

# Summary of Key Findings and Recommendations from the Massachusetts Gaming Commission FY24 Research

# MASSACHUSETTS GAMING COMMISSION

In partnership with



# **Background**

The Expanded Gaming Act enshrines the role of research in understanding the social and economic effects and mitigating the negative consequences of casino gambling in Massachusetts. To this end, with the advice of the Gaming Policy Advisory Committee, the Commission is charged with carrying out an annual research agenda to comprehensively assess the impacts of casino gambling in Massachusetts.

Specifically, M.G.L. Chapter 23K §71 directs the research agenda to examine the social and economic effects of expanded gambling and to obtain scientific information relative to the neuroscience, psychology, sociology, epidemiology, and etiology of gambling. M.G.L. Chapter 23N, §23 extends the scope of the research agenda to include an understanding of the effects of sports wagering in the commonwealth.

As part of enacting the annual research agenda, M.G.L. Chapter 23K §71 directs that:

The commission and the committee shall annually make scientifically-based recommendations which reflect the results of this research to the house and senate committees on ways and means, the joint committee on economic development and emerging technologies, the joint committee on mental health and substance abuse and the joint committee on public health. The commission shall consider any such recommendations, research and findings in all decisions related to enhancing responsible gambling and mitigating problem gambling.

# M.G.L. Chapter 23N §23 further states:

Annually, the commission shall make scientifically-based recommendations that reflect the results of the research under clause (a) to the clerks of the senate and house of representatives, the senate and house committees on ways and means, the joint committee on economic development and emerging technologies, the joint committee on mental health, substance use and recovery and the joint committee on public health. The commission shall consider any such recommendations, research and findings in all decisions related to enhancing responsible gambling and mitigating problem sports wagering. The recommendations shall be posted on the commission's website.

The MGC worked in collaboration with Greo, an independent knowledge translation and exchange organization, to synthesize key findings and recommendations from the FY24 research agenda.

#### **Approach**

MGC's legislatively mandated research agenda is guided by a strategic plan that outlines seven key focus areas for research: economic impact; social impact; community-engaged research; public safety; responsible gaming program evaluations; Massachusetts gambling impact cohort; and data sharing. These focus areas were used as the organizing framework in this brief.

The six studies published as part of the FY24 research agenda were grouped into four distinct categories based on this framework, including: 1) Responsible gaming program evaluation, 2) Social impact, 3) Economic impact, and 4) Casino impact on public safety/surrounding areas.

Based on study findings, researchers provided a wide variety of recommendations. The Division of Research and Responsible Gaming reviewed recommendations arising from study findings and selected

recommendations that pertained to the Commission and recommendations and/or could be initiated within the short term. Below are key findings from studies in each area, as well as recommendations of focus for consideration for adoption.

	REPORT	AUTHOR(S)	CATEGORY
1	GameSense in Focus: Insights from an Evaluation in Massachusetts Casinos	Michael J. A. Wohl; Gray E. Gaudett; Christopher G. Davis; & Nassim Tabri	Responsible Gaming Program Evaluations
2	Gambling and Problem Gambling in Massachusetts: Results of a Follow-up Population Survey	SEIGMA Research Team: Dr. Rachel A. Volberg, Robert J. Williams, Martha Zorn, Valerie Evans	Social Impact
3	Impacts of Advertising on Gambling Behavior in Massachusetts	SEIGMA Research Team: Rachel A. Volberg, Martha Zorn, and Valerie Evans	Social Impact
4	Encore Boston Harbor, First Three and a Half Years in Operation: Economic Impacts Report (2019-2022)	UMass Donahue Institute's Economic & Public Policy Research Group: Thomas Peake, Rebecca Loveland, Kazmiera Breest, Ellen Aron, Rye McKenzie, Barbara Talagan, and Mark Melnik	Economic Impact
5	Assessment of Job Quality at Massachusetts Casinos, 2022	UMass Donahue Institute's Economic & Public Policy Research Group: Thomas Peake, Rebecca Loveland, Kazmiera Breest, Ellen Aron, Rye McKenzie, Barbara Talagan, and Mark Melnik	Economic Impact
6	Assessing the Influence of Gambling on Public Safety in Massachusetts Cities and Towns: Crime Comparison Analysis of Changes in the MGM Springfield Region, 2013-2022	Justice Research Associates, LLC (Crime Analysis Consultant to the Massachusetts Gaming Commission)	Public Safety

