Cummings Associates

The "Density" of Casinos, Slot Machines

And Table Games in Iowa Compared

To Other States

April 18, 2005

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The Iowa Racing and Gaming Commission is currently reviewing ten applications for new riverboat gaming facilities in the State of Iowa. To assist in this review, the Commission has retained Cummings Associates to update my report of October 7, 2003. This document assesses the "density" of casinos, slot machines, and table games in Iowa, and the levels of service that its casinos provide (as measured by rates of consumers' spending), in comparison with the casinos of other states. A separate report presents additional analysis of the current markets for casino gaming in Iowa and develops projections for the likely gaming revenues and impacts of the proposed new casinos.[1]

By the "density" of casinos and slot machines, I mean the ratio of their numbers to the population that they serve. Exhibit 1, for example, compares the number of gaming establishments in each state in 2004 with its adult population.[2] Nevada is, off course, at the head of the list, with 441 unrestricted licenses granted by the State plus three Native American casinos, resulting in a ratio of 270 gaming establishments per million adult population. Montana, the Dakotas, Washington, and Oklahoma follow, each with a plethora of card rooms and/or small

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[1] *Analysis of Current Markets for Casino Gaming in Iowa, with Projections for the Revenues and Impacts of Potential New Facilities / Update*, April 18, 2005.

[2] For this analysis, I have taken "gaming establishment" to mean a casino, card room, or gaming-device facility at a race track that is of substantial size. For those states that have VLTs or slot machines on a widespread basis, it does not include the bars, restaurants, truck stops, and "mini-casinos" that have only such devices ("restricted" licensees in Nevada). Some of these facilities, however, can be quite substantial. In Louisiana, for example, there are nearly 6,000 video poker machines at 155 "truck stops," which means they average 38 machines at each. While the later

casinos. Colorado, too, has many small casinos, though they are limited to three remote former mining towns (to which Deadwood City in South Dakota is similar). Among the more "mainstream" casino states, only Mississippi and New Mexico have higher ratios of casinos to their state populations than Iowa.

This is due in part to the fact that state populations are not always good indicators of the size of the market that a state's casinos may serve. This is true for Iowa; my companion report indicates that more than half of the State's casino revenues come from visitors, primarily from Omaha, Rock Island, and Moline. If, therefore, one looks at the ratio of gaming establishments to total *market* populations, as in Exhibit 2, Iowa moves to the middle of the list. Interestingly, all the states that move ahead of it by this measure contain only Native American rather than state-regulated casinos (the non-Indian card rooms of California being a minor exception, though they are all approved by local option rather than by the State).

I would argue, however, that even total market populations provide inaccurate denominators for these calculations. In most of the larger markets, more of the population is more remote from casinos than is the case in Iowa. If one adjusts total market populations for distance (based upon gravity-model analyses as described in my companion report), many of the states' "density" ratios rise substantially (Exhibit 3). By this measure, Iowa drops one more notch, and falls slightly below the median.

The pictures are generally similar when one looks at the densities of slot machines (Exhibits 4, 5, and 6) and table games (Exhibits 7, 8, and 9). (Note that for Iowa I am using numbers of slots and tables that include the expansions approved for Dubuque, Prairie Meadows,

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exhibits include these machines in calculating the density of gaming devices, I do not include the facilities that house them here as gaming establishments.

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and Bluffs Run.) With regard to overall casino capacity, Iowa ranks squarely in the middle of the pack in relation to the distance-adjusted population that its current casinos serve.

The addition of one or two casinos, with up to several thousand slot machines, would not raise Iowa's ratios significantly. Additional casinos will raise not only the numerators of the density ratios, but also the denominator – they will expand the market in Iowa by bringing casino gaming closer to people in new markets, thereby raising the distance-adjusted population. With each additional casino, however, the ratios will creep upward. Under the "one casino in every [applicant] county" scenarios, the total number of slot machines in Iowa would reach roughly 22,000, versus a distance-adjusted population of approximately two million adults. The slot density ratio would then rise to 11.0, compared to 9.5 today.

As a final benchmark for the density, or more accurately, "accessibility" of casino capacity I would suggest measuring the level of service that Iowa's existing casinos currently provide. This can be obtained by comparing current casino spending with the level of casino revenues that would be obtained (from Iowans) under the hypothetical "casino in every county" scenario. I estimate that the residents of Iowa currently spend $704 million at casinos in Iowa and neighboring states. This is 49% of the roughly $1.43 billion that they would spend if every resident had an average casino close to him or her.[3] As indicated in Exhibit 10, this figure is just above the median for all the states whose corresponding ratios I have been able to estimate.

