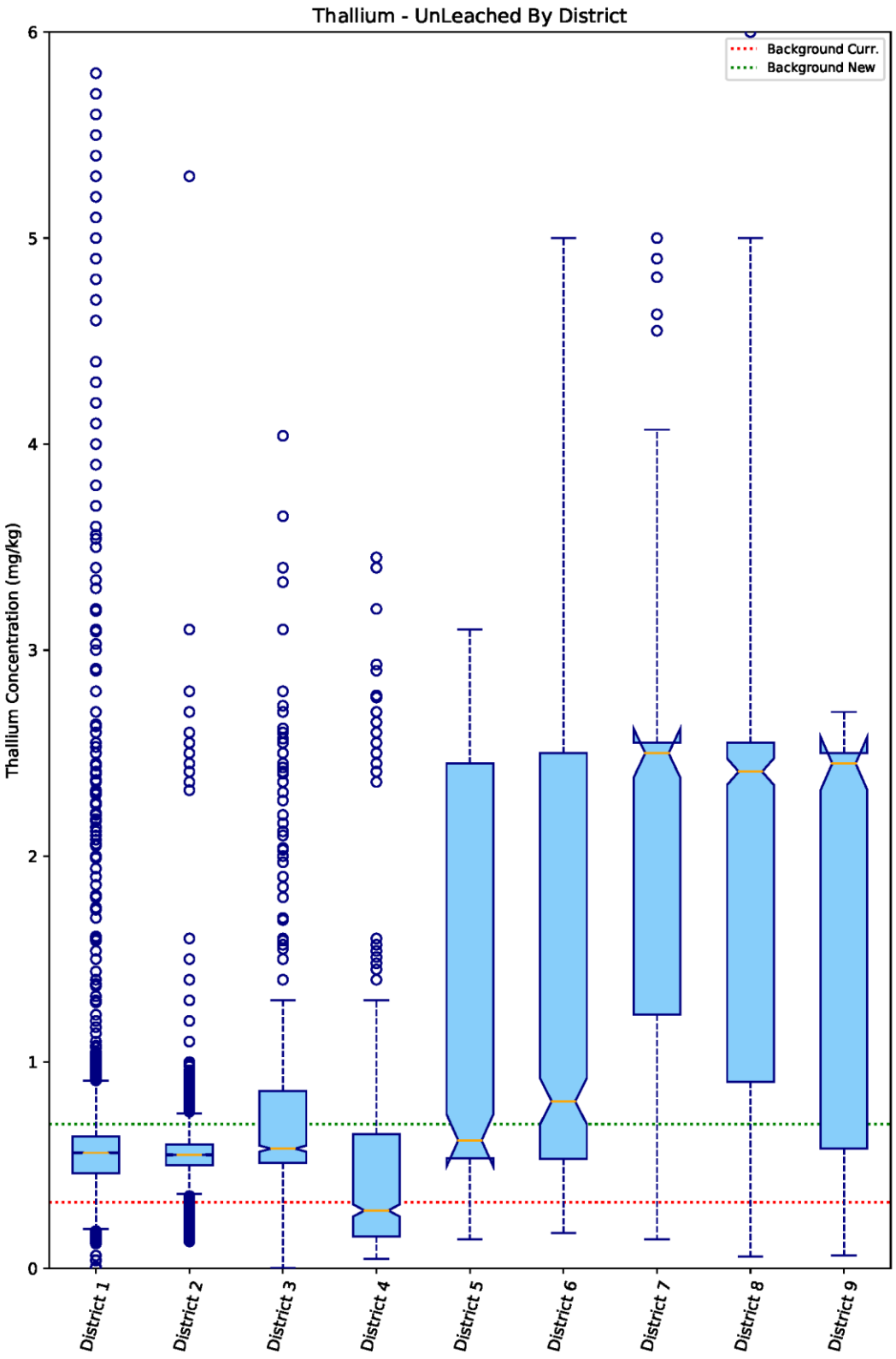


Figure 714. Boxplot of RSL thallium concentrations by IDOT District, REC (mg/kg)

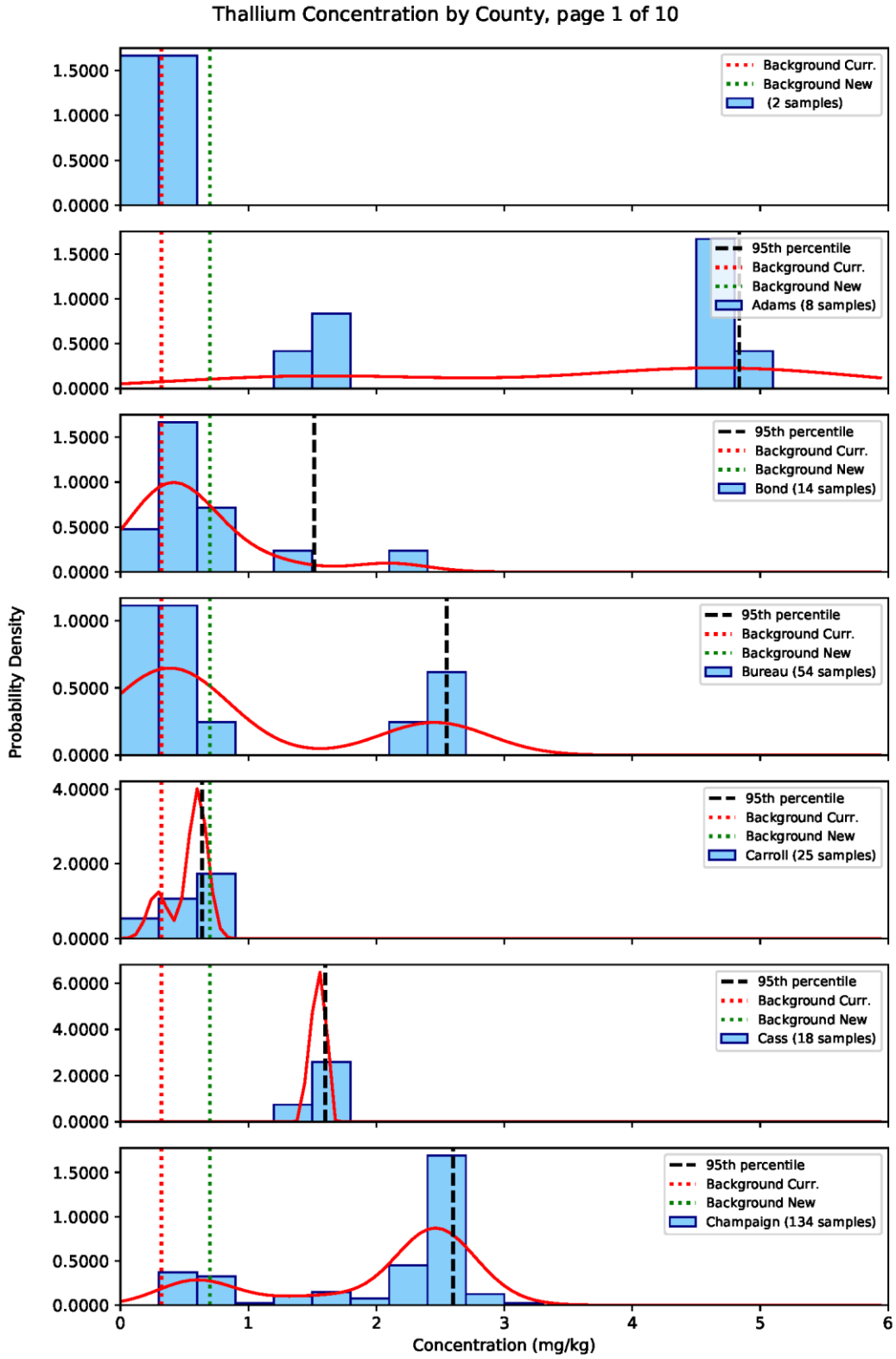


Figure 715. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 1

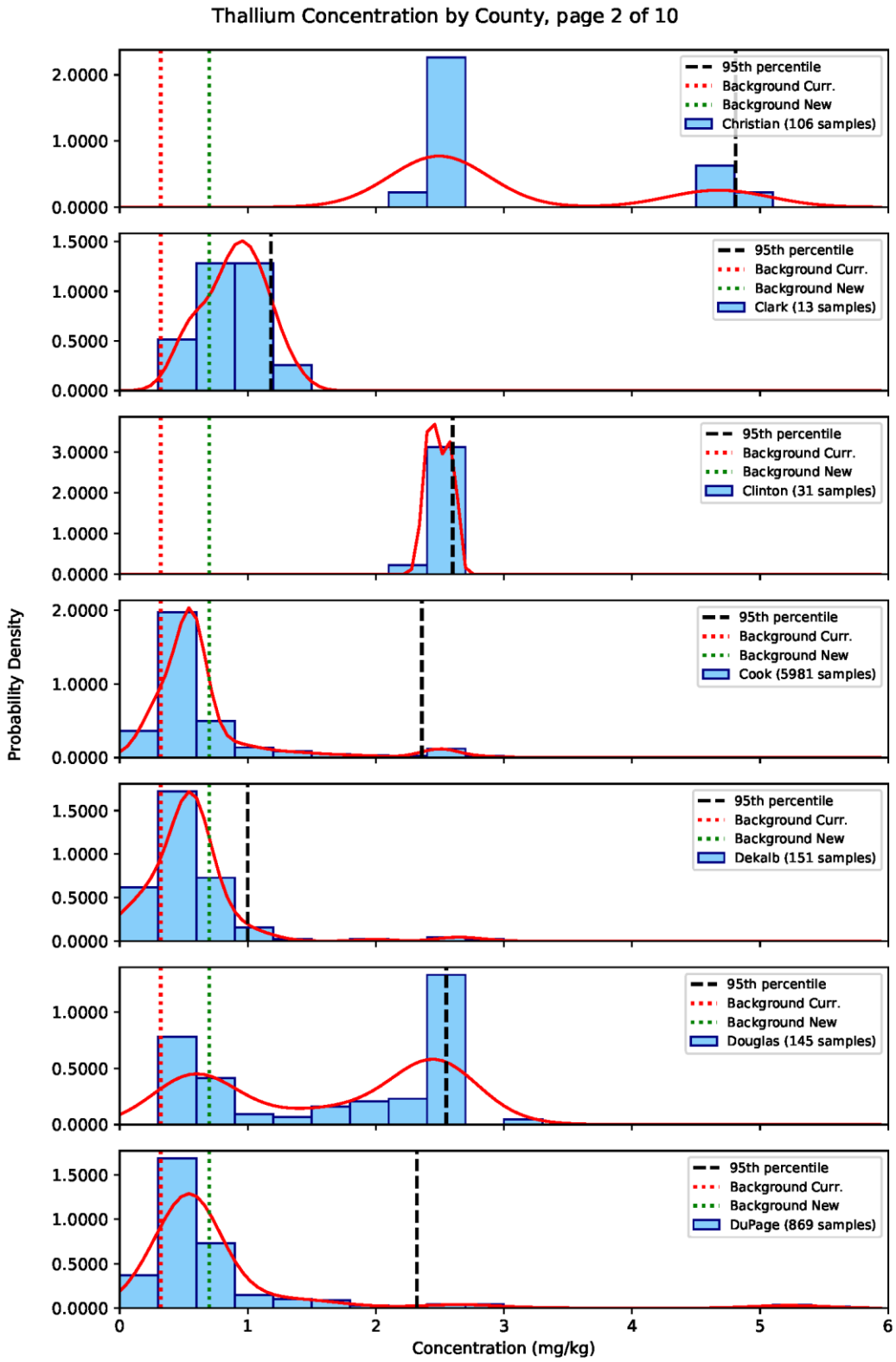


Figure 716. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 2

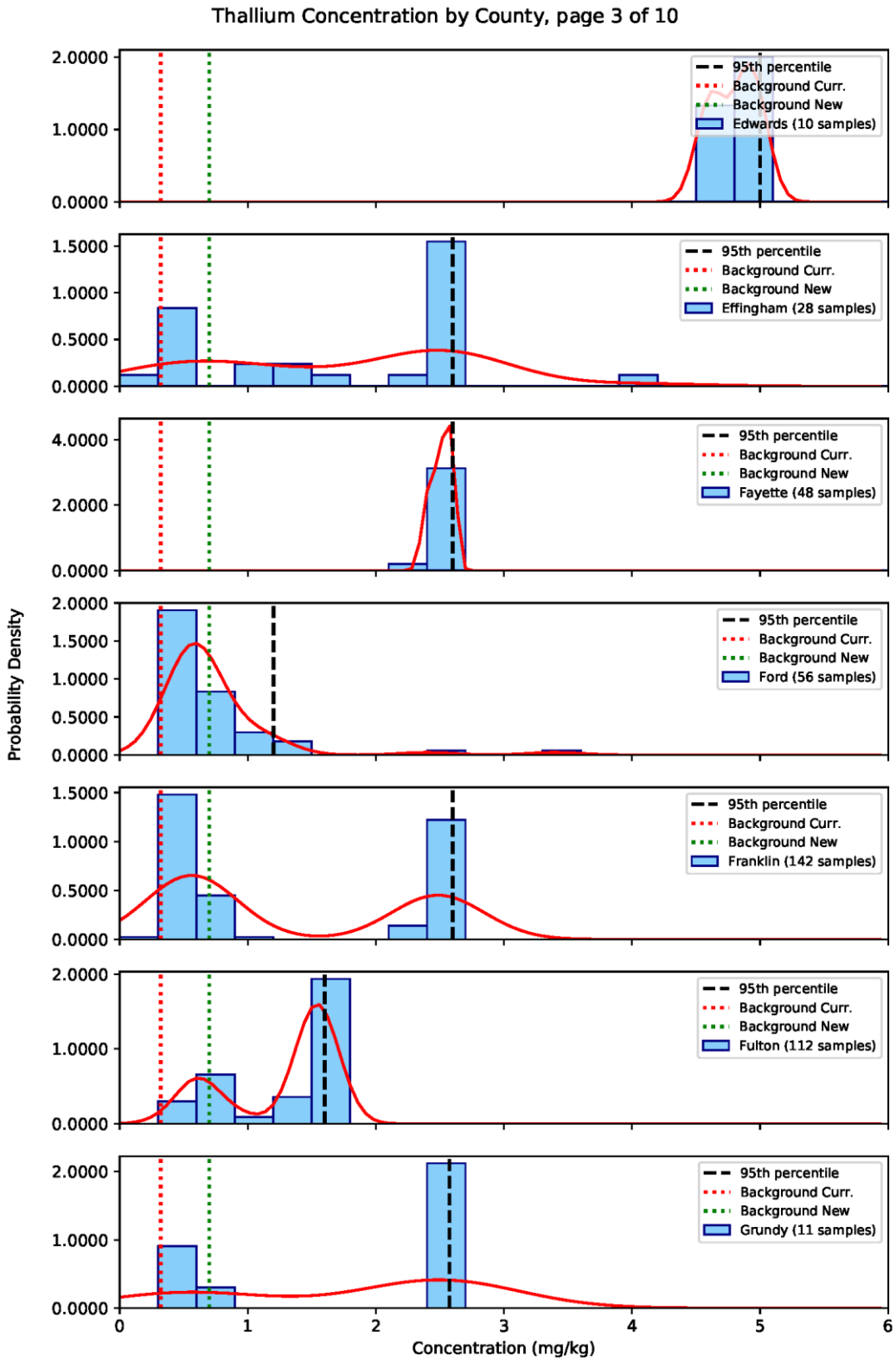


Figure 717. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 3

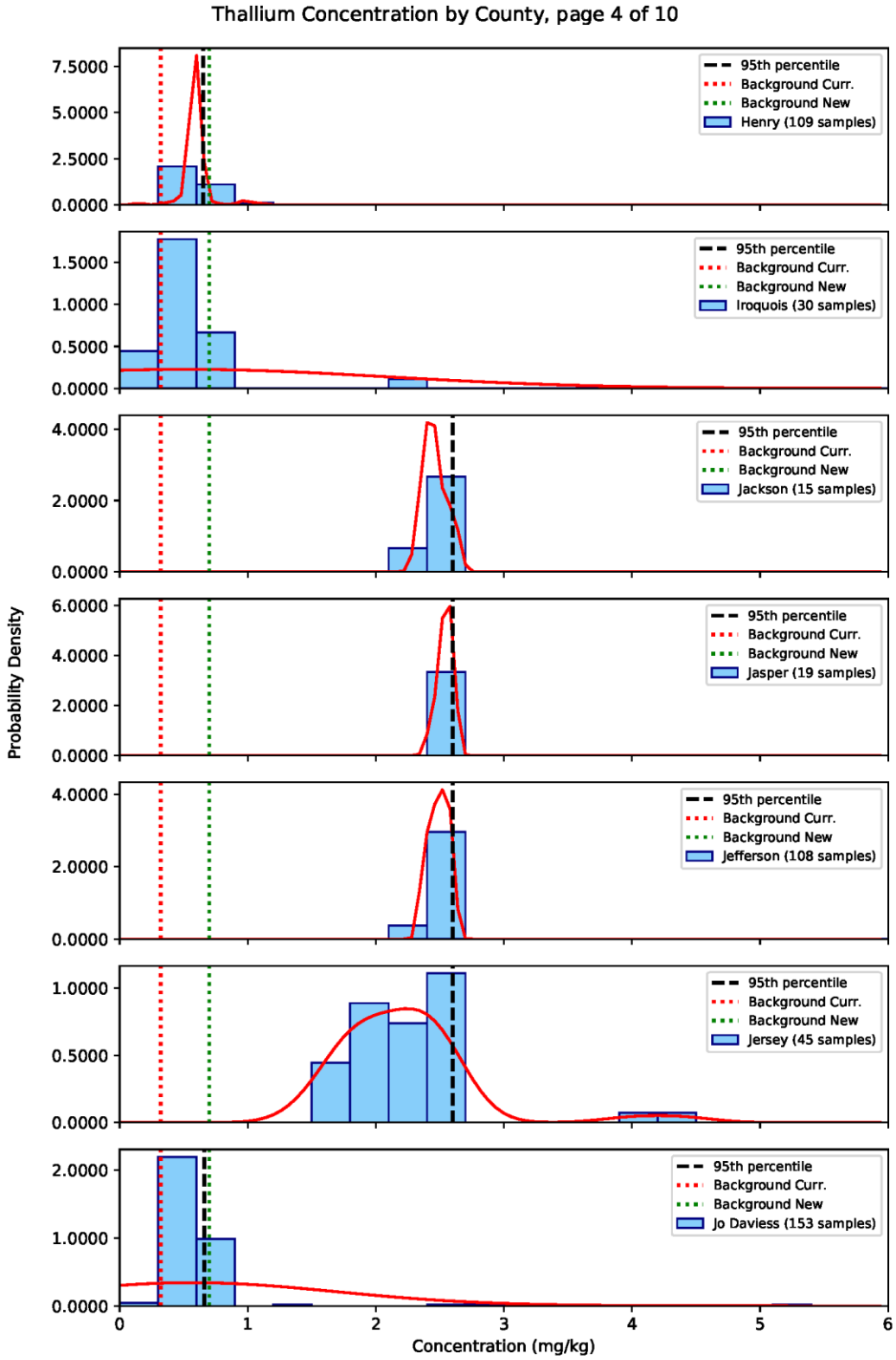


Figure 718. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 4

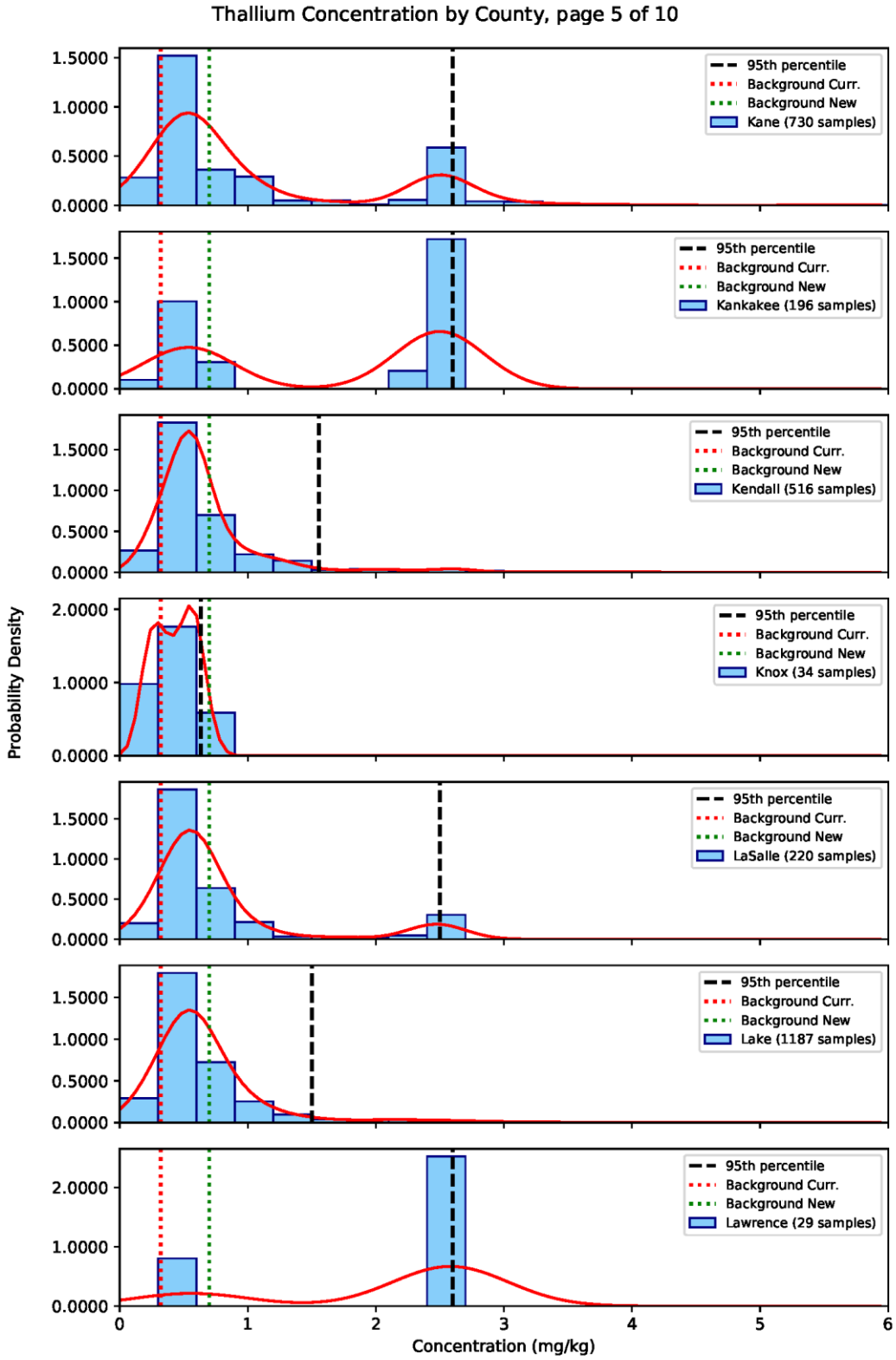


Figure 719. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 5

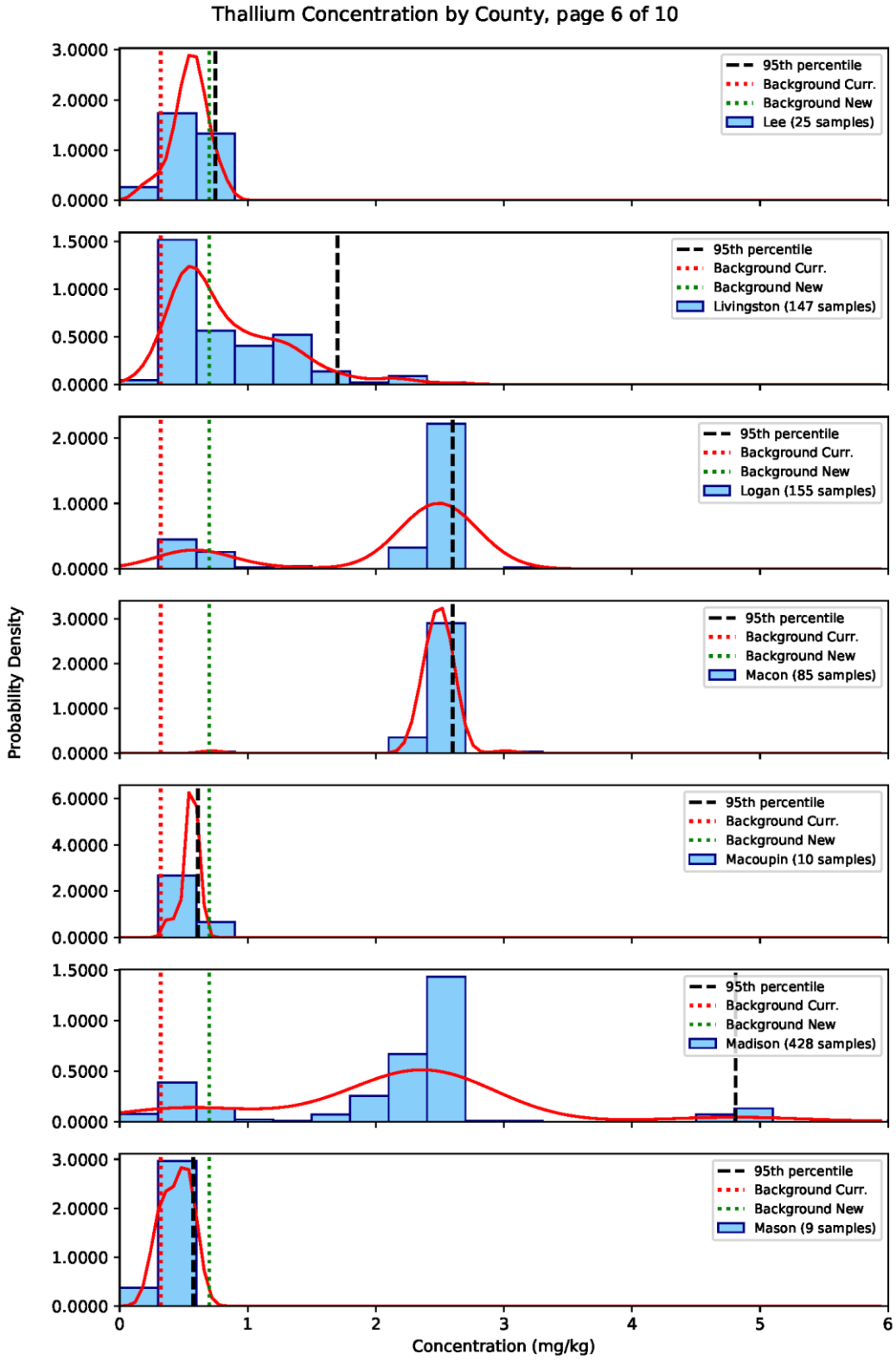


Figure 720. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 6

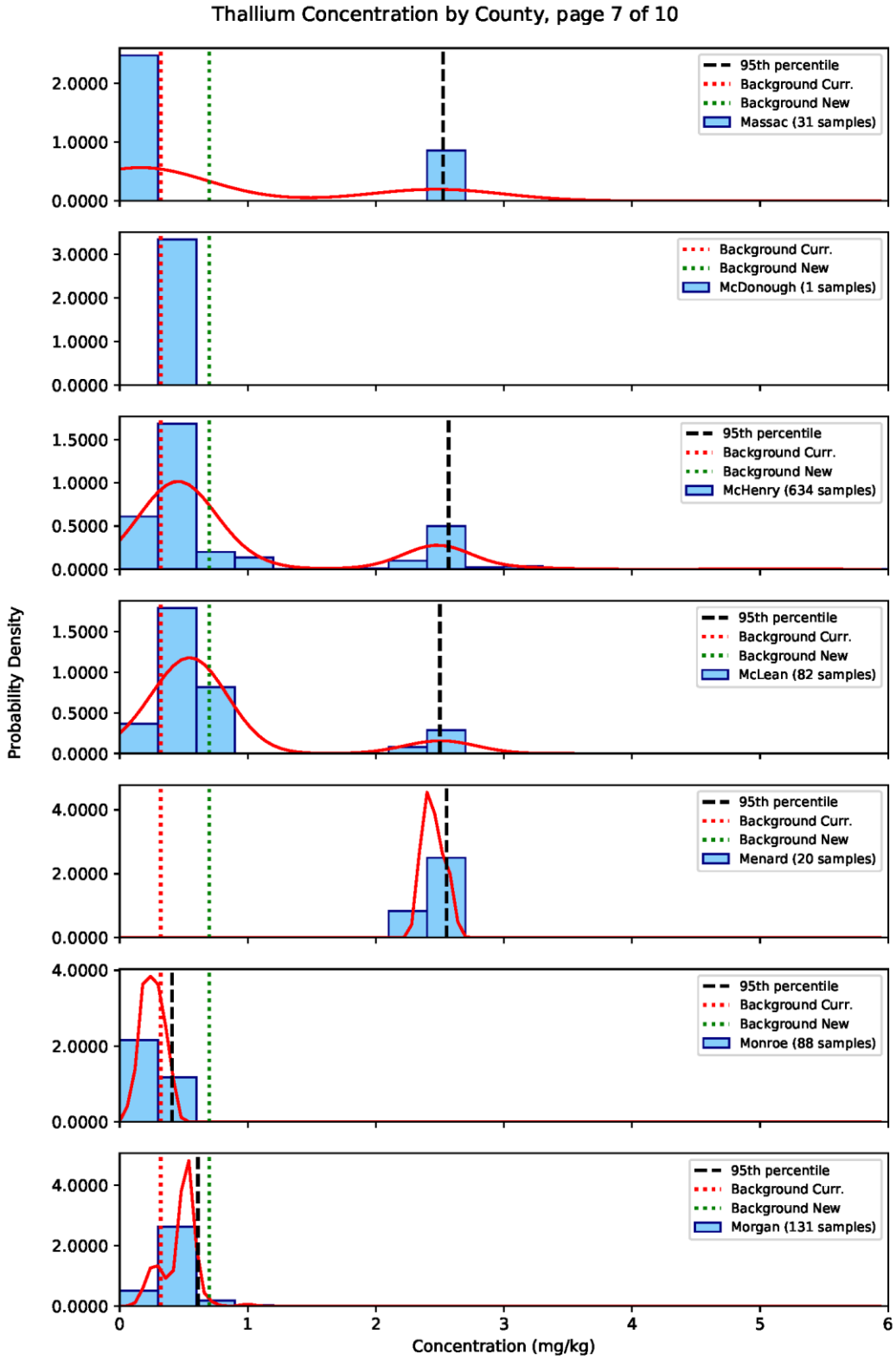


Figure 721. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 7

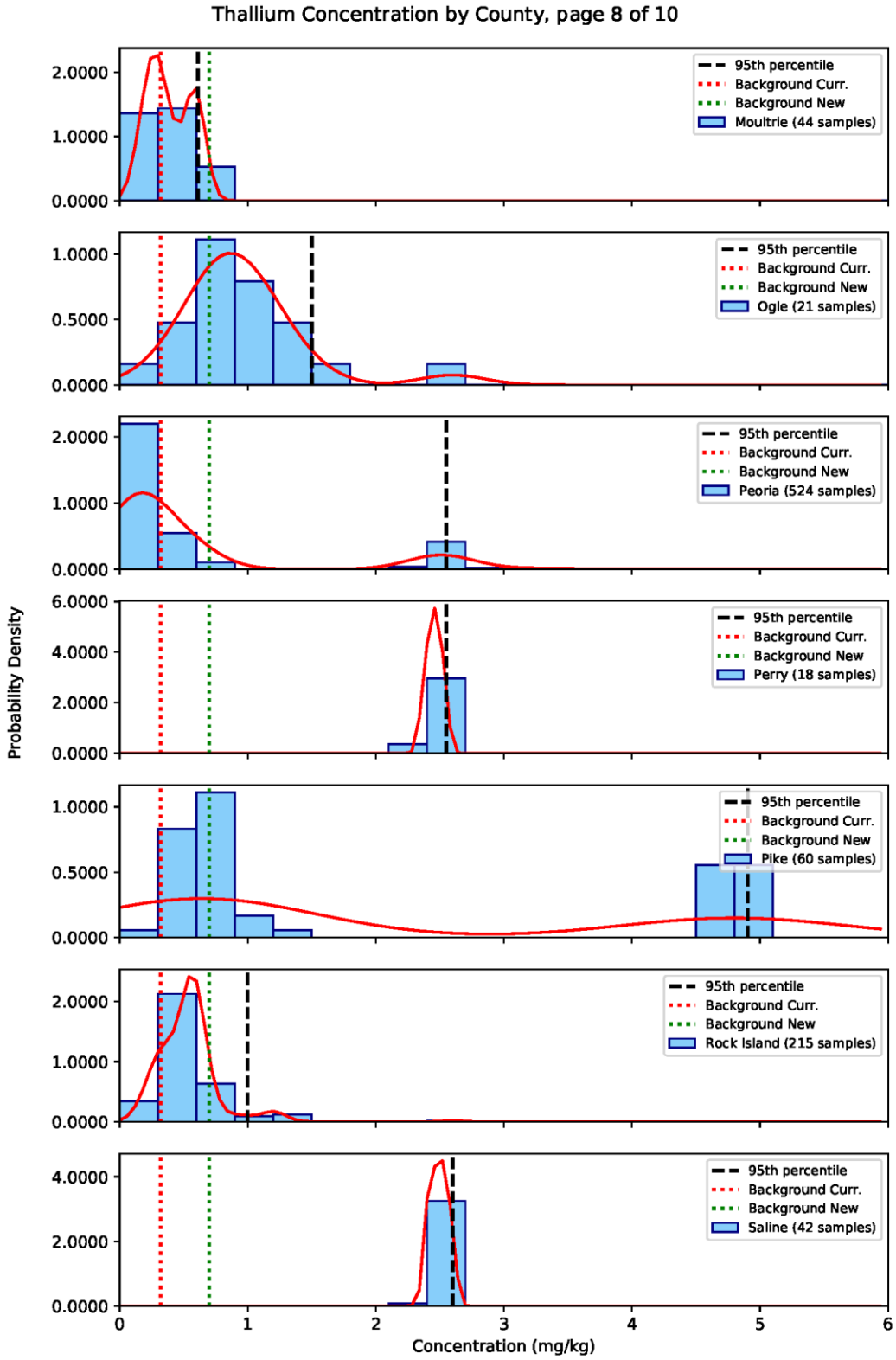


Figure 722. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 8

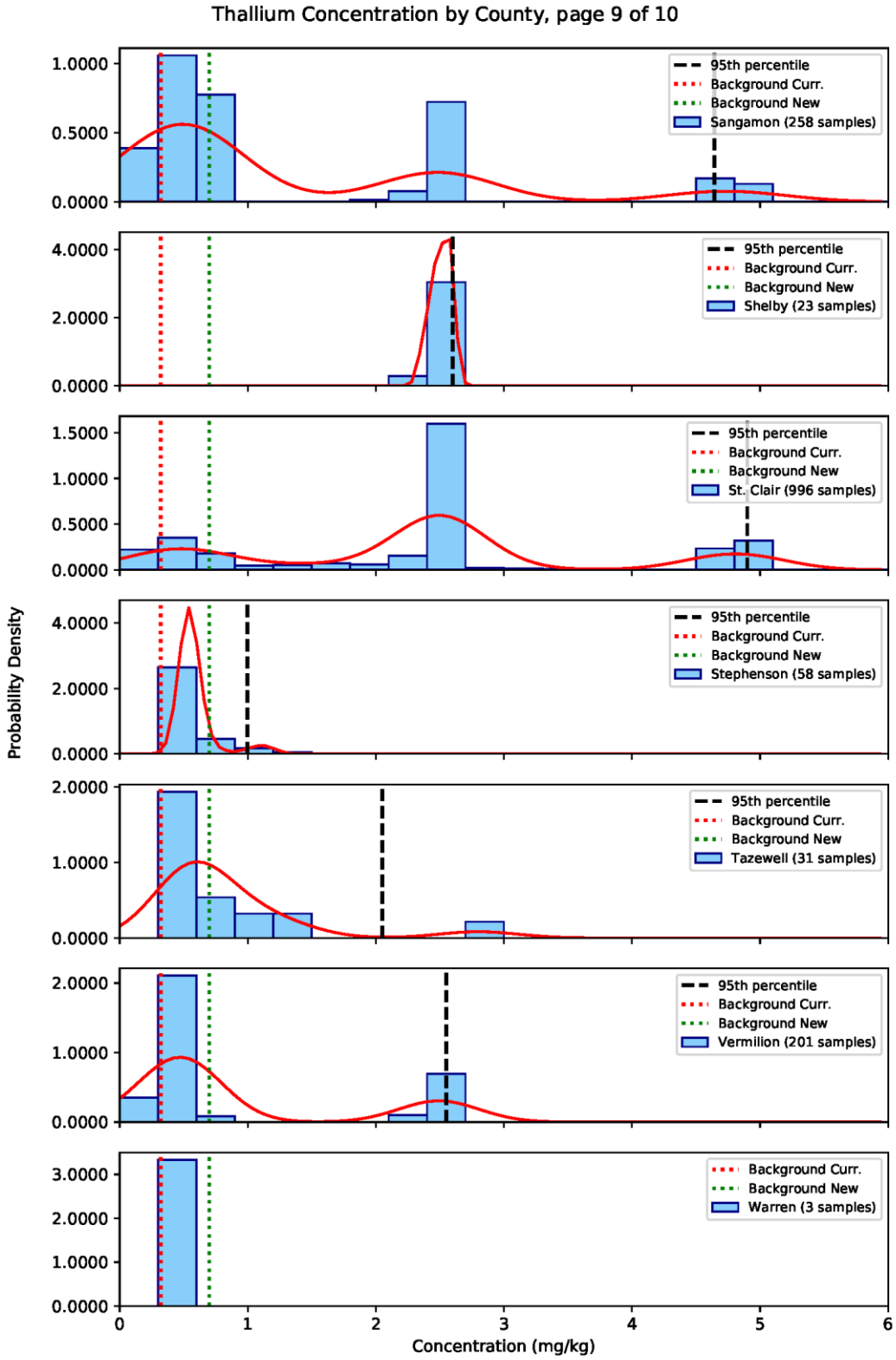


Figure 723. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 9

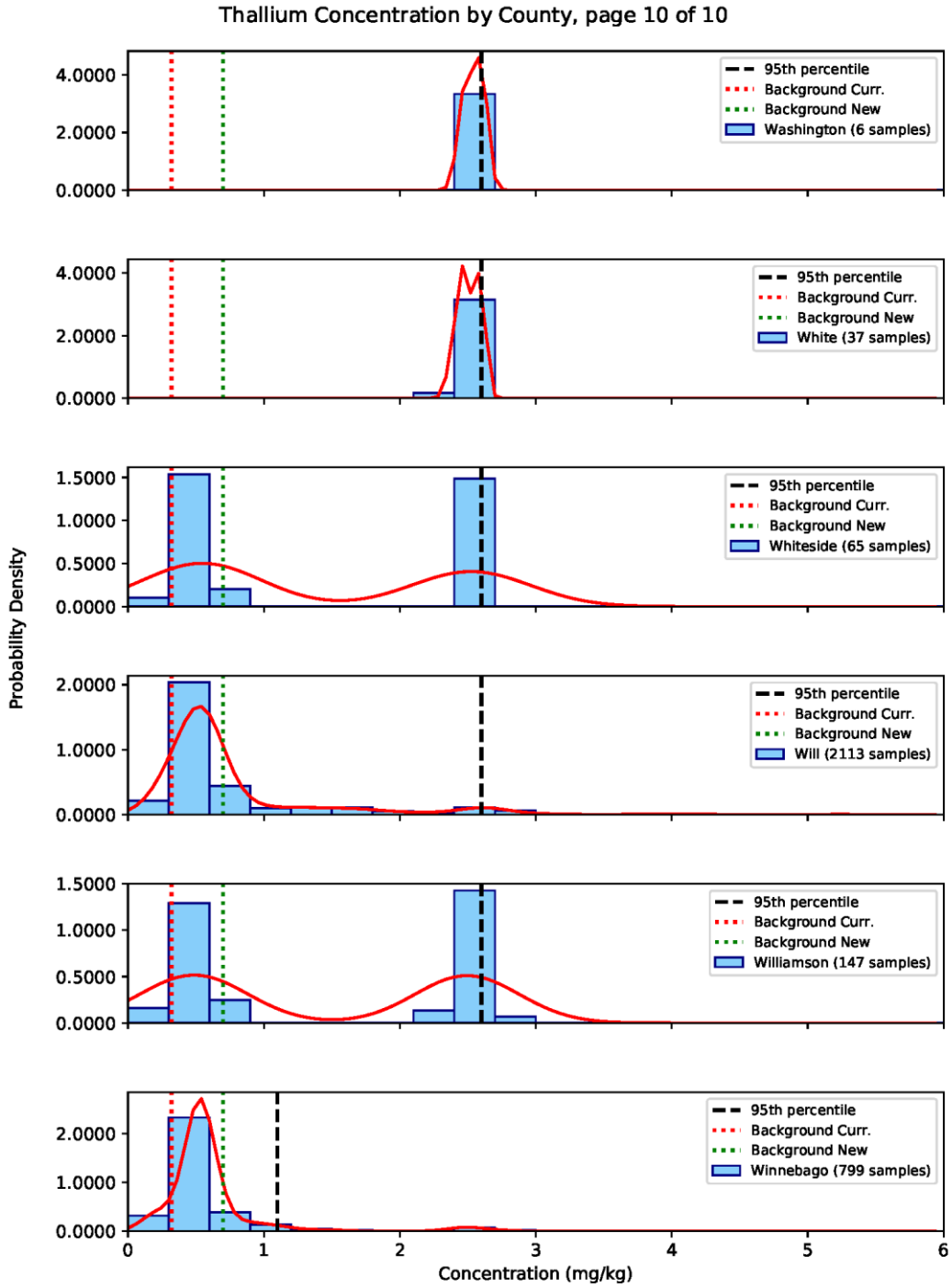


Figure 724. Histogram of RSL thallium concentrations by Illinois county, REC (mg/kg), part 10

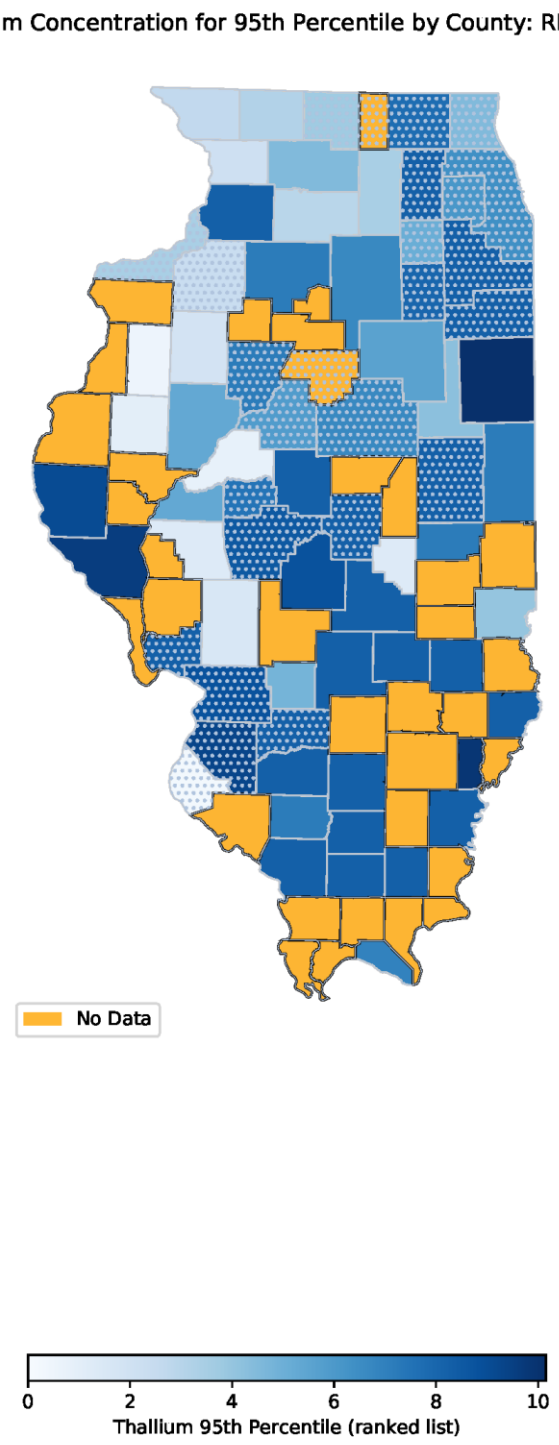


Figure 725. Map of RSL thallium 95th percentile concentration by Illinois county, REC (mg/kg)

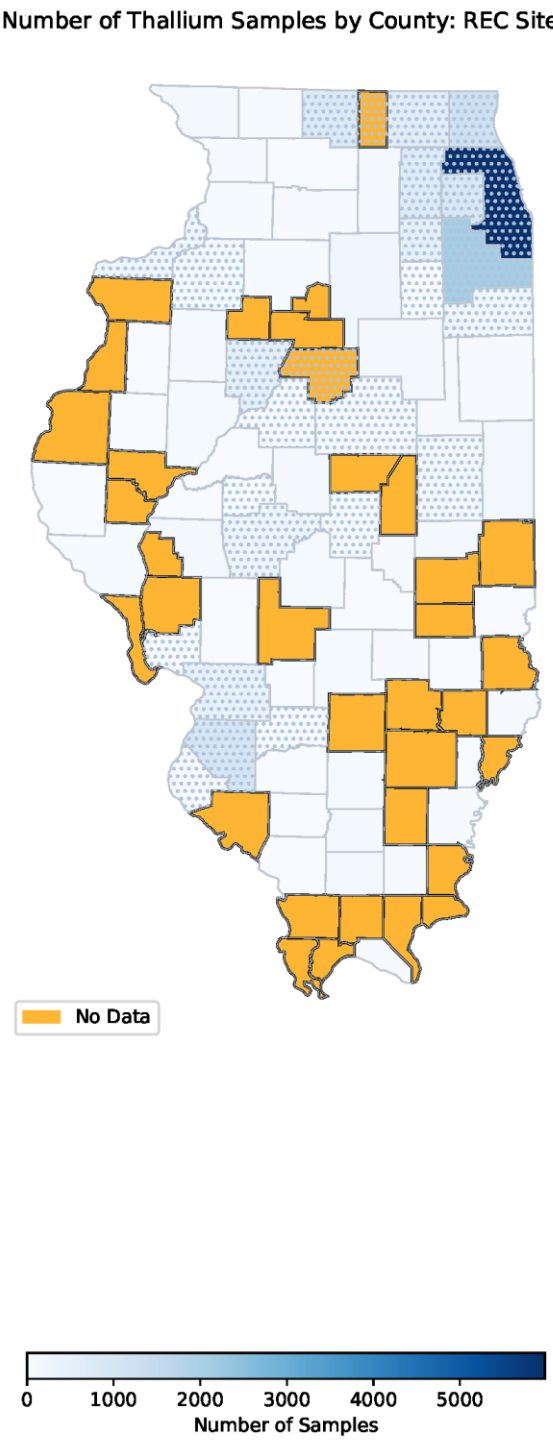


Figure 726. Map of RSL thallium sample quantity by Illinois county, REC (mg/kg)

