

**Table 23.1 Illicit Drug Use in Past Month and Illicit Drug Use Other Than Marijuana in Past Month in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

State/Substate Region	Illicit Drug Use in Past Month		Illicit Drug Use Other Than Marijuana in Past Month	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	9.03	(8.42 - 9.69)	3.74	(3.34 - 4.18)
Detroit City	12.91	(10.79 - 15.38)	3.45	(2.61 - 4.57)
Genesee	10.25	(8.28 - 12.63)	4.04	(3.07 - 5.29)
Kalamazoo	8.86	(7.27 - 10.76)	3.70	(2.86 - 4.79)
Kent	7.81	(6.32 - 9.61)	3.70	(2.85 - 4.80)
Lakeshore	8.54	(7.02 - 10.34)	3.95	(3.05 - 5.11)
Macomb	8.30	(6.82 - 10.06)	3.85	(2.99 - 4.95)
Mid South	9.84	(8.42 - 11.48)	4.28	(3.43 - 5.32)
Northern	8.01	(6.56 - 9.74)	3.30	(2.56 - 4.25)
Oakland	8.75	(7.36 - 10.37)	3.58	(2.83 - 4.51)
Pathways and Western	9.30	(7.33 - 11.74)	3.61	(2.74 - 4.74)
Riverhaven	7.63	(5.91 - 9.81)	3.53	(2.63 - 4.73)
Saginaw	8.86	(6.92 - 11.28)	3.76	(2.79 - 5.04)
Southeast	8.23	(7.00 - 9.66)	3.74	(2.99 - 4.67)
St. Clair	7.44	(5.66 - 9.71)	3.54	(2.61 - 4.77)
Washtenaw	9.93	(8.09 - 12.14)	4.03	(3.06 - 5.29)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

NOTE: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. These estimates are based on data from original questions, excluding those on the use of over-the-counter drugs or new methamphetamine items that were added in 2005 and 2006. See Section B.4.8 in Appendix B of the *Results from the 2008 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.2 Marijuana Use in Past Month, Average Annual Rate of First Use of Marijuana, and Perceptions of Great Risk of Smoking Marijuana Once a Month in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

State/Substate Region	Marijuana Use in Past Month		Average Annual Rate of First Use of Marijuana <sup>1</sup>		Perceptions of Great Risk of Smoking Marijuana Once a Month	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	6.91	(6.38 - 7.48)	1.94	(1.79 - 2.09)	34.39	(33.07 - 35.73)
Detroit City	10.78	(8.81 - 13.13)	2.12	(1.77 - 2.55)	39.89	(36.08 - 43.82)
Genesee	7.62	(6.03 - 9.59)	1.83	(1.47 - 2.28)	34.32	(30.24 - 38.64)
Kalamazoo	6.83	(5.37 - 8.64)	1.75	(1.42 - 2.15)	34.11	(30.45 - 37.98)
Kent	5.76	(4.48 - 7.38)	1.68	(1.36 - 2.09)	33.37	(29.30 - 37.69)
Lakeshore	6.29	(4.96 - 7.94)	2.09	(1.72 - 2.53)	37.66	(33.81 - 41.66)
Macomb	5.81	(4.59 - 7.33)	1.57	(1.30 - 1.91)	34.77	(31.28 - 38.44)
Mid South	7.56	(6.25 - 9.11)	2.35	(2.01 - 2.75)	32.53	(29.48 - 35.74)
Northern	6.33	(5.05 - 7.91)	2.05	(1.68 - 2.49)	30.92	(27.40 - 34.67)
Oakland	6.86	(5.71 - 8.22)	1.86	(1.58 - 2.19)	31.54	(28.42 - 34.82)
Pathways and Western	7.46	(5.65 - 9.79)	2.03	(1.60 - 2.56)	34.33	(29.62 - 39.37)
Riverhaven	5.49	(4.06 - 7.40)	1.50	(1.16 - 1.93)	37.80	(32.82 - 43.05)
Saginaw	6.95	(5.14 - 9.33)	2.18	(1.70 - 2.78)	35.53	(30.85 - 40.50)
Southeast	6.01	(4.98 - 7.24)	1.74	(1.48 - 2.03)	37.22	(34.08 - 40.47)
St. Clair	5.81	(4.27 - 7.85)	1.72	(1.33 - 2.22)	34.98	(30.26 - 40.02)
Washtenaw	7.55	(5.96 - 9.52)	2.72	(2.18 - 3.37)	28.27	(24.33 - 32.58)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

<sup>1</sup> *Average annual marijuana initiation rate* =  $100 * \{ [X_1 \div (0.5 * X_1 + X_2)] \div 2 \}$ , where  $X_1$  is the number of marijuana initiates in the past 24 months and  $X_2$  is the number of persons who never used marijuana. Both of the computation components,  $X_1$  and  $X_2$ , are based on a survey-weighted hierarchical Bayes estimation approach. Note that the age group is based on a respondent's age at the time of the interview, not his or her age at first use. The prediction intervals for Average Annual Rate of First Use of Marijuana use a simultaneous solution for First Use of Marijuana and Never Used Marijuana outcomes, which had age group-specific random effects that were allowed to be correlated across the two outcomes. The associated Markov Chain Monte Carlo chains were used to calculate the posterior variance.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.3 Marijuana Use in Past Year, Cocaine Use in Past Year, and Nonmedical Use of Pain Relievers in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

State/Substate Region	Marijuana Use in Past Year		Cocaine Use in Past Year		Nonmedical Use of Pain Relievers in Past Year	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	11.70	(10.98 - 12.45)	2.09	(1.80 - 2.42)	5.63	(5.13 - 6.17)
Detroit City	15.87	(13.48 - 18.59)	2.19	(1.44 - 3.30)	4.44	(3.48 - 5.65)
Genesee	12.20	(10.03 - 14.76)	2.41	(1.72 - 3.37)	6.01	(4.78 - 7.53)
Kalamazoo	10.84	(9.04 - 12.94)	2.20	(1.60 - 3.01)	5.91	(4.77 - 7.30)
Kent	10.83	(8.92 - 13.09)	2.31	(1.68 - 3.16)	5.24	(4.13 - 6.62)
Lakeshore	11.20	(9.42 - 13.26)	2.04	(1.50 - 2.77)	5.89	(4.74 - 7.31)
Macomb	10.55	(8.88 - 12.48)	2.21	(1.65 - 2.96)	6.07	(4.93 - 7.44)
Mid South	12.96	(11.26 - 14.87)	2.16	(1.63 - 2.86)	6.85	(5.68 - 8.24)
Northern	10.88	(9.13 - 12.90)	2.00	(1.50 - 2.67)	5.36	(4.32 - 6.65)
Oakland	11.54	(10.01 - 13.26)	1.80	(1.36 - 2.38)	5.23	(4.30 - 6.36)
Pathways and Western	11.44	(9.24 - 14.08)	2.34	(1.67 - 3.26)	5.29	(4.12 - 6.77)
Riverhaven	8.95	(7.13 - 11.19)	1.84	(1.30 - 2.62)	5.28	(4.09 - 6.79)
Saginaw	12.51	(9.98 - 15.57)	2.03	(1.42 - 2.88)	5.58	(4.35 - 7.14)
Southeast	10.93	(9.50 - 12.54)	1.94	(1.48 - 2.54)	5.50	(4.61 - 6.54)
St. Clair	9.92	(7.74 - 12.64)	1.98	(1.39 - 2.83)	6.25	(4.87 - 7.99)
Washtenaw	13.36	(11.18 - 15.89)	2.23	(1.64 - 3.03)	5.80	(4.65 - 7.20)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.4 Alcohol Use in Past Month, Binge Alcohol Use in Past Month, and Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

State/Substate Region	Alcohol Use in Past Month		Binge Alcohol Use in Past Month <sup>1</sup>		Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	55.01	(53.65 - 56.37)	24.96	(23.90 - 26.05)	38.36	(37.11 - 39.62)
Detroit City	39.93	(36.04 - 43.95)	21.11	(18.47 - 24.01)	49.82	(46.45 - 53.20)
Genesee	51.08	(46.58 - 55.55)	22.39	(19.47 - 25.60)	39.82	(36.06 - 43.71)
Kalamazoo	53.86	(49.31 - 58.34)	25.14	(22.15 - 28.39)	37.61	(34.40 - 40.94)
Kent	52.07	(47.59 - 56.52)	24.39	(21.34 - 27.73)	37.44	(34.21 - 40.78)
Lakeshore	54.11	(50.04 - 58.11)	23.92	(21.05 - 27.04)	37.28	(33.94 - 40.74)
Macomb	57.76	(53.99 - 61.44)	25.28	(22.60 - 28.17)	38.24	(35.24 - 41.33)
Mid South	57.38	(53.77 - 60.91)	28.02	(25.44 - 30.75)	35.48	(32.62 - 38.44)
Northern	55.92	(51.91 - 59.85)	24.74	(21.96 - 27.74)	35.11	(32.00 - 38.34)
Oakland	60.68	(57.35 - 63.92)	24.47	(22.05 - 27.06)	38.46	(35.51 - 41.51)
Pathways and Western	59.52	(53.84 - 64.96)	29.15	(25.46 - 33.13)	33.50	(29.84 - 37.37)
Riverhaven	53.83	(48.40 - 59.17)	26.33	(22.89 - 30.08)	35.14	(31.26 - 39.23)
Saginaw	54.76	(49.08 - 60.31)	25.74	(22.14 - 29.70)	38.88	(34.89 - 43.03)
Southeast	54.99	(51.67 - 58.26)	25.04	(22.73 - 27.50)	39.33	(36.50 - 42.23)
St. Clair	56.60	(50.83 - 62.20)	26.31	(22.53 - 30.47)	37.32	(33.18 - 41.65)
Washtenaw	61.91	(57.39 - 66.24)	25.76	(22.74 - 29.03)	36.43	(32.91 - 40.10)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

<sup>1</sup> Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.5 Alcohol Use in Past Month and Binge Alcohol Use in Past Month in Michigan among Persons Aged 12 to 20, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

State/Substate Region	Alcohol Use in Past Month among Persons Aged 12 to 20		Binge Alcohol Use in Past Month among Persons Aged 12 to 20 <sup>1</sup>	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	28.91	(27.76 - 30.08)	18.69	(17.68 - 19.76)
Detroit City	19.05	(16.53 - 21.85)	9.67	(7.90 - 11.77)
Genesee	24.98	(21.65 - 28.63)	14.66	(11.86 - 17.99)
Kalamazoo	30.61	(27.19 - 34.25)	20.31	(17.13 - 23.91)
Kent	26.54	(23.32 - 30.03)	16.50	(13.65 - 19.82)
Lakeshore	28.26	(25.00 - 31.77)	17.50	(14.63 - 20.79)
Macomb	28.74	(25.65 - 32.03)	18.35	(15.70 - 21.34)
Mid South	35.10	(32.23 - 38.09)	25.87	(22.92 - 29.06)
Northern	32.68	(29.31 - 36.24)	21.24	(18.21 - 24.63)
Oakland	27.82	(25.19 - 30.60)	17.22	(14.92 - 19.80)
Pathways and Western	36.36	(31.95 - 41.01)	26.44	(22.31 - 31.04)
Riverhaven	31.11	(26.76 - 35.82)	20.65	(16.94 - 24.94)
Saginaw	30.64	(26.41 - 35.23)	19.93	(16.34 - 24.08)
Southeast	27.34	(24.86 - 29.97)	18.36	(16.08 - 20.90)
St. Clair	29.30	(25.12 - 33.86)	19.36	(15.58 - 23.80)
Washtenaw	34.37	(30.36 - 38.62)	21.91	(18.20 - 26.13)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

<sup>1</sup> Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.6** *Cigarette Use in Past Month, Tobacco Product Use in Past Month, and Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*

State/Substate Region	Cigarette Use in Past Month		Tobacco Product Use in Past Month <sup>1</sup>		Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	26.14	(24.98 - 27.34)	30.75	(29.59 - 31.94)	71.60	(70.40 - 72.78)
Detroit City	25.79	(22.83 - 29.00)	29.02	(25.92 - 32.33)	73.34	(70.58 - 75.92)
Genesee	27.93	(24.58 - 31.54)	32.31	(28.91 - 35.90)	70.93	(67.77 - 73.90)
Kalamazoo	27.00	(23.84 - 30.42)	32.06	(28.84 - 35.47)	70.03	(66.93 - 72.95)
Kent	24.20	(21.15 - 27.53)	27.06	(24.02 - 30.33)	72.50	(69.41 - 75.39)
Lakeshore	28.58	(25.53 - 31.84)	33.16	(29.90 - 36.60)	71.76	(68.69 - 74.64)
Macomb	27.33	(24.29 - 30.59)	31.52	(28.47 - 34.73)	71.08	(68.10 - 73.89)
Mid South	27.80	(25.19 - 30.57)	32.90	(30.06 - 35.86)	70.86	(68.12 - 73.46)
Northern	27.91	(25.01 - 30.99)	33.29	(30.17 - 36.56)	69.76	(66.88 - 72.49)
Oakland	21.95	(19.67 - 24.42)	26.75	(24.21 - 29.44)	74.20	(71.59 - 76.65)
Pathways and Western	28.70	(25.01 - 32.69)	34.61	(30.64 - 38.81)	69.20	(65.64 - 72.53)
Riverhaven	30.46	(26.59 - 34.63)	35.53	(31.61 - 39.65)	66.68	(62.86 - 70.30)
Saginaw	26.05	(22.42 - 30.04)	31.06	(27.22 - 35.17)	70.55	(66.87 - 73.98)
Southeast	25.65	(23.24 - 28.21)	30.22	(27.69 - 32.88)	72.61	(70.13 - 74.96)
St. Clair	27.28	(23.38 - 31.56)	33.40	(29.37 - 37.69)	68.58	(64.89 - 72.05)
Washtenaw	20.97	(18.15 - 24.10)	25.31	(22.23 - 28.65)	74.16	(71.10 - 77.00)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