# 1. Responsible Gaming Program Evaluation

	REPORT	AUTHOR(S)
1	GameSense in Focus: Insights from an Evaluation in Massachusetts Casinos	Michael J. A. Wohl; Gray E. Gaudett; Christopher G. Davis; & Nassim Tabri

One study in FY24 focused on responsible gambling program evaluations. The study, *Players' Awareness of and Engagement with GameSense in Massachusetts Casinos*, assessed: 1) how regular visitors at three Massachusetts casinos perceive and interact with GameSense responsible gambling programming, GameSense Advisors (GSAs), and various safer gambling tools, 2) patrons' experiences with more indepth interactions with GSAs to gain insight into engagement and its predictors, and 3) player-facing casino employees' awareness, perceptions, engagement with, and referrals to GameSense, as well as included surveys and focus groups with GSAs and GameSense Managers. It identifies key factors that influenced perception and engagement. The study also provides recommendations to enhance awareness and perceptions of GameSense, engagement with GameSense, and improve the program overall.

# **Key findings:**

- → High awareness of GameSense among people who gamble regularly, with lower perception of GameSense as relevant to all who gamble: Participants had high awareness of GameSense, reporting using it for safer gambling education, access to budgeting tools such as PlayMyWay, and support for problem gambling. However, more participants believed that GameSense is mostly for people who experience problem gambling than a resource for everyone.
- → Value of meaningful engagement with GSAs: Only 18% of people visited a GameSense Info Center, with most reporting simple interactions with GSAs. A sizeable but smaller group of people experienced "meaningful engagements", which involved conversations about gambling mechanics or safer gambling. People who had meaningful interactions with GSAs recognized their value in raising safer gambling awareness. As a result, these people were more likely to recommend that other people seek their help, demonstrating the importance of deeper engagement with GSAs.
- → Reasons for not visiting GameSense: The three main reasons people reported for not visiting a GameSense Info Center were: 1) they were never directly invited, 2) they felt knowledgeable about gambling products already, and 3) they were already familiar with PlayMyWay.
- → Interest in visiting GameSense: Many respondents who had not visited a GameSense center expressed interest in visiting one to learn more about safer gambling, PlayMyWay, and other resources.
- → **Motivations for visiting GameSense:** There were two groups of people based on their motivations for visiting GameSense Info Centers: 1) "Curiosity and Swag Inspired", attracted by giveaways or general interest, and 2) "Information Seekers", primarily older people focused on learning about safer gambling or problem gambling.
- → **Motivations for not visiting GameSense:** There were three groups of people based on their motivations for not visiting GameSense Info Centers: 1) "Invitation Responsive," or those who

did not visit because they had not been invited, 2) "Self-Assured Non-Believers," who felt they already understood what GameSense had to offer, held negative view of GameSense and GSA's ability to help players with their gambling, and over 50% of whom did not agree with GameSense's presence at the casino, and 3) "Self-Assured," who felt they already understood what GameSense had to offer, and also scored lower in disordered gambling symptomatology and higher in positive play than those in the other two groups.

- → People who had engaged with GameSense show symptoms of gambling-related harm: People who responded that they engaged with GameSense displayed more signs of problem gambling than non-visitors, scoring lower on personal responsibility and precommitment behaviors, such as setting money limits.
- → Positive outcomes from in-depth interactions with GSAs. Among those who had a more in-depth interaction with a GSA, patron interactions with GSAs overwhelmingly yielded positive outcomes. A significant proportion reported feeling more informed about RG practices, indicating the effectiveness of GSA interactions in imparting knowledge. Additionally, over three-quarters reported that they would engage others to speak to a GSA.
- → Strong Awareness and Referral Rates for GameSense. Most player-facing casino employees were aware of GameSense through training and interactions with GSAs, recognizing its role in promoting safer gambling. Over half had referred patrons to GSAs, with referrals higher among those who had visited a GSIC. Key barriers to referral included a perceived lack of need and challenges in initiating conversations.