T.2 THALLIUM NON-REC

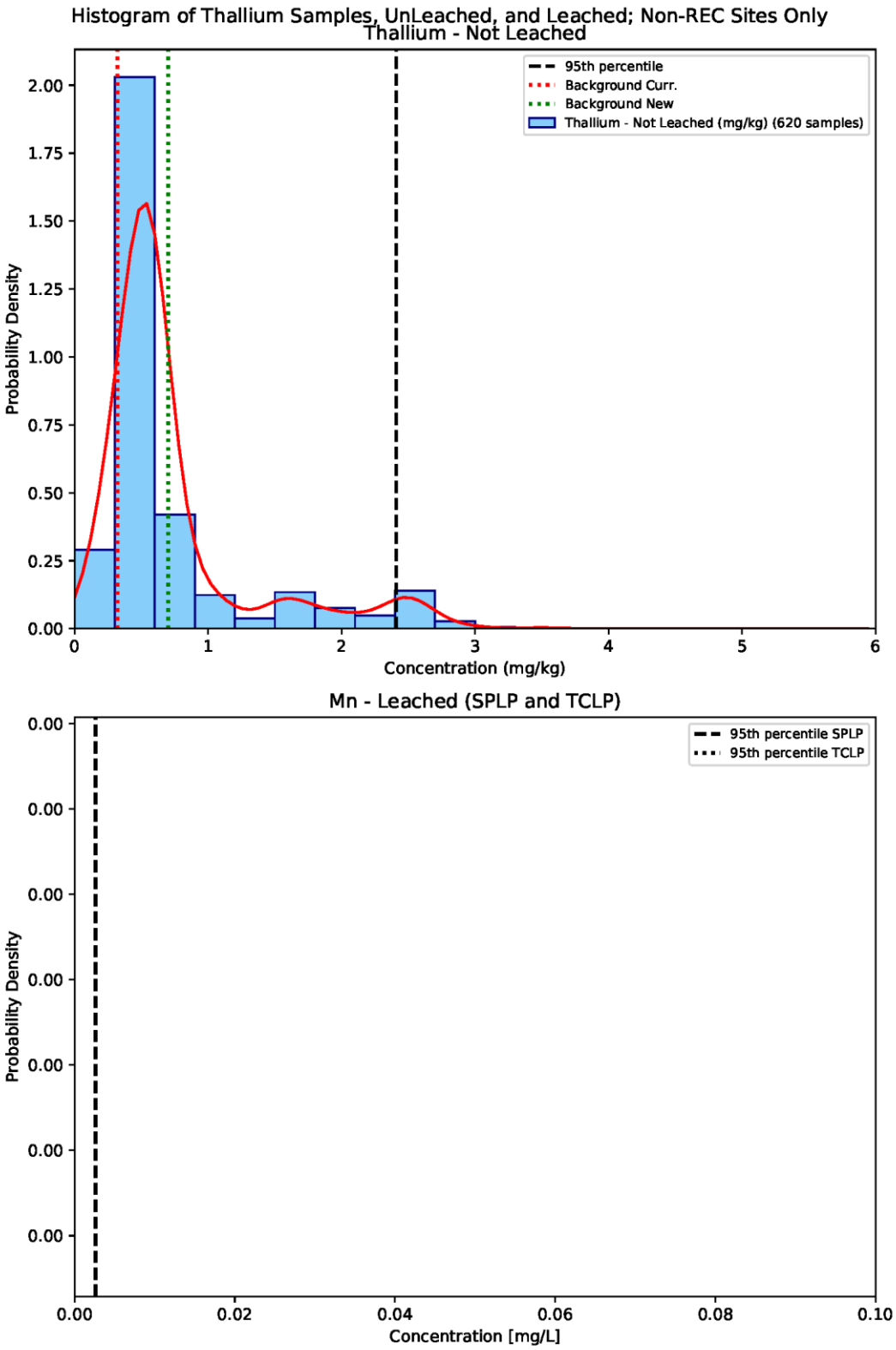


Figure 727. Histogram of RSL thallium concentrations, Non-REC (mg/kg)

Thallium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

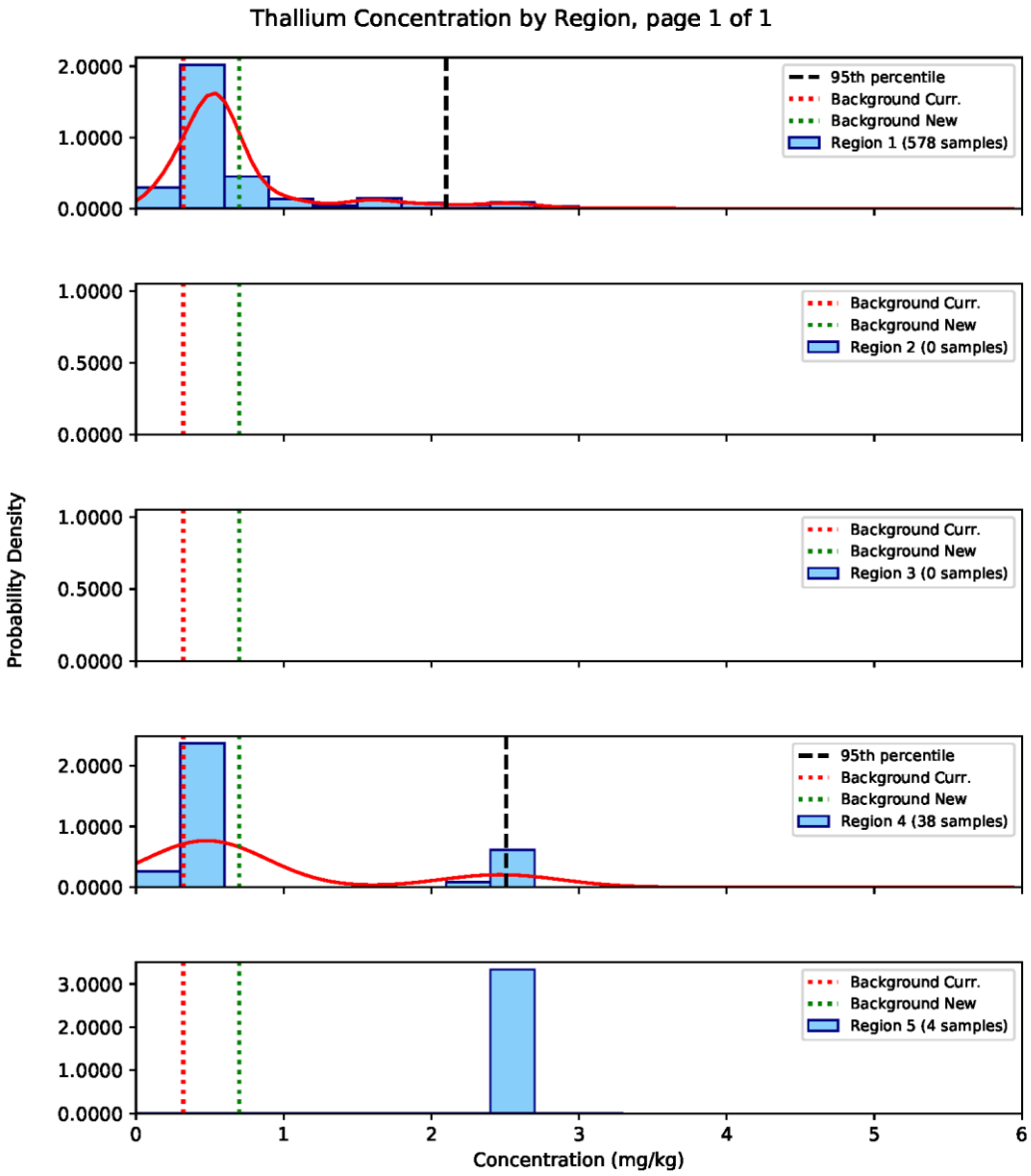


Figure 728. Histogram of RSL thallium concentrations by IDOT Region, Non-REC (mg/kg)

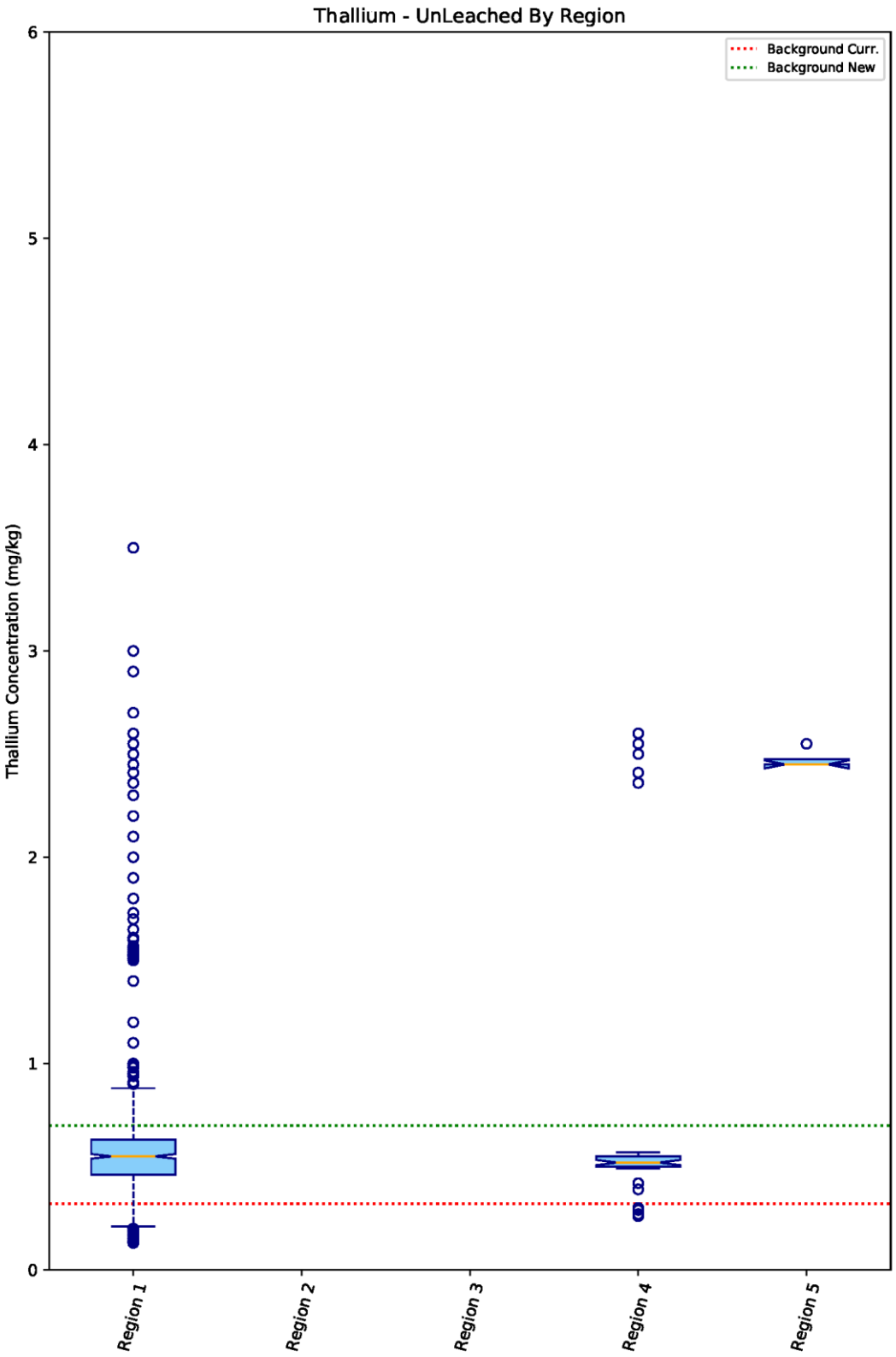


Figure 729. Boxplot of RSL thallium concentrations by IDOT Region, Non-REC (mg/kg)

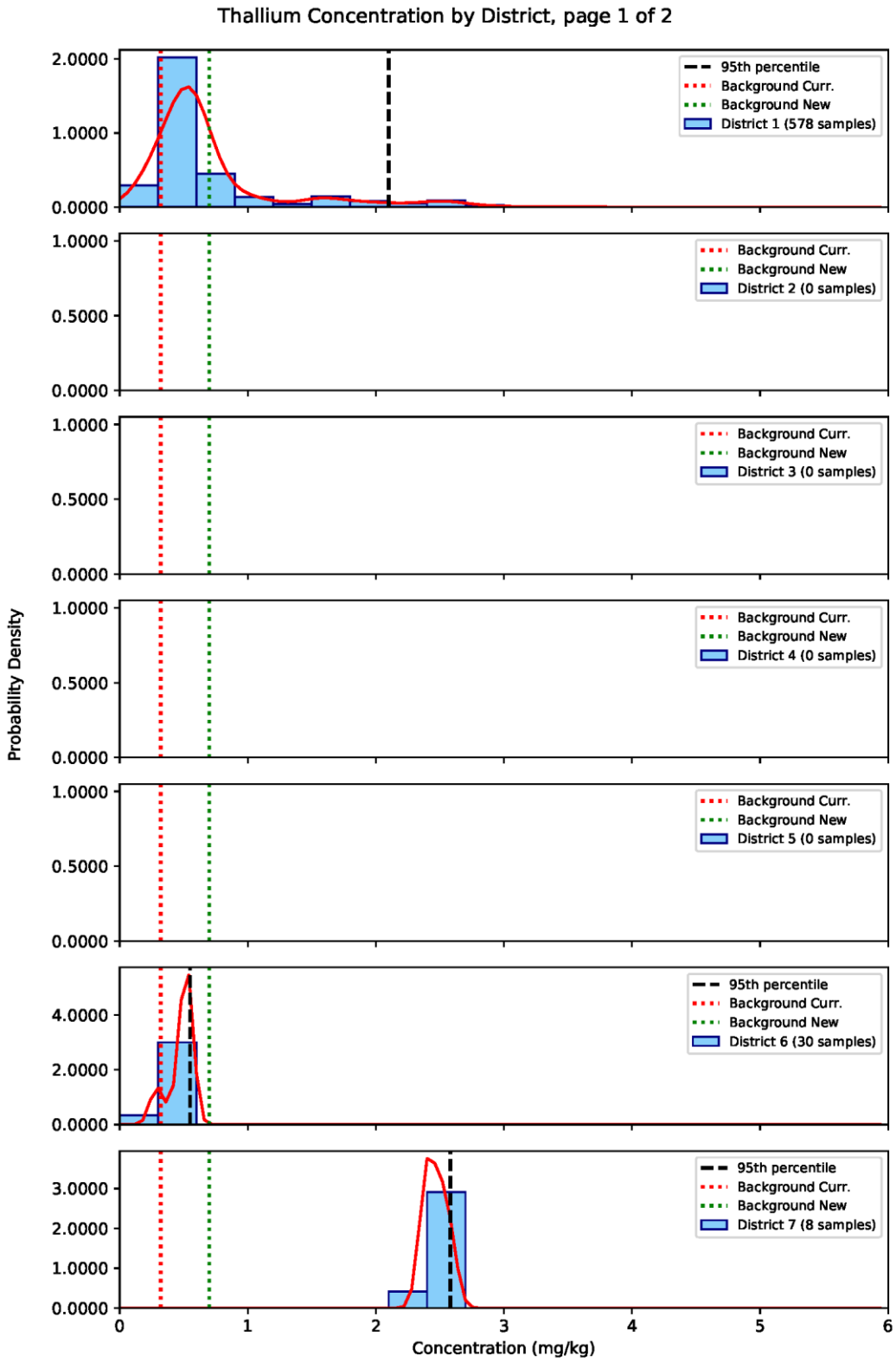


Figure 730. Histogram of RSL thallium concentrations by IDOT District, Non-REC (mg/kg), part 1

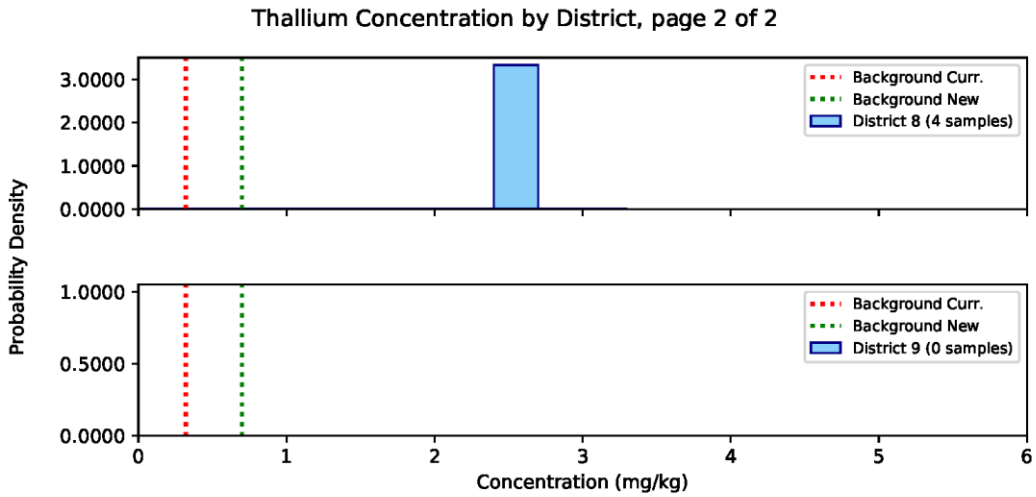


Figure 731. Histogram of RSL thallium concentrations by IDOT District, Non-REC (mg/kg), part 2

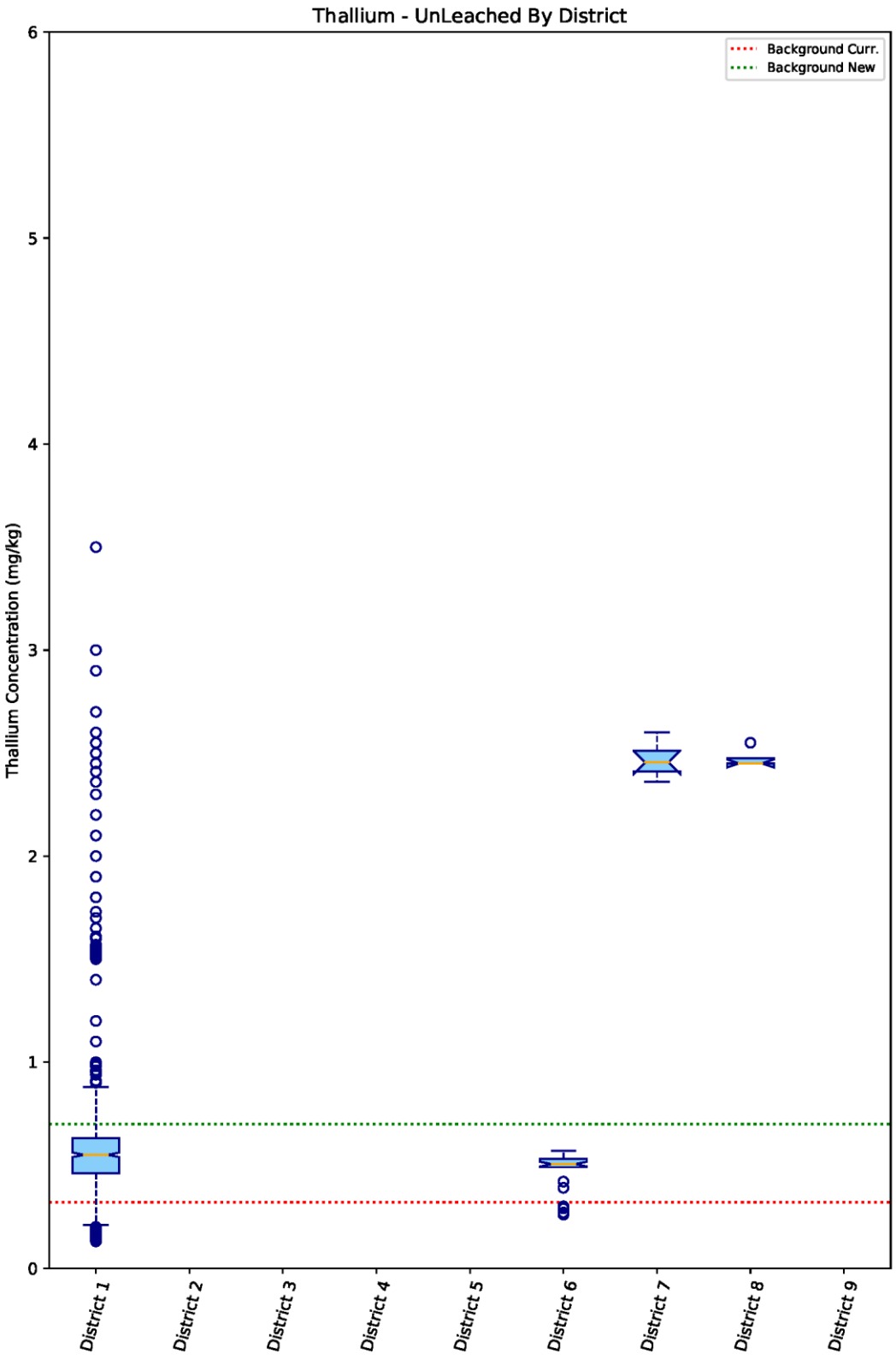


Figure 732. Boxplot of RSL thallium concentrations by IDOT District, Non-REC (mg/kg)

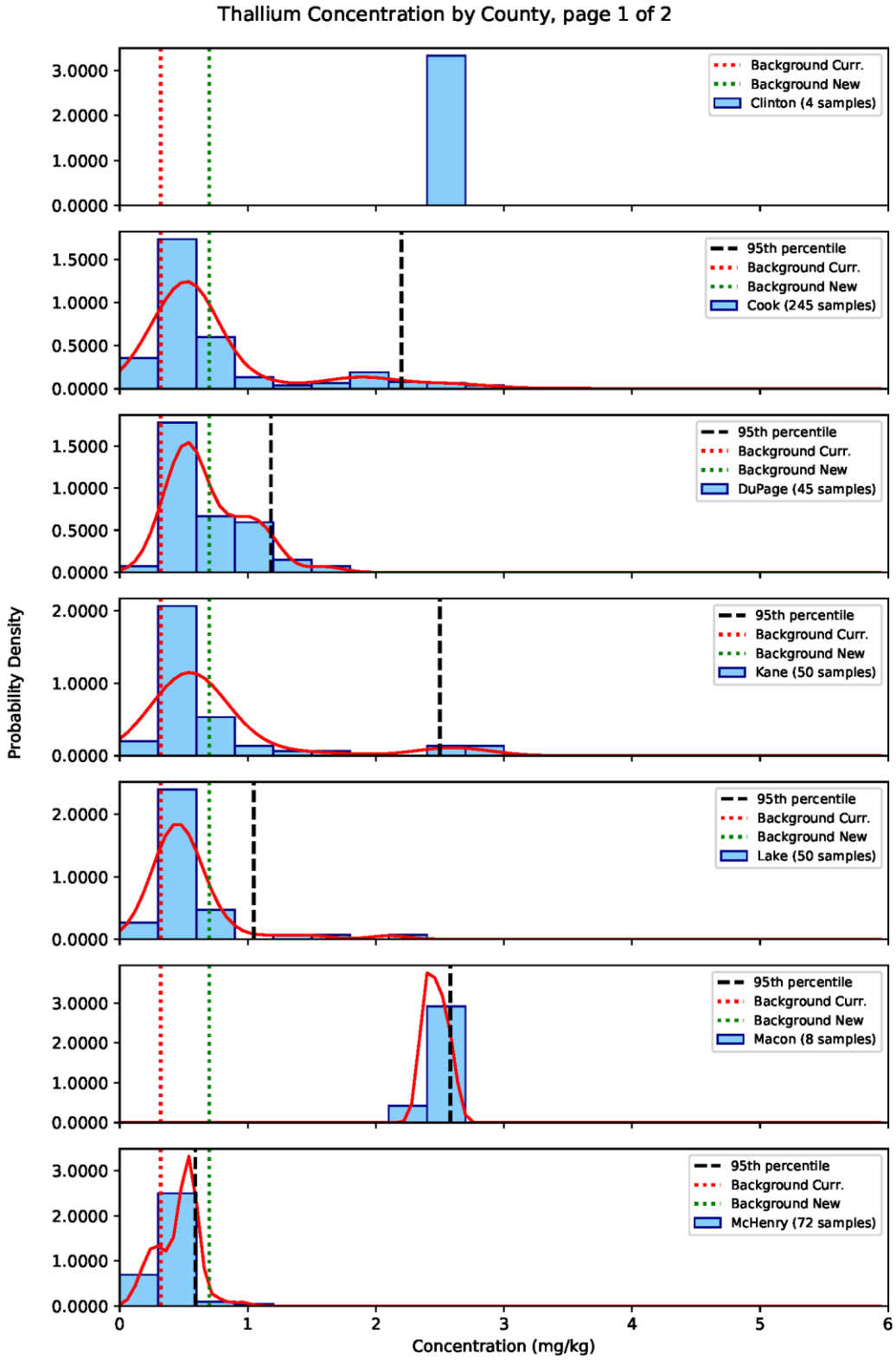


Figure 733. Histogram of RSL thallium concentrations by Illinois county, Non-REC (mg/kg), part 1

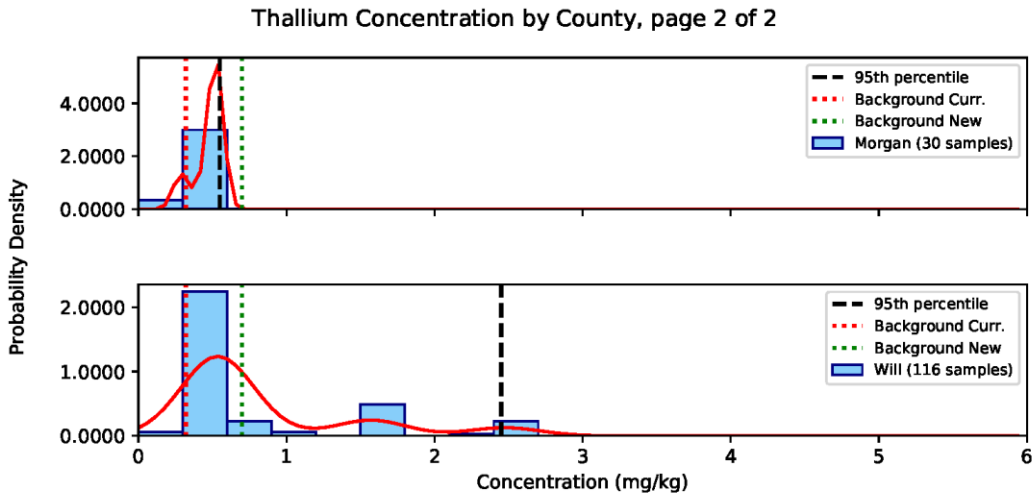


Figure 734. Histogram of RSL thallium concentrations by Illinois county, Non-REC (mg/kg), part 2

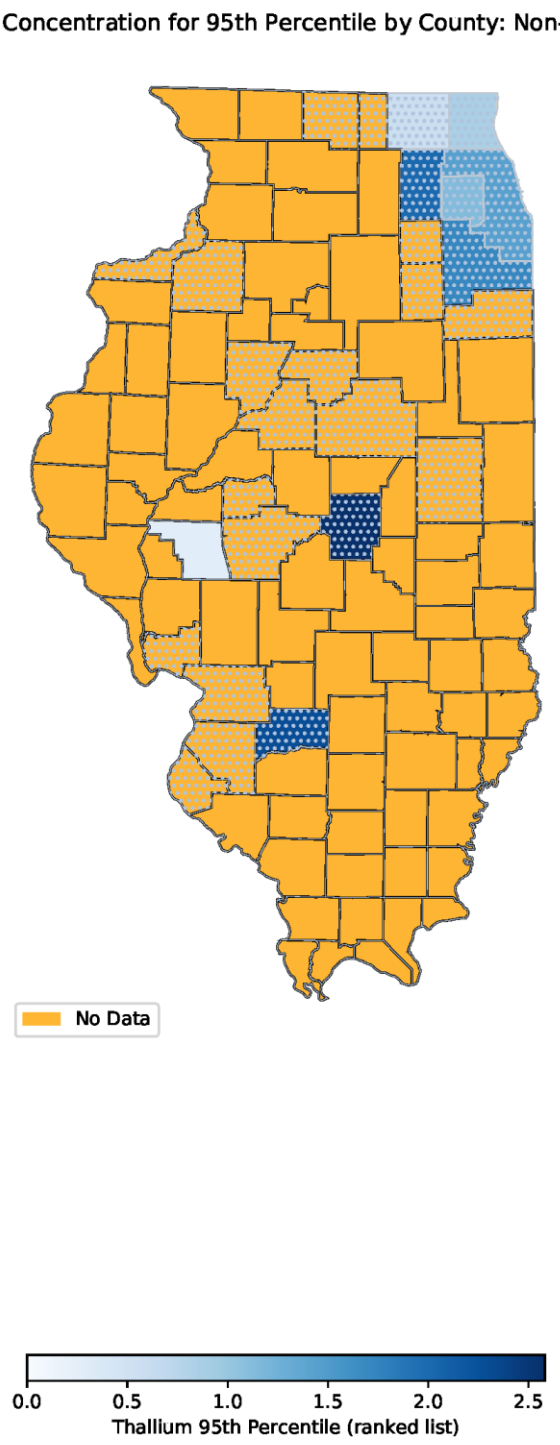


Figure 735. Map of RSL thallium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

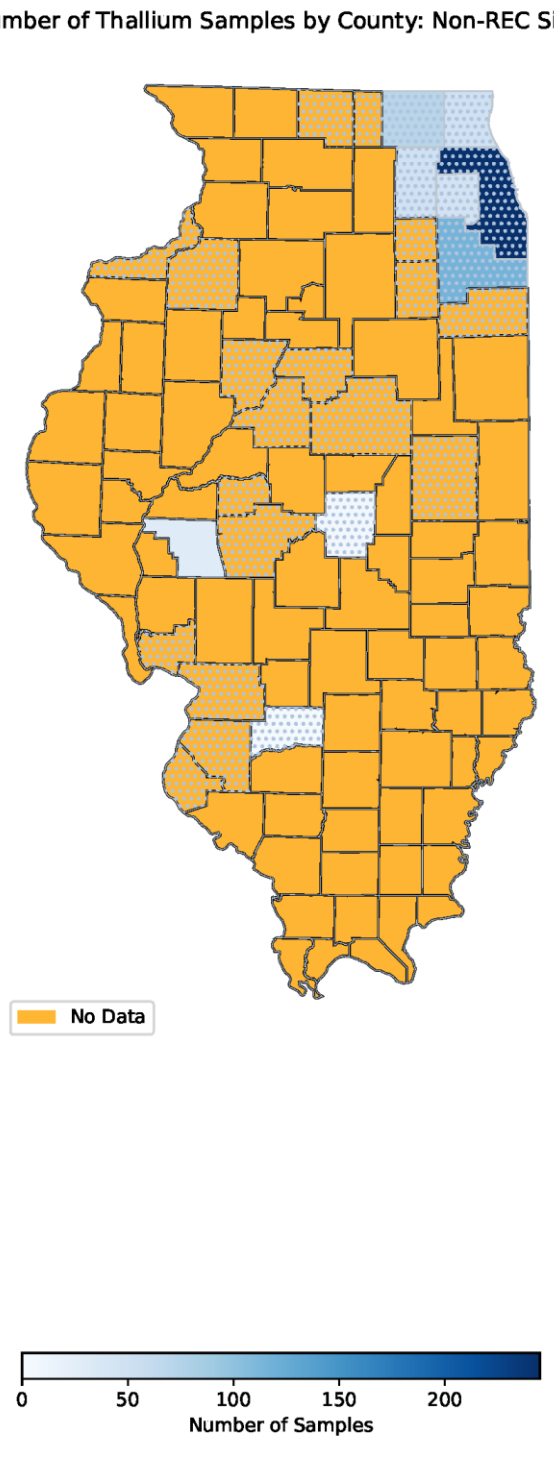


Figure 736. Map of RSL thallium sample quantity by Illinois county, Non-REC (mg/kg)

T.3 THALLIUM DE MINIMIS

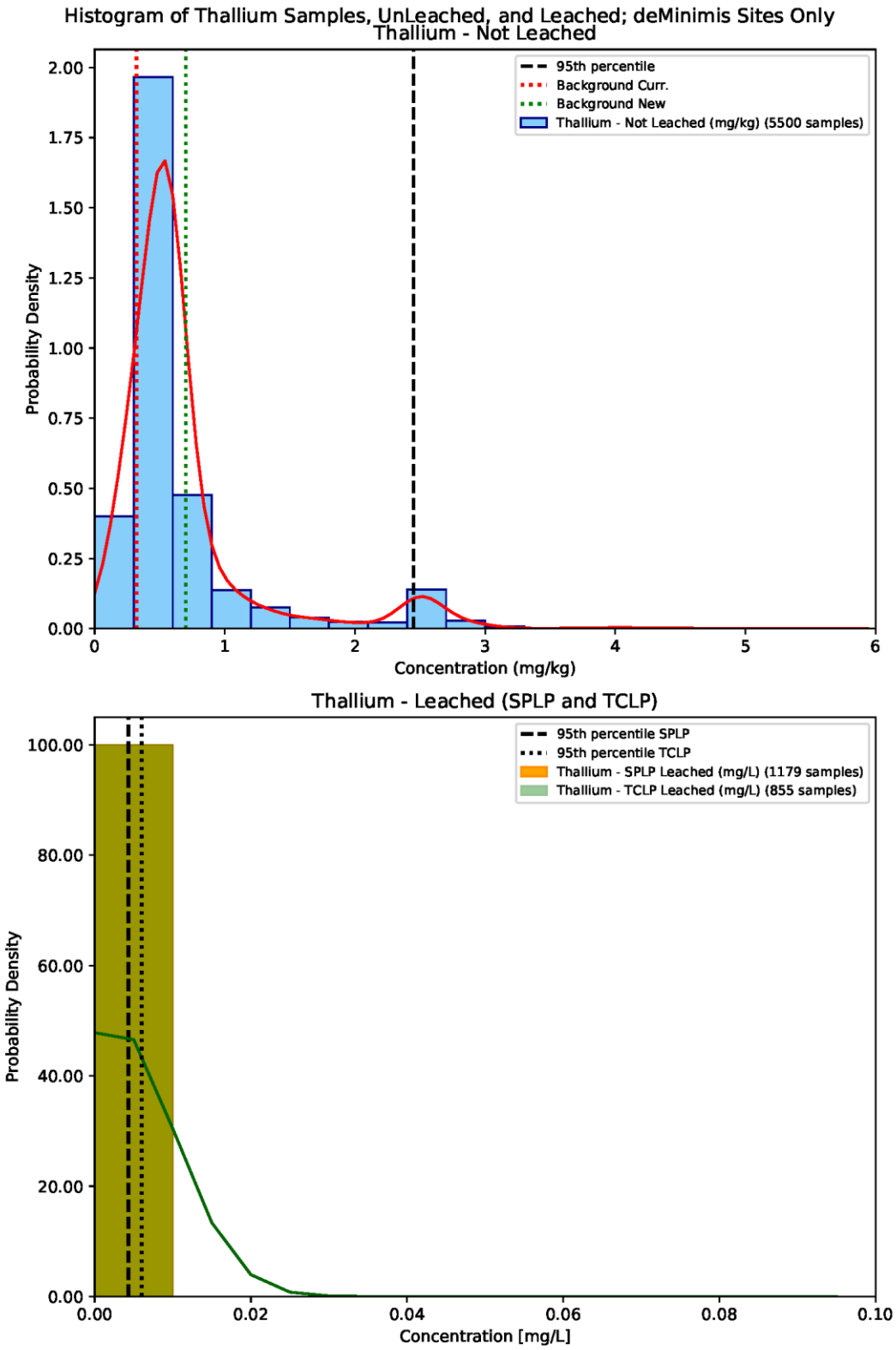


Figure 737. Histogram of RSL thallium concentrations, de minimis (mg/kg)

Thallium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

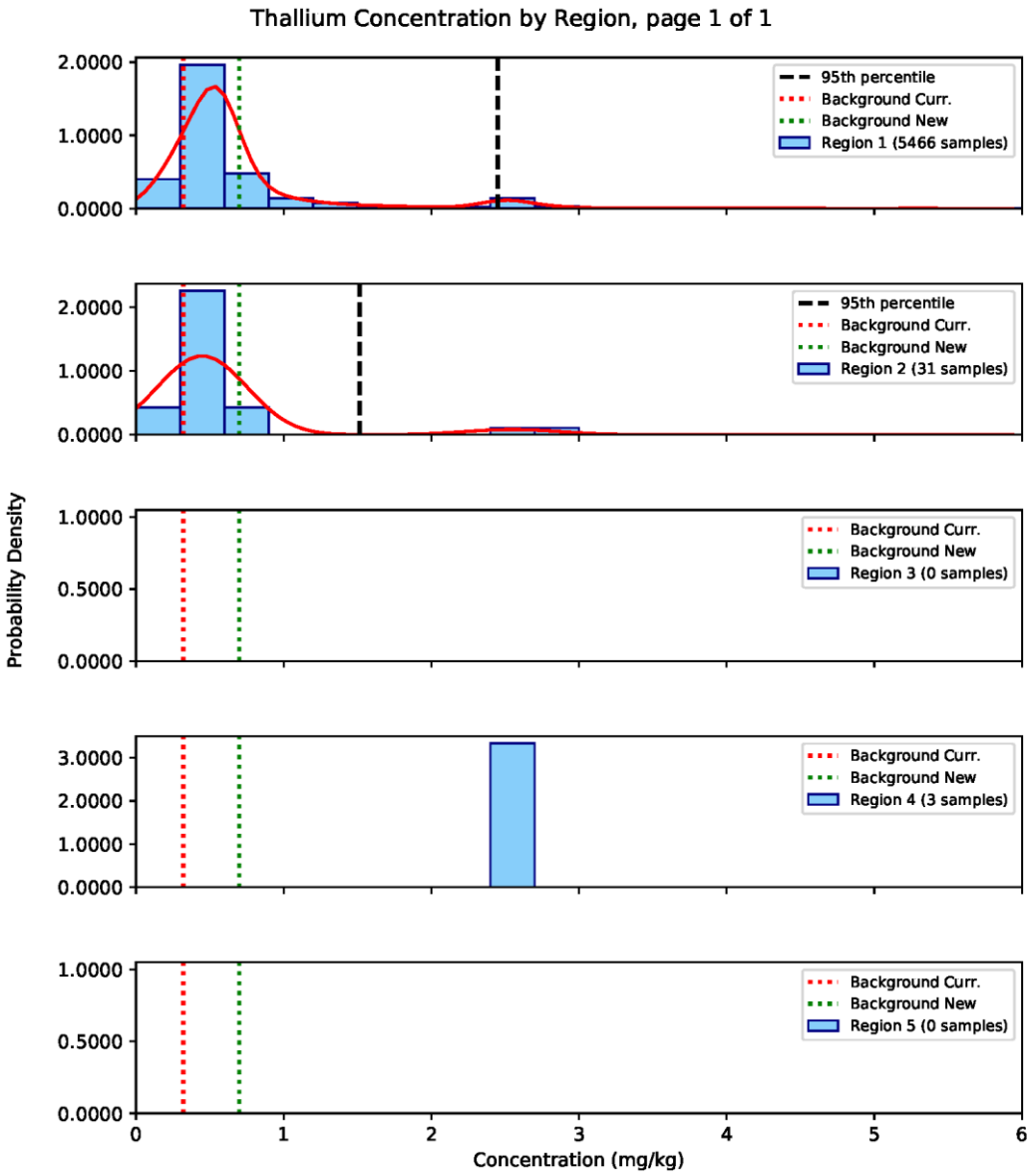


Figure 738. Histogram of RSL thallium concentrations by IDOT Region, de minimis (mg/kg)

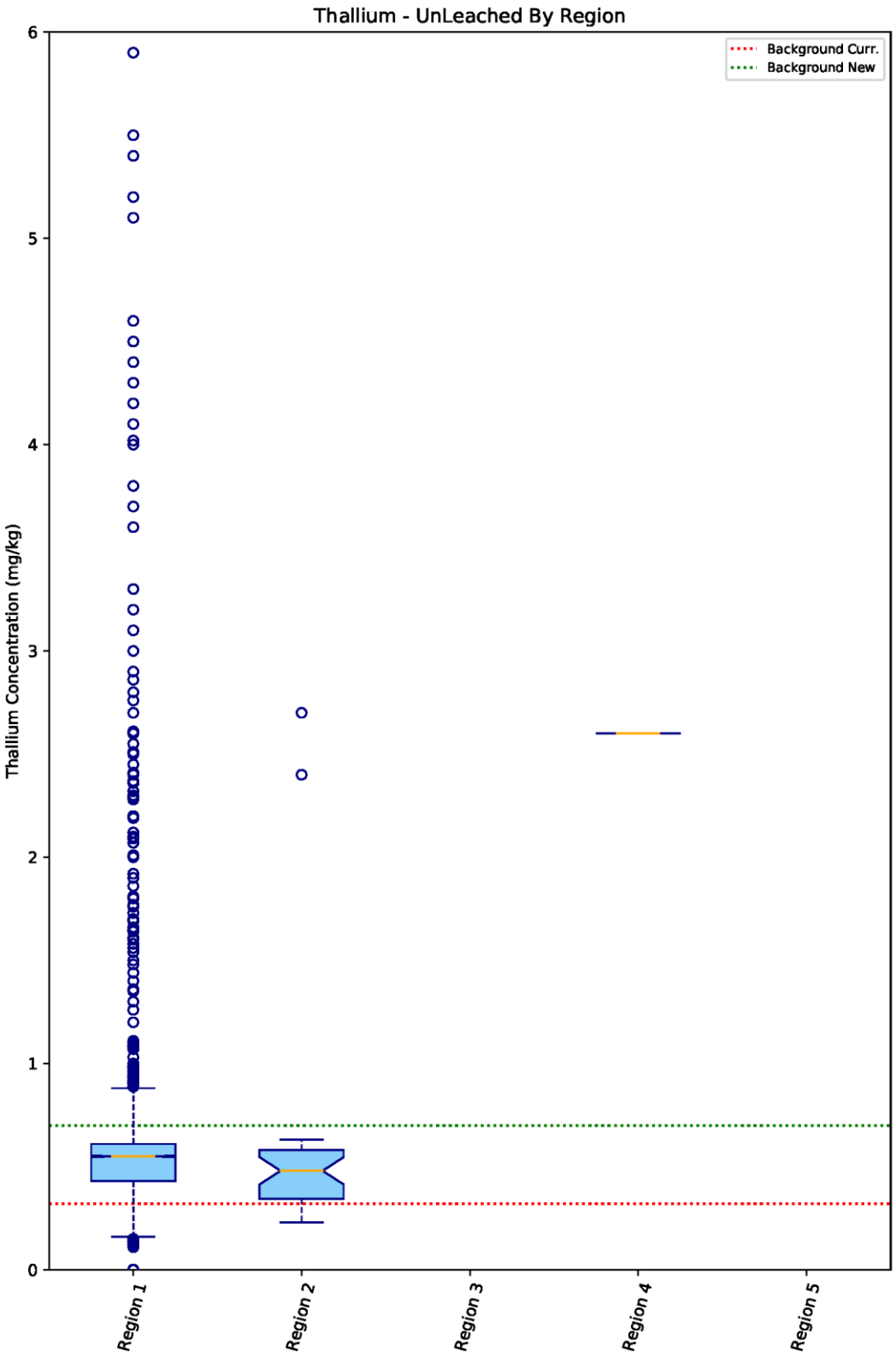


Figure 739. Boxplot of RSL thallium concentrations by IDOT Region, de minimis (mg/kg)

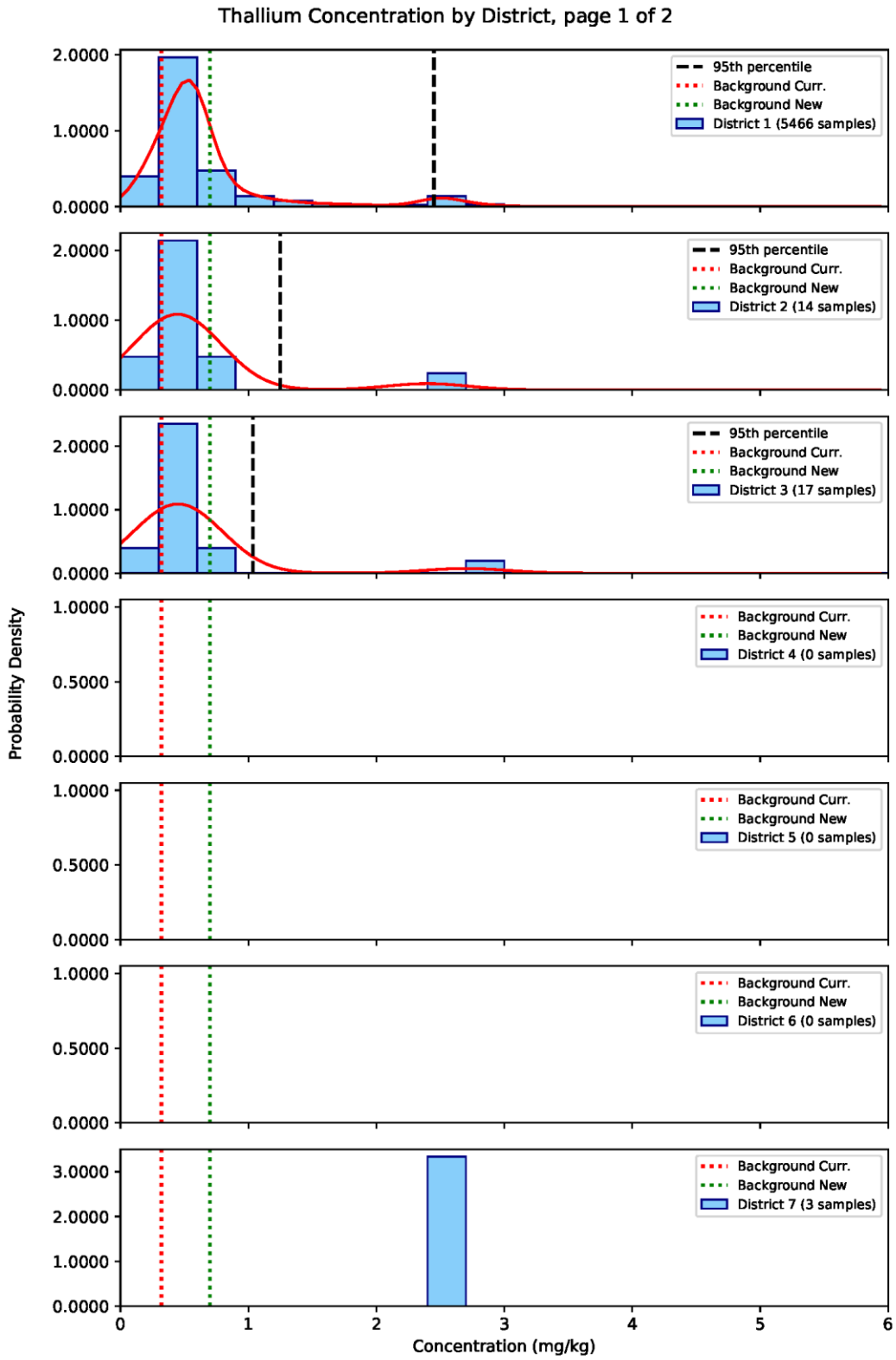


Figure 740. Histogram of RSL thallium concentrations by IDOT District, de minimis (mg/kg), part 1

