A Survey of Gambling Behaviors in Michigan, 2013

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Acknowledgments

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<u>Introduction</u>

The 2013Survey of Gambling Behaviors in Michigan is the fifth iteration of a project begun in 1997 and primarily designed to provide an estimate of problem gambling in the state. While there were two year intervals between that first study and replications in 1999 and 2001, it was five years until the next iteration in 2006 and now an additional seven years to this study. While minor changes were implemented in each iteration of the earlier studies (c.f., Hartmann and Gullickson 2001), the last two versions were, as closely as possible, replications of the 2001 design. The most important changes made up to and including the 2001 project were: 1) inclusion of questions on Internet gambling (added in 1999) and on suicidal ideation related to gambling and use of the State Problem Gambling Help Line (added in 2001), 2) the design sampled and collected responses so as to produce samples of at least size 384 from each of five regions in the State of Michigan: The City of Detroit, the remainder of the Detroit metropolitan area, East Michigan, West Michigan, and the Upper Peninsula (see Appendix B). In 1999 the Detroit Metropolitan Region included the City and in 1997, Wayne County rather than the City was estimated separately from the rest of the Metropolitan Area. After adjusting for an oversampling of older residents, each region this year had at least 584 respondents.

The current design allows inference of the rate of problem gambling within each region with a reasonable degree of precision based on sampling error (plus or minus 2.5 percentage points[1]) and allows combination of those regions in proportion to their contribution to the adult population of the state in an aggregate data set. As described more fully in the section called "Characteristics of the Sample," this year's state aggregate data set contains 1413 interviews and therefore has precision based on sampling error of plus or minus 1.6 percentage points[2] for the rate of problem gambling.

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[1] When problem gambling is liberally estimated at 10%.

[2] The bounds of inference are calculated as $B = z\sqrt{\dfrac{pq}{n}}$ where B is the bound plus or minus from the sample estimate, p is the population proportion of the event in question, q is 1-p, z is the z-value for the desired confidence coefficient, and n is the sample size. For example; for p=.1 and n=1413 with a confidence coefficient of .95 (z=1.96), B=.016.

A consistent challenge of prevalence studies is that, since the rate of problem gambling is low, regional and even statewide samples yield a small number of persons scoring with a problem on whatever problem gambling screen is used. For obvious reasons, including the planning of helping strategies, this is an important population to sample and about which to make inference. Since 2001, additional interviewing was therefore done to increase the number of respondents scoring as a "problem" or "probable pathological gambler" on the problem gambling screen to 200 thereby allowing more precise analysis of this important subgroup. In 2001, we used a special sample of persons with an expressed interest in gambling as a form of recreation to efficiently increase the number of responding problem or probable pathological gamblers. The non-comparability of this targeted sample with the random adult sample used for the main study made combining the problem and probable pathological gamblers from the two datasets problematic. To address this concern, in 2006 and again this year additional sampling to obtain the needed numbers was done using the same population of adult residents of the state as was used for the main study. While this is less efficient, all 200 problem and probable pathological gamblers interviewed are now drawn from and represent the adult statewide population. Fully 149 interviews completed from this additional interviewing were added to the 51 interviews obtained from the original statewide calling.

As before, the primary aim of the survey is to establish a precise estimate of problem gambling in the population of Michigan residents 18 years and older. The 1997 study was required to establish this estimate with precision due to sampling error of no more than plus or minus 1 point (Gullickson and Hartmann 1997). This led to a design through which 3,942 responses were completed. Subsequent iterations were allowed to produce statewide estimates with slightly larger confidence bands and so allowed substantial data collection savings. The statewide samples were of size 1,211 in 2001, 957 in 2006 and 1413 this year.

The standard in prevalence studies, including our earlier work in Michigan, is to administer the survey through a Computer Assisted Telephone Interviewing (CATI) approach utilizing a random-digit dial (RDD) telephone sample. The CATI system automates and

documents the distribution of numbers to interviewers while also recording the disposition of each call and storing completed interviews in a database. Efficiency of administration is enhanced through automated advancing through contingency branches in the survey and data entry errors are minimized through range restrictions and similar verification checks. In our survey, for example, the problem gambling score must be calculated to determine whether the section of the survey for problem gamblers should be completed. This would be very difficult to accomplish in a non-computerized format. The random digit numbers themselves are obtainable in a variety of ways but generally trade off inclusiveness for efficiency. For example, area codes and three digit prefixes are typically the starting point for randomizing the last four numbers while even potential subsets of these suffixes are systematically vetted to increase efficiency of hit rates (actually connecting to a residential number).

As documented in our earlier reports and most fully in Gullickson and Hartmann 1997, the original form of the survey instrument used in 1997 was adapted from Rachel Volberg's survey of New York State in 1996 (Volberg 1996c) and used the South Oaks Gambling Screen (SOGS) as the basis for estimates of problem gambling. This year, again following Volberg's example and a clear trend in the published literature, we switched to the NODS screen (discussed below) and used the 2006 California study as our model..

Since the NODS is the basis for the prevalence estimates made in this study, a brief description and a comparison to the SOGS used in earlier reports is presented here. Since the early 2000s, scales based on the DSM-IV were becoming available and had much to recommend them. In fact, Volberg had predicted for some years that such a scale might come to supplant the SOGS but, as of her summary of the field in 2004 (Volberg 2004), that had not yet happened. The NODS is an instrument developed by Dr. Volberg and colleagues at the NORC for a national gambling study in 1999. For a number of years, researchers had argued that a prevalence instrument should reflect the nature of problem gambling as reflected in the DSM-IV(*Diagnostic and Statistical Manual of Mental Disorders, 4th ed.)* . The NODS did so and came to be widely used for prevalence studies. The SOGS had asked about a range of behaviors and orientations

toward gambling and was highly correlated with the APA's DSM-III-R (*Diagnostic and Statistical Manual of Mental Disorders, 3rd ed.-revised)* criteria for pathological gambling (American Psychiatric Association, 1987). In both scales, scores of 0 through 2 are considered nonproblem gambling (though technically, a substantial subset of these persons are "nongamblers" who do not receive a score on the NODS at all while those scoring 0-2 are "at risk"), 3 through 4 are identified as "problem gambling", and 5 or more is identified as "probable pathological gambling" (the "probable" hedge is often dropped in discussions of the NODS). As is customary in current use of the NODS (as it was for the SOGS), we asked each of the scored questions for two time frames, "ever" and "in the past year." These give rise to a "lifetime" NODS score and a "current" (past year) NODS score. Since a person must score a point on the lifetime question to be asked the past year question, the lifetime score is the basis for admission to the problem gamblers section of the survey.

Characteristics of the Sample

EPIC/MRA reports that in the geographic sampling used to produce the regional and statewide estimates, a total of 4,000 responses were obtained with a refusal rate of just over 72%. This rate for the main study is roughly comparable to that obtained in 2006 (71%) though both are higher than the 65% rate obtained in 2001. Despite generally declining response rates over time, the rate is well within the expected range for telephone surveys over the past decade. In fact, a 2003 study in British Columbia reported a similar 73% refusal rate and also pointed out that a review of national omnibus surveys showed an average refusal rate of 77% (British Columbia 2003). Groves et al (2004) report that that even the Behavioral Risk Factor Surveillance System, one of the best funded and prestigious telephone based household surveys, showed an increase in median nonresponse[3] across states from about 30% in 1991 to almost 50% by 2001 (p. 187). Since most statewide gambling prevalence studies were done some time ago, their refusal rates are a bit lower. The last two state-wide surveys we reviewed in 2001 showed a

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[3] Refusals are a component, generally the largest and fastest growing one, in response rates.

64 percent rate in New York in 1996 and a 60 percent rate for Louisiana in 1995 at about the time we achieved the 65% rate in Michigan. Note that our earlier studies also had somewhat better refusal rates: 57 percent rate in 1997 and 55 percent in 1999. It is reassuring but not sufficient that several studies (British Columbia 2003, Volberg 2004) point out that the quality of prevalence rate estimates seem to be robust with respect to refusal rates.

Since samples sizes of 800 were collected by region to allow inference at acceptable levels for each part of the state, a representative statewide sample could not be a simple aggregation of the regions. After controlling for an oversampling of older residents, a weighting procedure was used to produce a statewide sample of size 1413 that is weighted to represent the adult population of Michigan by region. This resulted in an error band at a 95% confidence level for problem gambling rates with a precision of plus or minus 1.6 points based on sampling error (the band was plus or minus 1.7 points in 2001 and 1.9 points in 2006). The weighted sample includes 584 cases from the Metropolitan Detroit sample excluding the city of Detroit (the full sample), 317 from the East counties, 367 from the West, 47 from the U.P., and 98 from the City of Detroit. That weighted sample is used throughout this report as the "state sample."