#### **Recommendations:**

- → **Clarify misconceptions:** Raise awareness about how GameSense has a broad range of resources and is meant to be used by everyone.
- → **Targeted campaigns:** Develop campaigns targeted at people who are at low- and moderate-risk, to encourage engagement with GameSense.
- → Emphasize the importance of Play Breaks by adding seating area: A seating area specific to "Play Break" would help GameSense and GSAs to foster a supportive environment where people can take a break, learn about safer gambling practices, and engage with GSAs.
- → Conduct further research to enhance GameSense and the impact of GSAs:
  - Barriers and enablers to people's views of GameSense: Identify the barriers and enablers of increasing awareness, perception, and engagement with GameSense.
     Develop effective evidence-based strategies to enhance these factors so that people view GameSense more positively.
  - Long-term impact studies: Track the impact of GameSense on behavior and attitudes before, after, and with sustained engagement with GameSense through surveys and player data.
- → Attract patrons through tailored safer gambling messaging. Researchers recommended that MGC embrace player segmentation to attract patrons. Older respondents were more likely to engage with GameSense for safer gambling purposes. Thus, older people may be more receptive to safer-gambling-related messages about GameSense. To tap into the younger demographic, perhaps heightening curiosity about GameSense or offering swag that will be attractive to a younger demographic. Prior research has already shown the benefits of player segmentation.

# 2. Social Impact

	REPORT	AUTHOR(S)
2	Gambling and Problem Gambling in Massachusetts: Results of a Follow-up Population Survey	SEIGMA Research Team: Dr. Rachel A. Volberg, Robert J. Williams, Martha Zorn, Valerie Evans
3	Impacts of Advertising on Gambling Behavior in Massachusetts	SEIGMA Research Team: Rachel A. Volberg, Martha Zorn, and Valerie Evans

Two studies in FY24 focused on the social impact of gambling in Massachusetts. Both studies were conducted before the legalization of sports betting in Massachusetts.

The first report, *Gambling and Problem Gambling in Massachusetts: Results of a Follow-up Population Survey*, analyzed changes in gambling attitudes, behaviors, problem gambling prevalence, and prevention awareness following the introduction of casinos, while also highlighting demographic trends. It compared data from a 2013–2014 survey, conducted before the casinos opened, with a follow-up survey from 2021. The report assessed the state of at-risk and problem gambling to inform future research and policy recommendations for reducing gambling-related harm.

The second report, *Impacts of Advertising on Gambling Behavior in Massachusetts*, analyzed existing literature and evidence to assess how gambling advertising influences gambling behaviors and problem gambling, and how certain populations of people may be more vulnerable to its impacts. The report provides policy recommendations to prevent and mitigate harm from gambling advertising given the current increase in advertising, the legalization of sports betting, and the shift to online gambling.

# **Key findings:**

- → Mixed views on impacts of casinos in Massachusetts: About equal numbers of people believe the introduction of casinos have an overall positive impact, while the other half believe that the impact has been negative overall. The harmful impacts reported included increases in problem gambling, traffic, and crime. Positive impacts reported were employment, retaining money that was leaving Massachusetts, and increased state and government revenue. (2)
- → Advertisements contribute to positive perception of gambling: Gambling advertisements often emphasize positive experiences and downplay or ignore risks. There is evidence that indicates that exposure to these advertisements fosters favorable attitudes towards gambling and increases intentions to gamble, contributing to higher rates of gambling and problem gambling. (3)
- → **Growing concern about gambling accessibility:** There was a significant rise in the number of people who felt that gambling is too easily accessible. In 2013, only 15.6% of people had this concern, but by 2021, that number increased to 67.5%. (2)
- → **Decreased overall participation in gambling activity:** Both studies highlighted that there was a decrease in participation in gambling, apart from daily lottery gambling and online gambling.

This decrease may be related to the impacts of COVID-19 or larger trends in North America that show how overall rates of participation in gambling have been declining since the early 2000s. (2, 3)

