Members

Sen. Brandt Hershman, Chairperson
Sen. Edward Charbonneau
Sen. Timothy Skinner
Rep. Eric Turner
Rep. Greg Porter

COMMISSION ON STATE TAX AND FINANCING POLICY

Legislative Services Agency
200 West Washington Street, Suite 301
Indianapolis, Indiana 46204-2789
Tel: (317) 233-0696 Fax: (317) 232-2554

LSA Staff:

Jim Landers, Fiscal Analyst for the Commission
Robert Sigalow, Fiscal Analyst for the Commission
Randhir Jha, Fiscal Analyst for the Commission
Heath Holloway, Fiscal Analyst for the Commission
Lauren Sewell, Fiscal Analyst for the Commission
Karen Firestone, Fiscal Analyst for the Commission
Edward Gohmann, Attorney for the Commission
Michael Landwer, Attorney for the Commission
Ross Hooten, Attorney for the Commission

Authority: IC 2-5-3-2

MEETING MINUTES[1]

Meeting Date:	**November 13, 2013**
Meeting Time:	**9:00 A.M.**
Meeting Place:	**State House, 200 W. Washington St., Room 431**
Meeting City:	**Indianapolis, Indiana**
Meeting Number:	**1**

Members Present: **Sen. Brandt Hershman, Chairperson; Sen. Edward Charbonneau; Sen. Timothy Skinner; Rep. Eric Turner; Rep. Greg Porter.**

Members Absent: **None.**

The meeting was called to order at 9:05 A.M.

I. Effect of Circuit Breakers on Unprotected Taxes

Bob Sigalow of the Legislative Services Agency provided the Commission with a memorandum regarding the effect of circuit breaker credits on "unprotected" local government funds, sorted by the amount of the loss, and also sorted by county. (See Exhibit A, "Effect of Circuit Breaker Credits on Unprotected Funds".)

Mr. Sigalow explained the following: (1) Under legislation passed in 2012, levies exempt from the application of circuit breakers plus any debt service levies would be considered

---

[1] These minutes, exhibits, and other materials referenced in the minutes can be viewed electronically at http://www.in.gov/legislative Hard copies can be obtained in the Legislative Information Center in Room 230 of the State House in Indianapolis, Indiana. Requests for hard copies may be mailed to the Legislative Information Center, Legislative Services Agency, West Washington Street, Indianapolis, IN 46204-2789. A fee of $0.15 per page and mailing costs will be charged for hard copies.

"protected taxes". (2) Beginning with taxes paid in CY 2014, the protected taxes collected will be allocated without any adjustment for circuit breaker credits, and the entire tax loss due to the circuit breaker credits is to be allocated only among the "unprotected funds" under this approach. (3) There are four taxing units that would have lost 100% of their unprotected levies in 2013 to circuit breaker credits. (4) The average loss to school corporation unprotected funds would have been just over 17%.

Denny Costerison, Executive Director of the Indiana Association of School Business Officials, discussed a handout with the Commission. (See Exhibit B, "Protected Taxes Testimony.") Mr. Costerison discussed the history of the statute concerning protected levies, including amendments passed in 2013. He testified that interested parties are not looking to change the property tax caps or affect taxpayers, but they want to make sure that the provisions concerning protected taxes do not have a negative effect on school corporations. He explained that the potential impact on school corporations is growing.

Mike Reuter, Chief Financial Officer of Hamilton Southeastern Schools, noted that this issue is not about asking for relief from the property tax caps or asking for more money, but is instead about the allocation of funds. He testified that: (1) this is not a suburban versus urban issue; (2) there is already an "intercept" statute in place to protect bondholders; (3) changing how protected taxes and unprotected taxes are allocated will not affect tax rates for 2014, but will only affect how tax revenue is allocated; and (4) they are asking for circuit breaker losses to be allocated among all funds, which is what has been done since 2009.

Dr. Paul Kaiser, Superintendent of Beech Grove City Schools, testified concerning Beech Grove City School's experience with declining assessed valuation, cost-savings initiatives, and an appeal to the Distressed Unit Appeal Board that was not granted. Tom Keeley, Director of Business and Personnel of Beech Grove City Schools, testified regarding the need for flexibility, and that the school corporation is running out of options. Dr. Kaiser noted that: (1) the school corporation has 624 transfer students, and this brings in over $3 million in state support; and (2) they are asking for flexibility in refinancing debt. (See Exhibit C.)

Mike Shafer, Chief Financial Officer of Zionsville Community Schools, described steps that the school corporation has taken to restructure after the property tax caps took effect (restructuring routes, eliminating field trips, restructuring driver pay, requiring bus fees for athletics), which lowered their transportation budget by 17%.

Janet Gruwell, Business Manager, Concord Community Schools, testified regarding: (1) problems arising from pre-2009 debt; (2) the loss of assessed valuation; and (3) the need to rely on their general fund for transportation.

Brock Bowsher, Director of Finance and Operations, Avon Community School Corporation, testified that: (1) the school corporation has decreased transportation expenditures by 10% since 2009 (despite an increase in enrollment); (2) protected taxes will lead to greater reductions in transportation fund revenue; (3) buses have not been replaced according to the bus replacement plan; and (4) they are asking for flexibility at the local level.

Frank McWhorter, Chief Business Officer, New Albany-Floyd County Consolidated School Corporation, testified that: (1) the concept of protected taxes should either be repealed or be changed to allow losses to spread over all funds; (2) protected taxes involves the issue of allocation (and not the amount) of circuit breaker loss; and (3) local bond ratings may ultimately be lower under the protected taxes approach. (See Exhibit D, "New Albany - Floyd County Consolidated School Corporation Impact of Circuit Breakers and Protected

Taxes," and Exhibit E, "School Debt Service Example of Line 11 Cash Balance Impact.")

Doug Hasler, Executive Director of Support Services, Elkhart Community Schools, testified that: (1) they have suffered severe impacts from circuit breaker losses; (2) they lowered their tax rate, but circuit breaker losses still increased; (3) their assessed valuation has declined 20% over the last five years; (4) he does not see positive effects for bond ratings from the concept of protected taxes; and (5) two possible solutions are: (a) delay or eliminate having protected taxes; or (b) allow a local option income tax to replace circuit breaker losses (with a rate not to exceed 1%).

Scott Turney, Executive Director of the Indiana Small and Rural Schools Association, testified that: (1) circuit breaker cap issues also affect smaller and rural schools; (2) pre-2009 debt, zeroing-out of transportation revenue, maintaining buildings, and drops in assessed value are also issues; and (3) they are asking for flexibility.

Tera Klutz, Allen County Auditor and representing the Association of Indiana Counties, testified that: (1) protected taxes will affect other units of local government, not just school corporations; (2) the effect of protected taxes on operating funds needs to be considered; and (3) the local budgeting process needs to be addressed.

II. Soil Productivity Factors

Cathy Wolters, Department of Local Government Finance (DLGF) General Counsel, and Barry Wood, DLGF Director of Assessment, explained the background regarding the soil productivity issue and presented a memorandum to the Commission from DLGF Commissioner Micah Vincent. (See Exhibit F.)

Phillip Owens, Associate Professor, Purdue University Department of Agronomy, testified regarding soil productivity factors. He testified that: (1) soils are not equal; (2) in his analysis, he used the Dideriksen Model, which takes into account soil properties, but not management; (3) he used the United States Department of Agriculture (USDA) database and compared soils to get a ranking factor; (4) there are still some questions about the USDA's data, which will take at least three months to study; and (5) the factors are not ready to be used at this point. (See Exhibit G.)

Katrina Hall, Indiana Farm Bureau (IFB), testified that: (1) the IFB appreciates the cooperation of the General Assembly in dealing with this issue, and that they have had good cooperation from Purdue University and the DLGF; and (2) the range of the new numbers seems reasonable, but they want to review the data further and still need to review how each soil has changed.

Stacey O'Day, Allen County Assessor, testified that: (1) they ran the new factors in Allen County, and that they would result in an increase in assessments; and (2) she is concerned that if the debate on this issue is not finished, it will result in an assessment delay.

Bob Sigalow of the Legislative Services Agency presented a memorandum to the Commission concerning soil productivity factors. (See Exhibit H.)

The meeting was adjourned at 11:15 A.M.

Exhibit A
CSTFP #1
11/13/13

LEGISLATIVE SERVICES AGENCY
Office of Fiscal and Management Analysis
200 W. Washington Street, Suite 302
Indianapolis, Indiana 46204-2789
(317) 233-0696
(317) 232-2554 (FAX)

MEMORANDUM

To: Commission on State Tax and Financing Policy

From: Bob Sigalow

Re: Effect of Circuit Breaker Credits on Unprotected Funds

Date: November 13, 2013

Under HEA 1072 (2012) both exempt levies[1] plus any debt service levies that are not exempt are deemed "protected taxes". Beginning with taxes collected in CY 2014, SEA 517 (2013) requires that the total amount of protected taxes collected are to be allocated to the appropriate fund without any adjustment for circuit breaker credits,. The entire tax loss due to the circuit breaker credits is to be allocated only among the unprotected funds.

If the total circuit breaker loss exhausts the levies in all of a taxing unit's unprotected funds, the excess will then be allocated to the protected funds. Taxing units may transfer available money from any fund into the debt service fund to replace the revenue that the debt service fund would have received if not for the circuit breaker allocation.

To illustrate the effect of protected taxes, the 2013 circuit breaker credits (2012 in LaPorte County) were reallocated as if the protected taxes were already protected from circuit breaker losses. The attached report shows each taxing unit and compares the circuit breaker loss for each fund under both the existing law and the protected taxes law, effective in 2014. The actual impact in 2014 and future years will vary depending on local decisions and local conditions.

There are four taxing units that would have lost 100% of their unprotected levies to circuit breakers in 2013 if the new law had been in effect. Three of these taxing units are school corporations and one is a township. The following table shows the number of taxing units by unit type and percentage loss of unprotected levies due to circuit breakers. The table also shows the average and median percentage loss by unit type.

Percentage Loss of Levy to Circuit Breakers in Unprotected Funds
Based on Law Effective CY 2014 With Protected Levies

Unit Type	0% to 10%	>10% to 20%	>20% to 30%	>30% to 40%	>40% to 50%	>50% to 60%	>60% to 70%	>70% to 80%	>80% to 90%	>90% to 100%	Average	Median
Counties	77	13	2	0	0	0	0	0	0	0	8.8%	3.1%
Townships	915	58	10	4	6	0	0	0	0	1	12.3%	0.2%
Cities & Towns	408	99	52	10	6	1	0	0	0	0	17.4%	4.8%
Schools	237	39	23	12	5	8	3	1	3	5	17.1%	2.6%
Libraries	187	27	20	4	3	2	0	0	0	0	13.2%	3.1%
Special Units	125	25	9	1	3	3	0	0	0	0	15.5%	2.4%
Total	**1,949**	**261**	**116**	**31**	**23**	**14**	**3**	**1**	**3**	**6**	**14.7%**	**1.0%**

[1] Certain levies are exempt from the calculation of property tax limits under the circuit breaker law. These include levies that are approved in a referendum and levies in Lake County and St. Joseph County for debt incurred before July 1, 2008. Circuit breaker credits may not be allocated to these funds.