Sampling variation due to sample size is only one source of error in inference. The real concern is response bias and a standard check on this, particularly in the presence of high refusal rates, is to directly compare the obtained demographic characteristics of the sample against other estimates of those population characteristics in which one has some confidence. Table 1 does this for the statewide weighted sample against the 2010 Census figures for the state.

In reviewing this comparison, it is important to note that telephone surveys are used for prevalence studies because, despite reduced response rates, they can produce an efficient tradeoff of cost and response bias. Random digit dial (RDD) approaches, in particular, are preferred because they address the most obvious sources of bias in telephone sampling, access to unlisted numbers. Nevertheless, the RDD telephone survey has known weaknesses. First, most survey organizations exclude cell phones. There is an increasing percentage of the population that does not have a land line (perhaps as high as 5-10%). Therefore, for the first time, we included a cell

phone sample as part of our data collection protocol. Also, telephone surveys in general often under-represent males, poor people, and younger respondents and therefore tend to under-represent characteristics associated with male sex, low income, and youth. Several factors are likely to be in play. First, men are less likely to answer the phone when a woman also resides there. We used the "most recent birthday" screener to minimize that bias. Second, the poor simply are less likely to own a phone. Third, participation rates in survey research are directly related to education. Furthermore, poorer families and young householders may be less likely to have an adult at home in the evening when many contact attempts are made (due to one adult households and late shift work). Poor households also tend to have a younger age structure which is also related to presence in the home and willingness to participate. In any event, most telephone surveys expect to under-represent men, the young, the poor, and the less educated and consequently black and central-city residents as well.

Each recent statewide gambling study we reviewed reported these biases, especially with regard to education and income. A standard correction for each response rate variation is to weight the underrepresented category for analyses. Most of the statewide gambling studies did not do this, however. In her Iowa report, Volberg contends that, "To maintain comparability with results from the 1989 survey from Iowa, as well as with results from surveys in other United States jurisdictions, it was deemed advisable to caution readers regarding these prevalence estimates rather than weight the results from the 1995 sample." (Volberg 1995b, p. 5). We followed this precedent in past studies and do so again here with the exception already noted of using a random procedure to reduce the very large oversample of respondents 65 years of age or older. In the 1997 report, we produced both weighted and unweighted estimates. Weighting did affect estimates of gambling problems in Michigan, though the magnitudes tended to be of a half a percentage point or less. As explained below, it is important to remember that response bias, to the extent that it is present in all gambling prevalence surveys of this type, almost certainly works to produce underestimation relative to the actual rates of gambling and problem gambling in the population.

Table 1 shows the characteristics of respondents to the 2013 Michigan survey and of Census descriptors for Michigan's adult population. As expected, the statewide sample under-represents minorities and the younger and least educated residents of the state. As before, weighted estimates are not reported because of their small effect on problem gambling rates and the lack of such practice in other studies. The final reason for using unweighted estimates is that the assumptions of weighting (principally that non-respondents of a particular demographic category are well represented by respondents of that category) are rarely justified.

Table 1. Percent of the Sample in Demographic Categories Compared to Those of the 2010 Census Population Aged 18+and to Post-Census Estimates

	Statewide Sample	2010 Census
N	1413	7,539,572
Gender		
Male	51.5	48.4
Female	48.5	51.6
Race/Ethnicity	(n=1384)	
White/Caucasian	83.6	81.0
Black/African American	10.5	13.4
Other	5.9	5.7
Hispanic (n=1408)	1.8	3.5
Age	(n=1413)	
18-20	4.5	6.0
21-64	72.7	75.9
65 or older	22.9	18.1
Education (n=1404)		(age 25+)
<High School	3.2	11.4
High School/GED	29.6	30.7
Some College/Assoc.	32.0	32.4
Bachelors Degree	15.7	15.7
Grad.Study/Degree	19.5	9.8
Household Income	(n=967)	(all households)
$25,000 or less	22.3	25.5
$25,001 to $50,000	27.9	25.8
$50,001 to $100,000	32.9	30.5
$100,001 or more	16.9	18.1

Results

      As before, the main variables of interest in this year's survey are the estimated rates of problem and probable pathological gambling this time as derived from the NODS (recall that past estimates were from the South Oaks Gambling Screen). Table 2 presents the number and percentage of respondents who ever gambled and gambled in the past year as well as the unweighted NODS estimates for lifetime and current (last 12 month) periods. The percent who ever gambled is 77.1% which is lower than the rate in 2006. The result for past year gambling is 61.5%, again lower than that obtained in 2006.

      Table 2 also presents the NODS scores for the state and for geographic regions of the state defined by Detroit and the state's counties (see Appendix B). NODS scores are reported in the table both for the "problem" and "probable pathological" categories. In this report, the two percentages are often combined into a single NODS score for "problem gamblers." The state estimate for the "Lifetime NODS" is that 1.4% of the adult population may have a gambling problem. There are two very important points to emphasize here. First, this estimate is less than the estimate obtained in 2006 using the SOGS. But second, voluminous research on the comparability of the NODS and SOGS instruments suggested that the NODS gives an estimate substantially smaller (on average a multiplier of 1.7 is needed) than that of the SOGS (Williams, Volberg and Stevens 2012, pp. 18-20). The Williams, Volberg and Stevens meta-analysis also found that rates are declining in recent years. What can be said is that the rates obtained this year in Michigan are in the range of rates found with this instrumentation in other states (see below, Table 3). The estimate in this report for past year or "current" probable gambling is 0.5% using the NODS, again within the range found in other states.

      Additional notes on comparability to past years: Recall that sampling error is approximately 1.6 points above and below the NODS score so an actual state NODS score as high as 3.0 is consistent with these survey results.[2] Using the 1.7 multiplier

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[2] It is, of course, standard practice to use the sample proportion to substitute for the population parameter p in the standard error calculation. The use of the sample proportion is an expedient that is appropriate under most conditions. On the other hand, an important rationale for using an alternative to the sample proportion is that any

would give a SOGS equivalent of about 5.1 on the upper end (not likely but statistically within the bounds of error) which is higher than the point estimates obtained in all but the first of the past versions of this survey in Michigan. Another way to think about how close these estimates are across the years is to realize that the "Lifetime" estimate in 2006, for example, would exactly match the 2001 estimate if we had completed 4 more interviews with persons in the problem categories out of the 957 in that statewide sample. A similar difference was found between the 2001 and 1999 estimates. Similarly, this year if only two respondents in the entire sample had scored one point higher on their NODS score, the estimated SOGS equivalent would have been 5.5 at the upper bound of the confidence interval rather than 5.1. The take away point is that differences over time should not be a major area of interpretive focus until a longer series of scores using the new instrument are available. For now, all that can be said is that the results are roughly equivalent to past iterations using the SOGS. It is interesting, though not definitive, that the non-statistically significant changes every year (including this one) have been in the direction of decline as this is consistent with the trend noticed in the meta-analysis cited above.

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sampling error in the point estimate is reintroduced by using that point estimate again in the calculation of the standard error (Blalock, 1979, pp. 214-215). As we argue below (p. 13), in our case, we believe the sample estimates are low. With proportions we have the additional attraction of more conservative intervals as we move toward p=.5. Making wider confidence intervals warns users of this report that there may not be as much actual precision in our estimates as the standard construction would suggest. The use of p=.1 in the construction of the standard error for the NODS estimates is a compromise that we believe is conservative relative to the use of the sample proportion obtained. The most conservative interval would result from using a value of p=.5 but that is unrealistic given the literature and our own estimates over five studies. Our approach may yield an interval that may actually provide greater than 95% confidence (more properly, that more than 95% of the time intervals constructed by this procedure will include the parameter). That is the effect if, in fact, the interval is wider than it needed to be. The same reasoning underlies the use of p=.5 for the calculation of the standard errors in Table 4. This value is explicitly too conservative for the rare behaviors (footnote on p. 14) but is pretty good for the common behaviors and, again, warns against over interpretation of the estimates.

Our studies in 1997 and 1999 suggested higher rates in the Detroit area but did not allow an estimate specific to the city. Lifetime rates were 8.1 for Wayne County (including the City) in 1997 and 6.4 for Metropolitan Detroit (including the City) in 1997. In 2001, measurement for the City of Detroit was made directly and the estimate was 11.4. In 2006, the estimate for the City proper was statistically identical at 10.8. This year, the estimate using the NODS is 3.2 which is, as in past years, higher than the rates in the other regions.