As with the "density" benchmarks, this ratio will rise slightly if additional casinos are licensed. If a new facility induces Iowans to spend another $70 million net on casino gaming (similar to my projections for a new casino in Black Hawk County, after impacts on existing

facilities[4]), the "service" ratio would rise to 54%. If one new facility were licensed in every applicant county, the ratio would rise into the low 60s. This would move Iowa into a position similar to New Mexico, Mississippi and Louisiana with respect to the accessibility of its casinos to its residents.

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[3] This figure differs slightly from the 53% "percentage of potential" cited in the *Analysis* report. That figure includes contributions from the residents of other states; the 49% figure in this report does not.

[4] Including Tama; excluding that casino, the aggregate gain for Iowa's state-regulated casinos is projected at $82-$84 million under my baseline assumptions and only one new facility is licensed. The balance of the adverse impacts are projected to fall on the Tama casino.

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The "Density" of Casinos, Slot Machines

And Table Games in Iowa Compared

To Other States

Exhibits

April 18, 2005

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Exhibit 1: Number of Gaming Establishments vs. Adult Population / State

State	Number of Establishments				Adult Population	# Facilities per million
	State-Reg	Native Am	Total			
Nevada	441	3	444	(+restr.)	1,641,239	270.5
Montana	83	25	108	(+VLTs)	676,322	159.7
North Dakota	32	5	37		462,555	80.0
South Dakota	22	10	32	(+VLTs)	542,875	58.9
Washington	103	28	131		4,445,746	29.5
Oklahoma		73	73		2,498,495	29.2
New Mexico	5	19	24	(+VLTs)	1,322,680	18.1
Mississippi	29	2	31		2,014,904	15.4
Colorado	46	2	48		3,226,789	14.9
Iowa	**13**	**3**	**16**		**2,138,412**	**7.5**
Louisiana	18	3	21	(+VLTs)	3,135,155	6.7
Wisconsin		26	26		3,954,654	6.6
Idaho		6	6		953,679	6.3
California	96	56	152		24,756,139	6.1
Arizona		22	22		3,951,948	5.6
Minnesota		19	19		3,633,108	5.2
Delaware	3		3		600,993	5.0
Kansas		6	6		1,923,664	3.1
Oregon		8	8	(+VLTs)	2,592,033	3.1
West Virginia	4		4	(+VLTs)	1,356,653	2.9
Missouri	11		11		4,117,515	2.7
Michigan	3	16	19		7,152,079	2.7
Rhode Island	2		2		788,612	2.5
Indiana	10		10		4,366,234	2.3
New Jersey	12		12		6,223,990	1.9
Pennsylvania *	10		10		9,061,349	1.1
New York	8	6	14		13,872,500	1.0
Illinois	9		9		8,935,228	1.0
Connecticut		2	2		2,531,697	0.8
Florida		6	6		12,729,875	0.5
North Carolina		1	1		6,067,829	0.2

(See notes at end of exhibits.)

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Exhibit 2: Number of Gaming Establishments vs. Adult Population / Market

State	Number of Establishments				Market Population	# Facilities per million
	State-Reg	Native Am	Total			
Nevada	441	3	444	(+restr.)	na	na
Montana	83	25	108	(+VLTs)	676,322	159.7
North Dakota	32	5	37		462,555	80.0
South Dakota	22	10	32	(+VLTs)	542,875	58.9
Washington	103	28	131		4,445,746	29.5
Colorado	46	2	48		3,226,789	14.9
Oklahoma		73	73		7,947,781	9.2
New Mexico	5	19	24	(+VLTs)	2,840,382	8.4
Wisconsin		26	26		3,697,264	7.0
Idaho		6	6		953,679	6.3
California	96	56	152		24,756,139	6.1
Kansas		6	6		1,057,614	5.7
Arizona		22	22		3,951,948	5.6
Minnesota		19	19		3,545,955	5.4
Iowa	**13**	**3**	**16**		**3,376,415**	**4.7**
Mississippi	29	2	31		8,581,916	3.6
Oregon		8	8	(+VLTs)	2,592,033	3.1
Michigan	3	16	19		7,669,378	2.5
Missouri	11		11		4,743,602	2.3
New York	8	6	14		6,083,080	2.3
Louisiana	18	3	21	(+VLTs)	11,384,441	1.8
Illinois	9		9		6,044,391	1.5
Pennsylvania *	10		10		9,061,349	1.1
NJ + DE	15	0	15		20,777,602	0.7
Indiana	10		10		14,056,592	0.7
Florida		6	6		12,186,663	0.5
CT + RI	2	2	4		12,475,066	0.3
West Virginia	4		4	(+VLTs)	14,359,550	0.3
North Carolina		1	1		na	na

(See notes at end of exhibits.)

