

# **Cummings Associates**

## **Projected Gaming Revenues and Impacts of Proposed New Casinos in Prince George's County, Maryland**

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# **Projected Gaming Revenues and Impacts of Proposed New Casinos in Prince George's County, Maryland**

## **Executive Summary**

### **Background / Introduction**

Will Cummings, the author of this report, has been retained to conduct an analysis of the gaming market in and around Maryland and to develop projections for the likely gaming revenues of each of the three proposals for a new casino in Prince George's County, as well as the impacts of such a casino on the five casinos that have previously been licensed in Maryland.

I have developed projections for each of these casinos, and their impacts, based upon the performance of the existing gaming facilities in the Mid-Atlantic region, as well as those most comparable elsewhere around the country, by using a gravity-model methodology that is described in more detail in an Appendix. This methodology relates the numbers of people who live at various distances from each gaming facility to their patronage at each such facility based on the experience elsewhere, using distance (or more accurately, travel time) and size as its most salient variables. These types of models have been employed with much success in a multitude of other markets across North America.

I have developed my projections under assumptions that:

- o Each of the new gaming facilities will be broadly comparable to existing casinos in the region in terms of access, appearance, spaciousness and amenities – comparable, in particular, to Maryland Live. I have assumed that “micro-access” with respect to ingress and egress will be good at each site. Each proposal also includes a hotel, a parking structure, and various amounts of dining, retail and entertainment amenities.

- o The performance of each of the proposed facilities and the underlying “propensity to spend” of the population surrounding it will therefore also be similar to those of Maryland Live, with adjustments for the details of each proposal. These assumptions result in slot power ratings ranging from 71.41 to 73.68, or \$514 to \$530 annual spending per distance-adjusted adult (prior to the effects of crowding, if any, on slot performance at each facility).

I have assumed average annual table spending of \$168 per distance-adjusted adult at each of these casinos, which corresponds to a table power rating of 105.

(“Power Ratings” measure the performance of a casino with respect to the adult population which surrounds them at different distances / travel times. I describe these in some detail in the Appendix to this report.)

- o I have also assumed small amounts of incremental slot and table business arising from hotel guests at National Harbor, other hotels in Prince George’s County, the District of Columbia, and the nearest areas of Virginia.
- o All these assumptions apply to a time of “stabilized operations,” which is typically one to three years down the road from the opening of a new gaming facility, and reflect industry-standard patterns of investment in bricks and mortar and in player rewards.
- o The existing casinos of Maryland continue to operate largely as they do today, with the addition of (1) table games as planned at Ocean Downs, and (2) the new Horseshoe Casino now under construction in Downtown Baltimore.
- o No other new gaming facilities are developed in Maryland, Delaware, Virginia, or the nearby portions of Pennsylvania and West Virginia.
- o Under current law, when a new casino opens in Prince George’s County, the effective tax rates on slot gaming at Maryland Live and the Horseshoe Baltimore will decline. These lower tax rates ( = higher retention rates) will, as described above, tend to improve the performance of these casinos and thus offset some of the impacts of the new casino in Prince George’s County.

## **Projected Performance**

Based on these assumptions, I took the detailed model described (in part) in the Appendix, calculated the numbers of “distance-adjusted” adults likely to patronize each facility, and applied the appropriate rates of spending for each. A summary of the most salient results is presented in **Exhibit A**. These are reported here as of “stabilized operations” and in terms of

FY2019 dollars. **Exhibit B** provides additional detail regarding the performance and impacts of each proposal in FY2019, and **Exhibit 17** at the end of this report presents detailed projections for each of the first five fiscal years of operation (FYs 2017-2021).

In brief, the casino proposed by MGM at National Harbor is projected to generate the highest total gaming revenues, the highest gaming revenues net of impacts on the other casinos in Maryland, and the greatest positive impacts on Maryland's "net exports" of gaming services.

Among other casinos, the most severe impacts will be felt at Maryland Live because it lies closest to Prince George's County and already attracts significant business from the new casino's prime feeder markets in Virginia. Impacts on Rocky Gap, Ocean Downs and the new Horseshoe Casino in Baltimore are projected to be modest. These impacts would not materially differ between the MGM and Parx proposals, but would be slightly lower under the Penn Hollywood proposal at Rosecroft.

My analyses and projections are based upon the assumptions described herein. Some of these assumptions will inevitably not materialize, and unanticipated events and circumstances will occur. The actual results will therefore vary from my projections, and such variations may be material.

## Exhibit A: Key Findings

(FY2019 \$million)

### As Proposed:

( with # slots)

**Penn**  
(3,000)

**Parx**  
(4,750)

**MGM**  
(3,600)

### Gross Gaming Revenues:

VLT/Slots	\$387.2	\$491.0	\$501.3
Tables (inc. Poker)	\$172.7	\$191.2	\$211.3
Total	----- \$559.9	----- \$682.2	----- \$712.6

### Impacts on Other Casinos in Maryland:

VLT/Slots	-\$48.3	-\$88.5	-\$77.5
Tables (inc. Poker)	-\$51.1	-\$58.2	-\$59.9
Total	----- -\$99.4	----- -\$146.8	----- -\$137.4

### Net Gaming Revenues:

VLT/Slots	\$338.9	\$402.5	\$423.8
Tables (inc. Poker)	\$121.6	\$132.9	\$151.4
Total	----- \$460.5	----- \$535.4	----- \$575.2

(Impact on)  
**Net Exports of  
Gaming Services**  
(Exports - Imports)

\$393.1

\$462.9

\$501.5

## Exhibit B: Summary of Projections - FY2019 Detail

( one of two pages)

Facility		Number of Units		Proj. "Power Rating"		Projected Total Win (FY2019 \$000)			Proj. Win/Unit/Day		Projected Impacts		
		slots	tables (1)	slots	tables	slots	tables	total	slots	tables (1)	slots	tables	
Null case WITHOUT Prince George's County: (2)													
Horseshoe	Baltimore	2,435	132	70.1	107.8	\$276,653	\$174,464	\$451,117	\$311	\$3,621			
Maryland Live	Hanover	4,270	149	72.1	107.8	\$406,138	\$180,701	\$586,839	\$261	\$3,323			
Hollywood	Perryville	1,148	17	78.1	105.2	\$74,007	\$13,211	\$87,218	\$177	\$2,129			
Rocky Gap	Flintstone	558	12	88.8	108.9	\$35,048	\$5,558	\$40,606	\$172	\$1,324			
Ocean Downs	Berlin	800	10	99.6	100.0	\$55,572	\$3,398	\$58,970	\$190	\$931			
		-----	-----			-----	-----	-----					
Total Maryland		9,211	320			\$847,417	\$377,333	\$1,224,751					
Prince George's County Casinos as Proposed, with Impacts:													
Penn	Fort Wash'n	3,000	120	70.4	105.0	\$387,245	\$172,669	\$559,913	\$354	\$3,942			
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$272,278	\$156,236	\$428,515	\$306	\$3,243	-1.6%	-10.4%	
Maryland Live	Hanover	4,270	149	74.1	107.8	\$370,302	\$148,957	\$519,259	\$238	\$2,739	-8.8%	-17.6%	
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,627	\$12,626	\$83,253	\$169	\$2,035	-4.6%	-4.4%	
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,986	\$5,178	\$38,164	\$162	\$1,234	-5.9%	-6.8%	
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,913	\$3,270	\$56,184	\$181	\$896	-4.8%	-3.8%	
		-----	-----			-----	-----	-----					
Total Maryland		12,211	440			\$1,186,351	\$498,937	\$1,685,287			40.0%	32.2%	
Parx	Fort Wash'n	4,750	145	71.4	105.0	\$491,033	\$191,165	\$682,198	\$283	\$3,612			
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$263,356	\$153,656	\$417,012	\$296	\$3,189	-4.8%	-11.9%	
Maryland Live	Hanover	4,270	149	74.1	107.8	\$342,335	\$144,557	\$486,893	\$220	\$2,658	-15.7%	-20.0%	
Hollywood	Perryville	1,148	17	78.1	105.2	\$69,468	\$12,533	\$82,001	\$166	\$2,020	-6.1%	-5.1%	
Rocky Gap	Flintstone	558	12	88.8	108.9	\$31,968	\$5,109	\$37,077	\$157	\$1,217	-8.8%	-8.1%	
Ocean Downs	Berlin	800	10	99.6	100.0	\$51,739	\$3,251	\$54,990	\$177	\$891	-6.9%	-4.3%	
		-----	-----			-----	-----	-----					
Total Maryland		13,961	465			\$1,249,900	\$510,271	\$1,760,172			47.5%	35.2%	
MGM	Nat'l Harbor	3,600	125	69.7	105.0	\$501,314	\$211,310	\$712,624	\$382	\$4,631			
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$265,991	\$153,147	\$419,138	\$299	\$3,179	-3.9%	-12.2%	
Maryland Live	Hanover	4,270	149	74.1	107.8	\$349,289	\$143,394	\$492,683	\$224	\$2,637	-14.0%	-20.6%	
Hollywood	Perryville	1,148	17	78.1	105.2	\$69,906	\$12,533	\$82,439	\$167	\$2,020	-5.5%	-5.1%	
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,432	\$5,120	\$37,553	\$159	\$1,220	-7.5%	-7.9%	
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,307	\$3,257	\$55,564	\$179	\$892	-5.9%	-4.2%	
		-----	-----			-----	-----	-----					
Total Maryland		12,811	445			\$1,271,240	\$528,760	\$1,800,000			50.0%	40.1%	



## Exhibit B: Summary of Projections - FY2019 Detail

( one of two pages)

Facility		Number of Units		Proj. "Power Rating"		Projected Total Win (FY2019 \$000)			Proj. Win/Unit/Day		Projected Impacts	
		slots	tables	slots	tables	slots	tables	total	slots	tables	slots	tables
			(1)							(1)		
<b>Prince George's County Casinos "Apples to Apples," with Impacts:</b>												
<b>Penn</b>	Fort Wash'n	3,000	130	70.4	105.0	\$386,976	\$179,333	\$566,309	\$353	\$3,779		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$272,295	\$155,030	\$427,325	\$306	\$3,218	-1.6%	-11.1%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$370,354	\$146,922	\$517,276	\$238	\$2,702	-8.8%	-18.7%
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,629	\$12,585	\$83,214	\$169	\$2,028	-4.6%	-4.7%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,987	\$5,150	\$38,138	\$162	\$1,227	-5.9%	-7.3%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,915	\$3,262	\$56,177	\$181	\$894	-4.8%	-4.0%
		-----	-----			-----	-----	-----				
Total Maryland		12,211	450			\$1,186,157	\$502,282	\$1,688,438			40.0%	33.1%
<b>Parx</b>	Fort Wash'n	3,000	130	70.3	105.0	\$392,941	\$181,992	\$574,933	\$359	\$3,835		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$272,800	\$155,298	\$428,097	\$307	\$3,223	-1.4%	-11.0%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$371,755	\$147,309	\$519,064	\$239	\$2,709	-8.5%	-18.5%
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,657	\$12,590	\$83,247	\$169	\$2,029	-4.5%	-4.7%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,984	\$5,148	\$38,132	\$162	\$1,227	-5.9%	-7.4%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,921	\$3,263	\$56,184	\$181	\$894	-4.8%	-4.0%
		-----	-----			-----	-----	-----				
Total Maryland		12,211	450			\$1,194,057	\$505,600	\$1,699,657			40.9%	34.0%
<b>MGM</b>	Nat'l Harbor	3,000	130	68.1	105.0	\$445,645	\$214,732	\$660,377	\$407	\$4,525		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$270,804	\$152,528	\$423,331	\$305	\$3,166	-2.1%	-12.6%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$364,363	\$142,360	\$506,722	\$234	\$2,618	-10.3%	-21.2%
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,502	\$12,512	\$83,014	\$168	\$2,016	-4.7%	-5.3%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,938	\$5,106	\$38,044	\$162	\$1,216	-6.0%	-8.1%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,880	\$3,252	\$56,133	\$181	\$891	-4.8%	-4.3%
		-----	-----			-----	-----	-----				
Total Maryland		12,211	450			\$1,237,132	\$530,490	\$1,767,621			46.0%	40.6%

"Power Rating" reflects each facility's ability to attract revenues from the surrounding population based on gravity-model analysis. Slot ratings are depressed in some cases (win/slot/day > \$340) due to crowding at prime times. For discussion, see Appendix A.

(1) Poker tables counted as equivalent of 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) "Null case" assumes no new casino in Prince George's County, nor any enhancement of retention rates at other casinos related thereto.

# **Projected Gaming Revenues and Impacts of Proposed New Casinos in Prince George's County, Maryland**

## **1. Introduction**

The State of Maryland authorized casino gaming first in the form of VLTs (though these are entirely identical to slot machines in terms of look and feel to the customer) and subsequently authorized table games. Four gaming facilities are now in operation, and a fifth, the Horseshoe Casino, is now under construction in Downtown Baltimore.

The Maryland Lottery and State Gaming Control Agency is now considering three proposals regarding a casino in Prince George's County:

- o Penn National Gaming's (through a subsidiary) Hollywood Casino Resort at Rosecroft Raceway, off St. Barnabas Road just south of I-95 at Exit 4 ("Penn" for short hereafter). Penn proposes 3,000 VLT/slot machines, 100 house-banked table games, and 40 poker tables.

- o A casino proposed by Parx Maryland on Fort Hill Road at its intersection with Maryland 210, the Indian Head Highway, several miles south of Exit 3 on I-95 ("Parx"). Parx proposes that this facility ultimately contain 4,750 slot machines, 150 house-banked table games, and 50 poker tables; and

- o A casino proposed by MGM National Harbor, LLC, just north of the National Harbor development at Exit 2 on I-95 ("MGM"). This casino would have 3,600 slot machines, 110 house-banked table games, and 30 poker tables.

These three sites are all located on the west side of southern Prince George's County, near the southern tip of the District of Columbia where it meets the Potomac River – and thereby very convenient to the residents of Virginia. Each of the applicants also proposes a hotel (with 250 to 300 rooms), a parking structure, and a variety of dining and entertainment amenities.

In this report, Will Cummings assesses the current state of the market for slot-machine and table gaming in the area and develops projections for likely gaming win at each proposed casino as well as its likely impacts on Maryland's existing facilities. Section 2 presents background information regarding U.S. casinos in general, the competitive environment in the Mid-Atlantic region in particular, the performance of slot machines and table games at the facilities that currently serve Maryland and its neighbors, and those most comparable elsewhere, and recent trends in such gaming revenues.

Section 3 describes my analyses of existing markets for gaming across the U.S., and explains my methodology for analyzing and projecting such revenues. (I discuss this methodology in greater detail in an Appendix, and in my powerpoint presentation to the Commission of December 6.) Section 4 describes the key assumptions underlying my projections, which are then presented in Section 5. Section 6 provides a brief summary and conclusions.

## 2. The Lay of the Land

Casino gaming has proliferated across North America over the past twenty-four years. With the most recent addition of Massachusetts, eighteen states now authorize full-scale casino gambling on a commercial scale without limiting it to Indian tribes. In fifteen other states, full-scale casino operations are conducted only by Native Americans, but in at least nine of them, including Connecticut, California and Florida, these casinos are quite substantial.

Seven of the 33 “casino” jurisdictions also authorize slot machines (or slot-like video lottery terminals) at their race tracks,<sup>1</sup> and two states have gaming devices at their race tracks “only” (i.e., without full casinos). A table which summarizes this information is presented on the following page.

Whether at full-scale casinos, at race tracks, or at additional locations in eight other states, the public’s appetite for gambling at slot machines is immense. They now generate up to 90% of total revenues at most casinos – though table games approach 30% at many casinos in the Northeast. As described in Appendix A, my analyses indicate that the average adult who lives with convenient access to a “standard” facility with slot machines spends roughly \$720 per year on them (approximately 1.25% of personal income across the U.S. as a whole). In the Northeast, the corresponding figure for table games is roughly \$160 (0.25% of personal income).

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<sup>1</sup> That is, slots only, but not full casinos. In some of the other states that authorize casinos, “full” race track gaming facilities feature prominently in the mix (and in some cases were the original venues for gaming of any kind in the state). Examples include Delaware, Iowa, Pennsylvania, and West Virginia, which typically started with “slots at tracks” and later added table games and/or additional, non-track casino locations. In Delaware, moreover, gaming facilities are still limited to race tracks by statute.

<b>State-Regulated Casinos *</b>	<b>Indian Casinos Only *</b>	<b>Slots at Tracks Only</b>
Colorado	Arizona	Arkansas <sup>2</sup>
Delaware	California	Rhode Island
Illinois <sup>3</sup>	Connecticut	
Indiana *	Florida *	
Iowa	Idaho	
Kansas	Minnesota	
Louisiana * <sup>3</sup>	Montana <sup>3</sup>	
Maine	New York *	
Massachusetts	New Mexico * <sup>3</sup>	
Michigan	North Dakota	
Mississippi	Oklahoma *	
Missouri	Oregon <sup>3</sup>	
Nevada <sup>3</sup>	Washington	
New Jersey	Wisconsin	
Ohio *	Wyoming	
Pennsylvania <sup>4</sup>		
South Dakota <sup>3</sup>		
West Virginia <sup>3</sup>		

\* Indicates states with “slots at tracks”  
as well as / distinct from full casinos.

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<sup>2</sup> Arkansas’s machines are technically limited to “games of skill,” such as video poker and blackjack.

<sup>3</sup> Louisiana, Montana, Nevada, New Mexico, Oregon, South Dakota, West Virginia and Illinois also authorize slots or slot-like VLTs at widespread bars, taverns, and/or fraternal establishments. In New Mexico, these are not economically significant, but most of the other “widespread” states, they are. Illinois passed such legislation in 2011, and has just begun to distribute these devices.

<sup>4</sup> Pennsylvania began with slots at tracks, but will ultimately have five substantial “standalone” (i.e., non-track) gaming facilities. Four have opened so far, at Pocono (Mount Airy), Bethlehem (Sands), Pittsburgh (The Rivers), and Philadelphia (SugarHouse). Smaller facilities have also opened at Valley Forge and at the Nemacolin Resort in Western Pennsylvania. Pennsylvania authorized table games in 2010, so these are all now “full” casinos.

A map which depicts the existing casinos in and around Maryland is presented in **Exhibit 1**. In this and the following maps, the black squares indicate existing casinos and the open squares indicate casinos now under construction (the Horseshoe in Downtown Baltimore) or proposed (in Prince George's County).

Detail for the immediate area is presented in **Exhibit 2**. Again, existing casinos are depicted by black squares, and locations proposed for new ones are shown as open squares. The new casinos, both in Baltimore and in Prince George's County, will enjoy good access from much of the surrounding area. In particular, the new casino in Prince George's County, at any of the three locations proposed, will be *the* most conveniently-accessible casino for most of the population of Virginia.

The top portion of **Exhibit 3** presents recent statistics for the performance of slot machines at Maryland's four existing casinos, and the bottom portion for the nearest casinos in neighboring states. Performance varies among these casinos. The "power rating" statistics that I present in the final columns measure the performance of each facility in terms of its success in attracting spending from the surrounding population based on a gravity-model analysis that I describe later in this report. In brief, these are based upon the revenues of each facility compared to its size and accessibility to the surrounding population versus its competitors.

I would observe at this point that all of the gaming facilities in neighboring states operate under tax rates (and other financial burdens, such as purse allocations for horsemen) that are lower than those in Maryland. As described in the Appendix, "tax" rates and similar burdens have significant adverse impacts on casino performance. Aside from differences in demographics and access thereto, results at the new casinos should otherwise therefore be more

similar to those at Maryland Live than to those of the casinos in Pennsylvania, Delaware or West Virginia.

(The gravity-model analyses which I describe in the following sections take tax rates as well as capacity, access, and demographics into account in developing my projections.)

My perspective has to this point been rather static, and will be so again later: what is the performance *now*, or at each new casino, how it would have done in FY2013. Given, however, the severity of the recession from which we shall hopefully continue to emerge, it is reasonable to ask whether recent results provide a reasonable basis from which to project the future. The recession severely battered casinos in Nevada, Atlantic City, Connecticut and the Chicago area (aggravated there by the introduction of a ban on smoking in 2008). Elsewhere, however, and particularly in the Northeast, most “non-destination” gaming facilities held up rather well. Recent statewide statistics for slot win which illustrate these trends include:

<b>State</b>	<b>Slot Gaming Revenues FY2013 vs. FY2011</b>
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“Destination” Markets (relatively remote from most customers):

Connecticut	- 14.4%
New Jersey	- 11.9%

“Locals” Markets (relatively close to most customers):

Rhode Island	+ 5.7%
Upstate New York	+ 12.7%
Pennsylvania	+ 1.1% <sup>5</sup>
Iowa	+ 0.0% <sup>5</sup>
New Mexico	+ 2.1%

(South) Florida tracks + 13.3%<sup>5</sup>

Customers clearly economized during the downturn by gambling closer to home rather than traveling longer distances to destination resorts. Locals-oriented regional casinos held up far better, and in many cases actually saw their revenues grow through the course of the recession. Gross VLT revenues in New York State, for example, increased by 34% between FY2008 and FY2012 (*excluding* Resorts World at Aqueduct), and those in Rhode Island, despite serious financial troubles its major casino, Twin River, by 10%. I therefore believe that recent performance does indeed provide a reasonable guide to that which we should expect for regional casinos in the near future – barring yet another recession, of course.

Longer-term trends are presented in the graphs of **Exhibit 4** for the “mega-casinos” (a category that now includes Maryland Live) in Southern New England and the New York City area, and for a selection of the VLT facilities in Upstate New York in **Exhibit 5**. I have not prepared similar graphs for the casinos of New Jersey, Delaware, Pennsylvania, and West Virginia, because they are uninformatively erratic due to a continuing series of competing new casinos opening within each of those or neighboring jurisdictions (including, in particular, Maryland). I believe, however, that these two exhibits demonstrate quite well my general thesis that “local” gaming facilities have held up well, while destination resorts have suffered – due in no small part to the large “locals” establishments which now cramp the reach of both Atlantic City and the Connecticut casinos in almost every direction.

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<sup>5</sup> The calculation for Pennsylvania excludes Valley Forge in toto, and extrapolates SugarHouse to a full year of operations in FY2011. The calculation for Iowa excludes Grand Falls, which opened in June, 2011. Florida race track slot performance continues to benefit from a large reduction in the state tax rate enacted in 2009. I have excluded the casino at Miami Jai-Alai, which opened in mid-FY2012, from the calculation there.



### 3. Methodology

In order to develop my projections for each new gaming facility in Prince George's County, I first conducted detailed analyses of the performance of the existing casinos in the Northeast (and those most comparable in other states) in relation to the demographics of the market areas which surround them. "Geography," by which I primarily mean the distribution of population, is the most important factor underlying the performance of gaming facilities, as it is indeed for the sales of many consumer goods and services.

My methodology is described in detail in Appendix A. In brief, it is based on the number of adults residing at various distances from each gaming facility in an area, and the ratio of actual revenues obtained to such numbers of adults so distributed. I apply "gravity models" that incorporate data for various geographic subunits in each market such as its adult population, per capita income, urban/rural nature, and travel time to the nearest casino(s) and/or race-track gaming-device facilities (or relevant group(s) of such facilities).<sup>6</sup> From these parameters, I estimate the "distance-adjusted" adult population of each market. This figure is intended to represent the effective market population "as if" the entire population resided within ten minutes of a gaming facility.<sup>7</sup> In order to do this on a detailed basis, I conducted this analysis by zip code in all of Maryland and the states that neighbor it. In order to analyze the performance of the

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<sup>6</sup> These are called "gravity" models because in their simplest form, they are similar to Newton's Law of Gravitation: the "attraction" of each competing facility is inversely proportional to the square of its distance from the relevant population. Because economists named Reilly and Huff pioneered their application to retail sales, they are now called "Reilly" or, more commonly, "Huff models."

<sup>7</sup> And also had (disposable) per capita income of \$29,671 (the U.S. average at 1/1/2013) and was urban in nature, i.e., part of a defined metropolitan statistical area. These relationships are based upon statistical analysis of these models and of survey and players-club data from several large casino markets. The ten-minute criterion is no special figure; it is simply a benchmark intended to represent convenient access.

most relevant existing casinos, the model also covers all or portions of many other states, extending as far as Maine to the north and Ohio to the west. For the areas most remote from existing casinos, I used counties as the basic elements of analysis.<sup>8</sup>

A portion of the detailed gravity model is illustrated in **Exhibit 6** (note that this exhibit extends over two pages, and presents just a small portion of the model). In addition to the demographic data pertaining to each zip code, a second set of inputs describes the time it takes to drive from there to each of many current or potential gaming facilities or groups of such facilities: the Russell Street site in downtown Baltimore, the four existing casinos in Maryland, the five in West Virginia, the 12 in Atlantic City (considered as a group), and so forth. Other pages cover the casinos proposed for Prince George's County, as well all of the gaming facilities in New York, Connecticut, Pennsylvania, and many other casinos on the fringes of this region.

The model takes the travel time *from* each geographic market segment *to* each of the competing casinos, identifies the closest such facility, and based on the distance/travel time, estimates a "distance-adjusted" adult population for each market segment. Again, these figures represent the number of adults that would generate the estimated level of spending if they all lived within ten minutes of the facility. For the State as a whole (and for all the adjoining markets), these figures are lower than the actual adult population, because most people live more than ten minutes from such a facility. The model then distributes the distance-adjusted adult populations of each market segment across all the competing facilities, depending upon travel time and attractiveness.

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<sup>8</sup> Because I have used similar models to develop projections elsewhere, I have actually analyzed all of the northeastern U.S. at the zip-code level except for northern New York and Vermont, as well as most of the Midwest.

I have used such models for analysis and projections extensively in the Northeast, Midwest, West and many other markets across the country in a similar fashion. (I presented a selection of the underlying data to the Commission in my powerpoint presentation of December 6.) The results of these analyses are summarized in **Exhibit 7**. This exhibit presents an index that I call a slot-machine “power rating” for each of the facilities (or groups thereof) in most of the major markets of the U.S.<sup>9</sup> These power ratings represent annual spending on slot machines (and/or VLTs) per “distance-adjusted” adult compared to a representative “Midwest Standard” figure of \$720 (the middle yellow bar in this exhibit). Annual spending averaging \$792 per (distance-adjusted) adult would translate into a power rating of 110 (the upper yellow bar); \$648 translates into a power rating of 90 (the lower yellow bar). (For additional detail, see the Appendix at the end of this report.)

Exhibit 7 presents the broad range of markets in three groups: the Northeastern U.S. and Florida in the first column, medium to large markets elsewhere in the second column (largely in the West and Midwest), and rural markets in the third column. Rural facilities often do very

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<sup>9</sup> It may be helpful to consider these power ratings as a kind of extension of the “fair share” concept that is often used to compare different gaming facilities. If, for example, all the slot machines in a given market average \$200 in win per day as a group, a facility at which they win \$240 per day is said to do 120% of its “fair share.” One that wins \$180 per machine per day is said to do just 90% of its fair share.

The concepts behind my power ratings are similar, but include analyses of the surrounding demographics. If there are many people and few machines in an area (Chicago, for example), each machine *should* win a lot each day. In rural Iowa, on the other hand, there are many more machines and many fewer people. A facility with the same power rating in Iowa will win much less per machine per day than in Chicago, but will do equally well in attracting spending from the (smaller) surrounding population.