This year the East region scored at 0.9 percent for the Lifetime NODS, the West region scored at 0.2, the Upper Peninsula scored at 1.8 and Metropolitan Detroit (excluding the City) was 1.7.

Table 2. Gambling Prevalence for Michigan and NODS Scores for Michigan and Geographic Regions of the State

A. State of Michigan

Gambling Experiences	N	%
Ever		
Yes	1090	77.1
Past Year		
Yes	869	61.5

	Lifetime NODS Score			Current NODS Score		
	0-2	**3-4**	**5+**	**0-2**	**3-4**	**5+**
N	1393	13	7	1406	3	4
Percent	98.6	0.9	0.5	99.5	0.2	0.3
Total Problem Gamblers		1.4			0.5	

Estimated total problem gamblers (based on Census count of 7,539,572 people 18+)
  Point estimate: 105,554 Lifetime   37,698 Current.
  Upper Bound of
   95% confidence interval   (226,187)   (158,331)

B. Geographic Regions of Michigan*

Region	Lifetime NODS Score, %			Current NODS Score, %			N
	0-2	**3-4**	**5+**	**0-2**	**3-4**	**5+**	
Detroit	96.8	2.2	1.0	98.1	1.0	0.8	589
Detroit Metro.	98.3	1.0	0.7	99.3	0.5	0.1	584
East Michigan	99.1	0.9	0.0	100	0	0	587
West Michigan	99.8	0.2	0.0	100	0	0	600
Upper Peninsula	98.2	0.9	0.8	98.9	0.5	0.6	628

Estimated Adult Problem Gamblers for Regions Based on 2010 Census

Region	Lifetime NODS Score, Population Estimates		Current NODS Score, Population Estimates	
	3-4	**5+**	**3-4**	**5+**
Detroit	11,516	5,234	5,234	4,187
Detroit Metro.	31,172	21,820	15,586	3,117
East Michigan	15,211			
West Michigan	3,917			
Upper Peninsula	2,254	2,004	1,252	1,502

*Note that the rates and associated numbers of problem gamblers by region are based on the full samples for each region. These are more reliable but different than the smaller samples by region used for the statewide estimates (recall the total weighted statewide sample is 1413). Therefore, the totals added across regions in Table 2B would be different than the statewide totals reported out of Table 2A.

In general, the rates for geographic regions, based on samples of approximately 600 after adjusting for the over-representation of older residents are less precise than the estimates for the state sample derived from a sample size of 1413. Because the events of interest are relatively rare in these geographic subunits of the state, the confidence intervals are not produced here.

An important result illustrated in Table 2A is that, based on the 2010 census count of 7,539,572 residents 18 years of age and older in Michigan, the NODS survey estimates that about 100,000 adult Michigan residents have a lifetime gambling problem, with 38,000 of those estimated to have a probable pathological condition as indicated by a score of 5 or more on the Lifetime NODS. Again, allowing for the differences in instrumentation, these figures tell much the same story as in past years. The standards of problem and pathology using the NODS are simply harder to attain than under the SOGS. Similarly, the survey results indicate that 38,000 Michigan adults currently have a gambling problem, and almost 23,000 of those may have a severe or "probable pathological" problem.

These figures represent the best available single number estimate ("point estimate") but the actual population value most likely falls near but not precisely at these numbers. If we argue that the sample is randomly representative of the adult Michigan population, then there is a 95% probability (95% confidence) that the actual number of lifetime problem gamblers in Michigan is less than 226,000. Past year problem gamblers probably (again, with 95% confidence) number could be as many as 158,000.[3] These "confidence intervals" are a more useful quantification than the point estimates because they take into account the sampling error of estimate expected with a sample of this size. The last panel of Table 2 shows the adult population estimated to have a gambling problem by region based on the SOGS rates and the 2000 Census. Again, these estimates are less precise than the state estimates and, because the events of pathology are relatively rare in geographic subunits, they are relatively unstable.

Finally, both the point estimates and the confidence intervals built around them probably

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[3] Recall the range of persons with lifetime and past year problems would be narrower, both here and in past studies, if the sample proportions were used in the construction of the confidence intervals.

underestimate the actual number of problem gamblers by the NODS criteria. There are two reasons; both occur because the sample is not fully randomly representative of the population. First, recall that telephone interviews tend to under-represent the young and the poor who may have higher rates of problem gambling. Second, the population figures we used, of course, do not include anyone under the age of 18 who might have a problem since they were excluded from the survey. Our interviews and focus groups in 1997, as well as the survey questions that ask respondents when they started gambling, all suggest a substantial prevalence of gambling among teenagers.

As in previous iterations of this study using the SOGS, our NODS based estimates are within the range found in other states. Table 3 (derived from Williams, Volberg and Stevens 2012, Table 12) summarizes this comparison for both the lifetime and past year rates of problem and probable pathological gambling.

Table 3. DSM Based Estimates of Prevalence of Problem and Probable Pathological Gambling

	Lifetime 3+ Prevalence (%)	Current 3+ Prevalence (%)	Lifetime 5+ Prevalence (%)	Current 5+ Prevalence (%)
Panel A. Chronological Order				
2000 North Dakota	0.9	0.7	0.4	0.3
2000 Oregon	1.5	0.7	0.6	0.1
2001 Florida	1.6	1.1	1.0	0.7
2001 Nevada	5.1	2.1	2.1	0.3
2003 Arizona	2.1	1.0	0.5	0.3
2006 California	3.7	1.3	1.5	0.4
2006 New Mexico	2.2	1.3	1.1	0.6
2007 Georgia	4.0	1.5	1.4	0.4
2008 Connecticut	3.3	1.4	1.2	0.6
2011 Iowa	1.2	0.5	0.6	0.3
2013 Michigan	**1.4**	**0.5**	**0.5**	**0.3**

Detailed Results

Table 4 shows the rates of participation for each of the thirteen types of gambling included in the survey. Recall that respondents were asked whether they had ever participated in each activity and whether they had done so during the past year. Both responses are provided in

Table 4, as are the participation rates broken out by sex and by race. Confidence intervals are also built around the total prevalence rates for both lifetime and past year participation[4].

As expected, the highest rates of participation were for legal activities including the lottery and casinos. For the "ever" (lifetime) participated questions, men had statistically higher rates of participation than women in eight of the thirteen activities: sports betting, horse/dog racing, playing the numbers, betting on non-casino dice, cards and video poker, betting on one's own performance in games of skill, office pools, internet gambling, and stocks and commodities. Women had a statistically higher rate of participation in noncharitable bingo. In all cases, a chi square test for independence was used. This approach is identical to a t test for the difference in two proportions (gender) and provides a single summary measure for the three proportions comparisons for race.

For the "past year" activities, men were statistically higher on those same gambling types except for horse/dog racing and internet gambling (where cell frequencies were too small for a stable test) but were also higher in playing the lottery and in casino gambling. Women were not statistically more likely to play noncharitable bingo "in the past year." Race effects are relatively modest given the small number of respondents in the non-white categories so while Table 4 includes those comparisons, no interpretations are made.

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[4] We conservatively used an estimated 50% participation rate for each activity, thereby giving the largest possible estimate of error and confidence interval.

Table 4. Gambling Participation Rates by Type of Gambling, Sex, and Race

A. Ever Participated

Type of Gambling	Total	95% Confid. Interval	Gender		Race/Ethnicity		
			Male	Female	White	Black	Other
Lottery	61.8	59.1-64.5	64.06	59.4	63.9	57.5	43.8**
Charitable Group Events	24.1	21.4-26.8	22.8	25.4	26.3	15.8	12.3**
Sports Events	12.8	10.1-15.5	19.1	6.1**	11.9	19.9	9.9*
Horse/Dog Racing	14.2	11.5-16.9	16.8	11.4**	15.3	10.3	4.9*
Numbers Game	4.0	1.3-6.7	5.9	2.0**	4.0	5.5	2.5^
Casinos	54.6	51.9-57.3	55.4	53.9	57.5	47.9	37.0**
Noncharitable Bingo	7.2	4.5-9.9	5.6	8.9*	6.8	10.3	7.6
Noncasino Events	11.4	8.7-14.1	15.7	6.9**	11.3	13.7	8.6
Games of skill	13.2	10.5-15.9	20.6	5.4**	12.6	18.5	9.9
Office Pools & 50/50 Raffles	35.4	32.7-38.1	39.4	31.1**	37.5	28.8	19.8**
Internet Gambling Sites	1.3	0.0-4.0	2.1	0.4**	1.2	2.1	0.0^
Stocks/Commodities Markets	16.9	14.2-19.6	21.5	11.9**	18.2	6.9	16.0**
Other	1.0	0.0-3.7	1.4	0.6	1.0	1.4	0.0^