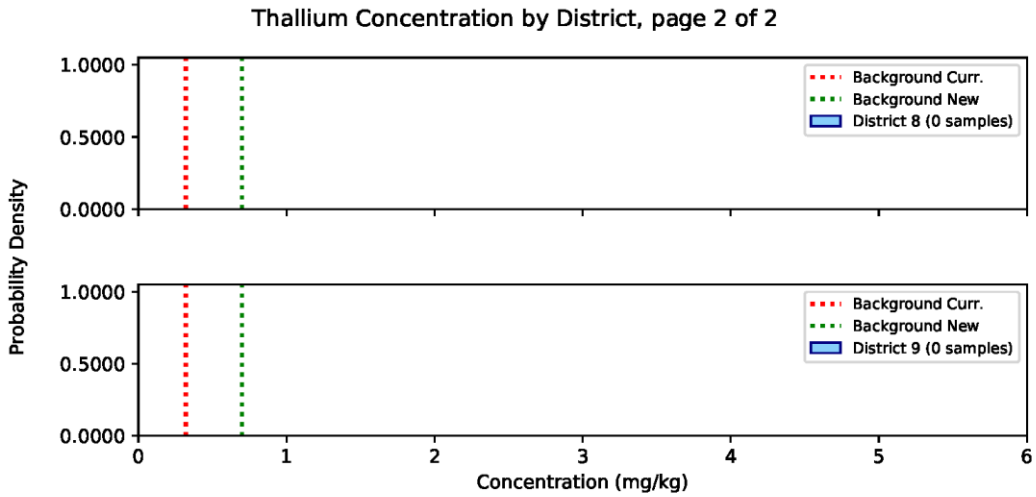


Figure 741. Histogram of RSL thallium concentrations by IDOT District, de minimis (mg/kg), part 2

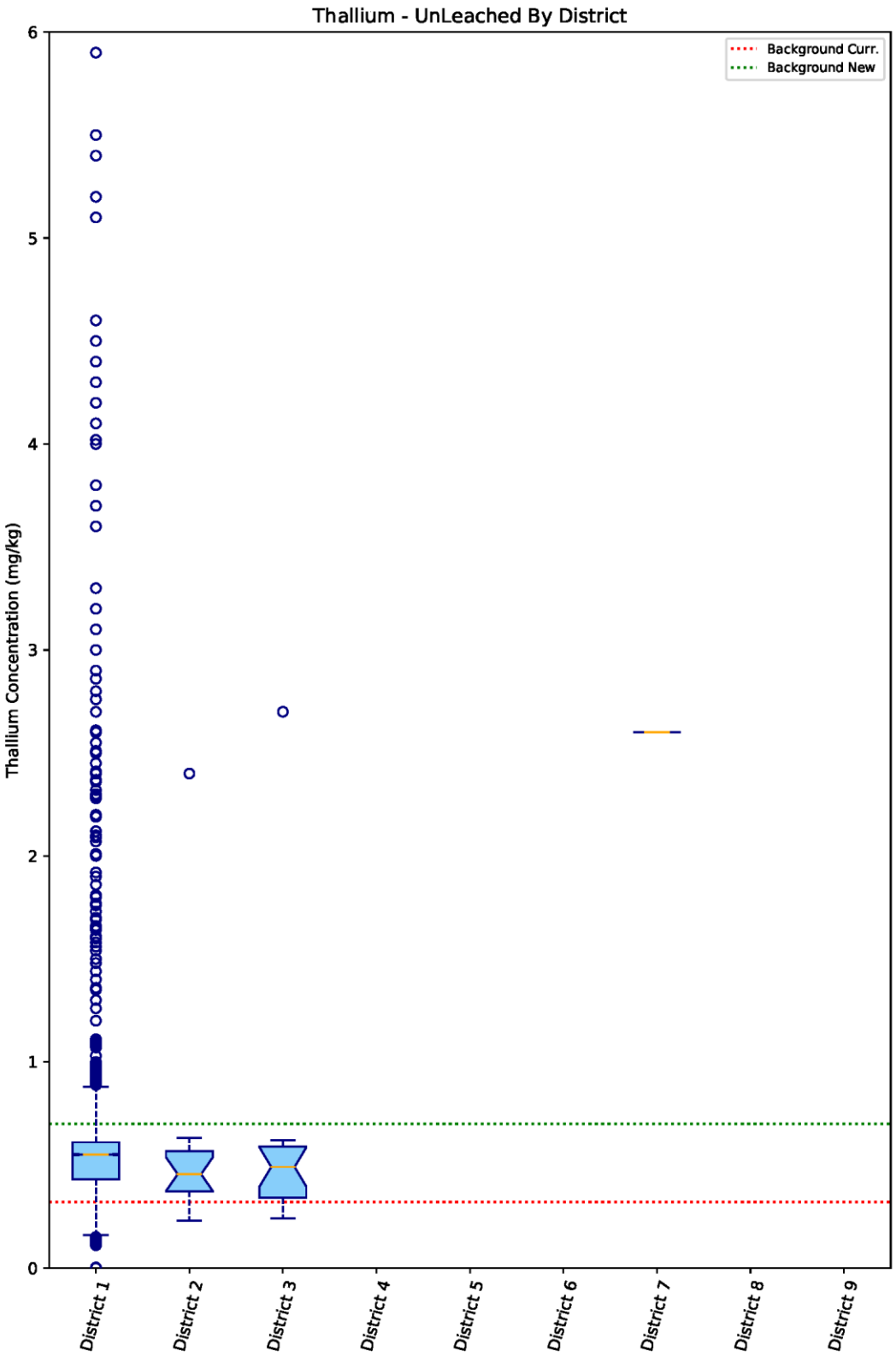


Figure 742. Boxplot of RSL thallium concentrations by IDOT District, de minimis (mg/kg)

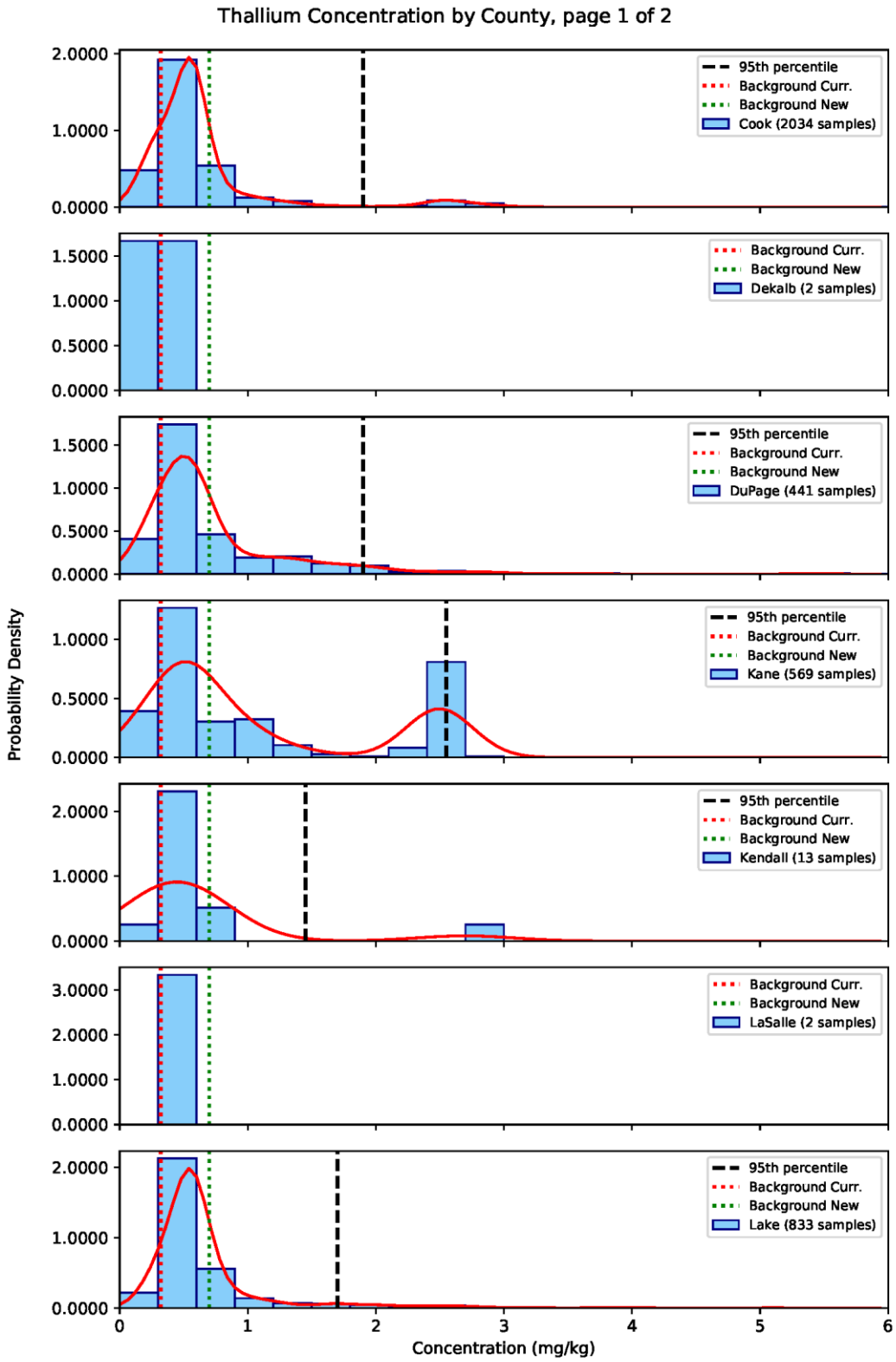


Figure 743. Histogram of RSL thallium concentrations by Illinois county, de minimis (mg/kg), part 1

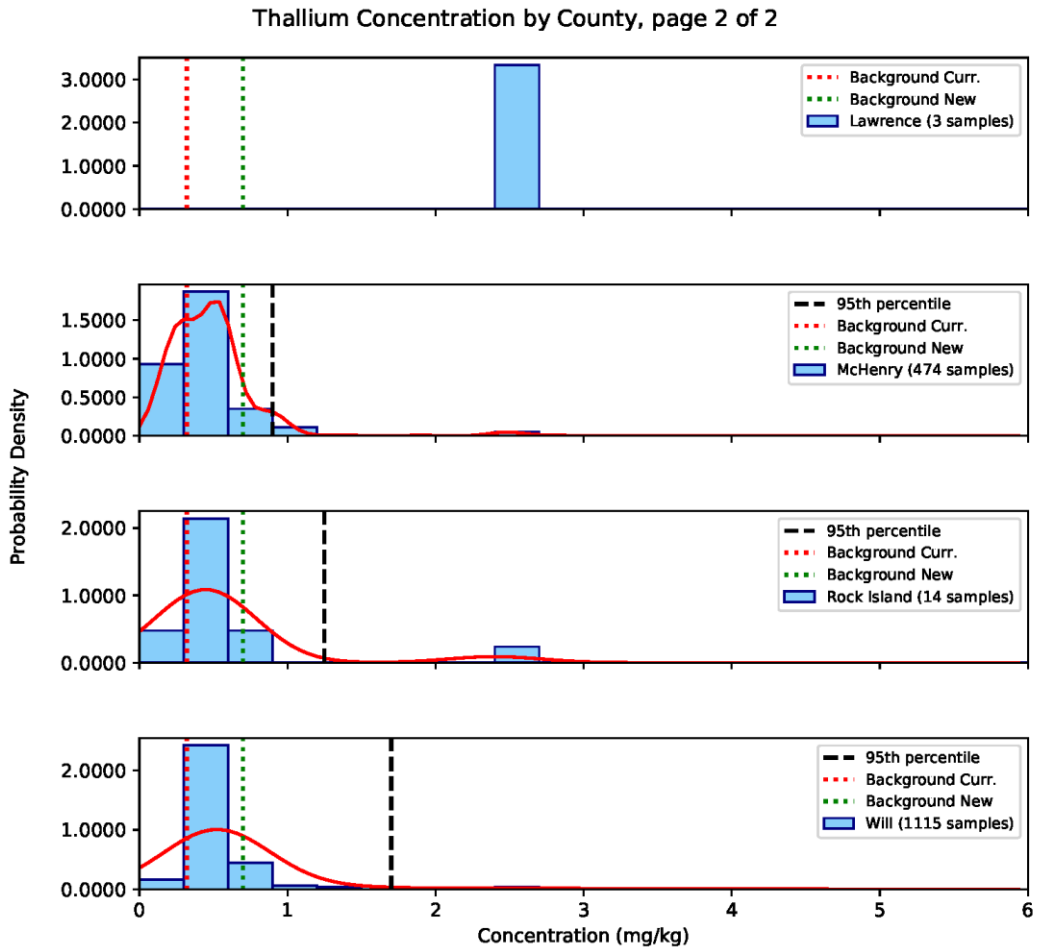


Figure 744. Histogram of RSL thallium concentrations by Illinois county, de minimis (mg/kg), part 2

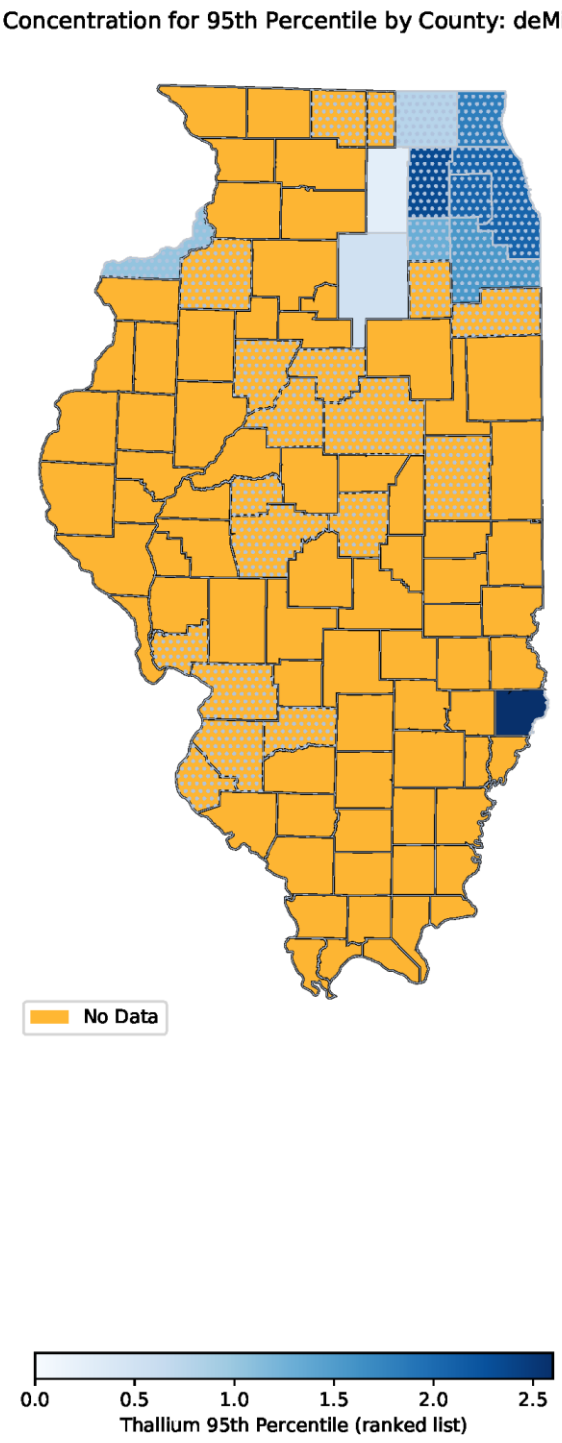


Figure 745. Map of RSL thallium 95th percentile concentration by Illinois county, de minimis (mg/kg)

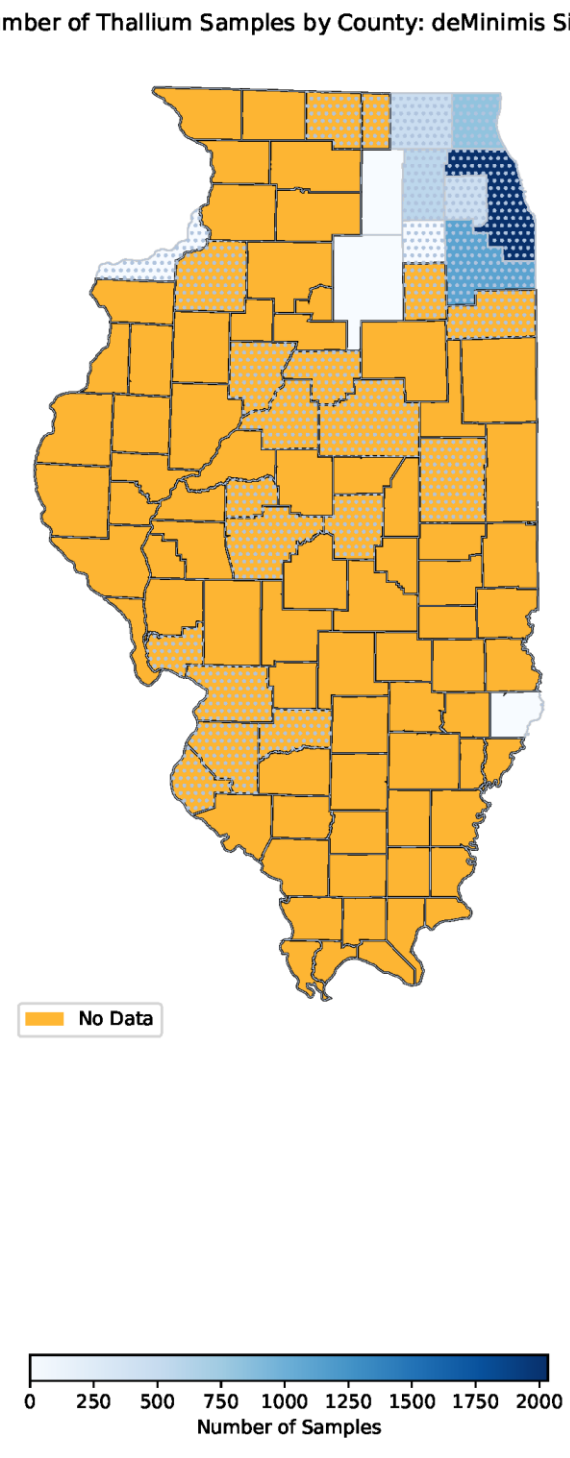


Figure 746. Map of RSL thallium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX U. ANALYTE ANALYSIS: VANADIUM

U.1 VANADIUM REC

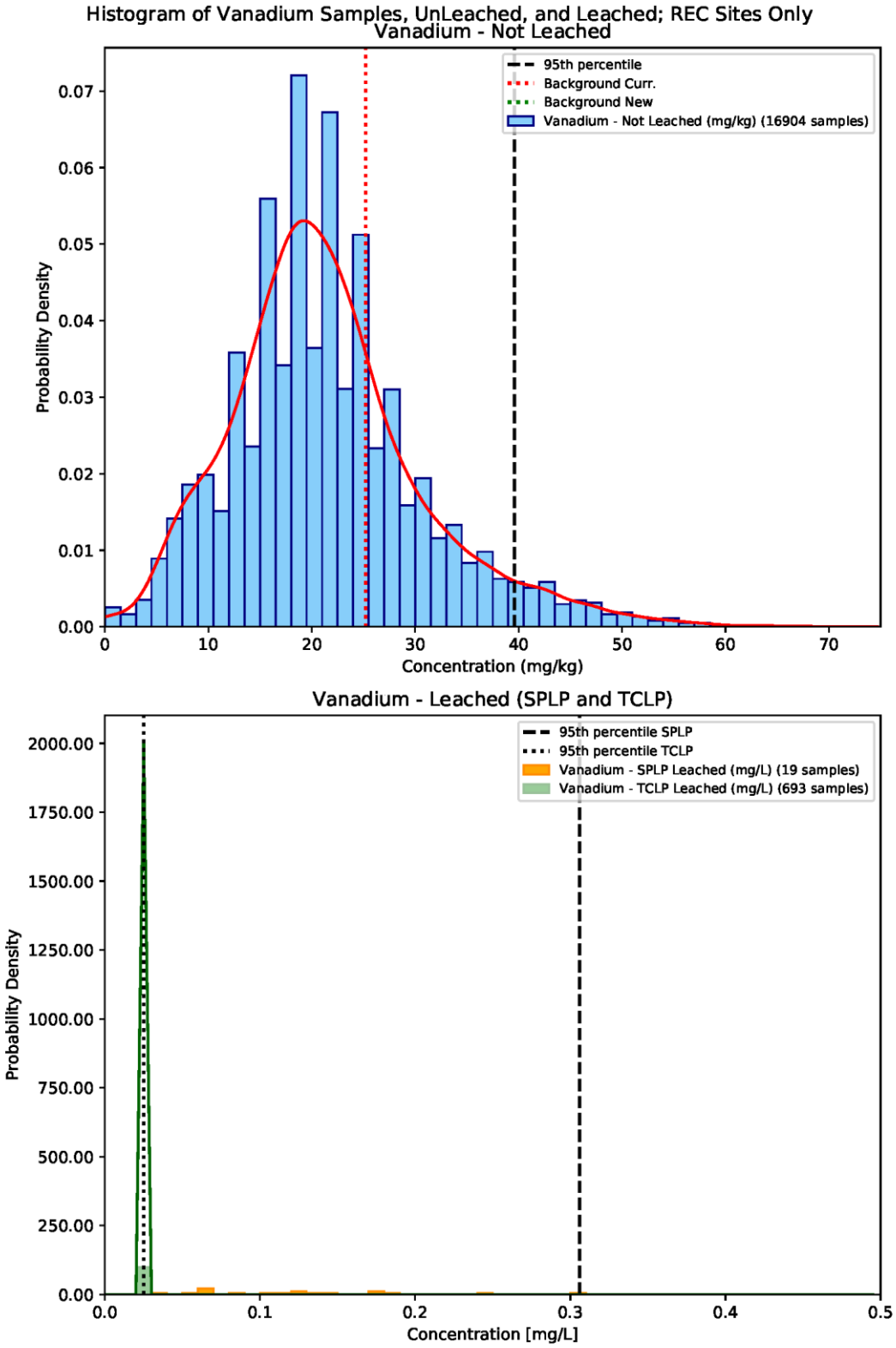


Figure 747. Histogram of RSL vanadium concentrations, REC (mg/kg)

Vanadium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

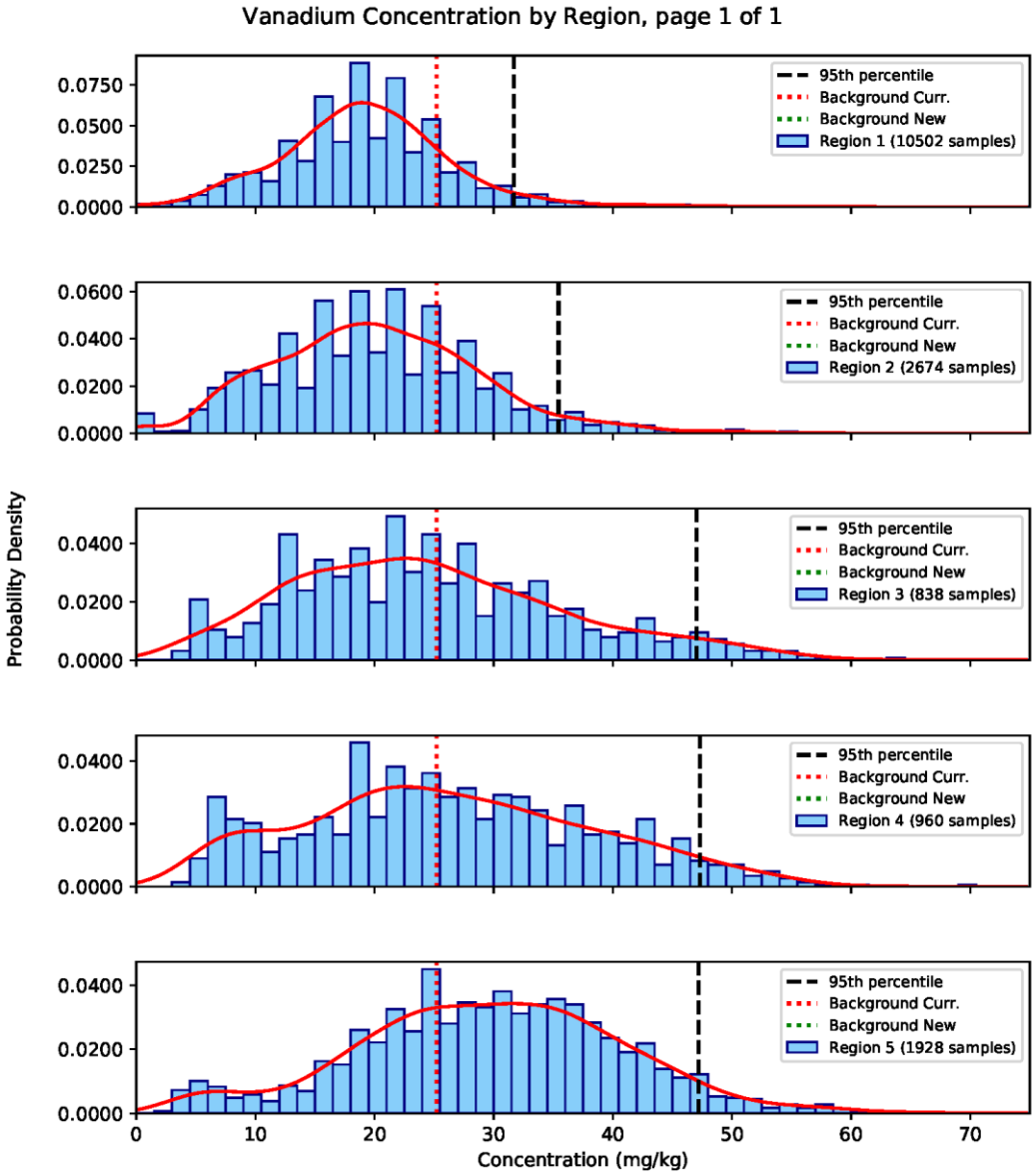


Figure 748. Histogram of RSL vanadium concentrations by IDOT Region, REC (mg/kg)

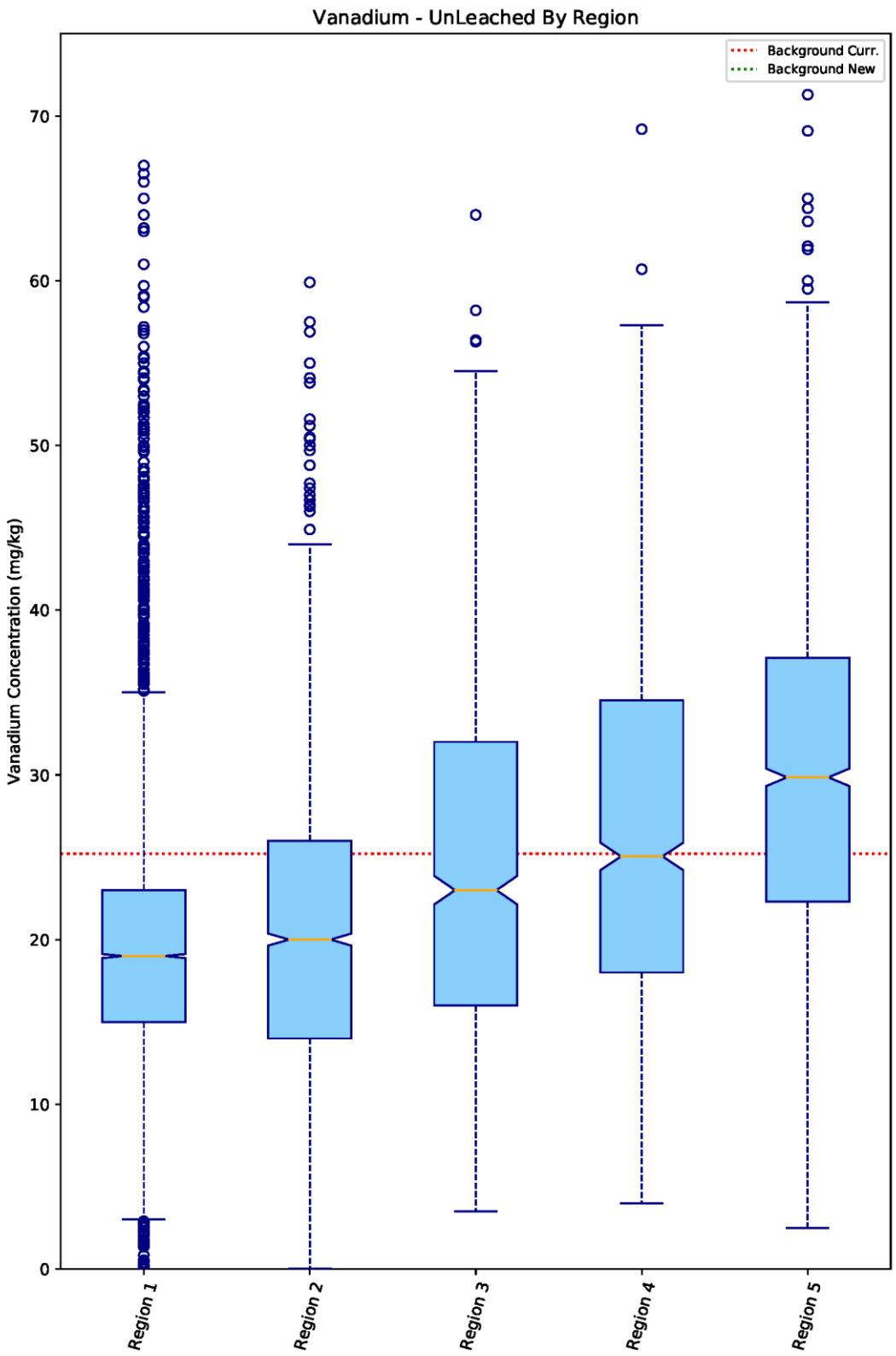


Figure 749. Boxplot of RSL vanadium concentrations by IDOT Region, REC (mg/kg)

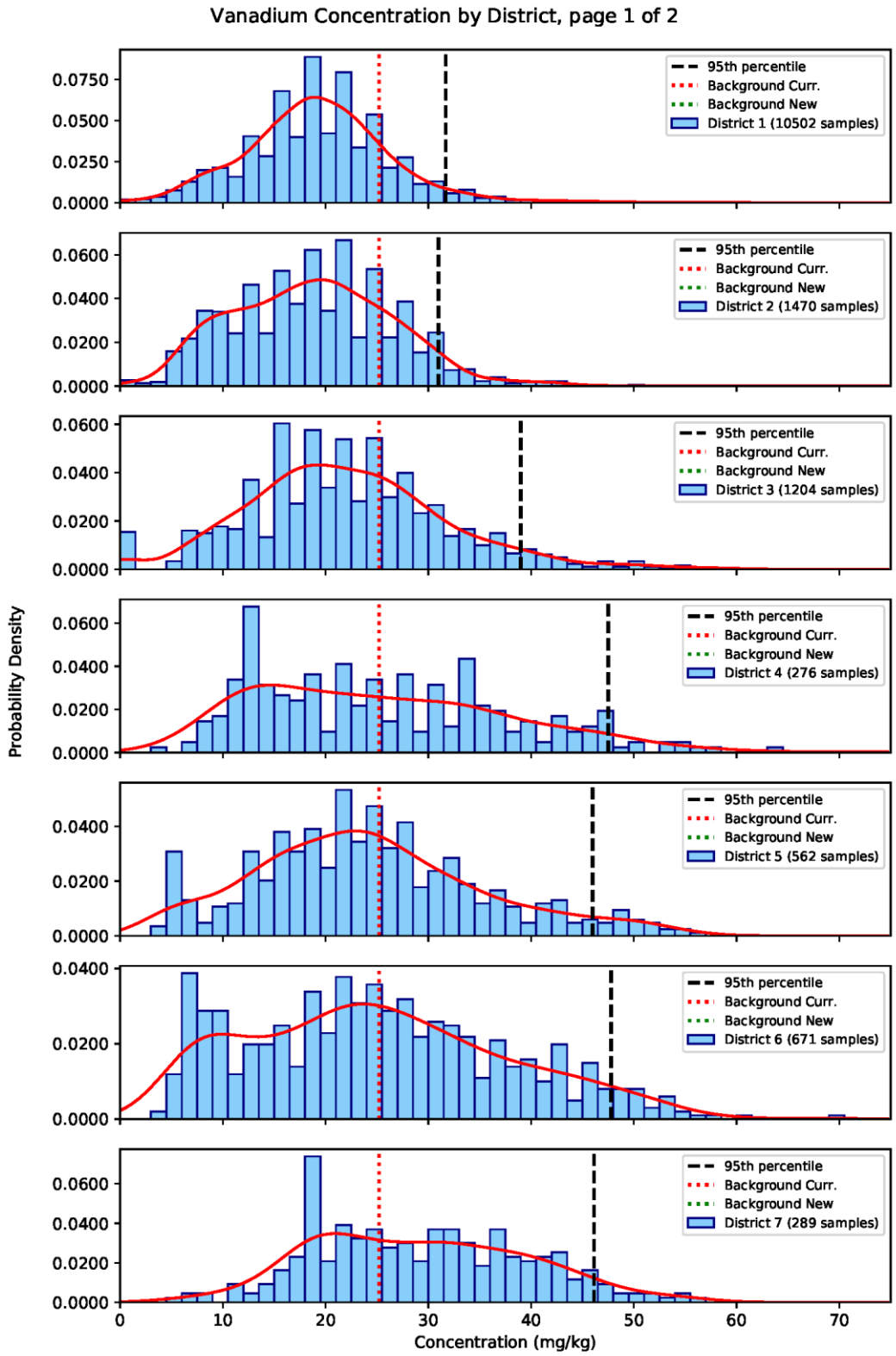


Figure 750. Histogram of RSL vanadium concentrations by IDOT District, REC (mg/kg), part 1

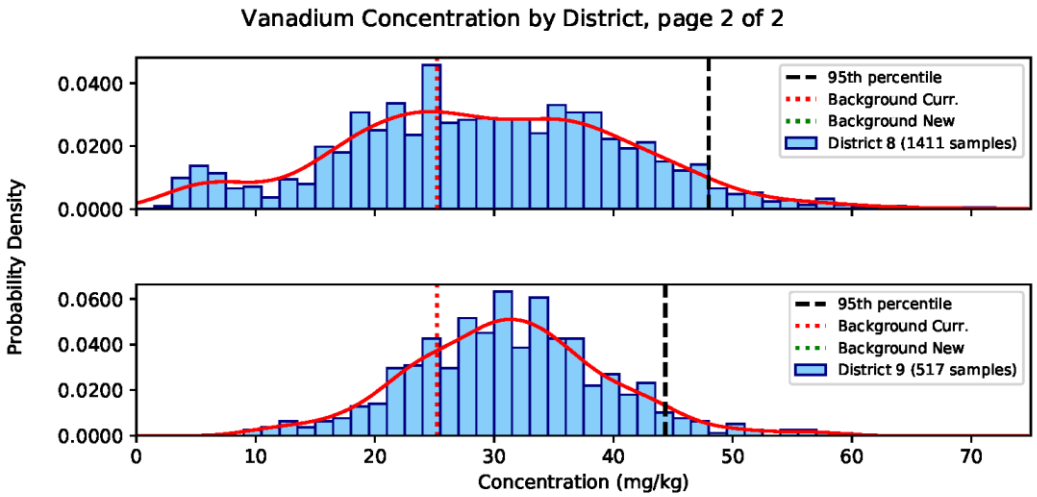


Figure 751. Histogram of RSL vanadium concentrations by IDOT District, REC (mg/kg), part 2

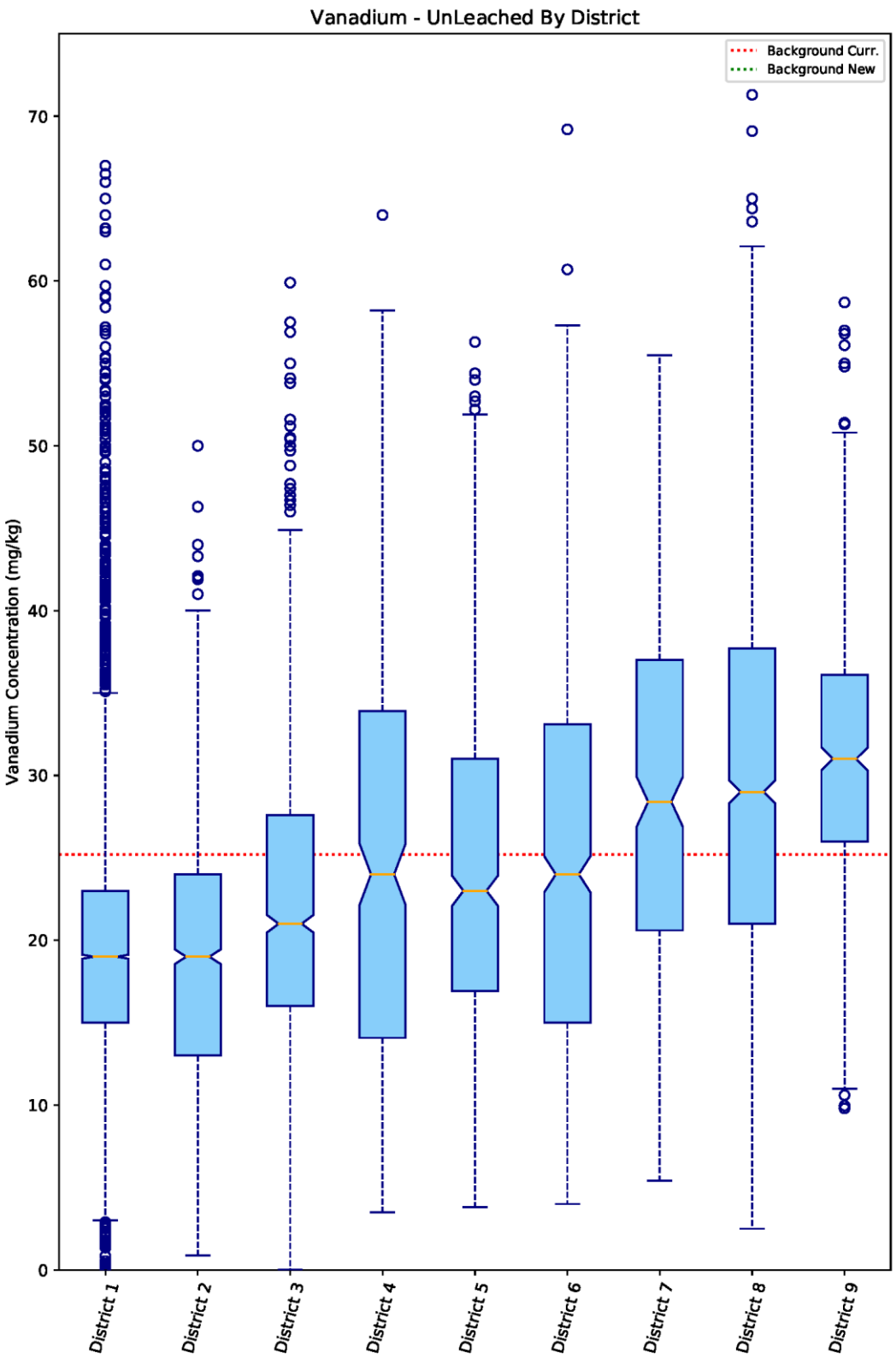


Figure 752. Boxplot of RSL vanadium concentrations by IDOT District, REC (mg/kg)