<sup>1</sup> Tobacco Products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.7 Alcohol Dependence in Past Year and Illicit Drug Dependence in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

State/Substate Region	Alcohol Dependence in Past Year		Illicit Drug Dependence in Past Year <sup>1</sup>	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	3.50	(3.12 - 3.92)	2.02	(1.75 - 2.32)
Detroit City	4.46	(3.37 - 5.86)	3.80	(2.67 - 5.39)
Genesee	3.57	(2.70 - 4.71)	2.61	(1.79 - 3.77)
Kalamazoo	3.44	(2.62 - 4.51)	1.66	(1.14 - 2.42)
Kent	3.92	(3.00 - 5.12)	1.95	(1.34 - 2.85)
Lakeshore	3.42	(2.61 - 4.46)	2.01	(1.40 - 2.88)
Macomb	2.89	(2.20 - 3.80)	1.72	(1.23 - 2.39)
Mid South	3.91	(3.13 - 4.88)	2.02	(1.49 - 2.73)
Northern	3.08	(2.36 - 4.00)	1.45	(1.01 - 2.08)
Oakland	3.53	(2.75 - 4.51)	2.04	(1.51 - 2.74)
Pathways and Western	3.52	(2.64 - 4.66)	2.03	(1.40 - 2.93)
Riverhaven	3.25	(2.42 - 4.35)	1.68	(1.14 - 2.49)
Saginaw	3.32	(2.44 - 4.49)	1.98	(1.29 - 3.03)
Southeast	3.35	(2.66 - 4.21)	1.68	(1.25 - 2.25)
St. Clair	3.13	(2.35 - 4.16)	1.94	(1.28 - 2.91)
Washtenaw	3.38	(2.59 - 4.39)	1.71	(1.17 - 2.52)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

NOTE: Dependence is based on the definition found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically; these estimates are based on data from original questions, excluding those on the use of over-the-counter drugs or new methamphetamine items that were added in 2005 and 2006. See Section B.4.8 in Appendix B of the *Results from the 2008 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.8** *Alcohol Dependence or Abuse in Past Year, Illicit Drug Dependence or Abuse in Past Year, and Dependence on or Abuse of Illicit Drugs or Alcohol in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*

State/Substate Region	Alcohol Dependence or Abuse in Past Year		Illicit Drug Dependence or Abuse in Past Year <sup>1</sup>		Dependence on or Abuse of Illicit Drugs or Alcohol in Past Year <sup>1</sup>	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	7.79	(7.19 - 8.43)	2.88	(2.57 - 3.23)	9.41	(8.78 - 10.08)
Detroit City	7.92	(6.36 - 9.82)	4.66	(3.47 - 6.25)	10.81	(8.86 - 13.12)
Genesee	7.59	(6.11 - 9.40)	3.46	(2.46 - 4.86)	9.78	(8.01 - 11.89)
Kalamazoo	8.00	(6.56 - 9.71)	2.31	(1.63 - 3.25)	9.11	(7.47 - 11.08)
Kent	8.03	(6.58 - 9.77)	2.80	(2.04 - 3.82)	9.59	(7.91 - 11.58)
Lakeshore	8.25	(6.83 - 9.94)	3.02	(2.24 - 4.07)	10.45	(8.76 - 12.43)
Macomb	6.76	(5.54 - 8.23)	2.66	(2.01 - 3.51)	8.00	(6.62 - 9.64)
Mid South	8.75	(7.47 - 10.24)	3.03	(2.36 - 3.89)	10.33	(8.85 - 12.03)
Northern	7.26	(5.96 - 8.82)	2.44	(1.79 - 3.30)	8.65	(7.16 - 10.42)
Oakland	7.81	(6.51 - 9.35)	2.80	(2.17 - 3.62)	9.34	(7.95 - 10.96)
Pathways and Western	8.05	(6.49 - 9.95)	3.07	(2.16 - 4.35)	10.00	(8.05 - 12.36)
Riverhaven	7.57	(6.06 - 9.42)	2.43	(1.69 - 3.48)	8.48	(6.73 - 10.64)
Saginaw	7.72	(6.11 - 9.70)	2.98	(2.05 - 4.30)	9.18	(7.25 - 11.55)
Southeast	7.53	(6.39 - 8.85)	2.45	(1.91 - 3.13)	9.00	(7.72 - 10.47)
St. Clair	7.33	(5.79 - 9.24)	2.63	(1.81 - 3.81)	8.46	(6.61 - 10.76)
Washtenaw	8.19	(6.75 - 9.90)	2.61	(1.89 - 3.59)	9.68	(7.98 - 11.69)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

NOTE: Dependence or abuse is based on definitions found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically; these estimates are based on data from original questions, excluding those on the use of over-the-counter drugs or new methamphetamine items that were added in 2005 and 2006. See Section B.4.8 in Appendix B of the *Results from the 2008 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Table 23.9** *Needing But Not Receiving Treatment for Alcohol Use in Past Year and Needing But Not Receiving Treatment for Illicit Drug Use in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*

State/Substate Region	Needing But Not Receiving Treatment for Alcohol Use in Past Year <sup>1</sup>		Needing But Not Receiving Treatment for Illicit Drug Use in Past Year <sup>2</sup>	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
<b>Michigan</b>	7.41	(6.84 - 8.02)	2.52	(2.25 - 2.83)
Detroit City	7.40	(5.91 - 9.23)	4.43	(3.27 - 5.99)
Genesee	7.31	(5.88 - 9.05)	2.79	(2.00 - 3.87)
Kalamazoo	7.54	(6.13 - 9.23)	1.92	(1.37 - 2.67)
Kent	7.89	(6.46 - 9.62)	2.50	(1.80 - 3.45)
Lakeshore	7.89	(6.50 - 9.55)	2.52	(1.86 - 3.41)
Macomb	6.38	(5.20 - 7.80)	2.25	(1.69 - 2.98)
Mid South	8.41	(7.19 - 9.83)	2.68	(2.09 - 3.43)
Northern	7.04	(5.82 - 8.49)	2.22	(1.63 - 3.03)
Oakland	7.42	(6.17 - 8.90)	2.40	(1.86 - 3.09)
Pathways and Western	7.69	(6.15 - 9.58)	2.68	(1.89 - 3.80)
Riverhaven	7.13	(5.62 - 9.02)	2.14	(1.47 - 3.10)
Saginaw	7.11	(5.65 - 8.93)	2.50	(1.71 - 3.63)
Southeast	6.97	(5.90 - 8.21)	2.15	(1.67 - 2.77)
St. Clair	6.98	(5.52 - 8.81)	2.26	(1.56 - 3.25)
Washtenaw	8.07	(6.62 - 9.80)	2.25	(1.60 - 3.16)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

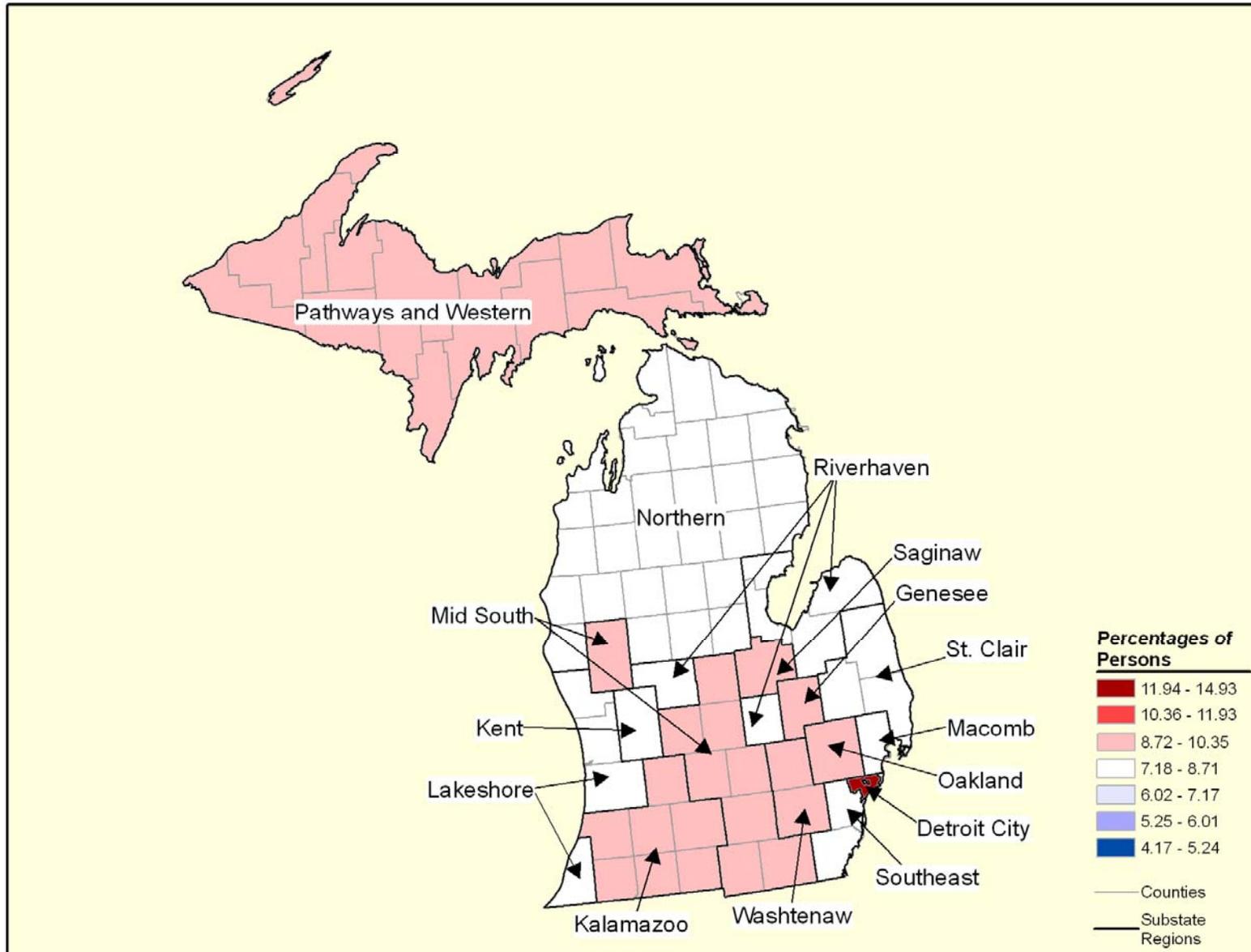
NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

<sup>1</sup> Needing But Not Receiving Treatment refers to respondents classified as needing treatment for alcohol, but not receiving treatment for an alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers).

<sup>2</sup> Needing But Not Receiving Treatment refers to respondents classified as needing treatment for illicit drugs, but not receiving treatment for an illicit drug problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers). Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, these estimate are based on data from original questions excluding those on the use of over-the-counter drugs or new methamphetamine items that were added in 2005 and 2006. See Section B.4.8 in the Appendix B of the *Results from the 2008 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

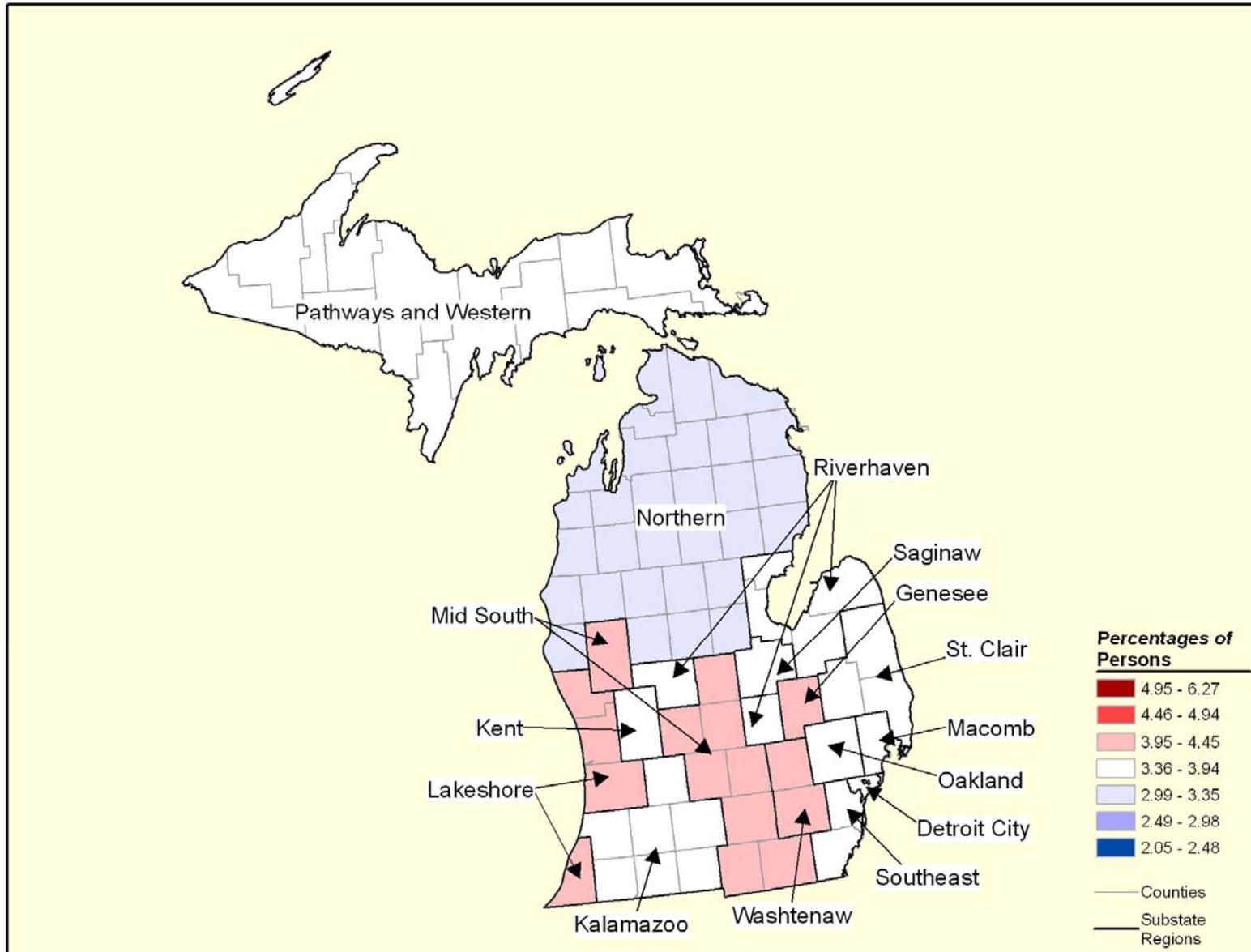
**Figure 23.1.1** *Illicit Drug Use in Past Month* among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