- → **Self-reported gambling expenditures:** People in Massachusetts reported spending the most on lottery gambling (42%), followed by casino gambling (21%), and sports betting (16%).(2)
- → Prevalence of problem and at-risk gambling: The prevalence of problem gambling in Massachusetts in 2021 was 1.4% of the population aged 18 and over. An additional 8.5% of the population aged 18 and over were classified at-risk gamblers. It should be noted that because gambling participation was suppressed to some extent by COVID-19, it is reasonable to assume that problem gambling may also have been suppressed. The prevalence of problem and at-risk gambling in 2021 was not significantly different from the prevalence rate in 2013, prior to the opening of casinos.
- → Increased weekly and monthly sports betting among regular betters: Among people who gamble regularly and who have gambled on sports in the last year, the percentage of people who placed bets weekly or monthly increased from 51% in 2014 to 80% in 2023, although participation in sports betting in the general population declined between 2014 and 2021. (3)
- → Trends related to at-risk and people experiencing problem gambling: Compared to people who gamble recreationally, people at-risk and experiencing problem gambling were more likely to:
  (2)
  - Be male, non-White, and unemployed.
  - Have a high school diploma or less.
  - Use tobacco.
  - Have friends and family who gamble regularly.
  - Report that their health is poor or fair, rather than good or excellent.
  - Report that the extensive amount of gambling advertisements and news coverage that they were exposed to prompted them to gamble more. (3)
- → Reasons for gambling. Recreational gamblers, people at-risk, and people experiencing problem gambling tend to gamble for different reasons. In 2021, 'winning money' was the most important reason for gambling among recreational gamblers followed by 'excitement and/or entertainment.' Among people at-risk and experiencing problem gambling, 'winning money' and 'excitement and/or entertainment' were equally important reasons for gambling. Gambling to socialize with friends and family was a much more common reason for gambling among recreational gamblers compared with people at-risk and experiencing problem gambling. In comparing recreational, people at-risk, and people experiencing problem gambling in Massachusetts in 2021, people at-risk and experiencing problem gambling in 2021 were more likely to gamble for excitement or entertainment and less likely to gamble to win money compared to 2013. (2)
- → Increased total expenditures from people at-risk and experiencing problem gambling: Though there were no significant increases in the rates of at-risk or problem gambling from 2013 to 2021, at-risk and people experiencing problem gambling represented a larger share of total gambling expenditures in 2021 compared to 2013. (2)

- → Change in trends related to substance use: Since 2013, there is less tobacco use and alcohol bingeing but more drug use among people who gamble recreationally and less alcohol bingeing among people experiencing problem gambling. (2)
- → **Mental health and gambling:** There are no longer significant differences in rates of depression, anxiety, and other mental health concerns between people who gamble recreationally, people at-risk, and people experiencing problem gambling. (2)
- → Increased risk of relapse when exposed to advertisements: Evidence indicates that exposure to gambling advertisements increases the risk of relapse for people recovering from problem gambling. However, few jurisdictions have implemented measures to support or protect this underserved population. (3)
- → **Decreased awareness of problem gambling initiatives:** There was a significant reduction of awareness of media and non-media gambling prevention campaigns in the public, schools, the workplace, and in the community. (2) This may be partially due to how gambling advertisements far outweigh counter-advertisements. (3)
- → Lack public health strategies: Most prevention efforts focus primarily on approaches at the individual level, such as promoting safer gambling practices, rather than public health strategies to prevent or minimize gambling-related harms at the population-level. (3)
- → Effective public health approaches: Studies have demonstrated that the restriction of alcohol and tobacco advertisements, availability, and price has been a cost-effective measure to reduce population-level harms. However, research on similar restrictions on gambling is limited. (3)
- → Jurisdictions regulating advertisements: Australia and several European governments have instituted measures to limit youth and other underserviced sectors from participating in online gambling, sports betting, and being exposed to advertising. (3)

#### **Recommendations:**

- → Encourage analysis beyond problem gambling rates: Policy makers and the media should focus on a deeper analysis of the survey data, which can offer valuable insights about gambling participation in Massachusetts. This is as opposed to only focusing on rates of problem gambling, and how they compare to treatment-seeking behaviors or rates in other jurisdictions.
  (2)
- → Investigate COVID-19 impacts: Future research should try to distinguish declines in gambling due to COVID-19-related factors from other factors that caused participation in gambling to decrease. (2)
- → Make survey data public: Making the survey data publicly available would allow researchers and stakeholders to conduct analyses that enhance the understanding of gambling in Massachusetts.
  (2)
- → **Strengthen advertising regulations:** Take a public health approach to strengthening regulations by: (3)
  - Enhancing protections for minors.
  - Restricting advertising that targets underserved groups.
  - Requiring that information on where to find support is included in all advertising and marketing content.
  - Limiting the amount and frequency of advertisements.

- Restricting messages that promote inducements, bonuses, or credits.
- Prohibiting advertising that promotes false or misleading messaging, including promoting overly positive outcomes of gambling.
- Ensuring that digital media and third parties abide by policy restrictions.
- Limiting advertisements of higher-risk forms of gambling.
- Restricting celebrity endorsements of gambling products.
- → Monitor gambling-related advertising trends: Continuously track influencer promotions, assess the potential reach of gambling posts on social media, and evaluate the prevalence and effectiveness of gambling prevention and treatment messages within the broader online landscape.