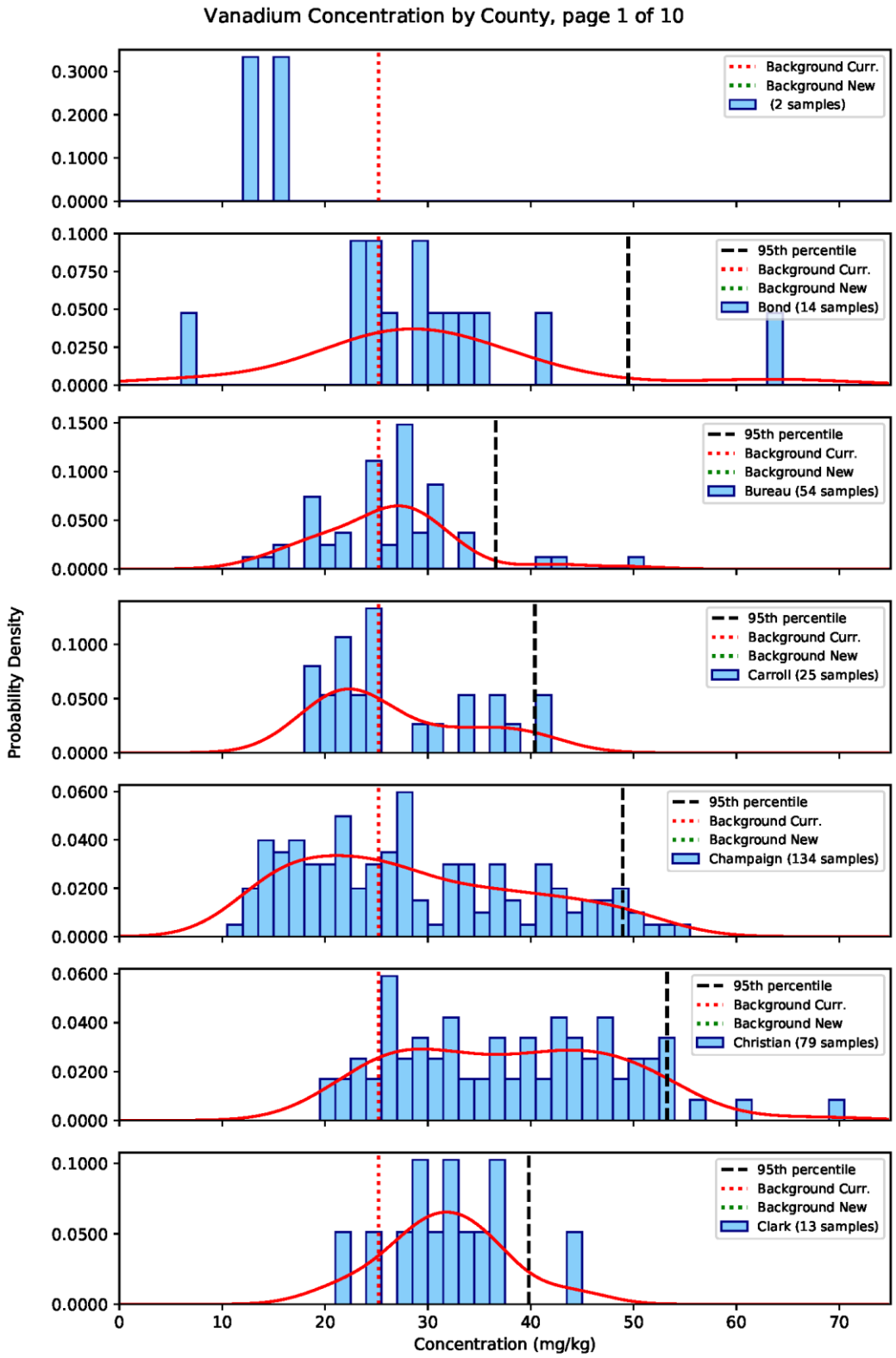


Figure 753. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 1

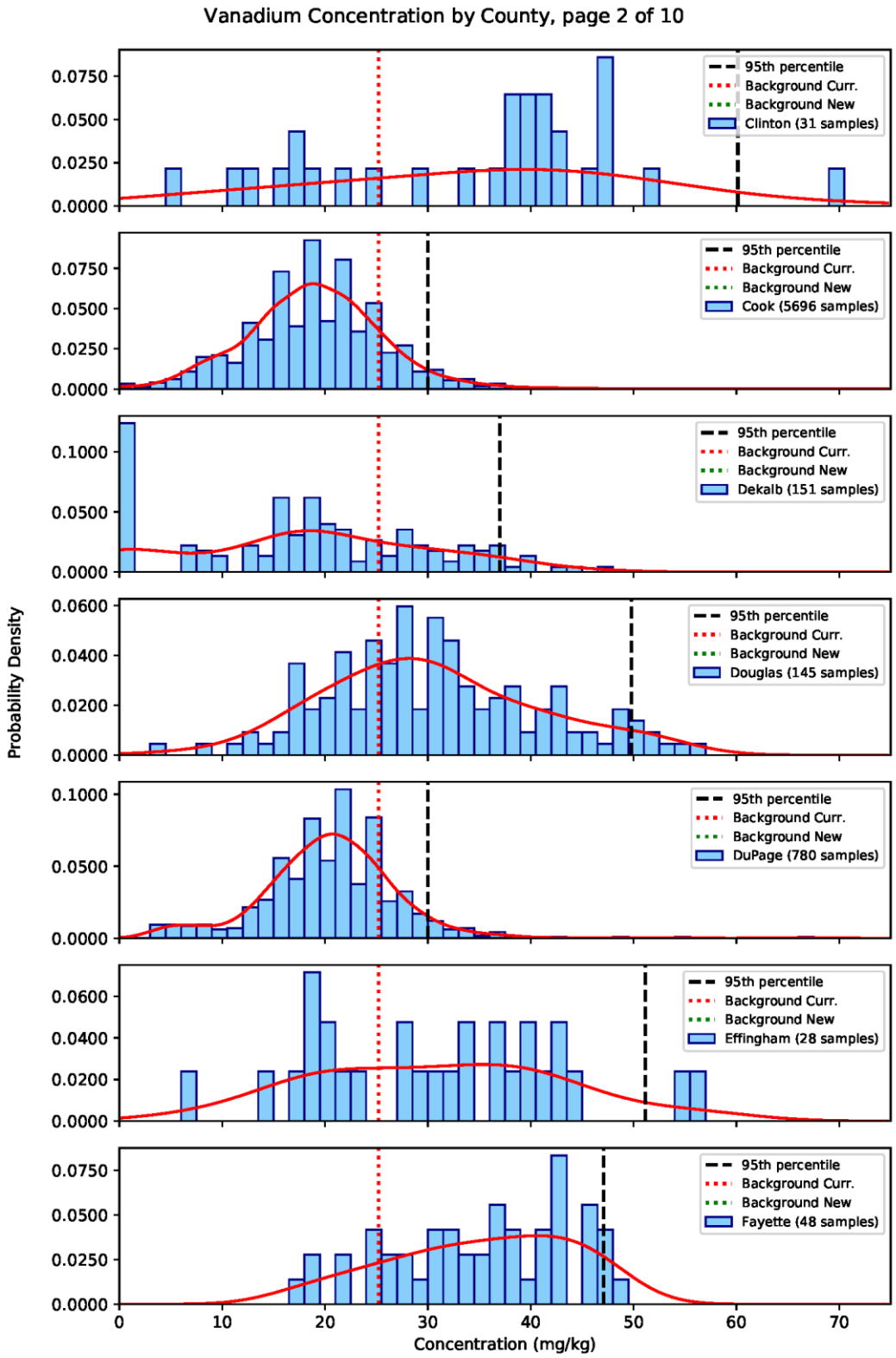


Figure 754. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 2

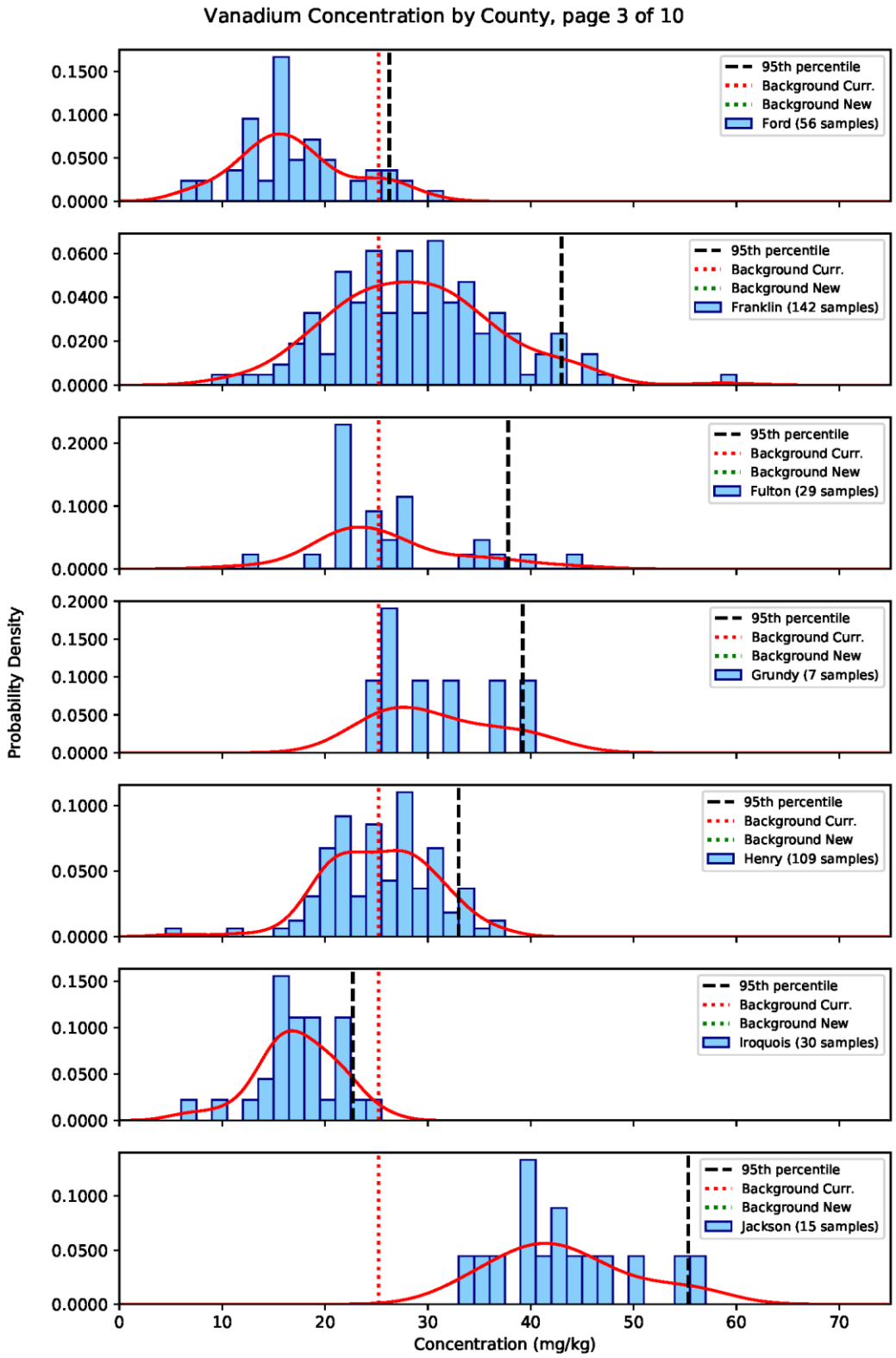


Figure 755. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 3

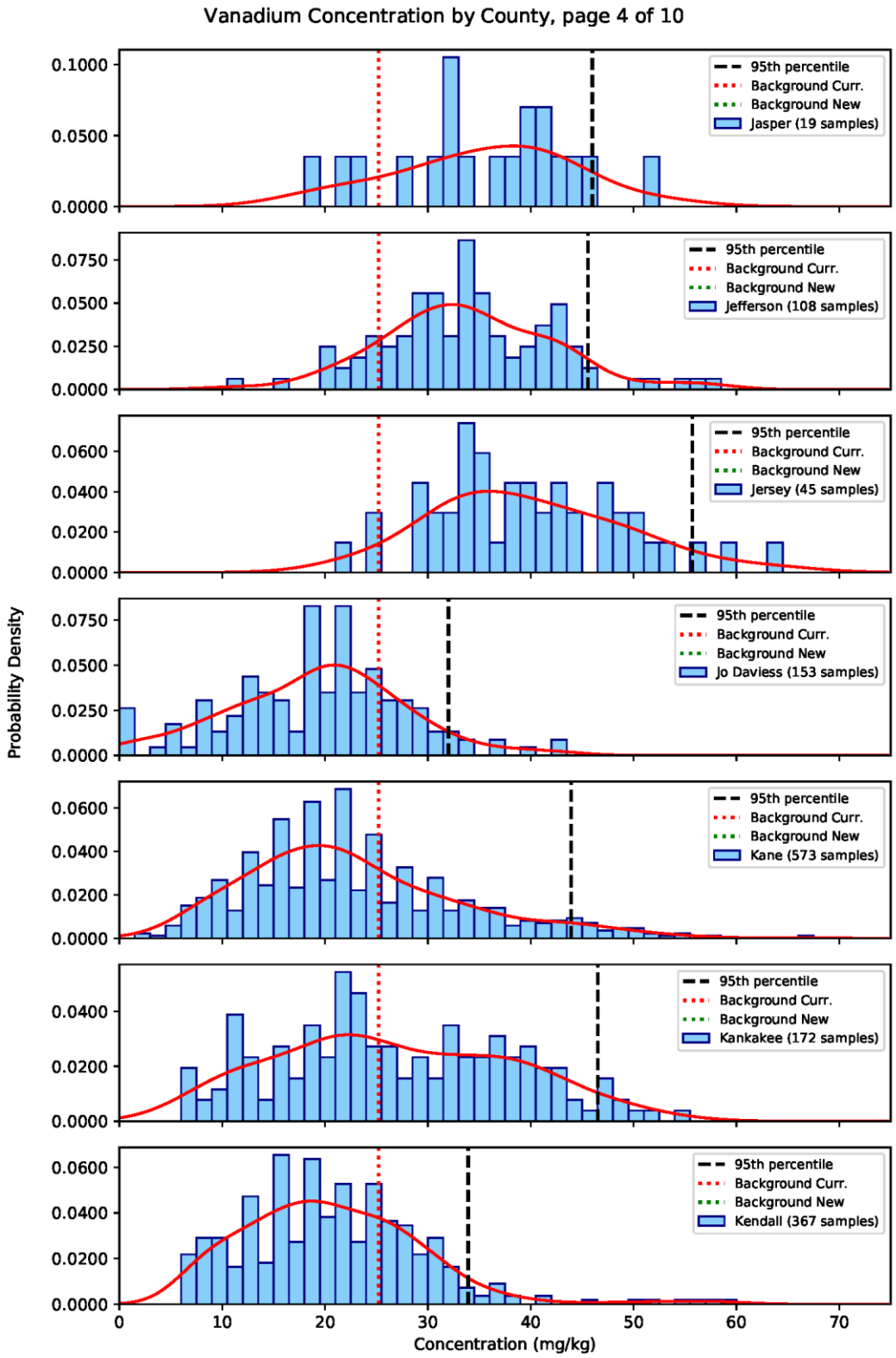


Figure 756. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 4

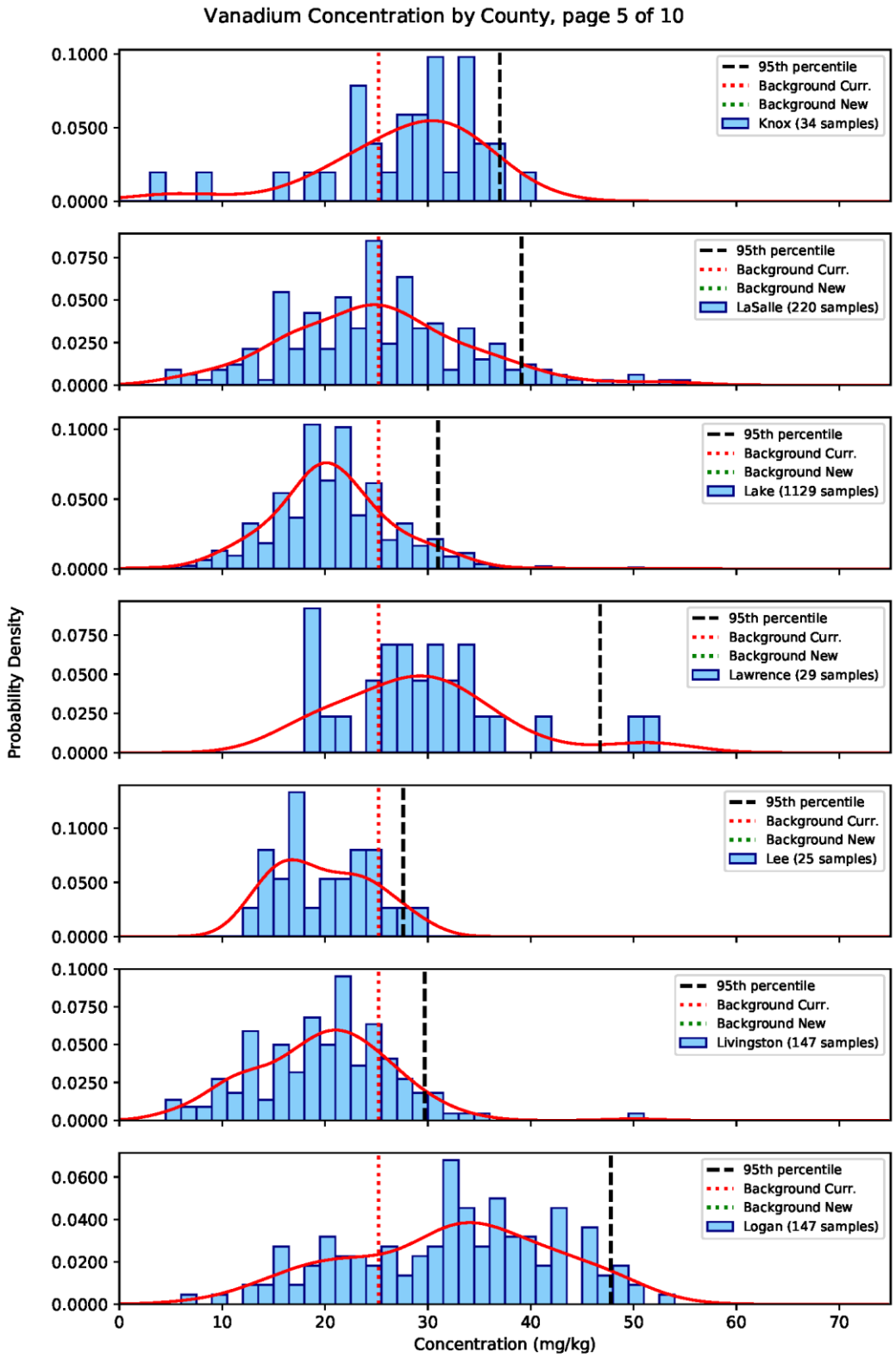


Figure 757. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 5

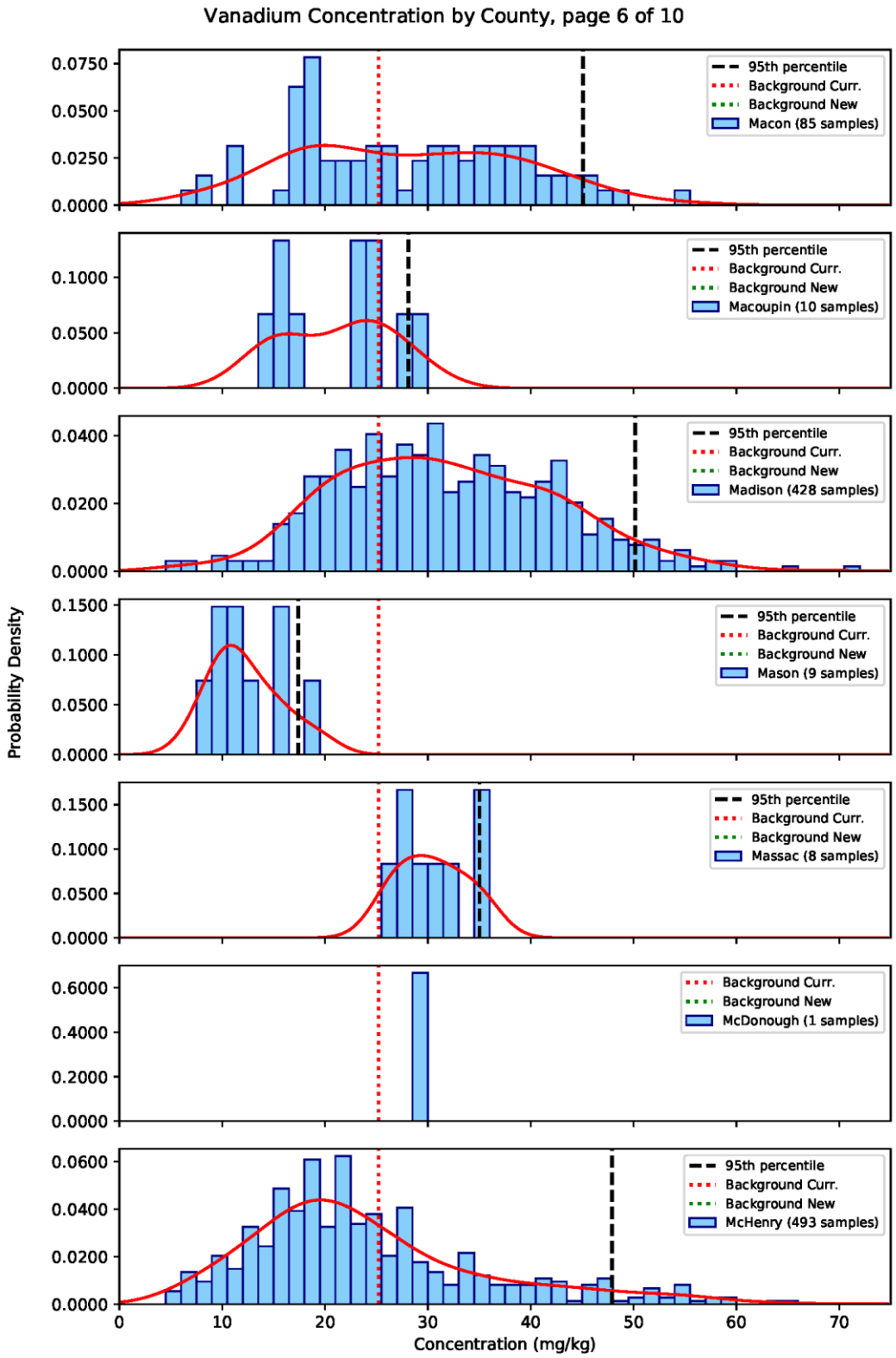


Figure 758. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 6

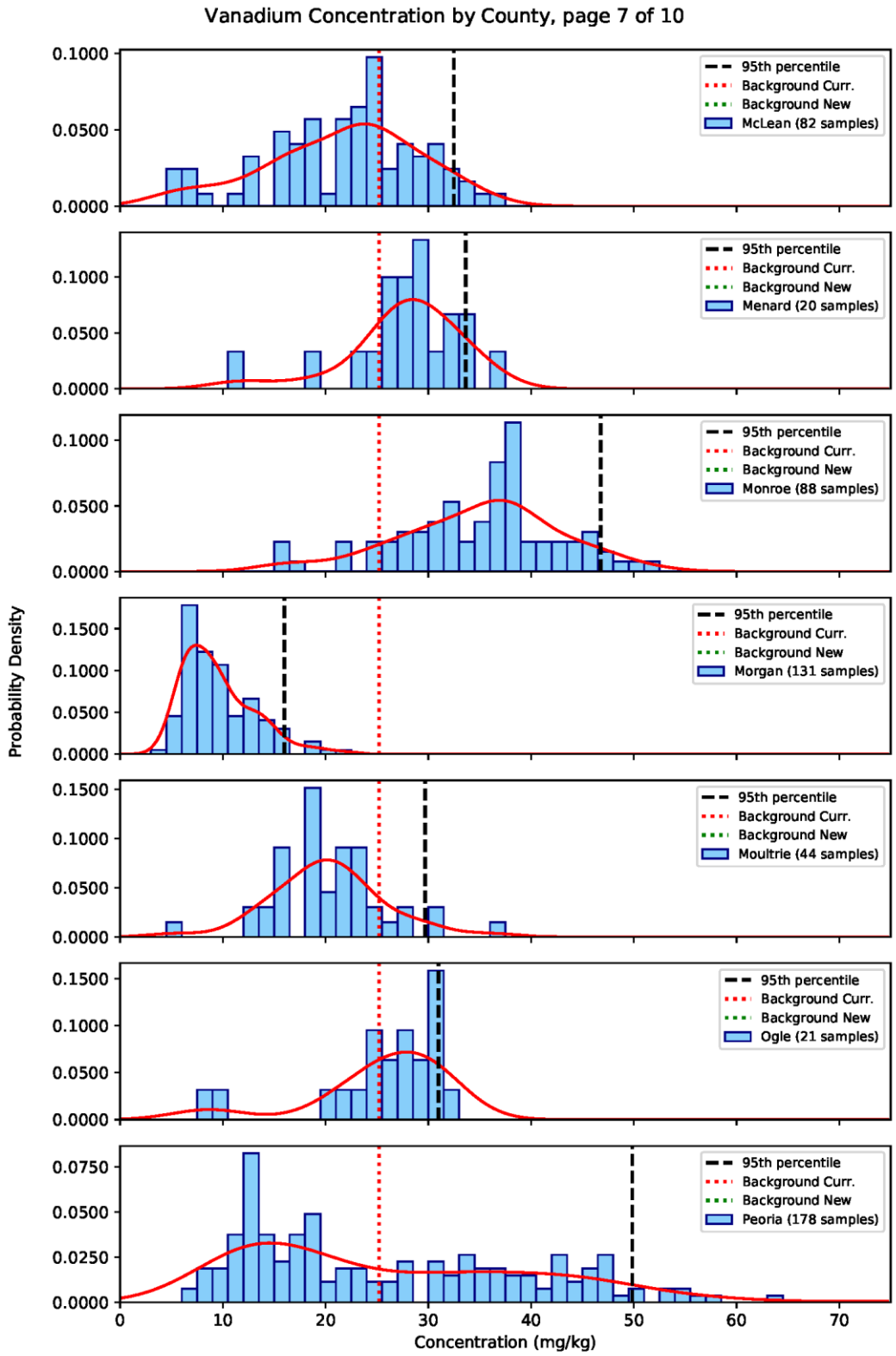


Figure 759. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 7

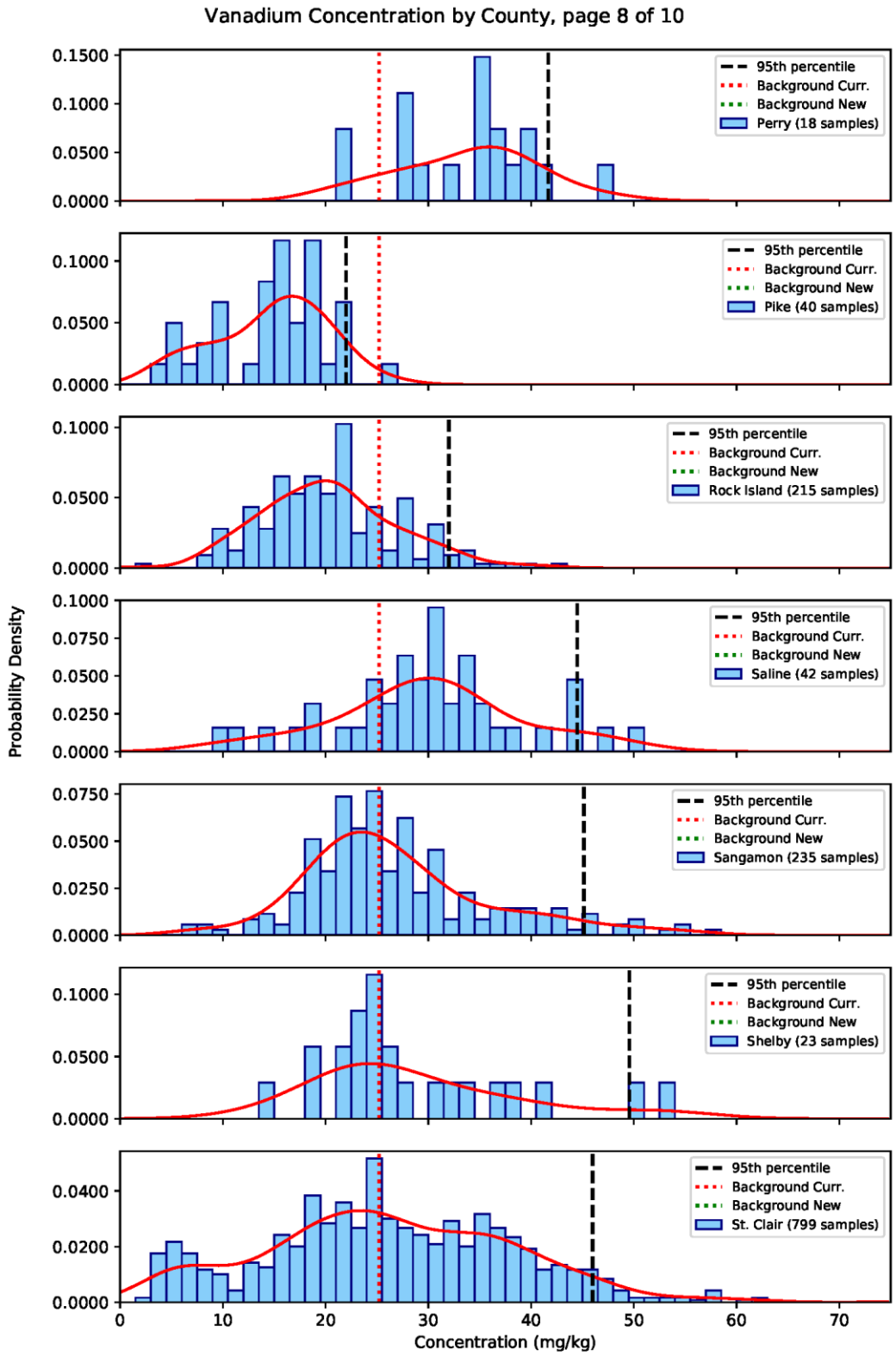


Figure 760. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 8

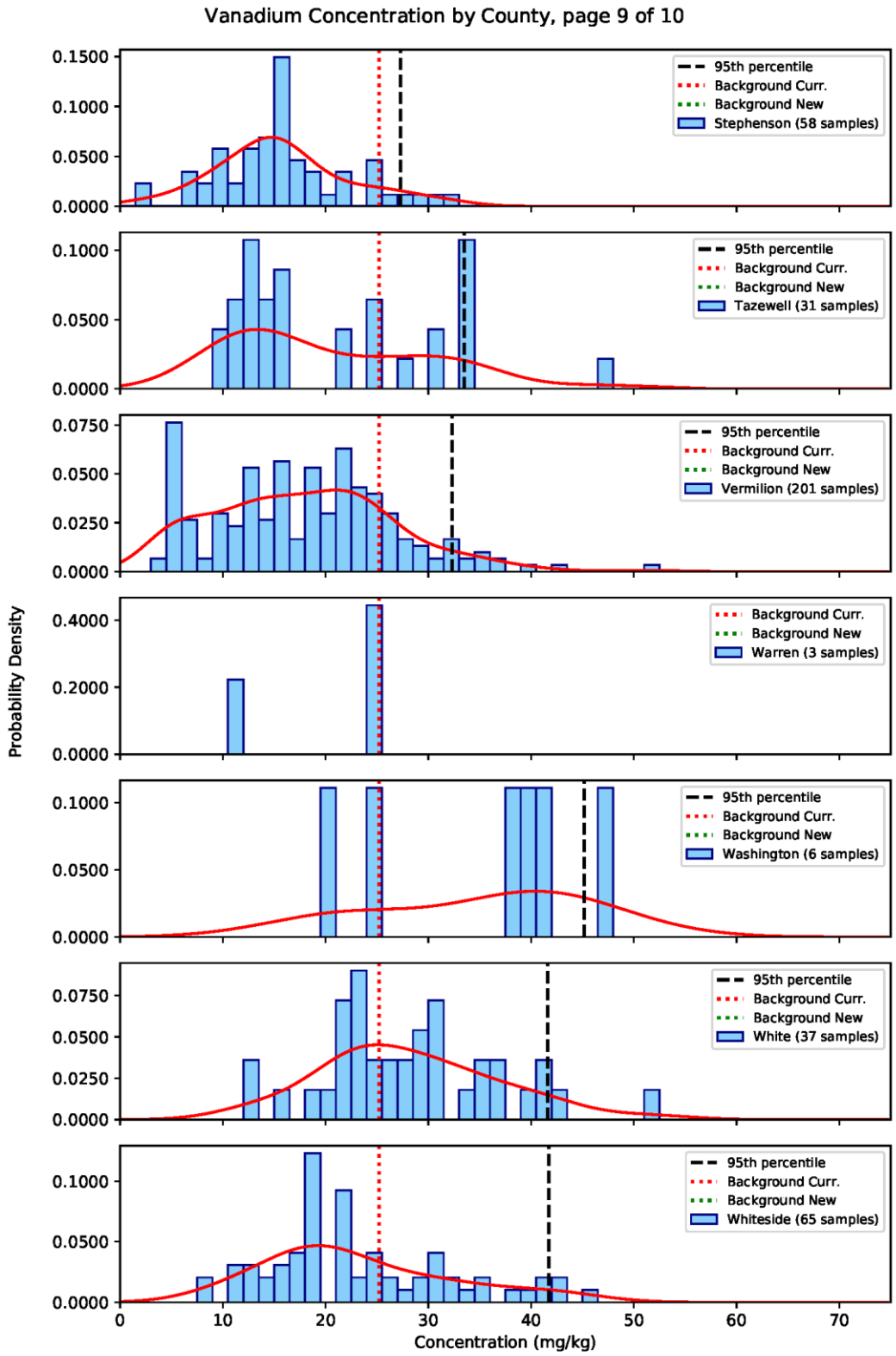


Figure 761. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 9

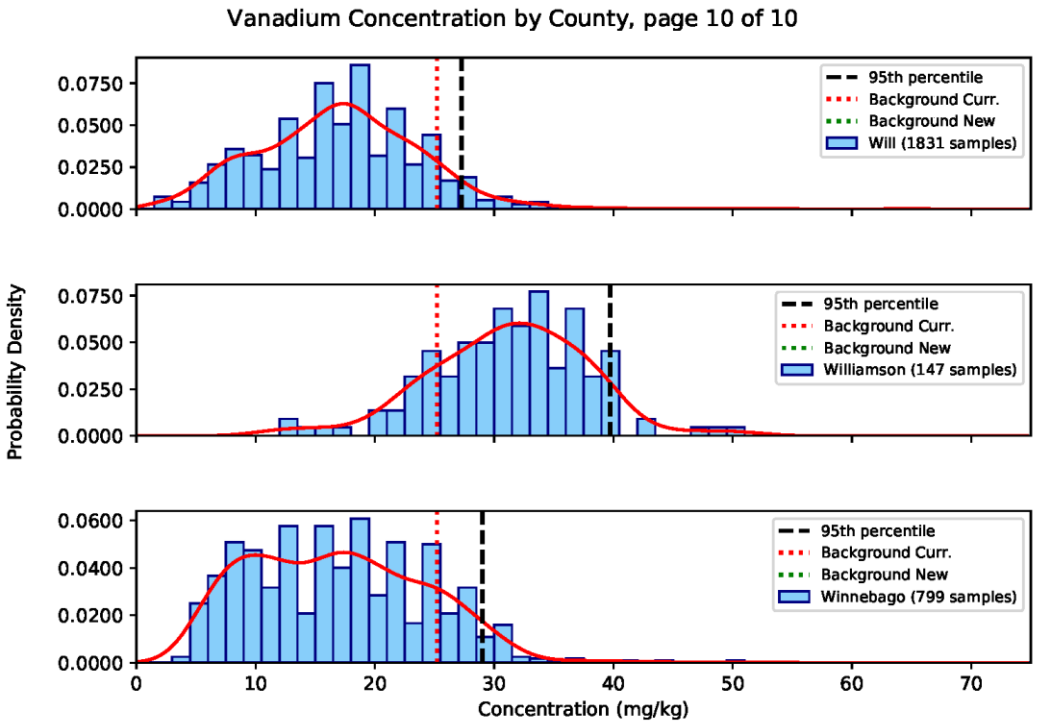


Figure 762. Histogram of RSL vanadium concentrations by Illinois county, REC (mg/kg), part 10

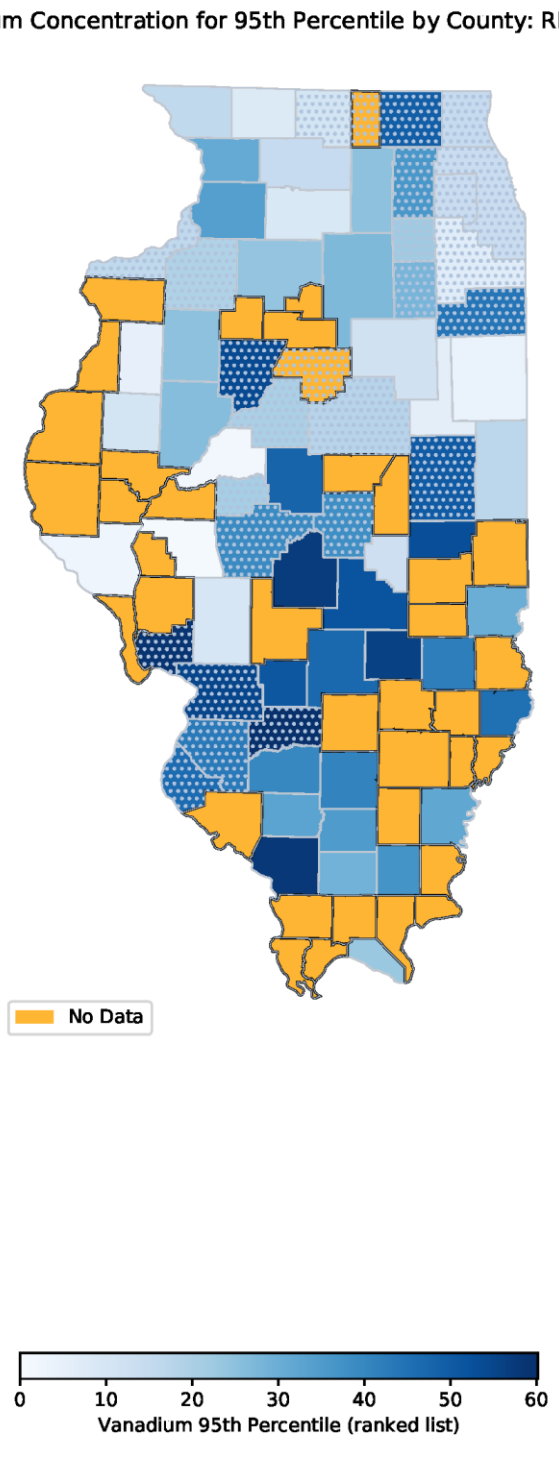


Figure 763. Map of RSL vanadium 95th percentile concentration by Illinois county, REC (mg/kg)

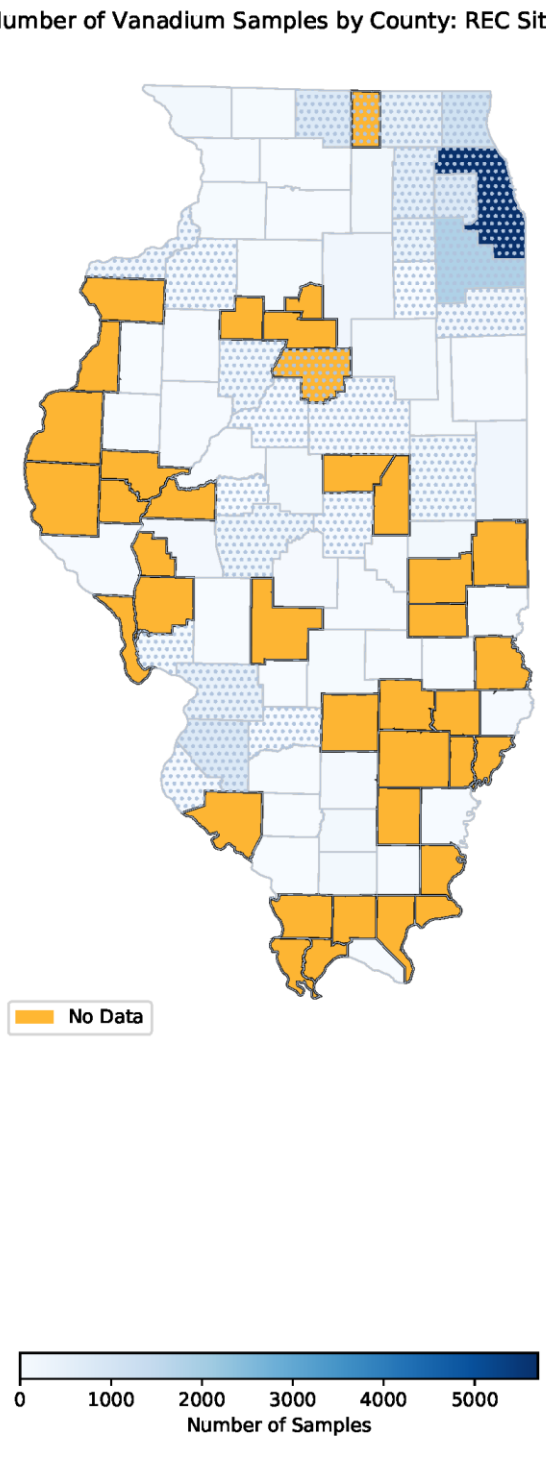


Figure 764. Map of RSL vanadium sample quantity by Illinois county, REC (mg/kg)

U.2 VANADIUM NON-REC

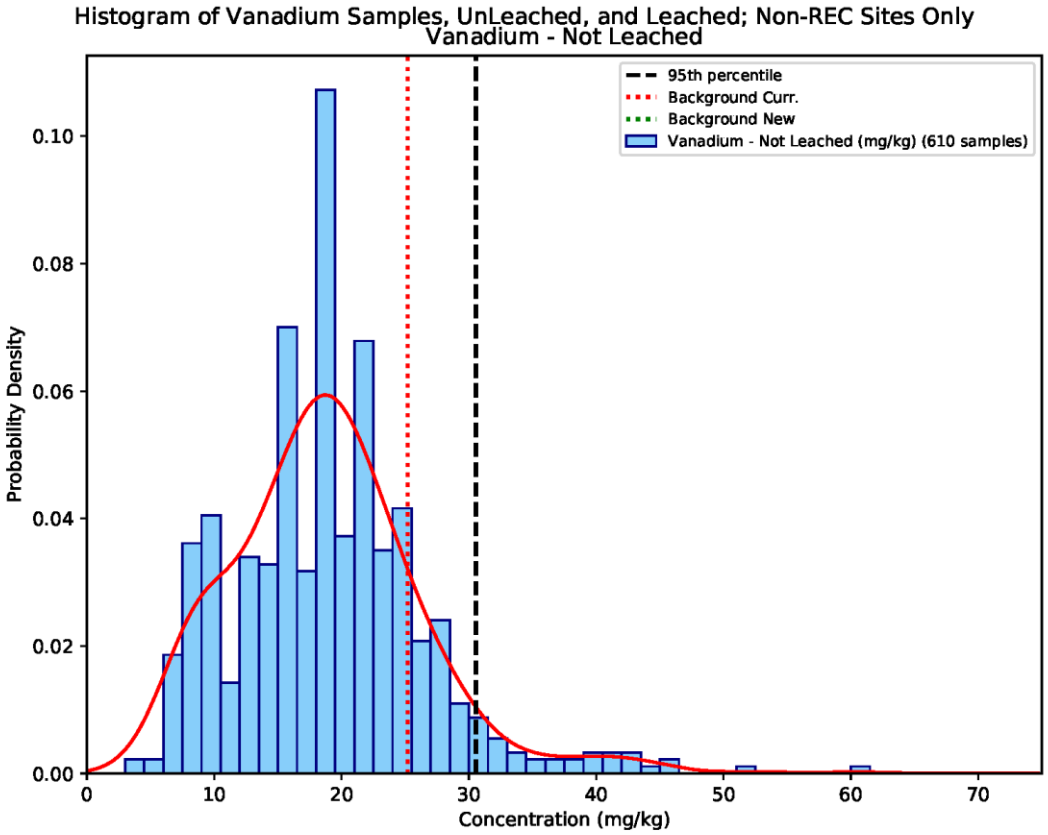


Figure 765. Histogram of RSL vanadium concentrations, Non-REC (mg/kg)

Vanadium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

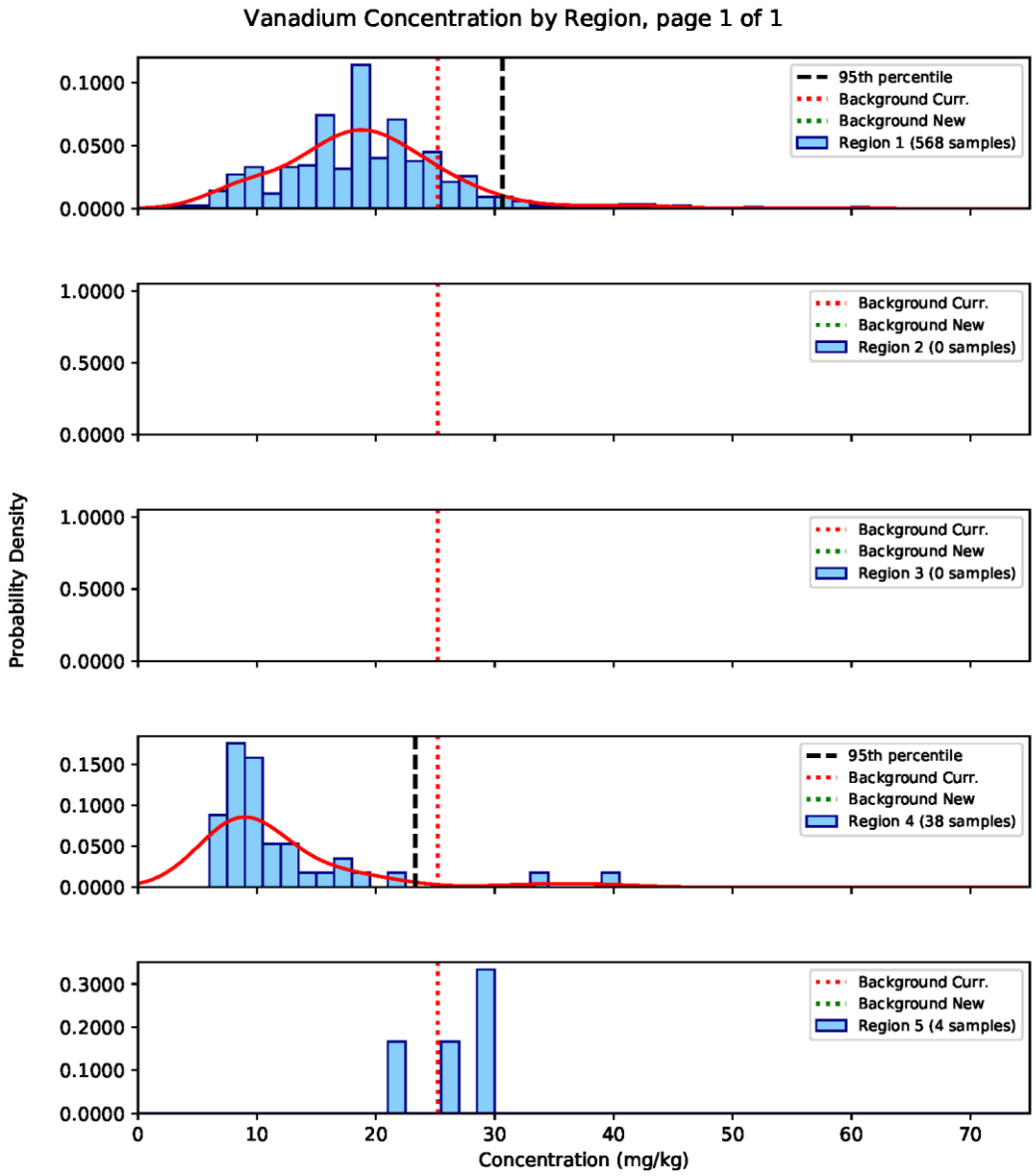


Figure 766. Histogram of RSL vanadium concentrations by IDOT Region, Non-REC (mg/kg)

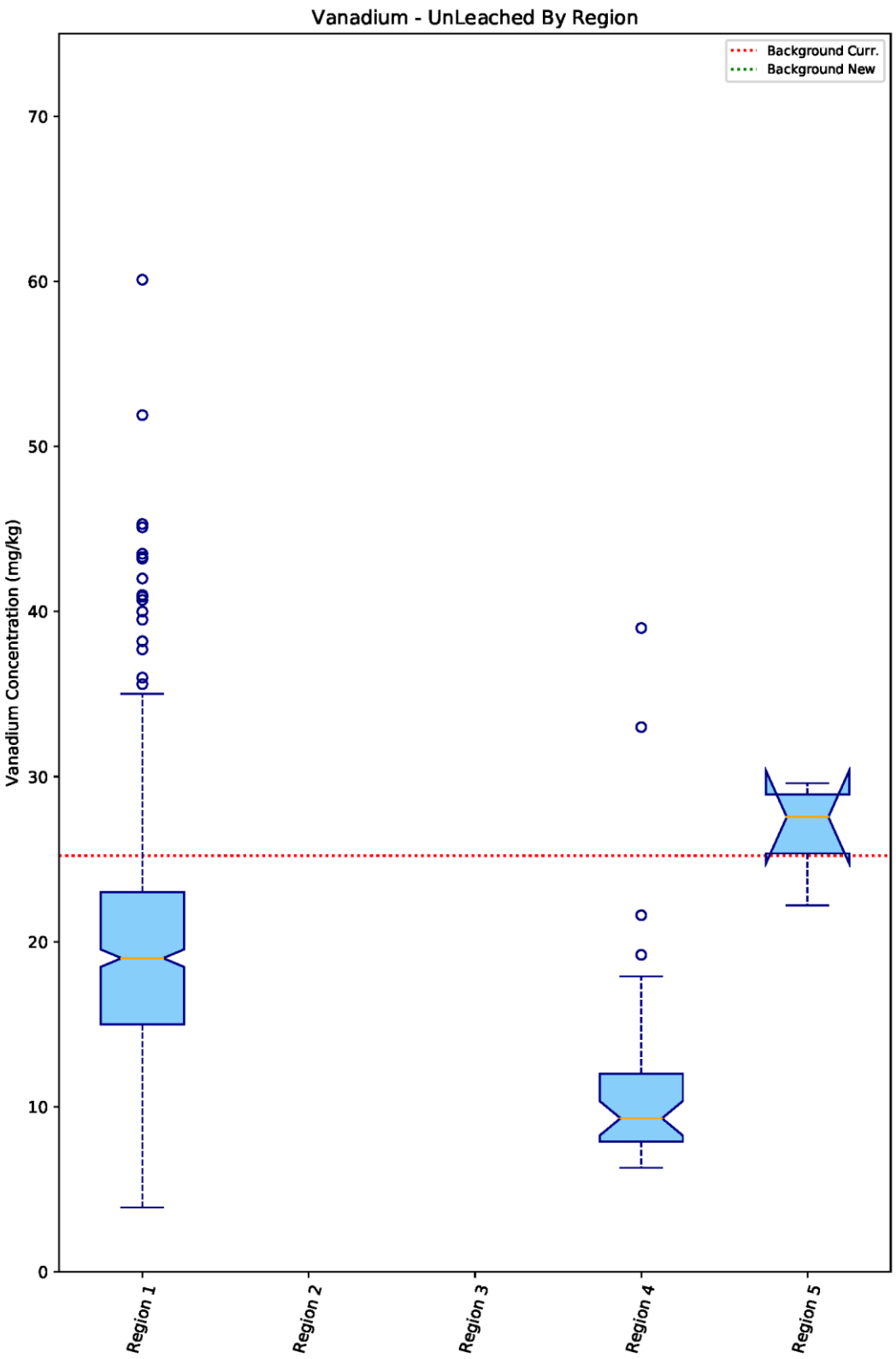


Figure 767. Boxplot of RSL vanadium concentrations by IDOT Region, Non-REC (mg/kg)