The major omissions from this chart involve California and Arizona. In these two states (as in many others), tribal gaming operations rarely release revenue statistics. In addition, I have not had the opportunity to analyze the markets of Louisiana and Mississippi in great detail.

well.<sup>10</sup> More competitive markets also generally attract higher rates of spending, but as they may be either urban, rural, North, South, East or West, I have not devoted a separate column to them.

It is obvious that many of the gaming facilities in the Northeast (the first column) perform poorly by this measure. This is due in large part to the relatively high tax rates imposed on most slots-at-tracks facilities there – and in Florida, too (at first), at the bottom of that column. (The bottom of the middle column, by contrast, generally comprises old-style riverboats that have not yet been replaced by more spacious and micro-accessible modern facilities.) Under high-tax conditions, casino operators can invest only very modest amounts in bricks and mortar and in player rewards, and these are increasingly critical to most gaming operations today – especially in competitive markets.

There is, in fact, a strong correlation between slot performance and tax rate, or more precisely its converse, the “retention rate” which casinos are allowed to keep.<sup>11</sup> I discuss this relationship in more detail in the Appendix – but in brief, the high tax rate in Maryland is the primary reason why its gaming facilities lag in the lower left-hand corner of Exhibit 7. (Maryland’s ban on smoking is also a factor, but that is becoming more common all across the country.)<sup>12</sup>

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<sup>10</sup> As described in the Appendix, there are at least three reasons why rural facilities appear to do so well: (i) easier to get around, (ii) less to do, and (iii) “survival bias” – in small markets, sometimes only the best survive.

<sup>11</sup> In addition to taxes on gross revenues, at race track facilities (and some others) the retention rate also reflects the subtraction of mandatory purse payments to horsemen, breeders' funds, and miscellaneous social mandates.

<sup>12</sup> Delaware, New York (at its commercial casinos) and Massachusetts (forthcoming) prohibit smoking in casinos just like Maryland. However, New Jersey, Pennsylvania, West Virginia and the tribal facilities in Connecticut and New York still allow smoking in their casinos.

Based upon the experience elsewhere and the specific assumptions that I describe in Section 4, the model applies the “elasticities” of spending versus travel time and income to the population of all the relevant zip codes. It calculates the market shares of each casino or group of casinos, and also incorporates the potential impacts of capacity constraints. The model then calculates the impacts of all these factors on the appropriate rate(s) of spending per adult per year from each zip code or county, and allocates that spending among all the facilities in the region – including in particular each new casino proposed for Prince George’s County and, in order to estimate impacts, at the four existing casinos in Maryland and the fifth that is now under construction in Baltimore.

## 4. Assumptions

Based on my reading of the materials submitted by each applicant, I expect that each of the proposed gaming facilities will be broadly comparable to existing casinos in the region in terms of access, appearance, spaciousness and amenities, and in particular, very comparable to Maryland Live. I have assumed that “micro-access” with respect to ingress and egress will be reasonably good at each site. Each proposal also includes a hotel, a parking structure, and various amounts of dining, retail and entertainment amenities.

I believe that the performance of each of the proposed facilities and the underlying “propensity to spend” of the population surrounding it will therefore also be similar to those of Maryland Live, with adjustments for the details of each proposal. These adjustments are described in **Exhibit 9**. Note that this exhibit presents two sets of scenarios, because I have developed two sets of projections with alternative assumptions regarding the size, or “mass” of each facility: one “as proposed,” and the other, called “apples to apples,” under which each of the facilities is hypothetically assumed to have exactly the same numbers of gaming positions. My projections under this “apples to apples” scenario will therefore reflect each at a standard “size” of 3,000 VLT/slot machines, 110 house-banked table games, and 40 poker tables.

My adjustments result in slot power ratings “as proposed” ranging from 71.41 to 73.68, or \$514 to \$530 annual spending per distance-adjusted adult *before* any effects of crowding at each facility. MGM earns, in my estimation, a slightly higher power rating than Penn and Parx because it proposes to spend more money on its facility, that facility will be roomier than the

others, and the higher retention rate that it proposes (44%, including 6% for slot costs) will enable it to spend more money on marketing, promotion, and player rewards.<sup>13</sup>

These power ratings pertain to each of the proposals as they would perform without any capacity constraints. All except Parx's 4,750-slot facility, however, would not be quite large enough to serve the market that I project without exceeding \$300 in win per slot per day in current dollars (roughly \$340 in FY2019). At this point, crowding at prime times begins to have significant effects, as some customers cannot sit right down at their favorite machines. I have therefore reduced the effective power ratings at each of the casinos to reflect this factor. After such adjustments, I estimate that MGM will effectively demonstrate the *lowest* slot power ratings of the group, at 68.1 with 3,000 slot machines and 69.7 with 3,600 slot machines as actually proposed.

With respect to table games, I have assumed average annual spending of \$168 per distance-adjusted adult at each of these casinos, which corresponds to a table power rating of 105.

All these assumptions apply to a time of "stabilized operations," which typically occurs one to three years down the road from the opening of a new gaming facility, and reflect industry-standard patterns of investment in bricks and mortar and in player rewards. For my projections, I have assumed that such "stabilized operations" occur by FY2019, the third year of operation at

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<sup>13</sup> Parx proposes to retain just 33% of its slot revenues unencumbered, plus 6% for machine costs, for an effective total of 39%. Penn proposes to retain 38% unencumbered, but will not make use of the monies allocated by the State for slot costs, resulting in the lowest effective retention rate (lower than the effective 39% at Maryland Live, resulting in a slight reduction in power rating compared to that facility.) I have assumed that because such incremental impacts of retention will apply in the near term only to current spending (with effects on capital expenditures either already captured by my "bricks-and-mortar \$" parameter or else requiring many years to take effect), they will be *half* as

each proposed casino. As Parx, however, does not propose to complete its full build-out (including its hotel and full complement of 4,750 VLT/slot machines) until the middle of 2019, my projections for that case should be considered hypothetical “as if” it were fully built-out by that year.

I have assumed that the existing casinos of Maryland continue to operate largely as they do today, with the addition of (1) table games as planned at Ocean Downs, and (2) the new Horseshoe Casino now under construction in Downtown Baltimore.

My projections assume no other new gaming facilities in Maryland, Delaware, Virginia, or the nearby portions of Pennsylvania and West Virginia.

Under current law, when a new casino opens in Prince George’s County, the effective tax rates on slot gaming at Maryland Live and the Horseshoe Baltimore will decline. These lower tax rates ( = higher retention rates) will, as described above, tend to improve the performance of these casinos and thus offset some of the impacts of the new casino in Prince George’s County. As with each new casino, I have assumed the existing casinos’ slot power ratings will increase (in the near term) by only half the rate indicated by my recent research because it will take many years for new capital expenditures (if any) to have an impact on the market.

In addition to spending by local residents, in some cases my models include contributions from (long-distance) drive-by traffic, seasonal residents, and/or hotel guests. I do not believe that the first two of these will be significant here. I have, however, added modest incremental contributions from hotel guests at National Harbor, other hotels in Prince George’s

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strong as those documented in my recent paper, *The Effects of Gaming Tax/Retention Rate on Casino Performance* (referenced in the Bibliography at the end of the Appendix).



County, the District of Columbia, and the nearest areas of Virginia. I have essentially assumed that these hotel guests will spend at rates similar to those at which they would have if residents of the area, but with (as I believe appropriate) a decline with distance / travel time that is more steep. These calculations for each of the proposed casinos are presented in **Exhibit 10**.

My projections for each new casino are otherwise based on my gravity model of the region. I took the detailed model illustrated (in part) in Exhibit 6, calculated the numbers of “distance-adjusted” adults likely to patronize the various facilities in the region, and applied the appropriate average rates of spending to each. The results are described below.

## 5. Projections

My analyses and projections are based on the performance of facilities elsewhere in Fiscal Year 2013, and I therefore calculated them initially in terms of FY2013 dollars. I then extrapolated to future years assuming “normal” growth, due to rising local population, incomes, and inflation, at 2% per year. For comparability among the different projects and with the applicants’ projections, almost all of the results that I describe below are presented as of “stabilized operations” in FY2019 in terms of then-year dollars.<sup>14</sup>

As a new gaming facility works out its kinks, however, there is typically an initial transient of five to 15 percent in the first year or two. I have assumed the first year here will likely be in the middle of this range (-10%) at each of the proposed new casinos. Each will have to develop its players’ list and rewards programs in the face of what will likely be strenuous efforts by its existing competitors to retain their current players. Each of the applicants, however, has substantial experience with at least one recently-opened casino and/or nearby markets in particular. I therefore believe the initial “learning curve” will not be as steep here as at some other casinos.

### ***Projected Gaming Revenues – “As Proposed”***

For comparison with the situation as it would be without any of these casinos, I first developed a projection for FY2019 revenues at each of the (then-)existing casinos *without* any new casino in Prince George’s County. This is presented in **Exhibit 11-0**. Without a new casino in that County, I project that total gaming revenues at the five other casinos in Maryland

would amount to \$1.2 billion in the aggregate, comprising \$847 million in slot win and \$377 million in table win.

My projections for Penn's Hollywood Casino as proposed, and its impacts on the other casinos in Maryland, are presented in **Exhibit 11-1**. I project total slot win at \$387.2 million in FY2019 for Penn, or \$354 per slot per day, and table win at \$172.7 million, for total gaming revenues of \$560 million. Net of impacts on the existing casinos, however, I project that only \$460.5 million of that total would represent net gain for Maryland's casinos as a whole, with \$339 million representing net slot win and \$121.6 million net table win.

Maryland Live would be most affected by this new casino (as will prove to be the case with each of the others) because it is closest to the new facility, and currently draws a significant portion of its business from Virginia, whose residents will find any of these casinos in Prince George's County much more accessible. Penn's impacts at Maryland Live are projected at -12% in the aggregate, with greater impacts on table games (-18%) than slot play (-9%). This occurs because Penn's numbers of table games (100 house-banked) will be much more comparable to those at Maryland Live (123) than will be the case with regard to VLT/slots (3,000 versus 4,270). Impacts on the other casinos in Maryland, due to their greater distance (and thus, relatively light drawing power from the most relevant parts of Virginia), will be modest.

My projections for the Parx Casino as proposed, and its impacts, are depicted in **Exhibit 11-2**. Due primarily to its (ultimately) larger size at 4,750 slots, I project total slot win for Parx at \$491 million in FY2019, or \$283 per slot per day. I project annual table win at \$191.2 million, for total gaming revenues of \$682.2 million. \$535.4 million of that total would

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<sup>14</sup> As described in the previous section, this should be considered a hypothetical scenario for Parx, as

represent net gain for Maryland's casinos in the aggregate, with \$402.5 million representing net slot win and \$132.9 million net table win.

Because it is larger and thereby attracts more business, the projected impacts of Parx as proposed on the other casinos of Maryland are greater than those of Penn – and with respect to slots, slightly greater than those projected for MGM below. Parx's impacts on Maryland Live are projected at -17% in the aggregate, and in contrast with the other proposals, are more evenly balanced between slots (-16%) and table games (-20%). This occurs because Parx will ultimately have somewhat more slots than Maryland Live (4,750 versus 4,270), and roughly the same number of table games as (120 house-banked + 50 poker versus 123 + 52). Impacts on casinos other than Maryland Live will also be somewhat greater than for Penn (and MGM), though still modest in total.

**Exhibit 11-3** presents my projections for MGM as proposed. My gravity models indicate that MGM's site has a three- to four-minute travel-time advantage over the others in terms of access from Virginia (at "normal" times of day, as reported by MapPoint, MapQuest and GoogleMaps – likely greater during rush hours, but I do not factor such times into my projections). As a result, with 3,600 slots and 110 house-banked table games, it is projected to attract the greatest total gaming revenues in FY2019: \$501.3 million at its slots (\$382 per unit per day), \$211.3 million at its tables, and \$712.6 million in total. I project that its impacts on Maryland's other casinos' slot revenues will be slightly less than Parx's, and on table revenues just slightly greater. Overall, I project MGM as proposed to generate the greatest net new win for Maryland's casinos as a whole, with \$423.8 million added to Maryland's aggregate slot/VLT win and \$151.4 million added to its table win, summing to \$575.2 million net new win in total.

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it does not propose to complete its hotel and full build-out to 4,750 slot machines until that year.

### ***Projected Impacts on Gaming Exports – “As Proposed”***

As inputs to other experts’ calculations of the economic impacts of each of these casinos, I have used my gravity models to develop projections for the “net exports” of gaming services that each casino would likely generate. I have done this by estimating how much money is currently (or more accurately, will in FY2019 likely be) spent by the residents of Maryland in total on casino gaming, how much will be spent at casinos within Maryland, and how much will be spent at casinos *outside* of Maryland – the latter representing “imports” of gaming services. Conversely, I can also estimate the amounts that the residents of other states will likely spend at casinos *in* Maryland under each scenario. These represent exports of gaming services. Increases in exports, and reductions in imports, are beneficial to the Maryland economy.

As with gaming revenues above, I have first developed a projection for the situation as it would likely be without any new casino in Prince George’s County. This is presented in **Exhibit 12-0**. I estimate that in FY2019, the residents of Maryland would then be spending a total of \$1.37 billion on casino gaming, \$837.5 million at Maryland’s five casinos and \$530.8 million at casinos in other states (primarily Delaware, New Jersey, West Virginia, and Pennsylvania).<sup>15</sup> The latter figure represents Maryland’s imports of gaming services.

I then estimate how much money the residents of other states would likely spend in Maryland: \$207.4 million from Virginia, \$68.6 million from D.C., and so forth, amounting to a total of \$387.3 million. This represents Maryland’s exports. The difference between Maryland’s imports of \$530.8 million and its exports of \$387.3 million represents its *net*

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<sup>15</sup> I ignore relatively modest amounts spent in Nevada, on the Gulf Coast, on cruise ships, in the Caribbean and at other “destination resorts” abroad, as well as incidental amounts spent while traveling outside the Northeastern U.S.

exports: a negative \$143.6 million prior to the opening of any new casino in Prince George's County (i.e., Marylanders would be spending more in other states, as they are now, than the residents of other states would be spending in Maryland).

My projections for the situation with Penn's Hollywood Casino as proposed are presented in **Exhibit 12-1**. Marylanders' spending would rise in total, but their spending at casinos in other states would decline, to \$465.8 million. Exports of gaming services would rise to a total of \$715.3 million, primarily to Virginia and D.C. Net exports would rise to a positive \$249.5 million. This is an improvement of \$393.1 million over the "null" case without any casino in Prince George's County.

As indicated in **Exhibit 12-2**, the larger Parx Casino as proposed (4,750 slots, and 170 table games including poker) would reduce Maryland's imports by slightly more than Penn (to \$447.2 million), and by attracting more customers from Virginia and D.C. add more to Maryland's exports (now \$766.5 million). Net exports with Parx would thus rise to \$319.3 million per year, an improvement of \$463 million over the null case (= \$70 million better than Penn.)

My projections for the balance of trade in gaming with the new casino proposed by MGM (with 3,600 slots and 140 table games including poker) are presented in **Exhibit 12-3**. It would not do quite as much as Parx to keep Marylanders' spending within Maryland (imports decline only to \$456.7 million), but due to its right-off-the-interstate and on-the-border location, it would attract substantially more spending from Virginia and D.C. Net exports are projected to rise to \$358 million, an improvement of \$501.5 million over the null case. This figure is roughly \$39 million higher than that with Parx as proposed, and roughly \$108 million better than that with Penn.

### ***Projected Gaming Revenues – “Apples to Apples”***

As described in Section 4, I have also developed projections under hypothetical “apples to apples” scenarios in which all of the applicants’ facilities have the same number of slot machines (3,000, for these illustrative purposes), house-banked table games (110) and poker tables (40).

My projections for gaming revenues under these scenarios are presented in **Exhibits 13-1** (for Penn), **13-2** (for Parx) and **13-3** (for MGM). At this standard “size,” my projections for Penn and Parx are very similar (\$566 million versus \$575 million, respectively), with a slight edge to Parx. This suggests that these two sites are currently roughly equivalent in terms of accessibility to the surrounding population.

My projections for total gaming revenues at MGM, however (Exhibit 13-3), are at \$660.4 million roughly 15% higher than the other two. Projected net gains for Maryland’s casinos as a whole are projected to exceed the others’ by a similar margin (\$543 million versus \$463.7 million for Penn and \$475 million for Parx). This occurs because, as described above, MGM’s site enjoys a three- to four-minute advantage in terms of travel time from Virginia, and that State provides roughly half the business to each of these casinos both as proposed and “apples to apples.”

### ***Projected Impacts on Gaming Exports – “Apples to Apples”***

My projections for the impacts of each new casino assuming the same numbers of tables and slots on Maryland’s balance of trade with respect to gaming services are presented in **Exhibits 14-1, 14-2, and 14-3**, again for Penn, Parx and MGM respectively.

To an even greater degree than with regard to gross and net gaming revenues, my “apples to apples” projections for the impacts of Penn and Parx are very similar: improvements of \$396.4 and \$398.9 million, respectively. In contrast, MGM’s greater accessibility from Virginia and D.C. enable it to improve net exports to the tune of \$469 million even when it is assumed to be the same standard size as the others.

**Exhibit 15** summarizes my projections for the source of gaming revenues, by state of origin, for each of the proposed casinos under each scenario.



## 6. Summary and Conclusions

**Exhibit 16** presents a summary of my projections for FY2019 in detail. The first page provides both the “null case” (no new casino in Prince George’s County) and projections for each casino in Maryland with each of the new casinos “as proposed.” The second page of Exhibit 16 provides the corresponding information with each of the new casinos under my “apples to apples” scenario regarding numbers of slot/VLTs and table games.

A summary of what I believe are the most salient results is presented in **Exhibit 17**. This presents slot, table, and total gaming win for each new casino “as proposed,” its net impacts on total win for all the casinos of Maryland as a whole (i.e., after accounting for adverse impacts on the other five casinos), and its impacts on net exports of gaming services.

**Exhibit 18** provides projections for each new casino and every other casino in the State of Maryland over the first five years of operation of each new casino “as proposed” in Prince George’s County, FY 2017 through FY2021.

**Cummings Associates**

**Projected Gaming Revenues and  
Impacts of Proposed New Casinos in  
Prince George's County, Maryland**

**Exhibits**

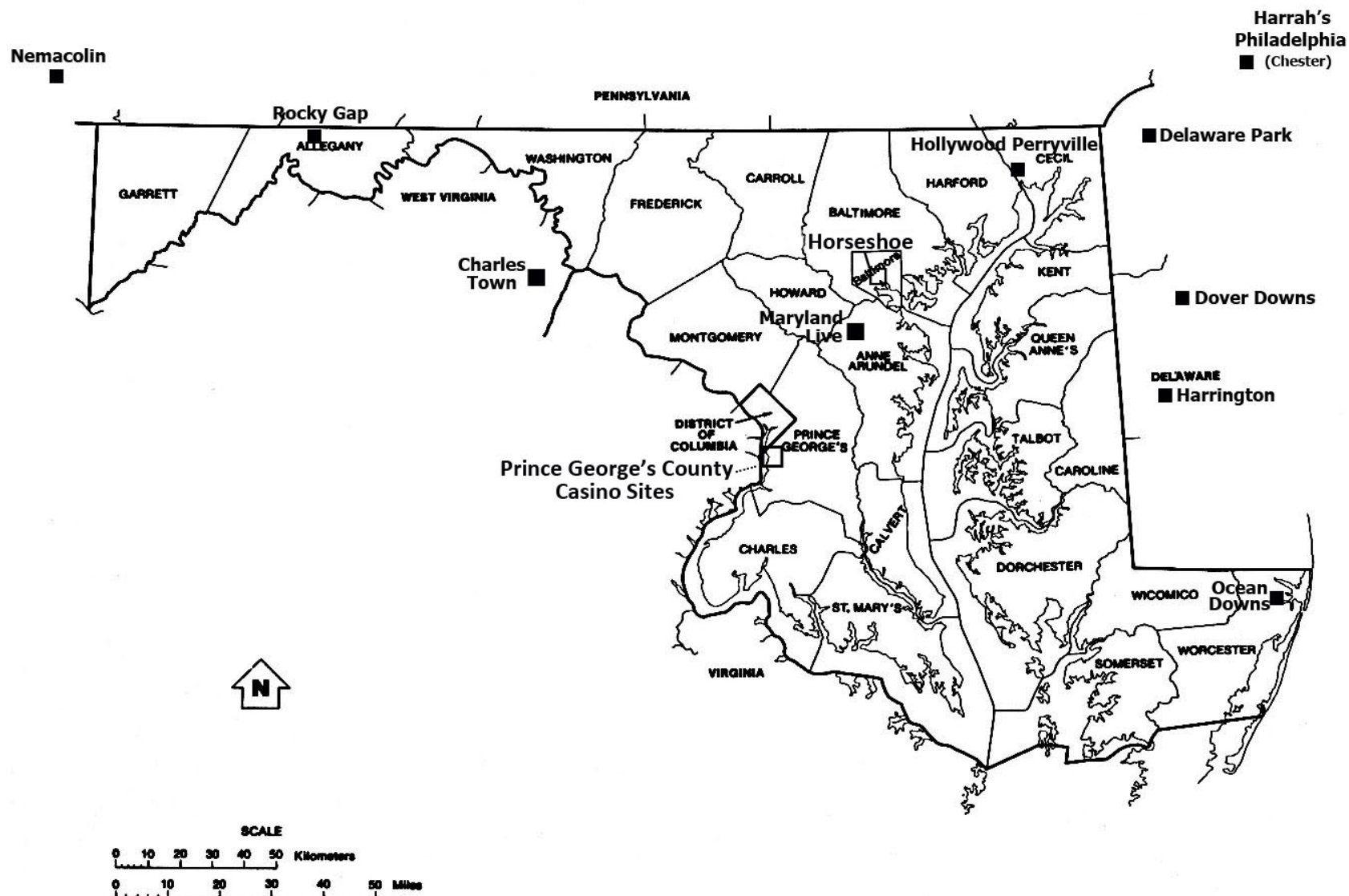
December 18, 2013

## **List of Exhibits**

### **Exhibit**

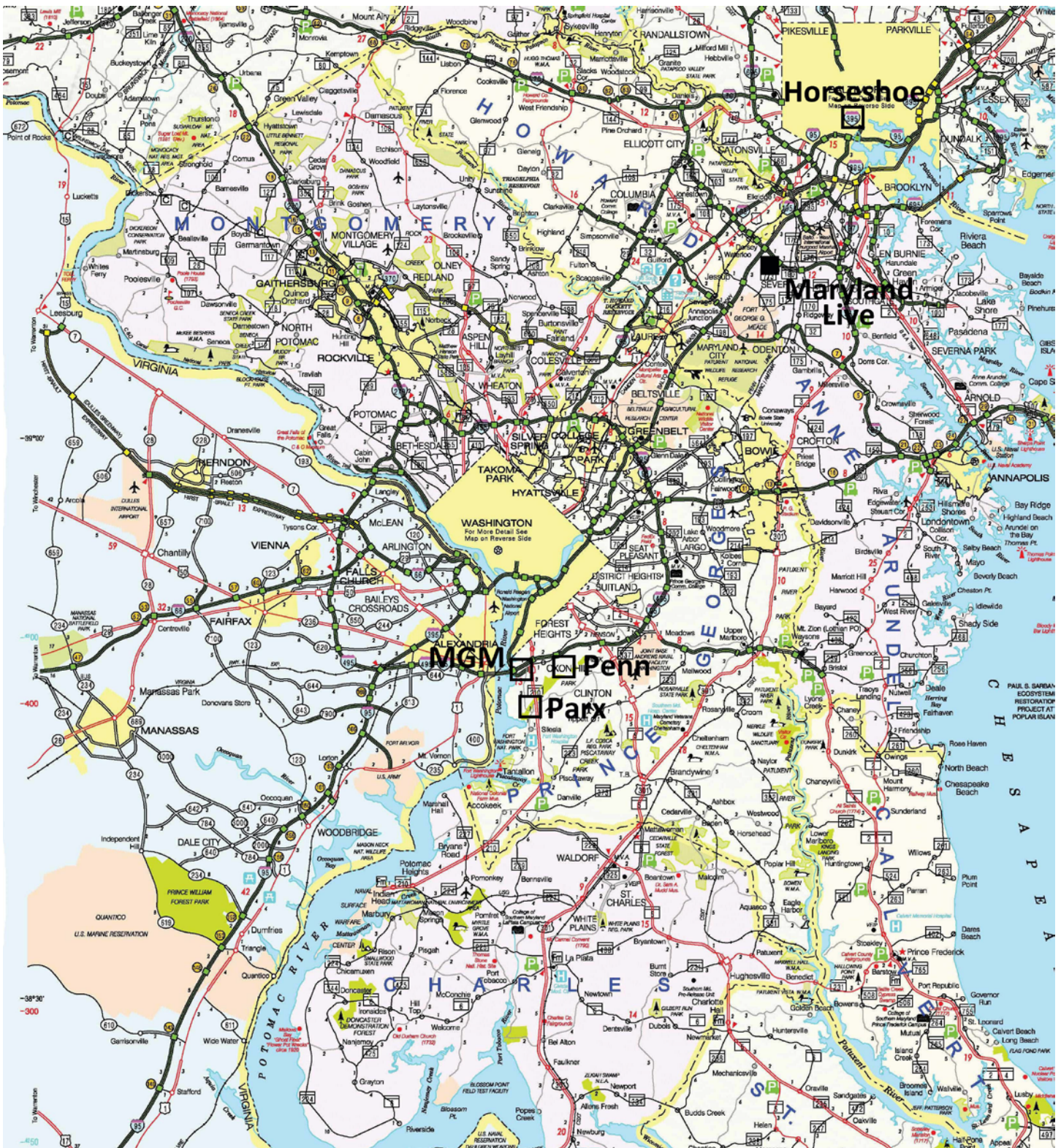
- 1 Gaming Facilities in and Near Maryland
- 2 Detail for Central Maryland
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- 4 Long-Term Trends at Eastern "Mega-Casinos"
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- 15 Summary of Gaming Revenues by Geographic Source
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## Exhibit 1: Gaming Facilities in and Near Maryland