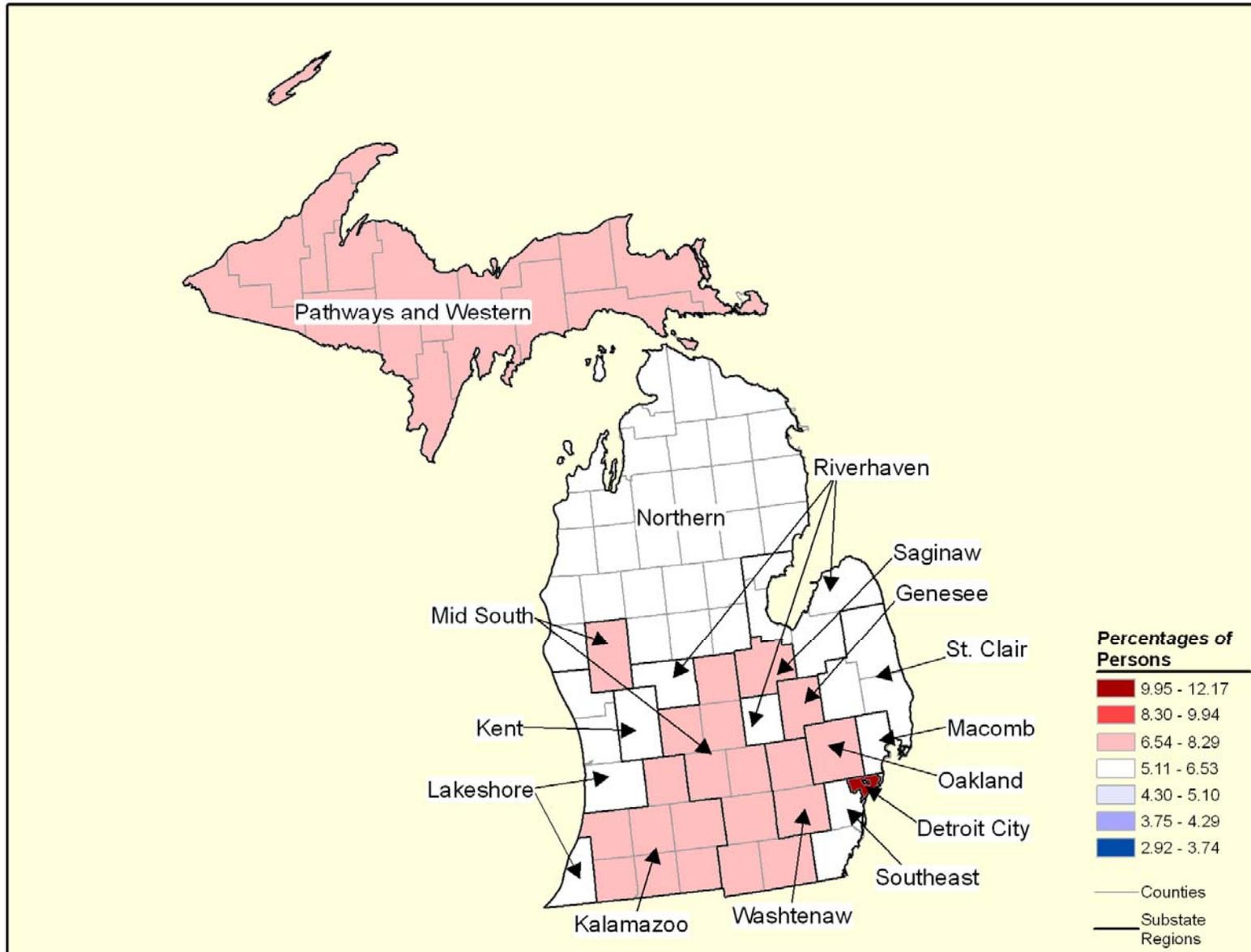
**Figure 23.1.2 Illicit Drug Use Other Than Marijuana in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

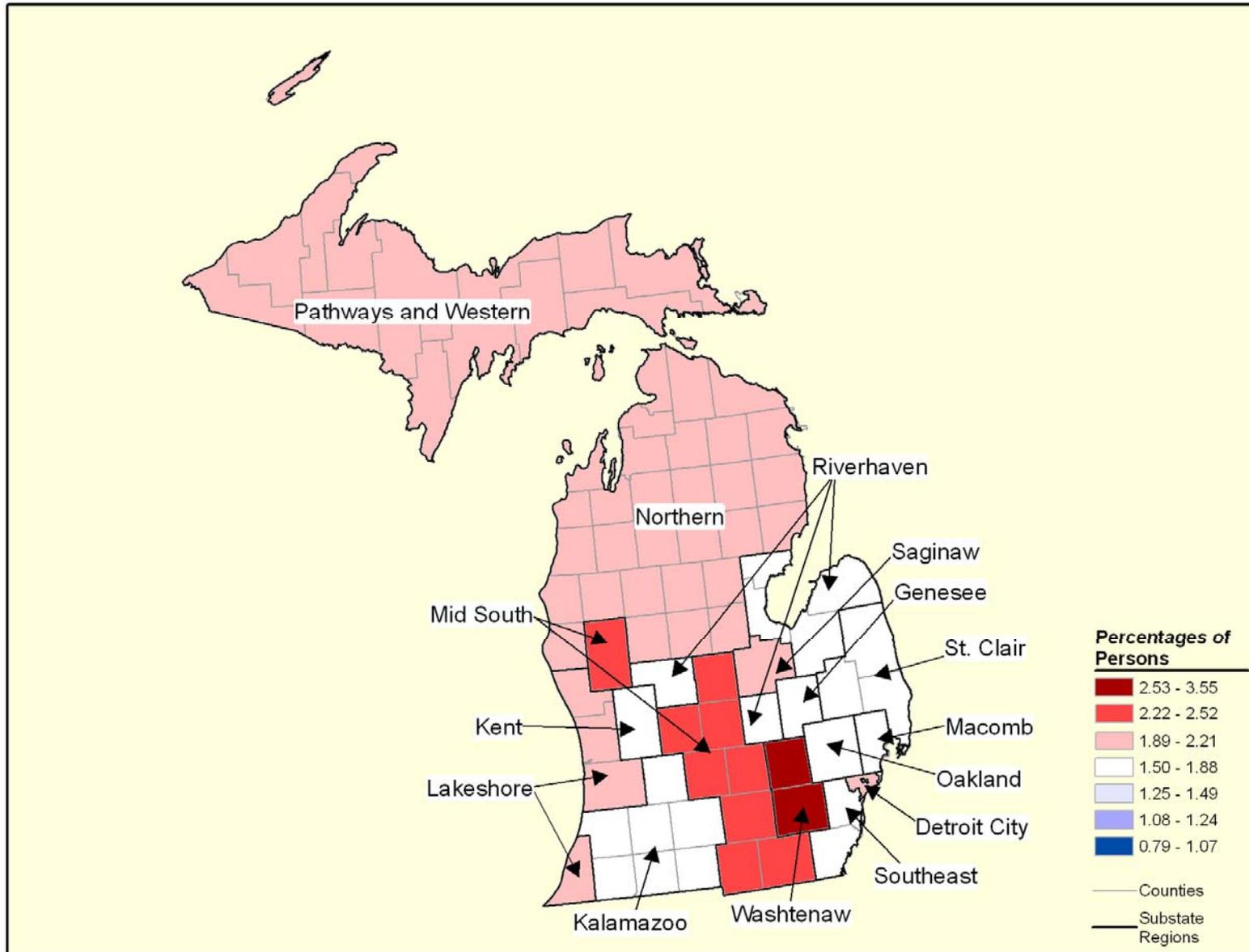
Figure 23.2.1 *Marijuana Use in Past Month* among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

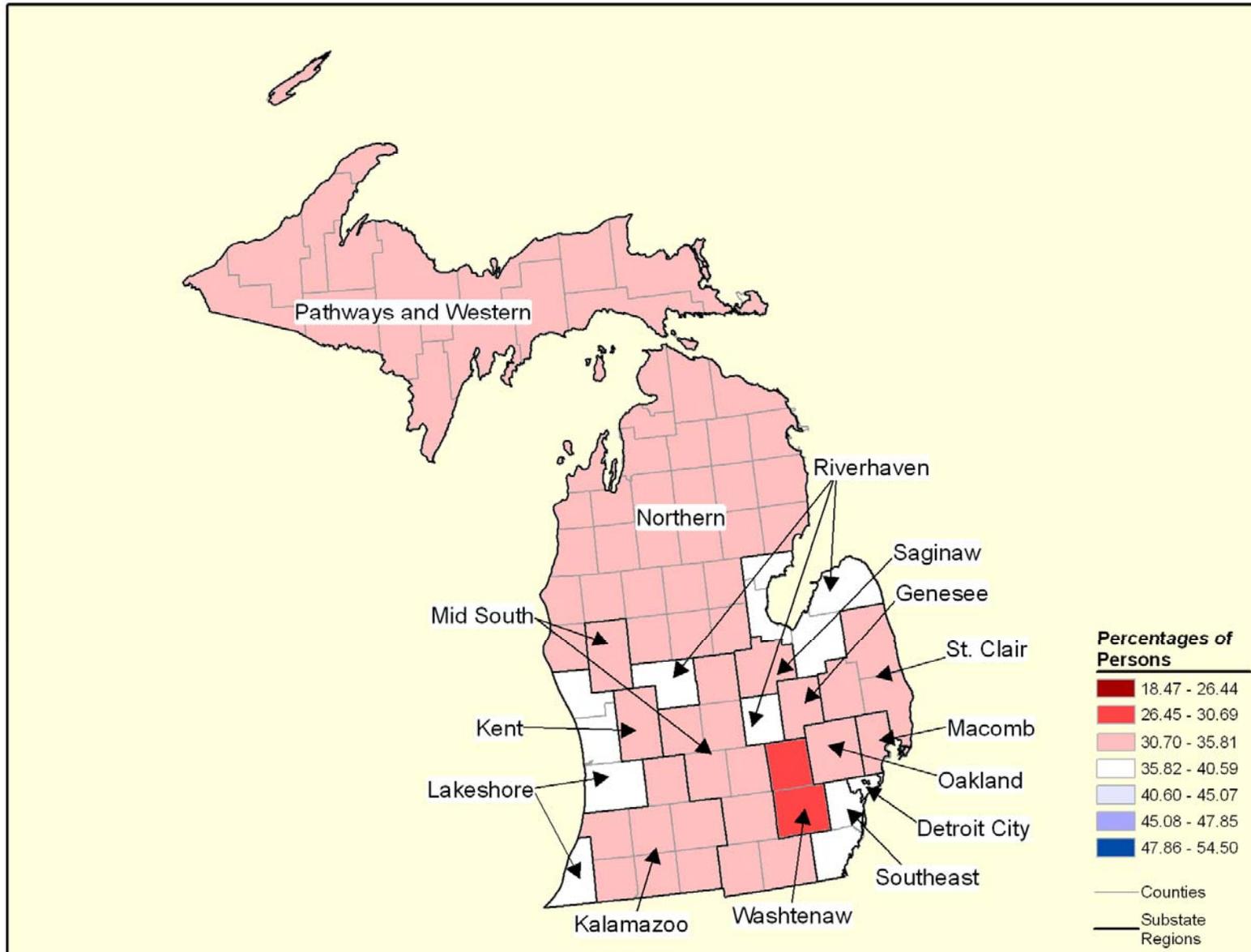
Figure 23.2.2 *First Use of Marijuana among Persons Aged 12 or Older in Michigan, by Substate Region: Average Annual Rates Based on 2006, 2007, and 2008 NSDUHs*