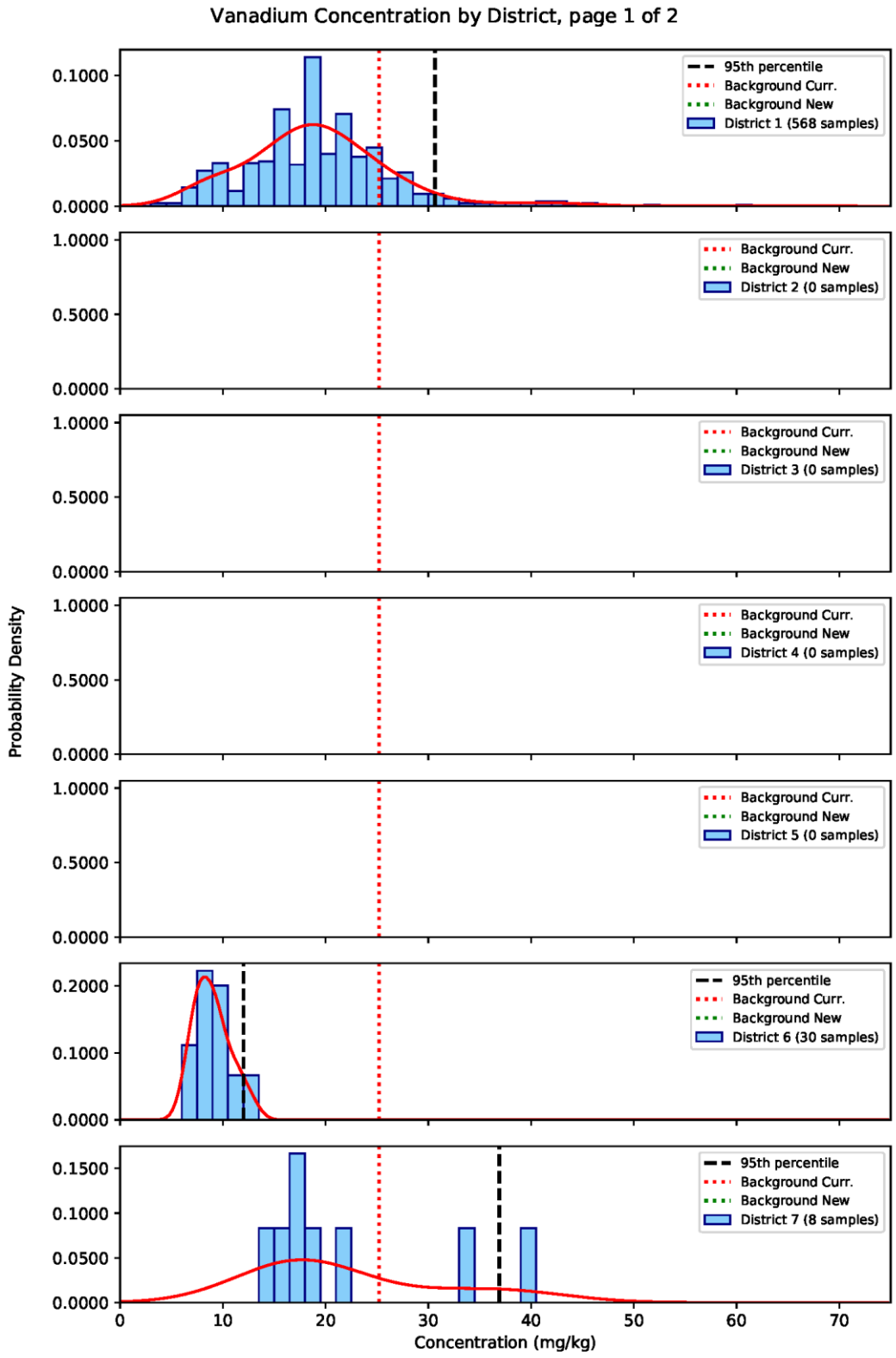


Figure 768. Histogram of RSL vanadium concentrations by IDOT District, Non-REC (mg/kg), part 1

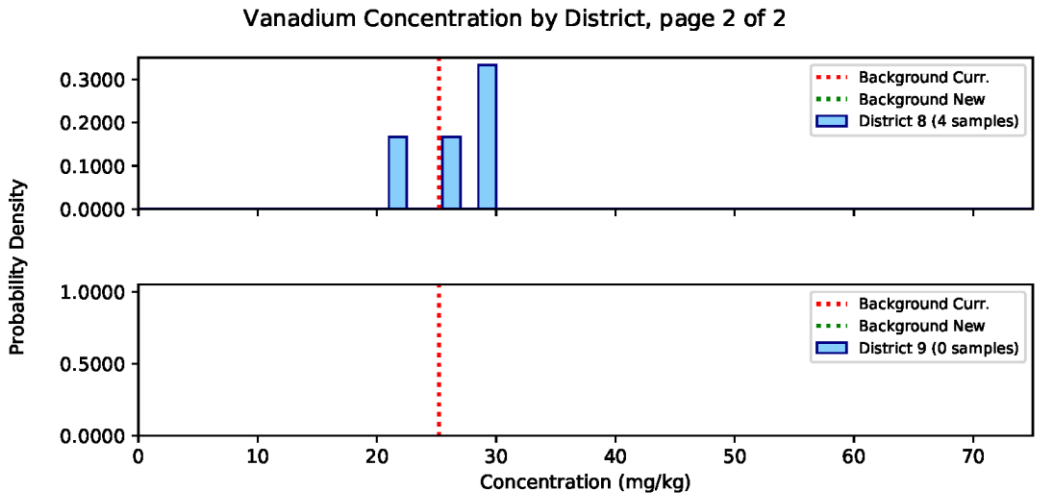


Figure 769. Histogram of RSL vanadium concentrations by IDOT District, Non-REC (mg/kg), part 2

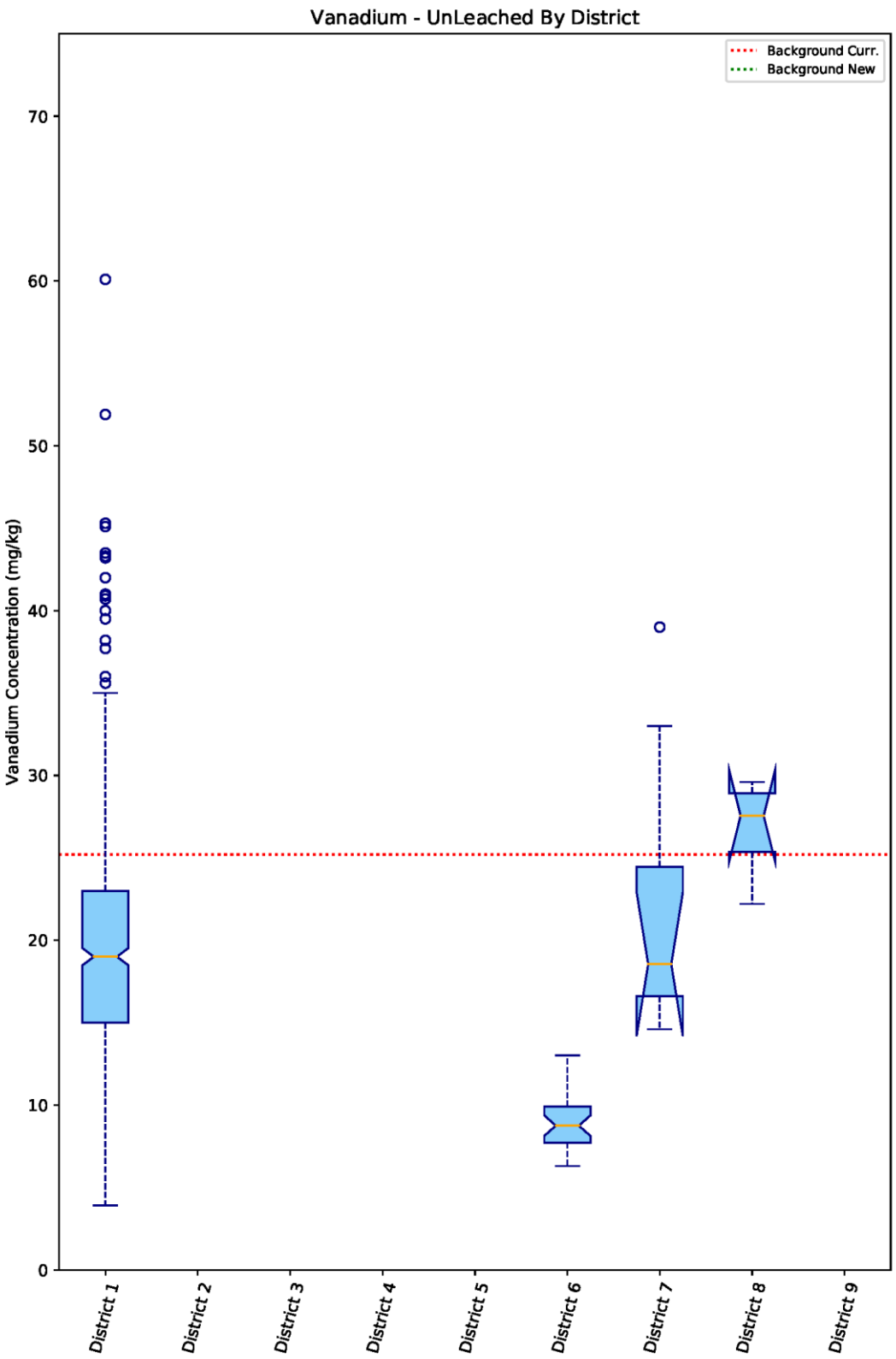


Figure 770. Boxplot of RSL vanadium concentrations by IDOT District, Non-REC (mg/kg)

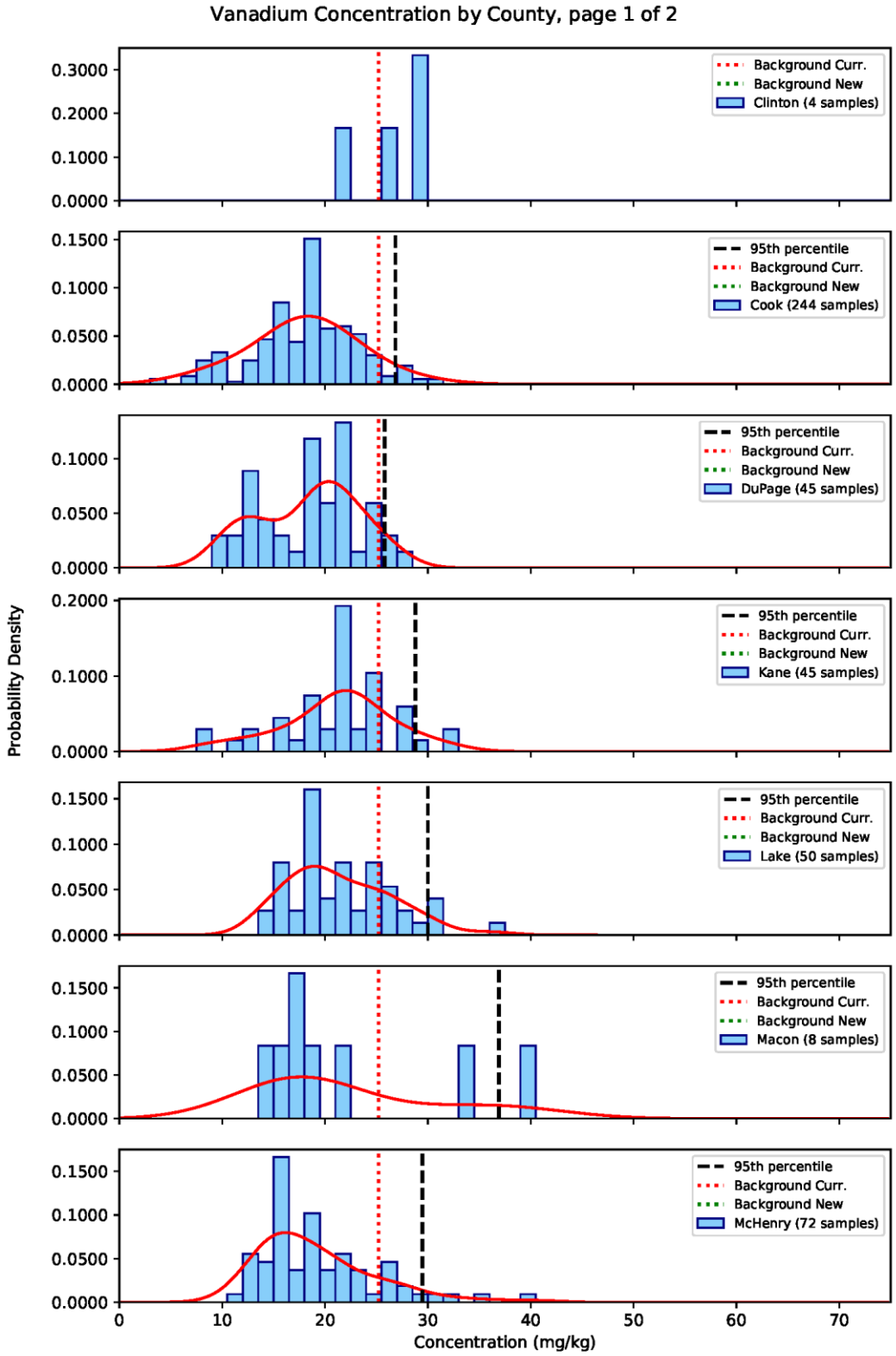


Figure 771. Histogram of RSL vanadium concentrations by Illinois county, Non-REC (mg/kg), part 1

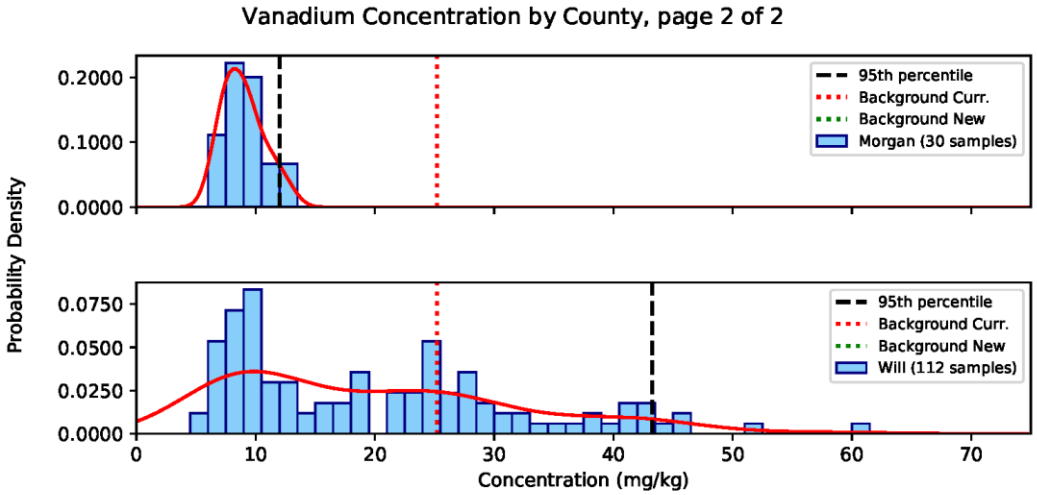


Figure 772. Histogram of RSL vanadium concentrations by Illinois county, Non-REC (mg/kg), part 2

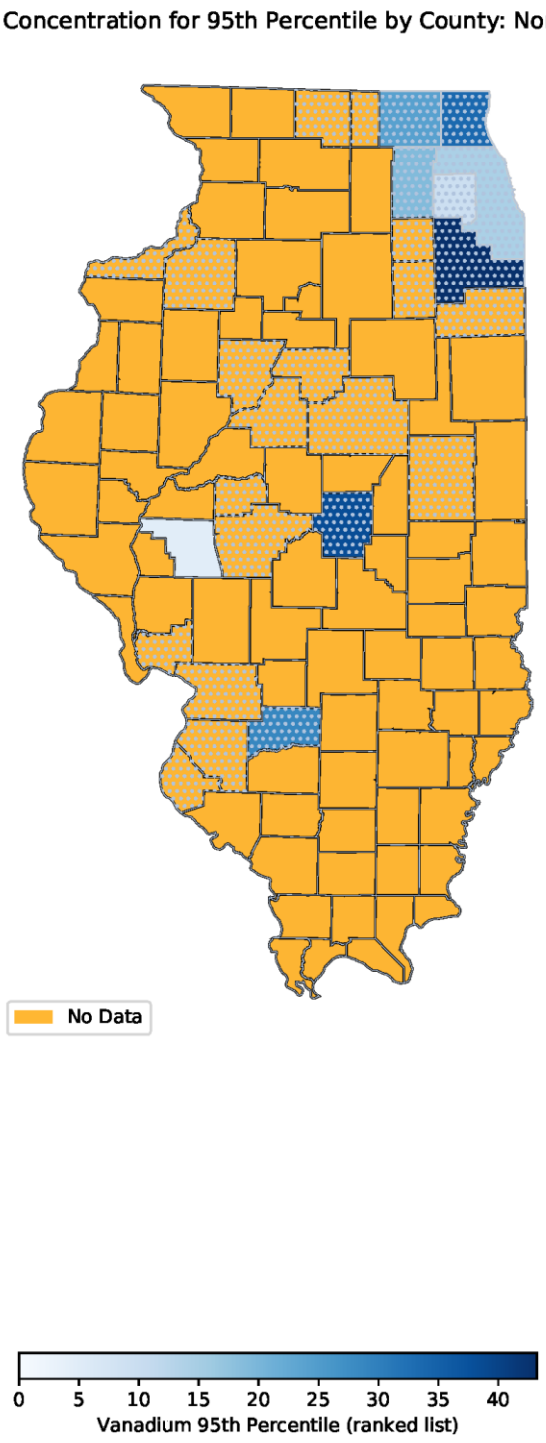


Figure 773. Map of RSL vanadium 95th percentile concentration by Illinois county, Non-REC (mg/kg)

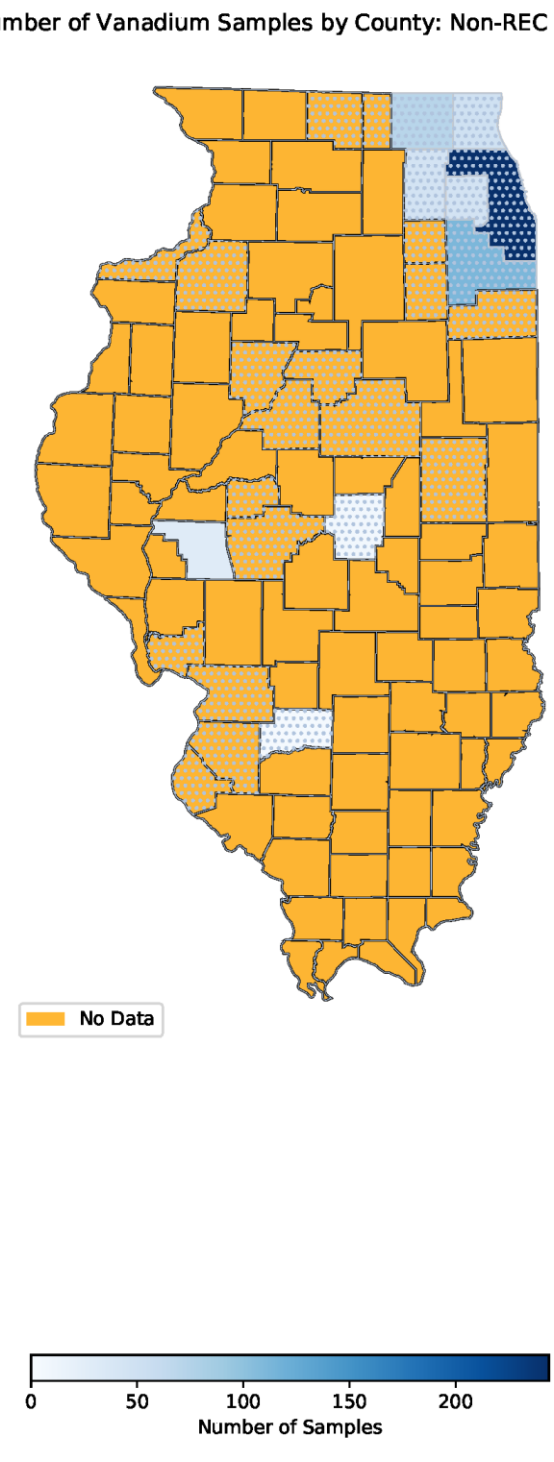


Figure 774. Map of RSL vanadium sample quantity by Illinois county, Non-REC (mg/kg)

U.3 VANADIUM DE MINIMIS

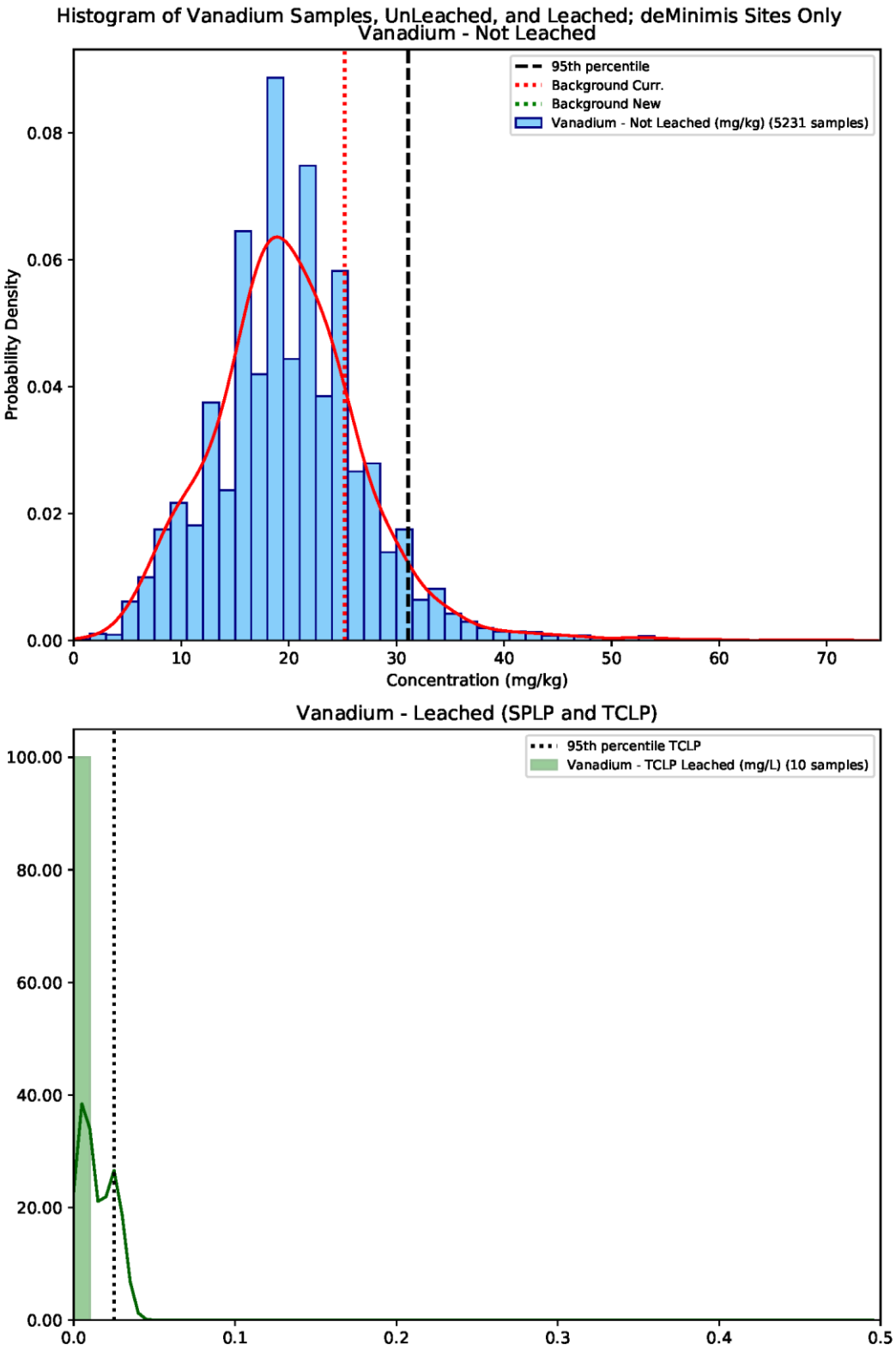


Figure 775. Histogram of RSL vanadium concentrations, de minimis (mg/kg)

Vanadium Unleached Concentration (mg/kg)

1) Region

2) District

3) County

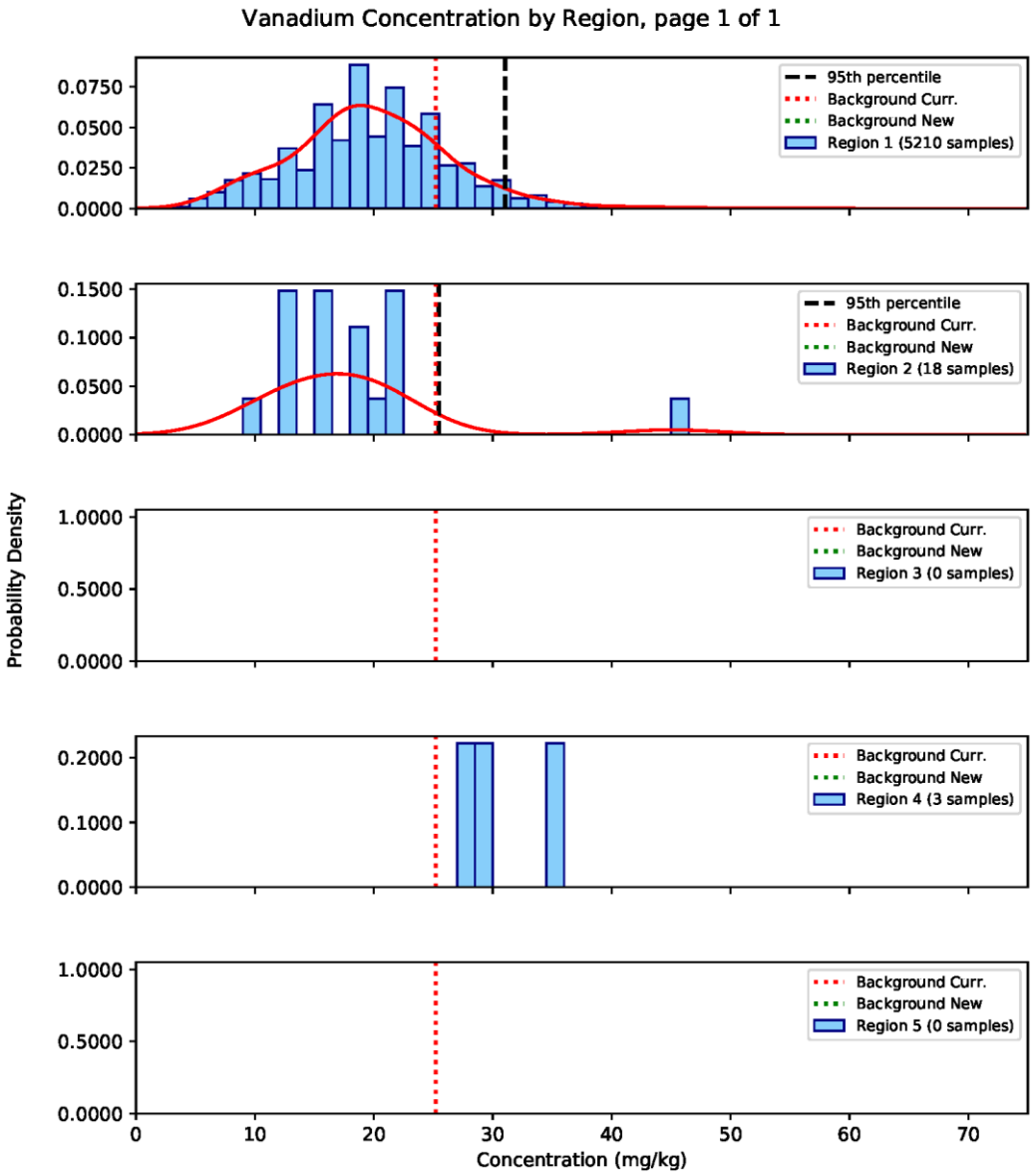


Figure 776. Histogram of RSL vanadium concentrations by IDOT Region, de minimis (mg/kg)

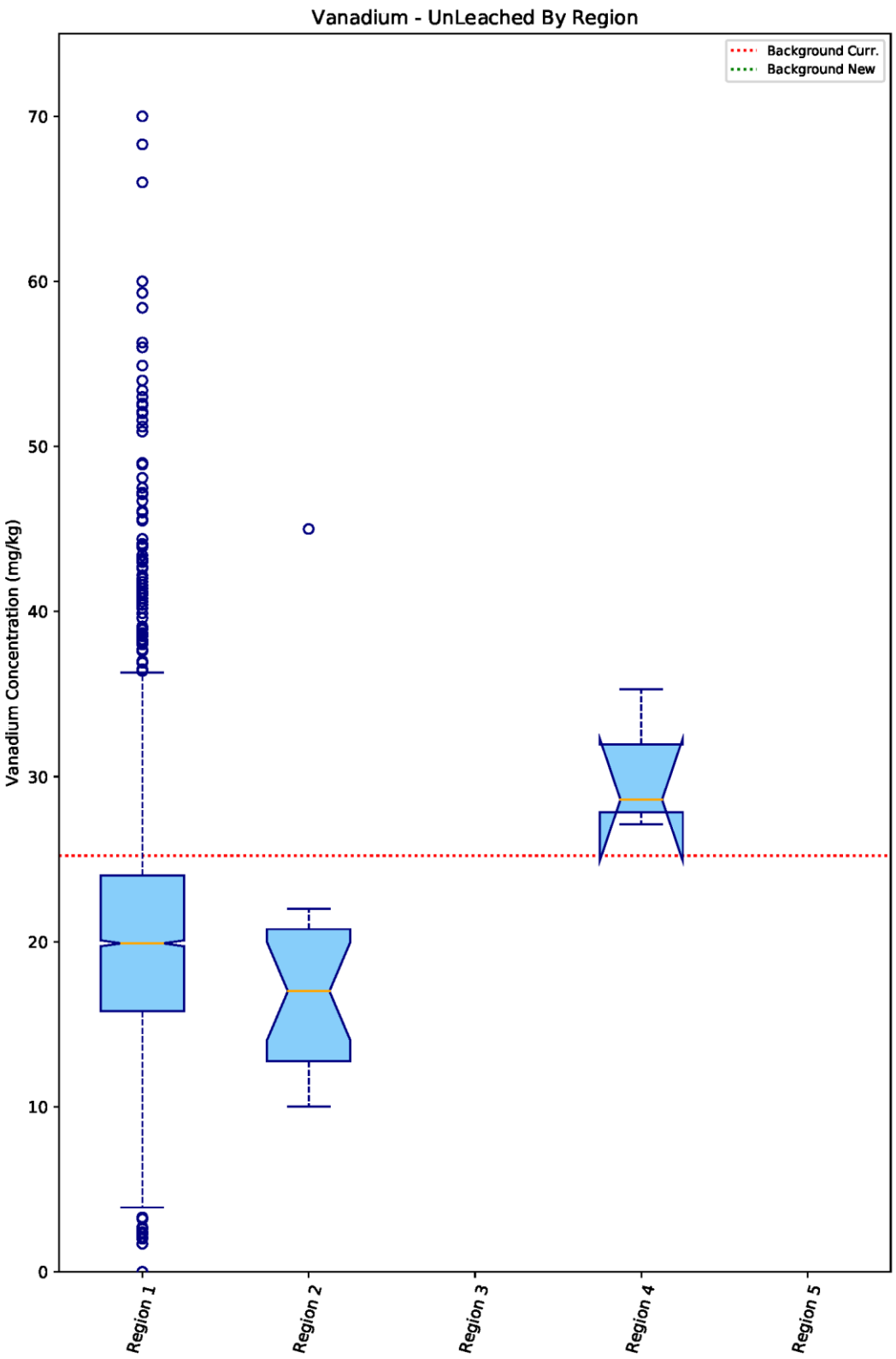


Figure 777. Boxplot of RSL vanadium concentrations by IDOT Region, de minimis (mg/kg)

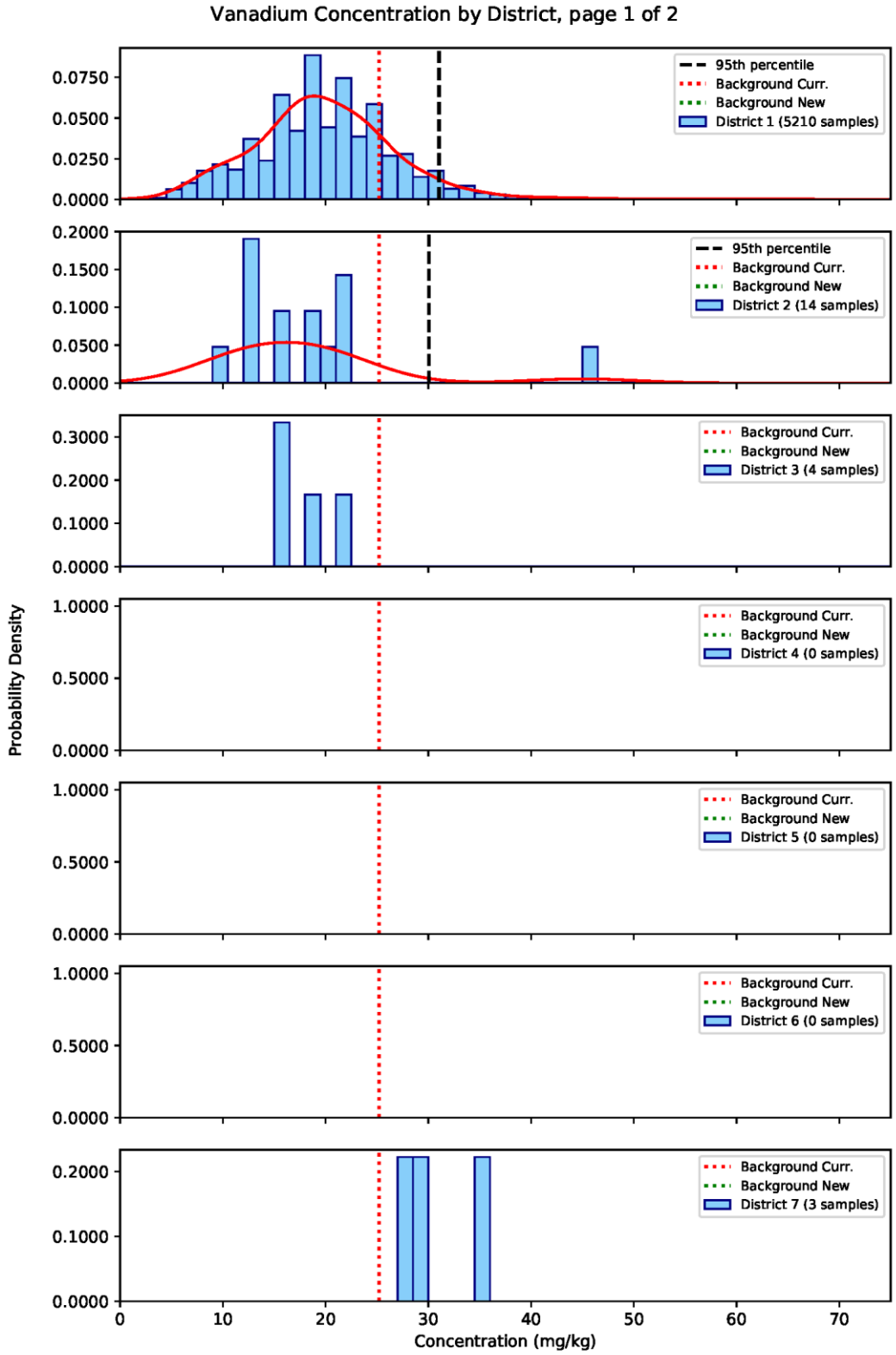


Figure 778. Histogram of RSL vanadium concentrations by IDOT District, de minimis (mg/kg), part 1

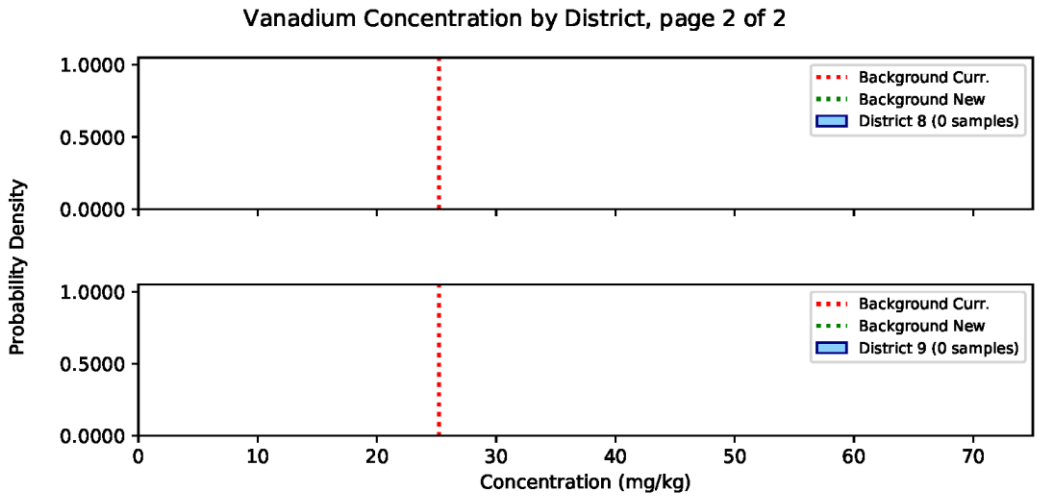


Figure 779. Histogram of RSL vanadium concentrations by IDOT District, de minimis (mg/kg), part 2

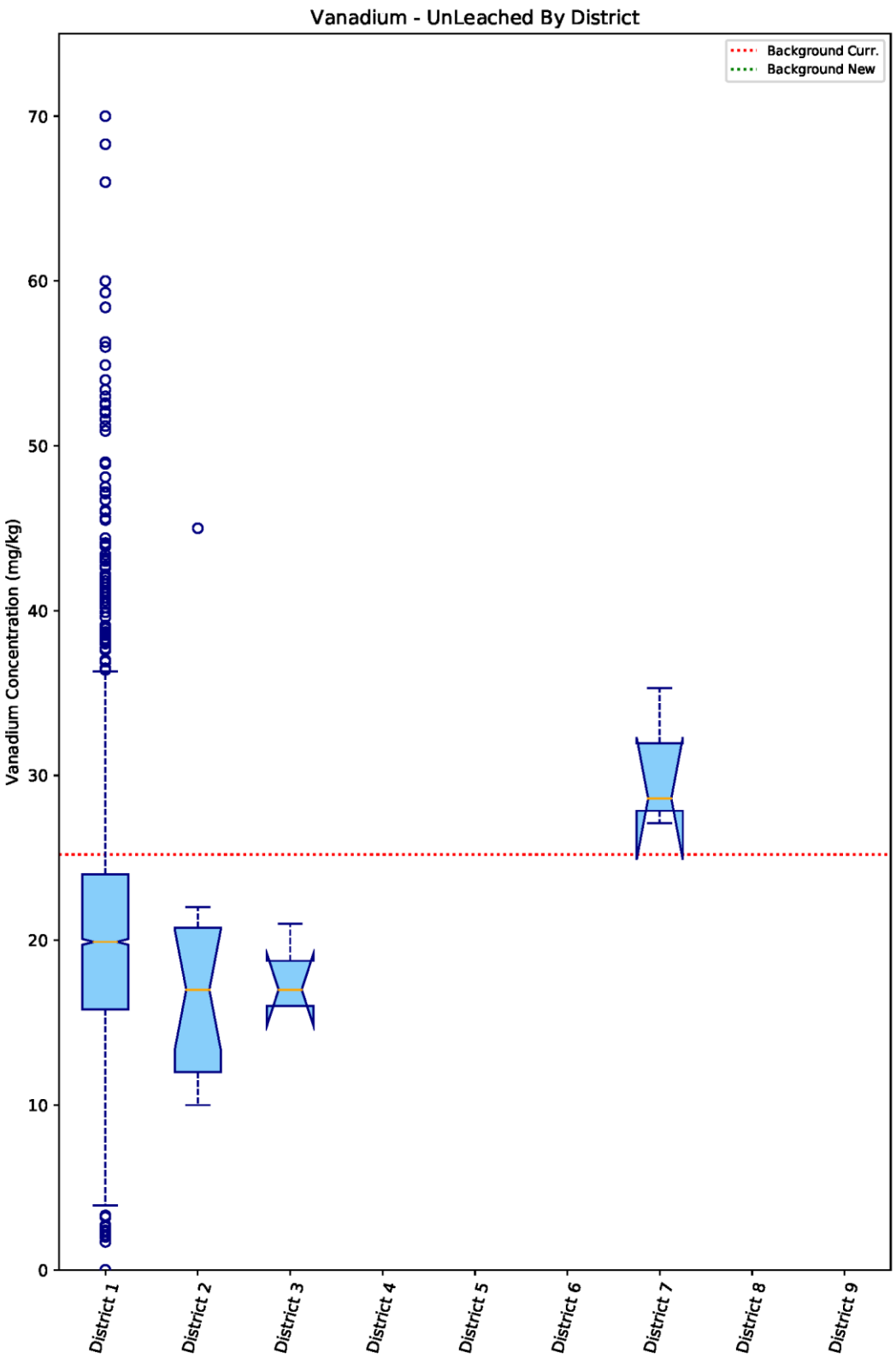


Figure 780. Boxplot of RSL vanadium concentrations by IDOT District, de minimis (mg/kg)

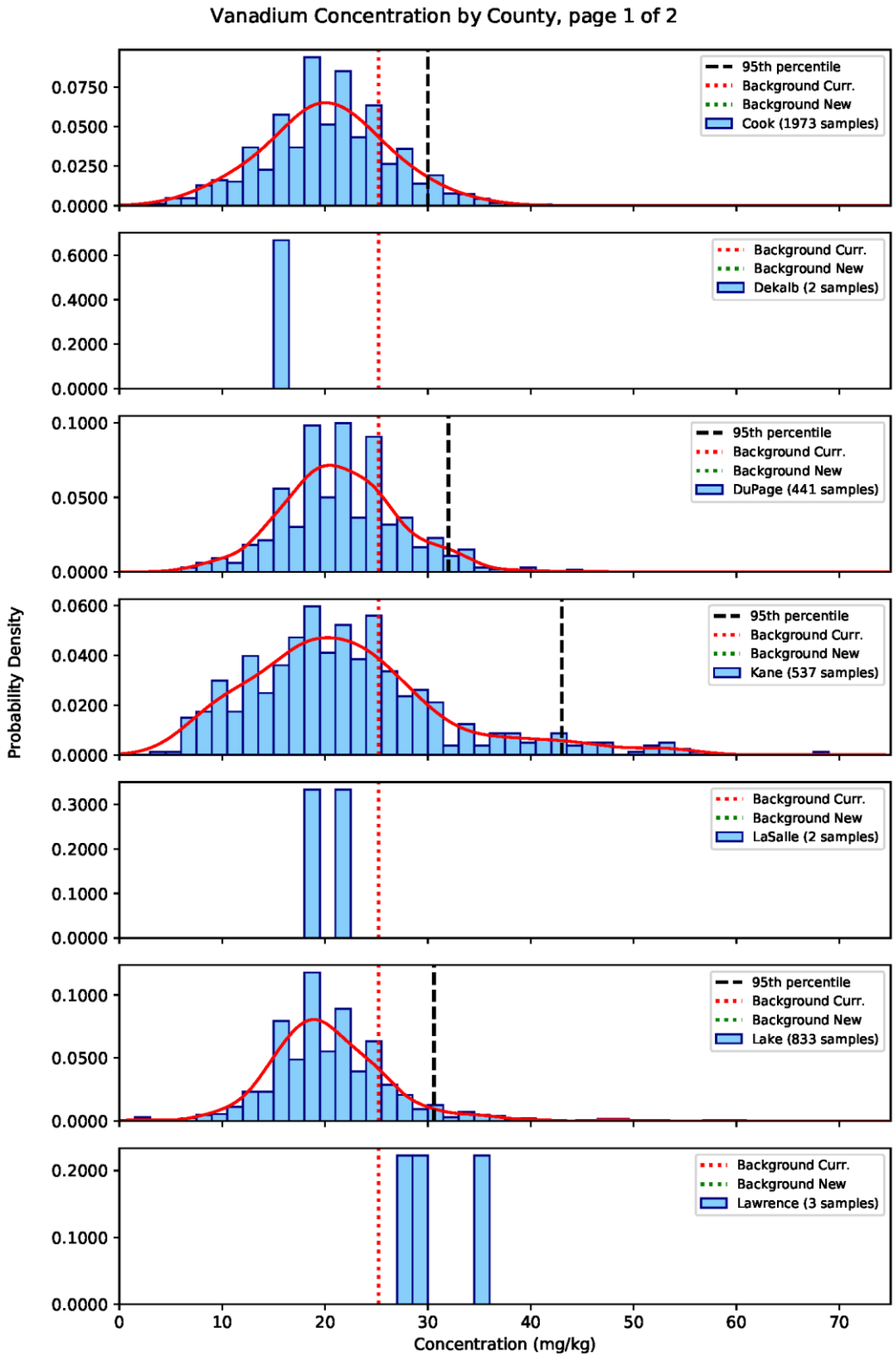


Figure 781. Histogram of RSL vanadium concentrations by Illinois county, de minimis (mg/kg), part 1