## Exhibit 2: Detail for Central Maryland



### Exhibit 3: Recent Performance of Casinos in the Area

State	Facility		# Units (FY Average)		FY2013 Total Win (\$000)			versus	FY 2013 Win/Unit/Day		Est. "Power Rating"		
			slots	tables (1)	slots	tables	total	Prior FY (3)	slots	tables (1)	slots	tables	
Maryland:													
MD	Maryland Live	Hanover	4,345	122	\$431,118	\$41,619	\$472,737 (2)	na	\$272	\$4,463	71.0	106.8	
MD	Hollywood	Perryville	1,328	17	\$76,002	\$5,957	\$81,959 (2)	-30.6%	\$157	\$2,182	76.1	105.2	
MD	Ocean Downs	Berlin	800		\$50,390		\$50,390	5.1%	\$173		99.0		
MD	Rocky Gap	Flintstone	558	10	\$2,801	\$461	\$3,262 (2)	na	\$122	\$1,125	86.0	110.0	
Nearby:													
DE	Delaware Park	Wilmington	2,309	66	\$158,813	\$31,645	\$190,458	-14%	\$188	\$1,324	96.2	109.1	
DE	Dover Downs	Dover	2,472	50	\$155,398	\$22,406	\$177,804	-17%	\$172	\$1,228	97.7	108.3	
DE	Harrington Racewy	Harrington	1,818	38	\$88,779	\$11,546	\$100,325	-11%	\$134	\$832	96.5	104.8	
PA	Harrah's Phila.	Chester	2,793	103	\$249,569	\$80,331	\$329,900	-4%	\$245	\$2,147	88.9	111.3	
PA	Penn National	Grantville	2,467	61	\$238,200	\$37,810	\$276,010	-5%	\$265	\$1,698	93.7	107.7	
WV	Charles Town	Ranson	3,447	127	\$346,346	\$153,611	\$499,957	-12%	\$275	\$3,314	89.1	116.2	

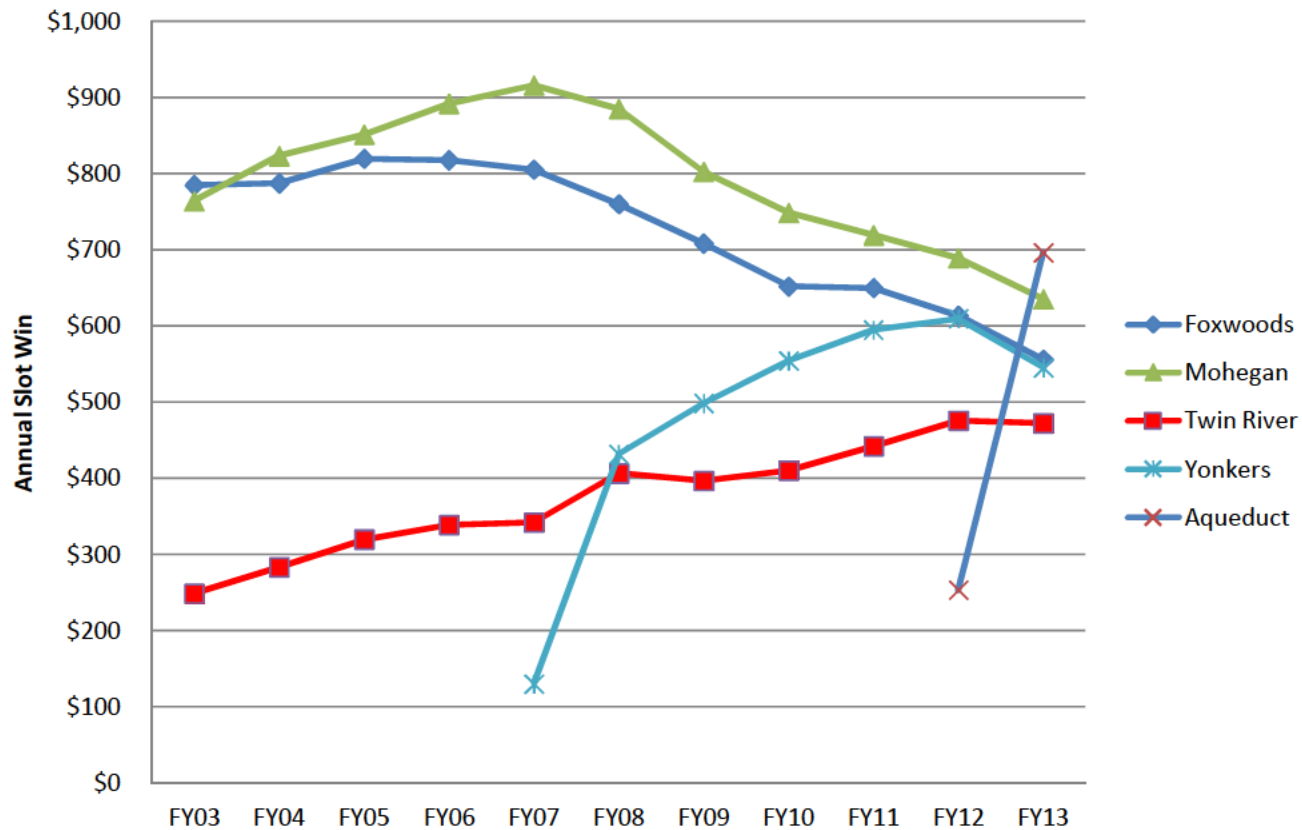
"Power Rating" reflects each facility's ability to attract revenues from the surrounding population based on gravity-model analysis. For discussion, see Appendix A.

(1) Poker tables counted as equivalent of 0.5 x house-banked tables. Wins/table/day in Maryland are for May and June of 2013 only.

(2) Table games opened at Hollywood and Maryland Live in March and April, 2013, respectively; Rocky Gap opened in toto May 21, 2013.

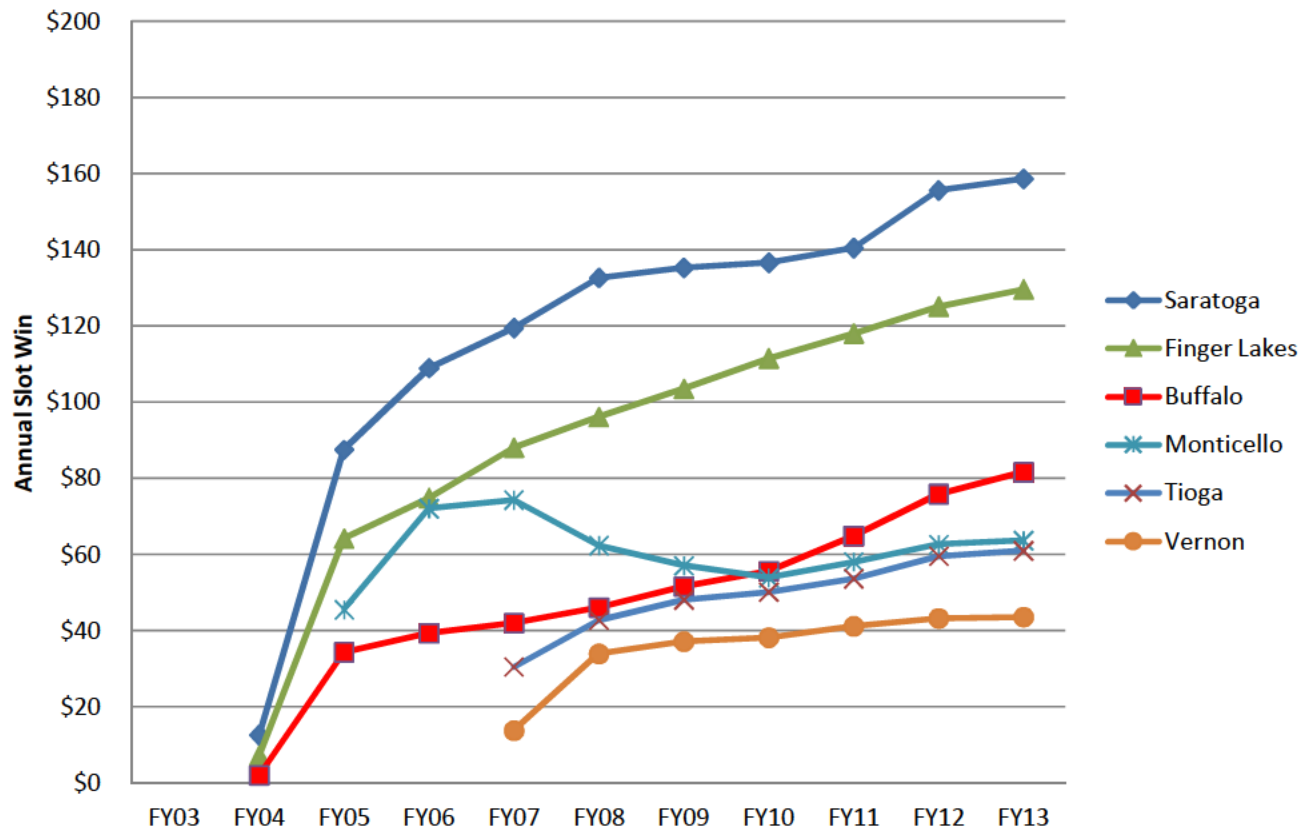
(3) Declines at existing casinos primarily due to opening of Maryland Live.

**Exhibit 4: Long-Term Trends at Eastern "Mega-Casinos"**  
(\$ million)





**Exhibit 5: Long-Term Trends at VLTs in Upstate New York**  
(\$ million)





## Exhibit 6: Portion of Model Inputs

### Northeast Slot Estimates

Travel Time (in minutes):

State	County	ZIP Code	Baltim.	MD Live	H'wood	F Rocky	G Ocean	D MTR	Wheeling	M Gras	Charles	T Greenbr	Atl City	Del Park	DoverD
MD	Allegany	21502	132.0	133.0	168.7	22.2	302.4	167.1	138.4	208.5	96.4	233.9	269.8	198.8	224.6
MD	Allegany	21504	123.1	124.1	159.8	13.3	293.5	169.9	136.9	207.0	87.5	240.2	260.9	189.9	215.7
MD	Allegany	21521	162.7	163.7	199.4	52.9	333.1	174.4	144.0	214.1	127.1	243.1	300.5	229.5	255.3
MD	Allegany	21529	137.1	138.1	173.8	27.3	307.5	162.5	146.8	216.9	101.5	254.2	274.9	203.9	229.7
MD	Allegany	21530	124.2	125.3	161.0	13.8	294.6	179.1	146.1	216.2	88.7	241.4	262.1	191.1	216.9
MD	Allegany	21532	137.5	138.5	174.2	27.7	307.9	159.7	131.2	201.4	102.0	235.7	275.4	204.3	230.1
MD	Allegany	21539	150.0	151.0	186.7	40.2	320.4	167.9	137.6	207.7	114.4	242.0	287.8	216.8	242.6
MD	Allegany	21540	159.4	160.5	196.2	49.6	329.8	186.1	157.5	235.8	116.6	214.4	297.3	226.3	252.1
MD	Allegany	21543	132.5	133.5	169.2	22.7	302.9	155.9	127.2	197.3	96.9	231.6	270.3	199.3	225.1
MD	Allegany	21545	141.5	142.6	178.3	31.7	311.9	159.6	141.1	218.1	106.0	252.4	279.4	208.4	234.2
MD	Allegany	21555	140.9	142.0	177.7	41.0	311.3	203.2	170.2	240.4	105.4	258.1	278.8	207.8	233.6
MD	Allegany	21557	143.2	144.2	179.9	33.4	313.6	181.1	152.5	222.6	107.6	228.7	281.0	210.0	235.8
MD	Allegany	21560	131.8	132.8	168.5	22.0	302.2	179.4	146.4	216.5	96.2	252.4	269.7	198.6	224.4
MD	Allegany	21562	149.1	150.1	185.8	39.3	319.5	187.1	158.4	223.0	103.8	216.6	287.0	215.9	241.7
MD	Allegany	21766	114.9	115.9	151.6	26.9	285.3	198.0	165.0	235.1	79.3	232.1	252.8	181.7	207.5
MD	Anne Arundel	20711	44.8	43.4	80.0	144.1	134.3	303.7	282.2	352.3	96.5	248.0	181.1	110.1	100.2
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
MD	Worcester	21851	147.0	145.2	145.2	257.6	38.2	417.2	395.7	465.8	209.9	353.1	128.4	138.0	96.1
MD	Worcester	21862	131.5	129.6	129.6	242.0	12.0	397.3	380.1	450.2	194.4	359.3	92.6	113.1	70.9
MD	Worcester	21863	137.8	136.0	136.0	248.3	25.0	403.6	386.5	456.6	200.7	365.7	115.2	128.7	86.8
MD	Worcester	21864	153.4	151.6	151.6	263.9	38.3	419.2	402.1	472.2	216.3	364.4	138.2	144.3	102.4
MD	Worcester	21872	132.2	130.3	130.3	242.7	16.0	398.0	380.8	451.0	195.1	360.0	94.5	115.0	72.8

**Total MD**

## Exhibit 6: Portion of Model Inputs

### Northeast Slot Estimates

State	County	ZIP Code	Harring'n		Chester	Closest	2013 Adult Population	2013 PCI	Impacts:				
									Dstnce	Urban?	Prox'y	Income	Dist-Adj Adults
MD	Allegany	21502	218.9	...	214.7	22.2	34,787	\$23,287	46%	100%	95%	91%	13,811
MD	Allegany	21504	210.0	...	205.8	13.3	113	\$23,983	65%	100%	95%	92%	64
MD	Allegany	21521	249.6	...	245.4	52.9	1,007	\$22,575	26%	100%	95%	90%	220
MD	Allegany	21529	224.0	...	219.8	27.3	817	\$23,496	40%	100%	95%	91%	283
MD	Allegany	21530	211.1	...	207.0	13.8	1,061	\$21,657	63%	100%	95%	88%	562
MD	Allegany	21532	224.4	...	220.3	27.7	11,417	\$24,898	40%	100%	95%	93%	4,008
MD	Allegany	21539	236.9	...	232.7	40.2	2,166	\$22,623	31%	100%	95%	90%	571
MD	Allegany	21540	246.3	...	242.2	49.6	54	\$21,271	27%	100%	95%	88%	12
MD	Allegany	21543	219.4	...	215.2	22.7	309	\$26,004	46%	100%	95%	95%	126
MD	Allegany	21545	228.4	...	224.3	31.7	1,501	\$25,964	36%	100%	95%	95%	489
MD	Allegany	21555	227.8	...	223.7	41.0	1,503	\$24,306	31%	100%	95%	92%	402
MD	Allegany	21557	230.1	...	225.9	33.4	1,424	\$27,656	35%	100%	95%	97%	460
MD	Allegany	21560	218.7	...	214.6	22.0	73	\$27,293	46%	100%	95%	97%	31
MD	Allegany	21562	236.0	...	231.9	39.3	2,310	\$23,909	31%	100%	95%	92%	631
MD	Allegany	21766	201.8	...	197.7	26.9	592	\$23,900	41%	100%	95%	92%	209
MD	Anne Arundel	20711	87.6	...	126.0	43.4	5,220	\$40,243	29%	100%	84%	100%	1,296
:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:
MD	Worcester	21851	75.5	...	153.9	38.2	5,196	\$25,657	32%	100%	100%	94%	1,564
MD	Worcester	21862	58.5	...	129.1	12.0	75	\$24,202	70%	100%	100%	92%	48
MD	Worcester	21863	66.2	...	144.7	25.0	3,781	\$29,305	43%	100%	100%	100%	1,596
MD	Worcester	21864	81.8	...	160.3	38.3	422	\$25,474	32%	100%	100%	94%	126
MD	Worcester	21872	60.6	...	131.0	16.0	496	\$26,777	57%	100%	100%	96%	272
Total MD							4,321,403						1,355,186

## Exhibit 7: Gaming-Device "Power Ratings" in Various US Markets

(vs. \$720 Benchmark Spending on Slots and/or VLTs Per "Distance-Adjusted" Adult in 2012-13)

(one of two pages)

Eastern US		Medium to Large Markets Elsewhere		Rural / Remote Markets Elsewhere	
		Mississippi average	131.8 n		
		Downstream Resort, OK	119.4	St Jo MO	124.6 o
		Harrahs NKCMO	119.2	Deadwood, SD	119.8
				S Dakota Tribes (avg of 8)	118.2
		San Felipe (ABQ), NM	117.5 n	Upstate Michigan avg.	118.0 e
				Lagunas (3 facils), NM	117.9 n
				Kansas Tribes (avg of 4)	117.0 e
				Cripple Creek, CO (2)	116.1 n
Turning Stone, NY	115.0 e	Santa Ana (ABQ), NM	115.6 n	Diamond Jo Worth, IA	115.8
Seneca Salamanca, NY	115.0 e	Argosy Riverside, MO	114.5	Upstate Wisconsin avg.	115.0 e
		Louisiana average	113.9 n	Other NM (avg. of 9)	114.9 n
		Sandia (ABQ), NM	113.9 n	Iowa Tribes (avg of 3)	112.1 e
		Ameristar KCMO	113.8	Dodge City, KS	112.0
				Emmetsburg, IA	111.8
				Terribles Lakeside, IA	111.7
				Black Hawk/CC, CO (2)	110.3 n
				Zia Park (Hobbs), NM	110.1 n
Midwest Standard +10%					
		Isleta (ABQ), NM	109.9 n		
Atlantic City, NJ avg.	109.2	Riverside, IA	109.9	SunRay Park, NM	109.7 n
Seneca Niagara, NY	109.2 e	IOC Waterloo, IA	108.9	Mt. Pleasant, MI	108.7 e
Vernon Downs, NY	106.8			IOC Boonville, MO	106.9 n, o
Tioga Downs, NY	106.7				
(Buffalo) Fairgrounds, NY	105.7	Dubuque Diamond Jo, IA	105.9		
		Horseshoe / Bluffs Run, IA	105.6	Taos, NM	105.2 n
		Dubuque Mystique, IA	104.4	IOC Marquette, IA	104.2 o
Mohegan Sun, CT	103.1	Argosy Sioux City, IA	103.8 o	Wisconsin Dells	104.0 e
		Grand Falls, IA (S. Falls, SD)	103.3		
		Prairie Meadows, IA	103.2		
		The Downs at ABQ, NM	102.7 n		
		Jumers Rock Island, IL	102.3		
Mountaineer Park, WV	101.5	Ameristar Council Bluffs, IA	102.2		
Foxwoods, CT	100.6				
Mohegan @ Pocono Downs, PA	100.4				
"Midwest Standard"					
Ocean Downs, MD	99.6				
Presque Isle, Erie, PA	98.9				
Finger Lakes, NY	98.8	Michigan City, IN	98.7 n		
Wheeling, WV	98.0				
Dover Downs, DE	97.7			Ruidoso Downs, NM	97.5 n
The Meadows / Pittsburgh	97.3	IOC KCMO	97.3 o		
Saratoga, NY	97.0	Harrahs W St Louis	96.9 n		
Harrington Raceway, DE	96.5	Clinton, IA	96.9		
Delaware Park	96.2	Detroit (avg / 3 facils)	96.0 n		
Mount Airy / Pocono, PA	94.6	Harrahs Council Bluffs, IA	94.5		
		Catfish Bend Burlington, IA	94.2		
		IOC Bettendorf, IA	93.8 o		
Penn National / Harrisburg, PA	93.7	Belterra, Florence, IN	93.7 n, o	Mark Twain, MO	93.7 n, o
		Ameristar St Chas, MO	93.1 n		
		Indiana Grand	92.9		
		Harrahs Joliet, IL	92.8 n, o	Metropolis, IL/KY	92.7 n, o
		East St Louis, IL (2 boats)	92.0 n, o		
		Rhythm City, IA	91.6 o		
Batavia, NY	90.8				

**Eastern US****Medium to Large Markets  
Elsewhere****Rural / Remote Markets  
Elsewhere**

<b>Midwest Standard -10%</b>		Green Bay, WI	90.0 e		
		KCKS 7th St Casino	90.0 e (Class II slots)		
Charles Town, WV	89.1	Hoosier Park, IN	89.3		
Harrahs @ Chester, PA	88.9	Ameristar, E Chicago IN	88.9 n, o		
Monticello, NY	88.9	St. Louis, MO (2 facils)	88.3 n		
Twin River @ Lincoln, RI	87.9				
Sands Bethlehem, PA	87.8				
		Hammond, IN	87.2 n, o	Caruthersville, MO	87.3 n, o
The Rivers / Pittsburgh	86.3				
		Rising Sun, IN	85.8 n, o		
		Hollywood, Lawr'burg, IN	85.4 n, o		
		Hollywood Toledo, OH	84.8		
Parx / Philadelphia	83.8			French Lick, IN	83.8 n
		Majestic Star, Gary IN	82.4 n, o		
		Elgin (Chicago), IL	81.7 n, o		
Sugarhouse / Philadelphia	81.2	Louisville, KY/IN	81.1 n, o		
Valley Forge, PA	80.2				
<b>Midwest Standard -20%</b>		Milwaukee, WI	80.0 e o		
		Aurora (Chicago), IL	79.7 n, o		
Resorts W @ Aqueduct, NY	79.4 o				
Hollywood @ Bangor, ME	78.5	Joliet Empress, IL	78.5 n, o		
Newport Grand, RI	78.1				
Oxford, ME	77.7	Scioto Downs(Columbus), OH	77.5		
Pompano Park, FL	77.1				
Hollywood Perryville, MD	76.2				
Mardi Gras, WV	75.5				
Empire City @ Yonkers, NY	75.5 o				
Gulfstream Park, FL	75.4				
Mardi Gras / Hollywood, FL	73.1				
		Peoria, IL	72.3 n, o		
Maryland Live	71.1				
		Evansville, IN	69.2 n, o		
		Montana VLTs (2)	69.2 e		
		Sunland Park, NM	69.0 n, o		
Magic City / Miami, FL	68.1				
Calder / Miami, FL	65.0	Horseshoe Cleveland, OH	65.2		
		South Dakota VLTs	64.7		
		Hollywood Columbus, OH	61.5		
Miami Jai-Alai & Casino	57.5 a				
Greenbrier, WV	54.6 o				

a = annual rate

e = slot revenues estimated (usually "n" as well)

n = mileage-based and/or low-resolution estimate

o = old boat, hotel- or capacity-constrained market

(1) Nevada local markets appear to be off this scale, in the range of 140 to 150.

(2) Colorado and Montana statistics do not include the Indian casinos in those states.

## Exhibit 8: Table-Game Power Ratings in the Eastern U.S.

(Benchmark = Total Annual Spending of \$160 per Distance-Adjusted Adult)

Large Urban Markets (or Fed From Such)		Smaller Cities & Misc. Markets		Rural Markets	
The Rivers / Pittsburgh	157.5				
Atlantic City, NJ avg.	124.5				
Eastern Standard +20%					
Charles Town, WV	116.2	Sands Bethlehem, PA	117.3		
Sugarhouse / Philadelphia	115.0	Seneca Niagara (NY)	115.0 e		
Mohegan Sun, CT	114.9				
Harrahs @ Chester, PA	111.3	Mount Airy / Pocono, PA	110.6		
		Mohegan @ Pocono Downs	110.2		
Eastern Standard +10%					
Delaware Park	109.1	Dover Downs, DE	108.3		
		Penn National / Harrisburg	107.7		
Foxwoods, CT	107.2				
Maryland Live	106.8	Hollywood Perryville, MD	105.2	Harrington Raceway, DE	104.8
Horseshoe Cleveland, OH	104.0				
Parx / Philadelphia	103.9				
Valley Forge, PA	101.6				
Twin River @ Lincoln, RI	100.1 a				
"Eastern Standard"		Detroit (avg / 3 facils)		100.0 e	
		Hollywood Toledo, OH	96.4		
		Presque Isle @ Erie, PA	94.8		
		Oxford, ME	90.5		
Eastern Standard -10%					
		Mardi Gras, WV	87.9		
		Hollywood Columbus, OH	87.1		
Eastern Standard -20%					
		Hollywood @ Bangor, ME	79.5		
				Greenbrier, WV	72.3 o
The Meadows / Pittsburgh	68.3				
( Typical Chicagoland Casino)		Mountaineer Park, WV	61.2		

a = annual rate, e = estimated, n = mileage-based or low-resolution estimate, o = old boat, hotel- or capacity-constrained market

## Exhibit 9: Projected Power Ratings, etc.

	"Apples to Apples" Comparison			As Actually Proposed (FY2019±)		
	Penn	Parx	MGM	Penn	Parx	MGM
Slot Machines	3,000	3,000	3,000	3,000	4,750	3,600
Banked Table Games	110	110	110	100	120	110
Poker Tables	40	40	40	40	50	30
Total Gaming Positions	3,900	3,900	3,900	3,840	5,770	4,440
<b>Baselines for Slots:</b>						
Maryland Live FY2013	71.05	71.05	71.05	71.05	71.05	71.05
less: allowance for the items below	(1.50)	(1.50)	(1.50)	(1.50)	(1.50)	(1.50)
Bricks & Mortar \$ / Gaming Position (in \$100ks) (1)	1.41	1.45	2.01	1.43	1.15	1.76
Casino Square Footage / Gaming Position (x .02) (2)	0.86	0.91	1.06	0.88	0.62	0.93
Hotel Rooms (Keys) / Gaming Position (x 2)	0.13	0.13	0.15	0.13	0.09	0.14
Higher Retention --> Greater Spending on Players	(0.26)		1.30	(0.26)		1.30
	-----	-----	-----	-----	-----	-----
<b>Slot Power Rating Benchmark</b>	<b>71.70</b>	<b>72.04</b>	<b>74.08</b>	<b>71.74</b>	<b>71.41</b>	<b>73.68</b>
(Effective after discount for crowding at prime times)	(70.39)	(70.30)	(68.10)	(70.41)	(71.41)	(69.70)
<b>Baseline for Tables:</b>						
	<b>105.0</b>	<b>105.0</b>	<b>105.0</b>	<b>105.0</b>	<b>105.0</b>	<b>105.0</b>
"Reach" (miles before extra decline with distance)	200	200	200	200	200	200

Note: 100 = "Midwest Standard" slot power rating. Maryland facilities lower primarily due to high tax / low retention rate.

(1) "Bricks and Mortar Dollars" include soft costs, but not land, financing fees, license fees, pre-opening expenses or working capital.

(2) "Casino" Square Footage includes gaming floor, restaurants and lounges; does not include hotel, back-of-house, or entertainment facilities.

## Exhibit 10: Projected Spending from Guests at Hotels Nearby

Source Locales	# rooms	occupancy rate	adults/ party	effective	average	travel-time	\$ / adult / year		\$ in total (\$000)	
				adult population		travel time	scaling factor (1)	Slots	Tables	Slots
for Penn:										
National Harbor	2,942	70%	1.7	3,501	9'	71%	\$434	\$121	\$1,521	\$423
Other Prince George's Co.	6,981	70%	1.7	8,307	22'	21%	\$70	\$19	\$582	\$162
Alexandria, VA	4,500	66%	1.7	5,049	19'	26%	\$94	\$26	\$477	\$132
District of Columbia	28,711	73%	1.7	35,630	24'	19%	\$62	\$17	\$2,199	\$611
Arlington, VA	10,759	72%	1.7	13,169	25'	18%	\$54	\$15	\$707	\$196
									-----	-----
									\$5,486	\$1,524
for Parx:										
National Harbor	2,942	70%	1.7	3,501	12'	49%	\$244	\$68	\$853	\$237
Other Prince George's Co.	6,981	70%	1.7	8,307	22'	22%	\$73	\$20	\$608	\$169
Alexandria, VA	4,500	66%	1.7	5,049	19'	26%	\$95	\$26	\$481	\$134
District of Columbia	28,711	73%	1.7	35,630	24'	20%	\$64	\$18	\$2,268	\$630
Arlington, VA	10,759	72%	1.7	13,169	25'	18%	\$55	\$15	\$719	\$200
									-----	-----
									\$4,930	\$1,369
for MGM:										
National Harbor	2,942	70%	1.7	3,501	4'	100%	\$720	\$200	\$2,521	\$700
Other Prince George's Co.	6,981	70%	1.7	8,307	21'	22%	\$76	\$21	\$634	\$176
Alexandria, VA	4,500	66%	1.7	5,049	15'	35%	\$147	\$41	\$744	\$207
District of Columbia	28,711	73%	1.7	35,630	19'	26%	\$93	\$26	\$3,306	\$918
Arlington, VA	10,759	72%	1.7	13,169	21'	22%	\$76	\$21	\$996	\$277
									-----	-----
									\$8,200	\$2,278

(1) Assumes effects of travel time on hotel guests twice as strong as on local residents.