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for Civil Taxing Units and School Corporations
Cross-County Units are Counted in Each Affected County

Percentage Loss of Levy to Circuit Breakers in Unprotected Funds
Based on Law Effective CY 2014 With Protected Levies

Unit Type	0% to 10%	>10% to 20%	>20% to 30%	>30% to 40%	>40% to 50%	>50% to 60%	>60% to 70%	>70% to 80%	>80% to 90%	>90% to 100%	Average	Median
Counties	77	13	2	0	0	0	0	0	0	0	8.8%	3.1%
Townships	915	58	10	4	6	0	0	0	0	1	12.3%	0.2%
Cities & Towns	408	99	52	10	6	1	0	0	0	0	17.4%	4.8%
Schools	237	39	23	12	5	8	3	1	3	5	17.1%	2.6%
Libraries	187	27	20	4	3	2	0	0	0	0	13.2%	3.1%
Special Units	125	25	9	1	3	3	0	0	0	0	15.5%	2.4%
Total	**1,949**	**261**	**116**	**31**	**23**	**14**	**3**	**1**	**3**	**6**	**14.7%**	**1.0%**

Percentage Loss of Levy to Circuit Breakers in Unprotected Funds
Based on CY 2013 Law Without Protected Levies

Unit Type	0% to 10%	>10% to 20%	>20% to 30%	>30% to 40%	>40% to 50%	>50% to 60%	>60% to 70%	>70% to 80%	>80% to 90%	>90% to 100%	Average	Median
Counties	78	12	2	0	0	0	0	0	0	0	8.4%	3.1%
Townships	924	59	7	2	2	0	0	0	0	0	11.0%	0.2%
Cities & Towns	415	95	50	12	3	1	0	0	0	0	16.9%	4.8%
Schools	271	46	9	7	2	1	0	0	0	0	9.0%	1.5%
Libraries	193	30	13	4	2	1	0	0	0	0	11.6%	2.8%
Special Units	125	28	7	1	2	3	0	0	0	0	14.3%	2.2%
Total	**2,006**	**270**	**88**	**26**	**11**	**6**	**0**	**0**	**0**	**0**	**11.9%**	**0.8%**

INDIANA ASSOCIATION *of* SCHOOL BUSINESS OFFICIALS

www.indiana-asbo.org

Dennis L. Costerison,
Executive Director

Exhibit B
CSTFP #1
11/13/13

Commission on State Tax & Financing Policy

PROTECTED TAXES TESTIMONY

Dennis L. Costerison
Executive Director
Indiana ASBO

Room 431, State House
Indianapolis, Indiana
November 13, 2013

ONE NORTH CAPITOL, SUITE 1215 | INDIANAPOLIS, INDIANA 46204 | (317) 639-3586

Legislative Services Agency
(September 10, 2013 Print-Out)

Protected Levies for Circuit Breaker Distributions
(Number of School Corporations)

	2012	2013
Levy Loss of 20% or more	48	58
Levy Loss of 50% or more	14	18
Levy Loss of 80% or more	4	7
Levy Loss of 1% or less	102	86