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

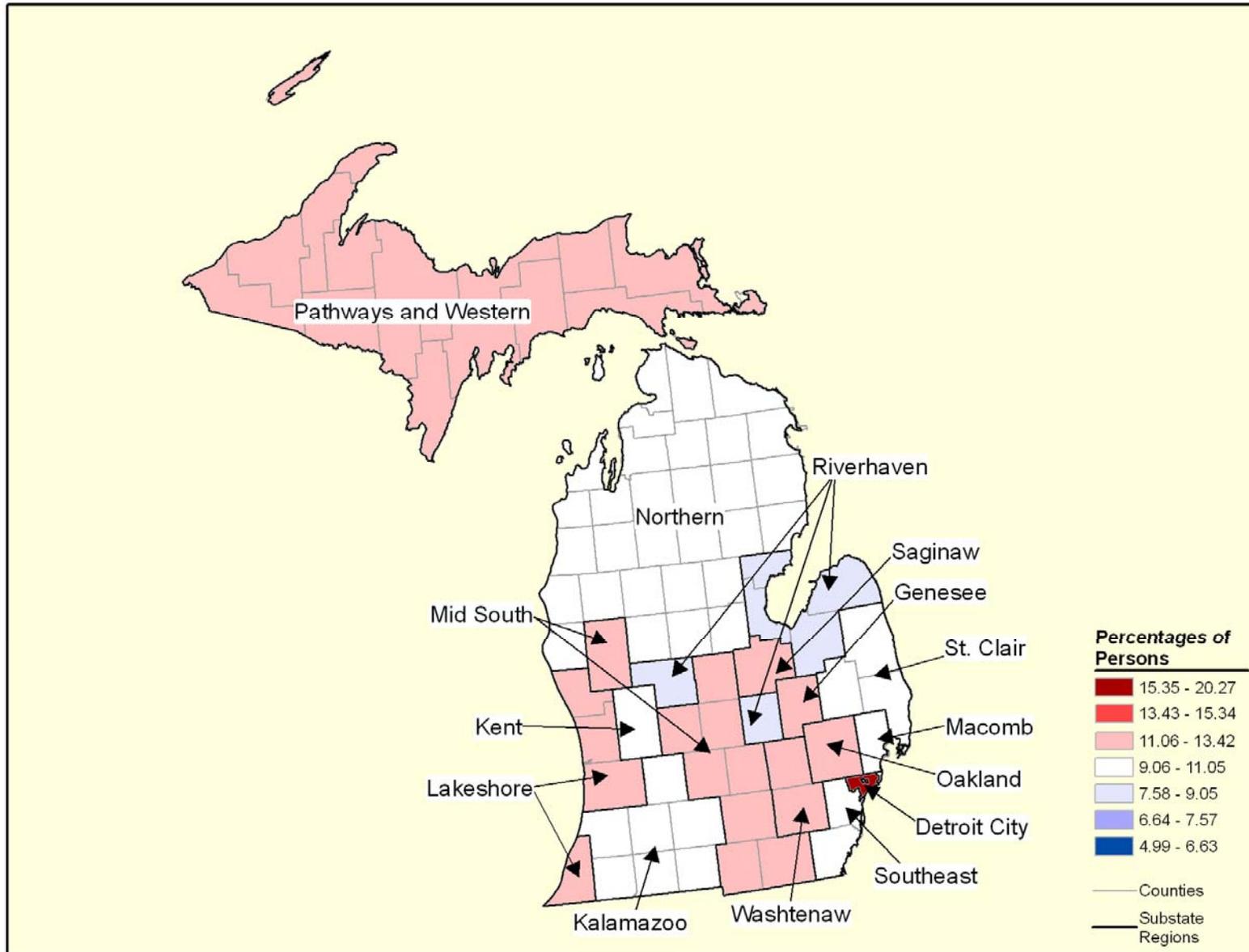
**Figure 23.2.3 Perceptions of Great Risk of Smoking Marijuana Once a Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

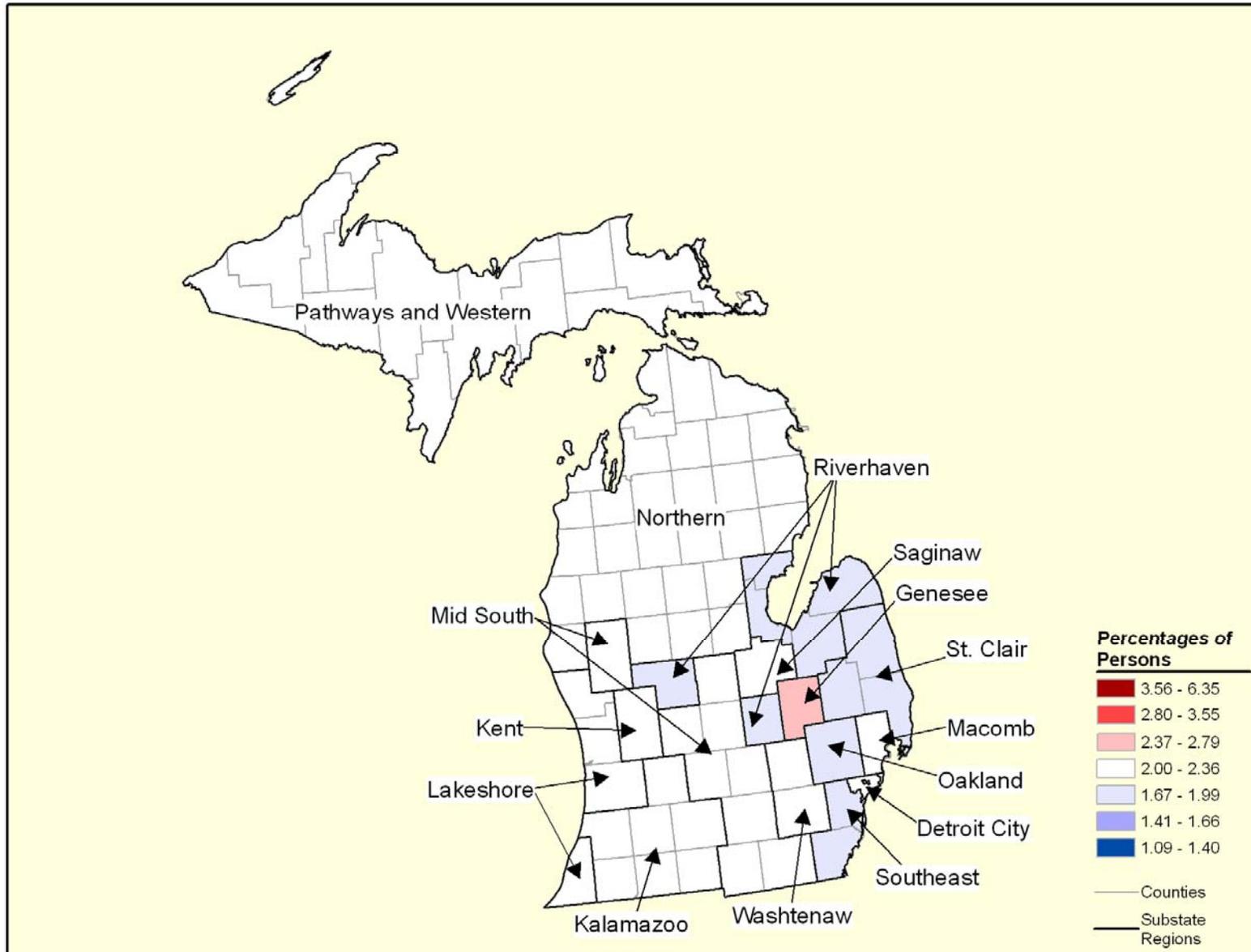
Figure 23.3.1 *Marijuana Use in Past Year* among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

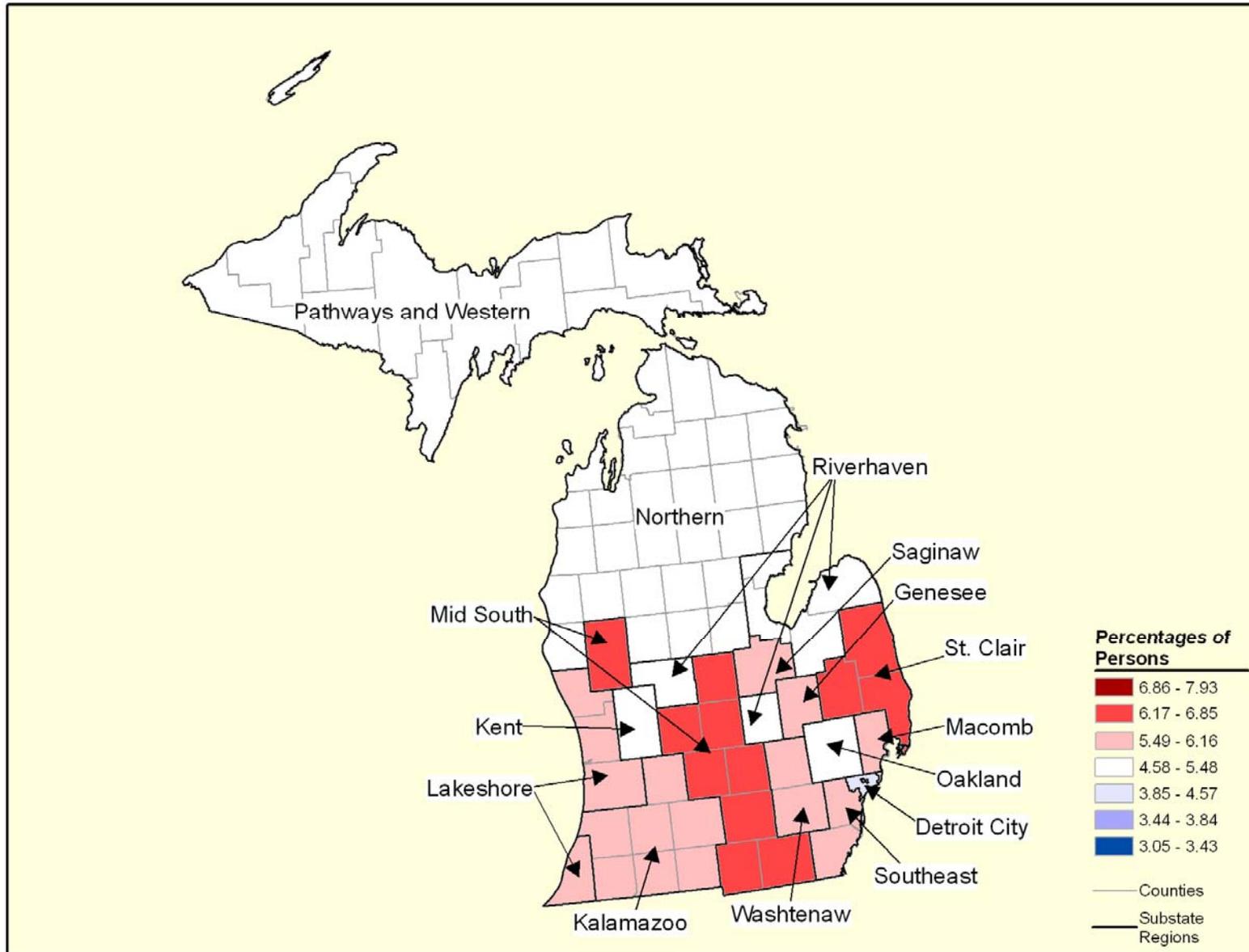
**Figure 23.3.2 Cocaine Use in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

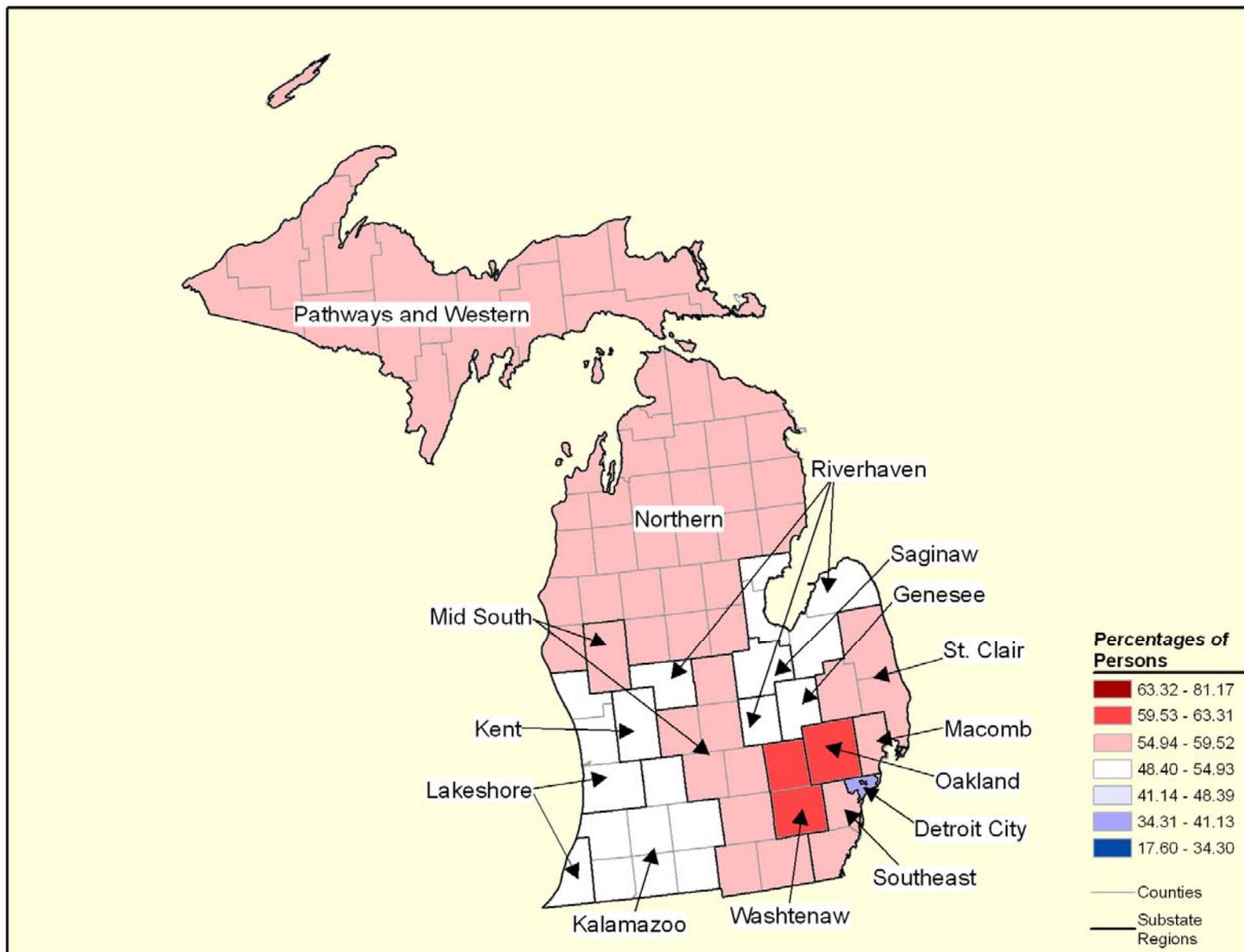
**Figure 23.3.3** *Nonmedical Use of Pain Relievers in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