# 3. Economic Impact

	REPORT	AUTHOR(S)
4	Encore Boston Harbor, First Three and a Half Years in Operation: Economic Impacts Report (2019-2022)	UMass Donahue Institute's Economic & Public Policy Research Group: Thomas Peake, Rebecca Loveland, Kazmiera Breest, Ellen Aron, Rye McKenzie, Barbara Talagan, and Mark Melnik
5	Assessment of Job Quality at Massachusetts Casinos, 2022	UMass Donahue Institute's Economic & Public Policy Research Group: Thomas Peake, Rebecca Loveland, Kazmiera Breest, Ellen Aron, Rye McKenzie, Barbara Talagan, and Mark Melnik

Two studies in FY24 focused on the economic impact of casinos in Massachusetts:

The first study, Encore Boston Harbor, First Three and a Half Years in Operation: Economic Impacts Report (2019-2022), estimated the economic impact of the Encore Boston Harbor casino on the Massachusetts economy in its first three and a half years of operation (June 2019 to December 2022). The study analyzed operator and revenue data from casino operations (spending on vendors, employees, and government entities) and patron spending (in the casino, and in Everett and surrounding region). Due to COVID-19 restrictions, 2022 was the first full year that Encore Boston Harbor was in operation and the first-year estimates could be drawn from patron data.

The second study, Assessment of Job Quality at Massachusetts Casinos, 2022, examined workforce conditions at Encore Boston Harbor, MGM Springfield, and Plainridge Park Casino. The main purpose of the study was to assess the quality of casino jobs, using operator data from the casinos (recruitment and hiring, wages, turnover, promotions, and diversity, equity and inclusion). The report also describes the overall context of the workforce in the three casino's regions, in Massachusetts, and in the Accommodations and Food Services sector.

# **Key findings:**

- → Contribution to state economy: Encore Boston Harbor spent \$290 million on outside firms (about half of which were Massachusetts-based) and facilitated \$1.1 billion in new personal income and \$1.7 billion in new sales in Massachusetts, \$1.3 billion of which was new economic activity. (4)
- → Contribution to government revenue: Encore Boston Harbor contributed \$538.6 million in local and state tax revenue. State tax revenues were highest in 2022 at \$197.4 million (note that \$167.6 million of this spending was as a result of moving away from other goods and services).
  (4)
- → **Patron spending:** From June 2019 to December 2022, it is estimated that people who visited Encore Boston Harbor spent close to \$3.8 billion at the casino and off-site. In 2022, likely the

- most representative year, it is estimated that people spent \$1.1 billion dollars in and around the casino. (4)
- → **Job creation largely in the Metro Boston Region:** The casino itself supported 3,282 positions on average, in addition to another 6,635 jobs from spending by vendors, government bodies, and casino employees and patrons, mainly in the metro Boston region. (5)
- → Employee turnover and retention: Turnover rates at the casinos are low compared to people working in accommodations and food services overall (28.6% vs 115%). In addition, Encore Boston Harbor retained many employees through the pandemic. However, turnover rates were much higher for employees who made under a living wage, held hourly positions, and worked part-time. (5)
- → Employee diversity, equity, and inclusion: In 2022, casinos met or exceeded their goals for hiring people who were from a minority population, veterans, and local residents. However, hiring for women failed to achieve expected levels. (5)
- → Employee wages: There are significant differences in wages between each casino: 43.6%, 33.8%, and 18.0% of employees make a living wage or more at Encore Boston Harbor, MGM-Springfield, and Plainridge Park Casino, respectively. (5)

#### **Recommendations:**

- → Conduct studies of MGM Springfield and Plainridge Park Casino between 2019 and 2022:

  Operating reports of the other casinos, which had been open for a longer period prior to pandemic COVID-19 closures, would provide data with which to compare to Encore Boston Harbor. (4)
- → Collect qualitative data from casino management and staff: Thoughts and opinions from casino management and staff, for example through interviews, focus groups, etc. could be added to factual data already collected for a fuller picture of job quality. (5)
- → Consider analyzing information about benefits, accommodation for disabilities, opportunities for career development, etc.: Job quality and equity could be further assessed based on: (5)
  - Benefits (e.g., paid time off, retirement, parental leave, Employee Assistance Programs)
  - Accommodation for people with disabilities (or other unique circumstances)
  - Career development opportunities (e.g., training and professional development)
  - Performance management (e.g., bonuses, raises, promotions)
  - Reasons why people continue their employment, choose to leave, or are terminated.