School Corporations Impacted by Protected Taxes by 20% or More

20% of all corporations impacted – 58/292

30% of all counties impacted – 28/92

32% of all students impacted – 320,000/1,000,000

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	**School Corporation**	**Fund Name**	**Levy**	**Circuit Breaker**	**Pct of Levy Lost**	**Circuit Breaker**	**Pct of Levy Lost**
5310	Franklin Township Community School Corp	Debt Service	34,092,307	13,120,857	38.5%	7,588,082	22.3%
5310	Franklin Township Community School Corp	School Pension Debt	969,401	373,086	38.5%	215,764	22.3%
5310	Franklin Township Community School Corp	Capital Projects (School)	4,362,305	1,678,888	38.5%	4,362,305	100.0%
5310	Franklin Township Community School Corp	Transportation	4,178,629	1,608,198	38.5%	4,178,629	100.0%
5310	Franklin Township Community School Corp	Bus Replacement	709,193	272,942	38.5%	709,193	100.0%
	Total		**44,311,835**	**17,053,971**	**38.5%**	**17,053,973**	**38.5%**
5380	Beech Grove City School Corporation	Referendum Fund - Exempt Operating	1,255,920	0	0.0%	0	0.0%
5380	Beech Grove City School Corporation	Debt Service	4,157,096	1,635,720	39.3%	381,625	9.2%
5380	Beech Grove City School Corporation	School Pension Debt	439,213	172,820	39.3%	40,320	9.2%
5380	Beech Grove City School Corporation	Capital Projects (School)	1,375,771	541,334	39.3%	1,375,771	100.0%
5380	Beech Grove City School Corporation	Transportation	799,483	314,578	39.3%	799,483	100.0%
5380	Beech Grove City School Corporation	Bus Replacement	110,880	43,629	39.3%	110,880	100.0%
	Total		**8,138,363**	**2,708,081**	**33.3%**	**2,708,079**	**33.3%**
6340	Cannelton City School Corporation	Referendum Fund - Exempt Operating	99,987	0	0.0%	0	0.0%
6340	Cannelton City School Corporation	Debt Service	359,978	151,980	42.2%	47,002	13.1%
6340	Cannelton City School Corporation	Capital Projects (School)	134,983	56,989	42.2%	134,983	100.0%
6340	Cannelton City School Corporation	Transportation	29,996	12,664	42.2%	29,996	100.0%
6340	Cannelton City School Corporation	Bus Replacement	16,705	7,053	42.2%	16,705	100.0%
	Total		**641,649**	**228,686**	**35.6%**	**228,686**	**35.6%**
5300	M.S.D. Decatur Township School Corp	Debt Service	15,373,221	4,076,587	26.5%	0	0.0%
5300	M.S.D. Decatur Township School Corp	School Pension Debt	776,447	205,894	26.5%	0	0.0%
5300	M.S.D. Decatur Township School Corp	Capital Projects (School)	3,628,396	962,158	26.5%	3,341,937	92.1%
5300	M.S.D. Decatur Township School Corp	Transportation	2,426,396	643,419	26.5%	2,234,834	92.1%
5300	M.S.D. Decatur Township School Corp	Bus Replacement	474,614	125,856	26.5%	437,144	92.1%
	Total		**22,679,074**	**6,013,914**	**26.5%**	**6,013,915**	**26.5%**
3030	Westfield-Washington School Corporation	Referendum Fund - Exempt Operating - Post 2009	4,598,270	0	0.0%	0	0.0%
3030	Westfield-Washington School Corporation	Debt Service	23,577,498	5,106,918	21.7%	0	0.0%
3030	Westfield-Washington School Corporation	School Pension Debt	394,952	85,547	21.7%	0	0.0%
3030	Westfield-Washington School Corporation	Capital Projects (School)	3,820,402	827,504	21.7%	3,489,221	91.3%
3030	Westfield-Washington School Corporation	Transportation	3,471,021	751,828	21.7%	3,170,127	91.3%
3030	Westfield-Washington School Corporation	Bus Replacement	161,399	34,959	21.7%	147,408	91.3%
	Total		**36,023,542**	**6,806,756**	**18.9%**	**6,806,756**	**18.9%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	School Corporation	Fund Name	Levy	Circuit Breaker	Pct of Levy Lost	Circuit Breaker	Pct of Levy Lost
1970	Muncie Community School Corporation	Debt Service	9,213,143	4,034,841	43.8%	0	0.0%
1970	Muncie Community School Corporation	School Pension Debt	890,640	390,050	43.8%	0	0.0%
1970	Muncie Community School Corporation	Capital Projects (School)	6,028,949	2,640,342	43.8%	5,344,016	88.6%
1970	Muncie Community School Corporation	Transportation	3,782,107	1,656,351	43.8%	3,352,432	88.6%
1970	Muncie Community School Corporation	Bus Replacement	56,054	24,549	43.8%	49,686	88.6%
	Total		**19,970,893**	**8,746,133**	**43.8%**	**8,746,134**	**43.8%**
5280	Elwood Community School Corporation	Debt Service	2,396,734	719,635	30.0%	0	0.0%
5280	Elwood Community School Corporation	School Pension Debt	360,809	108,335	30.0%	0	0.0%
5280	Elwood Community School Corporation	Capital Projects (School)	792,805	238,045	30.0%	693,235	87.4%
5280	Elwood Community School Corporation	Transportation	507,822	152,477	30.0%	444,044	87.4%
5280	Elwood Community School Corporation	Bus Replacement	141,448	42,471	30.0%	123,683	87.4%
	Total		**4,199,618**	**1,260,963**	**30.0%**	**1,260,962**	**30.0%**
2270	Concord Community School Corporation	Debt Service	11,170,586	2,658,674	23.8%	0	0.0%
2270	Concord Community School Corporation	School Pension Debt	419,676	99,886	23.8%	0	0.0%
2270	Concord Community School Corporation	Capital Projects (School)	3,911,458	930,953	23.8%	2,666,448	68.2%
2270	Concord Community School Corporation	Transportation	2,003,928	476,948	23.8%	1,366,081	68.2%
2270	Concord Community School Corporation	Bus Replacement	301,855	71,844	23.8%	205,775	68.2%
	Total		**17,807,503**	**4,238,305**	**23.8%**	**4,238,304**	**23.8%**
4225	Franklin Community School Corporation	Debt Service	13,524,852	2,422,577	17.9%	0	0.0%
4225	Franklin Community School Corporation	Capital Projects (School)	3,380,368	605,493	17.9%	2,099,565	62.1%
4225	Franklin Community School Corporation	Transportation	1,593,876	285,496	17.9%	989,965	62.1%
4225	Franklin Community School Corporation	Bus Replacement	506,886	90,794	17.9%	314,830	62.1%
	Total		**19,005,982**	**3,404,360**	**17.9%**	**3,404,360**	**17.9%**
4690	Gary Community School Corporation	Debt Service	3,888,867	2,026,059	52.1%	0	0.0%
4690	Gary Community School Corporation	Exempt Debt - Lake And St. Joseph Counties Only	3,861,329	0	0.0%	0	0.0%
4690	Gary Community School Corporation	Capital Projects (School)	9,544,150	4,972,402	52.1%	5,884,486	61.7%
4690	Gary Community School Corporation	Transportation	11,656,767	6,073,054	52.1%	7,187,029	61.7%
	Total		**28,951,113**	**13,071,515**	**45.2%**	**13,071,515**	**45.2%**
5275	Anderson Community School Corporation	Debt Service	7,785,810	2,287,867	29.4%	0	0.0%
5275	Anderson Community School Corporation	School Pension Debt	3,113,135	914,798	29.4%	0	0.0%
5275	Anderson Community School Corporation	Capital Projects (School)	5,859,056	1,721,689	29.4%	3,393,641	57.9%
5275	Anderson Community School Corporation	2013 State General Fund Loan Repayment	295,852	86,936	29.4%	0	0.0%
5275	Anderson Community School Corporation	Transportation	5,300,060	1,557,427	29.4%	3,069,863	57.9%
5275	Anderson Community School Corporation	Bus Replacement	368,700	108,343	29.4%	213,556	57.9%
	Total		**22,722,613**	**6,677,060**	**29.4%**	**6,677,060**	**29.4%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	School Corporation	Fund Name	Levy	Circuit Breaker	Pct of Levy Lost	Circuit Breaker	Pct of Levy Lost
3315	Avon Community School Corporation	Debt Service	25,803,625	4,493,218	17.4%	0	0.0%
3315	Avon Community School Corporation	School Pension Debt	846,117	147,335	17.4%	0	0.0%
3315	Avon Community School Corporation	Capital Projects (School)	4,970,201	865,467	17.4%	2,874,089	57.8%
3315	Avon Community School Corporation	Transportation	6,037,216	1,051,268	17.4%	3,491,105	57.8%
3315	Avon Community School Corporation	Bus Replacement	475,325	82,769	17.4%	274,863	57.8%
	Total		**38,132,484**	**6,640,057**	**17.4%**	**6,640,057**	**17.4%**
5375	M.S.D. Wayne Township School Corporation	Debt Service	18,296,694	4,986,119	27.3%	0	0.0%
5375	M.S.D. Wayne Township School Corporation	School Pension Debt	1,898,478	517,363	27.3%	0	0.0%
5375	M.S.D. Wayne Township School Corporation	Capital Projects (School)	9,433,346	2,570,726	27.3%	5,357,690	56.8%
5375	M.S.D. Wayne Township School Corporation	Transportation	8,543,151	2,328,135	27.3%	4,852,102	56.8%
5375	M.S.D. Wayne Township School Corporation	Bus Replacement	651,750	177,611	27.3%	370,163	56.8%
	Total		**38,823,419**	**10,579,954**	**27.3%**	**10,579,955**	**27.3%**
5255	South Madison Community School Corp	Debt Service	9,833,491	1,521,756	15.5%	0	0.0%
5255	South Madison Community School Corp	Capital Projects (School)	1,866,444	288,837	15.5%	1,011,304	54.2%
5255	South Madison Community School Corp	Transportation	1,685,491	260,834	15.5%	913,257	54.2%
5255	South Madison Community School Corp	Bus Replacement	379,418	58,716	15.5%	205,582	54.2%
	Total		**13,764,844**	**2,130,143**	**15.5%**	**2,130,143**	**15.5%**
4145	Clark-Pleasant Community School Corp	Debt Service	13,087,188	2,214,906	16.9%	0	0.0%
4145	Clark-Pleasant Community School Corp	School Pension Debt	569,405	96,367	16.9%	0	0.0%
4145	Clark-Pleasant Community School Corp	Capital Projects (School)	3,407,297	576,659	16.9%	1,825,885	53.6%
4145	Clark-Pleasant Community School Corp	Transportation	2,806,427	474,966	16.9%	1,503,894	53.6%
4145	Clark-Pleasant Community School Corp	Bus Replacement	90,333	15,288	16.9%	48,407	53.6%
	Total		**19,960,650**	**3,378,186**	**16.9%**	**3,378,186**	**16.9%**
5245	Frankton-Lapel Community School Corp	Debt Service	6,441,269	1,082,117	16.8%	0	0.0%
5245	Frankton-Lapel Community School Corp	Capital Projects (School)	1,263,270	212,226	16.8%	668,657	52.9%
5245	Frankton-Lapel Community School Corp	Transportation	1,367,516	229,739	16.8%	723,835	52.9%
5245	Frankton-Lapel Community School Corp	Bus Replacement	364,202	61,185	16.8%	192,775	52.9%
	Total		**9,436,257**	**1,585,267**	**16.8%**	**1,585,267**	**16.8%**
4680	Lake Station School Corporation	Debt Service	699,635	212,462	30.4%	0	0.0%
4680	Lake Station School Corporation	Exempt Debt - Lake And St. Joseph Counties Only	943,222	0	0.0%	0	0.0%
4680	Lake Station School Corporation	Capital Projects (School)	494,278	150,100	30.4%	257,322	52.1%
4680	Lake Station School Corporation	Transportation	371,977	112,960	30.4%	193,652	52.1%
4680	Lake Station School Corporation	Bus Replacement	113,166	34,366	30.4%	58,915	52.1%
	Total		**2,622,278**	**509,888**	**19.4%**	**509,889**	**19.4%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	School Corporation	Fund Name	Levy	Circuit Breaker	Pct of Levy Lost	Circuit Breaker	Pct of Levy Lost
0630	Zionsville Community School Corporation	Referendum Fund - Exempt Operating - Post 2009	5,052,168	0	0.0%	0	0.0%
0630	Zionsville Community School Corporation	Debt Service	18,787,551	2,689,933	14.3%	0	0.0%
0630	Zionsville Community School Corporation	School Pension Debt	759,153	108,693	14.3%	0	0.0%
0630	Zionsville Community School Corporation	Capital Projects (School)	3,819,425	546,851	14.3%	1,974,165	51.7%
0630	Zionsville Community School Corporation	Transportation	3,093,794	442,958	14.3%	1,599,105	51.7%
0630	Zionsville Community School Corporation	Bus Replacement	575,773	82,437	14.3%	297,603	51.7%
	Total		**32,087,864**	**3,870,872**	**12.1%**	**3,870,873**	**12.1%**
3135	Mt. Vernon Community School Corporation	Debt Service	8,893,535	1,246,628	14.0%	0	0.0%
3135	Mt. Vernon Community School Corporation	School Pension Debt	457,141	64,079	14.0%	0	0.0%
3135	Mt. Vernon Community School Corporation	Capital Projects (School)	2,511,431	352,033	14.0%	1,214,448	48.4%
3135	Mt. Vernon Community School Corporation	2013 State General Fund Loan Repayment	121,796	17,072	14.0%	0	0.0%
3135	Mt. Vernon Community School Corporation	Transportation	1,115,650	156,383	14.0%	539,493	48.4%
3135	Mt. Vernon Community School Corporation	Bus Replacement	239,532	33,576	14.0%	115,830	48.4%
	Total		**13,339,085**	**1,869,771**	**14.0%**	**1,869,771**	**14.0%**
2315	Goshen Community School Corporation	Debt Service	8,598,134	1,775,805	20.7%	0	0.0%
2315	Goshen Community School Corporation	School Pension Debt	742,881	153,430	20.7%	0	0.0%
2315	Goshen Community School Corporation	Capital Projects (School)	4,445,942	918,237	20.7%	2,106,952	47.4%
2315	Goshen Community School Corporation	Transportation	2,416,914	499,174	20.7%	1,145,386	47.4%
2315	Goshen Community School Corporation	Bus Replacement	352,726	72,850	20.7%	167,158	47.4%
	Total		**16,556,597**	**3,419,496**	**20.7%**	**3,419,496**	**20.7%**
4335	Vincennes Community School Corporation	Debt Service	5,537,297	840,896	15.2%	0	0.0%
4335	Vincennes Community School Corporation	School Pension Debt	246,669	37,459	15.2%	0	0.0%
4335	Vincennes Community School Corporation	Capital Projects (School)	1,536,012	233,259	15.2%	716,110	46.6%
4335	Vincennes Community School Corporation	Transportation	1,258,154	191,064	15.2%	586,569	46.6%
	Total		**8,578,132**	**1,302,678**	**15.2%**	**1,302,679**	**15.2%**
0225	Northwest Allen County School Corp	Debt Service	16,154,987	2,290,360	14.2%	0	0.0%
0225	Northwest Allen County School Corp	Capital Projects (School)	4,008,392	568,287	14.2%	1,830,302	45.7%
0225	Northwest Allen County School Corp	Transportation	2,675,803	379,360	14.2%	1,221,819	45.7%
0225	Northwest Allen County School Corp	Bus Replacement	590,407	83,704	14.2%	269,590	45.7%
	Total		**23,429,589**	**3,321,711**	**14.2%**	**3,321,711**	**14.2%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	School Corporation	Fund Name	Levy	Circuit Breaker	Pct of Levy Lost	Circuit Breaker	Pct of Levy Lost
4670	East Chicago City School Corporation	Debt Service	1,985,457	722,130	36.4%	0	0.0%
4670	East Chicago City School Corporation	Exempt Debt - Lake And St. Joseph Counties Only	10,426,578	0	0.0%	0	0.0%
4670	East Chicago City School Corporation	Exempt Pension Debt - Lake And St. Joseph Counties	612,036	0	0.0%	0	0.0%
4670	East Chicago City School Corporation	Capital Projects (School)	4,294,503	1,561,953	36.4%	1,925,445	44.8%
4670	East Chicago City School Corporation	2013 State General Fund Loan Repayment	20,499	7,456	36.4%	0	0.0%
4670	East Chicago City School Corporation	Transportation	4,228,614	1,537,989	36.4%	1,895,903	44.8%
4670	East Chicago City School Corporation	Bus Replacement	96,637	35,148	36.4%	43,327	44.8%
	Total		**21,664,324**	**3,864,676**	**17.8%**	**3,864,675**	**17.8%**
3305	Brownsburg Community School Corporation	Debt Service	18,581,411	2,298,012	12.4%	0	0.0%
3305	Brownsburg Community School Corporation	School Pension Debt	659,685	81,585	12.4%	0	0.0%
3305	Brownsburg Community School Corporation	Capital Projects (School)	4,640,541	573,908	12.4%	1,843,281	39.7%
3305	Brownsburg Community School Corporation	2013 State General Fund Loan Repayment	164,484	20,342	12.4%	0	0.0%
3305	Brownsburg Community School Corporation	Transportation	3,462,907	428,267	12.4%	1,375,510	39.7%