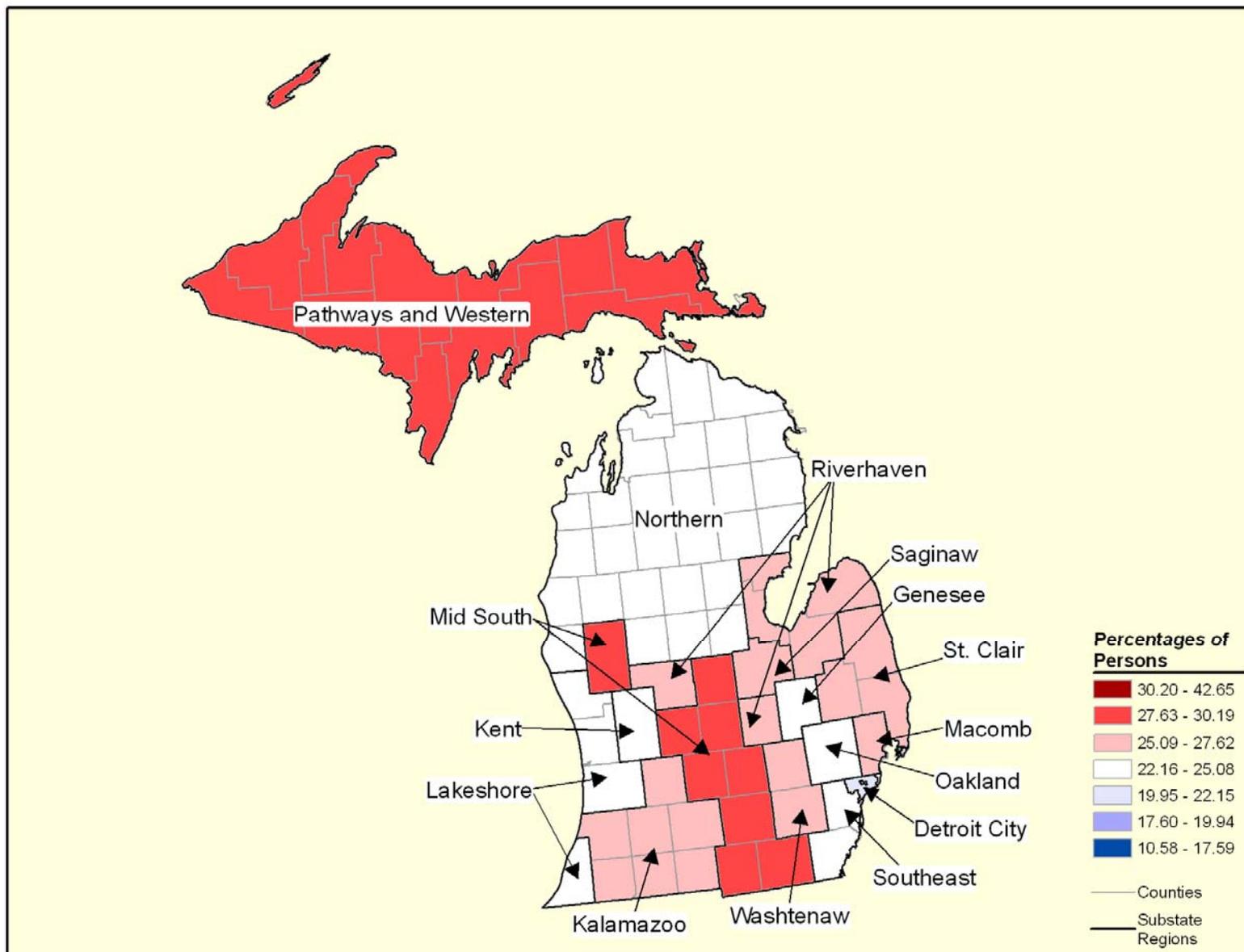
**Figure 23.4.1 Alcohol Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

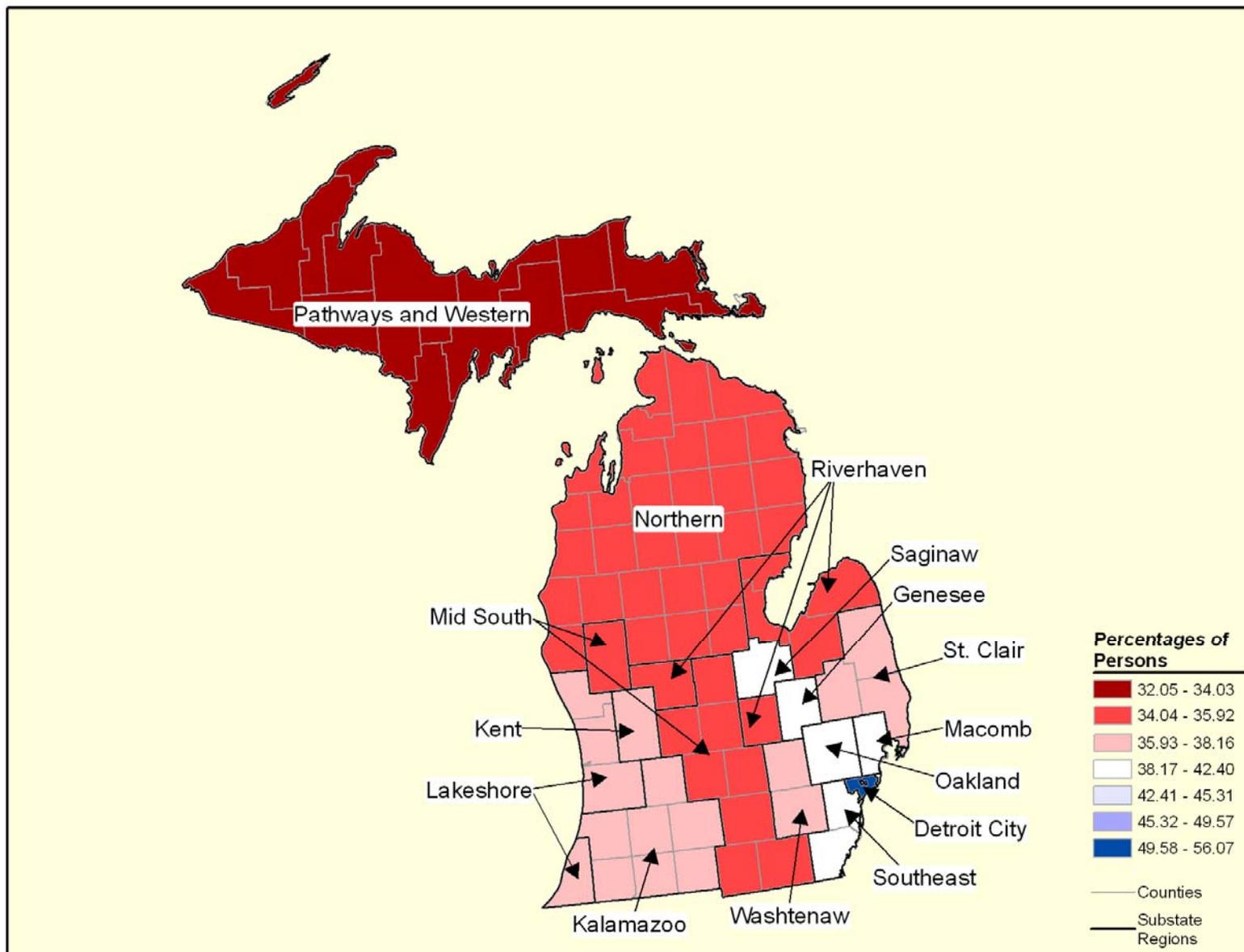
**Figure 23.4.2 Binge Alcohol Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

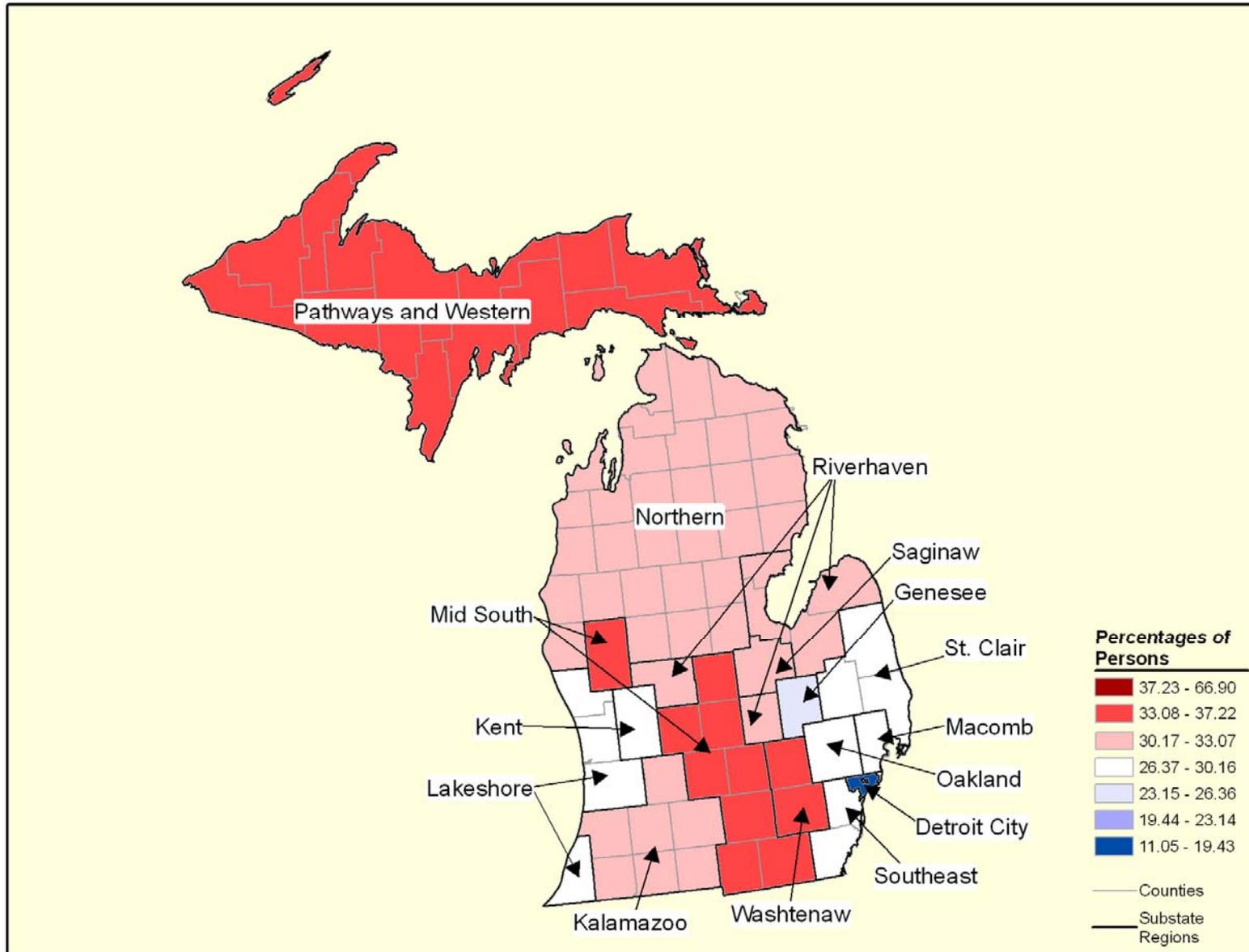
**Figure 23.4.3** *Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Figure 23.5.1 Alcohol Use in Past Month among Persons Aged 12 to 20 in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