## Exhibit 11-0: Projected Total Gaming Revenues (in FY2019\$)

### Null Case

			Projected:			
	# Slots	Assumed Slot Power Rating	\$ / slot / day	Slot Win (\$mn)	Table Win (\$mn)	Total Win (\$mn)
<b>"Existing" Casinos:</b>						
Horseshoe Baltimore	2,435	70.1	\$311	\$276.7	\$174.5	\$451.1
Maryland Live	4,270	72.1	\$261	\$406.1	\$180.7	\$586.8
Hollywood Perryville	1,148	78.1	\$177	\$74.0	\$13.2	\$87.2
Rocky Gap	558	88.8	\$172	\$35.0	\$5.6	\$40.6
Ocean Downs	800	99.6	\$190	\$55.6	\$3.4	\$59.0
	-----			-----	-----	-----
Subtotal	9,211			\$847.4	\$377.3	\$1,224.8

### New Casino in Prince George's County:

Penn  
Parx  
MGM

	-----		-----	-----	-----
Total MD	9,211		\$847.4	\$377.3	\$1,224.8

All scenarios assume:

No new on / off-ramps, but otherwise good micro-access at all facilities.

Retention rates rise at Horseshoe and Maryland Live as scheduled with opening of new casino.

Competition from neighboring states remains "status quo."

**Cummings Associates**



## Exhibit 11-1: Projected Total Gaming Revenues (in FY2019\$)

### Penn as Proposed

			Projected:				
	# Slots	Assumed Slot Power Rating	\$ / slot / day	Slot Win (\$mn)	Table Win (\$mn)	Total Win (\$mn)	Impact
<b>"Existing" Casinos:</b>							
Horseshoe Baltimore	2,435	71.9	\$306	\$272.3	\$156.2	\$428.5	-5%
Maryland Live	4,270	74.1	\$238	\$370.3	\$149.0	\$519.3	-12%
Hollywood Perryville	1,148	78.1	\$169	\$70.6	\$12.6	\$83.3	-5%
Rocky Gap	558	88.8	\$162	\$33.0	\$5.2	\$38.2	-6%
Ocean Downs	800	99.6	\$181	\$52.9	\$3.3	\$56.2	-5%
	-----			-----	-----	-----	
Subtotal	9,211			\$799.1	\$326.3	\$1,125.4	-8%

### New Casino in Prince George's County:

Penn	3,000	70.4 *	\$354	\$387.2	\$172.7	\$559.9	
Parx							
MGM							
	-----			-----	-----	-----	
Total MD	12,211			\$1,186.4	\$498.9	\$1,685.3	

### Net Gain from New Casino (versus Null Case):

\$338.9	\$121.6	\$460.5	38%
---------	---------	---------	-----

\* Power Rating below benchmark due to crowding.

All scenarios assume:

No new on / off-ramps, but otherwise good micro-access at all facilities.

Retention rates rise at Horseshoe and Maryland Live as scheduled with opening of new casino.

Competition from neighboring states remains "status quo."

**Cummings Associates**

## Exhibit 11-2: Projected Total Gaming Revenues (in FY2019\$)

### Parx as Proposed

			Projected:				
	# Slots	Assumed Slot Power Rating	\$ / slot / day	Slot Win (\$mn)	Table Win (\$mn)	Total Win (\$mn)	Impact
<b>"Existing" Casinos:</b>							
Horseshoe Baltimore	2,435	71.9	\$296	\$263.4	\$153.7	\$417.0	-8%
Maryland Live	4,270	74.1	\$220	\$342.3	\$144.6	\$486.9	-17%
Hollywood Perryville	1,148	78.1	\$166	\$69.5	\$12.5	\$82.0	-6%
Rocky Gap	558	88.8	\$157	\$32.0	\$5.1	\$37.1	-9%
Ocean Downs	800	99.6	\$177	\$51.7	\$3.3	\$55.0	-7%
	-----			-----	-----	-----	
Subtotal	9,211			\$758.9	\$319.1	\$1,078.0	-12%

### New Casino in Prince George's County:

Penn

Parx	4,750	71.4	\$283	\$491.0	\$191.2	\$682.2
------	-------	------	-------	---------	---------	---------

MGM

	-----			-----	-----	-----
Total MD	13,961			\$1,249.9	\$510.3	\$1,760.2

### Net Gain from New Casino (versus Null Case):

\$402.5	\$132.9	\$535.4	44%
---------	---------	---------	-----

All scenarios assume:

No new on / off-ramps, but otherwise good micro-access at all facilities.

Retention rates rise at Horseshoe and Maryland Live as scheduled with opening of new casino.

Competition from neighboring states remains "status quo."

**Cummings Associates**

## Exhibit 11-3: Projected Total Gaming Revenues (in FY2019\$)

### MGM as Proposed

			Projected:				
	# Slots	Assumed Slot Power Rating	\$ / slot / day	Slot Win (\$mn)	Table Win (\$mn)	Total Win (\$mn)	Impact
<b>"Existing" Casinos:</b>							
Horseshoe Baltimore	2,435	71.9	\$299	\$266.0	\$153.1	\$419.1	-7%
Maryland Live	4,270	74.1	\$224	\$349.3	\$143.4	\$492.7	-16%
Hollywood Perryville	1,148	78.1	\$167	\$69.9	\$12.5	\$82.4	-5%
Rocky Gap	558	88.8	\$159	\$32.4	\$5.1	\$37.6	-8%
Ocean Downs	800	99.6	\$179	\$52.3	\$3.3	\$55.6	-6%
	-----			-----	-----	-----	
Subtotal	9,211			\$769.9	\$317.5	\$1,087.4	-11%

### New Casino in Prince George's County:

Penn

Parx

MGM	3,600	69.7 *	\$382	\$501.3	\$211.3	\$712.6	
	-----			-----	-----	-----	
Total MD	12,811			\$1,271.2	\$528.8	\$1,800.0	

### Net Gain from New Casino (versus Null Case):

\$423.8	\$151.4	\$575.2	47%
---------	---------	---------	-----

\* Power Rating below benchmark due to crowding.

All scenarios assume:

No new on / off-ramps, but otherwise good micro-access at all facilities.

Retention rates rise at Horseshoe and Maryland Live as scheduled with opening of new casino.

Competition from neighboring states remains "status quo."

**Cummings Associates**

## Exhibit 12-0: Total Consumer Spending at Casinos (FY2019 \$mn)

### Null Case

FROM:	TO:	New Prince George's Co. Casino	Other Maryland Casinos	Subtotal AT casinos in MD	Other States' Casinos	Total FROM Maryland
<b>Residents of Maryland</b>		\$0.0	\$837.5	\$837.5	<b>\$530.8</b>	\$1,368.3
" <i>Prince George's County</i>		\$0.0	\$105.2	\$105.2	\$63.9 (= imports)	\$169.1
<b>Residents of Other States</b>						
Virginia		\$0.0	\$207.4	\$207.4		
District of Columbia		0.0	68.6	68.6		
Pennsylvania		0.0	58.1	58.1		
DE & WV		0.0	22.8	22.8		
Further Afield		0.0	30.3	30.3		
Subtotal FROM Other States		\$0.0	\$387.3	----- <b>\$387.3</b>	(= exports)	
<b>Grand Total AT Maryland Casinos</b>			\$1,224.8	\$1,224.8		

**NET EXPORTS:**  
(difference)

**-\$143.6**

**NET CHANGE vs. Null Case**

**\$0.0**

Memo: Prince George's County Net Exports

-\$169.1

## Exhibit 12-1: Total Consumer Spending at Casinos (FY2019 \$mn)

### Penn As Proposed

FROM:	TO:	New Prince George's Co. Casino	Other Maryland Casinos	Subtotal AT casinos in MD	Other States' Casinos	Total FROM Maryland
<b>Residents of Maryland</b>		\$172.3	\$797.6	\$970.0	<b>\$465.8</b>	\$1,435.8
" <i>Prince George's County</i>		\$98.7	\$75.2	\$173.9	\$37.5 (= imports)	\$211.3
<b>Residents of Other States</b>						
Virginia		\$284.9	\$169.7	\$454.6		
District of Columbia		82.7	44.4	127.0		
Pennsylvania		6.1	59.6	65.7		
DE & WV		1.0	22.9	24.0		
Further Afield		12.9	31.1	44.0		
Subtotal FROM Other States		\$387.6	\$327.7	\$715.3 ----- (= exports)		
<b>Grand Total AT Maryland Casinos</b>		\$559.9	\$1,125.4	\$1,685.3		

**NET EXPORTS:**  
(difference)

**\$249.5**

**NET CHANGE vs. Null Case**

**\$393.1**

Memo: Prince George's County Net Exports

\$348.6

## Exhibit 12-2: Total Consumer Spending at Casinos (FY2019 \$mn)

### Parx as Proposed

FROM:	TO:	New Prince George's Co. Casino	Other Maryland Casinos	Subtotal AT casinos in MD	Other States' Casinos	Total FROM Maryland
<b>Residents of Maryland</b>		\$214.5	\$779.2	\$993.7	<b>\$447.2</b>	\$1,440.8
" <i>Prince George's County</i>		\$111.7	\$69.2	\$180.9	\$33.0 (= imports)	\$213.9
<b>Residents of Other States</b>						
Virginia		\$346.0	\$149.5	\$495.5		
District of Columbia		98.3	35.8	134.1		
Pennsylvania		8.4	59.4	67.8		
DE & WV		1.4	22.9	24.3		
Further Afield		13.6	31.1	44.7		
Subtotal FROM Other States		\$467.7	\$298.8	\$766.5	(= exports)	
<b>Grand Total AT Maryland Casinos</b>		\$682.2	\$1,078.0	\$1,760.2		

**NET EXPORTS:**  
(difference)

**\$319.3**

**NET CHANGE vs. Null Case**

**\$462.9**

Memo: Prince George's County Net Exports

\$468.3

## Exhibit 12-3: Total Consumer Spending at Casinos (FY2019 \$mn)

### MGM as Proposed

FROM:	TO:	New Prince George's Co. Casino	Other Maryland Casinos	Subtotal AT casinos in MD	Other States' Casinos	Total FROM Maryland
<b>Residents of Maryland</b>		\$199.4	\$785.8	\$985.3	<b>\$456.7</b>	\$1,442.0
" <i>Prince George's County</i>		\$110.0	\$70.4	\$180.4	\$34.6 (= imports)	\$215.0
<b>Residents of Other States</b>						
Virginia		\$369.7	\$153.5	\$523.2		
District of Columbia		117.9	34.4	152.3		
Pennsylvania		7.0	59.6	66.5		
DE & WV		1.2	22.9	24.1		
Further Afield		17.4	31.1	48.5		
Subtotal FROM Other States		\$513.2	\$301.5	----- <b>\$814.7</b>	(= exports)	
<b>Grand Total AT Maryland Casinos</b>		\$712.6	\$1,087.4	\$1,800.0		

**NET EXPORTS:**  
(difference)

**\$358.0**

**NET CHANGE vs. Null Case**

**\$501.5**

Memo: Prince George's County Net Exports

\$497.6

## Exhibit 13-1: Projected Total Gaming Revenues (in FY2019\$)

### Penn Apples-to-Apples

			Projected:				
	# Slots	Assumed Slot Power Rating	\$ / slot / day	Slot Win (\$mn)	Table Win (\$mn)	Total Win (\$mn)	Impact
<b>"Existing" Casinos:</b>							
Horseshoe Baltimore	2,435	71.9	\$306	\$272.3	\$155.0	\$427.3	-5%
Maryland Live	4,270	74.1	\$238	\$370.4	\$146.9	\$517.3	-12%
Hollywood Perryville	1,148	78.1	\$169	\$70.6	\$12.6	\$83.2	-5%
Rocky Gap	558	88.8	\$162	\$33.0	\$5.2	\$38.1	-6%
Ocean Downs	800	99.6	\$181	\$52.9	\$3.3	\$56.2	-5%
	-----			-----	-----	-----	
Subtotal	9,211			\$799.2	\$322.9	\$1,122.1	-8%
<b>New Casino in Prince George's County:</b>							
Penn	3,000	70.4 *	\$353	\$387.0	\$179.3	\$566.3	
Parx							
MGM							
	-----			-----	-----	-----	
Total MD	12,211			\$1,186.2	\$502.3	\$1,688.4	
<b>Net Gain from New Casino (versus Null Case):</b>				\$338.7	\$124.9	\$463.7	38%

\* Power Rating below benchmark due to crowding.

All scenarios assume:

No new on / off-ramps, but otherwise good micro-access at all facilities.

Retention rates rise at Horseshoe and Maryland Live as scheduled with opening of new casino.

Competition from neighboring states remains "status quo."

**Cummings Associates**



## Exhibit 13-2: Projected Total Gaming Revenues (in FY2019\$)

### Parx Apples-to-Apples

			Projected:				
	# Slots	Assumed Slot Power Rating	\$ / slot / day	Slot Win (\$mn)	Table Win (\$mn)	Total Win (\$mn)	Impact
<b>"Existing" Casinos:</b>							
Horseshoe Baltimore	2,435	71.9	\$307	\$272.8	\$155.3	\$428.1	-5%
Maryland Live	4,270	74.1	\$239	\$371.8	\$147.3	\$519.1	-12%
Hollywood Perryville	1,148	78.1	\$169	\$70.7	\$12.6	\$83.2	-5%
Rocky Gap	558	88.8	\$162	\$33.0	\$5.1	\$38.1	-6%
Ocean Downs	800	99.6	\$181	\$52.9	\$3.3	\$56.2	-5%
	-----			-----	-----	-----	
Subtotal	9,211			\$801.1	\$323.6	\$1,124.7	-8%

### New Casino in Prince George's County:

Penn

Parx	3,000	70.3 *	\$359	\$392.9	\$182.0	\$574.9
------	-------	--------	-------	---------	---------	---------

MGM

	-----			-----	-----	-----
Total MD	12,211			\$1,194.1	\$505.6	\$1,699.7

### Net Gain from New Casino (versus Null Case):

\$346.6	\$128.3	\$474.9	39%
---------	---------	---------	-----

\* Power Rating below benchmark due to crowding.

All scenarios assume:

No new on / off-ramps, but otherwise good micro-access at all facilities.

Retention rates rise at Horseshoe and Maryland Live as scheduled with opening of new casino.

Competition from neighboring states remains "status quo."

**Cummings Associates**

## Exhibit 13-3: Projected Total Gaming Revenues (in FY2019\$)

### MGM Apples-to-Apples

			Projected:				
	# Slots	Assumed Slot Power Rating	\$ / slot / day	Slot Win (\$mn)	Table Win (\$mn)	Total Win (\$mn)	Impact
<b>"Existing" Casinos:</b>							
Horseshoe Baltimore	2,435	71.9	\$305	\$270.8	\$152.5	\$423.3	-6%
Maryland Live	4,270	74.1	\$234	\$364.4	\$142.4	\$506.7	-14%
Hollywood Perryville	1,148	78.1	\$168	\$70.5	\$12.5	\$83.0	-5%
Rocky Gap	558	88.8	\$162	\$32.9	\$5.1	\$38.0	-6%
Ocean Downs	800	99.6	\$181	\$52.9	\$3.3	\$56.1	-5%
	-----			-----	-----	-----	
Subtotal	9,211			\$791.5	\$315.8	\$1,107.2	-10%

### New Casino in Prince George's County:

Penn

Parx

MGM	3,000	68.1 *	\$407	\$445.6	\$214.7	\$660.4
	-----			-----	-----	-----
Total MD	12,211			\$1,237.1	\$530.5	\$1,767.6

### Net Gain from New Casino (versus Null Case):

\$389.7	\$153.2	\$542.9	44%
---------	---------	---------	-----

\* Power Rating below benchmark due to crowding.

All scenarios assume:

No new on / off-ramps, but otherwise good micro-access at all facilities.

Retention rates rise at Horseshoe and Maryland Live as scheduled with opening of new casino.

Competition from neighboring states remains "status quo."

**Cummings Associates**

## Exhibit 14-1: Total Consumer Spending at Casinos (FY2019 \$mn)

### Penn Apples-to-Apples

FROM:	TO:	New Prince George's Co. Casino	Other Maryland Casinos	Subtotal AT casinos in MD	Other States' Casinos	Total FROM Maryland
<b>Residents of Maryland</b>		\$174.4	\$796.2	\$970.6	<b>\$465.0</b>	\$1,435.6
" Prince George's County		\$99.4	\$74.7	\$174.0	\$37.2 (= imports)	\$211.3
<b>Residents of Other States</b>						
Virginia		\$288.1	\$168.4	\$456.5		
District of Columbia		83.4	43.9	127.2		
Pennsylvania		6.3	59.6	65.9		
DE & WV		1.1	22.9	24.0		
Further Afield		13.1	31.1	44.2		
Subtotal FROM Other States		\$391.9	\$325.9	<b>\$717.8</b>	(= exports)	
<b>Grand Total AT Maryland Casinos</b>		\$566.3	\$1,122.1	\$1,688.4		

**NET EXPORTS:**  
(difference)

**\$252.8**

**NET CHANGE vs. Null Case**

**\$396.4**

Memo: Prince George's County Net Exports

\$355.1

## Exhibit 14-2: Total Consumer Spending at Casinos (FY2019 \$mn)

### Parx Apples-to-Apples

FROM:	TO:	New Prince George's Co. Casino	Other Maryland Casinos	Subtotal AT casinos in MD	Other States' Casinos	Total FROM Maryland
<b>Residents of Maryland</b>		\$180.1	\$799.4	\$979.5	<b>\$464.8</b>	\$1,444.3
" <i>Prince George's County</i>		\$99.3	\$76.9	\$176.3	\$38.2 (= imports)	\$214.5
<b>Residents of Other States</b>						
Virginia		\$290.1	\$168.2	\$458.3		
District of Columbia		85.5	43.4	128.9		
Pennsylvania		6.1	59.6	65.7		
DE & WV		1.0	22.9	24.0		
Further Afield		12.2	31.1	43.3		
Subtotal FROM Other States		\$394.8	\$325.3	----- <b>\$720.1</b>	(= exports)	
<b>Grand Total AT Maryland Casinos</b>		\$574.9	\$1,124.7	\$1,699.7		

**NET EXPORTS:**  
(difference)

**\$255.4**

**NET CHANGE vs. Null Case**

**\$398.9**

Memo: Prince George's County Net Exports

\$360.5

### Exhibit 14-3: Total Consumer Spending at Casinos (FY2019 \$mn)

#### MGM Apples-to-Apples

FROM:	TO:	New Prince George's Co. Casino	Other Maryland Casinos	Subtotal AT casinos in MD	Other States' Casinos	Total FROM Maryland
<b>Residents of Maryland</b>		\$182.6	\$794.7	\$977.3	<b>\$464.9</b>	\$1,442.2
" Prince George's County		\$103.1	\$74.0	\$177.2	\$37.2 (= imports)	\$214.4
<b>Residents of Other States</b>						
Virginia		\$342.5	\$161.3	\$503.7		
District of Columbia		111.1	37.6	148.8		
Pennsylvania		6.1	59.6	65.8		
DE & WV		1.0	22.9	24.0		
Further Afield		17.0	31.1	48.1		
Subtotal FROM Other States		\$477.8	\$312.5	<b>\$790.3</b>	(= exports)	
<b>Grand Total AT Maryland Casinos</b>		\$660.4	\$1,107.2	\$1,767.6		

**NET EXPORTS:**  
(difference)

**\$325.5**

**NET CHANGE vs. Null Case**

**\$469.0**

Memo: Prince George's County Net Exports

\$446.0

## Exhibit 15: Summary of Gaming Revenues by Source

(FY2019 \$million)

### As Proposed:

( with # slots)

	<b>Penn</b> (3,000)	<b>Parx</b> (4,750)	<b>MGM</b> (3,600)
Source Market:			
Maryland	\$172.3	\$214.5	\$199.4
Virginia	\$284.9	\$346.0	\$369.7
DC	\$82.7	\$98.3	\$117.9
Pennsylvania	\$6.1	\$8.4	\$7.0
Delaware & WV	\$1.0	\$1.4	\$1.2
Further Afield	\$12.9	\$13.6	\$17.4
	-----	-----	-----
Total	\$559.9	\$682.2	\$712.6

### Apples-to-Apples:

( with # slots)

	<b>Penn</b> (3,000)	<b>Parx</b> (3,000)	<b>MGM</b> (3,000)
Source Market:			
Maryland	\$174.4	\$180.1	\$182.6
Virginia	\$288.1	\$290.1	\$342.5
DC	\$83.4	\$85.5	\$111.1
Pennsylvania	\$6.3	\$6.1	\$6.1
Delaware & WV	\$1.1	\$1.0	\$1.0
Further Afield	\$13.1	\$12.2	\$17.0
	-----	-----	-----
Total	\$566.3	\$574.9	\$660.4

(Penn goes up in apples-to-apples because it proposes a below-average number of tables)

## Exhibit 16: Summary of Projections - FY2019 Detail

( one of two pages)

Facility		Number of Units		Proj. "Power Rating"		Projected Total Win (FY2019 \$000)			Proj. Win/Unit/Day		Projected Impacts	
		slots	tables	slots	tables	slots	tables	total	slots	tables	slots	tables
		(1)							(1)			
Null case WITHOUT Prince George's County(2)												
Horseshoe	Baltimore	2,435	132	70.1	107.8	\$276,653	\$174,464	\$451,117	\$311	\$3,621		
Maryland Live	Hanover	4,270	149	72.1	107.8	\$406,138	\$180,701	\$586,839	\$261	\$3,323		
Hollywood	Perryville	1,148	17	78.1	105.2	\$74,007	\$13,211	\$87,218	\$177	\$2,129		
Rocky Gap	Flintstone	558	12	88.8	108.9	\$35,048	\$5,558	\$40,606	\$172	\$1,324		
Ocean Downs	Berlin	800	10	99.6	100.0	\$55,572	\$3,398	\$58,970	\$190	\$931		
		-----	-----			-----	-----	-----				
Total Maryland		9,211	320			\$847,417	\$377,333	\$1,224,751				
Prince George's County Casinos as Proposed, with Impacts:												
Penn	Fort Wash'n	3,000	120	70.4	105.0	\$387,245	\$172,669	\$559,913	\$354	\$3,942		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$272,278	\$156,236	\$428,515	\$306	\$3,243	-1.6%	-10.4%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$370,302	\$148,957	\$519,259	\$238	\$2,739	-8.8%	-17.6%
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,627	\$12,626	\$83,253	\$169	\$2,035	-4.6%	-4.4%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,986	\$5,178	\$38,164	\$162	\$1,234	-5.9%	-6.8%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,913	\$3,270	\$56,184	\$181	\$896	-4.8%	-3.8%
		-----	-----			-----	-----	-----				
Total Maryland		12,211	440			\$1,186,351	\$498,937	\$1,685,287			40.0%	32.2%
Parx	Fort Wash'n	4,750	145	71.4	105.0	\$491,033	\$191,165	\$682,198	\$283	\$3,612		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$263,356	\$153,656	\$417,012	\$296	\$3,189	-4.8%	-11.9%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$342,335	\$144,557	\$486,893	\$220	\$2,658	-15.7%	-20.0%
Hollywood	Perryville	1,148	17	78.1	105.2	\$69,468	\$12,533	\$82,001	\$166	\$2,020	-6.1%	-5.1%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$31,968	\$5,109	\$37,077	\$157	\$1,217	-8.8%	-8.1%
Ocean Downs	Berlin	800	10	99.6	100.0	\$51,739	\$3,251	\$54,990	\$177	\$891	-6.9%	-4.3%
		-----	-----			-----	-----	-----				
Total Maryland		13,961	465			\$1,249,900	\$510,271	\$1,760,172			47.5%	35.2%
MGM	Nat'l Harbor	3,600	125	69.7	105.0	\$501,314	\$211,310	\$712,624	\$382	\$4,631		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$265,991	\$153,147	\$419,138	\$299	\$3,179	-3.9%	-12.2%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$349,289	\$143,394	\$492,683	\$224	\$2,637	-14.0%	-20.6%
Hollywood	Perryville	1,148	17	78.1	105.2	\$69,906	\$12,533	\$82,439	\$167	\$2,020	-5.5%	-5.1%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,432	\$5,120	\$37,553	\$159	\$1,220	-7.5%	-7.9%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,307	\$3,257	\$55,564	\$179	\$892	-5.9%	-4.2%
		-----	-----			-----	-----	-----				
Total Maryland		12,811	445			\$1,271,240	\$528,760	\$1,800,000			50.0%	40.1%

## Exhibit 16: Summary of Projections - FY2019 Detail

( one of two pages)

Facility		Number of Units		Proj. "Power Rating"		Projected Total Win (FY2019 \$000)			Proj. Win/Unit/Day		Projected Impacts	
		slots	tables	slots	tables	slots	tables	total	slots	tables	slots	tables
		(1)								(1)		
Prince George's County Casinos "Apples to Apples," with Impacts:												
Penn	Fort Wash'n	3,000	130	70.4	105.0	\$386,976	\$179,333	\$566,309	\$353	\$3,779		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$272,295	\$155,030	\$427,325	\$306	\$3,218	-1.6%	-11.1%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$370,354	\$146,922	\$517,276	\$238	\$2,702	-8.8%	-18.7%
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,629	\$12,585	\$83,214	\$169	\$2,028	-4.6%	-4.7%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,987	\$5,150	\$38,138	\$162	\$1,227	-5.9%	-7.3%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,915	\$3,262	\$56,177	\$181	\$894	-4.8%	-4.0%
		-----	-----			-----	-----	-----				
Total Maryland		12,211	450			\$1,186,157	\$502,282	\$1,688,438			40.0%	33.1%
Parx	Fort Wash'n	3,000	130	70.3	105.0	\$392,941	\$181,992	\$574,933	\$359	\$3,835		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$272,800	\$155,298	\$428,097	\$307	\$3,223	-1.4%	-11.0%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$371,755	\$147,309	\$519,064	\$239	\$2,709	-8.5%	-18.5%
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,657	\$12,590	\$83,247	\$169	\$2,029	-4.5%	-4.7%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,984	\$5,148	\$38,132	\$162	\$1,227	-5.9%	-7.4%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,921	\$3,263	\$56,184	\$181	\$894	-4.8%	-4.0%
		-----	-----			-----	-----	-----				
Total Maryland		12,211	450			\$1,194,057	\$505,600	\$1,699,657			40.9%	34.0%
MGM	Nat'l Harbor	3,000	130	68.1	105.0	\$445,645	\$214,732	\$660,377	\$407	\$4,525		
Horseshoe	Baltimore	2,435	132	71.9	107.8	\$270,804	\$152,528	\$423,331	\$305	\$3,166	-2.1%	-12.6%
Maryland Live	Hanover	4,270	149	74.1	107.8	\$364,363	\$142,360	\$506,722	\$234	\$2,618	-10.3%	-21.2%
Hollywood	Perryville	1,148	17	78.1	105.2	\$70,502	\$12,512	\$83,014	\$168	\$2,016	-4.7%	-5.3%
Rocky Gap	Flintstone	558	12	88.8	108.9	\$32,938	\$5,106	\$38,044	\$162	\$1,216	-6.0%	-8.1%
Ocean Downs	Berlin	800	10	99.6	100.0	\$52,880	\$3,252	\$56,133	\$181	\$891	-4.8%	-4.3%
		-----	-----			-----	-----	-----				
Total Maryland		12,211	450			\$1,237,132	\$530,490	\$1,767,621			46.0%	40.6%

"Power Rating" reflects each facility's ability to attract revenues from the surrounding population based on gravity-model analysis. Slot ratings are depressed in some cases (win/slot/day > \$340) due to crowding at prime times. For discussion, see Appendix A.