3305	Brownsburg Community School Corporation	Bus Replacement	670,184	82,883	12.4%	266,206	39.7%
	Total		**28,179,212**	**3,484,997**	**12.4%**	**3,484,997**	**12.4%**
6460	Boone Township School Corporation	Debt Service	2,762,919	314,898	11.4%	0	0.0%
6460	Boone Township School Corporation	School Pension Debt	102,924	11,731	11.4%	0	0.0%
6460	Boone Township School Corporation	Capital Projects (School)	641,920	73,161	11.4%	249,142	38.8%
6460	Boone Township School Corporation	2013 State General Fund Loan Repayment	25,731	2,933	11.4%	0	0.0%
6460	Boone Township School Corporation	Transportation	453,226	51,655	11.4%	175,906	38.8%
6460	Boone Township School Corporation	Bus Replacement	106,987	12,194	11.4%	41,524	38.8%
	Total		**4,093,707**	**466,572**	**11.4%**	**466,572**	**11.4%**
3640	Medora Community School Corporation	Debt Service	419,955	61,406	14.6%	0	0.0%
3640	Medora Community School Corporation	School Pension Debt	30,798	4,503	14.6%	0	0.0%
3640	Medora Community School Corporation	Capital Projects (School)	175,662	25,685	14.6%	66,317	37.8%
3640	Medora Community School Corporation	Transportation	81,900	11,975	14.6%	30,920	37.8%
3640	Medora Community School Corporation	Bus Replacement	27,376	4,003	14.6%	10,335	37.8%
	Total		**735,691**	**107,572**	**14.6%**	**107,572**	**14.6%**
3445	New Castle Community School Corporation	Debt Service	2,012,795	467,167	23.2%	0	0.0%
3445	New Castle Community School Corporation	School Pension Debt	652,783	151,510	23.2%	0	0.0%
3445	New Castle Community School Corporation	Capital Projects (School)	2,159,293	501,169	23.2%	805,367	37.3%
3445	New Castle Community School Corporation	Transportation	1,897,169	440,330	23.2%	707,601	37.3%
3445	New Castle Community School Corporation	Bus Replacement	335,092	77,774	23.2%	124,982	37.3%
	Total		**7,057,132**	**1,637,950**	**23.2%**	**1,637,950**	**23.2%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	**School Corporation**	**Fund Name**	**Levy**	**Circuit Breaker**	**Pct of Levy Lost**	**Circuit Breaker**	**Pct of Levy Lost**
6350	Tell City-Troy Township School Corp	Debt Service	2,469,996	346,092	14.0%	0	0.0%
6350	Tell City-Troy Township School Corp	School Pension Debt	397,286	55,667	14.0%	0	0.0%
6350	Tell City-Troy Township School Corp	Capital Projects (School)	1,211,971	169,820	14.0%	451,478	37.3%
6350	Tell City-Troy Township School Corp	Transportation	516,793	72,412	14.0%	192,513	37.3%
	Total		**4,596,046**	**643,991**	**14.0%**	**643,991**	**14.0%**
4215	Edinburgh Community School Corporation	Debt Service	810,976	125,655	15.5%	0	0.0%
4215	Edinburgh Community School Corporation	School Pension Debt	209,636	32,472	15.5%	0	0.0%
4215	Edinburgh Community School Corporation	Capital Projects (School)	583,170	90,359	15.5%	211,612	36.3%
4215	Edinburgh Community School Corporation	Transportation	145,670	22,571	15.5%	52,859	36.3%
4215	Edinburgh Community School Corporation	Bus Replacement	31,680	4,909	15.5%	11,495	36.3%
	Total		**1,781,132**	**275,966**	**15.5%**	**275,966**	**15.5%**
3295	Northwest Hendricks School Corporation	Debt Service	5,760,969	700,508	12.2%	0	0.0%
3295	Northwest Hendricks School Corporation	School Pension Debt	244,034	29,673	12.2%	0	0.0%
3295	Northwest Hendricks School Corporation	Capital Projects (School)	1,174,720	142,841	12.2%	424,217	36.1%
3295	Northwest Hendricks School Corporation	Transportation	802,742	97,610	12.2%	289,887	36.1%
3295	Northwest Hendricks School Corporation	Bus Replacement	1,070,981	130,226	12.2%	386,754	36.1%
	Total		**9,053,446**	**1,100,858**	**12.2%**	**1,100,858**	**12.2%**
5855	Crawfordsville Community School Corp	Debt Service	3,098,499	428,522	13.8%	0	0.0%
5855	Crawfordsville Community School Corp	School Pension Debt	614,110	84,931	13.8%	0	0.0%
5855	Crawfordsville Community School Corp	Referendum Debt Fund - Exempt Capital - Post 2009	1,277,448	0	0.0%	0	0.0%
5855	Crawfordsville Community School Corp	Capital Projects (School)	1,271,916	175,906	13.8%	451,757	35.5%
5855	Crawfordsville Community School Corp	Transportation	813,695	112,534	13.8%	289,007	35.5%
5855	Crawfordsville Community School Corp	Bus Replacement	281,861	38,981	13.8%	100,111	35.5%
	Total		**7,357,529**	**840,874**	**11.4%**	**840,875**	**11.4%**
3070	Noblesville School Corporation	Referendum Fund - Exempt Operating - Post 2009	5,679,087	0	0.0%	0	0.0%
3070	Noblesville School Corporation	Debt Service	15,343,734	2,299,079	15.0%	0	0.0%
3070	Noblesville School Corporation	Referendum Debt Fund - Exempt Capital - Post 2009	3,173,844	0	0.0%	0	0.0%
3070	Noblesville School Corporation	Capital Projects (School)	7,036,010	1,054,264	15.0%	2,373,723	33.7%
3070	Noblesville School Corporation	Transportation	4,257,801	637,982	15.0%	1,436,445	33.7%
3070	Noblesville School Corporation	Bus Replacement	966,015	144,746	15.0%	325,902	33.7%
	Total		**36,456,491**	**4,136,071**	**11.3%**	**4,136,070**	**11.3%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	**School Corporation**	**Fund Name**	**Levy**	**Circuit Breaker**	**Pct of Levy Lost**	**Circuit Breaker**	**Pct of Levy Lost**
3460	Taylor Community School Corporation	Debt Service	1,646,028	234,118	14.2%	0	0.0%
3460	Taylor Community School Corporation	School Pension Debt	347,489	49,424	14.2%	0	0.0%
3460	Taylor Community School Corporation	Capital Projects (School)	807,458	114,847	14.2%	269,573	33.4%
3460	Taylor Community School Corporation	2013 State General Fund Loan Repayment	61,265	8,714	14.2%	0	0.0%
3460	Taylor Community School Corporation	Transportation	633,953	90,169	14.2%	211,648	33.4%
3460	Taylor Community School Corporation	Bus Replacement	83,761	11,914	14.2%	27,964	33.4%
	Total		**3,579,954**	**509,186**	**14.2%**	**509,185**	**14.2%**
4710	Hammond City School Corporation	Debt Service	3,818,120	884,588	23.2%	0	0.0%
4710	Hammond City School Corporation	Exempt Debt - Lake And St. Joseph Counties Only	17,978,890	0	0.0%	0	0.0%
4710	Hammond City School Corporation	Exempt Pension Debt - Lake And St. Joseph Counties	878,542	0	0.0%	0	0.0%
4710	Hammond City School Corporation	Capital Projects (School)	5,985,330	1,386,691	23.2%	1,848,838	30.9%
4710	Hammond City School Corporation	Transportation	5,219,208	1,209,195	23.2%	1,612,187	30.9%
4710	Hammond City School Corporation	Bus Replacement	251,904	58,362	23.2%	77,812	30.9%
	Total		**34,131,994**	**3,538,836**	**10.4%**	**3,538,837**	**10.4%**
2305	Elkhart Community School Corporation	Debt Service	13,233,738	2,256,748	17.1%	0	0.0%
2305	Elkhart Community School Corporation	School Pension Debt	1,411,528	240,708	17.1%	0	0.0%
2305	Elkhart Community School Corporation	Capital Projects (School)	10,296,162	1,755,804	17.1%	3,158,355	30.7%
2305	Elkhart Community School Corporation	Transportation	7,084,271	1,208,080	17.1%	2,173,105	30.7%
2305	Elkhart Community School Corporation	Bus Replacement	953,447	162,591	17.1%	292,471	30.7%
	Total		**32,979,146**	**5,623,931**	**17.1%**	**5,623,931**	**17.1%**
0515	Blackford County School Corporation	Debt Service	2,412,245	248,165	10.3%	0	0.0%
0515	Blackford County School Corporation	School Pension Debt	364,921	37,542	10.3%	0	0.0%
0515	Blackford County School Corporation	Capital Projects (School)	942,946	97,008	10.3%	278,240	29.5%
0515	Blackford County School Corporation	Transportation	466,266	47,968	10.3%	137,584	29.5%
0515	Blackford County School Corporation	Bus Replacement	77,310	7,953	10.3%	22,812	29.5%
	Total		**4,263,688**	**438,636**	**10.3%**	**438,636**	**10.3%**
2950	Linton-Stockton School Corporation	Debt Service	1,140,242	150,862	13.2%	0	0.0%
2950	Linton-Stockton School Corporation	School Pension Debt	259,265	34,303	13.2%	0	0.0%
2950	Linton-Stockton School Corporation	Capital Projects (School)	654,185	86,553	13.2%	188,585	28.8%
2950	Linton-Stockton School Corporation	2013 State General Fund Loan Repayment	10,301	1,363	13.2%	0	0.0%
2950	Linton-Stockton School Corporation	Transportation	409,062	54,122	13.2%	117,923	28.8%
2950	Linton-Stockton School Corporation	Bus Replacement	132,688	17,556	13.2%	38,251	28.8%
	Total		**2,605,743**	**344,759**	**13.2%**	**344,759**	**13.2%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	School Corporation	Fund Name	Levy	Circuit Breaker	Pct of Levy Lost	Circuit Breaker	Pct of Levy Lost
6835	Randolph Eastern School Corporation	Debt Service	742,533	127,475	17.2%	0	0.0%
6835	Randolph Eastern School Corporation	School Pension Debt	56,037	9,620	17.2%	0	0.0%
6835	Randolph Eastern School Corporation	Capital Projects (School)	718,389	123,330	17.2%	205,168	28.6%
6835	Randolph Eastern School Corporation	Transportation	403,970	69,352	17.2%	115,372	28.6%
6835	Randolph Eastern School Corporation	Bus Replacement	81,082	13,920	17.2%	23,157	28.6%
	Total		**2,002,011**	**343,697**	**17.2%**	**343,697**	**17.2%**
1405	Washington Community School Corporation	Debt Service	1,986,732	238,172	12.0%	0	0.0%
1405	Washington Community School Corporation	School Pension Debt	878,420	105,306	12.0%	0	0.0%
1405	Washington Community School Corporation	Capital Projects (School)	1,417,404	169,920	12.0%	398,392	28.1%
1405	Washington Community School Corporation	2013 State General Fund Loan Repayment	44,744	5,364	12.0%	0	0.0%
1405	Washington Community School Corporation	Transportation	746,760	89,523	12.0%	209,893	28.1%
	Total		**5,074,060**	**608,285**	**12.0%**	**608,285**	**12.0%**
7230	Scott County District No. 1 School Corp	Debt Service	1,088,860	139,251	12.8%	0	0.0%
7230	Scott County District No. 1 School Corp	School Pension Debt	170,297	21,779	12.8%	0	0.0%
7230	Scott County District No. 1 School Corp	Capital Projects (School)	717,876	91,807	12.8%	201,746	28.1%
7230	Scott County District No. 1 School Corp	Transportation	240,524	30,760	12.8%	67,595	28.1%
7230	Scott County District No. 1 School Corp	Bus Replacement	93,088	11,905	12.8%	26,161	28.1%
	Total		**2,310,645**	**295,502**	**12.8%**	**295,502**	**12.8%**
1910	Yorktown Community Schools	Debt Service	1,552,991	239,924	15.4%	0	0.0%
1910	Yorktown Community Schools	School Pension Debt	505,136	78,039	15.4%	0	0.0%
1910	Yorktown Community Schools	Capital Projects (School)	1,127,943	174,257	15.4%	313,692	27.8%
1910	Yorktown Community Schools	2013 State General Fund Loan Repayment	111,407	17,211	15.4%	0	0.0%
1910	Yorktown Community Schools	Transportation	1,336,888	206,538	15.4%	371,802	27.8%
1910	Yorktown Community Schools	Bus Replacement	246,528	38,086	15.4%	68,562	27.8%
	Total		**4,880,893**	**754,055**	**15.4%**	**754,056**	**15.4%**
3115	Southern Hancock County Comm School Corp	Debt Service	5,019,959	565,555	11.3%	0	0.0%
3115	Southern Hancock County Comm School Corp	School Pension Debt	441,810	49,775	11.3%	0	0.0%
3115	Southern Hancock County Comm School Corp	Capital Projects (School)	2,215,776	249,632	11.3%	607,013	27.4%
3115	Southern Hancock County Comm School Corp	2013 State General Fund Loan Repayment	114,319	12,879	11.3%	0	0.0%
3115	Southern Hancock County Comm School Corp	Transportation	1,469,338	165,537	11.3%	402,526	27.4%
3115	Southern Hancock County Comm School Corp	Bus Replacement	209,809	23,637	11.3%	57,477	27.4%
	Total		**9,471,011**	**1,067,015**	**11.3%**	**1,067,016**	**11.3%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	School Corporation	Fund Name	Levy	Circuit Breaker	Pct of Levy Lost	Circuit Breaker	Pct of Levy Lost
3325	Danville Community School Corporation	Debt Service	5,987,610	508,487	8.5%	0	0.0%
3325	Danville Community School Corporation	School Pension Debt	310,609	26,378	8.5%	0	0.0%
3325	Danville Community School Corporation	Capital Projects (School)	1,513,192	128,505	8.5%	402,529	26.6%
3325	Danville Community School Corporation	2013 State General Fund Loan Repayment	59,465	5,050	8.5%	0	0.0%
3325	Danville Community School Corporation	Transportation	1,205,746	102,396	8.5%	320,744	26.6%
3325	Danville Community School Corporation	Bus Replacement	262,531	22,295	8.5%	69,837	26.6%
	Total		**9,339,153**	**793,111**	**8.5%**	**793,110**	**8.5%**
5385	Indianapolis Public School Corporation	Debt Service	38,607,765	6,397,987	16.6%	0	0.0%
5385	Indianapolis Public School Corporation	School Pension Debt	3,316,506	549,603	16.6%	0	0.0%
5385	Indianapolis Public School Corporation	Referendum Debt Fund - Exempt Capital	22,107,012	0	0.0%	0	0.0%
5385	Indianapolis Public School Corporation	Capital Projects (School)	33,801,103	5,601,438	16.6%	8,922,569	26.4%
5385	Indianapolis Public School Corporation	Transportation	26,840,983	4,448,024	16.6%	7,085,287	26.4%
5385	Indianapolis Public School Corporation	Bus Replacement	10,067,640	1,668,385	16.6%	2,657,582	26.4%
	Total		**134,741,009**	**18,665,437**	**13.9%**	**18,665,438**	**13.9%**
5635	Peru Community School Corporation	Debt Service	1,553,091	181,403	11.7%	0	0.0%
5635	Peru Community School Corporation	School Pension Debt	253,630	29,624	11.7%	0	0.0%
5635	Peru Community School Corporation	Capital Projects (School)	929,663	108,586	11.7%	243,438	26.2%
5635	Peru Community School Corporation	2013 State General Fund Loan Repayment	62,938	7,351	11.7%	0	0.0%
5635	Peru Community School Corporation	Transportation	507,573	59,285	11.7%	132,911	26.2%
5635	Peru Community School Corporation	Bus Replacement	68,261	7,973	11.7%	17,875	26.2%
	Total		**3,375,156**	**394,222**	**11.7%**	**394,224**	**11.7%**
5360	M.S.D. Warren Township School Corp	Debt Service	16,317,651	2,060,611	12.6%	0	0.0%
5360	M.S.D. Warren Township School Corp	School Pension Debt	1,678,064	211,908	12.6%	0	0.0%
5360	M.S.D. Warren Township School Corp	Capital Projects (School)	9,946,659	1,256,075	12.6%	2,575,229	25.9%
5360	M.S.D. Warren Township School Corp	2013 State General Fund Loan Repayment	232,581	29,371	12.6%	0	0.0%
5360	M.S.D. Warren Township School Corp	Transportation	7,036,131	888,530	12.6%	1,821,682	25.9%
5360	M.S.D. Warren Township School Corp	Bus Replacement	373,869	47,213	12.6%	96,796	25.9%
	Total		**35,584,955**	**4,493,708**	**12.6%**	**4,493,707**	**12.6%**
2940	Eastern Consolidated School Corporation	Debt Service	1,585,369	185,938	11.7%	0	0.0%
2940	Eastern Consolidated School Corporation	School Pension Debt	213,683	25,061	11.7%	0	0.0%
2940	Eastern Consolidated School Corporation	Capital Projects (School)	560,307	65,715	11.7%	142,518	25.4%
2940	Eastern Consolidated School Corporation	Transportation	898,623	105,394	11.7%	228,571	25.4%
2940	Eastern Consolidated School Corporation	Bus Replacement	80,379	9,427	11.7%	20,445	25.4%
	Total		**3,338,361**	**391,535**	**11.7%**	**391,534**	**11.7%**