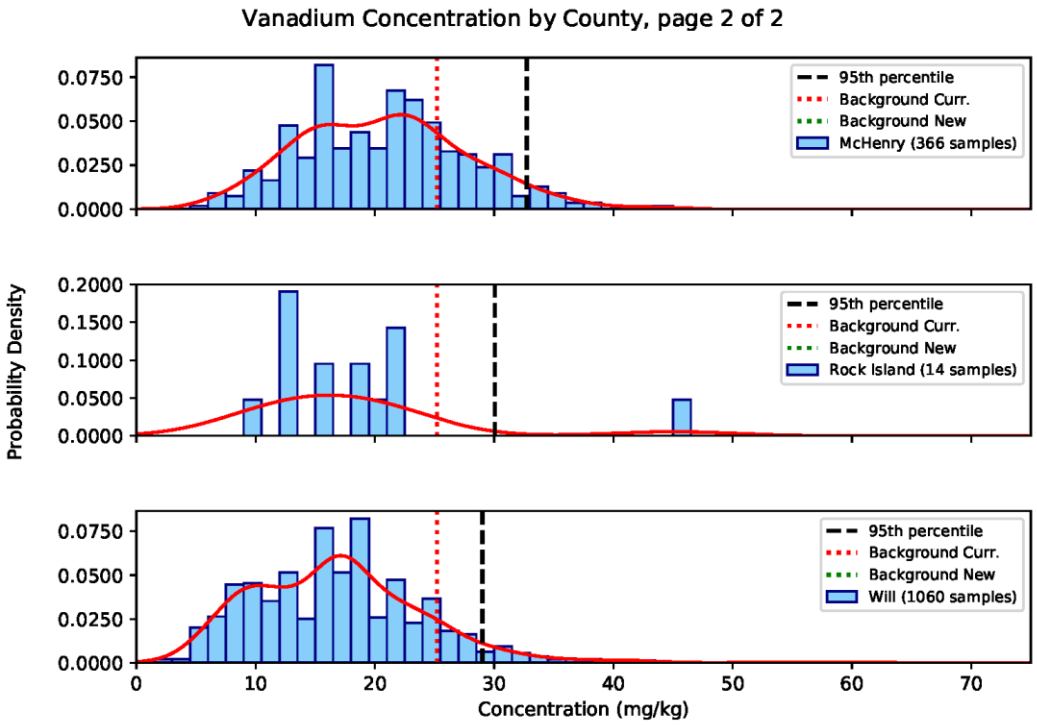


Figure 782. Histogram of RSL vanadium concentrations by Illinois county, de minimis (mg/kg), part 2

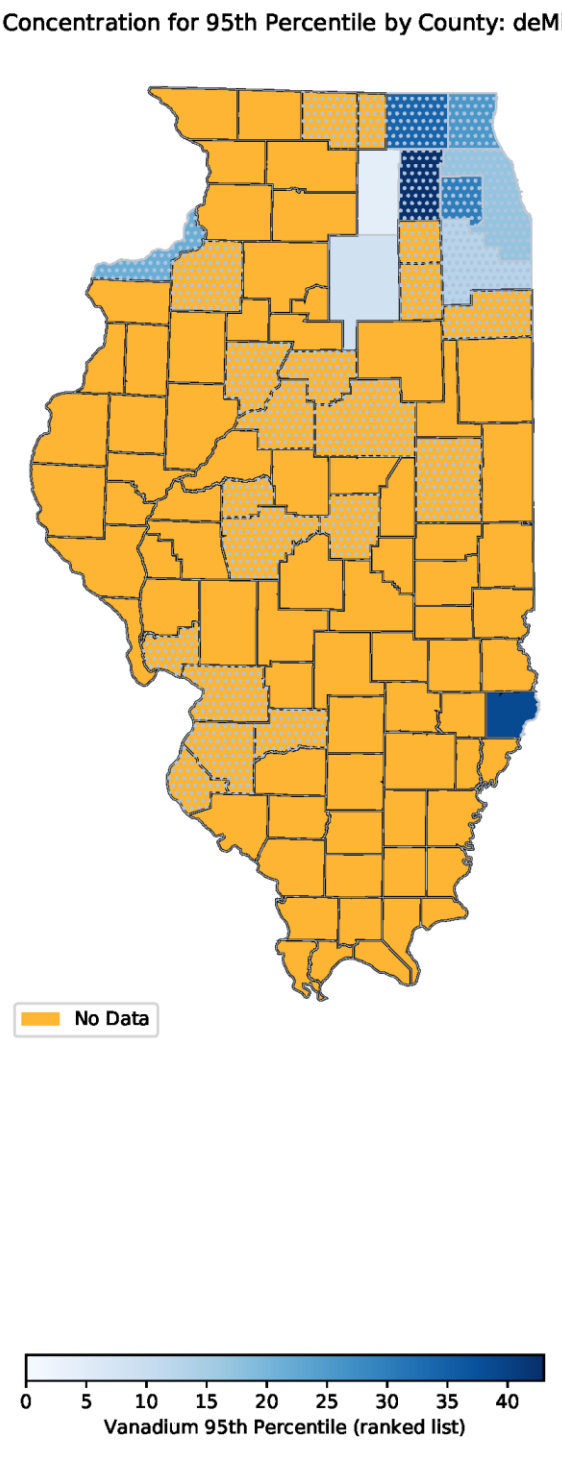


Figure 783. Map of RSL vanadium 95th percentile concentration by Illinois county, de minimis (mg/kg)

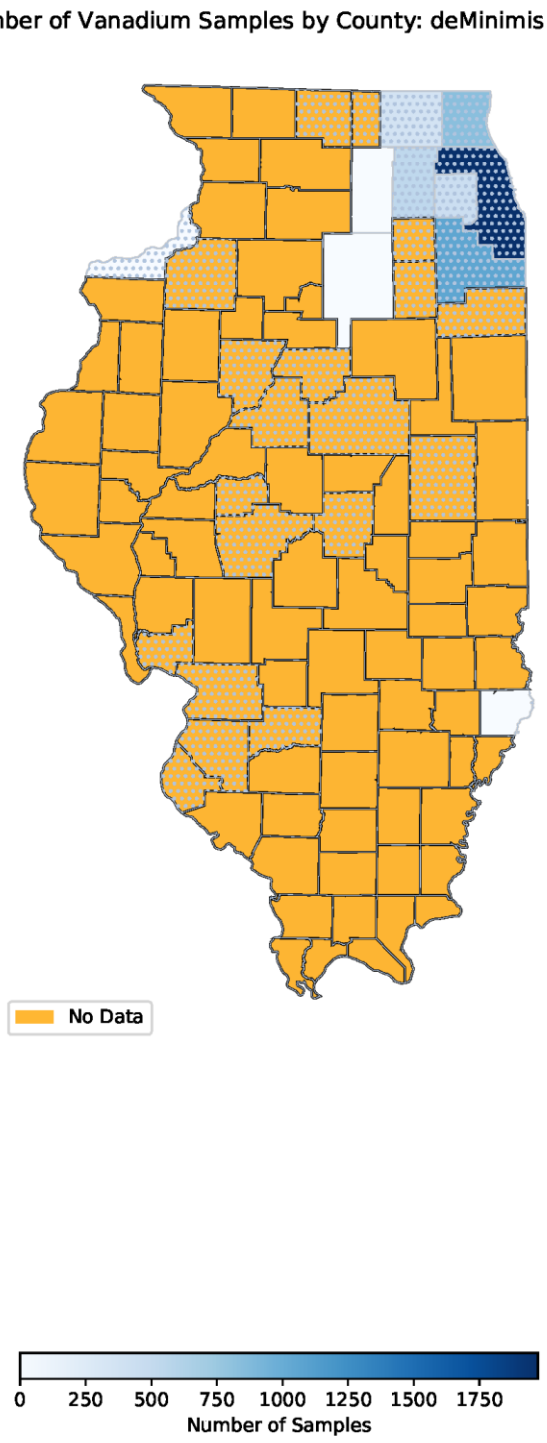


Figure 784. Map of RSL vanadium sample quantity by Illinois county, de minimis (mg/kg)

APPENDIX V. ANALYTE ANALYSIS: ZINC

V.1 ZINC REC

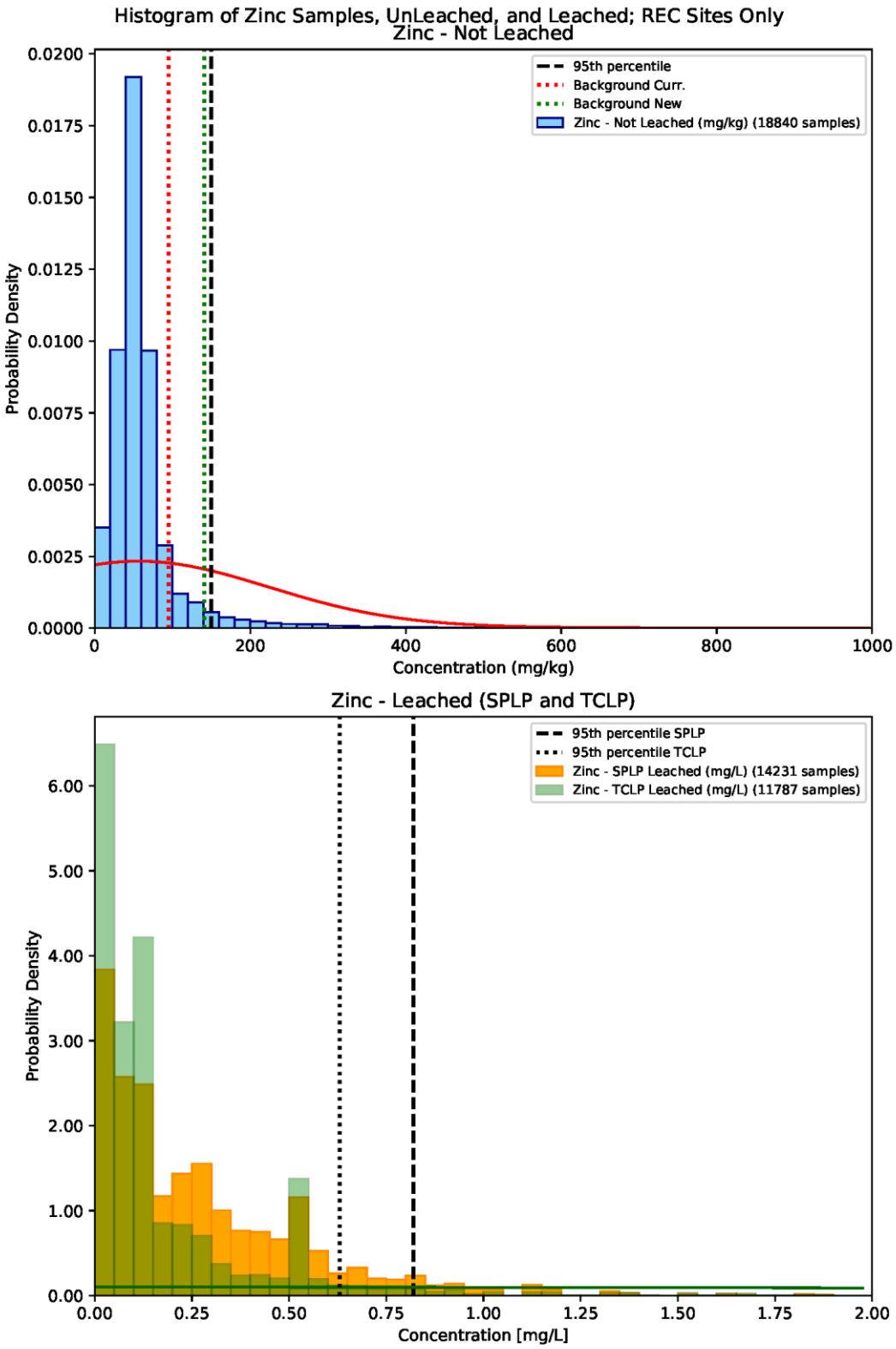


Figure 785. Histogram of RSL zinc concentrations, REC (mg/kg)

Zinc Unleached Concentration (mg/kg)

1) Region

2) District

3) County

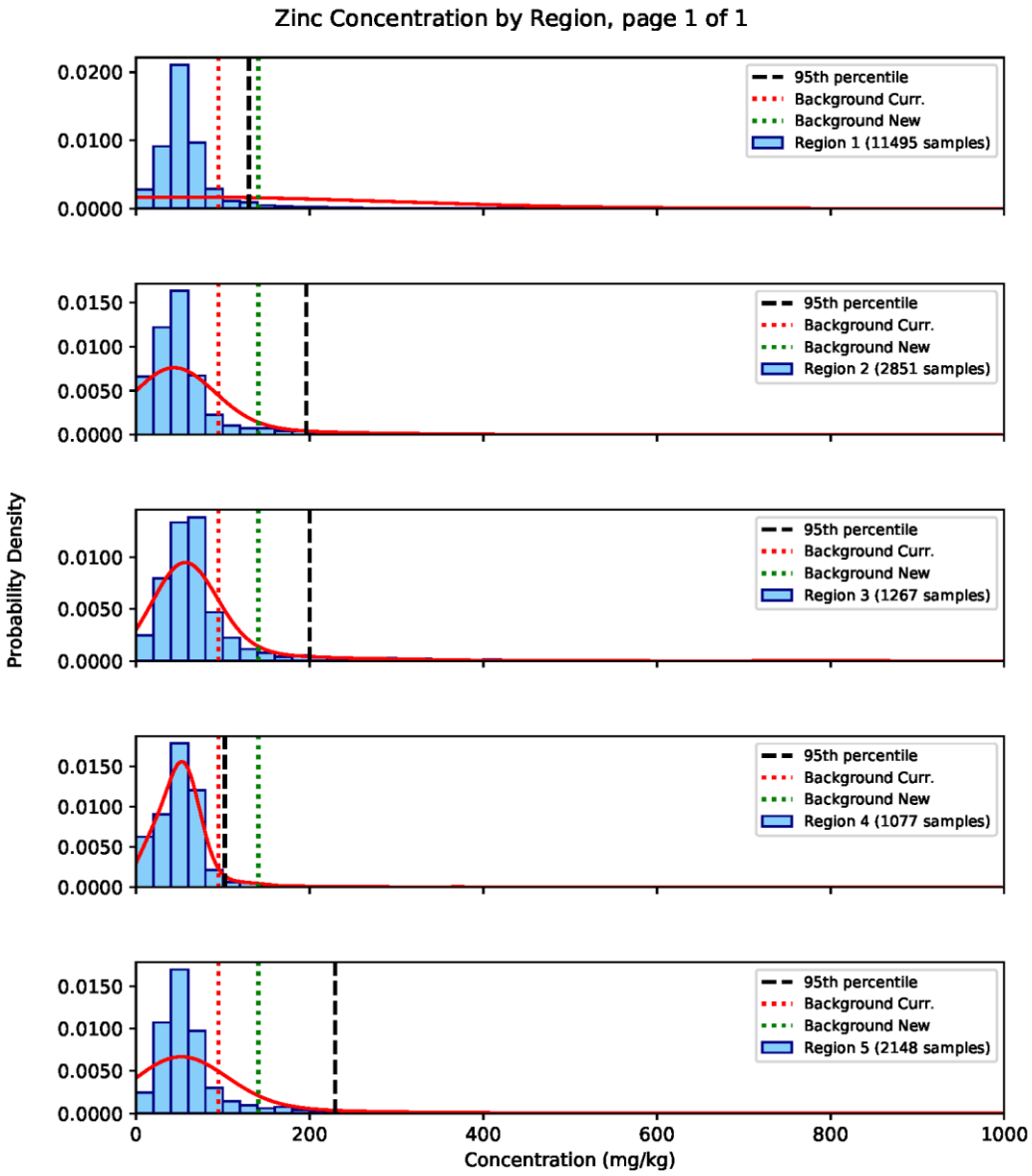


Figure 786. Histogram of RSL zinc concentrations by IDOT Region, REC (mg/kg)

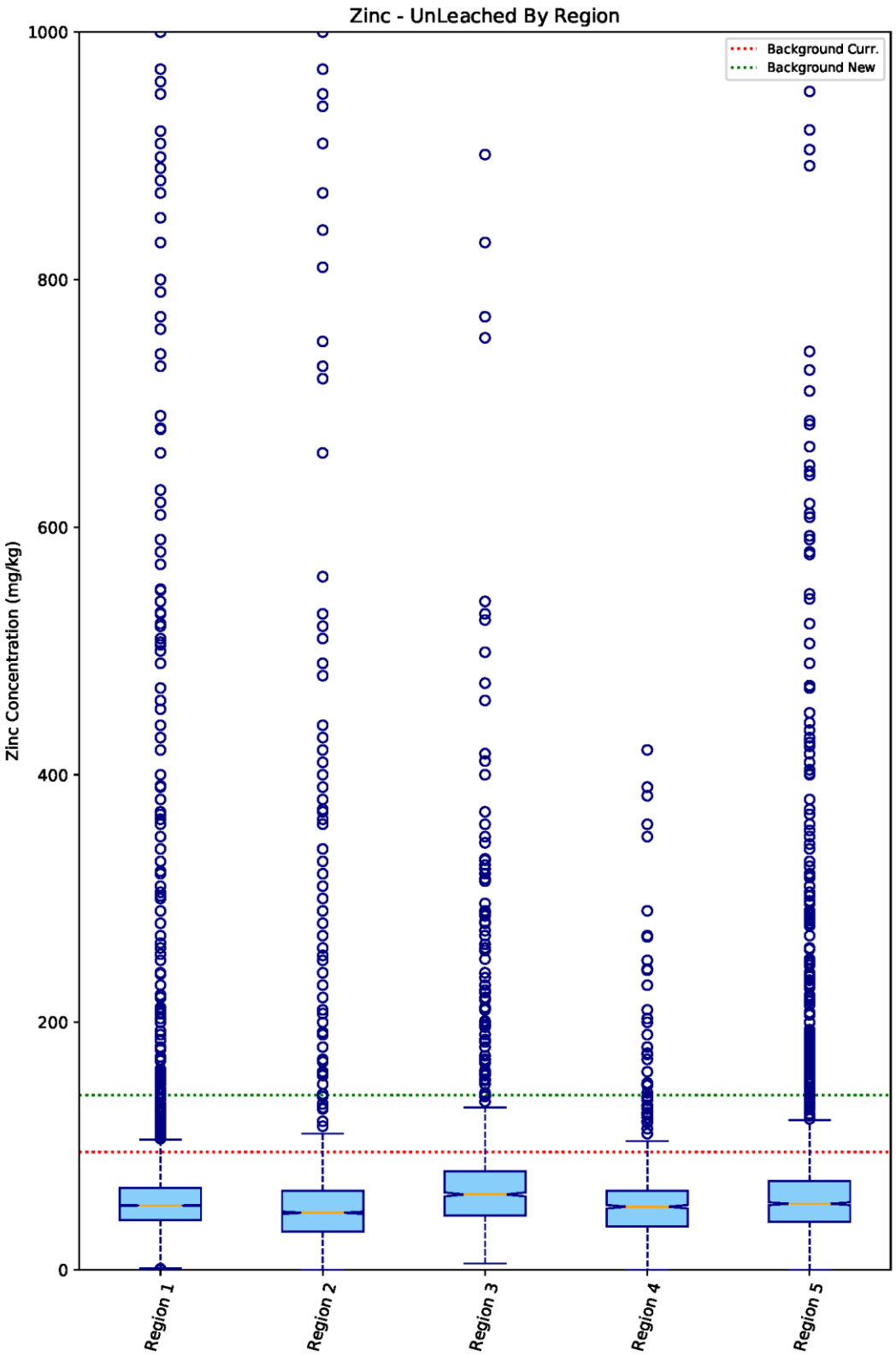


Figure 787. Boxplot of RSL zinc concentrations by IDOT Region, REC (mg/kg)

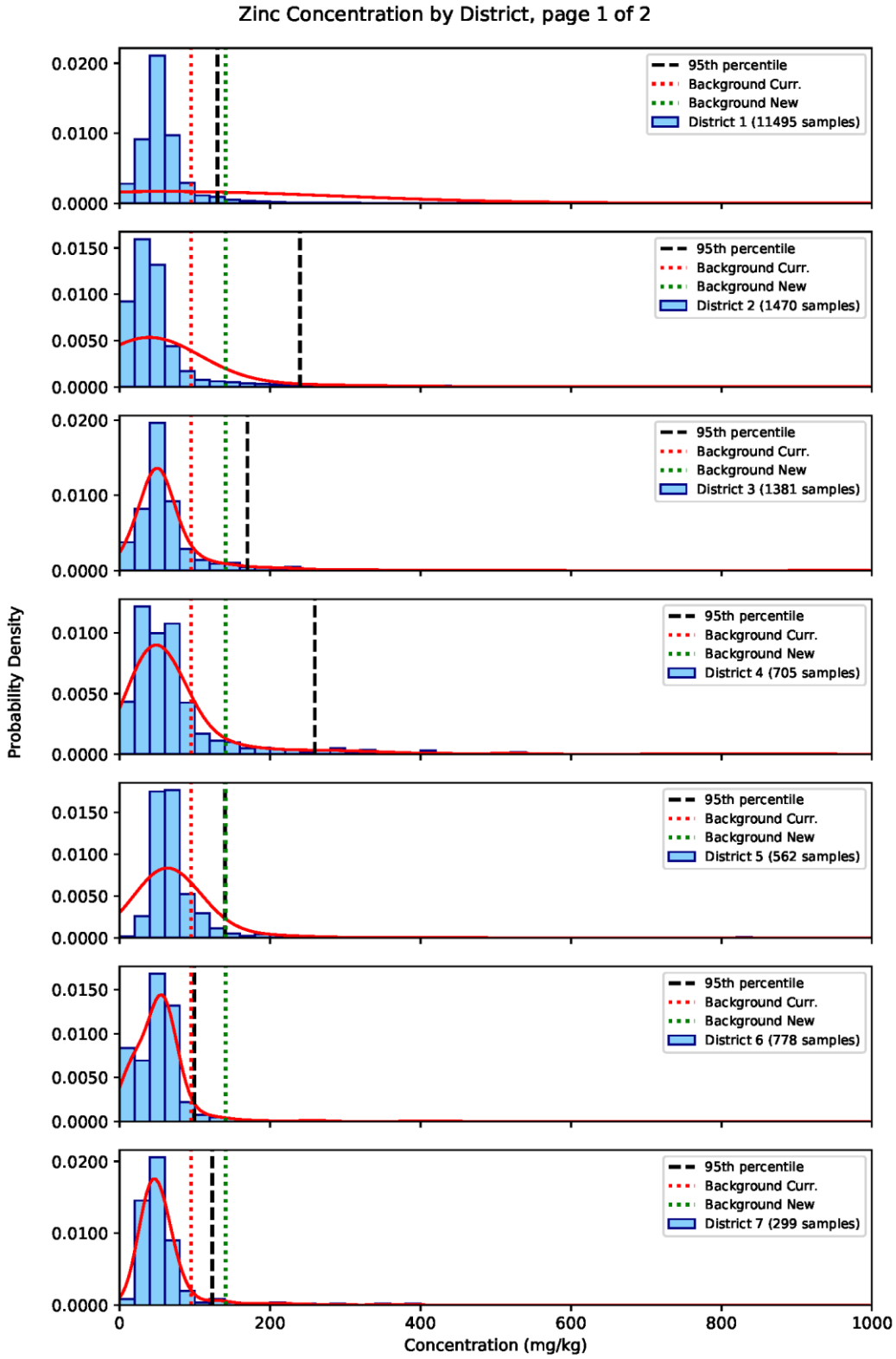


Figure 788. Histogram of RSL zinc concentrations by IDOT District, REC (mg/kg), part 1

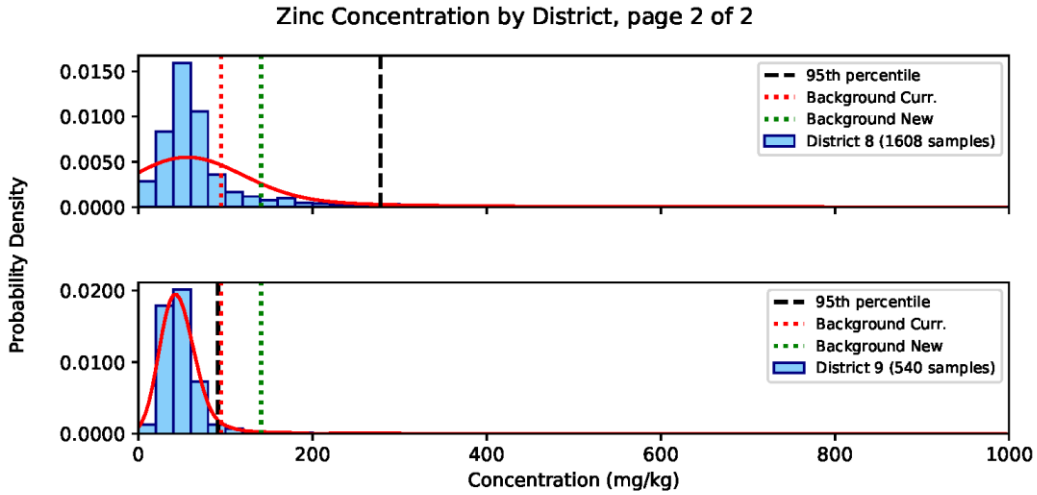


Figure 789. Histogram of RSL zinc concentrations by IDOT District, REC (mg/kg), part 2

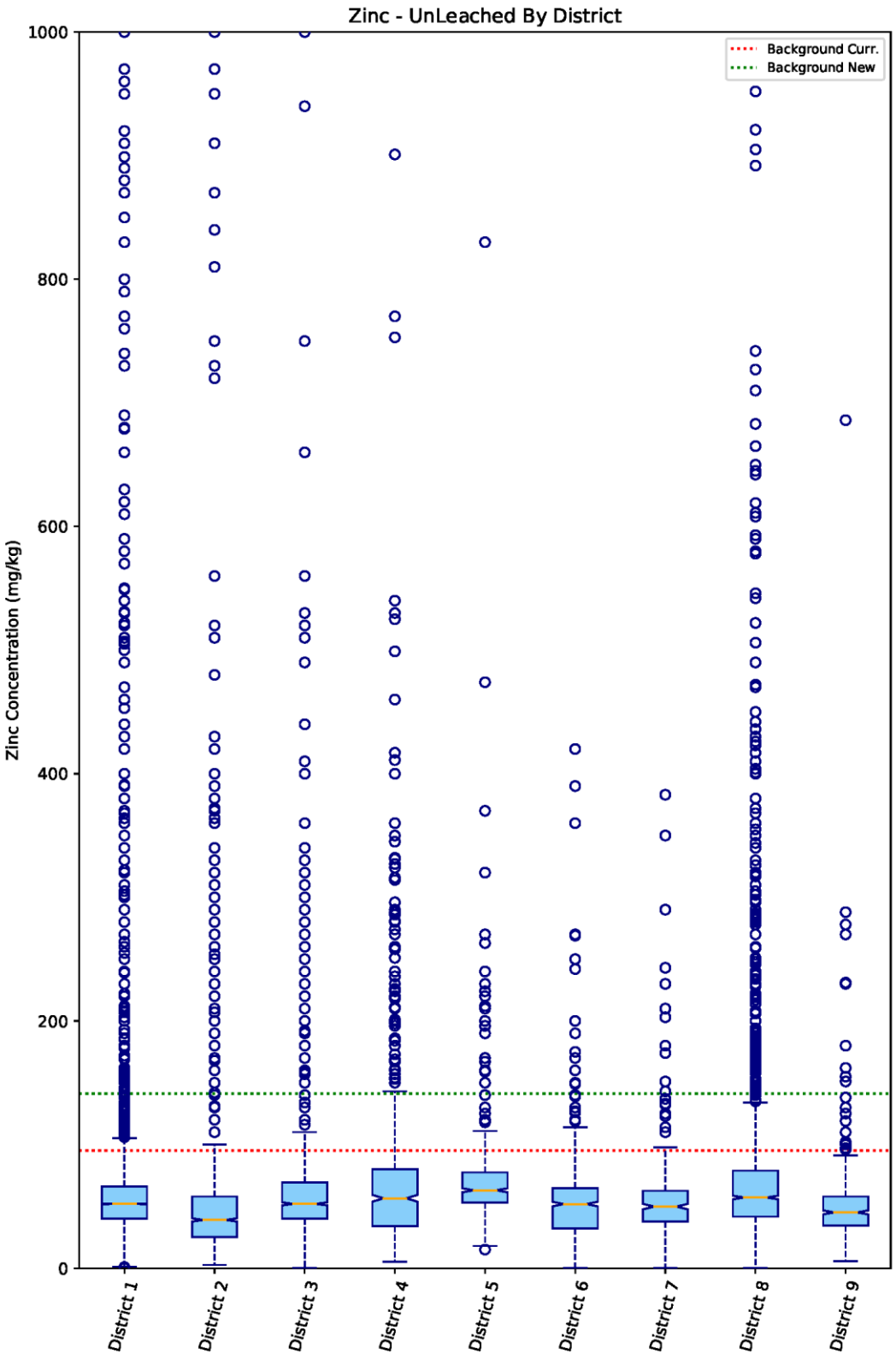


Figure 790. Boxplot of RSL zinc concentrations by IDOT District, REC (mg/kg)