(1) Poker tables counted as equivalent of 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) "Null case" assumes no new casino in Prince George's County, nor any enhancement of retention rates at other casinos related thereto.



## Exhibit 17: Key Findings

(FY2019 \$million)

### As Proposed:

( with # slots)

**Penn**  
(3,000)

**Parx**  
(4,750)

**MGM**  
(3,600)

### Gross Gaming Revenues:

VLT/Slots	\$387.2	\$491.0	\$501.3
Tables (inc. Poker)	\$172.7	\$191.2	\$211.3
Total	----- \$559.9	----- \$682.2	----- \$712.6

### Impacts on Other Casinos in Maryland:

VLT/Slots	-\$48.3	-\$88.5	-\$77.5
Tables (inc. Poker)	-\$51.1	-\$58.2	-\$59.9
Total	----- -\$99.4	----- -\$146.8	----- -\$137.4

### Net Gaming Revenues:

VLT/Slots	\$338.9	\$402.5	\$423.8
Tables (inc. Poker)	\$121.6	\$132.9	\$151.4
Total	----- \$460.5	----- \$535.4	----- \$575.2

(Impact on)  
**Net Exports of  
Gaming Services**  
(Exports - Imports)

\$393.1

\$462.9

\$501.5

**Exhibit 18: Projections for Gaming Win in Then-Year Dollars**

Facility		Year	Number of Units		Projected Total Win (\$000)			Projected Impacts	
			slots	tables (1)	slots	tables	total	slots	tables
Baseline WITHOUT Prince George's County: (2)									
(No new Casino)		FY2017	0	0					
		FY2018	0	0					
		FY2019	0	0					
		FY2020	0	0					
		FY2021	0	0					
Horseshoe	Baltimore	FY2017	2,435	132	\$265,910	\$167,690	\$433,600		
		FY2018	2,435	132	\$271,228	\$171,044	\$442,272		
		FY2019	2,435	132	\$276,653	\$174,464	\$451,117		
		FY2020	2,435	132	\$282,186	\$177,954	\$460,139		
		FY2021	2,435	132	\$287,830	\$181,513	\$469,342		
Maryland Live	Hanover	FY2017	4,270	149	\$390,367	\$173,684	\$564,051		
		FY2018	4,270	149	\$398,175	\$177,158	\$575,332		
		FY2019	4,270	149	\$406,138	\$180,701	\$586,839		
		FY2020	4,270	149	\$414,261	\$184,315	\$598,576		
		FY2021	4,270	149	\$422,546	\$188,001	\$610,547		
Hollywood	Perryville	FY2017	1,148	17	\$71,133	\$12,698	\$83,832		
		FY2018	1,148	17	\$72,556	\$12,952	\$85,508		
		FY2019	1,148	17	\$74,007	\$13,211	\$87,218		
		FY2020	1,148	17	\$75,487	\$13,476	\$88,963		
		FY2021	1,148	17	\$76,997	\$13,745	\$90,742		
Rocky Gap	Flintstone	FY2017	558	12	\$33,687	\$5,343	\$39,029		
		FY2018	558	12	\$34,360	\$5,449	\$39,810		
		FY2019	558	12	\$35,048	\$5,558	\$40,606		
		FY2020	558	12	\$35,748	\$5,670	\$41,418		
		FY2021	558	12	\$36,463	\$5,783	\$42,246		
Ocean Downs	Berlin	FY2017	800	10	\$53,414	\$3,266	\$56,680		
		FY2018	800	10	\$54,482	\$3,332	\$57,814		
		FY2019	800	10	\$55,572	\$3,398	\$58,970		
		FY2020	800	10	\$56,683	\$3,466	\$60,150		
		FY2021	800	10	\$57,817	\$3,536	\$61,353		
Total Maryland		FY2017	9,211	320	\$814,511	\$362,681	\$1,177,192		
		FY2018	9,211	320	\$830,801	\$369,935	\$1,200,736		
		FY2019	9,211	320	\$847,417	\$377,333	\$1,224,751		
		FY2020	9,211	320	\$864,366	\$384,880	\$1,249,246		
		FY2021	9,211	320	\$881,653	\$392,578	\$1,274,231		

(1) Poker tables counted as 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) Baseline assumes no new casino in Prince George's County, nor any enhancement of retention rates at these casinos related thereto.

**Exhibit 18: Projections for Gaming Win in Then-Year Dollars**

Facility		Year	Number of Units		Projected Total Win (\$000)			Projected Impacts	
			slots	tables (1)	slots	tables	total	slots	tables
Projections WITH Prince George's County ("As Proposed"):									
Penn as Proposed		FY2017	3,000	120	\$334,987	\$149,368	\$484,354		
		FY2018	3,000	120	\$379,652	\$169,283	\$548,935		
		FY2019	3,000	120	\$387,245	\$172,669	\$559,913		
		FY2020	3,000	120	\$394,989	\$176,122	\$571,112		
		FY2021	3,000	120	\$402,889	\$179,645	\$582,534		
Horseshoe	Baltimore	FY2017	2,435	132	\$262,126	\$151,921	\$414,047	-1.4%	-9.4%
		FY2018	2,435	132	\$266,940	\$153,173	\$420,112	-1.6%	-10.4%
		FY2019	2,435	132	\$272,278	\$156,236	\$428,515	-1.6%	-10.4%
		FY2020	2,435	132	\$277,724	\$159,361	\$437,085	-1.6%	-10.4%
		FY2021	2,435	132	\$283,278	\$162,548	\$445,827	-1.6%	-10.4%
Maryland Live	Hanover	FY2017	4,270	149	\$359,367	\$146,224	\$505,591	-7.9%	-15.8%
		FY2018	4,270	149	\$363,041	\$146,036	\$509,077	-8.8%	-17.6%
		FY2019	4,270	149	\$370,302	\$148,957	\$519,259	-8.8%	-17.6%
		FY2020	4,270	149	\$377,708	\$151,936	\$529,644	-8.8%	-17.6%
		FY2021	4,270	149	\$385,262	\$154,975	\$540,237	-8.8%	-17.6%
Hollywood	Perryville	FY2017	1,148	17	\$68,210	\$12,192	\$80,401	-4.1%	-4.0%
		FY2018	1,148	17	\$69,242	\$12,378	\$81,621	-4.6%	-4.4%
		FY2019	1,148	17	\$70,627	\$12,626	\$83,253	-4.6%	-4.4%
		FY2020	1,148	17	\$72,040	\$12,878	\$84,918	-4.6%	-4.4%
		FY2021	1,148	17	\$73,481	\$13,136	\$86,617	-4.6%	-4.4%
Rocky Gap	Flintstone	FY2017	558	12	\$31,903	\$5,014	\$36,917	-5.3%	-6.2%
		FY2018	558	12	\$32,339	\$5,077	\$37,416	-5.9%	-6.8%
		FY2019	558	12	\$32,986	\$5,178	\$38,164	-5.9%	-6.8%
		FY2020	558	12	\$33,645	\$5,282	\$38,927	-5.9%	-6.8%
		FY2021	558	12	\$34,318	\$5,388	\$39,706	-5.9%	-6.8%
Ocean Downs	Berlin	FY2017	800	10	\$51,114	\$3,156	\$54,270	-4.3%	-3.4%
		FY2018	800	10	\$51,876	\$3,206	\$55,082	-4.8%	-3.8%
		FY2019	800	10	\$52,913	\$3,270	\$56,184	-4.8%	-3.8%
		FY2020	800	10	\$53,971	\$3,336	\$57,307	-4.8%	-3.8%
		FY2021	800	10	\$55,051	\$3,403	\$58,453	-4.8%	-3.8%
Total Maryland		FY2017	12,211	440	\$1,107,706	\$467,874	\$1,575,580	36.0%	29.0%
		FY2018	12,211	440	\$1,163,089	\$489,153	\$1,652,243	40.0%	32.2%
		FY2019	12,211	440	\$1,186,351	\$498,937	\$1,685,287	40.0%	32.2%
		FY2020	12,211	440	\$1,210,078	\$508,915	\$1,718,993	40.0%	32.2%
		FY2021	12,211	440	\$1,234,279	\$519,094	\$1,753,373	40.0%	32.2%

(1) Poker tables counted as 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) Projections include effects of additional retention of 7% at Horseshoe Baltimore and 8% at Maryland Live when Penn opens.

## Exhibit 18: Projections for Gaming Win in Then-Year Dollars

Facility		Year	Number of Units		Projected Total Win (\$000)			Projected Impacts	
			slots	tables (1)	slots	tables	total	slots	tables
Projections WITH Prince George's County ("As Proposed"):									
Parx as Proposed  (hypothetical FY2019)		FY2017	3,000	145	\$339,914	\$165,367	\$505,282		
		FY2018	3,500	145	\$415,464	\$187,416	\$602,880		
		FY2019	4,750	145	\$491,033	\$191,165	\$682,198		
		FY2020	4,750	145	\$500,854	\$194,988	\$695,842		
		FY2021	4,750	145	\$510,871	\$198,888	\$709,759		
Horseshoe	Baltimore	FY2017	2,435	132	\$262,577	\$149,689	\$412,266	-1.3%	-10.7%
		FY2018	2,435	132	\$266,281	\$150,643	\$416,924	-1.8%	-11.9%
		FY2019	2,435	132	\$263,356	\$153,656	\$417,012	-4.8%	-11.9%
		FY2020	2,435	132	\$268,623	\$156,729	\$425,353	-4.8%	-11.9%
		FY2021	2,435	132	\$273,996	\$159,864	\$433,860	-4.8%	-11.9%
Maryland Live	Hanover	FY2017	4,270	149	\$360,624	\$142,418	\$503,042	-7.6%	-18.0%
		FY2018	4,270	149	\$358,143	\$141,723	\$499,865	-10.1%	-20.0%
		FY2019	4,270	149	\$342,335	\$144,557	\$486,893	-15.7%	-20.0%
		FY2020	4,270	149	\$349,182	\$147,448	\$496,630	-15.7%	-20.0%
		FY2021	4,270	149	\$356,166	\$150,397	\$506,563	-15.7%	-20.0%
Hollywood	Perryville	FY2017	1,148	17	\$68,236	\$12,112	\$80,347	-4.1%	-4.6%
		FY2018	1,148	17	\$69,328	\$12,287	\$81,615	-4.4%	-5.1%
		FY2019	1,148	17	\$69,468	\$12,533	\$82,001	-6.1%	-5.1%
		FY2020	1,148	17	\$70,858	\$12,784	\$83,641	-6.1%	-5.1%
		FY2021	1,148	17	\$72,275	\$13,039	\$85,314	-6.1%	-5.1%
Rocky Gap	Flintstone	FY2017	558	12	\$31,901	\$4,954	\$36,855	-5.3%	-7.3%
		FY2018	558	12	\$32,232	\$5,009	\$37,241	-6.2%	-8.1%
		FY2019	558	12	\$31,968	\$5,109	\$37,077	-8.8%	-8.1%
		FY2020	558	12	\$32,607	\$5,211	\$37,819	-8.8%	-8.1%
		FY2021	558	12	\$33,260	\$5,316	\$38,575	-8.8%	-8.1%
Ocean Downs	Berlin	FY2017	800	10	\$51,120	\$3,139	\$54,259	-4.3%	-3.9%
		FY2018	800	10	\$51,842	\$3,187	\$55,029	-4.8%	-4.3%
		FY2019	800	10	\$51,739	\$3,251	\$54,990	-6.9%	-4.3%
		FY2020	800	10	\$52,774	\$3,316	\$56,090	-6.9%	-4.3%
		FY2021	800	10	\$53,830	\$3,382	\$57,212	-6.9%	-4.3%
Total Maryland		FY2017	12,211	465	\$1,114,372	\$477,679	\$1,592,051	36.8%	31.7%
		FY2018	12,711	465	\$1,193,288	\$500,266	\$1,693,554	43.6%	35.2%
		FY2019	13,961	465	\$1,249,900	\$510,271	\$1,760,172	47.5%	35.2%
		FY2020	13,961	465	\$1,274,898	\$520,477	\$1,795,375	47.5%	35.2%
		FY2021	13,961	465	\$1,300,396	\$530,886	\$1,831,282	47.5%	35.2%

(1) Poker tables counted as 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) Projections include effects of additional retention of 7% at Horseshoe Baltimore and 8% at Maryland Live when Parx opens.

**Exhibit 18: Projections for Gaming Win in Then-Year Dollars**

Facility		Year	Number of Units		Projected Total Win (\$000)			Projected Impacts	
			slots	tables (1)	slots	tables	total	slots	tables
Projections WITH Prince George's County ("As Proposed"):									
MGM as Proposed		FY2017	3,600	125	\$433,663	\$182,794	\$616,457		
		FY2018	3,600	125	\$491,485	\$207,166	\$698,651		
		FY2019	3,600	125	\$501,314	\$211,310	\$712,624		
		FY2020	3,600	125	\$511,341	\$215,536	\$726,876		
		FY2021	3,600	125	\$521,567	\$219,846	\$741,414		
Horseshoe	Baltimore	FY2017	2,435	132	\$256,687	\$149,249	\$405,936	-3.5%	-11.0%
		FY2018	2,435	132	\$260,775	\$150,144	\$410,919	-3.9%	-12.2%
		FY2019	2,435	132	\$265,991	\$153,147	\$419,138	-3.9%	-12.2%
		FY2020	2,435	132	\$271,311	\$156,210	\$427,520	-3.9%	-12.2%
		FY2021	2,435	132	\$276,737	\$159,334	\$436,071	-3.9%	-12.2%
Maryland Live	Hanover	FY2017	4,270	149	\$341,190	\$141,412	\$482,602	-12.6%	-18.6%
		FY2018	4,270	149	\$342,441	\$140,582	\$483,023	-14.0%	-20.6%
		FY2019	4,270	149	\$349,289	\$143,394	\$492,683	-14.0%	-20.6%
		FY2020	4,270	149	\$356,275	\$146,262	\$502,537	-14.0%	-20.6%
		FY2021	4,270	149	\$363,401	\$149,187	\$512,588	-14.0%	-20.6%
Hollywood	Perryville	FY2017	1,148	17	\$67,586	\$12,111	\$79,697	-5.0%	-4.6%
		FY2018	1,148	17	\$68,535	\$12,287	\$80,822	-5.5%	-5.1%
		FY2019	1,148	17	\$69,906	\$12,533	\$82,439	-5.5%	-5.1%
		FY2020	1,148	17	\$71,304	\$12,784	\$84,088	-5.5%	-5.1%
		FY2021	1,148	17	\$72,730	\$13,039	\$85,769	-5.5%	-5.1%
Rocky Gap	Flintstone	FY2017	558	12	\$31,424	\$4,964	\$36,388	-6.7%	-7.1%
		FY2018	558	12	\$31,796	\$5,020	\$36,816	-7.5%	-7.9%
		FY2019	558	12	\$32,432	\$5,120	\$37,553	-7.5%	-7.9%
		FY2020	558	12	\$33,081	\$5,223	\$38,304	-7.5%	-7.9%
		FY2021	558	12	\$33,742	\$5,327	\$39,070	-7.5%	-7.9%
Ocean Downs	Berlin	FY2017	800	10	\$50,590	\$3,144	\$53,734	-5.3%	-3.8%
		FY2018	800	10	\$51,282	\$3,193	\$54,475	-5.9%	-4.2%
		FY2019	800	10	\$52,307	\$3,257	\$55,564	-5.9%	-4.2%
		FY2020	800	10	\$53,354	\$3,322	\$56,675	-5.9%	-4.2%
		FY2021	800	10	\$54,421	\$3,388	\$57,809	-5.9%	-4.2%
Total Maryland		FY2017	12,811	445	\$1,181,140	\$493,673	\$1,674,813	45.0%	36.1%
		FY2018	12,811	445	\$1,246,314	\$518,392	\$1,764,706	50.0%	40.1%
		FY2019	12,811	445	\$1,271,240	\$528,760	\$1,800,000	50.0%	40.1%
		FY2020	12,811	445	\$1,296,665	\$539,335	\$1,836,000	50.0%	40.1%
		FY2021	12,811	445	\$1,322,598	\$550,122	\$1,872,720	50.0%	40.1%

(1) Poker tables counted as 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) Projections include effects of additional retention of 7% at Horseshoe Baltimore and 8% at Maryland Live when MGM opens.

**Exhibit 18: Projections for Gaming Win in Then-Year Dollars**

Facility		Year	Number of Units		Projected Total Win (\$000)			Projected Impacts	
			slots	tables (1)	slots	tables	total	slots	tables
Projections WITH Prince George's County ("Apples to Apples"):									
Penn at Standard Size		FY2017	3,000	130	\$334,755	\$155,132	\$489,887		
		FY2018	3,000	130	\$379,388	\$175,816	\$555,205		
		FY2019	3,000	130	\$386,976	\$179,333	\$566,309		
		FY2020	3,000	130	\$394,716	\$182,919	\$577,635		
		FY2021	3,000	130	\$402,610	\$186,578	\$589,188		
Horseshoe	Baltimore	FY2017	2,435	132	\$262,140	\$150,878	\$413,018	-1.4%	-10.0%
		FY2018	2,435	132	\$266,956	\$151,990	\$418,946	-1.6%	-11.1%
		FY2019	2,435	132	\$272,295	\$155,030	\$427,325	-1.6%	-11.1%
		FY2020	2,435	132	\$277,741	\$158,130	\$435,871	-1.6%	-11.1%
		FY2021	2,435	132	\$283,296	\$161,293	\$444,589	-1.6%	-11.1%
Maryland Live	Hanover	FY2017	4,270	149	\$359,412	\$144,464	\$503,875	-7.9%	-16.8%
		FY2018	4,270	149	\$363,092	\$144,041	\$507,133	-8.8%	-18.7%
		FY2019	4,270	149	\$370,354	\$146,922	\$517,276	-8.8%	-18.7%
		FY2020	4,270	149	\$377,761	\$149,861	\$527,621	-8.8%	-18.7%
		FY2021	4,270	149	\$385,316	\$152,858	\$538,174	-8.8%	-18.7%
Hollywood	Perryville	FY2017	1,148	17	\$68,211	\$12,157	\$80,368	-4.1%	-4.3%
		FY2018	1,148	17	\$69,244	\$12,338	\$81,583	-4.6%	-4.7%
		FY2019	1,148	17	\$70,629	\$12,585	\$83,214	-4.6%	-4.7%
		FY2020	1,148	17	\$72,042	\$12,837	\$84,879	-4.6%	-4.7%
		FY2021	1,148	17	\$73,483	\$13,093	\$86,576	-4.6%	-4.7%
Rocky Gap	Flintstone	FY2017	558	12	\$31,905	\$4,990	\$36,894	-5.3%	-6.6%
		FY2018	558	12	\$32,341	\$5,049	\$37,390	-5.9%	-7.3%
		FY2019	558	12	\$32,987	\$5,150	\$38,138	-5.9%	-7.3%
		FY2020	558	12	\$33,647	\$5,253	\$38,901	-5.9%	-7.3%
		FY2021	558	12	\$34,320	\$5,359	\$39,679	-5.9%	-7.3%
Ocean Downs	Berlin	FY2017	800	10	\$51,116	\$3,148	\$54,264	-4.3%	-3.6%
		FY2018	800	10	\$51,878	\$3,198	\$55,075	-4.8%	-4.0%
		FY2019	800	10	\$52,915	\$3,262	\$56,177	-4.8%	-4.0%
		FY2020	800	10	\$53,974	\$3,327	\$57,300	-4.8%	-4.0%
		FY2021	800	10	\$55,053	\$3,393	\$58,446	-4.8%	-4.0%
Total Maryland		FY2017	12,211	450	\$1,107,538	\$470,768	\$1,578,306	36.0%	29.8%
		FY2018	12,211	450	\$1,162,899	\$492,433	\$1,655,332	40.0%	33.1%
		FY2019	12,211	450	\$1,186,157	\$502,282	\$1,688,438	40.0%	33.1%
		FY2020	12,211	450	\$1,209,880	\$512,327	\$1,722,207	40.0%	33.1%
		FY2021	12,211	450	\$1,234,077	\$522,574	\$1,756,651	40.0%	33.1%

(1) Poker tables counted as 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) Projections include effects of additional retention of 7% at Horseshoe Baltimore and 8% at Maryland Live when Penn opens.

**Exhibit 18: Projections for Gaming Win in Then-Year Dollars**

Facility		Year	Number of Units		Projected Total Win (\$000)			Projected Impacts	
			slots	tables (1)	slots	tables	total	slots	tables
Projections WITH Prince George's County ("Apples to Apples"):									
Parx at Standard Size		FY2017	3,000	130	\$339,914	\$157,433	\$497,347		
		FY2018	3,000	130	\$385,236	\$178,424	\$563,659		
		FY2019	3,000	130	\$392,941	\$181,992	\$574,933		
		FY2020	3,000	130	\$400,799	\$185,632	\$586,431		
		FY2021	3,000	130	\$408,815	\$189,344	\$598,160		
Horseshoe	Baltimore	FY2017	2,435	132	\$262,577	\$151,109	\$413,686	-1.3%	-9.9%
		FY2018	2,435	132	\$267,451	\$152,252	\$419,703	-1.4%	-11.0%
		FY2019	2,435	132	\$272,800	\$155,298	\$428,097	-1.4%	-11.0%
		FY2020	2,435	132	\$278,256	\$158,403	\$436,659	-1.4%	-11.0%
		FY2021	2,435	132	\$283,821	\$161,572	\$445,392	-1.4%	-11.0%
Maryland Live	Hanover	FY2017	4,270	149	\$360,624	\$144,799	\$505,423	-7.6%	-16.6%
		FY2018	4,270	149	\$364,465	\$144,421	\$508,886	-8.5%	-18.5%
		FY2019	4,270	149	\$371,755	\$147,309	\$519,064	-8.5%	-18.5%
		FY2020	4,270	149	\$379,190	\$150,256	\$529,445	-8.5%	-18.5%
		FY2021	4,270	149	\$386,774	\$153,261	\$540,034	-8.5%	-18.5%
Hollywood	Perryville	FY2017	1,148	17	\$68,236	\$12,160	\$80,396	-4.1%	-4.2%
		FY2018	1,148	17	\$69,272	\$12,343	\$81,615	-4.5%	-4.7%
		FY2019	1,148	17	\$70,657	\$12,590	\$83,247	-4.5%	-4.7%
		FY2020	1,148	17	\$72,070	\$12,841	\$84,912	-4.5%	-4.7%
		FY2021	1,148	17	\$73,512	\$13,098	\$86,610	-4.5%	-4.7%
Rocky Gap	Flintstone	FY2017	558	12	\$31,901	\$4,988	\$36,889	-5.3%	-6.6%
		FY2018	558	12	\$32,337	\$5,047	\$37,385	-5.9%	-7.4%
		FY2019	558	12	\$32,984	\$5,148	\$38,132	-5.9%	-7.4%
		FY2020	558	12	\$33,643	\$5,251	\$38,895	-5.9%	-7.4%
		FY2021	558	12	\$34,316	\$5,356	\$39,673	-5.9%	-7.4%
Ocean Downs	Berlin	FY2017	800	10	\$51,120	\$3,149	\$54,270	-4.3%	-3.6%
		FY2018	800	10	\$51,883	\$3,199	\$55,082	-4.8%	-4.0%
		FY2019	800	10	\$52,921	\$3,263	\$56,184	-4.8%	-4.0%
		FY2020	800	10	\$53,979	\$3,328	\$57,307	-4.8%	-4.0%
		FY2021	800	10	\$55,059	\$3,395	\$58,453	-4.8%	-4.0%
Total Maryland		FY2017	12,211	450	\$1,114,372	\$473,638	\$1,588,010	36.8%	30.6%
		FY2018	12,211	450	\$1,170,644	\$495,686	\$1,666,330	40.9%	34.0%
		FY2019	12,211	450	\$1,194,057	\$505,600	\$1,699,657	40.9%	34.0%
		FY2020	12,211	450	\$1,217,938	\$515,712	\$1,733,650	40.9%	34.0%
		FY2021	12,211	450	\$1,242,296	\$526,026	\$1,768,323	40.9%	34.0%

(1) Poker tables counted as 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) Projections include effects of additional retention of 7% at Horseshoe Baltimore and 8% at Maryland Live when Parx opens.