Prepared by Legislative Services Agency, September 10, 2013

Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	**School Corporation**	**Fund Name**	**Levy**	**Circuit Breaker**	**Pct of Levy Lost**	**Circuit Breaker**	**Pct of Levy Lost**
1170	Frankfort Community School Corporation	Debt Service	3,765,151	357,930	9.5%	0	0.0%
1170	Frankfort Community School Corporation	School Pension Debt	370,794	35,249	9.5%	0	0.0%
1170	Frankfort Community School Corporation	Capital Projects (School)	1,755,199	166,856	9.5%	436,663	24.9%
1170	Frankfort Community School Corporation	Transportation	722,158	68,651	9.5%	179,660	24.9%
1170	Frankfort Community School Corporation	Bus Replacement	80,420	7,645	9.5%	20,007	24.9%
	Total		**6,693,722**	**636,331**	**9.5%**	**636,330**	**9.5%**
8360	Centerville-Abington Comm School Corp	Debt Service	1,702,540	210,920	12.4%	0	0.0%
8360	Centerville-Abington Comm School Corp	School Pension Debt	157,672	19,533	12.4%	0	0.0%
8360	Centerville-Abington Comm School Corp	Capital Projects (School)	849,396	105,228	12.4%	207,799	24.5%
8360	Centerville-Abington Comm School Corp	Transportation	874,827	108,378	12.4%	214,020	24.5%
8360	Centerville-Abington Comm School Corp	Bus Replacement	184,174	22,817	12.4%	45,057	24.5%
	Total		**3,768,609**	**466,876**	**12.4%**	**466,876**	**12.4%**
7205	South Bend Community School Corporation	Debt Service	996,996	218,244	21.9%	0	0.0%
7205	South Bend Community School Corporation	Exempt Debt - Lake And St. Joseph Counties Only	18,615,968	0	0.0%	0	0.0%
7205	South Bend Community School Corporation	Exempt Pension Debt - Lake And St. Joseph Counties	3,067,679	0	0.0%	0	0.0%
7205	South Bend Community School Corporation	Historical Society	201,821	44,179	21.9%	46,438	23.0%
7205	South Bend Community School Corporation	Capital Projects (School)	14,486,710	3,171,167	21.9%	3,333,297	23.0%
7205	South Bend Community School Corporation	Art Institute	201,821	44,179	21.9%	46,438	23.0%
7205	South Bend Community School Corporation	2013 State General Fund Loan Repayment	597,390	130,770	21.9%	0	0.0%
7205	South Bend Community School Corporation	Transportation	13,953,903	3,054,535	21.9%	3,210,701	23.0%
7205	South Bend Community School Corporation	Bus Replacement	2,341,123	512,476	21.9%	538,677	23.0%
	Total		**54,463,411**	**7,175,550**	**13.2%**	**7,175,551**	**13.2%**
3480	Eastern Howard Community School Corp	Debt Service	2,310,214	202,779	8.8%	0	0.0%
3480	Eastern Howard Community School Corp	School Pension Debt	96,117	8,437	8.8%	0	0.0%
3480	Eastern Howard Community School Corp	Capital Projects (School)	770,638	67,643	8.8%	171,926	22.3%
3480	Eastern Howard Community School Corp	2013 State General Fund Loan Repayment	35,680	3,132	8.8%	0	0.0%
3480	Eastern Howard Community School Corp	Transportation	633,501	55,605	8.8%	141,331	22.3%
3480	Eastern Howard Community School Corp	Bus Replacement	179,856	15,787	8.8%	40,125	22.3%
	Total		**4,026,006**	**353,383**	**8.8%**	**353,382**	**8.8%**
1300	Crawford County Community School Corp	Debt Service	1,180,321	153,659	13.0%	0	0.0%
1300	Crawford County Community School Corp	School Pension Debt	457,421	59,558	13.0%	0	0.0%
1300	Crawford County Community School Corp	Capital Projects (School)	1,019,580	132,734	13.0%	223,140	21.9%
1300	Crawford County Community School Corp	2013 State General Fund Loan Repayment	23,582	3,070	13.0%	0	0.0%
1300	Crawford County Community School Corp	Transportation	1,389,132	180,842	13.0%	304,017	21.9%
1300	Crawford County Community School Corp	Bus Replacement	30,519	3,973	13.0%	6,679	21.9%
	Total		**4,100,555**	**533,836**	**13.0%**	**533,836**	**13.0%**

Prepared by Legislative Services Agency, September 10, 2013

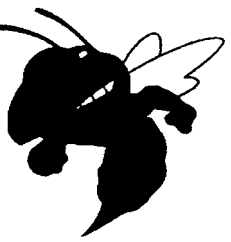
Effect of Protected Levies for Circuit Breaker Distributions in HEA 1072 (2012) and SEA 517 (2013)
Based on 2013 Actual Levies and Circuit Breaker Losses for School Corporations
(Cross-County School Amounts Combined by School Corporation)

				Previous Law Without Protected Levies		Current Law With Protected Levies	
Corp #	**School Corporation**	**Fund Name**	**Levy**	**Circuit Breaker**	**Pct of Levy Lost**	**Circuit Breaker**	**Pct of Levy Lost**
8030	Vigo County School Corporation	Debt Service	7,604,270	1,172,544	15.4%	0	0.0%
8030	Vigo County School Corporation	Capital Projects (School)	12,387,093	1,910,033	15.4%	2,655,471	21.4%
8030	Vigo County School Corporation	Transportation	5,324,737	821,050	15.4%	1,141,485	21.4%
8030	Vigo County School Corporation	Bus Replacement	1,772,581	273,324	15.4%	379,995	21.4%
	Total		**27,088,681**	**4,176,951**	**15.4%**	**4,176,951**	**15.4%**
0125	M.S.D. Sw Allen County School Corp	Referendum Fund - Exempt Operating	3,370,048	0	0.0%	0	0.0%
0125	M.S.D. Sw Allen County School Corp	Debt Service	10,424,261	1,057,512	10.1%	0	0.0%
0125	M.S.D. Sw Allen County School Corp	School Pension Debt	404,211	41,006	10.1%	0	0.0%
0125	M.S.D. Sw Allen County School Corp	Capital Projects (School)	6,759,577	685,740	10.1%	1,437,721	21.3%
0125	M.S.D. Sw Allen County School Corp	2013 State General Fund Loan Repayment	394,471	40,018	10.1%	0	0.0%
0125	M.S.D. Sw Allen County School Corp	Transportation	2,870,872	291,242	10.1%	610,617	21.3%
0125	M.S.D. Sw Allen County School Corp	Bus Replacement	603,882	61,262	10.1%	128,442	21.3%
	Total		**24,827,322**	**2,176,780**	**8.8%**	**2,176,780**	**8.8%**
3125	Greenfield Central Community School Corp	Debt Service	10,136,259	713,687	7.0%	0	0.0%
3125	Greenfield Central Community School Corp	School Pension Debt	486,075	34,224	7.0%	0	0.0%
3125	Greenfield Central Community School Corp	Capital Projects (School)	3,640,626	256,334	7.0%	772,467	21.2%
3125	Greenfield Central Community School Corp	Transportation	1,332,044	93,788	7.0%	282,633	21.2%
3125	Greenfield Central Community School Corp	Bus Replacement	302,837	21,323	7.0%	64,256	21.2%
	Total		**15,897,841**	**1,119,356**	**7.0%**	**1,119,356**	**7.0%**
3405	Blue River Valley School Corporation	Debt Service	1,087,375	117,336	10.8%	0	0.0%
3405	Blue River Valley School Corporation	Capital Projects (School)	495,665	53,486	10.8%	104,911	21.2%
3405	Blue River Valley School Corporation	Transportation	549,494	59,295	10.8%	116,304	21.2%
3405	Blue River Valley School Corporation	Bus Replacement	85,799	9,258	10.8%	18,160	21.2%
	Total		**2,218,333**	**239,375**	**10.8%**	**239,375**	**10.8%**
5330	M.S.D. Lawrence Township School Corp	Debt Service	18,215,476	2,000,125	11.0%	0	0.0%
5330	M.S.D. Lawrence Township School Corp	School Pension Debt	2,446,651	268,651	11.0%	0	0.0%
5330	M.S.D. Lawrence Township School Corp	Capital Projects (School)	13,331,286	1,463,823	11.0%	2,669,716	20.0%
5330	M.S.D. Lawrence Township School Corp	Transportation	9,763,823	1,072,103	11.0%	1,955,298	20.0%
5330	M.S.D. Lawrence Township School Corp	Bus Replacement	1,986,480	218,123	11.0%	397,811	20.0%
	Total		**45,743,716**	**5,022,825**	**11.0%**	**5,022,825**	**11.0%**
4650	Lake Ridge School Corporation	Debt Service	209,067	38,658	18.5%	0	0.0%
4650	Lake Ridge School Corporation	Exempt Debt - Lake And St. Joseph Counties Only	3,387,086	0	0.0%	0	0.0%
4650	Lake Ridge School Corporation	Exempt Pension Debt - Lake And St. Joseph Counties	99,605	0	0.0%	0	0.0%
4650	Lake Ridge School Corporation	Capital Projects (School)	992,937	183,601	18.5%	197,675	19.9%
4650	Lake Ridge School Corporation	Transportation	1,479,029	273,483	18.5%	294,446	19.9%
4650	Lake Ridge School Corporation	Bus Replacement	255,497	47,243	18.5%	50,865	19.9%
	Total		**6,423,221**	**542,985**	**8.5%**	**542,986**	**8.5%**