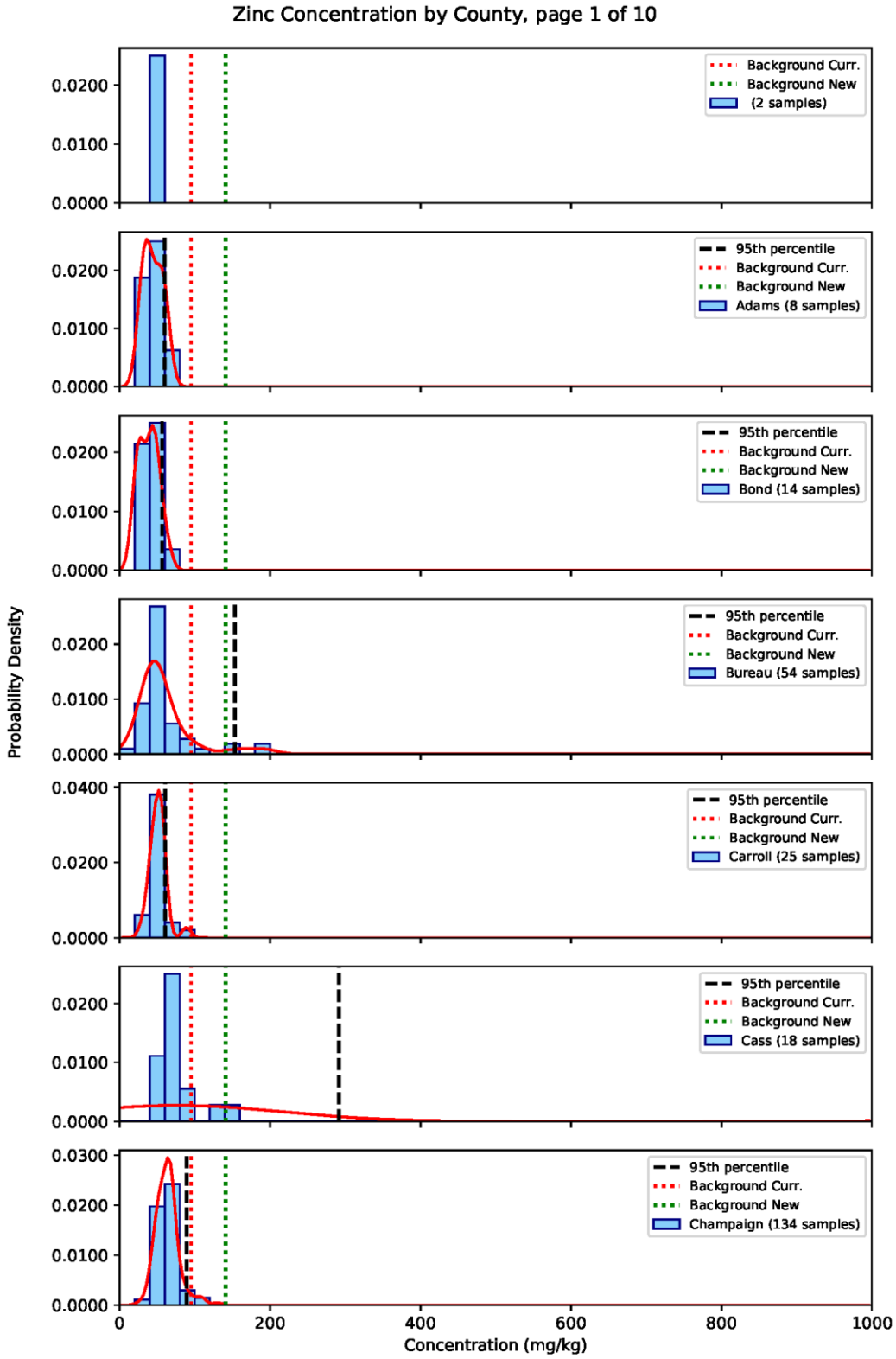


Figure 791. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 1

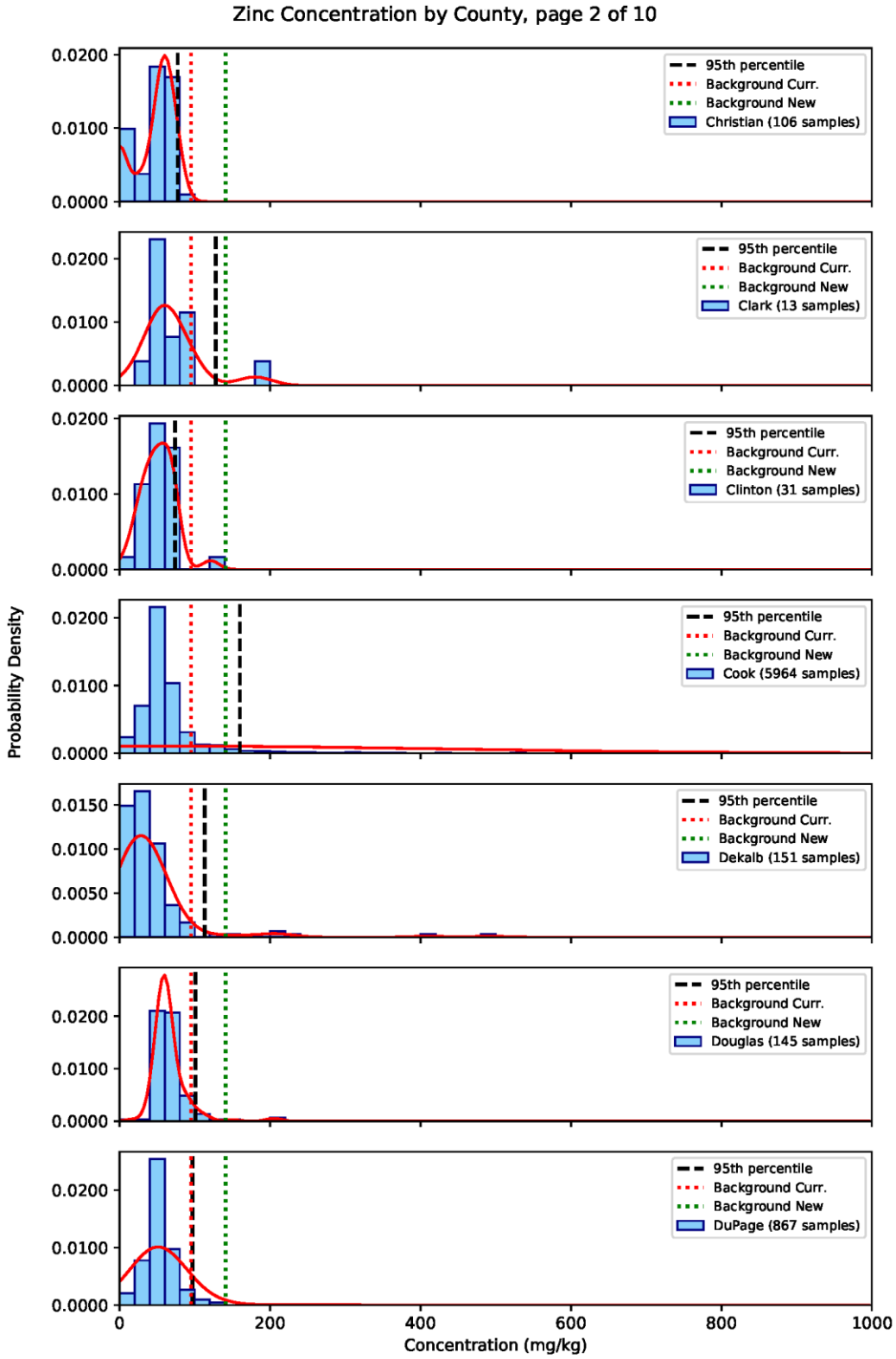


Figure 792. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 2

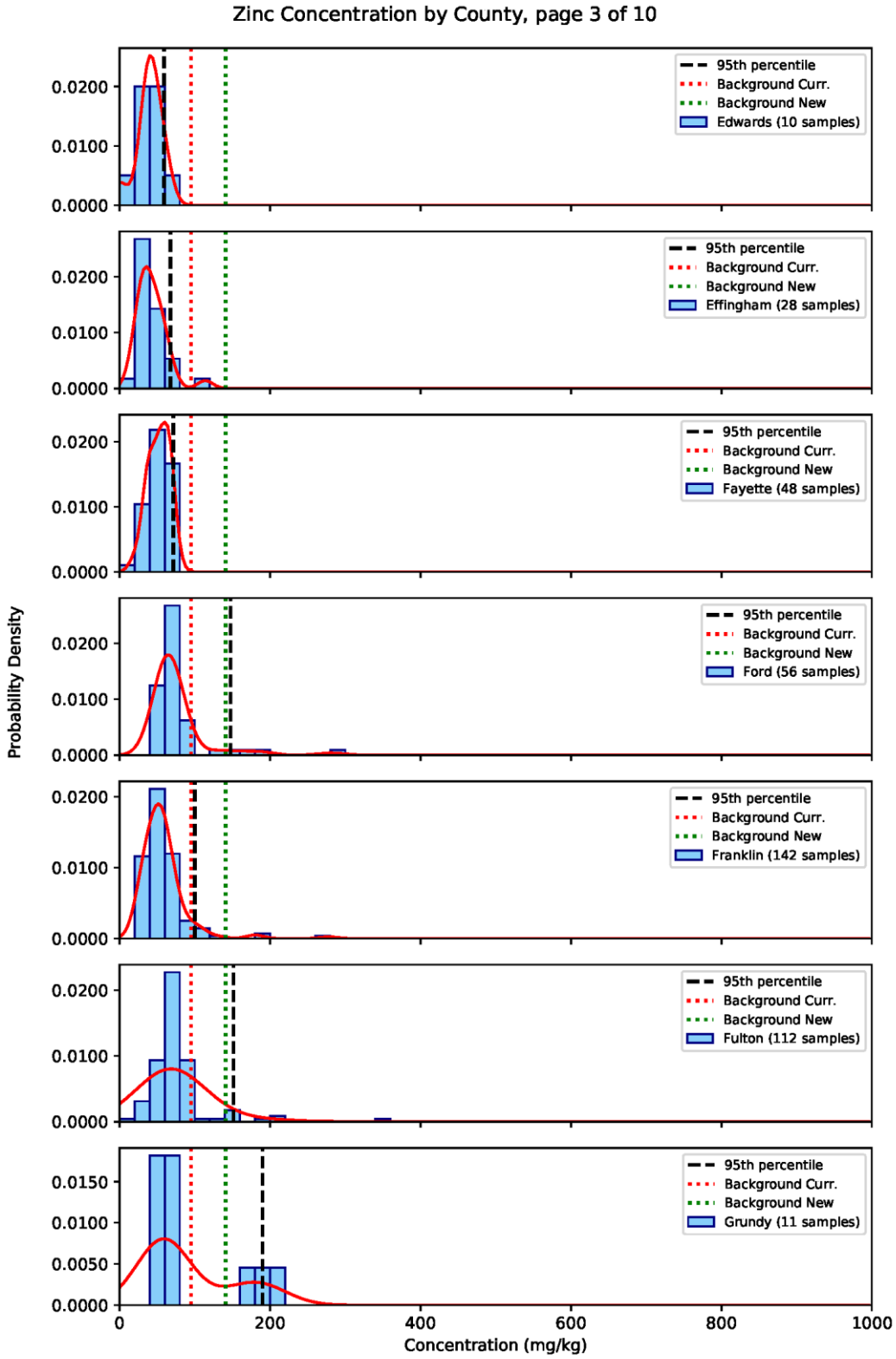


Figure 793. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 3

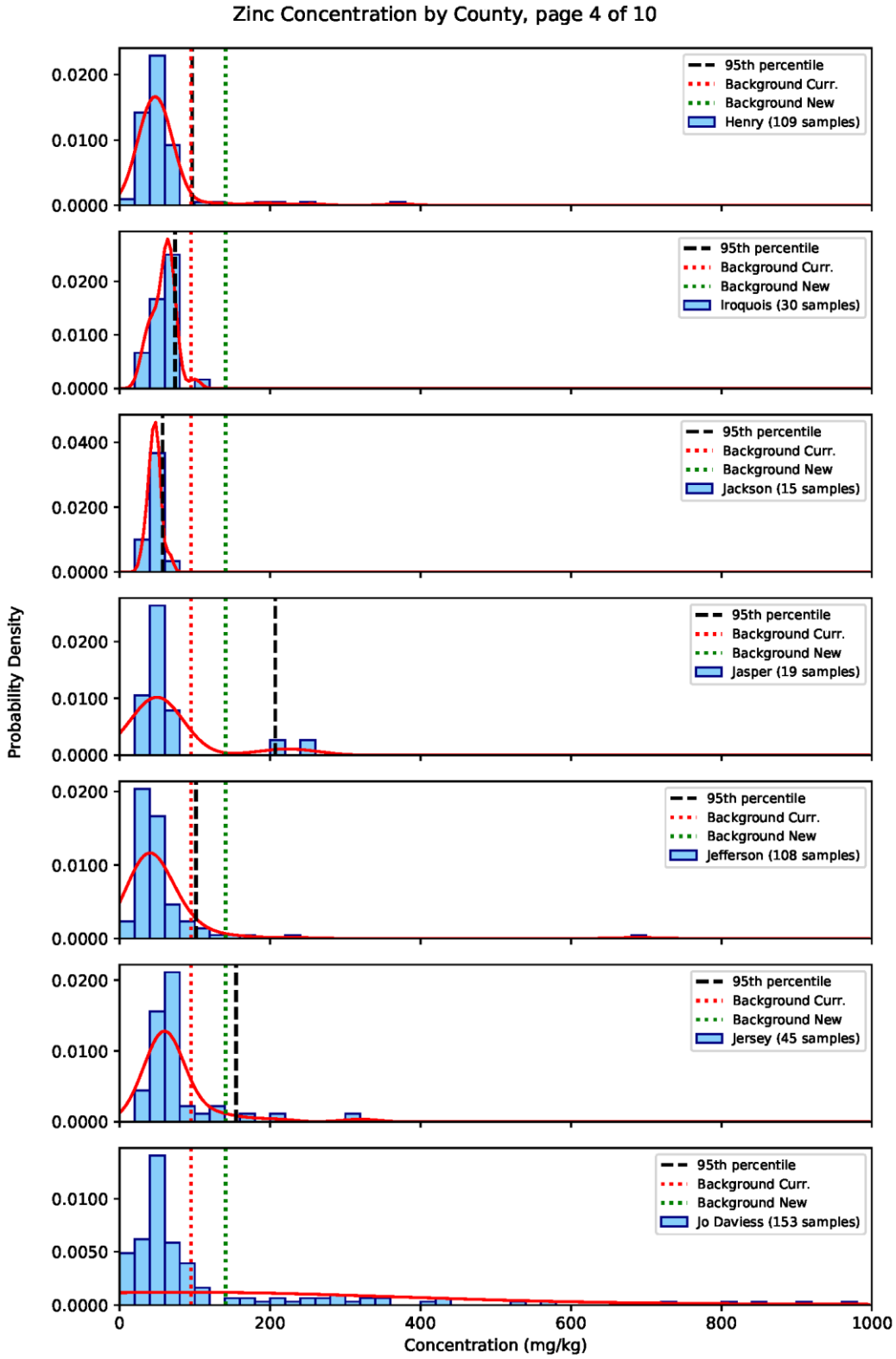


Figure 794. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 4

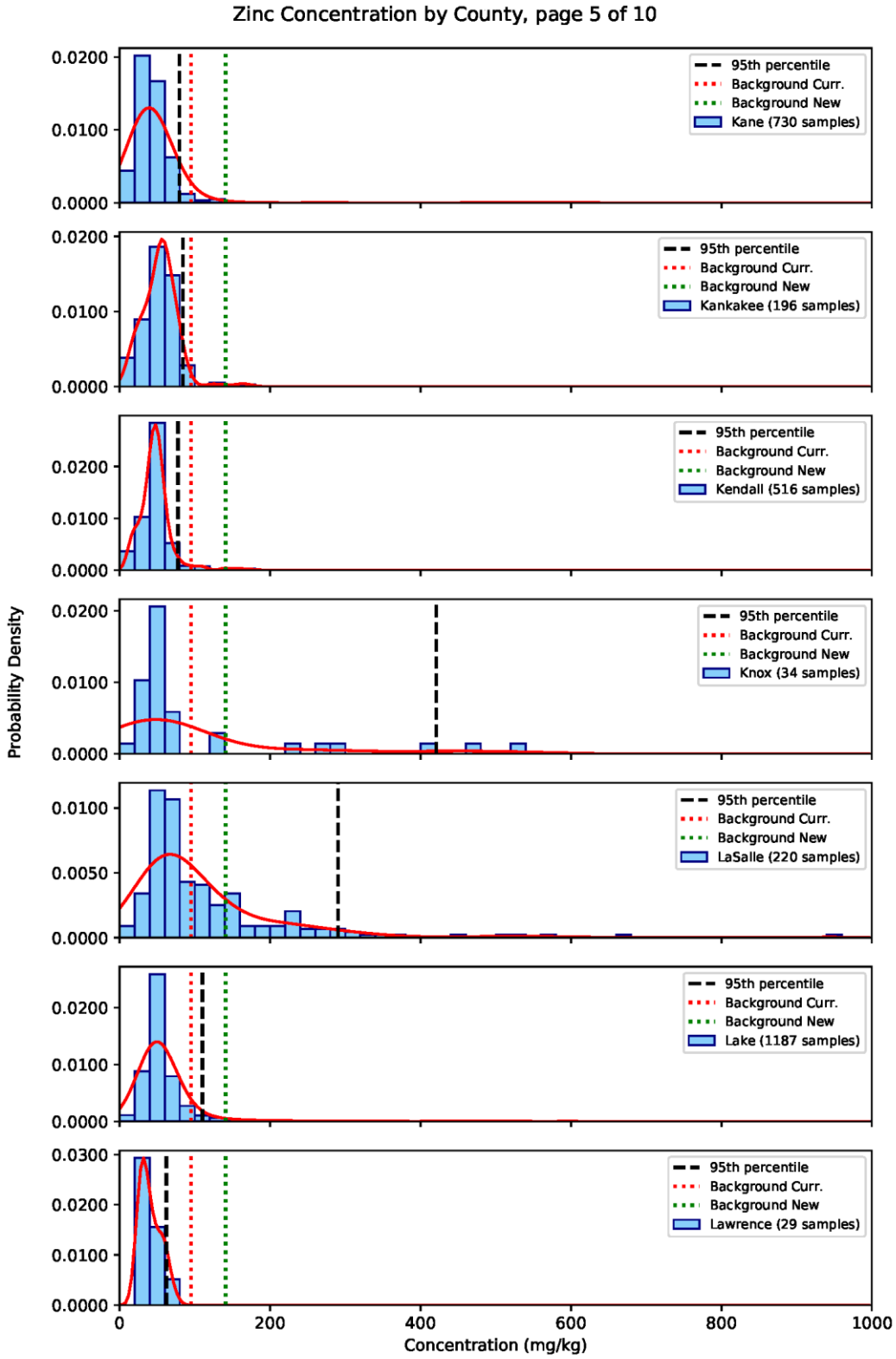


Figure 795. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 5

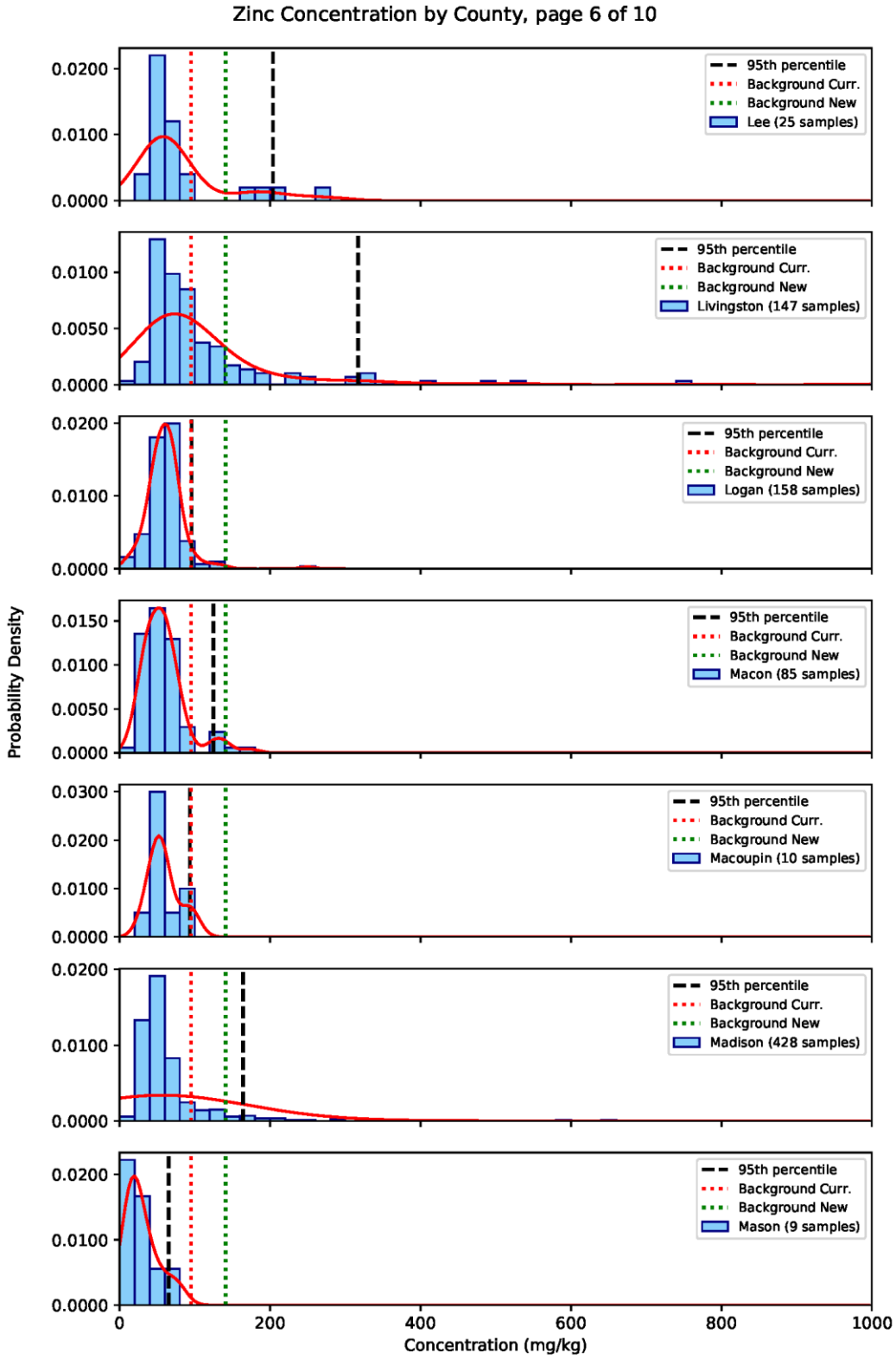


Figure 796. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 6

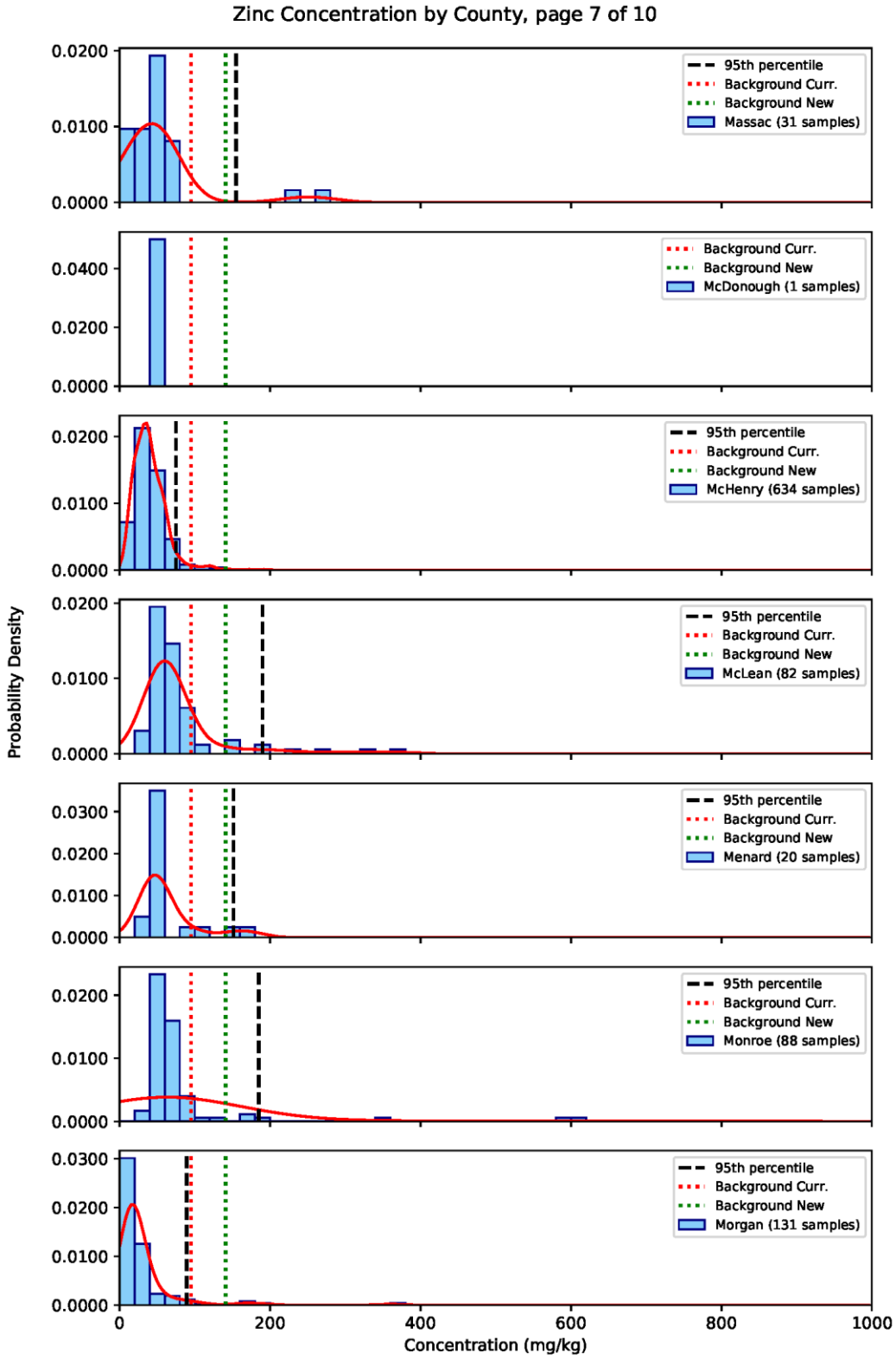


Figure 797. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 7

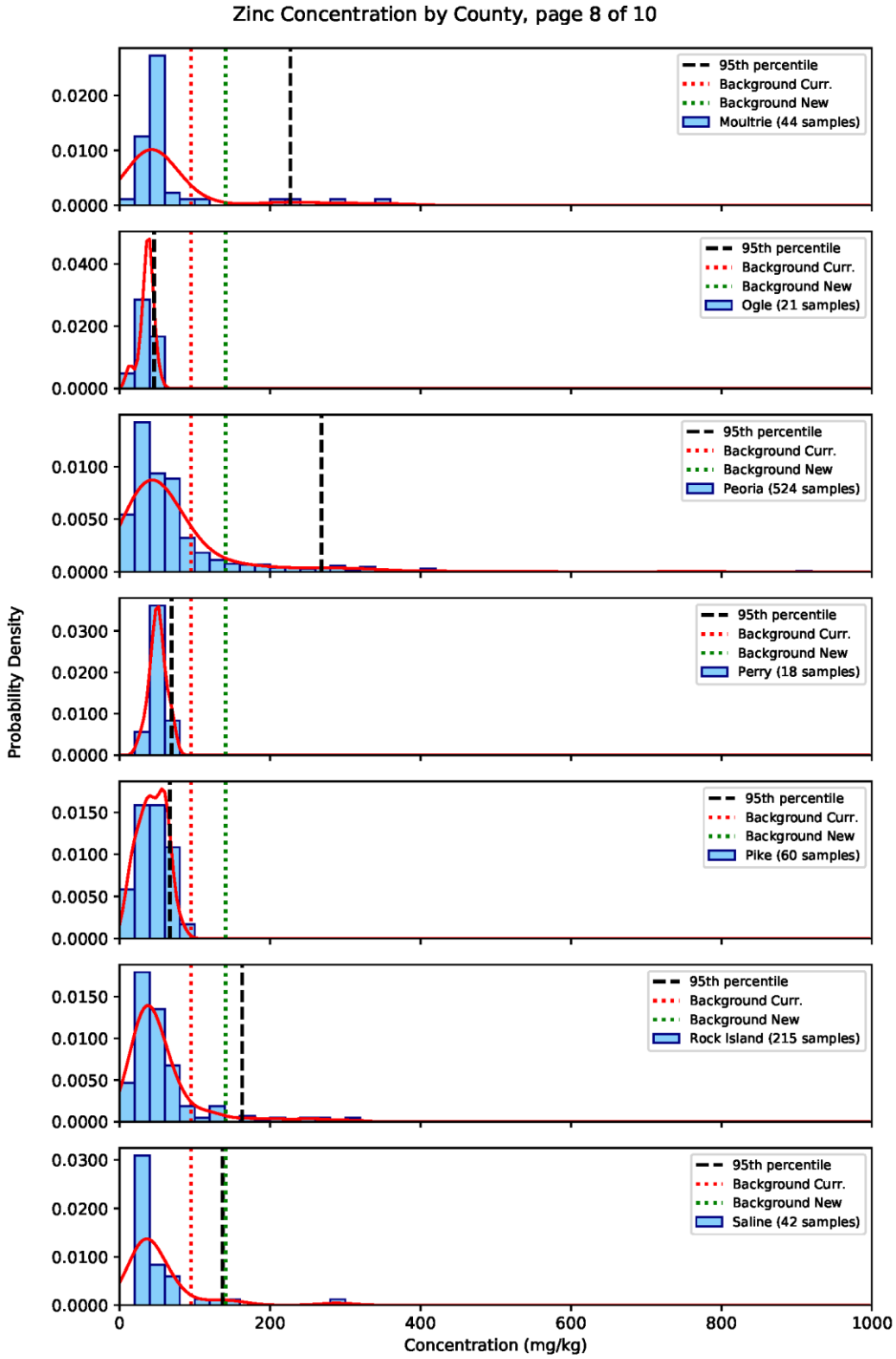


Figure 798. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 8

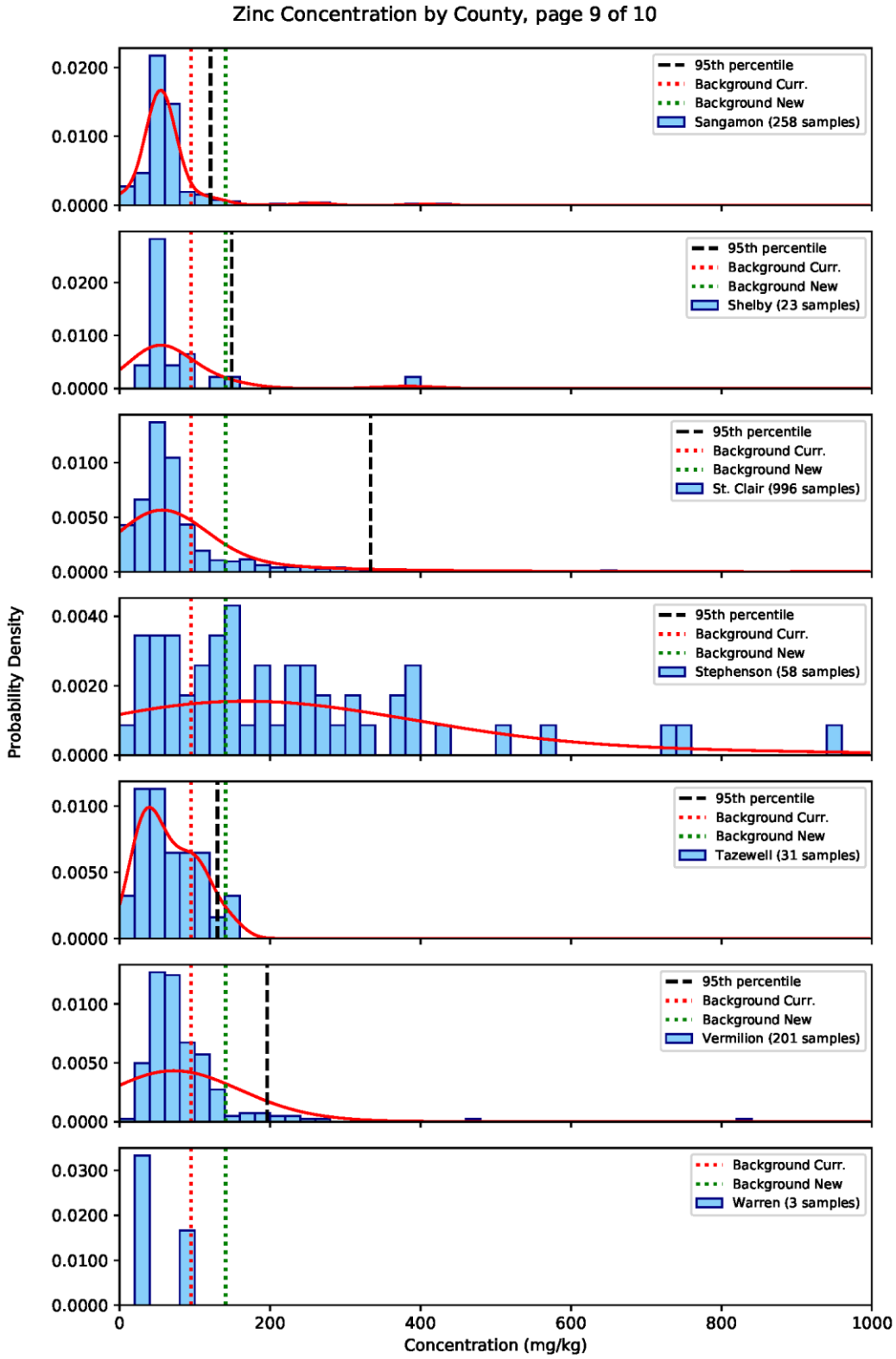


Figure 799. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 9

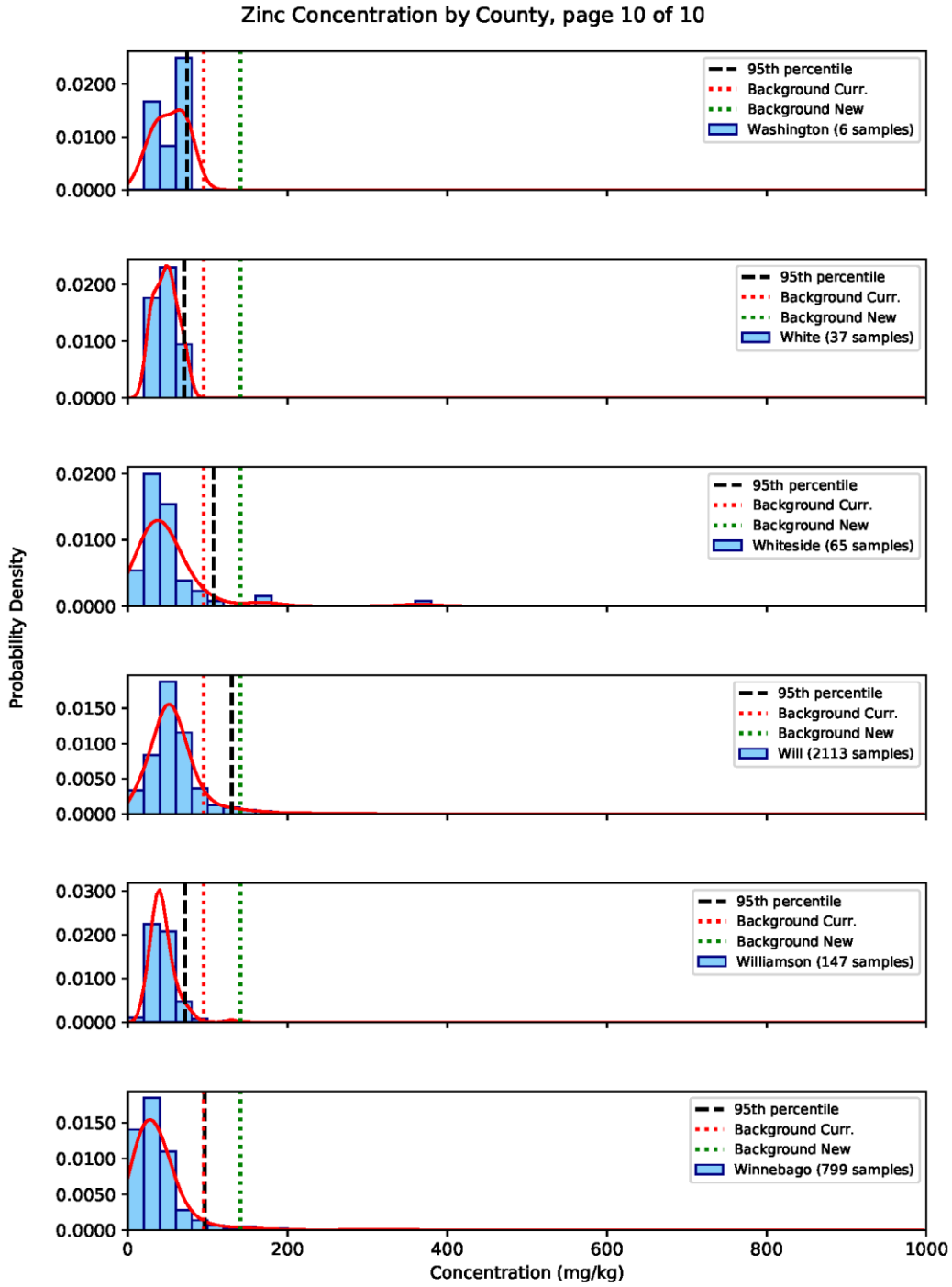


Figure 800. Histogram of RSL zinc concentrations by Illinois county, REC (mg/kg), part 10

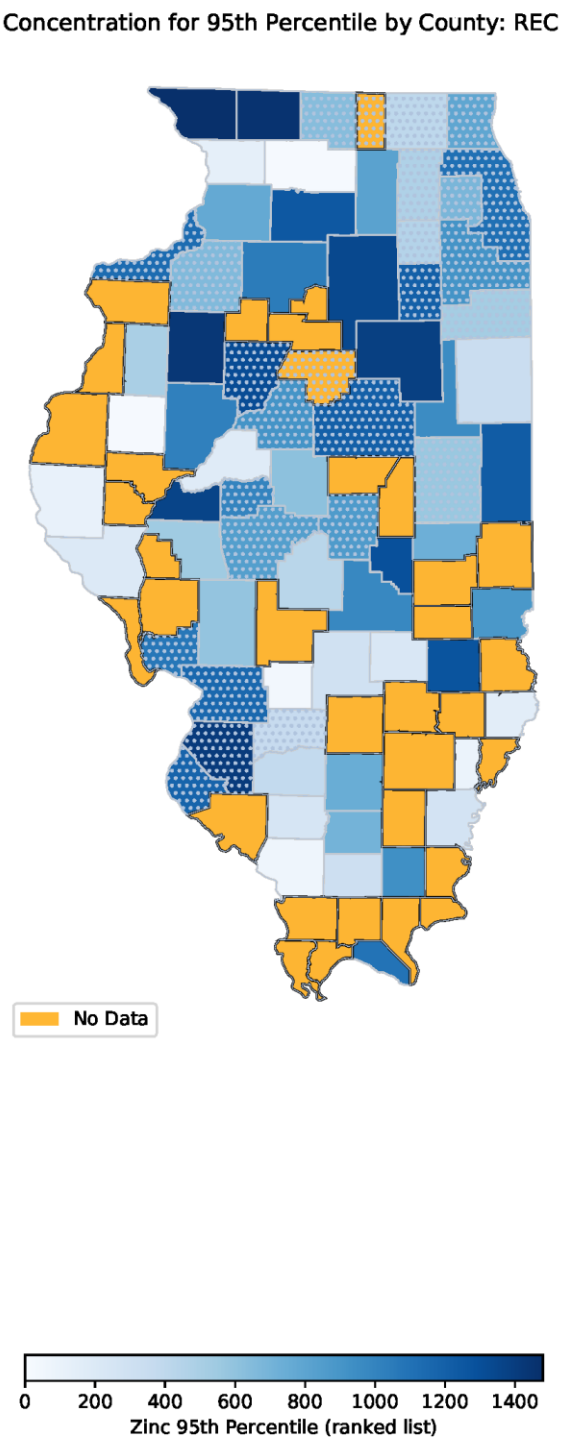


Figure 801. Map of RSL zinc 95th percentile concentration by Illinois county, REC (mg/kg)

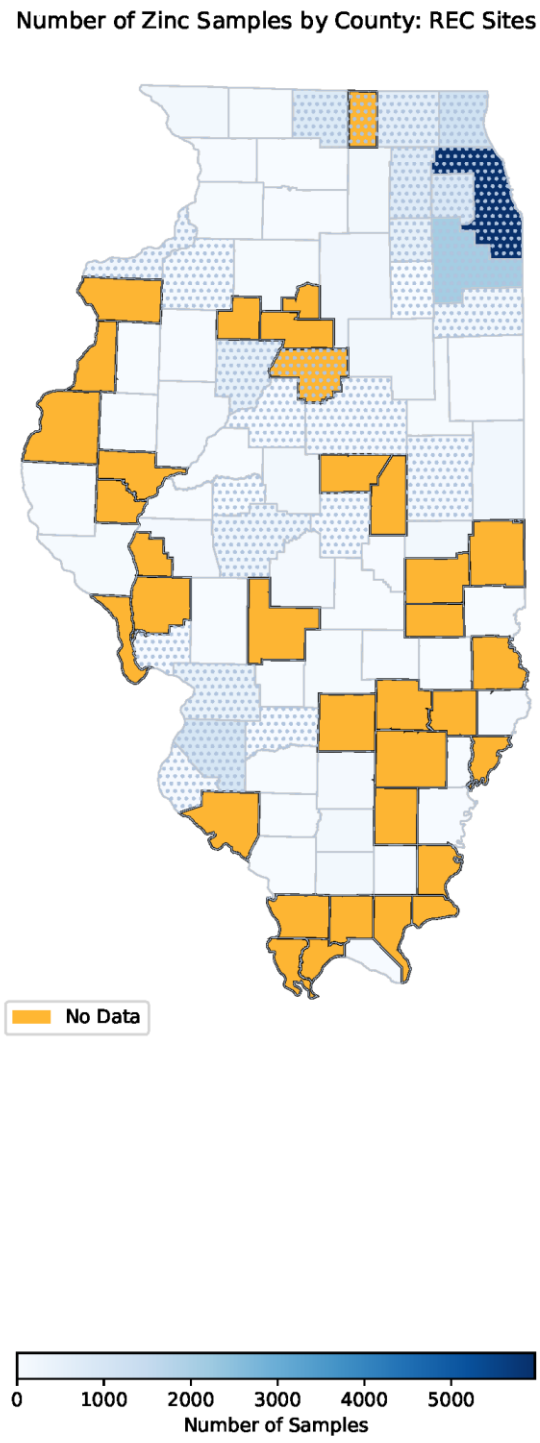


Figure 802. Map of RSL zinc sample quantity by Illinois county, REC (mg/kg)

V.2 ZINC NON-REC

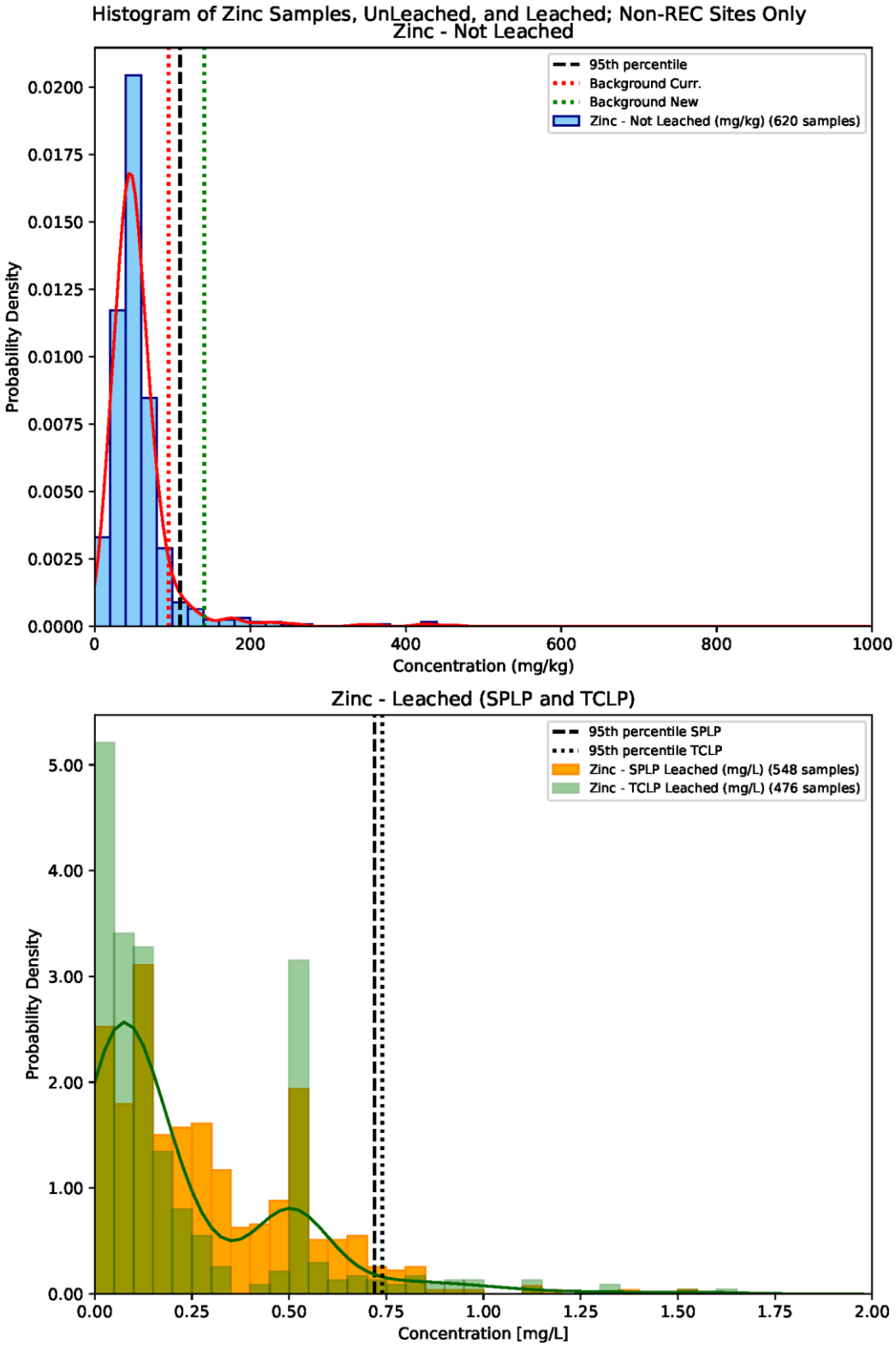


Figure 803. Histogram of RSL zinc concentrations, Non-REC (mg/kg)

Zinc Unleached Concentration (mg/kg)

1) Region

2) District

3) County

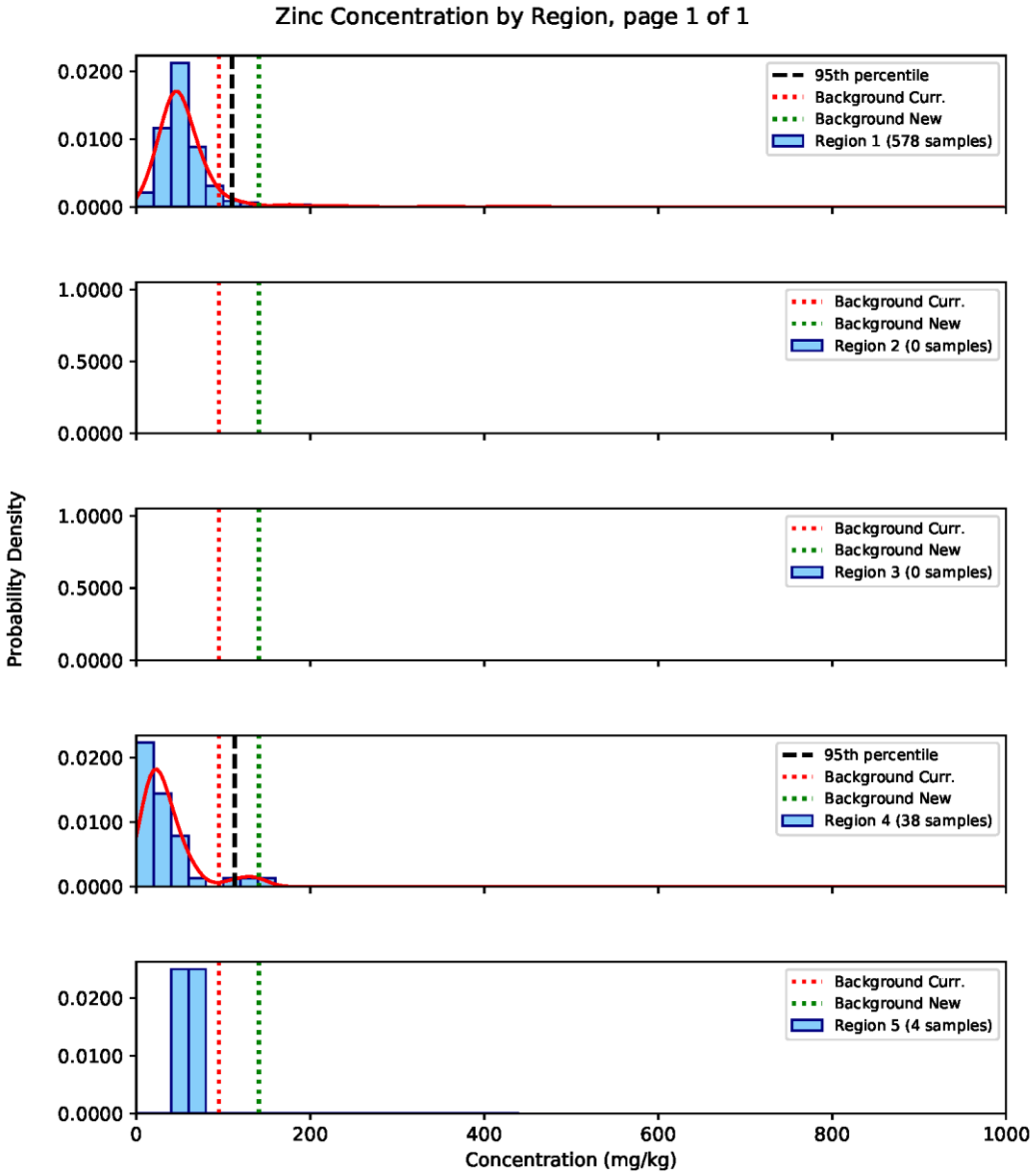


Figure 804. Histogram of RSL zinc concentrations by IDOT Region, Non-REC (mg/kg)

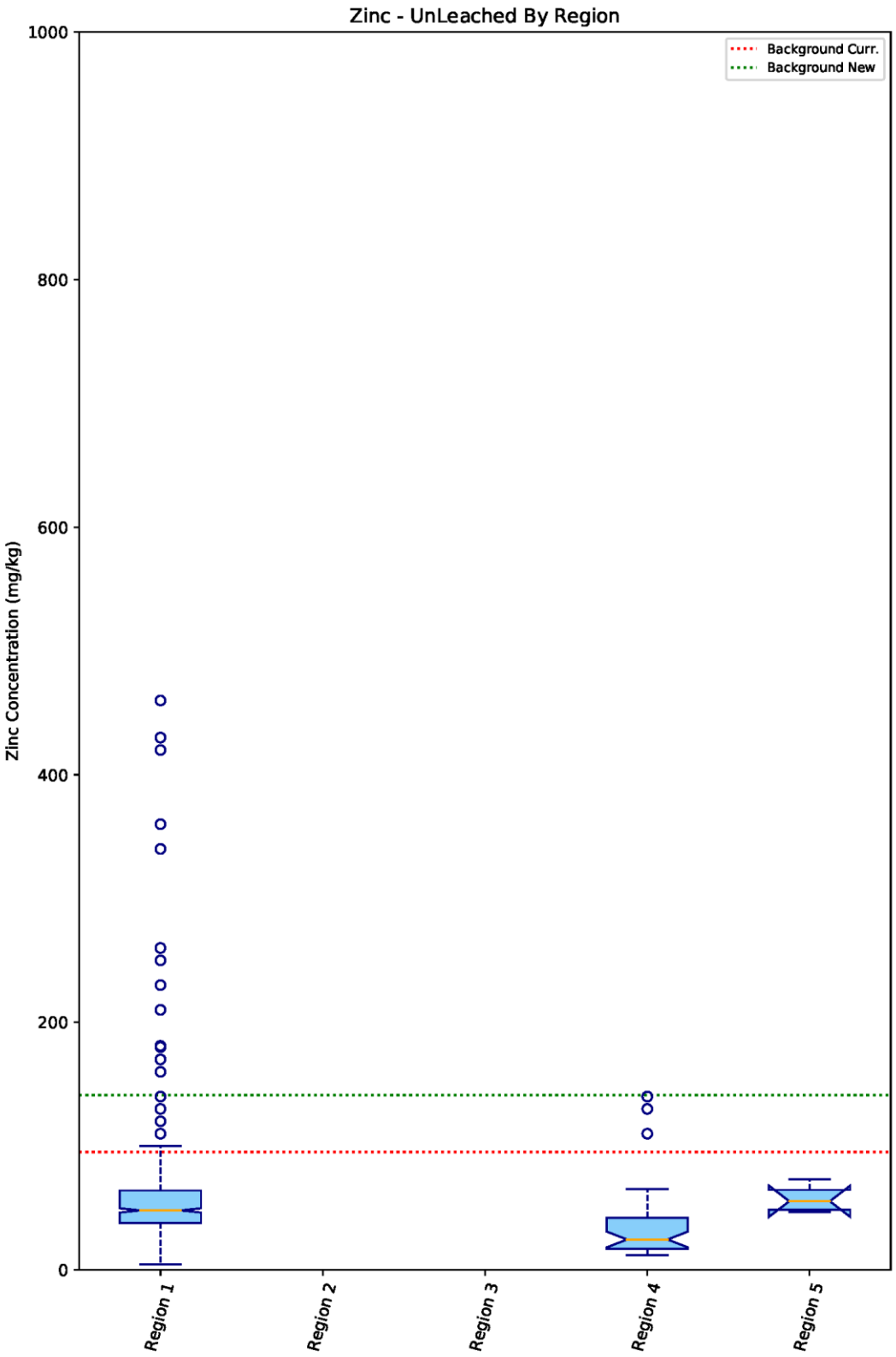


Figure 805. Boxplot of RSL zinc concentrations by IDOT Region, Non-REC (mg/kg)

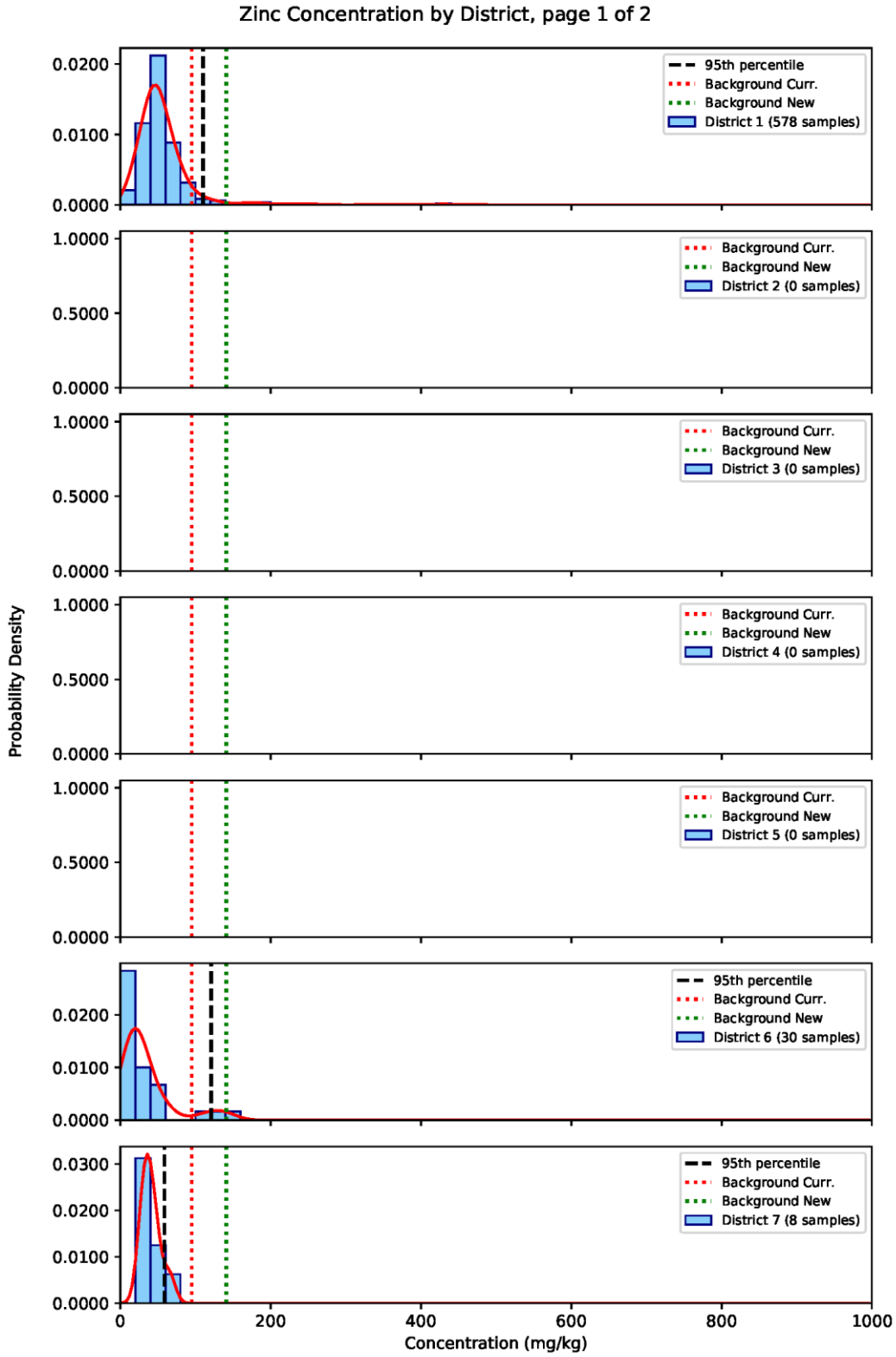


Figure 806. Histogram of RSL zinc concentrations by IDOT District, Non-REC (mg/kg), part 1

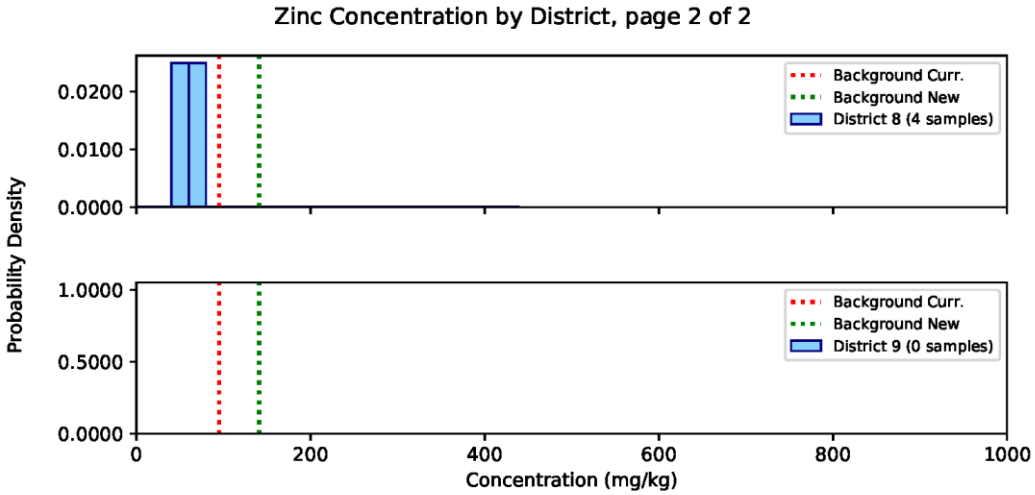


Figure 807. Histogram of RSL zinc concentrations by IDOT District, Non-REC (mg/kg), part 2

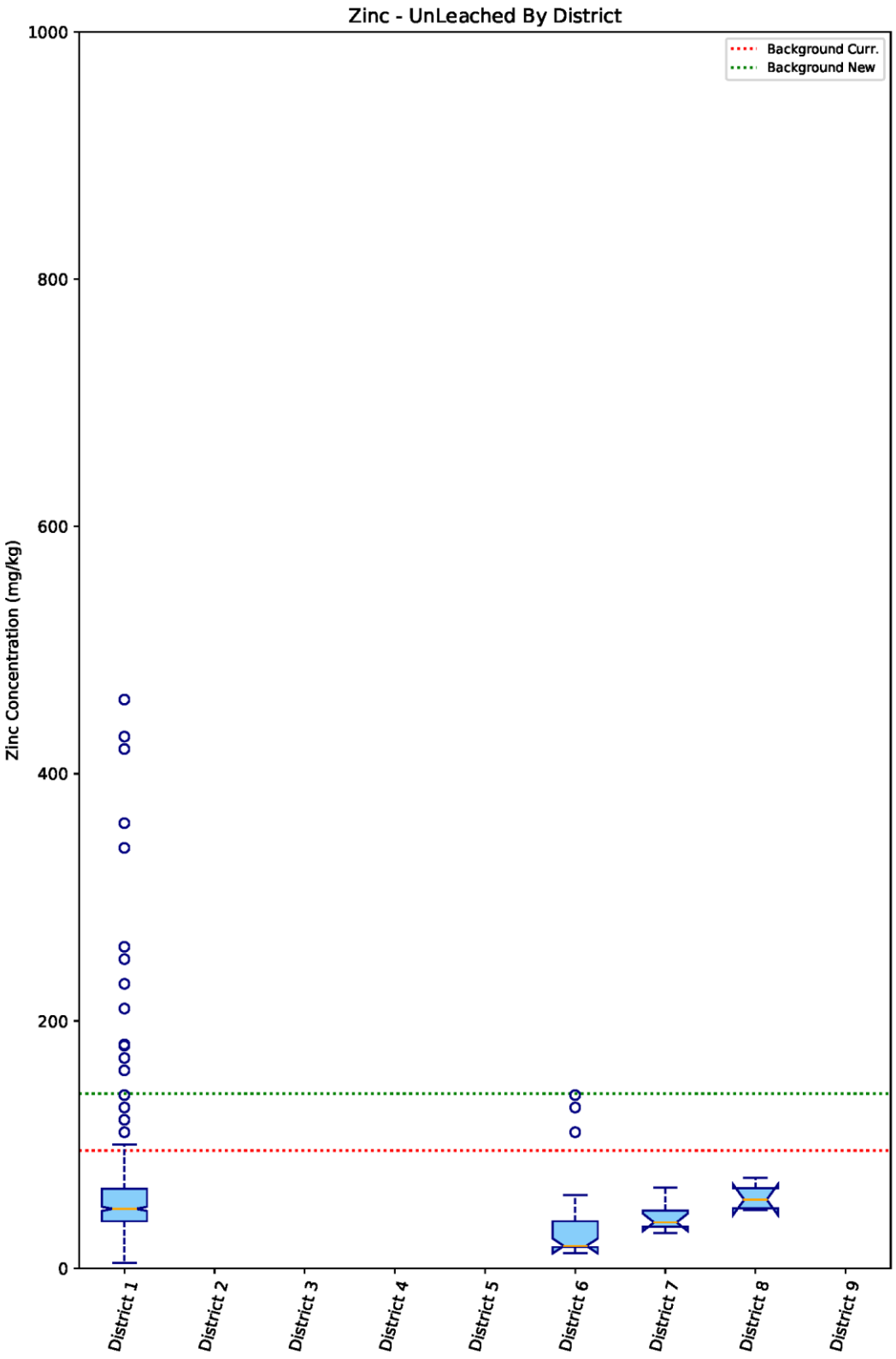


Figure 808. Boxplot of RSL zinc concentrations by IDOT District, Non-REC (mg/kg)