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Exhibit 3: Number of Gaming Establishments vs. Distance-Adjusted Adults

State	Number of Establishments				Distance-Adj. Population	# Facilities per million
	State-Reg	Native Am	Total			
Nevada	441	3	444	(+restr.)	na	na
Montana	83	25	108	(+VLTs)	676,322	159.7
Washington	103	28	131		1,526,000	85.8
North Dakota	32	5	37		462,555	80.0
South Dakota	22	10	32	(+VLTs)	542,875	58.9
Colorado	46	2	48		987,483	48.6
Idaho		6	6		178,571	33.6
Oklahoma		73	73		2,404,792	30.4
California	96	56	152		6,714,000	22.6
Kansas		6	6		268,716	22.3
New Mexico	5	19	24	(+VLTs)	1,151,662	20.8
Minnesota		19	19		1,172,300	16.2
Arizona		22	22		1,740,000	12.6
Wisconsin		26	26		2,202,128	11.8
Mississippi	29	2	31		3,334,332	9.3
Iowa	**13**	**3**	**16**		**1,731,797**	**9.2**
Michigan	3	16	19		2,381,946	8.0
Missouri	11		11		2,210,426	5.0
Louisiana	18	3	21	(+VLTs)	4,590,293	4.6
New York	8	6	14		3,077,337	4.5
Oregon		8	8	(+VLTs)	2,592,033	3.1
NJ + DE	15		15		5,045,089	3.0
Indiana	10		10		3,471,165	2.9
Illinois	9		9		3,456,107	2.6
West Virginia	4		4	(+VLTs)	2,801,581	1.4
CT + RI	2	2	4		3,910,253	1.0
North Carolina		1	1		na	na

(See notes at end of exhibits.)

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Exhibit 4: Number of Slot Machines and/or VLTs vs. Adult Population / State

State	Number of Slots / VLTs			Adult Population	# Machines per 000
	State-Reg	Native Am	Total		
Nevada	202,801	941	203,742	1,641,239	124.1
Montana	18,192	694	18,886	676,322	27.9
South Dakota	11,336	1,973	13,309	542,875	24.5
Mississippi	38,988	4,762	43,750	2,014,904	21.7
West Virginia	19,546		19,546	1,356,653	14.4
Louisiana	37,006	6,532	43,538	3,135,155	13.9
New Mexico	3,020	13,108	16,128	1,322,680	12.2
Delaware	6,337		6,337	600,993	10.5
Oklahoma		20,523	20,523	2,498,495	8.2
Iowa	**13,944**	**2,522**	**16,466**	**2,138,412**	**7.7**
New Jersey	42,378		42,378	6,223,990	6.8
Pennsylvania *	60,000 *		60,000	9,061,349	6.6
North Dakota		2,939	2,939	462,555	6.4
Oregon	9,500	6,610	16,110	2,592,033	6.2
Minnesota		20,726	20,726	3,633,108	5.7
Rhode Island	4,303		4,303	788,612	5.5
Connecticut		13,183	13,183	2,531,697	5.2
Colorado	15,654	937	16,591	3,226,789	5.1
Missouri	17,701		17,701	4,117,515	4.3
Wisconsin		16,856	16,856	3,954,654	4.3
Indiana	18,072		18,072	4,366,234	4.1
Idaho		3,650	3,650	953,679	3.8
Washington		14,534	14,534	4,445,746	3.3
Michigan	7,810	15,334	23,144	7,152,079	3.2
Arizona		11,496	11,496	3,951,948	2.9
California		56,053	56,053	24,756,139	2.3
Kansas		2,774	2,774	1,923,664	1.4
Illinois	9,900		9,900	8,935,228	1.1
Florida	6,102	7,738	13,840	12,729,875	1.1
New York	5,078	8,357	13,435	13,872,500	1.0
North Carolina		3,300	3,300	6,067,829	0.5

(See notes at end of exhibits.)