B. Participated During the Last Year

Type of Gambling	Total	95% Confid. Interval	Gender		Race/Ethnicity		
			Male	Female	White	Black	Other
Lottery	46.6	43.9-49.3	51.3	41.5**	47.6	48.6	29.6**
Charitable Group Events	14.8	12.1-17.5	14.8	14.8	16.0	11.6	7.4
Sports Events	7.4	4.7-10.1	11.0	3.5**	7.1	11.0	4.9^
Horse/Dog Racing	2.0	0.0-4.7	2.9	1.0*	2.1	2.7	0.0^
Numbers Game	1.9	0.0-4.6	2.9	0.9**	1.9	2.7	1.2^
Casinos	27.0	24.3-29.7	29.9	23.9*	27.6	31.5	14.8*
Noncharitable Bingo	2.3	0.0-5.0	1.8	2.9	2.1	4.8	1.2^
Noncasino Events	5.8	3.1-8.59	18.1	3.4**	6.0	5.5	3.7^
Games of skill	6.4	3.7-9.1	10.0	2.6**	5.6	11.0	7.4*
Office Pools & 50/50 Raffles	17.7	15.0-20.4	20.7	14.5**	19.0	13.0	11.1
Internet Gambling Sites	0.2	0.0-2.9	0.3	0.1^	0.3	0.0	0.0^
Stocks/Commodities Markets	10.4	7.7-13.1	13.3	7.3**	11.3	4.8	8.6*
Other	0.6	0.0-3.3	0.8	0.3^	0.7	0.0	0.0^

*chi square test significant at .05   **chi square test significant at .01
^3 by 2 table with at least one expected cell frequency less than five

Table 5 shows variation in NODS scores for lifetime and current periods by categories of the demographic variables. The rates for demographic subgroups are based on small samples so, as stated in past reports, "they should be read as indicators of potentially important variation rather than precise estimates of incidence. On a technical level, the same point is evidenced in the small cell frequencies for the crosstabulations. Tests of significance therefore have little statistical power and were not computed."

Table 5. Percent in NODS Grouping by Demographic Categories

	Lifetime NODS Score			Past Year/Current NODS Score		
	0-2	3-4	5+	0-2	3-4	5+
Gender (n=1413)						
Male (n=728)	97.5	1.6	0.8	99.2	0.4	0.4
Female (n=685)	99.7	0.1	0.1	99.9	0.0	0.1
Race (n=1384)						
White (n=1157)	98.9	0.8	0.3	99.7	0.2	0.2
Black (n=146)	95.9	2.7	1.4	98.6	0.0	1.4
Other (n=81)	98.8	0.0	1.2	98.8	1.2	0.0
Age (n=1413)						
18-29 (n=180)	96.7	2.2	1.1	99.4	0.0	0.6
30-49 (n=356)	97.8	1.4	0.8	98.9	0.6	0.6
50-64 (n=554)	99.1	0.5	0.4	99.6	0.2	0.2
65+ (n=323)	98.6	0.3	0.0	100	0.0	0.0
Education (n=1404)						
< High School (n=45)	100	0.0	0.0	100	0.0	0.0
High School/GED (n=416)	97.6	1.4	1.0	99.0	0.2	0.7
Some College/Assoc (n=449)	98.4	1.1	0.4	99.8	0.2	0.0
Bachelors Degree (n=220)	99.5	0.0	0.5	99.5	0.0	0.5
Grad. Study/Degree (n=274)	99.3	0.7	0.0	99.6	0.4	0.0
Income (n=967)						
$25,000 or less (n=216)	98.6	0.5	0.9	99.5	0.0	0.5
$25,001-$50,000 (n=270)	98.5	0.7	0.7	99.3	0.0	0.7
$50,001-$100,000 (n=318)	98.7	0.9	0.3	99.7	0.3	0.0
$100,001 or more (n=163)	96.3	3.1	0.6	98.8	1.2	0.0

As in earlier reports, gender, age and race appear to have some correlation to incidence of higher scores on the NODS but it is clear that no age, race, gender, education, or income group is immune to the risk of gambling problems.

Table 6 displays the current (past year) NODS distribution for those who participated in each listed types of gambling activities at least once in the past year. While small numbers of respondents for particular gambling activities make several of the estimates unreliable, broad comparisons may be instructive, especially when trends hold over time. Remembering that the NODS gives lower prevalence rates than the SOGS however, makes direct comparisons less

clear. For example, while in past surveys, 95 percent or more of those who played the lottery

scored as nonproblem gamblers on the past year's SOGS, this year the figure is more than 99%

on the NODS. Small samples and different instruments mean that we simply cannot say whether

that is a meaningful difference. While many subgroup samples are small in this report, that is

particularly the case for this table and it is worth reminding the reader that a figure like the 33%

problem score for past year internet gamblers is based on a sample of 3 persons and is not

interpretable. If such results continued over subsequent years of study, and if they were

consistent with other forms of data (such as the testimony of experts in the helping professions or

in law enforcement) they might suggest making special study with larger samples to determine

whether there is anything there.

Table 6. Percent Distribution of Current NODS Score by Gambling Type in the Past Year

| Type of Gambling | n | Past Year/Current NODS Score | | |
		0-2	3-4	5+
Lottery	657	99.2	0.3	0.5
Charitable Group Events	209	99.0	0.0	1.0
Sports Events	104	98.1	1.0	1.0
Horse/Dog Racing	28	100	0.0	0.0
Numbers Game	27	100	0.0	0.0
Casinos	382	98.7	0.8	0.5
Noncharitable Group Events	33	97.0	0.0	3.0
Noncasino Events	82	95.1	2.4	2.4
Games of Skill	91	96.72	2.2	1.1
Office Pools & 50/50 Raffles	249	99.2	0.4	0.4
Internet Gambling Sites	3	66.7	33.3	0.0
Stock/Commodities Markets	147	99.3	0.0	0.7
Other	8	100.0	0.0	0.0

Table 7 presents indicators of the past year's gambling behavior of respondents grouped

to each category of both the lifetime and current NODS.   Though the rarity of problem and

pathology prevents any definitive conclusions from these data, respondents who fall in the

problem categories of the NODS show a tendency to be more likely to gamble alone or with friends rather than with family members, to play for longer than an hour at a time, and to lose more at a sitting.

Table 7. Gamblers' Past Year's Usual Gambling Behaviors by NODS Scores, Percent Distributions

	Lifetime NODS			Past Year NODS		
	0-2	3-4	5+	0-2	3-4	5+
When you gamble, do you usually do so...						
Alone	27.5	30.8	57.1	27.6	66.7	25.0
With spouse or partner	25.2	7.7	0.0	25.0	0.0	0.0
With other family members	13.7	15.4	14.3	13.8	0.0	25.0
With friends	24.4	38.5	28.6	24.5	33.3	50.0
With coworkers	2.6	0.0	0.0	2.6	0.0	0.0
With others	6.5	7.7	0.0	6.5	0.0	0.0
N	1027	13	7	1040	3	4
When you gamble, do you usually do so for...						
< 1 hour	54.5	23.1	0.0	54.1	0.0	0.0
1-2 hours	31.9	38.5	50.0	32.0	66.7	33.3
3-5 hours	11.6	15.4	50.0	11.7	0.0	66.7
6-12 hours	1.7	23.1	0.0	1.8	33.3	0.0
< 12 hours	0.4	0.0	0.0	0.4	0.0	0.0
N	1030	13	6	1043	3	3
In the past year, what is the largest amount of money you have ever lost gambling in one day?						
< $1	22.1	7.7	0.0	21.9	0.0	0.0
$1-$9	21.6	7.7	0.0	21.5	0.0	0.0
$10-$99	39.1	15.4	0.0	38.8	0.0	0.0
$100-$999	15.8	38.5	85.7	16.2	33.3	100
$1,000-$9,999	1.0	30.8	0.0	1.2	33.3	0.0
$10,000 or more	0.4	0.0	14.3	0.4	33.3	0.0
N	1044	13	7	1057	3	4

<u>Results for Problem Gamblers</u>

Table 8 displays results for those respondents who scored as having a problem on the Lifetime NODS. The first panel contains the results from the statewide sample we have been using while the second panel uses the specially collected sample of 200 problem gamblers. While these estimates can be compared to the estimates reported in 1997, 1999, 2001 and 2006, it is important to remember that the standard of problem by the NODS is different than for the SOGS used in those studies. In the first study in 1999, the estimates were based on a very small sample derived strictly from the statewide sampling. The intrinsic interest of this subpopulation was such that oversampling of problem and probable pathological gamblers was used in each subsequent study.