Prepared by Legislative Services Agency, September 10, 2013

Exhibit C
CSTFP #1
11/13/13

Beech Grove City Schools



5334 Hornet Avenue
Beech Grove, IN 46107-2306
Phone (317) 788-4481
Fax (317) 782-4065
www.bgcs.k12.in.us

Commission on State Tax and Finance Policy
November 13, 2013

1: The Beech Grove City Schools story

2. Power Point and 7 Year Budget History

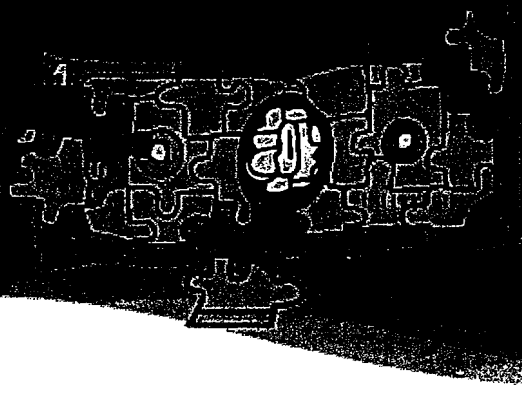
3. History:

2007	$521 million in Assessed Valuation $8.3 net tax revenue without Gen Fund Capital Projects was $2,000,000
2008	$500,000 deficit in General Fund $1.5 million Circuit Breaker loss pending
2009	Referendum for $0.35 to general $1.5 million operating Cost containment and cuts throughout school district
2010	Assessed valuation dropped to $436 million
2011	Assessed valuation dropped to $385 million
2012	Assessed valuation dropped again to $381 million
2013	Assessed valuation dropped again to $358 million
	Net revenue from $7.3 million in 2010 down to $6 million in 2013 The $6 million includes the $1.25 in referendum money
	Petitioned Distressed Unit Appeals Board to restructure one bond issue for a lower debt payment to increase available money for CPF
2014	Estimated Assessed valuation to $353 million

4. Beech Grove City Schools would not be here today talking to you if the Assessed Valuation had not decreased from $521 million in 2007 to $353 million today

Beech Grove City Schools

Distressed Unit Appeals Board

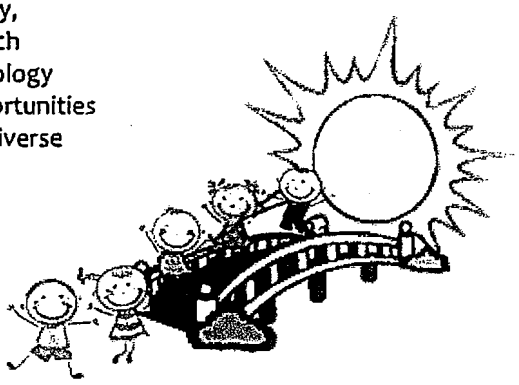


Original Plan
Summer of 2008

1. General Fund - $800,000 Deficit Spending
2. Pass Referendum - $1,600,000
3. A.V. remaining stable - $521,035,285
4. Circuit Breaker Loss

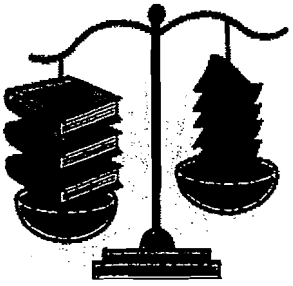
Bridge to the Future

Beech Grove City Schools is committed to have a quality, effective academic approach utilizing 21st Century technology tools and educational opportunities to meet the needs of our diverse community of learners.



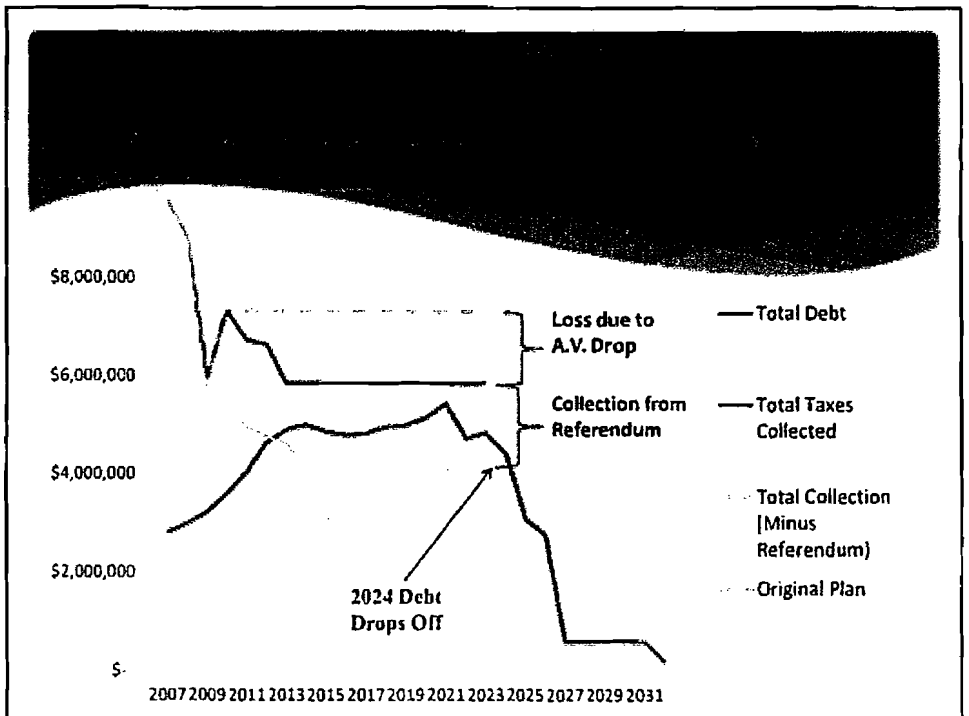
Why We Are Here Today

1. Decreased assessed valuation
   a. 521 million to 358 million
2. Property tax caps
   a. Appeals
3. Referendum Collections Down
   a. 1.6 million to 1.25 million



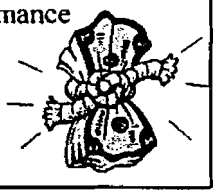
Property Tax Collection

	2012	2013
Debt Service	$3,301,847	$2,521,521
Pension Debt	$334,740	$266,408
Capital Projects	$619,538	$834,485
Transportation	$503,085	$484,933
Bus Replacement	$0.00	$67,255
Referendum	$1,275,995	$1,255,920
Actual Collection	$6,035,205	$5,430,523
Certified Levy	$8,776,400	$8,138,363
Percentage Loss	31.2%	33.3%



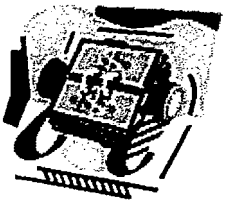
BGCS Cost Cuts

1. Move $750,000 of CPF (Utilities, Software Cost, and Technology Staff) into General Fund
2. Reduce administrative positions by $100,000
3. Reduce classified staff by $30,000
4. Reduce teachers salary by over $500,000 through retirements and attrition
5. Future salary increases for staff based on performance
   a. Beginning teacher salary frozen in 2010
   b. District insurance contribution frozen since 2009



Cost Saving Initiatives

* Member of HSBT for employee insurance
* Outsourced custodial ($110,000 Savings)
* Workmen's compensation pooling with ISESC ($75,000 Savings)
* Outsourced food service to Chartwells ($130,000 Savings)
* Nurses from Community Health ($250,000 Savings)
* Adult & Child provides counselors ($250,000 Savings)

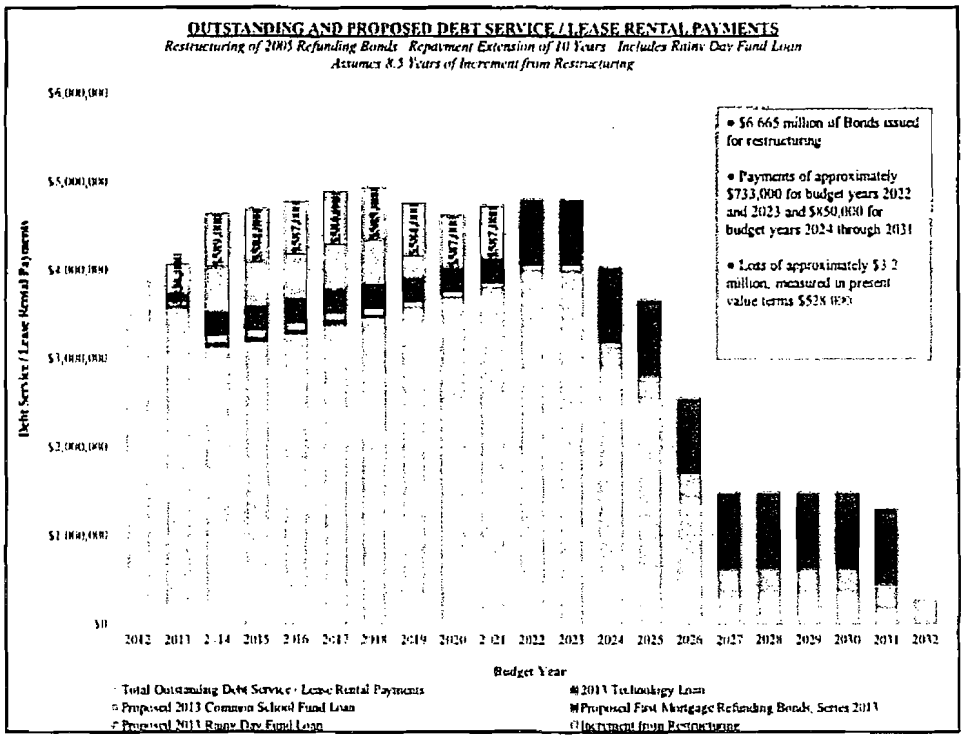


Future A.V. Growth

- ADM Milling $28 million expansion $344,000
- Franciscan Place $24 million added to tax base $400,000
- Beech Grove Main Street Project