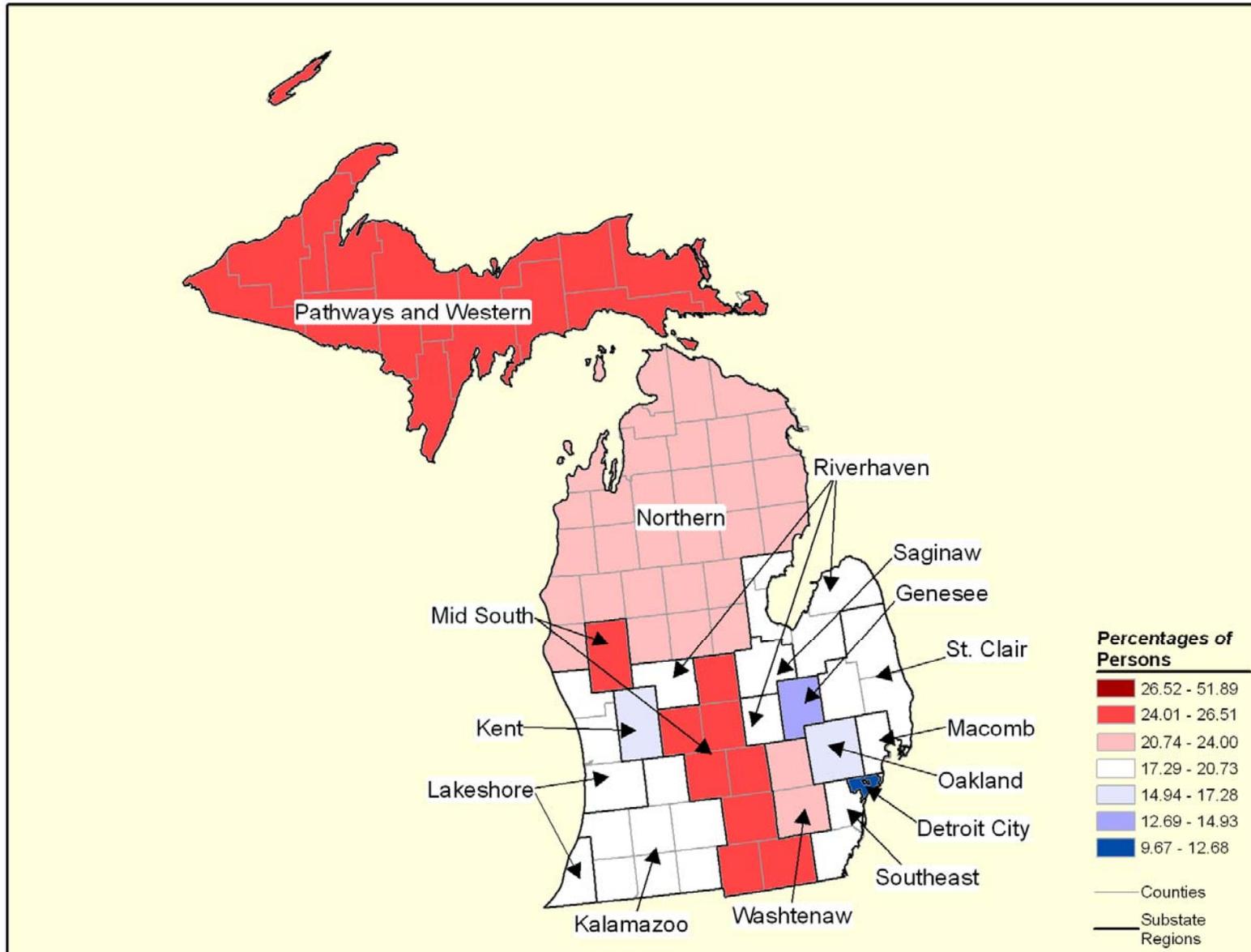


725

NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

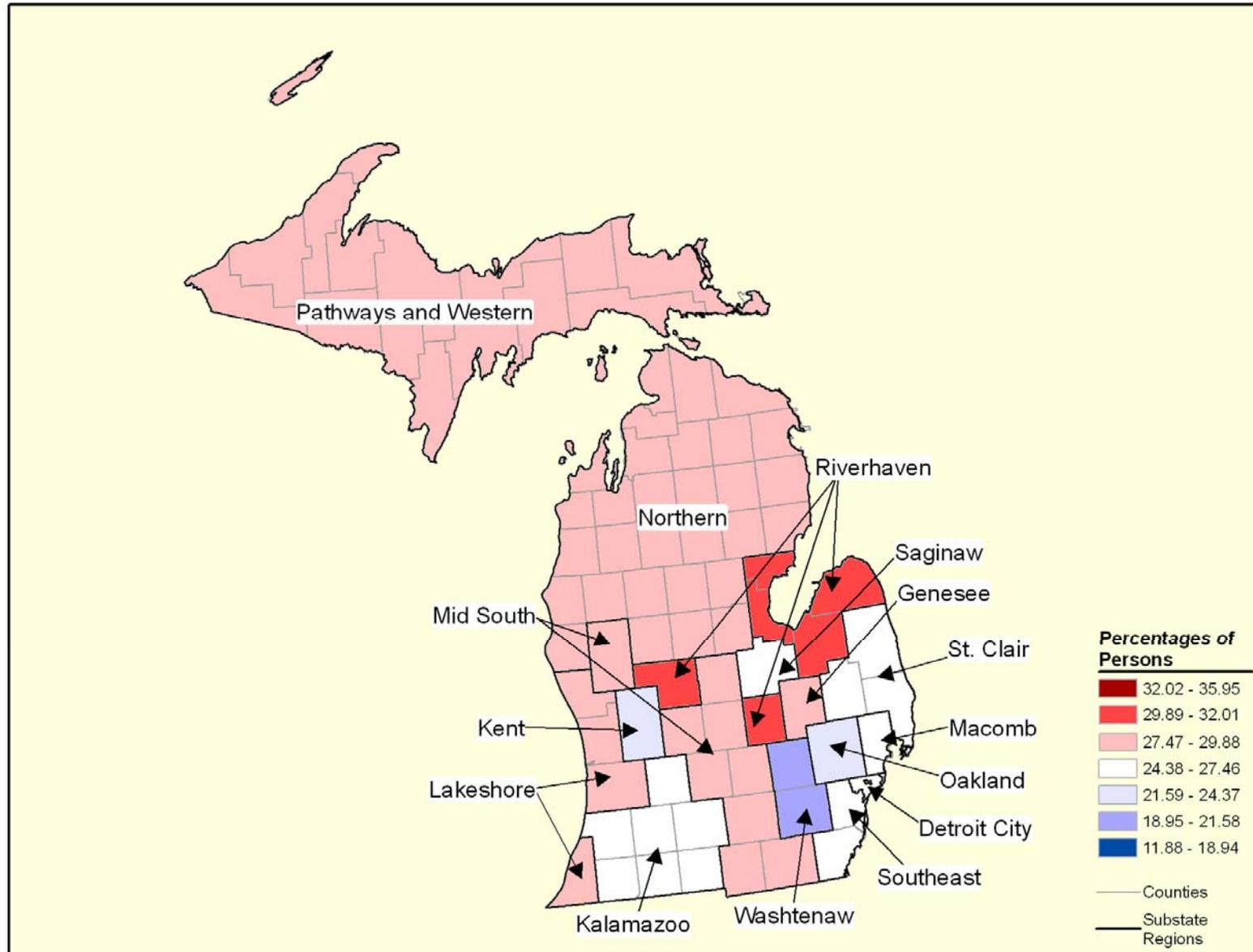
**Figure 23.5.2 Binge Alcohol Use in Past Month among Persons Aged 12 to 20 in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

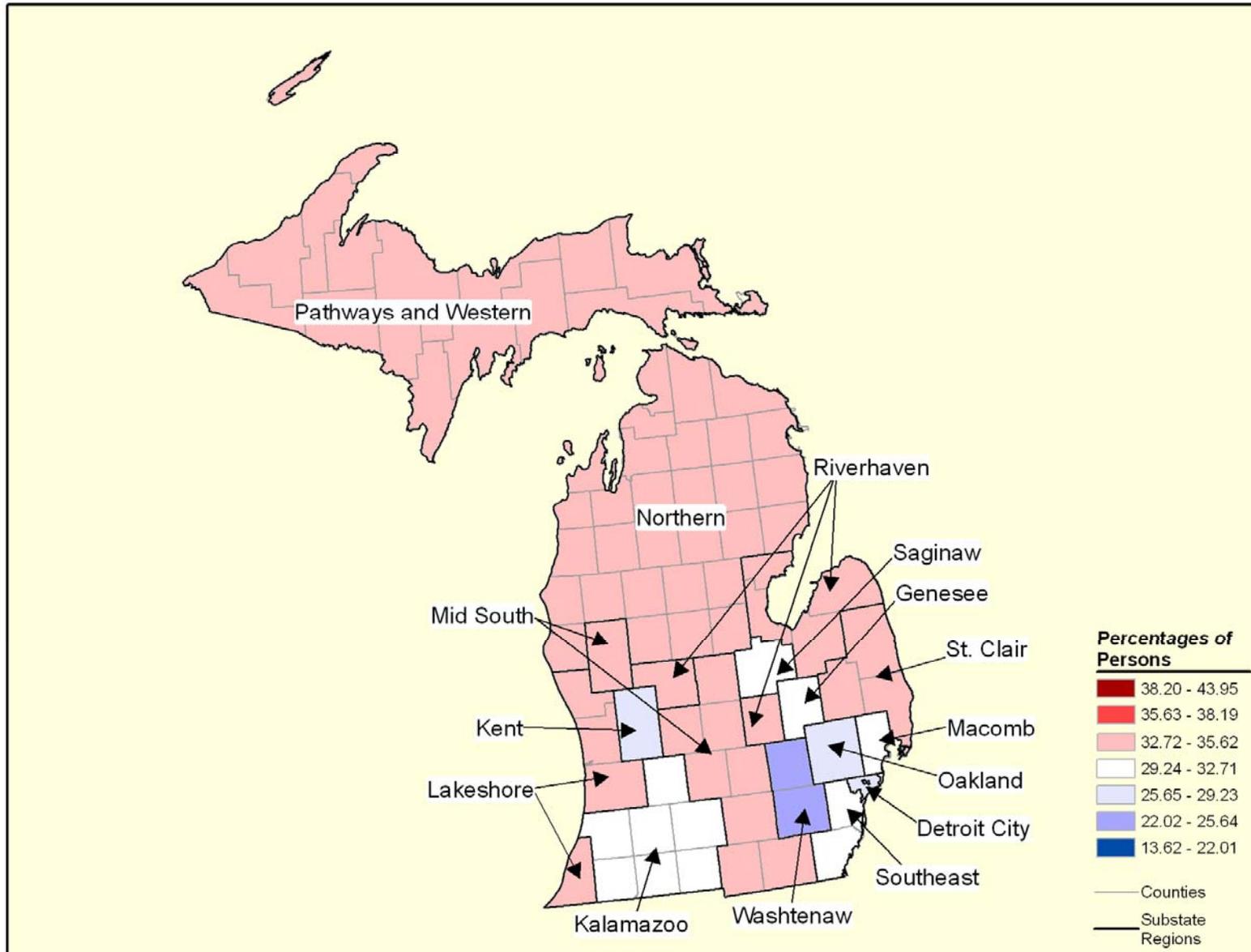
**Figure 23.6.1 Cigarette Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

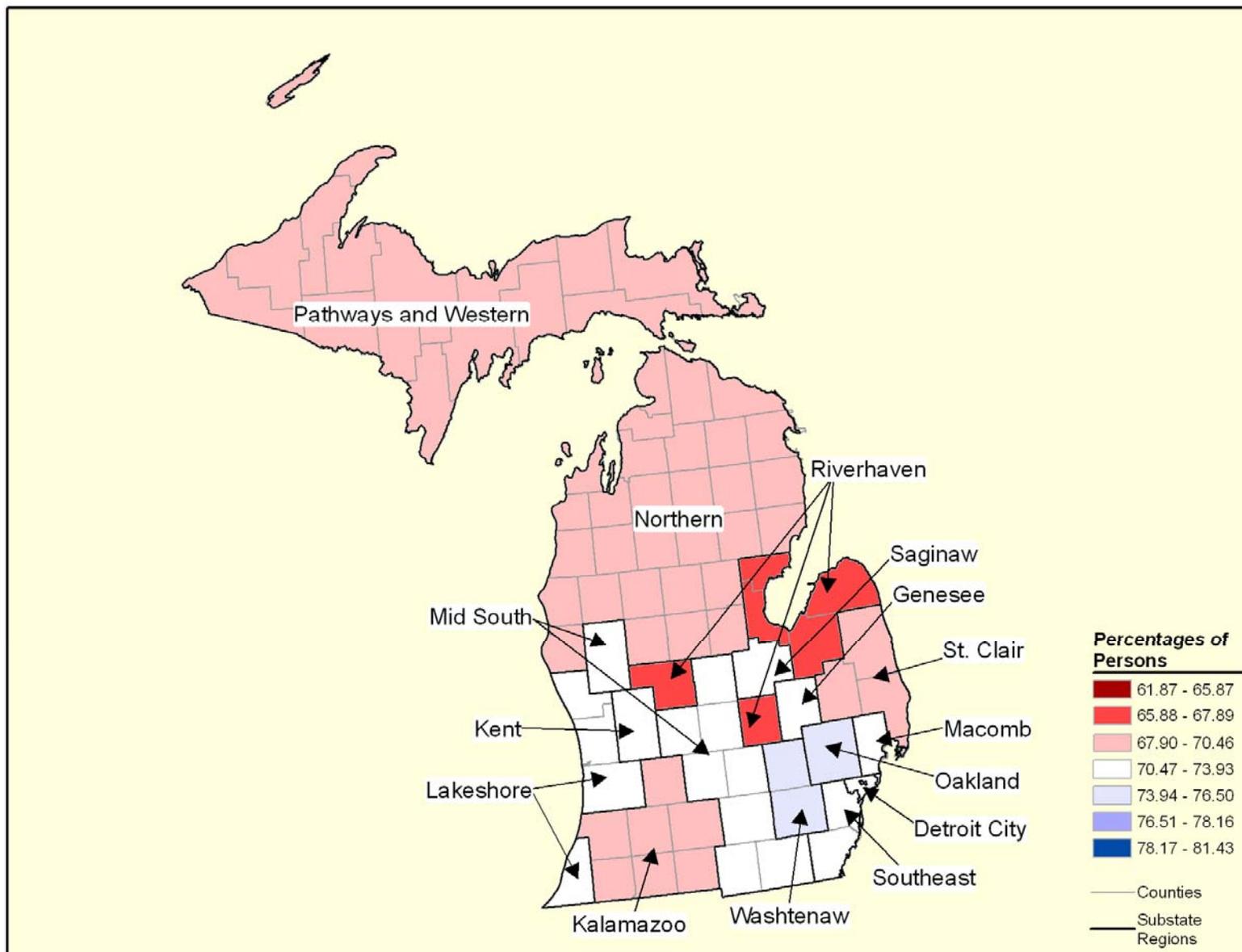
**Figure 23.6.2 Tobacco Product Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