The first panel of Table 8 displays results from this year's statewide representative sample. As seen in previous tables, this sample contains only 20 Lifetime problem and probable pathological gamblers with only seven of these so scoring for the past year. Sampling errors are extraordinarily large here (estimates are not very precise[4]), since such a small number of respondents fell in these categories, especially on contingency questions (questions which are answered only for those who answer an entry question in a particular way). Panel B is based on the full set of the sample of 200 respondents (the original 51 from the regional samples[5] plus an additional 149 specially collected) who scored in the problem or probable pathological categories on the Lifetime NODS.

Both panels of Table 8 list important descriptive information for respondents who scored as problem or probable pathological gamblers on the Lifetime NODS. No interpretation is made of the first panel since, again, the number of respondents falling in particular categories is so small. For the second panel, interesting patterns are present but the reader is cautioned that even here the results are relatively unstable, particularly for the current (last year) group and were not

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[4]I.e., Another survey sample of this same size might yield a much larger or smaller value of the estimate.

[5] Although there were 51 qualifying respondents in the five regional samples of size 800 each, only 20 made it into the proportional statewide sample.

corrected to be representative (by region) of the state's adult population. Nevertheless, because there are substantially more respondents, more of the available indicators are presented in the second panel than in the first.

A first point in reading the table is that two categories of respondent are presented for the Lifetime NODS, persons scoring in the 3-4 range and persons scoring 5 or more, corresponding to problem and probable pathological gambler status. Scoring in those ranges was the basis for inclusion in this sample. Some of these respondents, of course, did not score as being in a problem category (3-4 or 5+) on the Current NODS. They are nevertheless included as the first column of that indicator with their scores of 0-2. There are therefore three categories listed for the Current NODS and a total of five categories of respondents across the two indicators.

The first indicator in Panel B is which type of gambling would be the most difficult to give up. Here, only three types of gambling were chosen by at least 10% of any of the five respondent groups. Those activities were playing the lottery, casinos and non-casino play of cards, dice, video poker or other machines (hereafter referred to as "non-casino gaming"). Among these, the largest percentages were registered for casino gambling, particularly for those scoring 5+ on both the Lifetime and Current NODS.

The next indicator is age at which these gamblers first gambled. It is clear that many started quite young with 47% to 65% of four of the five categories of gamblers reporting starting by age 18 (only those with a score of 3-4 on the Current NODS were lower with 38%. Casino gambling and non-casino gaming were the most common starter activities.

Large percentages of problem and probable pathological gamblers report that their gambling has made them nervous with a low of 42% and a high of 77% for 5+ Current NODS respondents. That nervousness typically started in their twenties and while gambling in casinos. A moderate percentage of 5+ respondents, both Lifetime and Current, report desiring help to stop gambling: 30% for Lifetime 5+ respondents and 37% for Current 5+ respondents. Even more moderate percentages report actually seeking help with about 4% of Lifetime problem gamblers (3-3 NODS) and a high of 23% of Current probable pathological gamblers (5+). Low percentages of the problem gambler groups report ever calling the Michigan problem Gambling Help Line but the percentage rises to over 13% for Current 5+ gamblers.

Finally, the last three indicators in Panel B report co-morbid conditions with gambling. First, small but important numbers of 5+ respondents report ever having suicidal thoughts related to their gambling with 5% for the Lifetime group and almost 7% for the Current NODS group. Second, between 13% and 33% of the various groups report having ever experienced or been treated for alcohol or other drug abuse problems. Third, very similar percentages report they have ever experienced or been treated for a mental health problem.

Table 8. Percentages of Problem and Probable Pathological Gamblers for Selected Characteristics

A: Representative Sample

	Life Time NODS			Past Yr/Current NODS	
	3-4	5+		3-4	5+
Age First Gambled					
14 or younger	46.2	14.3		66.7	0.0
15-18	30.8	57.1		0.0	75.0
19-29	15.4	14.3		33.3	0.0
30 or older	7.7	14.3		0.0	25.0
(n=20)	(13)	(7)	(n=7)	(3)	(4)
Has Gambling					
Made you Nervous	61.5	85.7		100	75.0
(n=20)	(13)	(7)	(n=7)	(3)	(4)
Desired to Stop	15.4	28.6		0.0	50.0
(n=20)	(13)	(7)	(n=7)	(3)	(4)
Sought Help	0.0	14.3		0.0	25.0
(n=20)	(13)	(7)	(n=7)	(3)	(4)
Suicidal Thoughts	0.0	14.3		0.0	25.0
(n=20)	(13)	(7)	(n=7)	(3)	(4)
Experience or Treatment: Alc. or other drug					
abuse problem	0.0	28.6		33.3	25.0
(n=20)	(13)	(7)	(n=7)	(3)	(4)
Mental Health					
Problem	7.7	14.3		0.0	25.0
(n=20)	(13)	(7)	(n=7)	(3)	(4)

B: Sample of Problem Gamblers

	Life Time NODS		Past Yr/Current NODS		
	3-4	5+	0-2	3-4	5+
Which type of gambling would you find most difficult to give up?*					
Lottery	20.7	10.4	16.7	26.3	3.4
Casinos	42.2	64.9	45.2	52.6	75.9
Non-casino games	8.6	13.0	11.1	5.3	13.8
None	15.5	2.6	14.3	5.3	0.0
(n=193)	(116)	(77)	(126)	(38)	(29)
Age First Gambled					
14 or younger	17.6	13.6	16.8	12.8	16.7
15-18	30.3	33.3	29.8	25.6	46.7
19-29	27.7	25.9	29.0	23.1	23.3
30 or older	24.4	27.2	24.4	38.5	13.3
(n=200)	(119)	(81)	(131)	(39)	(30)
What type of gambling was that?*					
Lottery	12.9	11.1	11.7	10.3	16.7
Casinos	38.8	44.4	39.8	46.2	40.0
Non-casino games	25.9	25.9	27.3	17.9	30.0
(n=197)	(116)	(81)	(128)	(39)	(30)
Has Gambling Made you Nervous	42.0	64.2	42.0	61.5	76.7
(n=200)	(119)	(81)	(n=131)	(39)	(30)
Age Made Nervous					
14 or younger	2.0	7.7	3.6	4.2	8.7
15-18	22.0	5.8	18.2	8.3	8.7
19-29	36.0	36.5	38.2	25.0	43.5
30 or older	40.0	50.0	40.0	62.5	39.1
(n=102)	(50)	(52)	(55)	(24)	(23)

What type of gambling were you doing?*					
Casinos	58.0	58.8	55.6	66.7	56.5
Non-casino games	24.0	23.5	24.1	16.7	30.4
(n=101)	(50)	(51)	(54)	(24)	(23)
Desired help to Stop	10.9	29.6	14.5	17.9	36.7
(n=200)	(119)	(81)	(131)	(39)	(30)
Sought Help	4.2	22.2	9.2	10.3	23.3
(n=200)	(119)	(81)	(131)	(39)	(30)
Ever called MI Help Line	0.0	8.6	0.8	5.1	13.3
(n=200)	(119)	(81)	(131)	(39)	(30)
Had suicidal thoughts related to your gambling	0.0	4.9	0.8	2.6	6.7
(n=200)	(119)	(81)	(131)	(39)	(30)
Experience or treatment for alcohol or other drug abuse problem	12.6	22.2	12.2	17.9	33.3
(n=200)	(119)	(81)	(131)	(39)	(30)
Mental Health treatment or problem	15.3	23.88	15.4	18.4	33.3
(n=200)	(118)	(81)	(130)	(38)	(30)

*Only those receiving at least a 10% share in at least one column are presented.

Summary

In most ways, this report and its previous iterations are designed to be a template for a first examination of gambling behaviors in Michigan. The table structure and even the explanatory language are purposely kept as constant as possible so that a relatively consistent examination is available in each report. That is why it is important to also stress important changes when they occur. The most important difference in this year's report is clearly that it relies on a different measure of gambling problem. It was necessary to make this change but the strict numeric comparability of most of the important trend data is compromised. While the overall picture is consistent with that painted by the SOGS in previous years, detailed comparisons are harder to make and were in fact made less often and with more caution than before. In part because we cannot assume that readers are familiar with the earlier studies, the rest of this summary, again, mimics the messages and language of those earlier reports.