## Exhibit 18: Projections for Gaming Win in Then-Year Dollars

Facility		Year	Number of Units		Projected Total Win (\$000)			Projected Impacts	
			slots	tables (1)	slots	tables	total	slots	tables
Projections WITH Prince George's County ("Apples to Apples"):									
MGM at Standard Size		FY2017	3,000	130	\$385,506	\$185,754	\$571,260		
		FY2018	3,000	130	\$436,907	\$210,522	\$647,429		
		FY2019	3,000	130	\$445,645	\$214,732	\$660,377		
		FY2020	3,000	130	\$454,558	\$219,027	\$673,585		
		FY2021	3,000	130	\$463,649	\$223,407	\$687,056		
Horseshoe	Baltimore	FY2017	2,435	132	\$260,850	\$148,713	\$409,564	-1.9%	-11.3%
		FY2018	2,435	132	\$265,494	\$149,537	\$415,031	-2.1%	-12.6%
		FY2019	2,435	132	\$270,804	\$152,528	\$423,331	-2.1%	-12.6%
		FY2020	2,435	132	\$276,220	\$155,578	\$431,798	-2.1%	-12.6%
		FY2021	2,435	132	\$281,744	\$158,690	\$440,434	-2.1%	-12.6%
Maryland Live	Hanover	FY2017	4,270	149	\$354,229	\$140,517	\$494,746	-9.3%	-19.1%
		FY2018	4,270	149	\$357,218	\$139,568	\$496,787	-10.3%	-21.2%
		FY2019	4,270	149	\$364,363	\$142,360	\$506,722	-10.3%	-21.2%
		FY2020	4,270	149	\$371,650	\$145,207	\$516,857	-10.3%	-21.2%
		FY2021	4,270	149	\$379,083	\$148,111	\$527,194	-10.3%	-21.2%
Hollywood	Perryville	FY2017	1,148	17	\$68,101	\$12,093	\$80,194	-4.3%	-4.8%
		FY2018	1,148	17	\$69,119	\$12,266	\$81,386	-4.7%	-5.3%
		FY2019	1,148	17	\$70,502	\$12,512	\$83,014	-4.7%	-5.3%
		FY2020	1,148	17	\$71,912	\$12,762	\$84,674	-4.7%	-5.3%
		FY2021	1,148	17	\$73,350	\$13,017	\$86,367	-4.7%	-5.3%
Rocky Gap	Flintstone	FY2017	558	12	\$31,862	\$4,951	\$36,813	-5.4%	-7.3%
		FY2018	558	12	\$32,293	\$5,006	\$37,298	-6.0%	-8.1%
		FY2019	558	12	\$32,938	\$5,106	\$38,044	-6.0%	-8.1%
		FY2020	558	12	\$33,597	\$5,208	\$38,805	-6.0%	-8.1%
		FY2021	558	12	\$34,269	\$5,312	\$39,581	-6.0%	-8.1%
Ocean Downs	Berlin	FY2017	800	10	\$51,086	\$3,140	\$54,226	-4.4%	-3.9%
		FY2018	800	10	\$51,844	\$3,189	\$55,032	-4.8%	-4.3%
		FY2019	800	10	\$52,880	\$3,252	\$56,133	-4.8%	-4.3%
		FY2020	800	10	\$53,938	\$3,317	\$57,255	-4.8%	-4.3%
		FY2021	800	10	\$55,017	\$3,384	\$58,400	-4.8%	-4.3%
Total Maryland		FY2017	12,211	450	\$1,151,634	\$495,169	\$1,646,804	41.4%	36.5%
		FY2018	12,211	450	\$1,212,874	\$520,088	\$1,732,962	46.0%	40.6%
		FY2019	12,211	450	\$1,237,132	\$530,490	\$1,767,621	46.0%	40.6%
		FY2020	12,211	450	\$1,261,874	\$541,099	\$1,802,974	46.0%	40.6%
		FY2021	12,211	450	\$1,287,112	\$551,921	\$1,839,033	46.0%	40.6%

(1) Poker tables counted as 0.5 x house-banked tables. Horseshoe assumed to have 30 poker tables, Maryland Live 52, and Hollywood 10.

(2) Projections include effects of additional retention of 7% at Horseshoe Baltimore and 8% at Maryland Live when MGM opens.



**Cummings Associates**

**Projected Gaming Revenues and  
Impacts of Proposed New Casinos in  
Prince George's County, Maryland**

**Appendix:  
Details of the Gravity-Model Methodology**

December 18, 2013

## **Appendix**

### **Details of the Gravity-Model Methodology**

My projections for the likely performance of new gaming facilities are based upon analyses of the experience of the most comparable operations elsewhere in the immediate region and more broadly all across the United States. I use “gravity models” as a key element of this process. This methodology has been refined over the years as others and I have applied it to assessing the performance of many gaming facilities, both existing and proposed. It is based essentially on the demographics of the areas surrounding each facility, in particular the number of adults residing at various distances, and the ratio of actual revenues obtained to such adult populations at existing facilities. *Access time*, not mileage per se, and population density are the most critical variables. (A bibliography is attached.)

To illustrate the relationships among casino revenues, population, and distance, **Exhibit A-1** presents a graph which compares rates of visitation versus distance for the casinos of Mississippi, based upon statewide survey data. There is clearly a relationship between patronage and distance: the greater the distance the customer has to travel, the lower the number of visits. Fewer patrons are willing to travel longer distances, and when they do, they usually visit less often. (Offsetting this to some extent, when they *do* visit, they typically spend more on each occasion than nearby customers who visit more frequently – distance acts as a filter to deter more casual fans.) In addition, the further you live from *these* casinos, the closer you generally get to competing casinos in other states, further reducing your rate of visiting Mississippi.

Because rates of visitation appear to decline so dramatically as distance increases, and because the scale is so large when looking at statewide data such as these from Mississippi, it is

useful to transform this data by taking logarithms (“log-transforming the data,” as economists say).

**Exhibit A-2** presents the Mississippi data in such fashion, and, to my eyes, at least, presents a pattern that comes across more clearly. When we exclude the most distant data (beyond 250 miles, where competition, rather than distance, usually becomes the most critical factor), regression analysis indicates a relationship that is indeed fairly robust (**Exhibit A-3**).

I have analyzed such data from a wide variety of markets (including a selection which I illustrated for the Commission in my powerpoint presentation of December 6), and have estimated that in general, over a reasonable range of distances the aggregate “elasticity” of slot spending with respect to distance is roughly -0.7, that is, consumers’ total spending on slot machines declines in somewhat less than direct proportion to the distance to be traveled.<sup>1</sup> When, however, several facilities compete within the same (or closely connected) market(s), the customer overwhelmingly prefers the closest. It appears that in this respect slot machines (and similar video lottery terminals, or VLTs) behave in a fashion very similar to many other retail markets, in which the relative “attraction” of each outlet is roughly inversely proportional to the distance *squared*.<sup>2</sup>

Using these parameters to account for the relationships with distance and demographic data for each county in gaming markets across the United States (and in cases such as Maryland for each

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<sup>1</sup> This is a relatively “long-distance” attraction; if you double the distance, revenues decline by about 38%. For comparison, pari-mutuel betting at race tracks generally exhibits a distance coefficient of about -1 to -1.2: if you double the distance, visitation declines by 50% or more. Generically, this type of relationship is called a “gravity model,” because it is similar to Newton’s law of gravitation (for which the “distance factor” would be -2.0: if you double the distance, the attraction declines by a factor of 2<sup>2</sup>, or four). With respect to travel time, the elasticity appears to be slightly less; I estimate -0.67.

<sup>2</sup> A relationship sometimes called Reilly’s Law of Retail Gravitation, based upon its mathematical identity with Newton’s Law, above. David Huff and others have extended these models further with many retail applications, so they are more generally known today as Huff models.

A point of terminology: Huff describes the “general” decline with distance (as opposed to the “competitive” decline) as “friction.” I think this is a very useful way to look at this process, particularly with respect to the traffic-congested markets of the Northeast as opposed to the more rural Midwest.

zip code), I have calculated the “distance-adjusted” adult population surrounding each slot or VLT facility or close group of such facilities in each market. (A portion of my model for the Northeastern U.S. is presented in **Exhibit A-4**, which extends over two pages. The model itself extends over a dozen sheets with circa 9,000 rows x 130 columns.) Dividing the total revenues, or spending, in each existing market by these population figures results in ratios measuring revenues, or consumer spending, per “distance-adjusted” adult. The gravity model, based upon “Reilly’s Law” noted above, then distributes these adults (and so, by proxy, their spending) across the different gaming facilities, or closely-situated groups of gaming facilities, to which they have access. By summing across geographic areas, we can then estimate the sources of revenues (again, consumer spending) for each such group of facilities.

These models can also be used to compare different markets and facilities against one another. Statistics of this type are presented for the major regional gaming markets of the U.S. in **Exhibit A-5**, listed in order of estimated slot (or VLT) spending per person.<sup>3</sup> Again, the gravity-model procedure simply puts the different markets onto a common footing in terms of performance, abstracting out differences due to the varying distributions of population around each facility. The figure for each market represents the amount that the “average” adult that lives within ten minutes of (legal) gaming devices spends on them each year.<sup>4</sup>

Note that this exhibit extends over two pages. As benchmarks, I have inserted several horizontal yellow bars, which represent what I call “Midwest Standard” performance (\$720 per distance-adjusted adult per year), plus ten percent, minus ten percent, and minus twenty percent. In

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<sup>3</sup> These figures do not include relatively modest amounts spent at casinos in Las Vegas, the Caribbean, and other remote “destination resorts” in the U.S. and abroad.

the Midwest, modern casino facilities in populous markets that are more or less typical consistently cluster around the \$720 benchmark. In other parts of the country, as indicated in the columns to the left and to the right, the dispersion is somewhat greater.

In an attempt to simplify comparisons among markets, and to clarify discussion of the principles involved, I have converted these dollar figures into what I call “power ratings” in **Exhibit A-6** and (pardon the small print) all on one page in **Exhibit A-7**. “Midwest Standard” spending of \$720 per year translates into a power rating of 100; ten percent higher (\$770) translates into 110, and ten percent less into 90. I think these ratings are intuitively more comprehensible than large dollar figures that have not been normalized versus some standard for comparison.

It may be helpful to consider these power ratings as a kind of extension of the “fair share” concept that is often used to compare different facilities in the gaming industry. If, for example, all the slot machines in a given market average \$200 in win per day as a group, a facility at which the machines win \$240 per day is said to do 120% of its “fair share.” One that does \$180/day/machine, on the other hand, wins just 90% of its fair share.

My extension to power ratings adds analysis of the surrounding demographics. If there are many people and few machines (like the Chicago area, for example), high wins per machine per day should be expected. Harrah’s Joliet, as an extreme example, wins roughly \$500/machine/ day. In Iowa, on the other hand, there are many more machines and many fewer people. The newly land-based Wild Rose casino at Clinton, for example, wins just \$177/machine/day. Based on my gravity-model analysis, however, I estimate the power rating for the Clinton casino at 96.9, while that for Harrah’s Joliet is just 92.8. Despite its much lower win/slot/day, the Wild Rose at Clinton

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<sup>4</sup> There is nothing special about the ten-minute figure; it is simply a benchmark to represent convenient access.

actually does *better* in drawing from the population which surrounds it – that population is simply much smaller at Clinton than at Joliet. And some other casinos in Iowa actually do even better, such as the casino at Riverside, Iowa, the Dubuque Diamond Jo, and the Mystique (formerly Dubuque Greyhound Park). My analyses indicate that these casinos have slot power ratings ranging from 104 to 110, while their wins/slot/day are in the same ballpark as the Wild Rose (\$150-\$190/day).<sup>5</sup>

When analyzed in this way, the range of experience across the diverse spectrum of markets depicted in these exhibits is, in my opinion, not all that wide. The difference between the best markets (Mississippi, South Dakota, Colorado, New Mexico and Louisiana) and the worst (several highly “urban” casinos in New York and South Florida) amounts to roughly a factor of two. Most of these markets fall into the range of \$600 to \$800 in annual spending per distance-adjusted adult – or in terms of power ratings, from 80 to 110.

As indicated by the columns in these exhibits, I have divided the broad universe of markets into three groups: the Northeastern U.S. and Florida in the first column, medium to large markets elsewhere in the second column, and very rural markets in the third column. Rural markets tend to do better than others for three reasons: (i) it is easier to get around rural areas than urban ones (the “friction” is less – a twenty-minute drive on a rural highway is generally far less challenging than

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<sup>5</sup> To press my point further, the Horseshoe Casino at the Bluffs Run greyhound track has a power rating that is very similar to these (105.6), but because it serves a more densely-populated market (Omaha), its win per slot per day is significantly higher (\$247).

I should perhaps explain at this point that because of all the ways in which I use power ratings in my models, the difference between 93 and 105 (for example) ultimately results in much more than a twelve percent difference in performance. I use the power ratings to modulate (i) average spending per person in the market, (ii) market share for each facility, and (iii) the “reach” of each facility at greater distances (the distance coefficient that represents the competitive interactions of the Reilly and Huff models). Other things being equal (i.e., the surrounding demographics), one point of power rating typically translates into 3-4% change in performance.

one of similar duration in urban or even suburban traffic), (ii) there is less competition from other commercial entertainment activities, and (iii) there is likely some “survival bias” in the data – rural facilities often serve such small markets that only the best survive. Thus, most of the “best” facilities in the top right corners of Exhibits A-5 through A-7 are very “country.”<sup>6</sup>

More competitive markets also appear to attract higher rates of spending. This is true even for the Northeastern U.S. and for rural areas, but I have placed all of the markets in each area into their respective geographic zones for ease of comparison.

Outside of the most rural markets, those in Mississippi demonstrate the best performance. Tunica is, of course, somewhat “rural,” but the more urban casinos on the Gulf Coast and at Vicksburg seem to do nearly as well. In my view, this is because there are no statutory limits on the number or size of casinos in Mississippi, its tax rate is very low, and there are multiple properties at most locations, so all of its markets are highly competitive. These casinos therefore attract high rates of spending.

Similar factors apply to New Mexico, both in rural areas and in the metropolitan area of Albuquerque. And while their tax rates are somewhat higher, the Colorado casinos, while restricted to three remote former mining towns (and until recently to \$5 bets), are also highly competitive, as are most of the major (and minor) markets of Louisiana and Iowa, and many of the rural markets in other states in the top right corner.

As we move down the middle column, we generally find less competitive conditions, with areas such as Chicago, Detroit, and Milwaukee where the number of facilities and/or gaming

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<sup>6</sup> Even in the left-hand column, the data points at the top are generally very rural, or else large but relatively remote “destination resorts,” while casinos in the most urban settings (The Rivers, Parx, and SugarHouse casinos in Pennsylvania, Resorts World and Empire City in New York, and three casinos in Miami) fall near the bottom.

devices is nowhere near sufficient to meet the demand for them, and/or the markets are constrained by cramped conditions, on riverboats or ashore. As a result of these capacity-constrained conditions, spending per (distance-adjusted) adult is relatively low in these areas. (Conversely, spending *per machine* is typically [but not always] very high, as people are figuratively lined up at the machines to play them.)<sup>7</sup> Even in these markets, however, slot spending per “distance-adjusted” adult generally ranges from \$550 to \$650 per year, not all that far below the \$720± that most competitive casino markets demonstrate and even some less-competitive markets achieve.

At the bottom of the left-hand column are some of the “VLT” facilities in New York State, Rhode Island, and West Virginia, along with most of the slot-machine facilities in South Florida, and even two of the facilities in Maryland (highlighted in orange). The facts that these tend to involve “video lottery terminals,” and are often located at race tracks, are in my opinion of little import. In most cases (aside from New York), these VLTs are identical to the slot machines found in casinos elsewhere.<sup>8</sup> It is, however, surely no coincidence that these jurisdictions have some of the highest tax rates on gaming devices found anywhere in the U.S. With high tax rates, only modest investments in new and improved facilities can earn a reasonable return. As a result, the facilities in New York were initially very modest indeed, and, with a few exceptions, most of those in the other states as well. High tax rates also limit the operators’ ability to spend effectively on promoting their gaming product, including in particular player rewards programs. In highly competitive jurisdictions such as Iowa and New Jersey, casinos spend more than twenty percent of

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<sup>7</sup> Markets can effectively be “capacity-constrained” even when, as at some of the New York and Rhode Island VLT facilities, win/machine/day is not at astronomical levels. If the major issues are accessibility and attractiveness (simply in terms of spaciousness, amenities, and/or quality of machines, not necessarily “glitz”), players may indeed not be lined up to play as they are in other jurisdictions where the unsatisfied demand is far more obvious.



their gaming revenues on such promotion. With less than fifty percent of the gross retained by the gaming facilities in the lower left corner, spending any significant fraction of that amount is impossible.

Florida, with many facilities at the bottom of the left-hand column, initially followed a similar model, with a tax rate of 50% on slot gaming at the pari-mutuel facilities in Miami-Dade and Broward Counties that it authorized in 2006. With very modest investments at most of the facilities and little to spend on player rewards, the slots at the South Florida tracks have so far performed in a fashion very similar to the worst of those in the Northeast. Their tax rate was reduced to 35% in 2009, but because they were designed in much leaner times, their performance (like their facilities) still tends to lag their peers elsewhere.<sup>9</sup>

In today's competitive environment, attractive facilities and intensive promotion are essential to obtaining high volumes of revenue. In the 1990s, when slot machines and VLTs were novelties to most of the country, it was often sufficient to put slots in a barn and attract large numbers of customers. That is *not* the case today. If facilities do not meet competitive standards of attractiveness and marketing, they will see many fewer customers than those that do.

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<sup>8</sup> The gaming facilities at race tracks in Pennsylvania, Delaware and West Virginia, now offer table games as well, so they are now truly "full"(-spectrum) casinos.

<sup>9</sup> In addition to gaming facilities and player rewards (initially) designed on a shoestring, the slot operations at the pari-mutuel facilities in South Florida suffer from serious traffic congestion and access issues, and face substantial competition from first-class gaming facilities operated by the Seminole Tribe immediately nearby. Moreover, smoking is allowed at the Seminole facilities, but not (indoors) at the pari-mutuels'.

Still, four out of the five South Florida race track facilities then operating showed double-digit growth in over the past two years, with three in the range of 18-19%.

The data do in fact demonstrate a strong relationship between tax rate, or more precisely its converse, the “retention rate” that casinos are allowed to keep,<sup>10</sup> and their ability to generate slot revenues as measured by power rating. The raw data regarding this effect are rather ragged (see **Exhibit A-8**), but when aggregated by state, or portion thereof, in the table below (and in **Exhibit A-9**) the impacts of retention rate on performance stand out:

<b>State/Region</b>	<b>Retention Rate (FY2012-13)</b>	<b>Average Power Rating (FY2012-13)</b>
Downstream, OK	93.0%	119.4
Atlantic City, NJ	90.2%	109.2
Deadwood, SD	84.0%	119.8
Iowa non-tracks <sup>11</sup>	75.2%	103.3
Connecticut	75.0%	102.1
Kansas City, MO	73.3%	111.2
Iowa track casinos	67.9%	103.8

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<sup>10</sup> In addition to taxes on gross revenues, the retention rate also reflects the subtraction of mandatory purse payments to horsemen, breeders funds, and other social mandates (in Iowa, for example, the gaming license must technically be held by a public-benefit non-profit entity, which typically receives about 4% of GGR.) In Delaware, New York and West Virginia, retention rates vary by facility. The figures shown for each state are arithmetic averages of those for each gaming facility (i.e., they are not weighted by GGR).

I have excluded Florida, Indiana and New Mexico from this analysis: Indiana because its race track facilities are handicapped by amortization of enormous up-front license fees – one has just emerged from Chapter 11, and one is still going through it. (Those tracks retain roughly 49%, and their performance to date has been in the mid-eighties.) I have omitted New Mexico (retention rate 53.8%, average power rating 109.1), because three of its five race tracks are located in rural areas that are very remote, which boosts their ratings substantially. I have excluded Florida because (a) the tax rate was reduced there so recently, and (b) I do not have precise figures regarding purse contributions, and therefore effective retention rates, at its track slot facilities. With retention rates (formerly) “in the 40s” and power ratings “in the 70s,” however, its facilities would generally fall somewhat below the curve set by the others.

<sup>11</sup> Several of the non-track casinos are highly rural, which would tend to skew this picture; I have, however, eliminated the three greatest such outliers from this analysis and “re-balanced” it by also excluding three old-style riverboats. Illinois and Indiana still harbor a substantial number of old-style riverboats, so I have also excluded them from this analysis.

Upstate New York <sup>12</sup>	53.9%	99.2
Delaware <sup>12</sup>	46.8%	96.1
Pennsylvania	45.0%	91.3
West Virginia	44.0%	90.5
Maryland <sup>12</sup>	39.0%	84.5
Rhode Island <sup>12</sup>	34.0%	83.4

With an effective retention rates proposed to range from 38% at Penn to 44% (including 6% to cover the costs of the gaming machines) at MGM, the new casino will face one of the highest effective slot tax rates in the country. I believe that it will therefore tend to demonstrate a slot power rating very similar to that of the nearby Maryland Live casino, which I estimate at 71.1. This corresponds to average annual spending of \$512 per distance-adjusted adult. I have, however, made several adjustments as described in the main body of this report to reflect the capital spending, square footage, number of hotel rooms/keys, and retention rate proposed for each of the candidate casinos in Prince George's County. These result in slot power ratings ranging from 71.41 to 73.68 (or \$514 to \$530 per distance-adjusted adult, respectively).<sup>13</sup>

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<sup>12</sup> For comparability among the different states, the retention rates presented here assume that the operators pay for the gaming machines. In Delaware, New York, Maryland and Rhode Island, these are actually provided by the State Lottery, but in the other states must be provided by the tracks. The "retention" rates shown in my charts and this table therefore include six percent to represent machine costs in those circumstances in which they are actually paid by the state.

I should also note that this analysis was conducted in May of 2013, so the power ratings presented above (and in Exhibits A-8 and A-9) may differ slightly from those presented elsewhere in this report.

<sup>13</sup> These figures pertain to each of the proposals as they would perform without any capacity constraints. All except Parx's 4,750-slot facility would, however, not be quite large enough to serve the market without exceeding \$300 in win/slot/day (in current dollars), a point at which I believe such effects begin to become material. I have therefore reduced the others' slot power ratings further to reflect crowding on their slot floors at prime times.

The picture with respect to table games is rather more diverse. In the Midwest, table games attract an average of roughly \$80 per distance-adjusted adult per year; in the Northeastern US, the corresponding figure is approximately \$160. Table-game players tend to be younger, higher-income and are much more often men than slot players, so their aggregate behavior is somewhat different, and their representation among the population appears to vary more widely even *within* the East and the Midwest than slot players. My analyses of spending rates at table games in the East are summarized in **Exhibits A-10** (presenting annual spending per distance-adjusted adult) and **A-11** (the corresponding power ratings, here normalized to an “Eastern Standard” benchmark of \$160).<sup>14</sup> In these exhibits, the first two columns represent large urban markets and smaller/miscellaneous markets, respectively, because urban areas appear to generate higher rates of table spending than rural ones – another contrast with consumers’ spending on slot machines. The small aqua box in the lower left-hand corner of each of these exhibits represents the distance-adjusted spending rates in the Chicago area, which are the *highest* in the Midwest. Note that they would barely make the chart here in the East.

My gravity-model analyses of spending on table games suggest that these players (likely because they are younger and more male, etc.) also appear willing to travel slightly farther than slot players (which I reflect in my models), and I believe they will also likely be affected less by the bricks-and-mortar particulars of any given project. For my projections, I have therefore assumed that the table-game power rating each of the casinos proposed for Prince George’s County would be 105, similar to that I which currently estimate for Maryland Live.

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<sup>14</sup> Because table-game spending appears to increase with income to a degree that is not paralleled by slot spending, this figure is not strictly comparable to the \$720 benchmark I use for that activity. At the nationwide average per capita income of \$29,671, the benchmarks are actually \$720 (unchanged) for slots, but only \$136 for table games.

Projections for new facilities based on similar gravity models have in my opinion proved reasonably accurate in the past. **Exhibit A-12** presents a tabulation of actual results versus my projections for facilities that have actually been built over the past ten years.

## **Projections for Prince George's County**

For the new casinos examined in this report that have been proposed for Prince George's County, I have specifically assumed that:

- o Based on my review of their application materials, each of the new gaming facilities will be broadly comparable to existing casinos in the region in terms of access, appearance, spaciousness and amenities – comparable, in particular, to Maryland Live. I have assumed that “micro-access” with respect to ingress and egress will be good at each site. Each proposal also includes a hotel, a parking structure, and various amounts of dining, retail and entertainment amenities.
- o The performance of each of the proposed facilities and the underlying “propensity to spend” of the population surrounding it will therefore also be similar to those of Maryland Live, with adjustments for the details of each proposal. These assumptions result in slot power ratings ranging from 71.41 to 73.68, or \$514 to \$530 annual spending per distance-adjusted adult (prior to the effects of crowding, if any, on slot performance at each facility).

I have assumed average annual table spending of \$168 per distance-adjusted adult at each of these casinos, which corresponds to a table power rating of 105.

- o I have also assumed small amounts of incremental slot and table business arising from hotel guests at National Harbor, other hotels in Prince George's County, the District of Columbia, and the nearest areas of Virginia. The particulars are described in the main body of this report.
- o All these assumptions apply to a time of “stabilized operations,” which is typically one to three years down the road from the opening of a new gaming facility, and reflect industry-standard patterns of investment in bricks and mortar and in player rewards.
- o The existing casinos of Maryland continue to operate largely as they do today, with the addition of (1) table games as planned at Ocean Downs, and (2) the new Horseshoe Casino now under construction in Downtown Baltimore.

- o No other new gaming facilities are developed in Maryland, Delaware, Virginia, or the nearby portions of Pennsylvania and West Virginia.
- o Under current law, when a new casino opens in Prince George's County, the effective tax rates on slot gaming at Maryland Live and the Horseshoe Baltimore will decline. These lower tax rates ( = higher retention rates) will, as described above, tend to improve the performance of these casinos and thus offset some of the impacts of the new casino in Prince George's County.

To develop projections based on these assumptions, I took the detailed model illustrated (in part) in Exhibit A-4, calculated the numbers of "distance-adjusted" adults likely to patronize each new facility (and its existing competitors), and applied the appropriate average rates of spending for slots and tables. The results are described in the main body of this report.

All my analyses and projections are based on the performance of facilities elsewhere in Fiscal Year 2013, and are therefore calculated initially in terms of FY2013 dollars. I then extrapolate to future years assuming "normal" growth, due to rising local population, incomes, and inflation, at 2% per year. As a new gaming facility works out its kinks, however, there is typically an initial transient of five to 15 percent in the first year or two. I have assumed the first year here will likely be in the middle of this range (-10%). The new casino will have to develop its players' list and rewards programs in the face of what will likely be strenuous efforts by its existing competitors to retain their current players. Each of the applicants, however, has substantial experience with at least one recently-opened casino and/or nearby markets in particular. I therefore believe the initial "learning curve" will not be as steep here as at some other casinos.

## BIBLIOGRAPHY

Christiansen/Cummings Associates, Inc., et al., *Legal Gambling in Connecticut: Assessment of Current Status and Options for the Future*, January, 1992.

Gerstein et al., *Gambling Impact and Behavior Study: Report to the National Gambling Impact Study Commission*, National Opinion Research Center at the University of Chicago, April 1, 1999.

Cummings, Will E., *If You Build It, They Will Come -- But How Far? The "Distance Factor" in Regional Gaming Markets*, a presentation to the 12<sup>th</sup> International Conference on Gambling and Risk-Taking, Vancouver, B.C., May 30, 2003.

Cummings Associates, *Analysis of the Current Markets for Gaming in South Dakota, with Projections for the Likely Impacts of New or Enlarged Facilities*, April 5, 2004. May be found at [www.state.sd.us/drr2/reg/gaming/Analysis.pdf](http://www.state.sd.us/drr2/reg/gaming/Analysis.pdf).

Cummings Associates, *Analysis of Current Markets for Casino Gaming in Iowa, with Projections for the Revenues and Impacts of Potential New Facilities: Update*, April 18, 2005. May be found at [www.state.ia.us/irgc/Cummings.pdf](http://www.state.ia.us/irgc/Cummings.pdf).

Cummings Associates, *Slot Machines (or Video Lottery Terminals) at the Four Race Tracks of Massachusetts: An Opportunity for More Jobs and Tax Revenues*, March 17, 2006.

Cummings, Will E., *Casinos' Gravity According To Reilly – Amended*, a presentation to the 13<sup>th</sup> International Conference on Gambling and Risk-Taking, Lake Tahoe, Nevada, May 25, 2006. May be found at [http://www.unr.edu/gaming/13th\\_Conference\\_Web\\_files/Files/Abstracts/index.htm](http://www.unr.edu/gaming/13th_Conference_Web_files/Files/Abstracts/index.htm).

Cummings Associates, *Assessment of the Value of a License for a New Casino in Davenport, Iowa*, July 21, 2008.