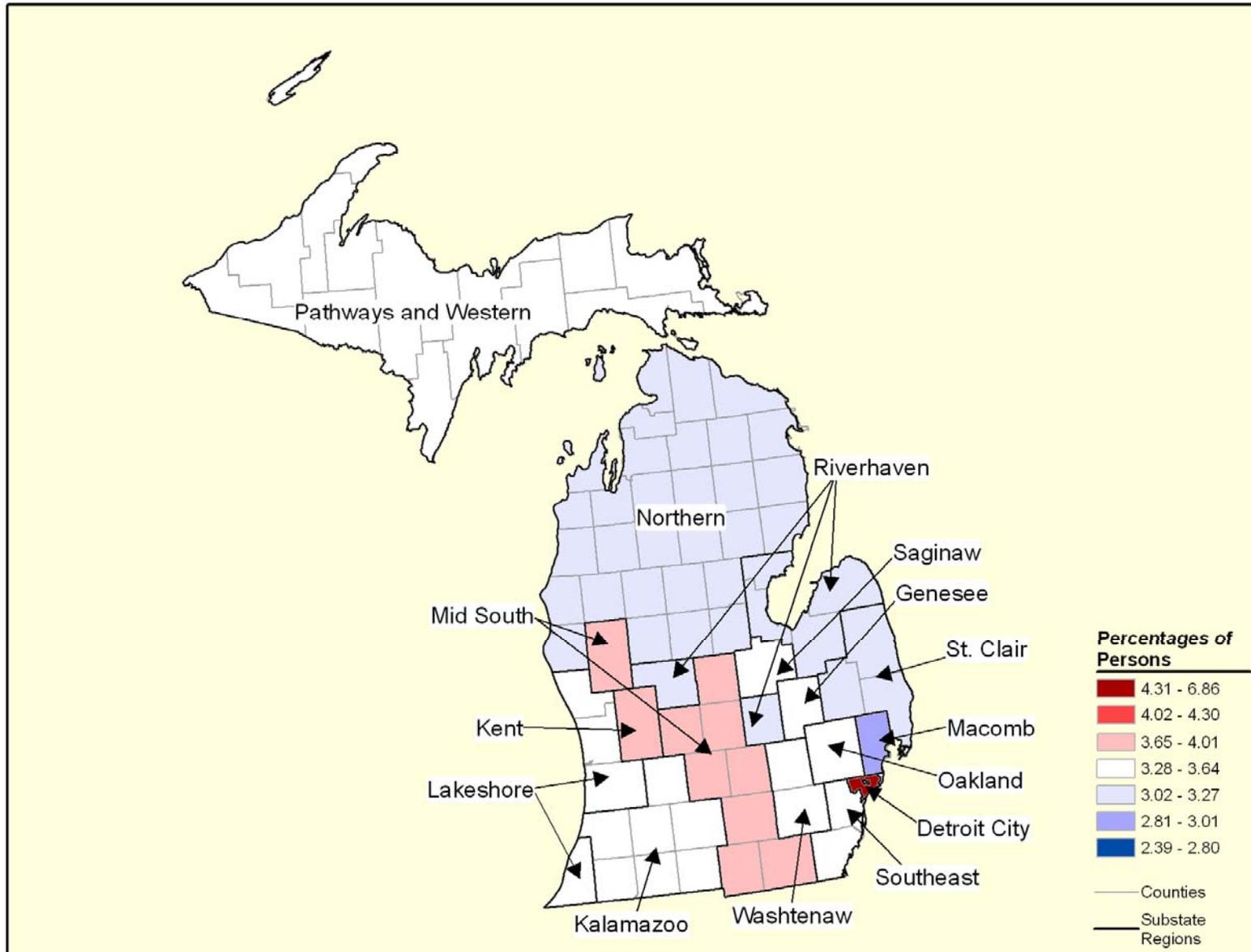
**Figure 23.6.3** *Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

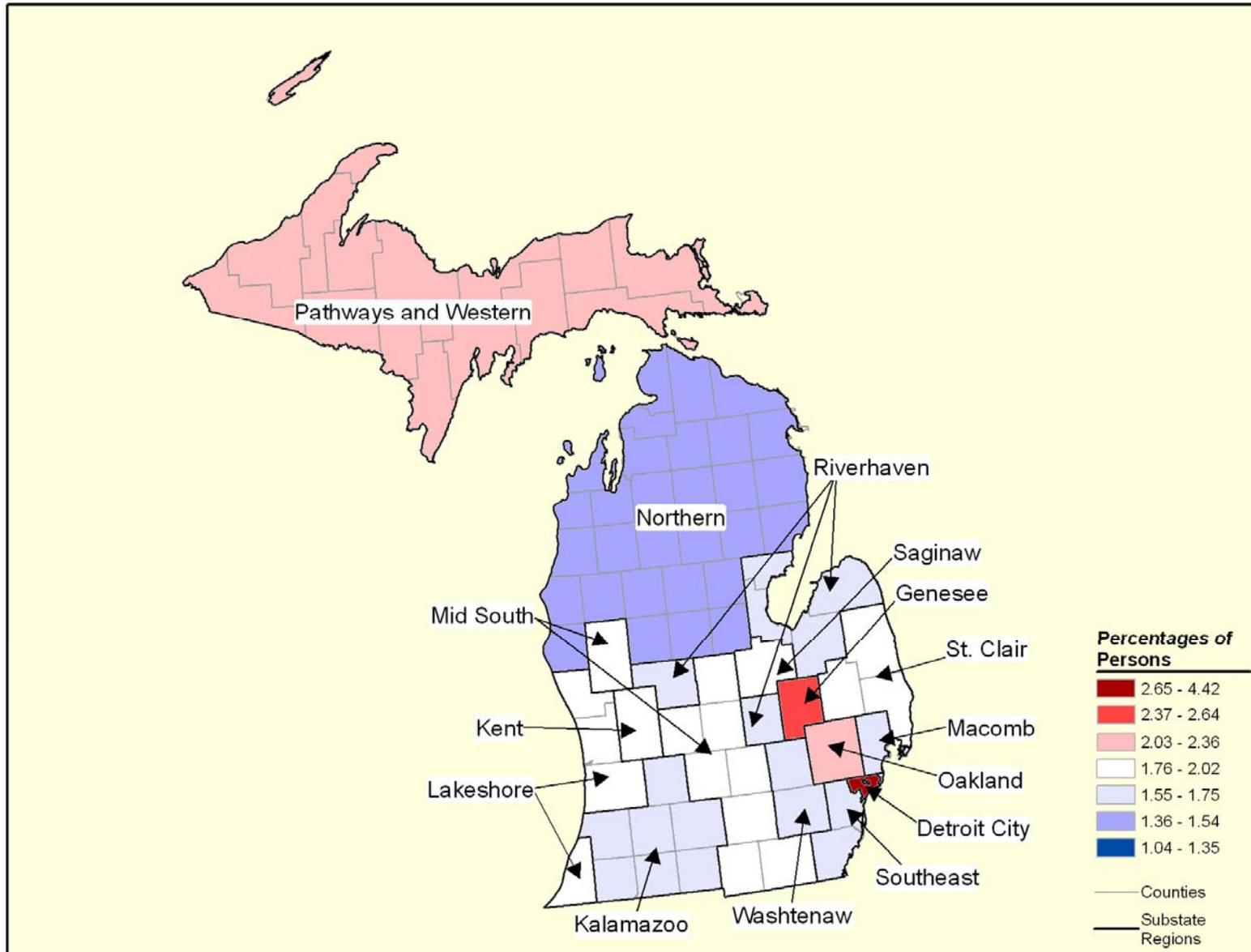
**Figure 23.7.1 Alcohol Dependence in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

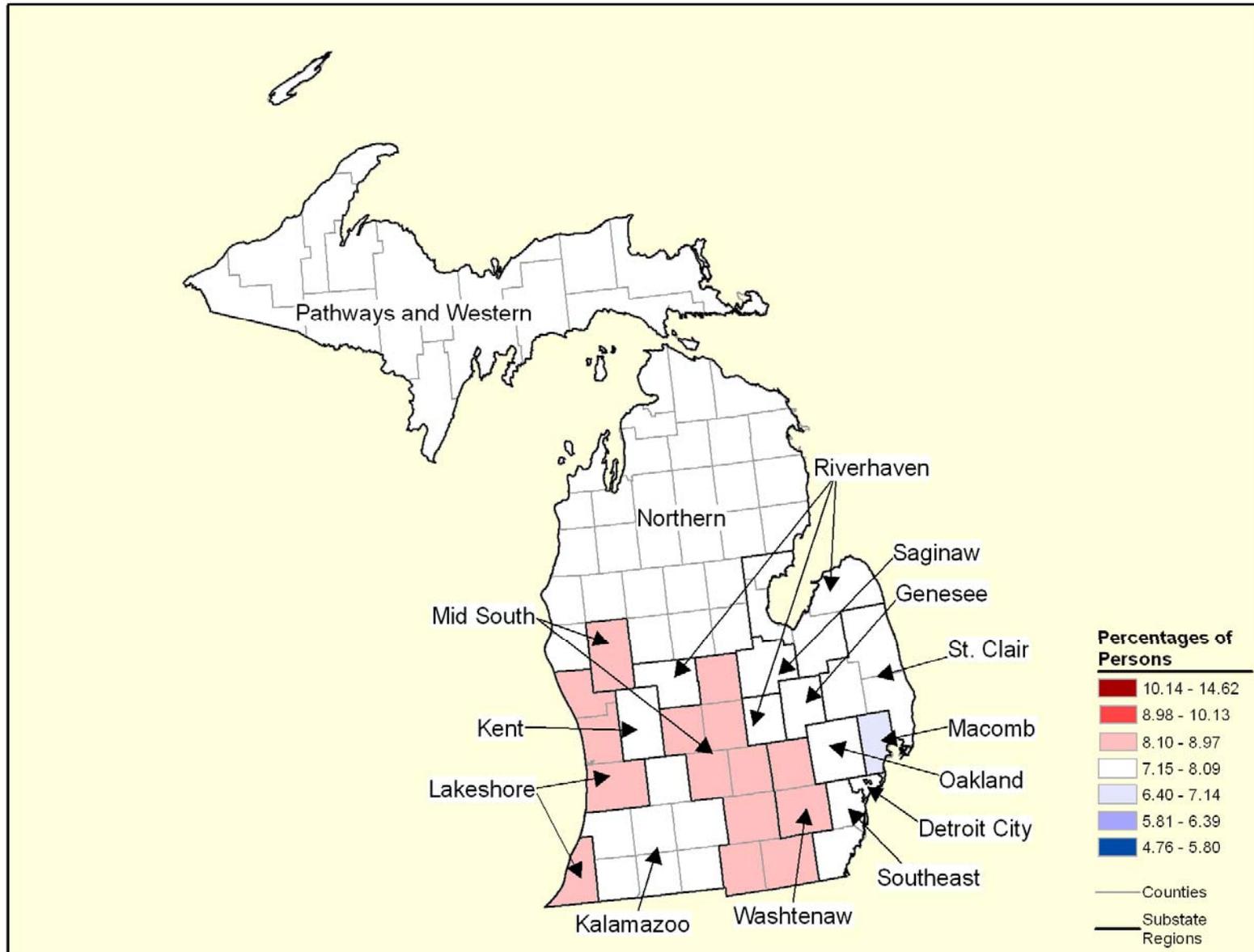
**Figure 23.7.2 Illicit Drug Dependence in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