The estimates of the gambling behavior of Michigan adults 18 years and older, provided in this report are based on what the authors believe are the best survey results available. Even as survey work has become more difficult to carry out and response rates declines and reliance on cell phones has changed the landscape, robust estimates are produced. Weaknesses remain in this data set as in the results of any recent survey. Even as phone coverage has increased, poor residents are still more likely to live without regular phone service. If their gambling behavior is different from that of other residents, it is not fairly captured here. As we have said in the past, this effect is probably small however.

A more important problem is response bias among those we attempted to contact. While it is not clear that nonresponse is systematically related to the behaviors detailed in this survey, it is at least a good possibility that our estimates are conservative (underestimate the actual rates of problems). Youth and poverty are related to low response and may reasonably be expected to be related to gambling behavior. A social desirability response might also suggest under-reporting or even refusal to participate for problem gamblers. A salience difference may well bias in the opposite direction, it is simply impossible to tell with any precision. For the most part, however, nonresponse is probably for reasons unrelated to gambling behavior, reasons such as an unwillingness to give the time required to respond to the survey. Nevertheless, as almost all

survey experts now warn (c.f., Massey and Tourangeau 2013), as response rates decline in telephone surveys, concern over bias increases.

Another reason to believe our estimates may be conservative is the instrumentation used. In a cross-validation of the SOGS, it was found to provide a conservative estimate of probable pathological gamblers, probably around 6 percent (Lesieur and Blume 1987). The NODS, as discussed earlier, is consistently and substantially more conservative yet.

In addition to the major findings on problem prevalence, there is a wealth of detailed information to be found in the tables in this report. A useful strategy for understanding results, as we showed in Table 2 for example, is to convert the survey percentages to estimated population figures. The procedure for making this conversion is to take the point estimate from the table, e.g., the percentage of respondents reporting they played the lottery in the past year (Table 4, Panel B: point estimate is 46.6 percent), and multiply by the estimated adult population of Michigan (7,539,572) to get an estimate of 3,513,441 adult lottery players. This can also be done for the point estimates that make up the lower and upper bounds of the confidence intervals, which would yield an estimated range for the population figures. A similar procedure for problem gamblers would be to take the point or interval estimates for the representative sample of problem gamblers (remember, though that this sample is only of size 200 before subsetting and therefore yields imprecise estimates) and multiply by the estimated number of adult problem gamblers from Table 2. One should always remember the cautions we have made about response bias and a probable underestimation of many gambling behaviors.

As before, this report can only suggest the range of analysis and discussion that these data will support. The general lesson remains consistent across the several studies and so the conclusion is worth repeating: "Estimates continue to suggest that problem gambling is a substantial reality in Michigan and reaches across demographic and geographic boundaries. Perhaps most telling is that even among persons scoring as problem or probable pathological gamblers, rates of help seeking are very low. All of this reinforces the obligation to continue to systematically collect data on gambling so that the public discussion may be as balanced and informed as possible."

Appendix A: Survey Instrument

EPIC ▪ MRA Western Michigan University — Gambling Prevalence Study — Sept 2013
FINAL

SAMPLE: 1=Cell/2=Land REGION: _____ COUNTY:
_____

DATE:___ _____/_____/_____ PHONE:_____
_____

INTERVIEWER: _____ NORC SCORE:
_____
===
=====

INTRO
Hello, my name is _____ and I am calling from EPIC ▪ MRA on behalf of Dr. David Hartmann
of Western Michigan University and the Michigan Department of Community Health.
Since it is such an important issue, the Michigan Legislature has asked us to survey Michigan
citizens on gambling in the state. Could I please speak to the person in your household who is 18
or older and had the most recent birthday?

[Would that be you?] [Can I ask you a few questions?]

Your answers are strictly anonymous. This survey will take about 10 to 15 minutes. By
providing them, you are giving your consent to use those answers to understand gambling in
Michigan. You have the right to refuse and to skip any question that you do not wish to answer.
To ensure professionalism, this conversation may be monitored by my supervisor.

If you have any questions or concerns you may call **… redacted**.

[Can you speak freely and in private?] [May we continue?]

People spend or bet money on a variety of things including lottery, charitable games such as
raffles or church sponsored bingo, horse races, casinos, sports, cards and dice. We will ask you
about whether you have ever participated in these activities and whether you have participated in
the past 12 months. We will ask about the extent of your participation and how gambling affects
other aspects of your life. You may prefer to keep some of your answers private from people
who could overhear this interview.

*[May we continue? We understand that not everyone gambles, but your opinions are still very
important to us.]*

CALLBACK INTRODUCTION: Hello, my name is _____ and I am calling from Western
Michigan University on behalf of Dr. David Hartmann and the Michigan Department of
Community Health. We called you recently and started an interview with the adult member of
this household who had the most recent birthday. That person asked us to call back to complete
the survey. May I speak to that person again?

GAMBLING ACTIVITIES:

__1. Have you ever bet or spent money on the Lottery including Mega Millions, Powerball, Fantasy 5, Daily 3 and 4, Club Keno, Keno!, Classic Lottery 47, or instant tickets?

(1)   Yes
(2)   No ------------------------------- **GO TO Q.3**
(3)   Don't know/Refused --------- **GO TO Q.3**

__2. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__3. Have you ever bet on charitable group events such as local bingos, pulltab tickets, Las Vegas Nights, or raffles?

(1)   Yes
(2)   No ------------------------------- **GO TO Q.5**
(3)   Don't know/Refused --------- **GO TO Q.5**

__4. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__5. Have you ever bet on the outcome of sports events?

(1)   Yes
(2)   No ------------------------------- **GO TO Q.7**
(3)   Don't know/Refused --------- **GO TO Q.7**

__6. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__7. Have you ever bet on horse or dog racing?

(1)   Yes
(2)   No ------------------------------- **GO TO Q.9**
(3)   Don't know/Refused --------- **GO TO Q.9**

__8. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__9. Have you ever bet or spent money on a numbers game not sponsored by the state lottery?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.11**
(3)   Don't know/Refused --------- **GO TO Q.11**

__10. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__11. Have you ever bet at casinos (including slots, video machines, and table games)?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.13**
(3)   Don't know/Refused --------- **GO TO Q.13**

__12. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__13. Have you ever played non-charitable Bingo for money?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.15**
(3)   Don't know/Refused --------- **GO TO Q.15**

__14. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__15. Have you ever bet on cards or dice games or on video poker or other machines not at a casino?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.17**
(3)   Don't know/Refused --------- **GO TO Q.17**

__16. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__17. Have you ever bet on your performance at games of skill such as pool, golf, bowling, darts or other games?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.19**
(3)   Don't know/Refused --------- **GO TO Q.19**

__18. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__19. Have you ever bet in office pools or 50/50 raffles?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.21**
(3)   Don't know/Refused --------- **GO TO Q.21**

__20. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__21. Have you ever bet money at internet gambling sites?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.23**
(3)   Don't know/Refused --------- **GO TO Q.23**

__22. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__23. Have you ever bet or spent money on the stock or commodities markets?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.25**
(3)   Don't know/Refused --------- **GO TO Q.25**

__24. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__25. Have you bet or spent money on any other type of gambling?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.27**
(3)   Don't know/Refused --------- **GO TO Q.27**

__26. Have you done so in the past year?

(1)   Yes
(2)   No
(3)   Don't know/Refused

POLLERS NOTE: IF "NO" OR "DON'T KNOW/REFUSED" TO ALL GAMBLING ACTIVITIES - SKIP TO DEMOGRAPHICS Q.104

__27. When you gamble, do you *usually* do so ... **[READ 1 TO 6]**

(1)   Alone
(2)   With your spouse or partner
(3)   With other family members
(4)   With friends
(5)   With co-workers
(6)   With some other individual or group
(7)   Don't Know/Refused

__28. When you gamble, do you usually do so for ... **[READ 1 TO 5]**

(1)   Less than 1 hour
(2)   1-2 hours
(3)   3-5 hours
(4)   6-12 hours
(5)   More than 12 hours
(6)   Don't Know/Refused

__29. In the past year, what is the largest amount of money you have ever lost gambling in one day?
[READ 1 TO 6]

(1)   Less than $1
(2) $1 - $9
(3) $10 - $99
(4) $100 - $999
(5) $1,000 - $9,999
(6) $10,000 or more
(7)   Don't Know/Refused

__30. Now I'd like you to think about how many days you have ever gambled. Was it more than 5 days in your life?

(1)   Yes
(2)   No ------------------------------ **GO TO DEMOGRAPHICS Q.104**
(3)   Don't know/Refused --------- **GO TO DEMOGRAPHICS Q.104**

INTRO:
The next set of questions is part of a standard measurement scale which has been used throughout the United States in surveys similar to this one. There are no right or wrong answers to the questions that follow. We want to know what your experiences have been. Please try to be as accurate as possible in your answers and remember that all this information is confidential.