#### 4. Public Safety

	REPORT	AUTHOR(S)
6	Assessing the Influence of Gambling on Public Safety in Massachusetts Cities and Towns: Crime Comparison Analysis of Changes in the MGM Springfield Region, 2013-2022	Justice Research Associates, LLC (Crime Analysis Consultant to the Massachusetts Gaming Commission)

One study in FY24 focused on public safety in relation to casinos in Massachusetts: The report, Assessing the Influence of Gambling on Public Safety in Massachusetts Cities and Towns: Crime Comparison Analysis of Changes in the MGM Springfield Region, 2013-2022, analyzed the distribution of crime in the region around MGM Springfield casino during the past decade and since its opening. The purpose of the study was to begin to understand patterns of crime in the region and determine if any changes might be traced back to the casino. In addition, the study identified trends that may need closer analysis and potential responses from police agencies. The data analyzed (on crimes, calls for service, and collisions) was from eight of the eleven police agencies and covered the previous ten years.

# **Key findings:**

- → Springfield faces the highest impact of crime in the region: The City of Springfield experienced the highest crime rates in the area, accounting for 62% of all regional incidents. Springfield had a history of elevated crime levels even before the casino.
- → Overall crime decreases since opening of casino: Crime rates have declined over the past 10 years except for a slight increase in 2022.
- → Crime increases in the area around MGM Springfield during summer: Crime in the MGM-Springfield area consistently follows a summer seasonal pattern of increase in warmer months. A clear summer seasonality spike in crime occurred in each year of this decade.
- → Increased traffic collisions due to inebriation: In the area surrounding MGM Springfield, traffic collisions attributed to drunk driving increased by 10%. In 2022, reports indicating that people's last drink was at MGM Springfield increased to an average of 7, up from the previous average of 5.8 per year.
- → Significant increases in crime prior to MGM Springfield reopening after COVID-19: There was an increase in crime around MGM Springfield while it was closed due to the pandemic in the period prior to its re-opening.
- → **Difficulty assessing the impact on crime rates:** During the pandemic closures, it is likely that stress from COVID-19, protests related to George Floyd, and events surrounding the 2020 election all contributed to varying levels of crime.
- → Better economic conditions can lower crime through improved collective efficacy—Springfield urban development: The City of Springfield has started to implement an urban development plan, including the area around the casino. The goal is to strengthen social bonds and increase employment opportunities. This is expected to help spread shared norms and values, and enforce informal social control, which in turn lowers crime.

# **Recommendations:**

- → Implement strategies to prevent and mitigate crime during the summer: MGM Springfield experiences a consistent rise in crime during the summer months. This highlights the need for proactive strategies to address the annual rise in incidents.
- → Enhance crime response through regular data sharing and unified strategies: The effectiveness of crime responses would be enhanced by sharing the results of crime analyses and working collaboratively. By leveraging crime data and related intelligence, agencies can strategically determine the optimal deployment of police officers, ensuring they are positioned in the right places at the right times.

- → **Collaboration across jurisdictions:** Cities are experiencing similar crime issues driven by common contributing factors, often perpetrated by a small group in key hotspots. Collaboration among jurisdictions can help to address the interconnected challenges. Key areas of concern include:
  - Cash-related crimes (e.g., street robbery, theft from cars)
  - Identity theft (e.g., stealing documents from parked cars)
  - Crime and scams targeted wealthy people
  - Prostitution and human trafficking
  - Drunk driving
- → Track crime victims' casino attendance: Police officers could record whether people who were victims of crime had been at the casino around the time of the incident. This would help to understand the role of the casino in crimes in the region.
- → **Use current crime findings as comparisons to data on future crimes:** The results of this study can act as benchmarks to compare crime activity in the future, using the latest criminal studies research methods:
  - o Poisson regression
  - Seasonal-Trend decomposition procedure based on Loess (STL)
  - Spatial Point Pattern Test (SPPT) (in addition to other techniques that use time series and trend analysis)
  - Risk Terrain Modeling to conduct micro-analysis of hexagon hotspots (to identify drivers or contributors of crime to help to understand factors in communities that increase risk or offer protection)
  - Aggregate clustering to monitor and pinpoint hotspots within hotspots