Cummings, Will E., *Size Matters – But How Much?*, a presentation to the 14<sup>th</sup> International Conference on Gambling and Risk-Taking, Lake Tahoe, Nevada, May 26, 2009.

Cummings Associates, variety of reports to the Kansas Lottery Gaming Facility Review Board, 2008, 2009, and 2010. May be found at [http://krgc.ks.gov/index.php?option=com\\_fabrik&view=table&tableid=4&calculations=0&resetfilters=0&Itemid=63](http://krgc.ks.gov/index.php?option=com_fabrik&view=table&tableid=4&calculations=0&resetfilters=0&Itemid=63).

Cummings, Will E., *The Effects of Gaming Tax/Retention Rate on Casino Performance*, a presentation to the 15<sup>th</sup> International Conference on Gambling and Risk-Taking, Las Vegas, Nevada, May 31, 2013.

**Cummings Associates**

**Projected Gaming Revenues and  
Impacts of Proposed New Casinos in  
Prince George's County, Maryland**

**Appendix:**

**Details of the Gravity-Model Methodology**

**Exhibits**

December 18, 2013

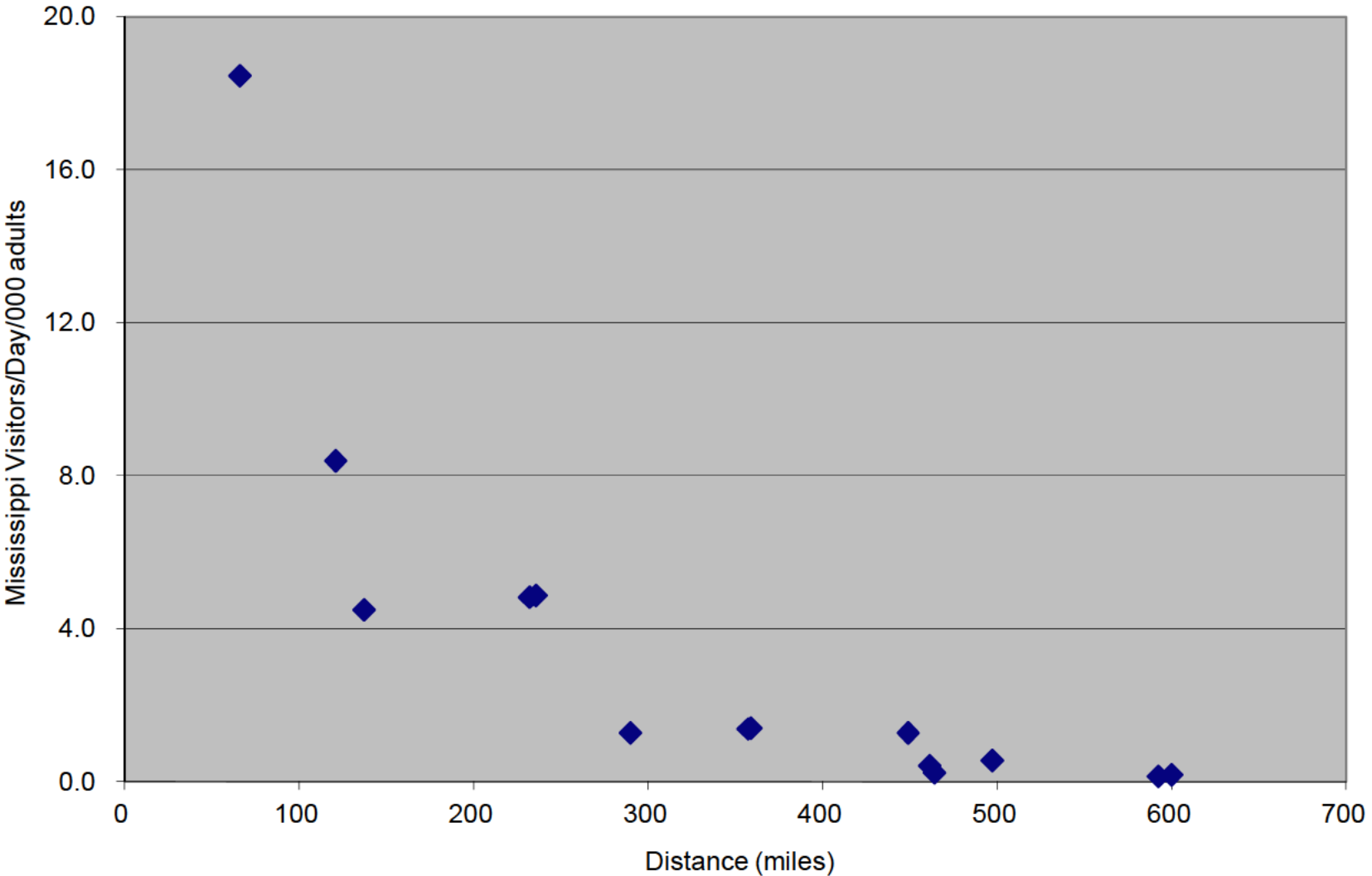


## **List of Exhibits**

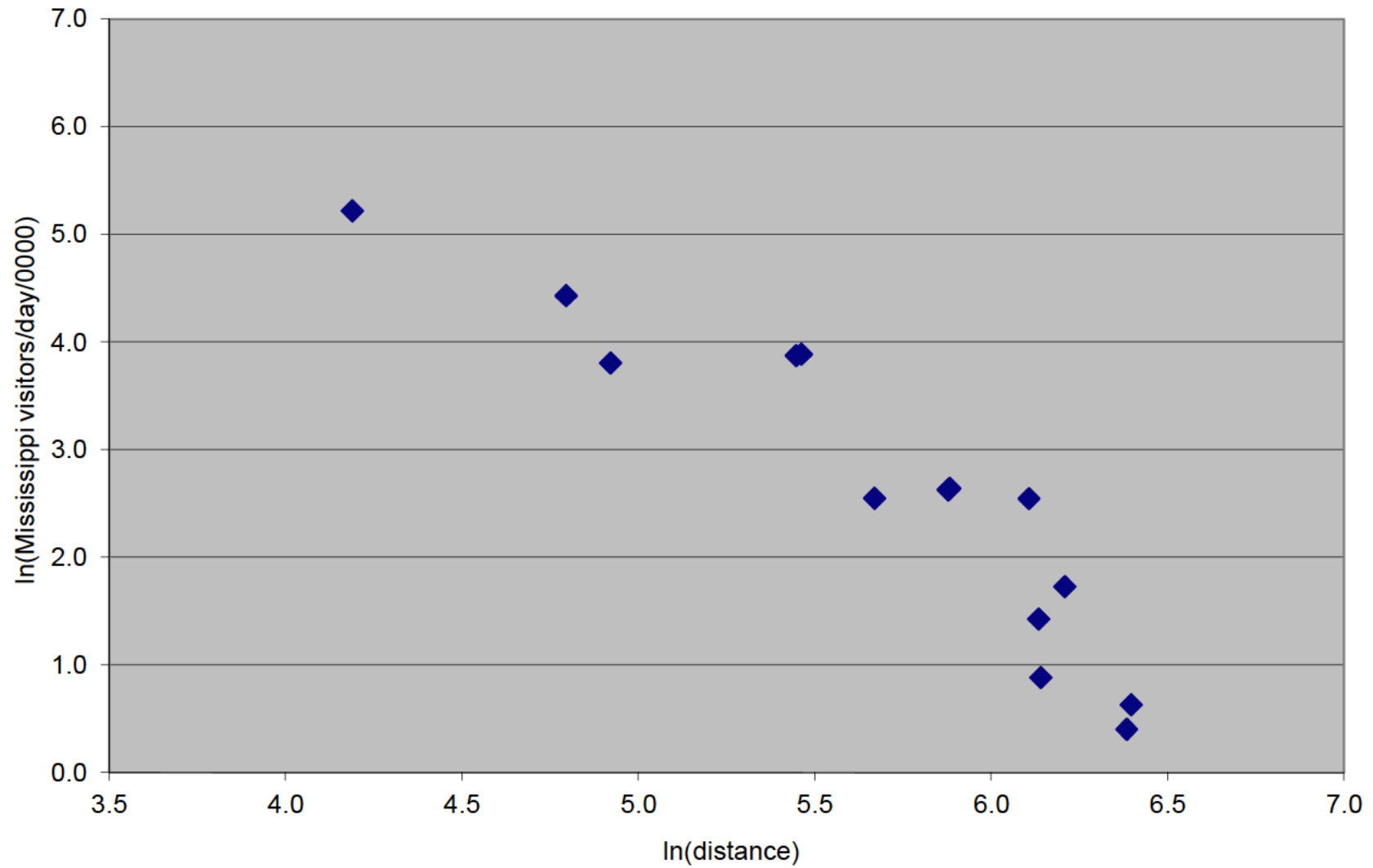
### **Exhibit**

- A-1 Illustrative Distance Relationships (Mississippi)
- A-2 Distance Relationships II
- A-3 Distance Relationships III
- A-4 Portion of Model Inputs (2 pages)
- A-5 Spending on Slots/VLTs in Major US Markets (2 pages)
- A-6 Gaming-Device "Power Ratings" (2 pages)
- A-7 Slot Power Ratings on One Page
- A-8 Slot Power Rating vs. Track Casino Retention % (Detail)
- A-9 Slot Power Rating vs. Track Casino Retention % (Averages)
- A-10 Spending on Table Games in the Eastern U.S.
- A-11 Table-Game Power Ratings in the Eastern U.S.
- A-12 Recent Projections Compared to Actual Results (2 pages)

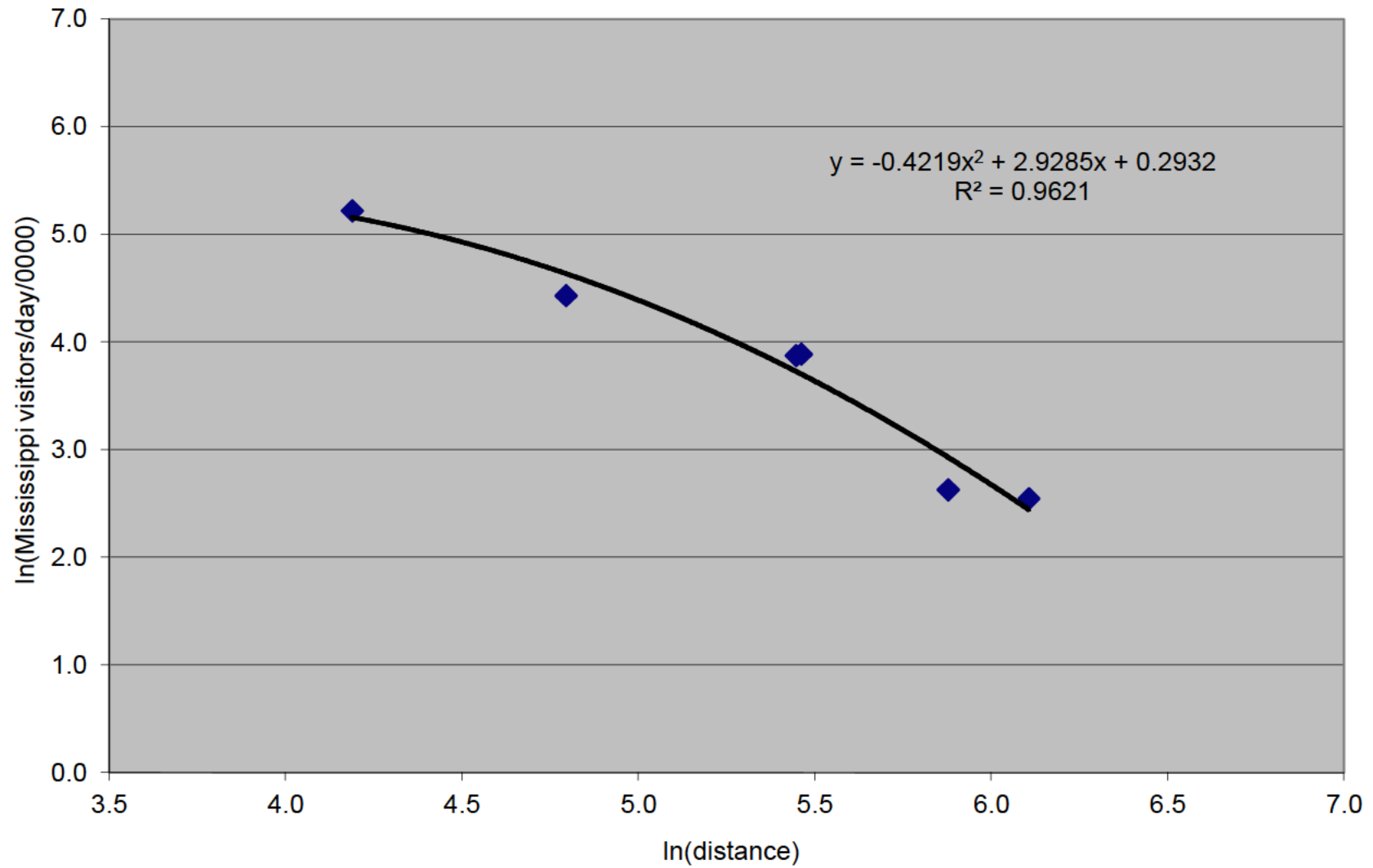
**Exhibit A-1: Illustrative Distance Relationships (Mississippi)**



**Exhibit A-2: Distance Relationships II**



**Exhibit A-3: Distance Relationships III**



**Exhibit A-4: Portion of Model Inputs****Northeast Slot Estimates**

Travel Time (in minutes):

State	County	ZIP Code	Baltim.	MD Live	H'wood	F Rocky	G Ocean	D MTR	Wheeling	M Gras	Charles	T Greenbr	Atl City	Del Park	DoverD
MD	Allegany	21502	132.0	133.0	168.7	22.2	302.4	167.1	138.4	208.5	96.4	233.9	269.8	198.8	224.6
MD	Allegany	21504	123.1	124.1	159.8	13.3	293.5	169.9	136.9	207.0	87.5	240.2	260.9	189.9	215.7
MD	Allegany	21521	162.7	163.7	199.4	52.9	333.1	174.4	144.0	214.1	127.1	243.1	300.5	229.5	255.3
MD	Allegany	21529	137.1	138.1	173.8	27.3	307.5	162.5	146.8	216.9	101.5	254.2	274.9	203.9	229.7
MD	Allegany	21530	124.2	125.3	161.0	13.8	294.6	179.1	146.1	216.2	88.7	241.4	262.1	191.1	216.9
MD	Allegany	21532	137.5	138.5	174.2	27.7	307.9	159.7	131.2	201.4	102.0	235.7	275.4	204.3	230.1
MD	Allegany	21539	150.0	151.0	186.7	40.2	320.4	167.9	137.6	207.7	114.4	242.0	287.8	216.8	242.6
MD	Allegany	21540	159.4	160.5	196.2	49.6	329.8	186.1	157.5	235.8	116.6	214.4	297.3	226.3	252.1
MD	Allegany	21543	132.5	133.5	169.2	22.7	302.9	155.9	127.2	197.3	96.9	231.6	270.3	199.3	225.1
MD	Allegany	21545	141.5	142.6	178.3	31.7	311.9	159.6	141.1	218.1	106.0	252.4	279.4	208.4	234.2
MD	Allegany	21555	140.9	142.0	177.7	41.0	311.3	203.2	170.2	240.4	105.4	258.1	278.8	207.8	233.6
MD	Allegany	21557	143.2	144.2	179.9	33.4	313.6	181.1	152.5	222.6	107.6	228.7	281.0	210.0	235.8
MD	Allegany	21560	131.8	132.8	168.5	22.0	302.2	179.4	146.4	216.5	96.2	252.4	269.7	198.6	224.4
MD	Allegany	21562	149.1	150.1	185.8	39.3	319.5	187.1	158.4	223.0	103.8	216.6	287.0	215.9	241.7
MD	Allegany	21766	114.9	115.9	151.6	26.9	285.3	198.0	165.0	235.1	79.3	232.1	252.8	181.7	207.5
MD	Anne Arundel	20711	44.8	43.4	80.0	144.1	134.3	303.7	282.2	352.3	96.5	248.0	181.1	110.1	100.2
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MD	Worcester	21851	147.0	145.2	145.2	257.6	38.2	417.2	395.7	465.8	209.9	353.1	128.4	138.0	96.1
MD	Worcester	21862	131.5	129.6	129.6	242.0	12.0	397.3	380.1	450.2	194.4	359.3	92.6	113.1	70.9
MD	Worcester	21863	137.8	136.0	136.0	248.3	25.0	403.6	386.5	456.6	200.7	365.7	115.2	128.7	86.8
MD	Worcester	21864	153.4	151.6	151.6	263.9	38.3	419.2	402.1	472.2	216.3	364.4	138.2	144.3	102.4
MD	Worcester	21872	132.2	130.3	130.3	242.7	16.0	398.0	380.8	451.0	195.1	360.0	94.5	115.0	72.8

**Total MD**

**Exhibit A-4: Portion of Model Inputs****Northeast Slot Estimates**

State	County	ZIP Code	Harring'n		Chester	Closest	2013 Adult Population	2013 PCI	Impacts:				
									Dstnce	Urban?	Prox'y	Income	Dist-Adj Adults
MD	Allegany	21502	218.9	...	214.7	22.2	34,787	\$23,287	46%	100%	95%	91%	13,811
MD	Allegany	21504	210.0	...	205.8	13.3	113	\$23,983	65%	100%	95%	92%	64
MD	Allegany	21521	249.6	...	245.4	52.9	1,007	\$22,575	26%	100%	95%	90%	220
MD	Allegany	21529	224.0	...	219.8	27.3	817	\$23,496	40%	100%	95%	91%	283
MD	Allegany	21530	211.1	...	207.0	13.8	1,061	\$21,657	63%	100%	95%	88%	562
MD	Allegany	21532	224.4	...	220.3	27.7	11,417	\$24,898	40%	100%	95%	93%	4,008
MD	Allegany	21539	236.9	...	232.7	40.2	2,166	\$22,623	31%	100%	95%	90%	571
MD	Allegany	21540	246.3	...	242.2	49.6	54	\$21,271	27%	100%	95%	88%	12
MD	Allegany	21543	219.4	...	215.2	22.7	309	\$26,004	46%	100%	95%	95%	126
MD	Allegany	21545	228.4	...	224.3	31.7	1,501	\$25,964	36%	100%	95%	95%	489
MD	Allegany	21555	227.8	...	223.7	41.0	1,503	\$24,306	31%	100%	95%	92%	402
MD	Allegany	21557	230.1	...	225.9	33.4	1,424	\$27,656	35%	100%	95%	97%	460
MD	Allegany	21560	218.7	...	214.6	22.0	73	\$27,293	46%	100%	95%	97%	31
MD	Allegany	21562	236.0	...	231.9	39.3	2,310	\$23,909	31%	100%	95%	92%	631
MD	Allegany	21766	201.8	...	197.7	26.9	592	\$23,900	41%	100%	95%	92%	209
MD	Anne Arundel	20711	87.6	...	126.0	43.4	5,220	\$40,243	29%	100%	84%	100%	1,296
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MD	Worcester	21851	75.5	...	153.9	38.2	5,196	\$25,657	32%	100%	100%	94%	1,564
MD	Worcester	21862	58.5	...	129.1	12.0	75	\$24,202	70%	100%	100%	92%	48
MD	Worcester	21863	66.2	...	144.7	25.0	3,781	\$29,305	43%	100%	100%	100%	1,596
MD	Worcester	21864	81.8	...	160.3	38.3	422	\$25,474	32%	100%	100%	94%	126
MD	Worcester	21872	60.6	...	131.0	16.0	496	\$26,777	57%	100%	100%	96%	272
<b>Total MD</b>							4,321,403						1,355,186

# Exhibit A-5: Spending on Slots/VLTs per Distance-Adjusted Adult

("Midwest Standard" Benchmark = \$720 in 2012-13)

(one of two pages)

Northeastern US and Florida		Medium to Large Markets Elsewhere		Rural / Remote Markets Elsewhere	
		Mississippi average	\$949 n		
		Downstream Resort, OK	\$859	St Jo MO	\$897 o
		Harrahs NKCMO	\$858	Deadwood, SD	\$862
				S Dakota Tribes (avg of 8)	\$851
		San Felipe (ABQ), NM	\$846 n	Upstate Michigan avg.	\$850 e
				Lagunas (3 facils), NM	\$849 n
				Kansas Tribes (avg of 4)	\$842 e
				Cripple Creek, CO (2)	\$836 n
Turning Stone, NY	\$828 e	Santa Ana (ABQ), NM	\$833 n	Diamond Jo Worth, IA	\$834
Seneca Salamanca, NY	\$828 e	Argosy Riverside, MO	\$824	Upstate Wisconsin avg.	\$828 e
		Louisiana average	\$820 n	Other NM (avg. of 9)	\$827 n
		Sandia (ABQ), NM	\$820 n	Iowa Tribes (avg of 3)	\$807 e
		Ameristar KCMO	\$820	Dodge City, KS	\$806
				Emmetsburg, IA	\$805
				Terribles Lakeside, IA	\$804
				Black Hawk/CC, CO (2)	\$794 n
				Zia Park (Hobbs), NM	\$793 n
Midwest Standard +10%					
		Isleta (ABQ), NM	\$791 n		
Atlantic City, NJ avg.	\$786	Riverside, IA	\$791	SunRay Park, NM	\$790 n
Seneca Niagara, NY	\$786 e	IOC Waterloo, IA	\$784	Mt. Pleasant, MI	\$783 e
Vernon Downs, NY	\$769			IOC Boonville, MO	\$770 n, o
Tioga Downs, NY	\$768				
(Buffalo) Fairgrounds, NY	\$761	Dubuque Diamond Jo, IA	\$762		
		Horseshoe / Bluffs Run, IA	\$760	Taos, NM	\$758 n
		Dubuque Mystique, IA	\$751	IOC Marquette, IA	\$750 o
Mohegan Sun, CT	\$742	Argosy Sioux City, IA	\$748 o	Wisconsin Dells	\$749 e
		Grand Falls, IA (S. Falls, SD)	\$744		
		Prairie Meadows, IA	\$743		
		The Downs at ABQ, NM	\$739 n		
		Jumers Rock Island, IL	\$736		
Mountaineer Park, WV	\$731	Ameristar Council Bluffs, IA	\$736		
Foxwoods, CT	\$724				
Mohegan @ Pocono Downs, PA	\$723				
"Midwest Standard"					
Ocean Downs, MD	\$717				
Presque Isle, Erie, PA	\$712				
Finger Lakes, NY	\$711	Michigan City, IN	\$711 n		
Wheeling, WV	\$706				
Dover Downs, DE	\$704			Ruidoso Downs, NM	\$702 n
The Meadows / Pittsburgh	\$700	IOC KCMO	\$701 o		
Saratoga, NY	\$698	Harrahs W St Louis	\$698 n		
Harrington Raceway, DE	\$695	Clinton, IA	\$698		
Delaware Park	\$692	Detroit (avg / 3 facils)	\$691 n		
Mount Airy / Pocono, PA	\$681	Harrahs Council Bluffs, IA	\$680		
		Catfish Bend Burlington, IA	\$678		
		IOC Bettendorf, IA	\$676 o		
Penn National / Harrisburg, PA	\$675	Belterra, Florence, IN	\$674 n, o	Mark Twain, MO	\$674 n, o
		Ameristar St Chas, MO	\$670 n		
		Indiana Grand	\$669		
		Harrahs Joliet, IL	\$668 n, o	Metropolis, IL/KY	\$667 n, o
		East St Louis, IL (2 boats)	\$662 n, o		
		Rhythm City, IA	\$659 o		
Batavia, NY	\$654				

**Northeastern US  
and Florida****Medium to Large Markets  
Elsewhere****Rural / Remote Markets  
Elsewhere**

<b>Midwest Standard -10%</b>		Green Bay, WI	\$648 e		
		KCKS 7th St Casino	\$648 e (Class II slots)		
Charles Town, WV	\$641	Hoosier Park, IN	\$643		
Harrahs @ Chester, PA	\$640	Ameristar, E Chicago IN	\$640 n, o		
Monticello, NY	\$640	St. Louis, MO (2 facils)	\$636 n		
Twin River @ Lincoln, RI	\$633				
Sands Bethlehem, PA	\$632				
		Hammond, IN	\$628 n, o	Caruthersville, MO	87.3 n, o
The Rivers / Pittsburgh	\$622	Rising Sun, IN	\$618 n, o		
		Hollywood, Lawr'burg, IN	\$615 n, o		
		Hollywood Toledo, OH	\$611		
Parx / Philadelphia	\$603			French Lick, IN	\$603 n
		Majestic Star, Gary IN	\$593 n, o		
		Elgin (Chicago), IL	\$588 n, o		
Sugarhouse / Philadelphia	\$585	Louisville, KY/IN	\$584 n, o		
Valley Forge, PA	\$577				
<b>Midwest Standard -20%</b>		Milwaukee, WI	\$576 e o		
		Aurora (Chicago), IL	\$574 n, o		
Resorts W @ Aqueduct, NY	\$572 o				
Hollywood @ Bangor, ME	\$565	Joliet Empress, IL	\$565 n, o		
Newport Grand, RI	\$563				
Oxford, ME	\$559	Scioto Downs(Columbus), OH	\$558		
Pompano Park, FL	\$555				
Hollywood Perryville, MD	\$548				
Mardi Gras, WV	\$544				
Empire City @ Yonkers, NY	\$543 o				
Gulfstream Park, FL	\$543				
Mardi Gras / Hollywood, FL	\$526				
		Peoria, IL	\$520 n, o		
<b>Maryland Live</b>					
	\$512				
		Evansville, IN	\$498 n, o		
		Montana VLTs (2)	\$498 e		
		Sunland Park, NM	\$497 n, o		
Magic City / Miami, FL	\$490				
Calder / Miami, FL	\$468	Horseshoe Cleveland, OH	\$470		
		South Dakota VLTs	\$466		
		Hollywood Columbus, OH	\$443		
Miami Jai-Alai & Casino	\$414 a				
Greenbrier, WV	\$393 o				

a = annual rate

e = slot revenues estimated (usually "n" as well)

n = mileage-based and/or low-resolution estimate

o = old boat, hotel- or capacity-constrained market

(1) Nevada local markets appear to be off this scale, in the range of 140 to 150.

(2) Colorado and Montana statistics do not include the Indian casinos in those states.