Refinance 2005 Bond Issue

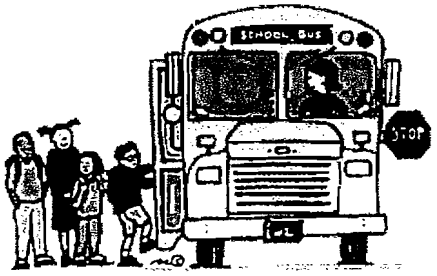
a. Cost $8.2 million in additional interest
b. Cost savings/receipt in $5 million over next 8 years
c. Total cost of restructure $3.2 million with a net present value of $528,481.75
d. Only bond issue restructured out of 4 possible



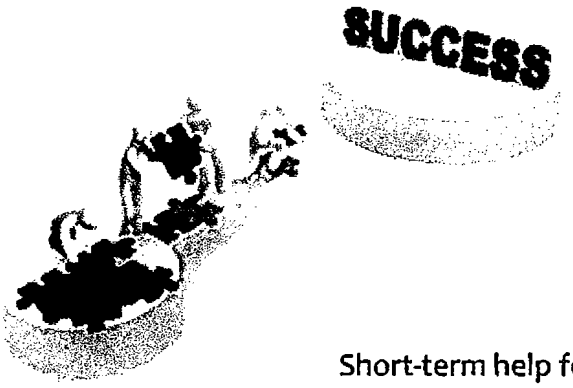
Emergency Loan

a. Borrow $2 million until assessed valuation return
   - Could Borrow $1,000 * 2698 ADM = $2,698,000

b. Payment of $31,290 a month for 72 months taken from our General Fund



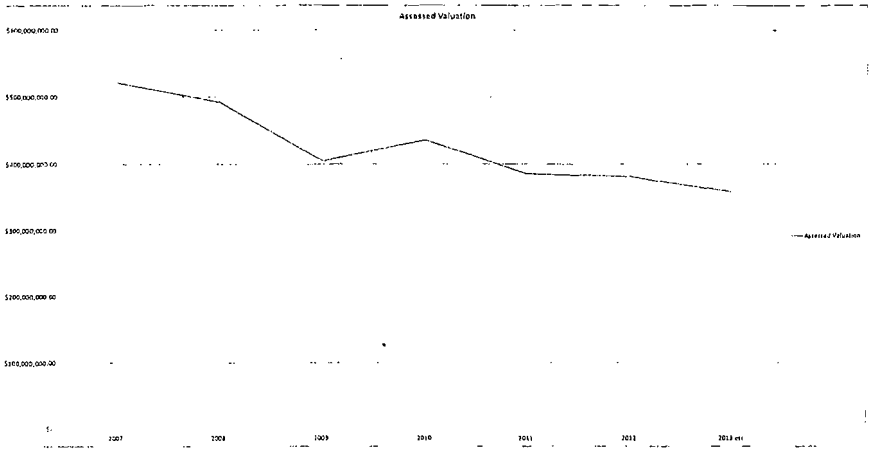
Teaming together for success

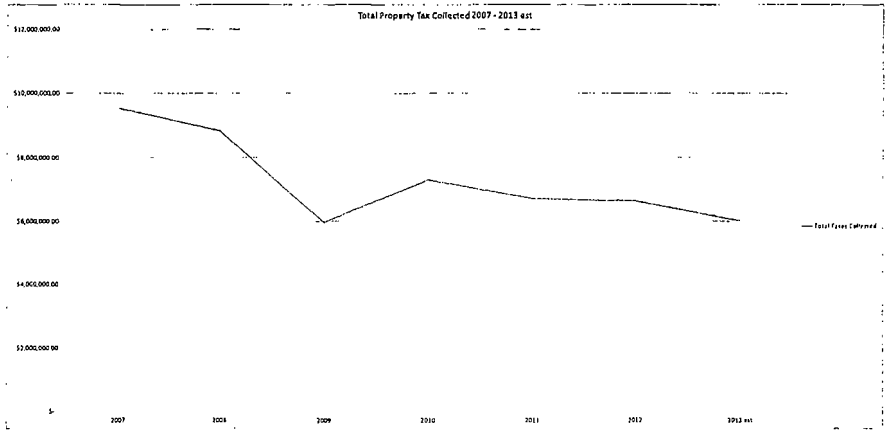


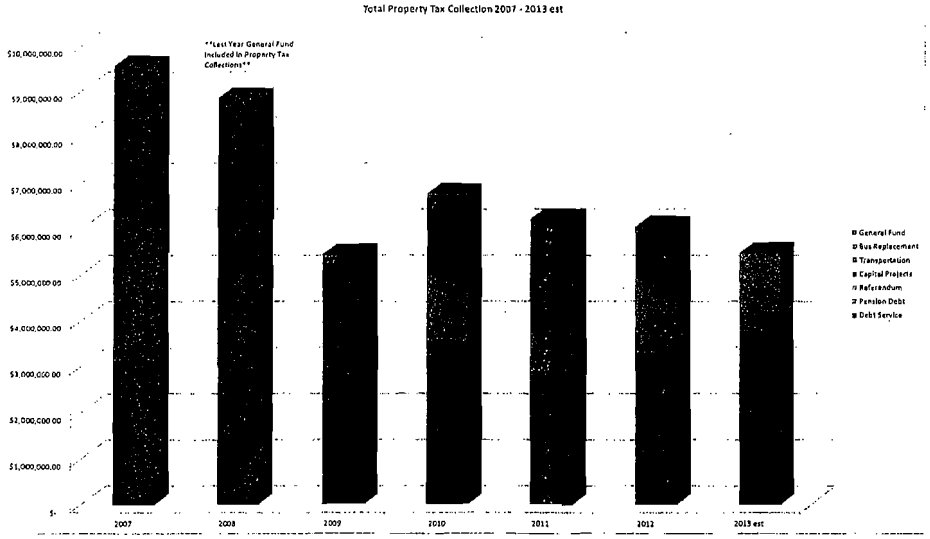
- Plan
- Tools to restructure
- Initiate

Short-term help for long-term gains

Year	Debt Service	Pension Debt	Capital Projects	Transportation	Bus Replacement	Referendum	General Fund	Misc Tax Collection	Total Taxes Collected	Total Collection (Minus Ref)	Net Change ($)	Net Change (%)	Total Tax Collection	Year	Assessed Valuation	Net Change $	Net Change %	Tax Collection Assuming NO AV LOSS	Loss Due To AV
2007	$ 3,136,573.32	$ 308,344.64	$ 2,021,428.27	$ 664,086.84	$ 93,232.58	$ -	$ 3,320,434.22	$ -	$ 9,544,099.87	$ 9,544,099.87	$ -	0%	$ 9,544,099.87	2007	$ 521,035,285.00	$ -	0%	$ 9,544,099.87	0%
2008	$ 2,647,362.07	$ 321,378.57	$ 1,912,713.02	$ 680,194.59	$ 40,354.65	$ -	$ 3,231,288.94	$ -	$ 8,833,291.84	$ 8,833,291.84	$ (710,808.03)	-7%	$ 8,833,291.84	2008	$ 492,257,280.00	$ (28,778,005.00)	-6%	$ 8,833,291.84	0%
[illegible]	$ 2,970,711.66	$ 217,377.04	$ 1,341,517.66	$ 580,212.05	$ 290,268.01	$ -	$ 31,748.06	$ 526,932.77	$ 5,958,767.25	$ 5,958,767.25	$ (2,874,524.59)	-33%	$ 5,958,767.25	2009	$ 404,703,441.00	$ (87,553,839.00)	-18%	$ 5,958,767.25	0%
[illegible]	$ 3,241,941.62	$ 338,871.58	$ 1,124,069.19	$ 511,458.99	$ 114,057.75	$ 1,409,056.77	$ -	$ 560,677.57	$ 7,300,133.47	$ 5,891,076.70	$ 1,341,366.22	23%	$ 7,300,133.47	2010	$ 436,143,303.00	$ 31,439,862.00	8%	$ 7,300,133.47	0%
[illegible]	$ 2,459,706.63	$ 274,950.60	$ 961,955.90	$ 473,924.76	$ 743,925.75	$ 1,280,021.49	$ -	$ 518,881.35	$ 6,713,366.48	$ 5,914,463.64	$ (586,766.99)	-6%	$ 6,713,366.48	2011	$ 385,696,321.00	$ (50,446,982.00)	-12%	$ 7,258,337.25	8%
2012	$ 3,301,846.63	$ 334,740.45	$ 619,537.81	$ 503,085.17	$ -	$ 1,275,995.12	$ -	$ 590,133.77	$ 6,625,338.95	$ 6,756,210.06	$ (88,027.53)	-1%	$ 6,625,338.95	2012	$ 381,003,565.00	$ (4,692,756.00)	-1%	$ 7,329,589.67	10%
2013 est	$ 3,768,900.00	$ 439,200.00	$ -	$ -	$ -	$ 1,255,900.00	$ -	$ 538,000.00	$ 6,002,000.00	$ 6,208,100.00	$ (623,338.95)	-9%	$ 6,002,000.00	2013 est	$ 358,834,385.00	$ (22,169,180.00)	-6%	$ 7,277,455.90	18%







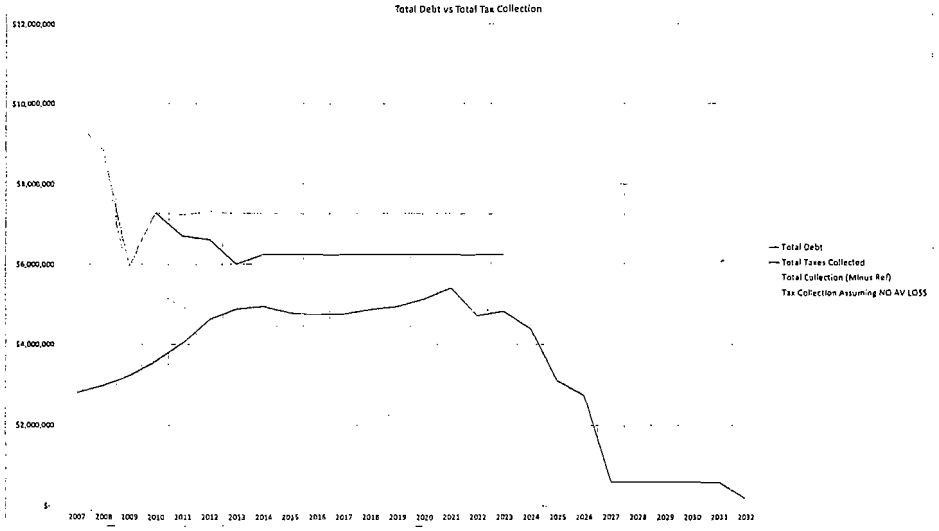


Exhibit D
CSTFP #1
11/13/13

NEW ALBANY FLOYD COUNTY CONSOLIDATED SCHOOL CORPORATION
IMPACT OF CIRCUIT BREAKER AND PROTECTED TAXES

Circuit Breaker Losses:

2010	526,038.01	
2011	916,096.70	
2012	932,298.92	
2013	1,316,030.28	
2014	?	Assumed to be at least at the 2013 level

Impact of Protected Taxes:

		Estimated New Protected Taxes	
Circuit Breaker Loss:	**2013**	**2014**	
Debt Service Fund	663,095.45	0.00	
Capital Projects Fund	416,469.66	836,337.24	doubles impact
Transportation Fund	193,398.03	388,360.54	doubles impact
Bus Replacement Fund	42,951.68	91,332.50	doubles impact
Pension Debt Fund	115.46	0.00	paid off
	1,316,030.28	1,316,030.28	

Note: NAFC Schools loses $1.3 Million. Tax payers bills do not change at all. Only the distribution of the loss changes. It negatively effects the Capital Projects Fund, Transportation Fund, and Bus Replacement Fund. This is devastating to our transportation and capital needs.