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Exhibit 5: Number of Slots and/or VLTs vs. Adult Population / Market

State	Number of Slots / VLTs			Adult Population	# Machines per 000
	State-Reg	Native Am	Total		
Nevada	202,801	941	203,742	na	na
Montana	18,192	694	18,886	676,322	27.9
South Dakota	11,336	1,973	13,309	542,875	24.5
Pennsylvania *	60,000 *		60,000	9,061,349	6.6
North Dakota		2,939	2,939	462,555	6.4
Oregon	9,500	6,610	16,110	2,592,033	6.2
Minnesota		20,726	20,726	3,545,955	5.8
New Mexico	3,020	13,108	16,128	2,840,382	5.7
Colorado	15,654	937	16,591	3,226,789	5.1
Mississippi	38,988	4,762	43,750	8,581,916	5.1
Iowa	**13,944**	**2,522**	**16,466**	**3,376,415**	**4.9**
Wisconsin		16,856	16,856	3,697,264	4.6
Idaho		3,650	3,650	953,679	3.8
Louisiana	37,006	6,532	43,538	11,384,441	3.8
Missouri	17,701		17,701	4,743,602	3.7
Washington		14,534	14,534	4,445,746	3.3
Michigan	7,810	15,334	23,144	7,669,378	3.0
Arizona		11,496	11,496	3,951,948	2.9
Kansas		2,774	2,774	1,057,614	2.6
Oklahoma		20,523	20,523	7,947,781	2.6
NJ + DE	48,715		48,715	20,777,602	2.3
California		56,053	56,053	24,756,139	2.3
New York	5,078	8,357	13,435	6,083,080	2.2
Illinois	9,900		9,900	6,044,391	1.6
CT + RI	4,303	13,183	17,486	12,475,066	1.4
West Virginia	19,546		19,546	14,359,550	1.4
Indiana	18,072		18,072	14,056,592	1.3
Florida	6,102	7,738	13,840	12,186,663	1.1
North Carolina		3,300	3,300	na	na

(See notes at end of exhibits.)

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Exhibit 6: Number of Slots and/or VLTs vs. Distance-Adjusted Adults

State	Number of Slots / VLTs			Adult Population	# Machines per 000
	State-Reg	Native Am	Total		
Nevada	202,801	941	203,742	na	na
Montana	18,192	694	18,886	676,322	27.9
South Dakota	11,336	1,973	13,309	542,875	24.5
Idaho		3,650	3,650	178,571	20.4
Minnesota		20,726	20,726	1,172,300	17.7
Colorado	15,654	937	16,591	987,483	16.8
New Mexico	3,020	13,108	16,128	1,151,662	14.0
Mississippi	38,988	4,762	43,750	3,334,332	13.1
Kansas		2,774	2,774	268,716	10.3
Michigan	7,810	15,334	23,144	2,381,946	9.7
NJ + DE	48,715	0	48,715	5,045,089	9.7
Washington		14,534	14,534	1,526,000	9.5
Iowa	**13,944**	**2,522**	**16,466**	**1,731,797**	**9.5**
Louisiana	37,006	6,532	43,538	4,590,293	9.5
Oklahoma		20,523	20,523	2,404,792	8.5
California		56,053	56,053	6,714,000	8.3
Missouri	17,701		17,701	2,210,426	8.0
Wisconsin		16,856	16,856	2,202,128	7.7
West Virginia	19,546		19,546	2,801,581	7.0
Arizona		11,496	11,496	1,740,000	6.6
North Dakota		2,939	2,939	462,555	6.4
Oregon	9,500	6,610	16,110	2,592,033	6.2
Indiana	18,072		18,072	3,471,165	5.2
CT + RI	4,303	13,183	17,486	3,910,253	4.5
New York	5,078	8,357	13,435	3,077,337	4.4
Illinois	9,900		9,900	3,456,107	2.9
North Carolina		3,300	3,300	na	na

(See notes at end of exhibits.)

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Exhibit 7: Number of Table Games vs. Adult Population / State

State	Number of Tables			Adult Population	# Tables per 0000
	State-Reg	Native Am	Total		
Nevada	6,549	20	6,569	1,641,239	40.0
Mississippi	1,074	105	1,179	2,014,904	5.9
Montana	240		240	676,322	3.5
Louisiana	766	202	968	3,135,155	3.1
North Dakota	64	60	124	462,555	2.7
South Dakota	82	54	136	542,875	2.5
Connecticut		617	617	2,531,697	2.4
Washington	500	509	1,009	4,445,746	2.3
New Jersey	1,370		1,370	6,223,990	2.2
New Mexico		272	272	1,322,680	2.1
Iowa	**348**	**67**	**415**	**2,138,412**	**1.9**
Indiana	640		640	4,366,234	1.5
Missouri	531		531	4,117,515	1.3
Minnesota	50	365	415	3,633,108	1.1
Arizona		440	440	3,951,948	1.1
California	1,102	1,557	2,659	24,756,139	1.1
Michigan	255	327	582	7,152,079	0.8
Wisconsin		290	290	3,954,654	0.7
Oregon		164	164	2,592,033	0.6
Colorado	180	17	197	3,226,789	0.6
Florida	414	150	564	12,729,875	0.4
Kansas		84	84	1,923,664	0.4
Illinois	225		225	8,935,228	0.3
New York		279	279	13,872,500	0.2
Oklahoma		27	27	2,498,495	0.1
North Carolina		27	27	6,067,829	0.0
Delaware			0	600,993	0.0
Idaho			0	953,679	0.0
Pennsylvania *			0	9,061,349	0.0
Rhode Island			0	788,612	0.0
West Virginia			0	1,356,653	0.0

(See notes at end of exhibits.)