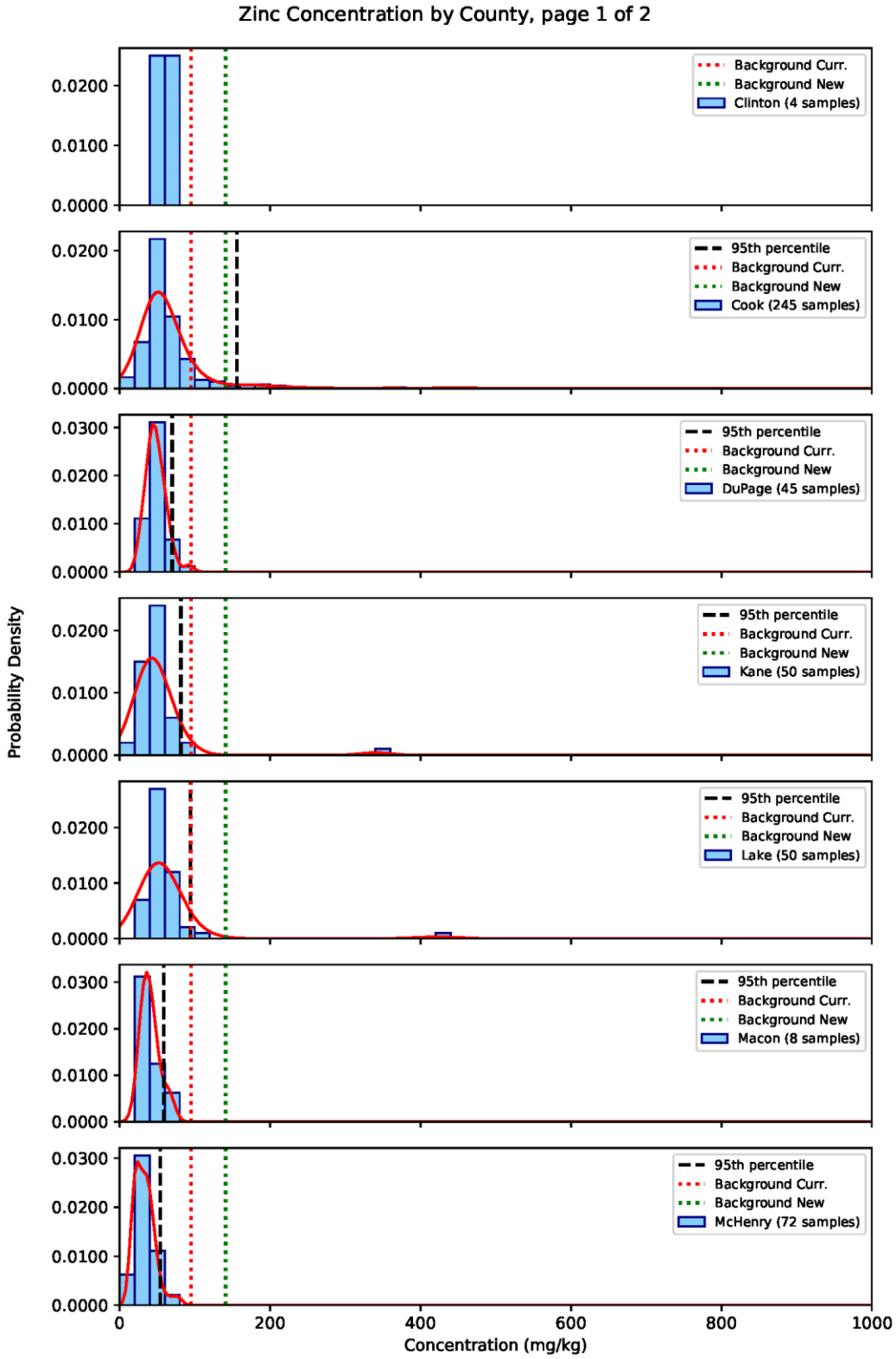


Figure 809. Histogram of RSL zinc concentrations by Illinois county, Non-REC (mg/kg), part 1

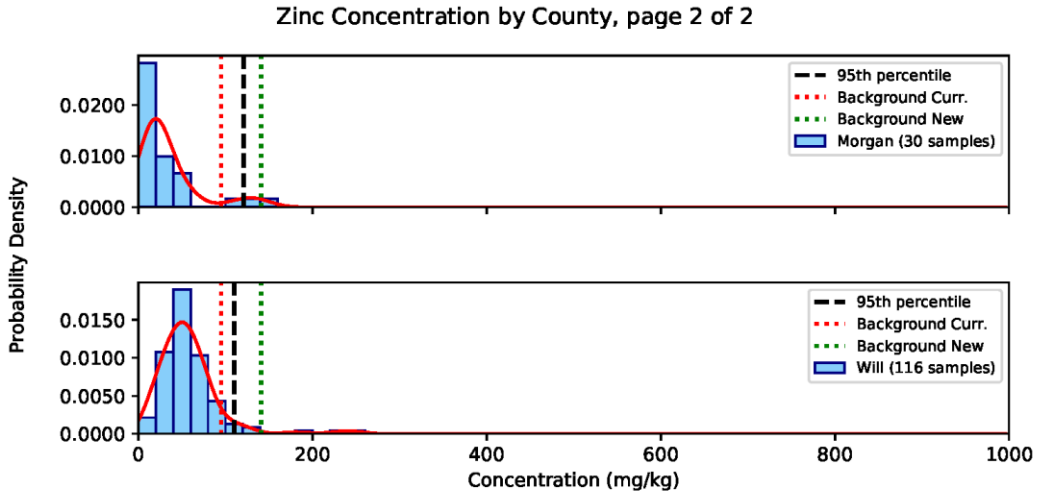


Figure 810. Histogram of RSL zinc concentrations by Illinois county, Non-REC (mg/kg), part 2

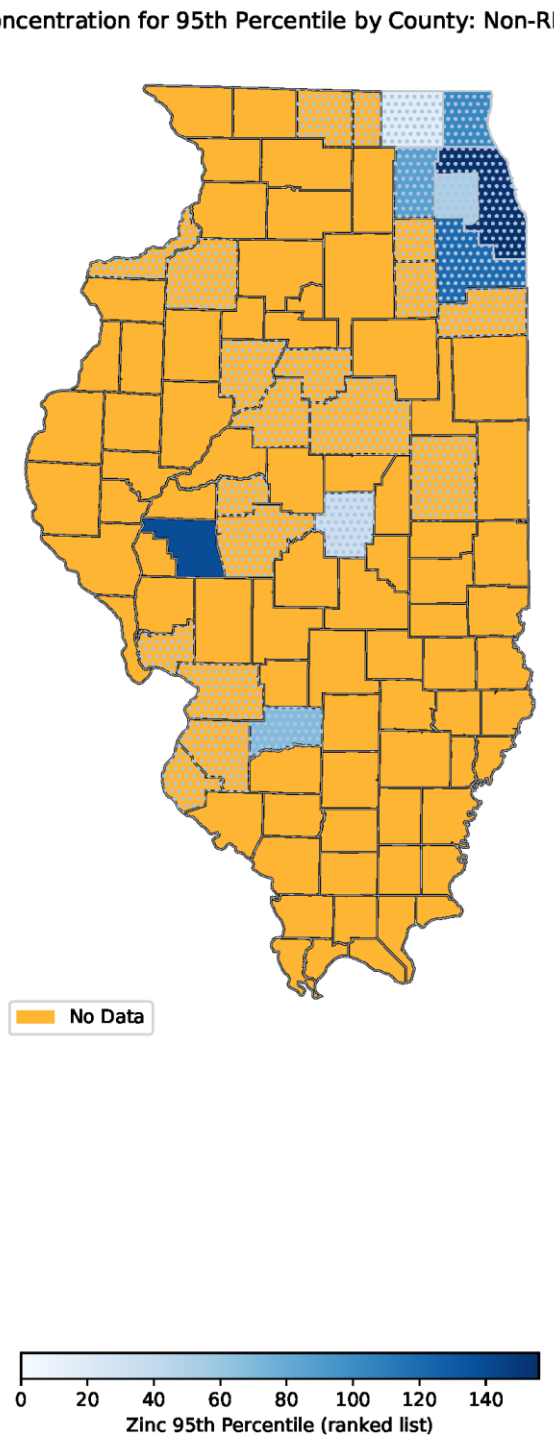


Figure 811. Map of RSL zinc 95th percentile concentration by Illinois county, Non-REC (mg/kg)

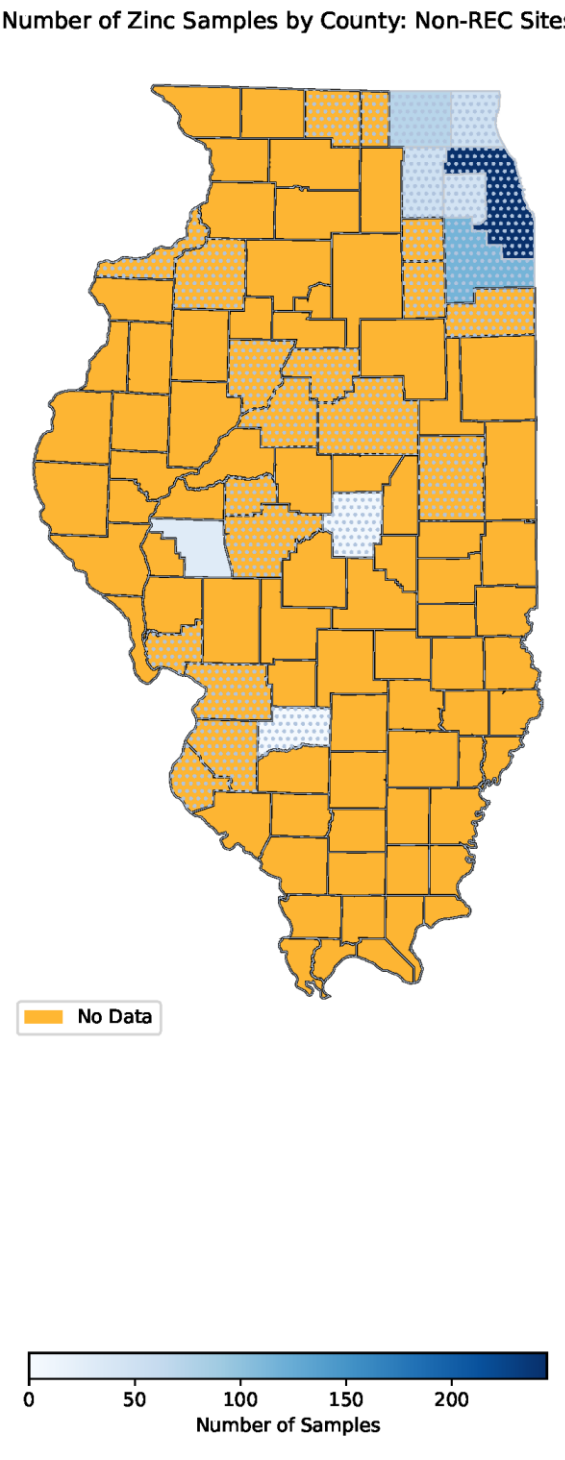


Figure 812. Map of RSL zinc sample quantity by Illinois county, Non-REC (mg/kg)

V.3 ZINC DE MINIMIS

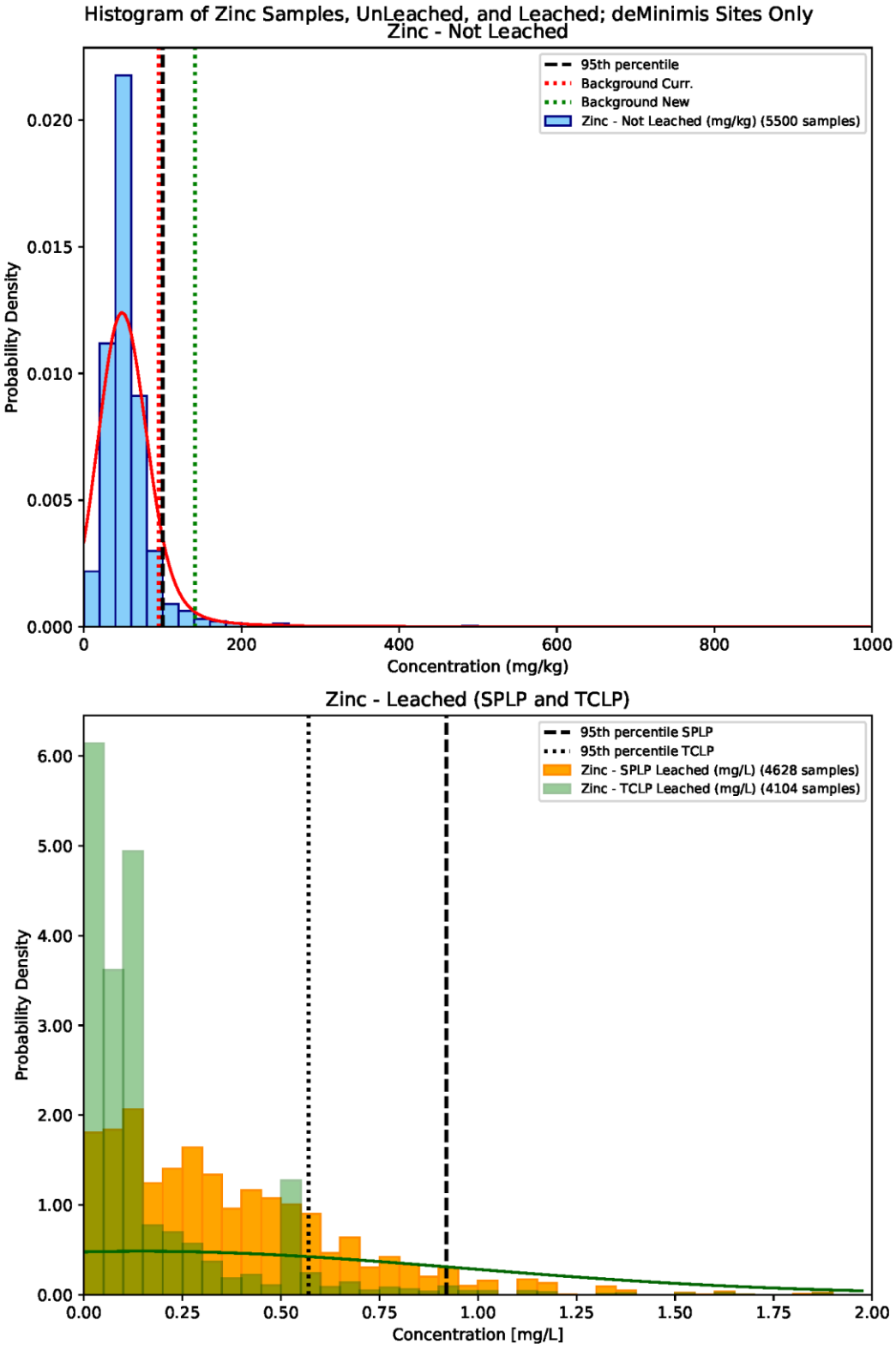


Figure 813. Histogram of RSL zinc concentrations, de minimis (mg/kg)

Zinc Unleached Concentration (mg/kg)

1) Region

2) District

3) County

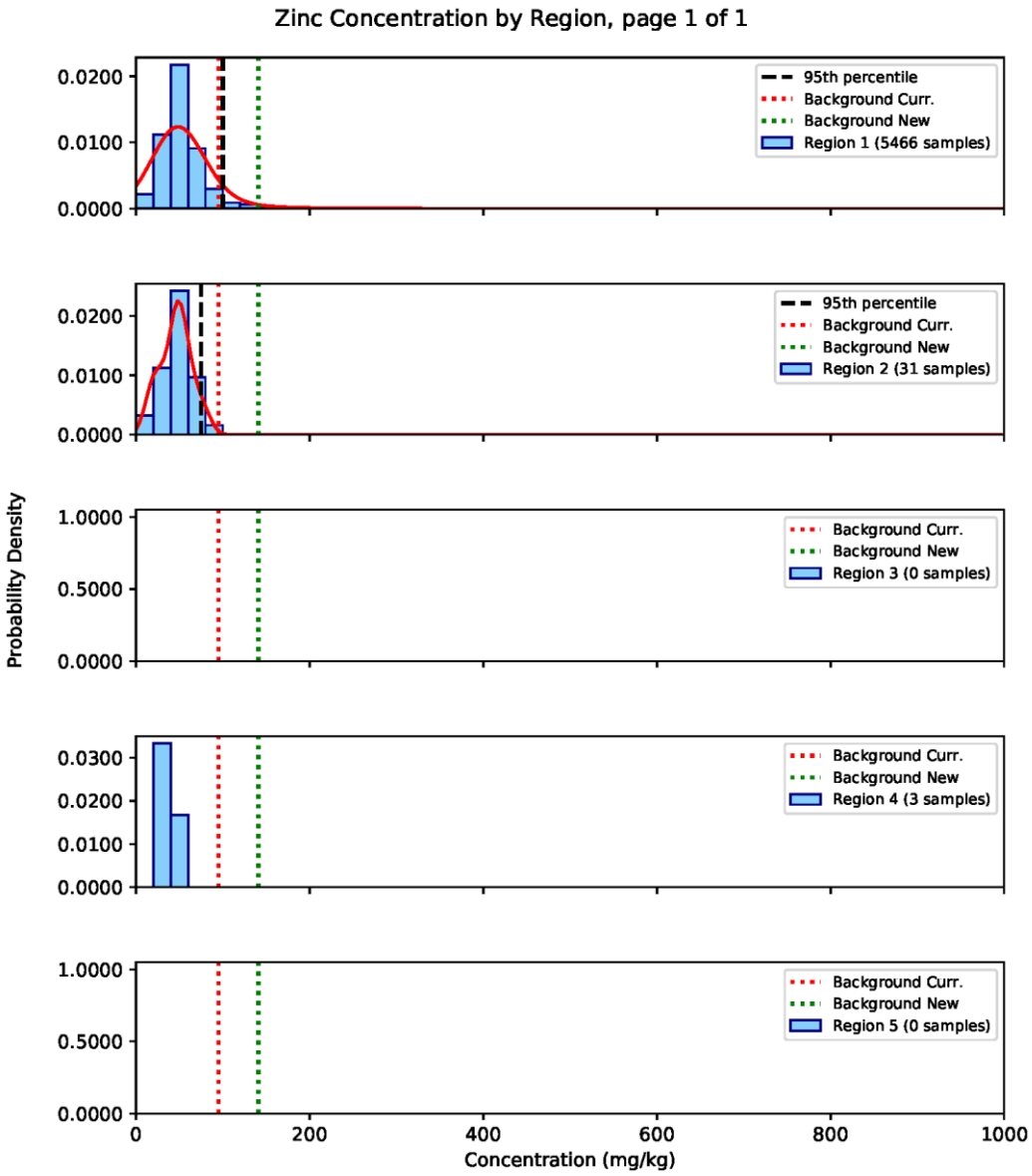


Figure 814. Histogram of RSL zinc concentrations by IDOT Region, de minimis (mg/kg)

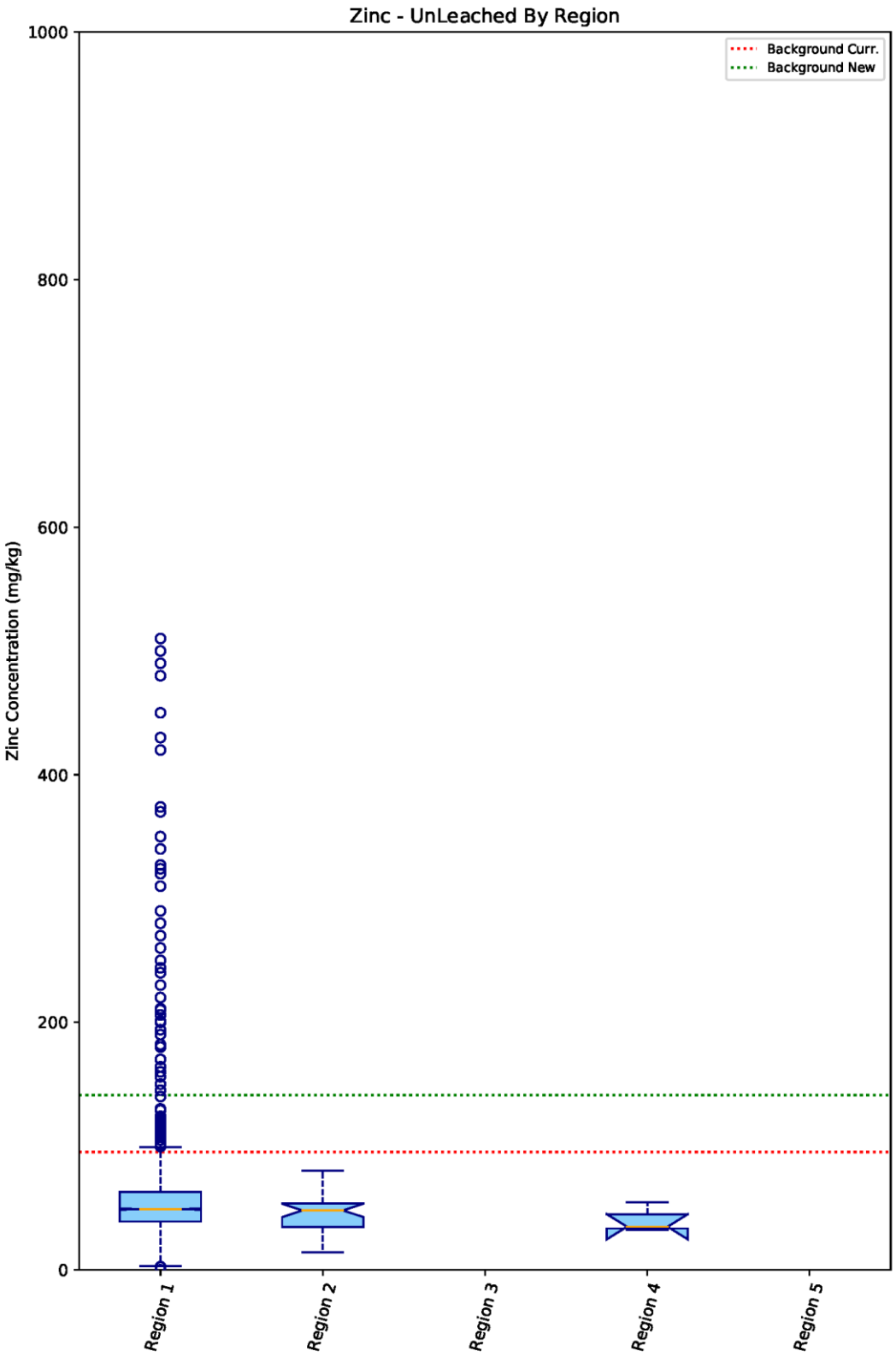


Figure 815. Boxplot of RSL zinc concentrations by IDOT Region, de minimis (mg/kg)

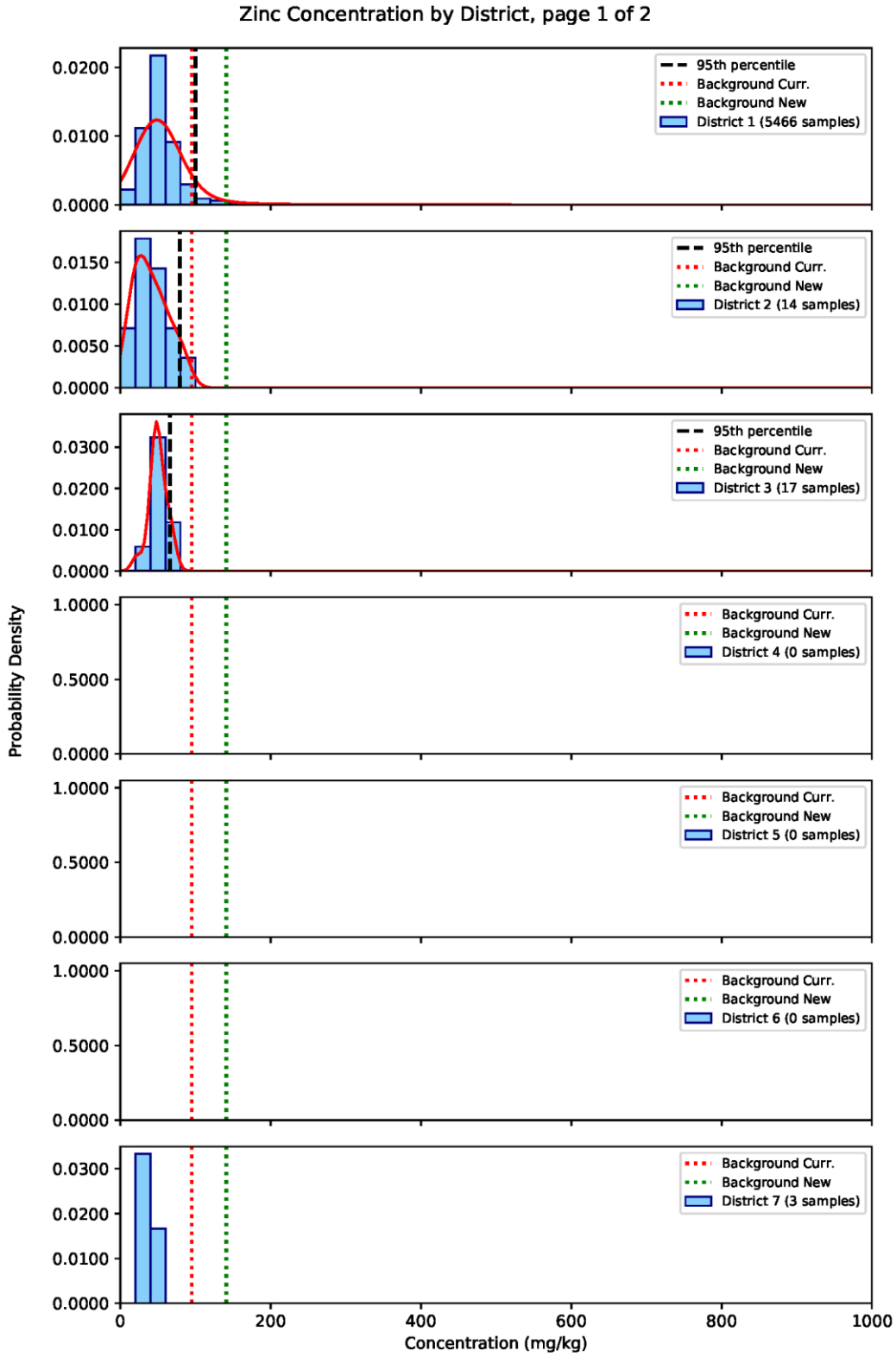


Figure 816. Histogram of RSL zinc concentrations by IDOT District, de minimis (mg/kg), part 1

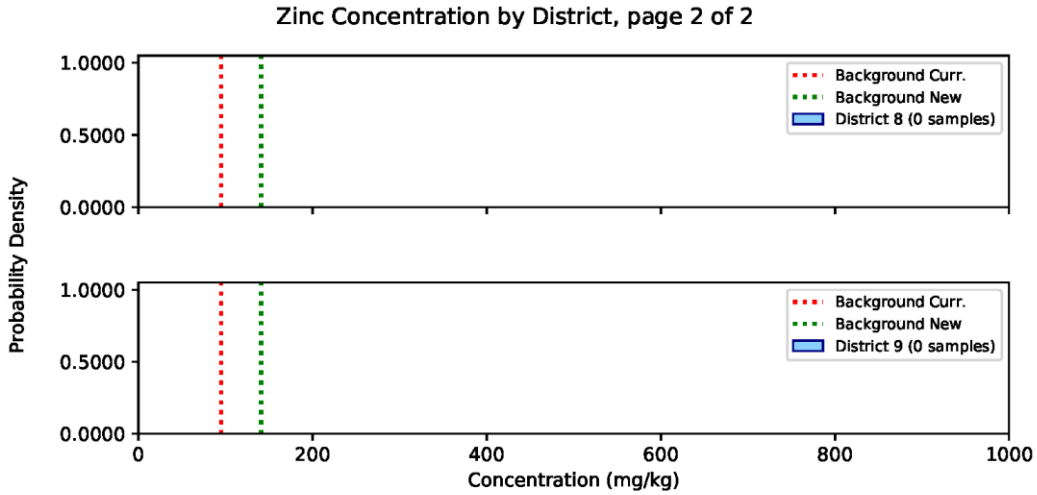


Figure 817. Histogram of RSL zinc concentrations by IDOT District, de minimis (mg/kg), part 2

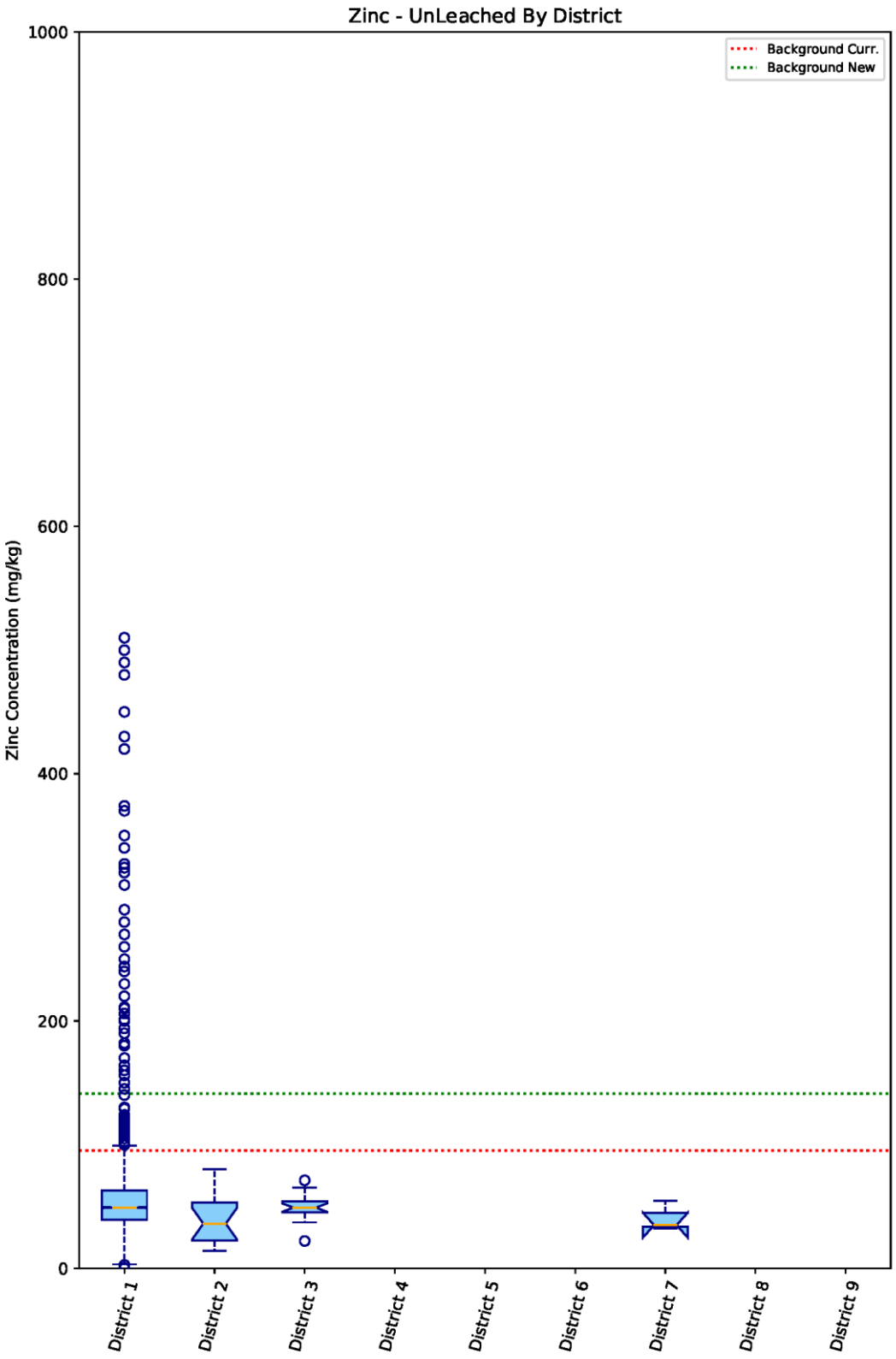


Figure 818. Boxplot of RSL zinc concentrations by IDOT District, de minimis (mg/kg)

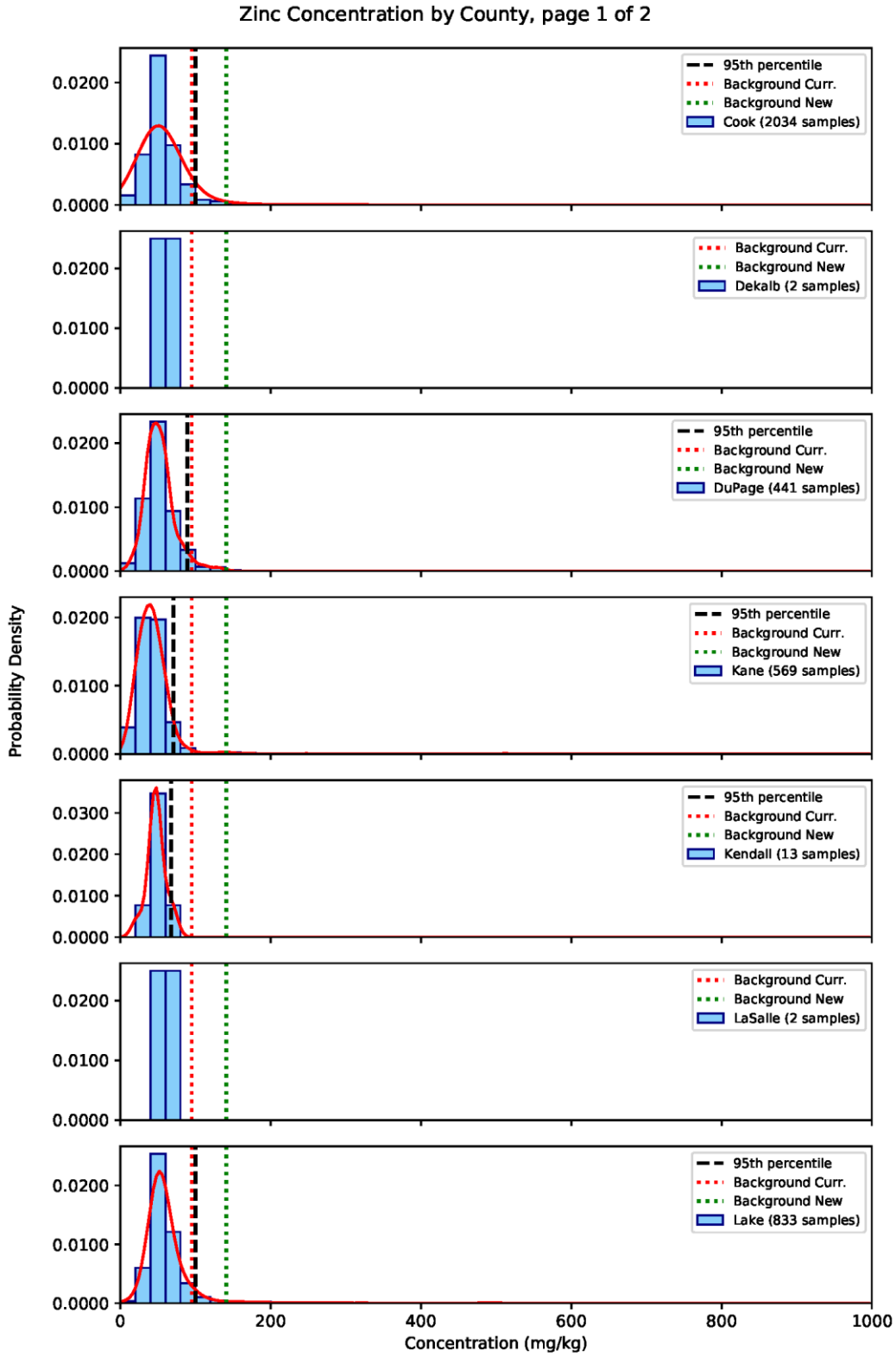


Figure 819. Histogram of RSL zinc concentrations by Illinois county, de minimis (mg/kg), part 1

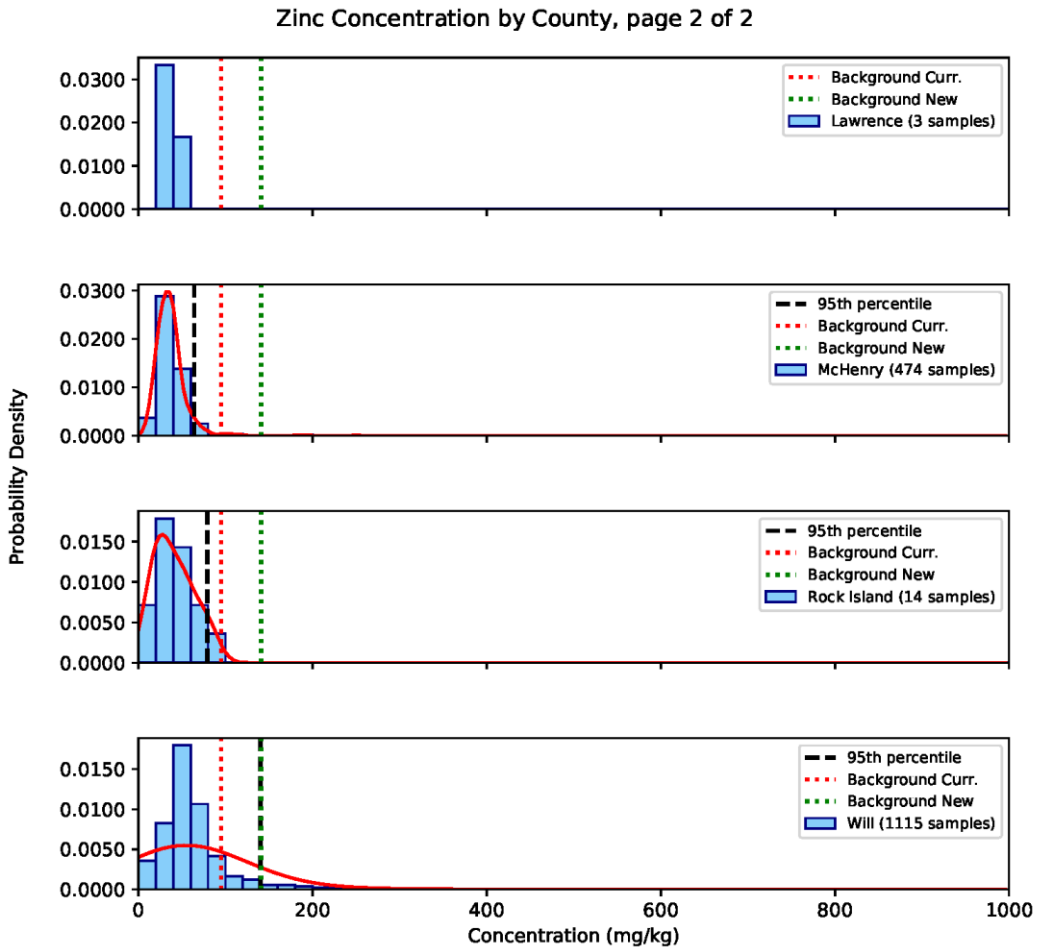


Figure 820. Histogram of RSL zinc concentrations by Illinois county, de minimis (mg/kg), part 2

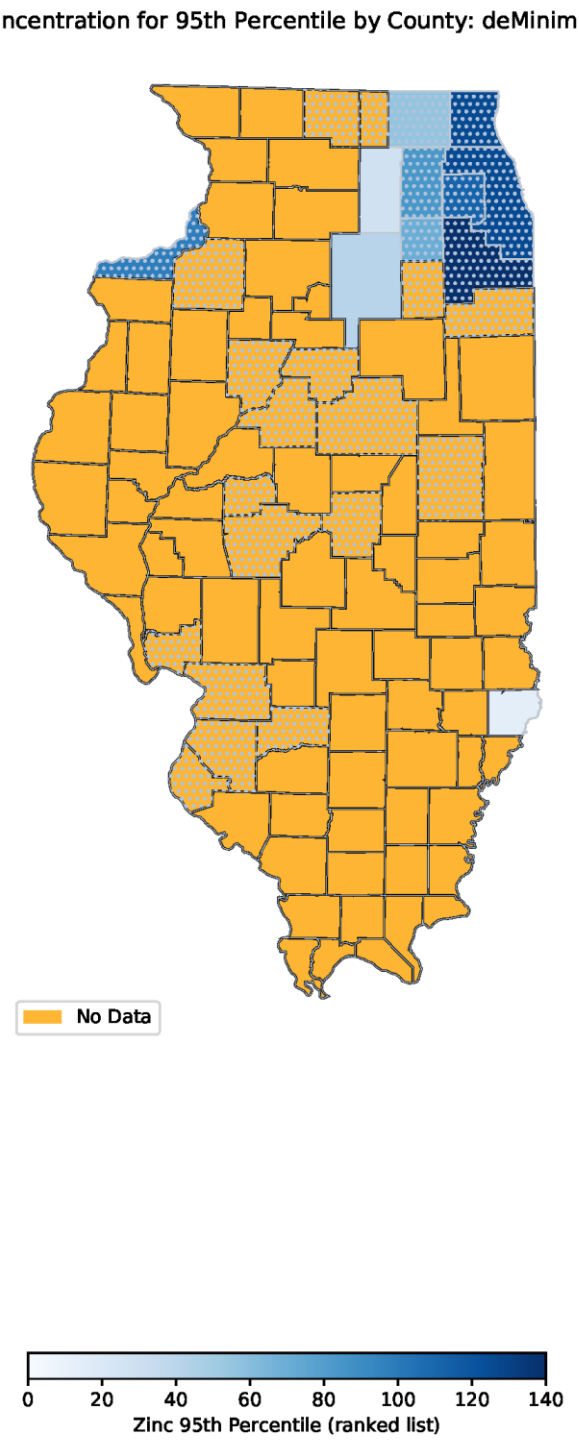


Figure 821. Map of RSL zinc 95th percentile concentration by Illinois county, de minimis (mg/kg)

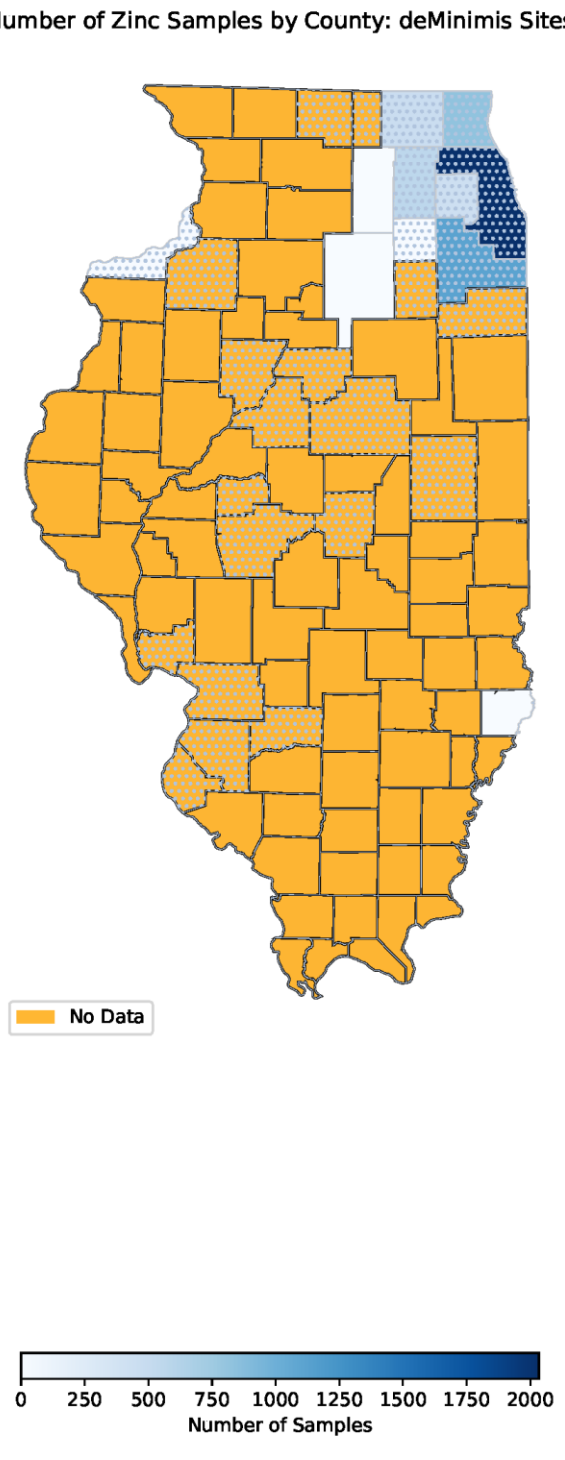


Figure 822. Map of RSL zinc sample quantity by Illinois county, de minimis (mg/kg)


Illinois Department
of Transportation


ILLINOIS