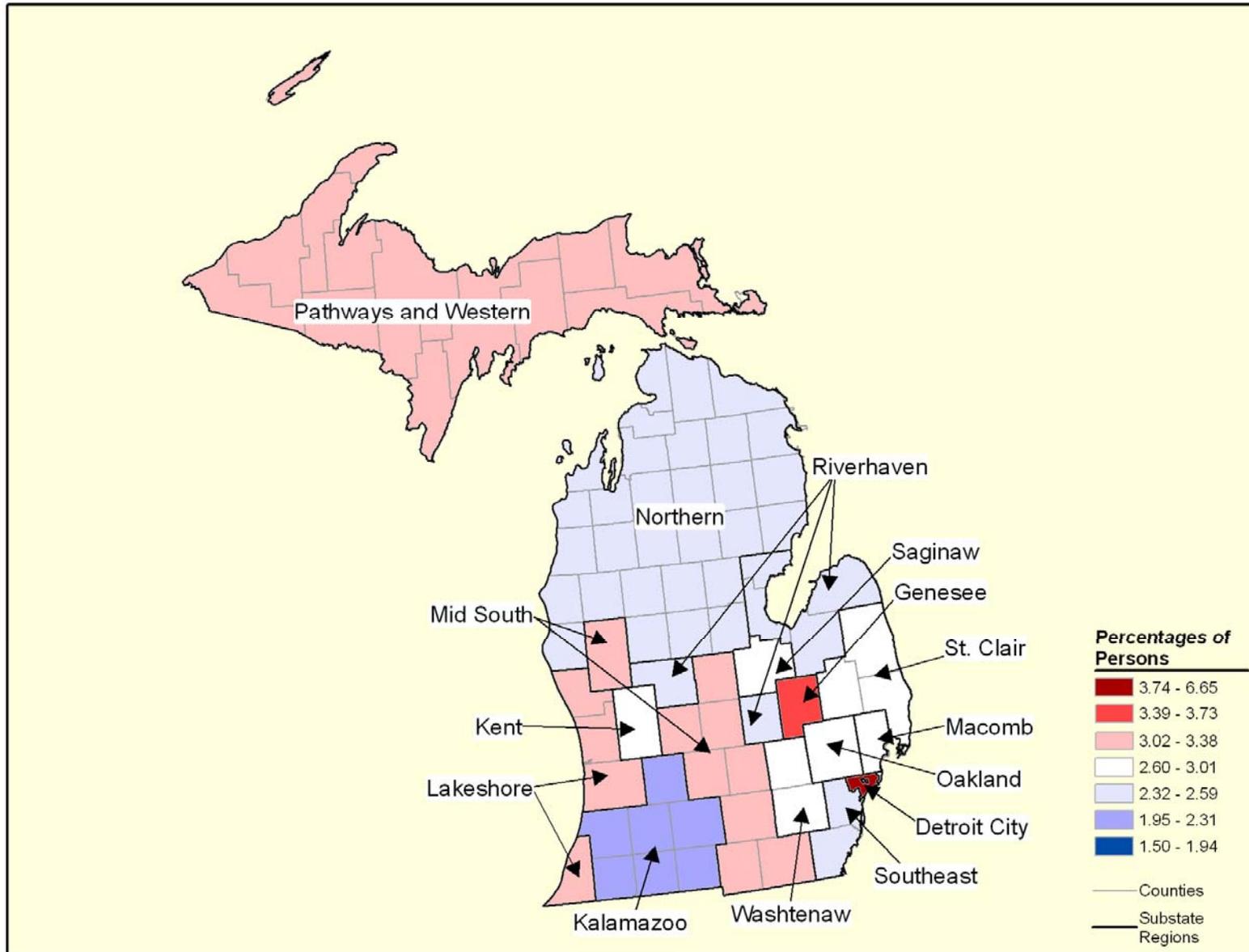
**Figure 23.8.1 Alcohol Dependence or Abuse in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Figure 23.8.2 Illicit Drug Dependence or Abuse in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs**

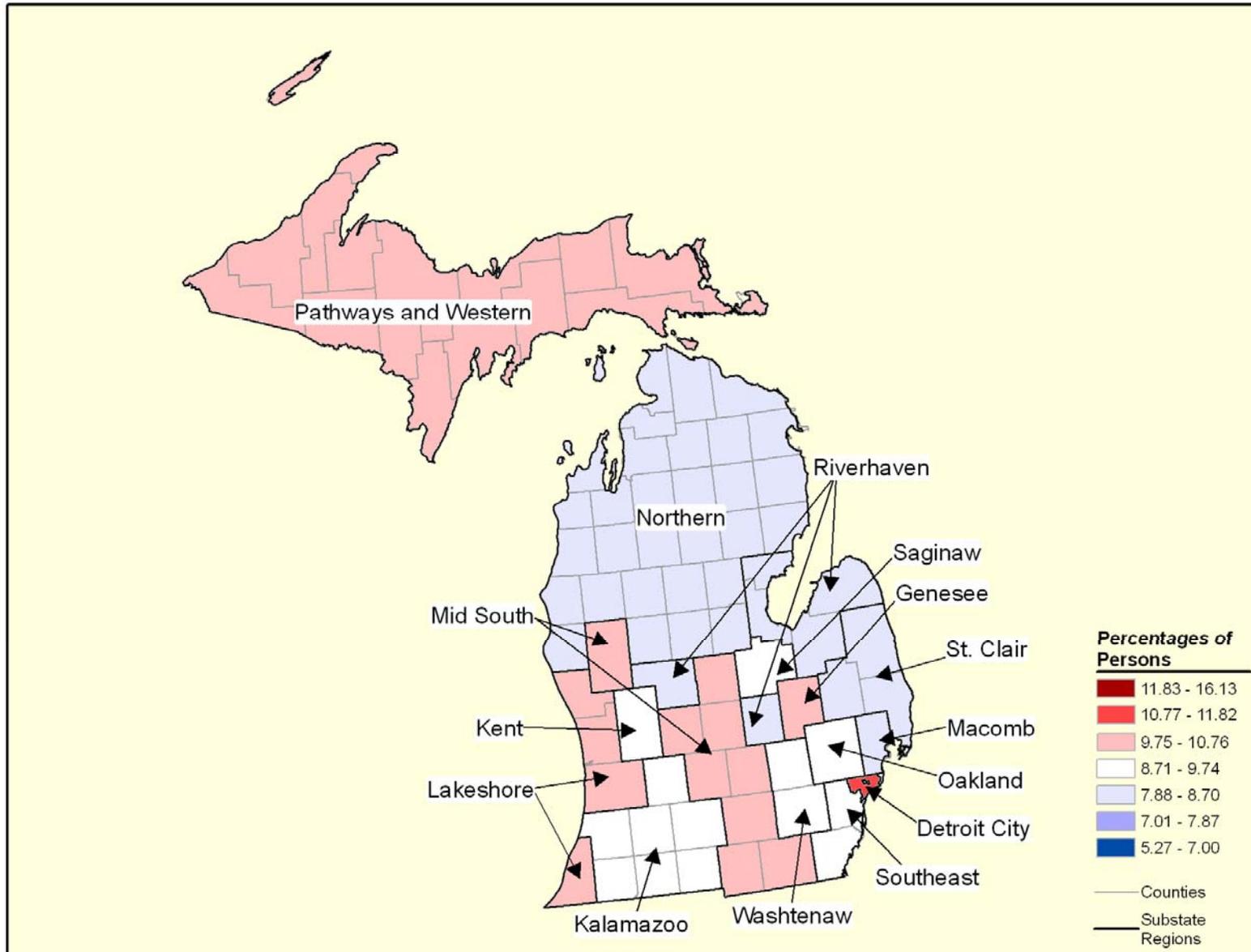


733

NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

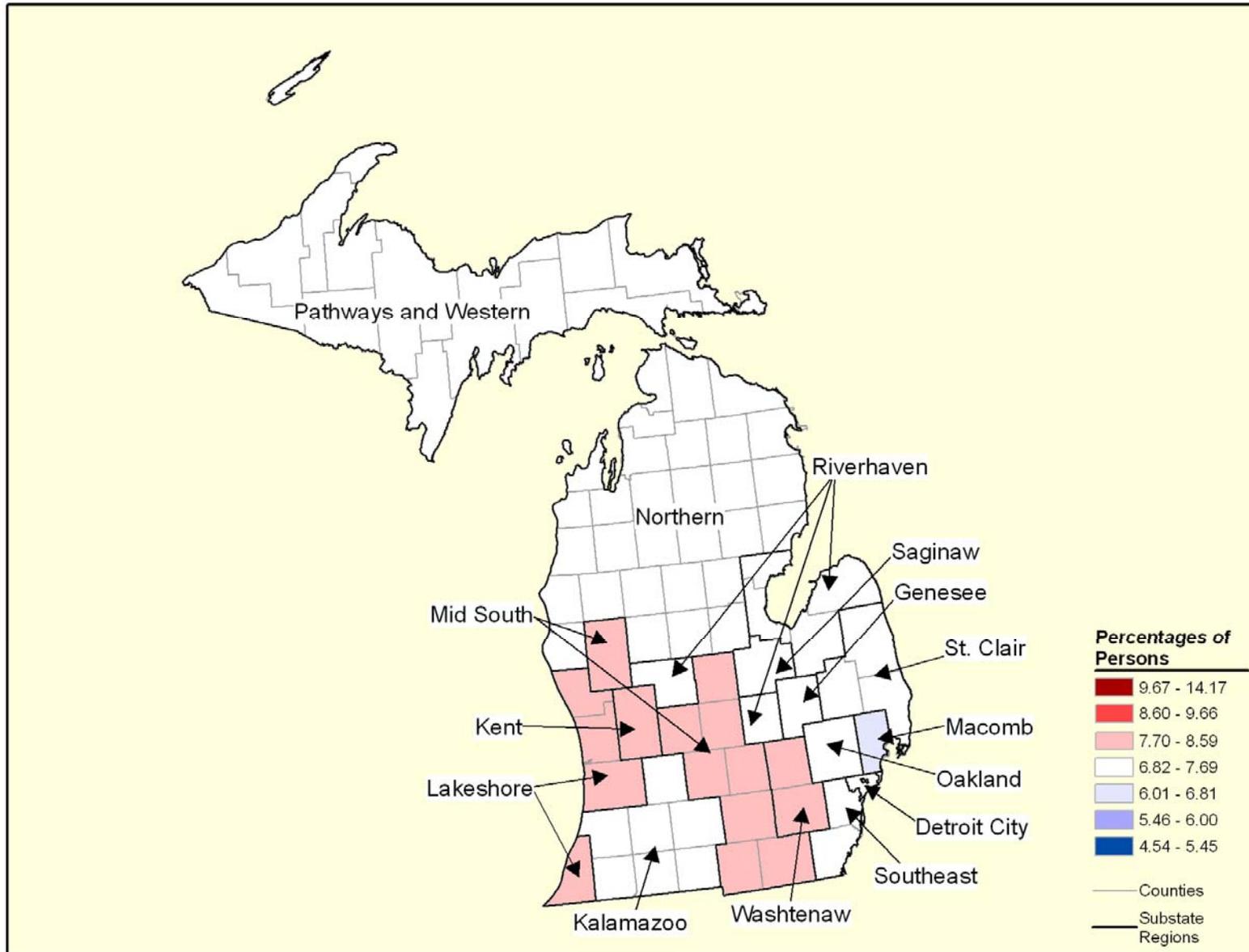
**Figure 23.8.3** *Dependence on or Abuse of Illicit Drugs or Alcohol in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

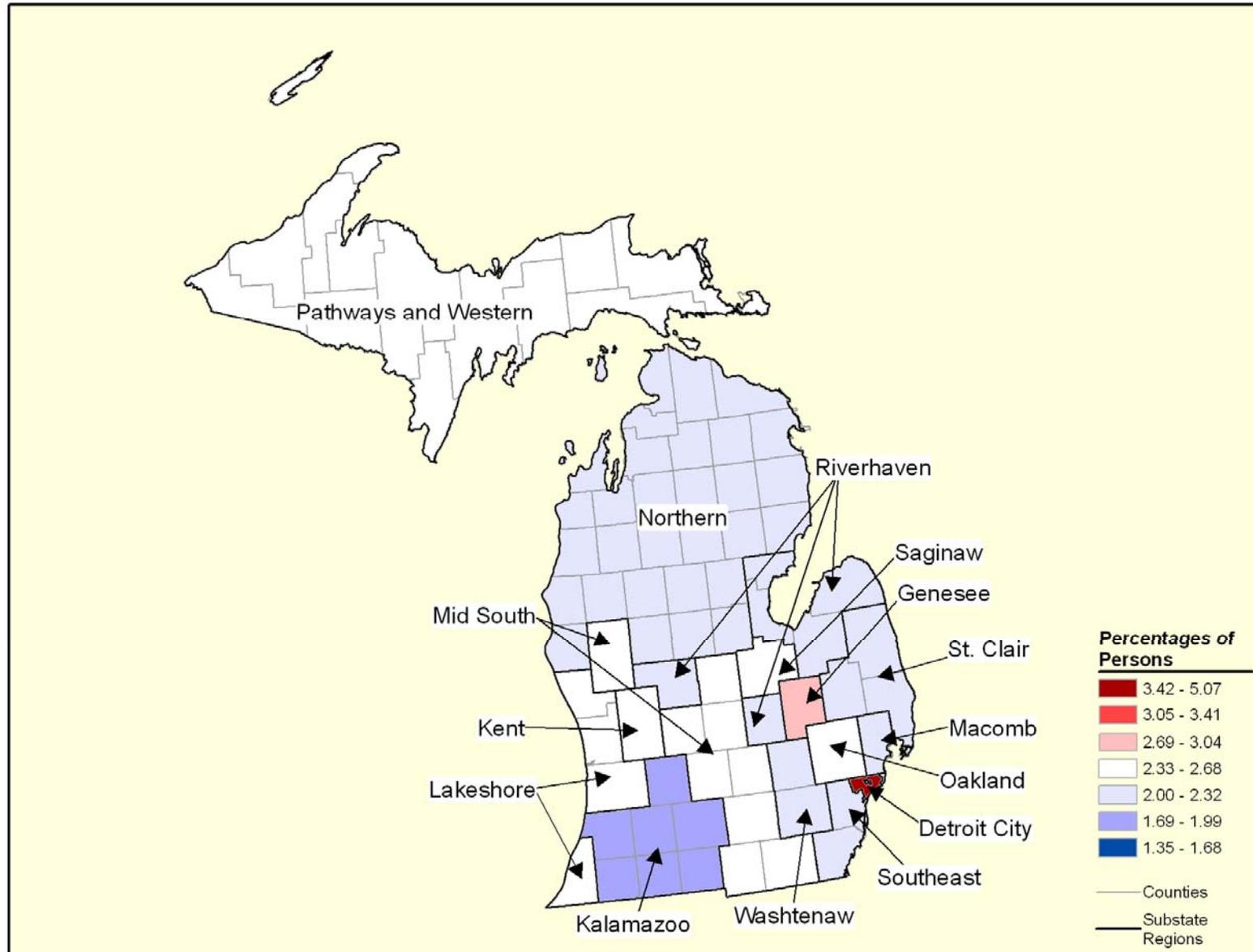
**Figure 23.9.1** *Needing But Not Receiving Treatment for Alcohol Use in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.

**Figure 23.9.2** *Needing But Not Receiving Treatment for Illicit Drug Use in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2006, 2007, and 2008 NSDUHs*



NOTE: The legend's ranges were created by dividing 344 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2006-2008 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006, 2007, and 2008.