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Exhibit 8: Number of Table Games vs. Adult Population / Market

| State | Number of Tables | | | Adult Population | # Tables per 0000 |
	State-Reg	Native Am	Total		
Nevada	6,549	20	6,569	na	na
Montana	240		240	676,322	3.5
North Dakota	64	60	124	462,555	2.7
South Dakota	82	54	136	542,875	2.5
Washington	500	509	1,009	4,445,746	2.3
Mississippi	1,074	105	1,179	8,581,916	1.4
Iowa	**348**	**67**	**415**	**3,376,415**	**1.2**
Minnesota	50	365	415	3,545,955	1.2
Missouri	531		531	4,743,602	1.1
Arizona		440	440	3,951,948	1.1
California	1,102	1,557	2,659	24,756,139	1.1
New Mexico		272	272	2,840,382	1.0
Louisiana	766	202	968	11,384,441	0.9
Kansas		84	84	1,057,614	0.8
Wisconsin		290	290	3,697,264	0.8
Michigan	255	327	582	7,669,378	0.8
NJ + DE	1,370	0	1,370	20,777,602	0.7
Oregon		164	164	2,592,033	0.6
Colorado	180	17	197	3,226,789	0.6
CT + RI		617	617	12,475,066	0.5
Florida	414	150	564	12,186,663	0.5
New York		279	279	6,083,080	0.5
Indiana	640		640	14,056,592	0.5
Illinois	225		225	6,044,391	0.4
Oklahoma		27	27	7,947,781	0.0
North Carolina		27	27	na	na
Idaho			0	953,679	0.0
Pennsylvania *			0	9,061,349	0.0
West Virginia			0	14,359,550	0.0

(See notes at end of exhibits.)

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Exhibit 9: Number of Table Games vs. Distance-Adjusted Adults

| State | Number of Tables | | | Adult Population | # Tables per 0000 |
	State-Reg	Native Am	Total		
Nevada	6,549	20	6,569	na	na
Washington	500	509	1,009	1,526,000	6.6
California	1,102	1,557	2,659	6,714,000	4.0
Montana	240		240	676,322	3.5
Minnesota	50	365	415	1,172,300	3.5
Mississippi	1,074	105	1,179	3,334,332	3.5
Kansas		84	84	268,716	3.1
NJ + DE	1,370		1,370	5,045,089	2.7
North Dakota	64	60	124	462,555	2.7
Arizona		440	440	1,740,000	2.5
South Dakota	82	54	136	542,875	2.5
Michigan	255	327	582	2,381,946	2.4
Missouri	531		531	2,210,426	2.4
Iowa	**348**	**67**	**415**	**1,731,797**	**2.4**
New Mexico		272	272	1,151,662	2.4
Louisiana	766	202	968	4,590,293	2.1
Colorado	180	17	197	987,483	2.0
Indiana	640		640	3,471,165	1.8
CT + RI		617	617	3,910,253	1.6
Wisconsin		290	290	2,202,128	1.3
New York		279	279	3,077,337	0.9
Illinois	225		225	3,456,107	0.7
Oregon		164	164	2,592,033	0.6
Oklahoma		27	27	2,404,792	0.1
Idaho			0	178,571	0.0
West Virginia			0	2,801,581	0.0

(See notes at end of exhibits.)

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Exhibit 10: "Levels of Service" Provided by Casinos (and/or VLTs)

defined as actual (or estimated) casino spending divided by
projected "Casino in Every County" casino spending

State	Spending Ratio
Nevada	100%
South Dakota	85%
Montana	79%
Rhode Island	78%
Delaware	66%
Louisiana	65% (e)
Mississippi	60% (e)
New Mexico	60%
West Virginia	59%
Oklahoma	55%
Missouri	49%
Iowa	**49%**
Wisconsin	45%
Arizona	44%
Illinois	44%
Michigan	41%
North Dakota	41%
Minnesota	40%
Washington	34%
Connecticut	33%
Colorado	31%
Indiana	28%
New York	28%
California	27% (e)
Kansas	25%
New Jersey	25%
Idaho	19%
Oregon	na

(See notes at end of exhibits.)

Cummings Associates