[INTERVIEWER: IF YOU ENCOUNTER DIFFICULTIES WITH RESPONDENT IN COMPLETING THIS SECTION, SAY: "We realize these questions may not apply to everyone, but we would like answers to any of the questions you may choose to answer."]

The NORC Diagnostic Screen for Gambling Problems

Lifetime ("Ever") Questions

__31. Have there ever been periods lasting 2 weeks or longer when you spent a lot of time thinking about your gambling experiences, or planning out future gambling ventures or bets?

(1)   Yes *(NORC=1)*
(2)   No ------------------------------- **GO TO Q.33**
(3)   Don't know/Refused --------- **GO TO Q.33**

__32. Have there ever been periods lasting 2 weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__33. Have there ever been periods when you needed to gamble with increasing amounts of money or with larger bets than before in order to get the same feeling of excitement?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__34. Have you ever tried to stop, cut down, or control your gambling?

(1)   Yes
(2)   No ------------------------------- **GO TO Q.36**
(3)   Don't know/Refused --------- **GO TO Q.36**

34

__35. On one or more of the times when you tried to stop, cut down, or control your gambling, were you restless or irritable?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__36. Have you ever tried but not succeeded in stopping, cutting down, or controlling your gambling?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.38**
(3)   Don't know/Refused --------- **GO TO Q.38**

__37. Has this happened three or more times?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__38. Have you ever gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness, or depression?

(1)   Yes *(NORC=1)*
(2)   No ------------------------------ **GO TO Q.40**
(3)   Don't know/Refused --------- **GO TO Q.40**

__39. Have you ever gambled as a way to escape from personal problems?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__40. Has there ever been a period when, if you lost money gambling one day, you would often return another day to get even?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__41. Have you ever lied to family members, friends, or others about how much you gamble or how much money you lost on gambling?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.43**
(3)   Don't know/Refused --------- **GO TO Q.43**

__42. Has this happened three or more times?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__43. Have you ever written a bad check or taken money that didn't belong to you from family members or anyone else in order to pay for your gambling?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__44. Has your gambling ever caused serious or repeated problems in your relationships with any of your family members or friends?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__45. Has your gambling ever caused you any problems in school, such as missing classes or days of school or your grades dropping?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__46. Has your gambling ever caused you to lose a job, have trouble with your job, or miss out on an important job or career opportunity?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__47. Have you ever needed to ask family members or anyone else to loan you money or otherwise bail you out of a desperate money situation that was largely caused by your gambling?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

Past Year Questions (only ask those items for which the corresponding "Lifetime" answer was YES)

__48. Since [*Current Month*] 2012, have there been any periods lasting 2 weeks or longer when you spent a lot of time thinking about your gambling experiences, or planning out future gambling ventures or bets?

(1)   Yes *(NORC=1)*
(2)   No ------------------------------ **GO TO Q.50**
(3)   Don't know/Refused --------- **GO TO Q.50**

__49. Since [*Current Month*] 2012, have there been any periods lasting 2 weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__50. Since [*Current Month*] 2012, have there been periods when you needed to gamble with increasing amounts of money or with larger bets than before in order to get the same feeling of excitement?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__51. Since [*Current Month*] 2012, have you tried to stop, cut down, or control your gambling?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.53**
(3)   Don't know/Refused --------- **GO TO Q.53**

__52. Since [*Current Month*] 2012, on one or more of the times when you tried to stop, cut down, or control your gambling, were you restless or irritable?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__53. Since [*Current Month*] 2012, have you tried but not succeeded in stopping, cutting down, or controlling your gambling?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.55**
(3)   Don't know/Refused --------- **GO TO Q.55**

__54. Since [*Current Month*] 2012, has this happened three or more times?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__55. Since [*Current Month*] 2012, have you gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness, or depression?

(1)   Yes *(NORC=1)*
(2)   No ------------------------------ **GO TO Q.57**
(3)   Don't know/Refused --------- **GO TO Q.57**

__56. Since [*Current Month*] 2012, have you gambled as a way to escape from personal problems?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__57. Since [*Current Month*] 2012, has there been a period when, if you lost money gambling one day, you would often return another day to get even?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__58. Since [*Current Month*] 2012, have you lied to family members, friends, or others about how much you gamble or how much money you lost on gambling?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.60**
(3)   Don't know/Refused --------- **GO TO Q.60**

__59. Has this happened three or more times?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__60. Since [*Current Month*] 2012, have you written a bad check or taken money that didn't belong to you from family members or anyone else in order to pay for your gambling?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__61. Since [*Current Month*] 2012, has your gambling caused serious or repeated problems in your relationships with any of your family members or friends?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__62. Since [*Current Month*] 2012, has your gambling caused you any problems in school, such as missing classes or days of school or your grades dropping?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__63. Since [*Current Month*] 2012, has your gambling caused you to lose a job, have trouble with your job, or miss out on an important job or career opportunity?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

__64. Since [*Current Month*] 2012, have you needed to ask family members or anyone else to loan you money or otherwise bail you out of a desperate money situation that was largely caused by your gambling?

(1)   Yes *(NORC=1)*
(2)   No
(3)   Don't know/Refused

SECTION 3: IN-DEPTH ANALYSIS OF PROBLEM GAMBLERS

Ask Section 3 only of those who score as Problem Gamblers on the NODS (generated by the computer). The skip pattern is based on the responses to questions 1 through 12 of Section 1.

INTRO
For each of the gambling activities in which you participated in the past year, we would like your estimate of the amount of time and money you spent.

[INTERVIEWER: If needed, say ... "I am only looking for an approximate amount, rounded to the nearest 5 dollars or so."]

__65. For the Lottery (LOTTO, Big Game, Daily 3 and 4, Cash 5, Keno, or instant tickets, can you give me an estimate of the amount you spend in a typical month? [**IF "UNDECIDED/REFUSED" CODE "99999"**]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__66. Did you play the lottery at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__67. For charitable group events, such as bingo or Las Vegas nights, can you give me an estimate of the amount you spend in a typical month? [**IF "UNDECIDED/REFUSED" CODE "99999"**]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__68. Did you play charitable group events at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__69. For sports betting, can you give me an estimate of the amount you spend in a typical month?
[**IF "UNDECIDED/REFUSED" CODE "99999"**]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__70. Did you bet on sports at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__71. For betting on horse or dog racing, can you give me an estimate of the amount you spend in a typical month? [IF "UNDECIDED/REFUSED" CODE "99999"]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__72. Did you bet on horse or dog racing at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__73. For non-Lottery numbers games, can you give me an estimate of the amount you spend in a typical month? [IF "UNDECIDED/REFUSED" CODE "99999"]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__74. Did you play non-Lottery numbers at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__75. For betting at casinos, can you give me an estimate of the amount you spend in a typical month?
[IF "UNDECIDED/REFUSED" CODE "99999"]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__76. Did you bet at casinos at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__77. For playing non-charitable Bingo for money, can you give me an estimate of the amount you spend in a typical month? [IF "UNDECIDED/REFUSED" CODE "99999"]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__78. Did you play non-charitable Bingo for money at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__79. For cards, dice, video poker or other machine games not in a casino, can you give me an estimate of the amount you spend in a typical month? [**IF "UNDECIDED/REFUSED" CODE "99999"**]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__80. Did you bet on cards, dice, video poker or other machine games not in a casino at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__81. For betting on your performance at games of skill like pool, golf, bowling, or darts, can you give me an estimate of the amount you spend in a typical month? [**IF "UNDECIDED/REFUSED" CODE "99999"**]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__82. Did you bet on your performance at games of skill at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__83. For office pools or 50/50 raffles, can you give me an estimate of the amount you spend in a typical month? [**IF "UNDECIDED/REFUSED" CODE "99999"**]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__84. Did you bet on office pools or 50/50 raffles at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__85. For Internet gambling, can you give me an estimate of the amount you spend in a typical month? [**IF "UNDECIDED/REFUSED" CODE "99999"**]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__86. Did you bet at Internet gambling sites at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__87. For the stock or commodities markets, can you give me an estimate of the amount you spend in a typical month? [IF "UNDECIDED/REFUSED" CODE "99999"]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__88. Did you play the stock or commodities markets at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__89. For other types of gambling, can you give me an estimate of the amount you spend in a typical month? [IF "UNDECIDED/REFUSED" CODE "99999"]

RECORD DOLLAR AMOUNT: _____ UP TO 5 DIGITS.