# Exhibit A-6: Gaming-Device "Power Ratings" in Various US Markets

(vs. \$720 Benchmark Spending on Slots and/or VLTs Per "Distance-Adjusted" Adult in 2012-13)

(one of two pages)

Northeastern US and Florida		Medium to Large Markets Elsewhere		Rural / Remote Markets Elsewhere	
		Mississippi average	131.8 n		
		Downstream Resort, OK	119.4	St Jo MO	124.6 o
		Harrahs NKCMO	119.2	Deadwood, SD	119.8
				S Dakota Tribes (avg of 8)	118.2
		San Felipe (ABQ), NM	117.5 n	Upstate Michigan avg.	118.0 e
				Lagunas (3 facils), NM	117.9 n
				Kansas Tribes (avg of 4)	117.0 e
				Cripple Creek, CO (2)	116.1 n
Turning Stone, NY	115.0 e	Santa Ana (ABQ), NM	115.6 n	Diamond Jo Worth, IA	115.8
Seneca Salamanca, NY	115.0 e	Argosy Riverside, MO	114.5	Upstate Wisconsin avg.	115.0 e
		Louisiana average	113.9 n	Other NM (avg. of 9)	114.9 n
		Sandia (ABQ), NM	113.9 n	Iowa Tribes (avg of 3)	112.1 e
		Ameristar KCMO	113.8	Dodge City, KS	112.0
				Emmetsburg, IA	111.8
				Terribles Lakeside, IA	111.7
				Black Hawk/CC, CO (2)	110.3 n
				Zia Park (Hobbs), NM	110.1 n
Midwest Standard +10%					
		Isleta (ABQ), NM	109.9 n		
Atlantic City, NJ avg.	109.2	Riverside, IA	109.9	SunRay Park, NM	109.7 n
Seneca Niagara, NY	109.2 e	IOC Waterloo, IA	108.9	Mt. Pleasant, MI	108.7 e
Vernon Downs, NY	106.8			IOC Boonville, MO	106.9 n, o
Tioga Downs, NY	106.7				
(Buffalo) Fairgrounds, NY	105.7	Dubuque Diamond Jo, IA	105.9		
		Horseshoe / Bluffs Run, IA	105.6	Taos, NM	105.2 n
		Dubuque Mystique, IA	104.4	IOC Marquette, IA	104.2 o
Mohegan Sun, CT	103.1	Argosy Sioux City, IA	103.8 o	Wisconsin Dells	104.0 e
		Grand Falls, IA (S. Falls, SD)	103.3		
		Prairie Meadows, IA	103.2		
		The Downs at ABQ, NM	102.7 n		
		Jumers Rock Island, IL	102.3		
Mountaineer Park, WV	101.5	Ameristar Council Bluffs, IA	102.2		
Foxwoods, CT	100.6				
Mohegan @ Pocono Downs, PA	100.4				
"Midwest Standard"					
Ocean Downs, MD	99.6				
Presque Isle, Erie, PA	98.9				
Finger Lakes, NY	98.8	Michigan City, IN	98.7 n		
Wheeling, WV	98.0				
Dover Downs, DE	97.7			Ruidoso Downs, NM	97.5 n
The Meadows / Pittsburgh	97.3	IOC KCMO	97.3 o		
Saratoga, NY	97.0	Harrahs W St Louis	96.9 n		
Harrington Raceway, DE	96.5	Clinton, IA	96.9		
Delaware Park	96.2	Detroit (avg / 3 facils)	96.0 n		
Mount Airy / Pocono, PA	94.6	Harrahs Council Bluffs, IA	94.5		
		Catfish Bend Burlington, IA	94.2		
		IOC Bettendorf, IA	93.8 o		
Penn National / Harrisburg, PA	93.7	Belterra, Florence, IN	93.7 n, o	Mark Twain, MO	93.7 n, o
		Ameristar St Chas, MO	93.1 n		
		Indiana Grand	92.9		
		Harrahs Joliet, IL	92.8 n, o	Metropolis, IL/KY	92.7 n, o
		East St Louis, IL (2 boats)	92.0 n, o		
		Rhythm City, IA	91.6 o		
Batavia, NY	90.8				

Northeastern US and Florida		Medium to Large Markets Elsewhere		Rural / Remote Markets Elsewhere	
Midwest Standard -10%		Green Bay, WI	90.0 e		
		KCKS 7th St Casino	90.0 e (Class II slots)		
Charles Town, WV	89.1	Hoosier Park, IN	89.3		
Harrahs @ Chester, PA	88.9	Ameristar, E Chicago IN	88.9 n, o		
Monticello, NY	88.9	St. Louis, MO (2 facils)	88.3 n		
Twin River @ Lincoln, RI	87.9				
Sands Bethlehem, PA	87.8				
		Hammond, IN	87.2 n, o	Caruthersville, MO	87.3 n, o
The Rivers / Pittsburgh	86.3				
		Rising Sun, IN	85.8 n, o		
		Hollywood, Lawr'burg, IN	85.4 n, o		
		Hollywood Toledo, OH	84.8		
Parx / Philadelphia	83.8			French Lick, IN	83.8 n
		Majestic Star, Gary IN	82.4 n, o		
		Elgin (Chicago), IL	81.7 n, o		
Sugarhouse / Philadelphia	81.2	Louisville, KY/IN	81.1 n, o		
Valley Forge, PA	80.2				
Midwest Standard -20%		Milwaukee, WI	80.0 e o		
		Aurora (Chicago), IL	79.7 n, o		
Resorts W @ Aqueduct, NY	79.4 o				
Hollywood @ Bangor, ME	78.5	Joliet Empress, IL	78.5 n, o		
Newport Grand, RI	78.1				
Oxford, ME	77.7	Scioto Downs(Columbus), OH	77.5		
Pompano Park, FL	77.1				
Hollywood Perryville, MD	76.2				
Mardi Gras, WV	75.5				
Empire City @ Yonkers, NY	75.5 o				
Gulfstream Park, FL	75.4				
Mardi Gras / Hollywood, FL	73.1				
		Peoria, IL	72.3 n, o		
Maryland Live	71.1				
		Evansville, IN	69.2 n, o		
		Montana VLTs (2)	69.2 e		
		Sunland Park, NM	69.0 n, o		
Magic City / Miami, FL	68.1				
Calder / Miami, FL	65.0	Horseshoe Cleveland, OH	65.2		
		South Dakota VLTs	64.7		
		Hollywood Columbus, OH	61.5		
Miami Jai-Alai & Casino	57.5 a				
Greenbrier, WV	54.6 o				

a = annual rate

e = slot revenues estimated (usually "n" as well)

n = mileage-based and/or low-resolution estimate

o = old boat, hotel- or capacity-constrained market

(1) Nevada local markets appear to be off this scale, in the range of 140 to 150.

(2) Colorado and Montana statistics do not include the Indian casinos in those states.

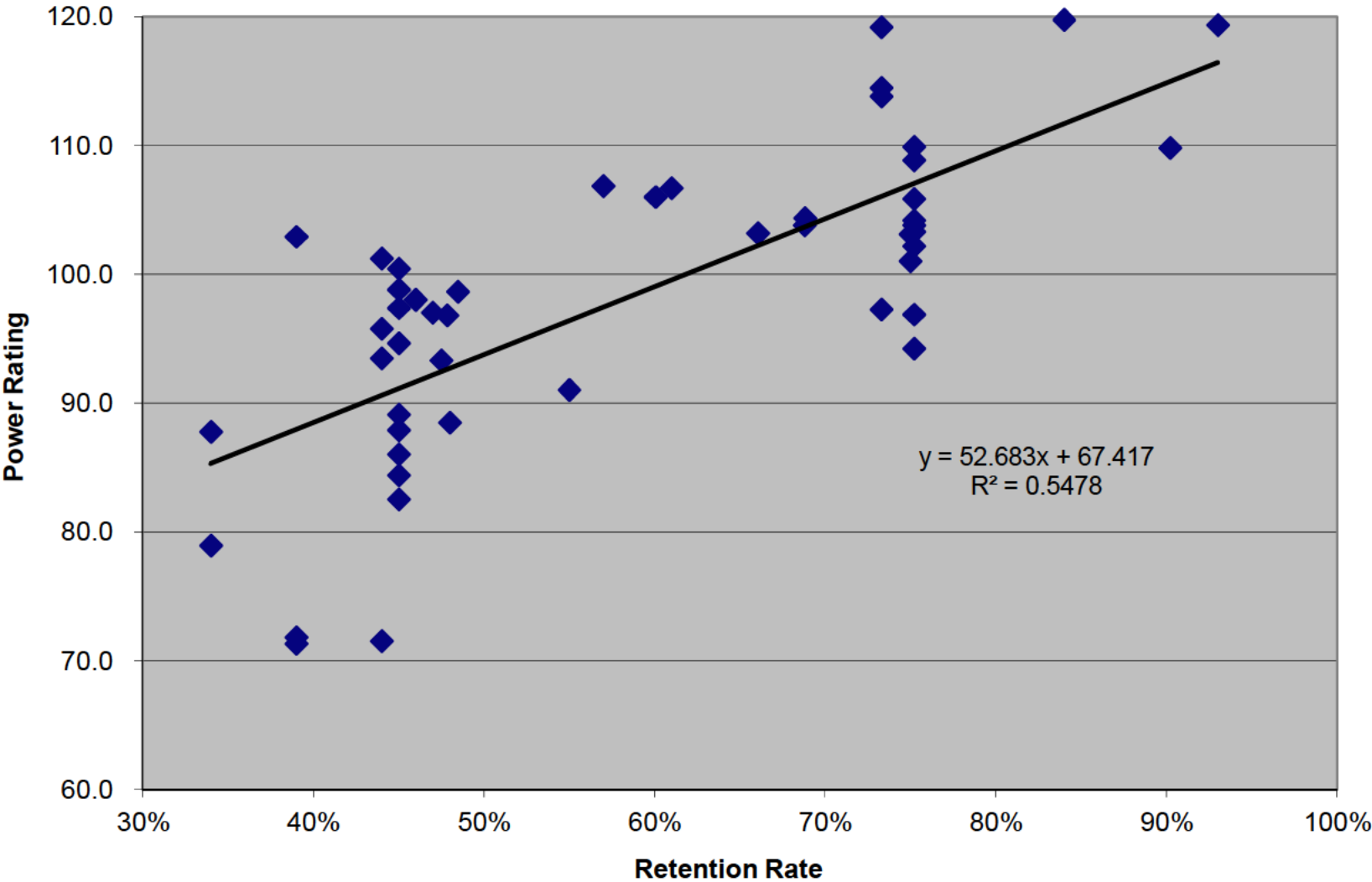
# Exhibit A-7: Slot Power Ratings on One Page

(Benchmark = Total Annual Spending of \$720 per Distance-Adj. Adult)

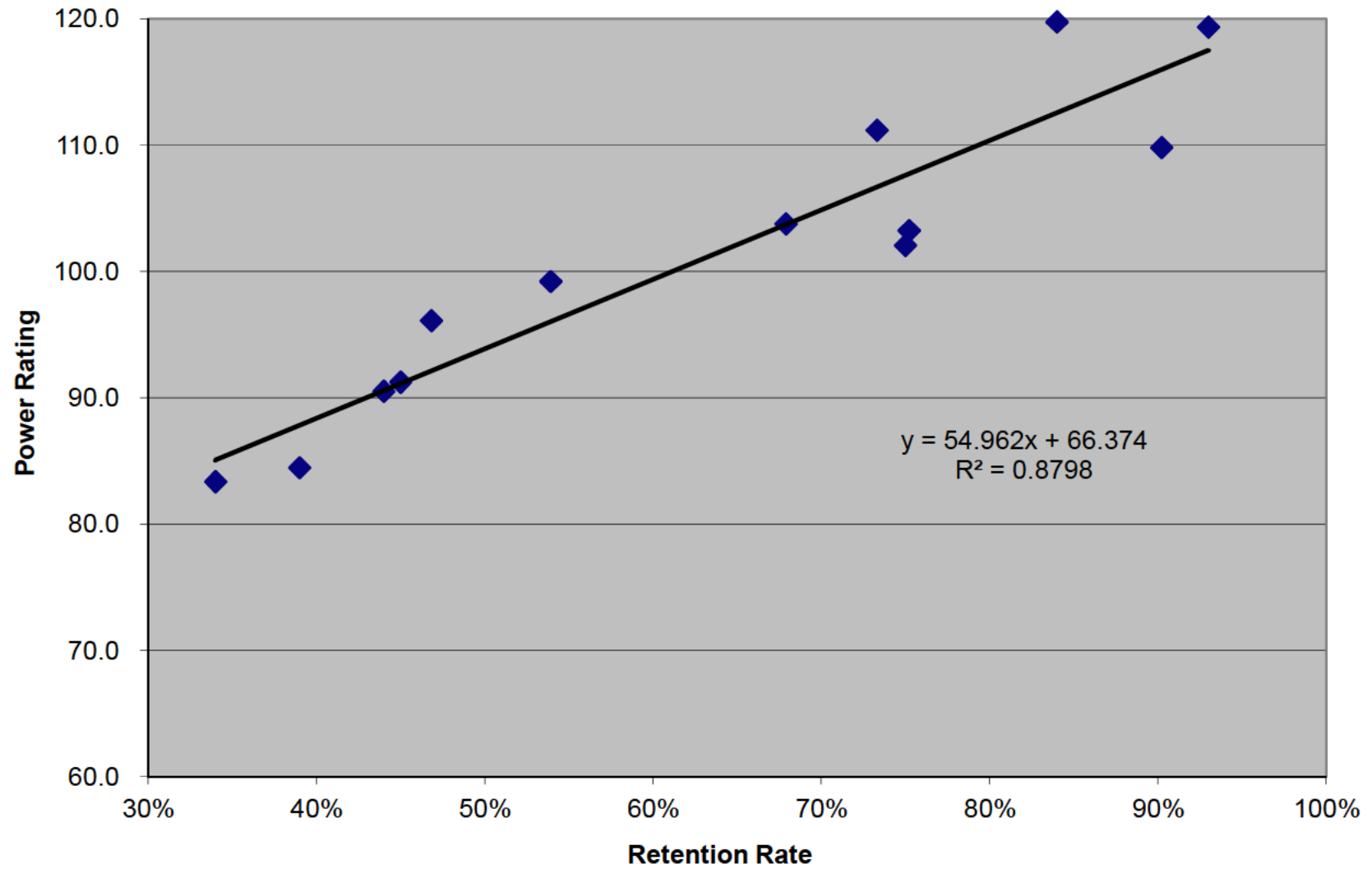
Northeastern US and Florida		Medium to Large Markets Elsewhere		Rural / Remote Markets Elsewhere	
		Mississippi average	131.8 n	St Jo MO	124.6 o
		Downstream Resort, OK	119.4	Deadwood, SD	119.8
		Harrahs NCMO	119.2	S Dakota Tribes (avg of 8)	118.2 e
		San Felipe (ABQ), NM	117.5 n	Upstate Michigan avg.	118.0 e
				Laguna Tribe (3 facils), NM	117.9 n
				Kansas Tribes (avg. of 4)	117.0 e
				Cripple Creek, CO (2)	116.1 n
Turning Stone, NY	115.0 e	Santa Ana (ABQ), NM	115.6 n	Diamond Jo Worth, IA	115.8
Salamanca, NY	115.0 e	Argosy Riverside, MO	114.5	Upstate Wisconsin avg.	115.0 e
		Louisiana average	113.9 n	Other NM (avg. of 9)	114.9 n
		Sandia (ABQ), NM	113.9 n	Iowa Tribes (average of 3)	112.1 e
		Ameristar KCMO	113.8	Dodge City, KS	112.0
				Emmetsburg, IA	111.8
				Terribles Lakeside, IA	111.7
				Black Hawk/CC, CO (2)	110.3 n
				Zia Park (Hobbs), NM	110.1 n
Midwest Standard +10%					
Atlantic City, NJ avg.	109.2	Isleta (ABQ), NM	109.9 n	SunRay Park, NM	109.7 n
Seneca Niagara (NY)	109.2 e	Riverside, IA	109.9	Mt. Pleasant, MI	108.7 e
Vernon Downs, NY	106.8	IOC Waterloo, IA	108.9	IOC Boonville, MO	106.9 n, o
Tioga Downs, NY	106.7				
(Buffalo) Fairgrounds, NY	105.7	Dubuque Diamond Jo, IA	105.9		
		Horseshoe / Bluffs Run, IA	105.6	Taos, NM	105.2 n
		Dubuque Mystique, IA	104.4	IOC Marquette, IA	104.2 o
		Argosy Sioux City, IA	103.8 o	Wisconsin Dells	104.0 e
		Grand Falls, IA (S. Falls, SD)	103.3		
		Prairie Meadows, IA	103.2		
		The Downs at ABQ, NM	102.7 n		
		Jumers Rock Island, IL	102.3		
		Ameristar Council Bluffs, IA	102.2		
Mountaineer Park, WV	101.5				
Foxwoods, CT	100.6				
Mohegan @ Pocono Downs, PA	100.4				
Midwest Standard					
Ocean Downs, MD					99.6
Presque Isle @ Erie, PA	98.9				
Finger Lakes, NY	98.8	Michigan City, IN	98.7 n		
Wheeling, WV	98.0				
Dover Downs, DE	97.7	IOC KCMO	97.3 o	Ruidoso Downs, NM	97.5 n
The Meadows / Pittsburgh	97.3	Harrahs W St Louis	96.9 n		
Saratoga, NY	97.0	Clinton, IA	96.9		
Harrington Raceway, DE	96.5	Detroit (avg / 3 facils)	96.0 n		
Delaware Park	96.2	Harrahs Council Bluffs, IA	94.5		
Mount Airy / Pocono, PA	94.6	Cattfish Bend Burlington, IA	94.2		
		IOC Bettendorf, IA	93.8 o		
		Belterra, Florence, IN	93.7 n, o	Mark Twain, MO	93.7 n, o
		Ameristar St Chas, MO	93.1 n		
		Indiana Grand	92.9		
		Harrahs Joliet, IL	92.8 n, o	Metropolis, IL/KY	92.7 n, o
		East St Louis, IL (2 facils)	92.0 n, o		
		Rhythm City, IA	91.6 o		
Batavia, NY	90.8				
Midwest Standard -10%		Green Bay, WI	90.0 e		
Charles Town, WV	89.1	KCKS 7th St Casino	90.0 e (Class II slots)		
Harrahs @ Chester, PA	88.9	Hoosier Park, IN	89.3		
Monticello, NY	88.9	Ameristar, E Chicago IN	88.9 n, o		
Twin River @ Lincoln, RI	87.9	St. Louis, MO (2 facils)	88.3 n		
Sands Bethlehem, PA	87.8				
		Hammond, IN	87.2 n, o	Caruthersville, MO	87.3 n, o
The Rivers / Pittsburgh	86.3				
		Rising Sun, IN	85.8 n, o		
		Hollywood Lawrenceburg, IN	85.4 n, o		
		Hollywood Toledo, OH	84.8		
Parx / Philadelphia	83.8	Majestic Star, Gary IN	82.4 n, o	French Lick, IN	83.8 n
		Elgin (Chicago) IL	81.7 n, o		
		Louisville, KY/IN	81.1 n, o		
Sugarhouse / Philadelphia	81.2				
Valley Forge, PA	80.2	Milwaukee, WI	80.0 e, o		
Midwest Standard -20%		Aurora (Chicago), IL	79.7 n, o		
Resorts World @ Aqueduct, NY	79.4 o				
Hollywood @ Bangor, ME	78.5	Joliet Empress, IL	78.5 n, o		
Newport Grand, RI	78.1				
Oxford, ME	77.7	Scioto Downs(Columbus), OH	77.5		
Pompano Park, FL	77.1				
Hollywood Perryville, MD	76.2				
Mardi Gras, WV	75.5				
Empire City @ Yonkers, NY	75.5 o				
Gulfstream Park, FL	75.4				
Mardi Gras / Hollywood, FL	73.1				
Maryland Live		Peoria, IL	72.3 n, o		
		Evansville, IN	69.2 n, o		
		Montana VLTs	69.2		
		Sunland Park, NM	69.0 n, o		
Magic City / Flagler, Miami, FL	68.1				
Calder Race Course, Miami, FL	65.0	Horseshoe Cleveland, OH	65.2		
		South Dakota VLTs	64.7		
		Hollywood Columbus, OH	61.5		
Miami Jai-Alai & Casino	57.5 a				
Greenbrier, WV	54.6 o				

a = annual rate, e = estimated, n = mileage-based or low-resolution estimate, o = old boat, hotel- or capacity-constrained market

Exhibit A-8: Slot Power Rating vs. Casino Retention % (Detail)



**Exhibit A-9: Slot Power Rating vs. Retention % (Regional Averages)**



## Exhibit A-10: Spending on Table Games per Distance-Adj. Adult

(Eastern U.S. Only; "Eastern Standard" Benchmark = \$160 in 2012-13)

Large Urban Markets (or Fed From Such)		Smaller Cities & Misc. Markets		Rural Markets		
The Rivers / Pittsburgh	\$252					
Atlantic City, NJ avg.	\$199					
Eastern Standard +20%						
Charles Town, WV	\$186	Sands Bethlehem, PA	\$188			
Sugarhouse / Philadelphia	\$184	Seneca Niagara (NY)	\$184	e		
Mohegan Sun, CT	\$184					
Harrahs @ Chester, PA	\$178	Mount Airy / Pocono, PA	\$177			
		Mohegan @ Pocono Downs	\$176			
Eastern Standard +10%						
Delaware Park	\$175	Dover Downs, DE	\$173			
		Penn National / Harrisburg	\$172			
Foxwoods, CT	\$172					
Maryland Live	\$171	Hollywood Perryville, MD	\$168	Harrington Raceway, DE	\$168	
Horseshoe Cleveland, OH	\$166					
Parx / Philadelphia	\$166					
Valley Forge, PA	\$163					
Twin River @ Lincoln, RI	\$160	a				
"Eastern Standard"		Detroit (avg / 3 facils)	\$160	e		
		Hollywood Toledo, OH	\$154			
		Presque Isle @ Erie, PA	\$152			
		Oxford, ME	\$145			
Eastern Standard -10%						
		Mardi Gras, WV	\$141			
		Hollywood Columbus, OH	\$139			
Eastern Standard -20%						
		Hollywood @ Bangor, ME	\$127			
				Greenbrier, WV	\$116	o
The Meadows / Pittsburgh	\$109					
( Typical Chicagoland Casino)		Mountaineer Park, WV	\$98			

a = annual rate, e = estimated, n = mileage-based or low-resolution estimate, o = old boat, hotel- or capacity-constrained market

## Exhibit A-11: Table-Game Power Ratings in the Eastern U.S.

(Benchmark = Total Annual Spending of \$160 per Distance-Adjusted Adult)

Large Urban Markets (or Fed From Such)		Smaller Cities & Misc. Markets		Rural Markets	
The Rivers / Pittsburgh	157.5				
Atlantic City, NJ avg.	124.5				
Eastern Standard +20%					
Charles Town, WV	116.2	Sands Bethlehem, PA	117.3		
Sugarhouse / Philadelphia	115.0	Seneca Niagara (NY)	115.0 e		
Mohegan Sun, CT	114.9				
Harrahs @ Chester, PA	111.3	Mount Airy / Pocono, PA	110.6		
		Mohegan @ Pocono Downs	110.2		
Eastern Standard +10%					
Delaware Park	109.1	Dover Downs, DE	108.3		
		Penn National / Harrisburg	107.7		
Foxwoods, CT	107.2				
Maryland Live	106.8	Hollywood Perryville, MD	105.2	Harrington Raceway, DE	104.8
Horseshoe Cleveland, OH	104.0				
Parx / Philadelphia	103.9				
Valley Forge, PA	101.6				
Twin River @ Lincoln, RI	100.1 a				
"Eastern Standard"		Detroit (avg / 3 facils)		100.0 e	
		Hollywood Toledo, OH	96.4		
		Presque Isle @ Erie, PA	94.8		
		Oxford, ME	90.5		
Eastern Standard -10%					
		Mardi Gras, WV	87.9		
		Hollywood Columbus, OH	87.1		
Eastern Standard -20%					
		Hollywood @ Bangor, ME	79.5		
				Greenbrier, WV	72.3 o
The Meadows / Pittsburgh	68.3				
( Typical Chicagoland Casino)		Mountaineer Park, WV	61.2		

a = annual rate, e = estimated, n = mileage-based or low-resolution estimate, o = old boat, hotel- or capacity-constrained market

**Exhibit A-12: Recent Projections Compared to Actual Results**  
(Total Annual Gaming Win / \$million)

	Projection / Source		Actual / Source	
Facility / Market:				
Zia Park, New Mexico	\$53.7	(1)	\$68.9	(2)
Emmetsburg, Iowa	\$23.4	(3)	\$26.4	(4)
Worth County, Iowa	\$34.2	(3)	\$67.5	(4)
Riverside, Iowa	\$82.0	(3)	\$85.8	(4)
IOC Waterloo, Iowa	\$96.8	(3)	\$76.9	(4)
Tioga Downs , NY	\$30.2 \$49.9	(5)	\$42.2	(6)
Hoosier Park, Indiana	\$275	(7)	\$217	(8)
Indiana Grand / Shelbyville	\$261	(7)	\$240	(8)
Wild Rose Clinton, Iowa	\$48.2	(9)	\$40.2	(10)
DBQ Diamond Jo, Iowa	\$61.9	(9)	\$67.2	(10)
Jumers Rock Island, Illinois	\$89.7	(9)	\$85.8	(11)
Dodge City, Kansas	\$40.7	(12)	\$44.0	(14)
Sumner County, Kansas	\$159.1	(13)	\$183.2	(14)
Kansas City, Kansas	\$203.3	(15)	\$125.0	(14)

(Sources cited in numbered notes described on next page)



## Exhibit A-12: Recent Projections

### Footnotes / Sources

- (1) *The Projected Performance of a New Race Track / Slot Facility at Hobbs, New Mexico* February 15, 2002.
- (2) Penn National Gaming Press Release, 4/17/07 stated total revenue was \$76.6 million in 2006. I assume that 90% was gaming. (Revenues have since increased).
- (3) *Analysis of Current Markets for Casino Gaming in Iowa, with Projections for the Revenues and Impacts of Potential New Facilities -- Update*, April 18, 2005.
- (4) Iowa Racing and Gaming Commission, FY2007 for Emmetsburg and Worth County, FY2008 for Riverside and Waterloo (first full fiscal years of operation for each). As of FY2012, the Worth County facility (after expansion) is running roughly \$20mn higher, the others ~\$5mn.
- (5) *Projections for the Performance of a New Race Track and Video Lottery Facility at Tioga Park*, September 14, 2004. Higher projection is without competition from Pocono Downs; lower figure is with such competition.
- (6) New York State Lottery, FY2008. Pocono Downs's temporary slot facility was open throughout this period. Following substantial tax reductions, Tioga Downs won \$59.6mn in FY2012.
- (7) *Projections for the Performance of Slot Machines at the Race Tracks of Central Indiana*, September 8, 2007.
- (8) Indiana Gaming Commission, Annual Report for [Fiscal Year] 2011.
- (9) *Assessment of the Value of a License for a New Casino in Davenport, Iowa*, July 21, 2008.
- (10) Iowa Racing and Gaming Commission, revenue statistics for FY2011. FY2012 performance was \$3mn higher at Dubuque, \$1mn lower at Clinton.
- (11) Illinois Gaming Board, 2011 [Calendar] Annual Report.
- (12) *Projections for the Likely Gaming Revenues of New Casinos in the Northeast and Southwest Gaming Zones [of Kansas]*, September 12, 2008.
- (13) *Projections for the Performance of New Gaming Facilities in South-Central Kansas*, November 23, 2010.
- (14) Kansas Racing and Gaming Commission Lottery Gaming Facility Revenue Reports, Calendar 2012 for Dodge City and Sumner County and FY2013 for Kansas City.
- (15) *Projections for the Performance of New Gaming Facilities in Kansas*, October 19, 2009.