__90. Did you bet on other forms of gambling at least once a week?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__91. Which type of gambling would you find *most* difficult to give up? **[TAKE FIRST RESPONSE ONLY – IF RESPONDENT HESITATES, READ 1 TO 13]**

(01)   The Lottery (LOTTO, Big Game, Daily 3 and 4, Cash 5, Keno, etc.)
(02)   Charitable group events (bingo, pull-tab tickets, Las Vegas Nights, raffles)
(03)   The outcome of sports events
(04)   Horse or dog racing
(05)   A numbers game not sponsored by the state lottery
(06)   Casinos (including slots, video machines, and table games)
(07)   Playing non-charitable Bingo for money
(08)   Cards or dice games or video poker or other machines not at a casino
(09)   Your performance at games of skill (pool, golf, bowling, darts, etc.)
(10)   Office pools or 50/50 raffles
(11)   Internet gambling sites
(12)   Playing the stock or commodities markets
(13)   Other (*Please specify*):
_____
(14)   None (*volunteered*)
(99)   Don't Know/Refused

__92. How old were you when you first gambled? **[IF "UNDECIDED/REFUSED" CODE "99"]**

RECORD AGE: _____ IN 2 DIGITS.

__93. What type of gambling was that? **[TAKE FIRST RESPONSE ONLY – IF RESPONDENT HESITATES, READ 1 TO 13]**

(01)   The Lottery (LOTTO, Big Game, Daily 3 and 4, Cash 5, Keno, etc.)
(02)   Charitable group events (bingo, pull-tab tickets, Las Vegas Nights, raffles)
(03)   The outcome of sports events
(04)   Horse or dog racing
(05)   A numbers game not sponsored by the state lottery
(06)   Casinos (including slots, video machines, and table games)
(07)   Playing non-charitable Bingo for money
(08)   Cards or dice games or video poker or other machines not at a casino
(09)   Your performance at games of skill (pool, golf, bowling, darts, etc.)
(10)   Office pools or 50/50 raffles
(11)   Internet gambling sites
(12)   Playing the stock or commodities markets
(13)   Other (***Please specify***):
_____
(14)   None (***volunteered***)
(99)   Don't Know/Refused

__94. Was there any time when the amount you were gambling made you nervous?

(1)   Yes
(2)   No ------------------------------ **GO TO Q.97**
(3)   Don't know/Refused --------- **GO TO Q.97**

__95. How old were you when that happened? **[IF "UNDECIDED/REFUSED" CODE "99"]**

RECORD AGE: _____ IN 2 DIGITS.

__96. What type of gambling were you doing when that happened? **[TAKE FIRST RESPONSE ONLY – IF RESPONDENT HESITATES, READ 1 TO 13]**

(01)   The Lottery (LOTTO, Big Game, Daily 3 and 4, Cash 5, Keno, etc.)
(02)   Charitable group events (bingo, pull-tab tickets, Las Vegas Nights, raffles)
(03)   The outcome of sports events
(04)   Horse or dog racing
(05)   A numbers game not sponsored by the state lottery
(06)   Casinos (including slots, video machines, and table games)
(07)   Playing non-charitable Bingo for money
(08)   Cards or dice games or video poker or other machines not at a casino
(09)   Your performance at games of skill (pool, golf, bowling, darts, etc.)
(10)   Office pools or 50/50 raffles
(11)   Internet gambling sites
(12)   Playing the stock or commodities markets
(13)   Other (**Please specify**):
_____
(14)   None (**volunteered**)
(99)   Don't Know/Refused

__97. Have you ever desired help to stop gambling?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__98. Have you ever sought help to stop gambling?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__99A-E. What type of help was that? **[READ 1 TO 10 – CODE ALL RESPONSES MENTIONED]**

(01)   Family member
(02)   Friend
(03)   Family doctor
(04)   Gamblers Anonymous/Gamanon
(05)   Problem gambling treatment program in Michigan
(06)   Employee assistance program (EAP)
(07)   Professional Counseling (Psychologist/Psychiatrist/Other counselor)
(08)   Minister/Priest/Rabbi/Imam (Muslim prayer leader)
(09)   Alcohol or drug abuse treatment program
(10)   Other (**please specify**):
_____
(99)   Undecided/Refused

__100. Have you ever called the Michigan Problem Gambling Help Line (1-800-270-7117)?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__101. Have you ever experienced thoughts of suicide related to your gambling?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__102. Have you ever experienced or been treated for an alcohol or other drug abuse problem?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__103. Have you ever experienced or been treated for a mental health problem?

(1)   Yes
(2)   No
(3)   Don't know/Refused

SECTION 4: DEMOGRAPHICS

INTRO
As you probably know, different types of people have different opinions and experiences. The following questions are for statistical purposes only and the answers to these questions, like all of the others, will be confidential.

__104. Are you currently married, widowed, divorced, separated, or have you never been married?

(1)   Married, common-law, co-habitation
(2)   Widowed
(3)   Divorced
(4)   Separated
(5)   Never married
(6)   Don't Know/Refused

__105. Including yourself, how many people age 18 and over live in your household? [**IF "UNDECIDED/REFUSED" CODE "99"]**

RECORD: _____ IN 2 DIGITS.

__106. What is the last grade of school you completed?

(1)   Elementary or some high school
(2)   High school graduate or G.E.D.
(3)   Some college or Associates degree (vocational, technical or trade school)
(4)   Undergraduate degree
(5)   Graduate study or degree
(6)   Don't Know/Refused

__107A-D. Last week, were you working full-time, part-time, going to school, keeping house, disabled, retired, unemployed, or something else? **[CODE ALL RESPONSES MENTIONED]**

(1)   Working full-time
(2)   Working part-time
(3)   Going to school
(4)   Keeping house
(5)   Disabled
(6)   Retired
(7)   Unemployed
(8)   Something else
(9)   Don't Know/Refused

__108. What is your age? **[IF UNDECIDED/REFUSED, CODE "99"]**

RECORD TWO DIGIT AGE: _____

__109. Do you consider yourself Hispanic?

(1)   Yes
(2)   No
(3)   Don't know/Refused

__110. Which of the following best describes your racial or ethnic group? **[READ 1 TO 6]**

(1)   White/Caucasian
(2)   Black/African American
(3)   Native American
(4)   Asian
(5)   Mixed Race
(6)   Other
(7)   Don't know/Refused

__111. What was your total household income last year? **[READ 1 TO 8]**

(1)   Under $15,000
(2) $15,001 to $25,000
(3) $25,001 to $35,000
(4) $35,001 to $50,000
(5) $50,001 to $75,000
(6) $75,001 to $100,000
(7) $100,001 to $125,000
(8)   Over $125,000
(9)   Don't Know/Refused

In what county do you live? (*remove – this will be pre-coded from sample*)

__112. Could I have the name of the city you live in or nearest to? **[WRITE RESPONSE AS STATED]**

_____

_____

That was the last question. As part of our closing script, I am to share with you the information that there are two resources available to assist you if you want to talk more about gambling and related problems. The state problem gambling hotline can be reached at 1-800-270-7177 and the National Suicide Prevention Lifeline at 1-800-273-TALK. Thank you very much for your time and cooperation.

__113. Sex of respondent **(BY OBSERVATION ONLY)**

(1)   Male
(2)   Female

Appendix B:

<div align="center">COUNTIES IN GEOGRAPHIC REGIONS</div>

1= City of Detroit

2= Detroit Metro Area (excluding Detroit)
    Wayne County (excluding Detroit)
    St. Clair
    Lapeer
    Macomb
    Oakland
    Livingston
    Washtenaw
    Monroe

3= East Region of the State

Cheboygan	Bay	Presque Isle
Huron	Otsego	Sanilac
Montmorency	Tuscola	Alpena
Saginaw	Crawford	Gratiot
Oscoda	Clinton	Alcona
Shiawassee	Roscommon	Genesee
Ogemaw	Eaton	Iosco
Ingham	Clare	Jackson
Gladwin	Hillsdale	Arenac
Lenawee	Isabella	Midland

4= West Region of the State

Emmet	St. Joseph	Charlevoix
Cass	Antrim	Berrien
Leelanau	Van Buren	Benzie
Kalamazoo	Grand Traverse	Kalkaska
Manistee	Wexford	Missaukee
Mason	Lake	Osceola
Oceana	Newaygo	Mecosta
Montcalm	Ionia	Kent
Ottawa	Muskegon	Allegan
Barry	Calhoun	Branch

5= Upper Peninsula

Delta	Schoolcraft	Mackinac
Chippewa	Luce	Alger
Menominee	Dickinson	Marquette
Iron	Baraga	Houghton
Keweenaw	Ontonagon	Gogebic

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