SUMMARY: REPEAL THE PROTECTED TAXES PROVISIONS. Continue to spread impact across all funds or allow schools the choice of what fund(s) to impact.

CSTFP #1
Exhibit E
11/13/13

SCHOOL DEBT SERVICE FUND EXAMPLE OF LINE 11 CASH BALANCE IMPACT

Debt Example: **$10 million paid back over 5 years**

Option 1: Not balanced payment/levy

Year	Payments Jan-Jun	Payments July-Dec	Line 11 Cash Balance	Net Levy	Ending Cash
2013	1,000,000	1,000,000	1,000,000	3,000,000	1,000,000
2014	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
2015	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
2016	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
2017	1,000,000	1,000,000	0	1,000,000	0
				10,000,000	

Option 2: Smart Balanced payment/levy

Year	Payments Jan-Jun	Payments July-Dec	Line 11 Cash Balance	Net Levy	Ending Cash
2013	x	1,000,000	1,000,000	2,000,000	1,000,000
2014	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
2015	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
2016	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
2017	1,000,000	1,000,000	1,000,000	2,000,000	1,000,000
2018	1,000,000	x	x	0	0
				10,000,000	

Note: It is a misconception that you collect 150% of the debt levy every year. You can only collect your next 6 months payment. Smart budgeting allows 1 year of payments to be collected. Cash balance covers the rest. Cash flow allows for the avoidance of additional borrowing due to late property tax settlements. If the line 11 cash balance option is changed it puts our debt payments at risk.

Exhibit F
CSTFP #1
11/13/13

STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE

INDIANA GOVERNMENT CENTER NORTH
100 NORTH SENATE AVENUE N1058(B)
INDIANAPOLIS, IN 46204
PHONE (317) 232-3777
FAX (317) 232-8779

TO: **Commission on State Tax and Financing Policy**

FROM: **Micah G. Vincent, Commissioner** MGV

RE: **Updated Soil Ranking Factors**

DATE: **November 13, 2013**

Pursuant to SEA 319 – 2013, the Department of Local Government Finance (Department), in cooperation with the Purdue University College of Agriculture (Purdue), is required to submit the following to the Commission on State Tax and Financing Policy (Commission) and to any interim study committee established to study agriculture issues or assigned the topic of studying agriculture issues:

(1) Proposed soil productivity factors to be used in the assessment of agricultural land under IC 6-1.1-4-13.

(2) An explanation of the methodology used to determine the proposed soil productivity factors.

(3) Data, from each county, used to determine the proposed soil productivity factors.

(4) Evidence of oral testimony and written comments provided to the department of local government finance by taxpayers and other stakeholders concerning the proposed soil productivity factors.

In cooperation with Purdue, attached are the proposed Soil Productivity Factors, including a brief narrative by Purdue explaining the soil survey and classification process used to determine the factors. The factors proposed by Purdue were accepted without change by the Department.

Purdue utilized the "Dideriksen Model" in the calculation of the factors. The Dideriksen Model, which is a corn yield model that evaluates corn yield changes in soil relative to a set index yield potential, contains fourteen (14) soil characteristics that are used to evaluate yield changes from index soils. These soil characteristics are considered to have either beneficial or detrimental effects on corn yield. If the effects are beneficial, then bushels per acre are added. If the effects are detrimental, bushels per acre are removed. The soil input values used for the Dideriksen Model were obtained from the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture (USDA) Soil Survey Database.

The Dideriksen Model does not take differential management strategies into account, but does assume management at a level required for crop production. The model also assumes that tile drainage is in place for wet soils. This assumption is necessary and valid considering large areas of Indiana farmland would be poorly drained and unsuitable for agriculture without tile drainage.

The following are the 14 model factors:

- Soil material
- Base saturation
- Thickness and organic matter content of the surface horizons
- Calcareous soils and/or marl and non-calcareous soils
- Presence of clay-iron bands in sandy soils
- Fragipans
- Depth and texture of the upper layer of two-layered soil profiles as related to the texture of the lower layer
- Thickness of the solum
- Bottomland soil as related to family and drainage
- Soil texture of the surface horizon
- Natural soil drainage
- Slope
- Erosion
- Organic soils

A soil productivity factor was generated from the corn yield prediction of the Dideriksen Model. Corn yield values themselves are not of interest, but instead, the yield value of each soil relative to all other soils can be used to establish a relative productivity ranking index. Corn yield was selected as the metric for the soil ranking calculation because corn is a major agricultural product for Indiana and corn is sensitive to changes in soil properties.

The predicted corn yield from the Dideriksen Model for each soil map unit was divided by 145 bushels/acre. The value of 145 bu/acre was the model yield for the Miami soil mapping unit, which is considered to be the average corn producing soil in Indiana. According to the USDA National Agricultural Statistics Agency, the average corn yield in Indiana was near 145 bu/acre. Mapping units with modeled yields of 73 bu/acre have a soil productivity factor of 0.50, which corresponds to the minimum allowable factor. All mapping units with a model yield of 73 bu/acre or less were given the minimum soil ranking factor of 0.50.

Additionally, the Department worked with the NRCS to compile correlation documents and amendments for the Soil Surveys in all 92 counties in Indiana. These are the official documents

when Soil Surveys are changed.

In addition to numerous informal telephone and in-person conversations between the Department's Commissioner and interested parties, on October 7, 2013, the Department held a soil productivity factor meeting with stakeholders including Katrina Hall of the Indiana Farm Bureau and Andrew Berger of the Association of Indiana Counties. During the meeting, Ms. Hall asked whether influence factors such as woodlands and non-tillable soils would be taken into account with respect to the .50 floor. Mr. Berger also stated that the factors should be accurate with respect to Indiana's "market value in use" standard. Ms. Hall stated that the productivity factors should not take into account the management of production, but rather only the soil types. Ms. Hall cited the effect of soil amendments and other management techniques that raise the soil productivity. Ms. Hall also questioned how the average was derived. Ms. Hall noted that not all acres that could be farmed are being farmed and wondered about the impact. In that meeting, it was also suggested that the term "Soil Productivity Factor" be changed to "Soil Ranking Factor."

Please note, the Department released the proposed factors to the Indiana Farm Bureau and the Association of Indiana Counties for review and comment. Finally, it is the understanding of the Department that the Legislative Services Agency (LSA) conducted a fiscal analysis of the proposed factors.

Exhibit G
CSTFP #1
11/13/13

PURDUE
UNIVERSITY

DEPARTMENT OF AGRONOMY
Crop Soil and Environmental Sciences

Soil Productivity Ranking Factors of Indiana

Under uniform management and environmental conditions (weather, pests, disease, cultivar, etc.), soil can be considered the determining factor in yield variability. The inherent variability in soil type to produce crops across land parcels is taken into account through a soil-based differential tax assessment system. In order to fairly and equitably determine differential tax rates for agricultural property, it is necessary to have a fair and equitable assessment of soil variability and the relative potential of each soil to determine the potential yield for each soil type.

In Indiana, as in the entire USA, soils are mapped and classed as soil series by the USDA-NRCS Soil Survey. These soil series are mapped as "mapping units", which are comprised of one or more series. For the purpose of tax assessment, the management-independent yield potential of each mapping unit present in Indiana was determined using the Dideriksen Model which is a corn yield model that only considers soil properties.

The Soil Survey

Soil surveys, covering the entire state of Indiana and the majority of the U.S., have been conducted for over 100 years and are a product of the USDA-National Cooperative Soil Survey (NCSS) with participation by federal, state, university and local agencies in an effort to distribute scientifically-based soil data. Traditionally, printed soil survey publications were generally created at the county level for the state and were available at state or local agencies, universities, and public libraries. Now that Soil Surveys are completed for the majority of the USA, the soil maps are being updated to match soil mapping units across county lines and state lines. Therefore, the control of Soil Surveys is within National and Regional offices.

Soil scientists created surveys to illustrate variable soils in a particular areas and how they can be managed. They mapped the soils by looking at regional factors, such as slopes, streams, vegetation, and geology. Then the soil scientists examine subsurface features by soil pits or auger holes to observe and record soil changes with depth or "profiles". A soil profile shows the natural layers of the soil, called horizons, which are distinguished by differences in color, texture, and other characteristics. Similar soil profiles are correlated to create the official soil series, usually named for a nearby town. Next, the soil scientists draw the extent of the soil series on aerial photographs. The areas shown on the map are called map units. Map units comprise the major soil series but may contain one or more series of lesser extent. Soils are also sampled so

that physical and chemical properties can be ascertained and included in the Soil Survey information. Using these physical and chemical characteristics, along with field observations, soil scientists can develop soils maps that provide interpretations and recommendations for farmers, engineers, educators, and other users.

Prior to 2005, soil surveys were produced as paperback copies only. Now paper copies are no longer produced and all the soils information is housed in a database and distributed through the Web Soil Survey. The Web Soil Survey (WSS) is an electronic product created by the USDA-NRCS. The WSS contains up-to-date, easily accessible information on soils to assist land and property owners make informed decisions for land use and management. The WSS is designed to deliver customized soil information that is important to you based on your needs. The WSS provides aerial photographic images of your land with associated soil interpretation information. This data that is delivered through WSS and the database includes a description of the soil, soil chemical and physical properties, and interpretations for each soil for potential uses or limitations. The most current data in the database was used in the Dideriksen Model to determine the predicted corn yields for all soil types in Indiana.

The Dideriksen Model

The Dideriksen model (Walker, 1979) was developed to evaluate corn yield changes in soil relative to a set index yield potential. There are 14 soil characteristic considered to have either beneficial or detrimental effects on corn yield and these values are evaluated using this model. If the effects are beneficial, then bushels per acre are added, and if the effects are detrimental, bushels per acre are removed when compared to a set index value. The soil input values used as input for the Dideriksen Model were obtained from the USDA-NRCS Soil Survey database. These databases contain all of the necessary associated soil properties for each mapping unit and were queried to serve as the model input.

The Dideriksen model does not take differential management strategies into account, but does assume management at a level require for crop production. The model also assumes that tile drainage is in place for wet soils. This assumption is necessary and valid considering large areas of Indiana farmland would be poorly drained and unsuitable for agriculture without tile drainage. Much of these drained areas underwent tile drainage installation many years ago, as land was first brought into arable conditions. Many of our most productive soil would be incapable of conventional agriculture production if left un-drained.

List of 14 Model Factors

Soil material
Base saturation
Thickness and organic matter content of the surface horizons
Calcareous soils and/or marl and non-calcareous soils
Presence of clay-iron bands in sandy soils
Fragipans
Depth and texture of the upper layer of two-layered soil profiles as related to the texture of the lower layer
Thickness of the solum
Bottomland soil as related to family and drainage
Soil texture of the surface horizon
Natural soil drainage
Slope
Erosion
Organic soils

Soil Material

Soil material influences the soil morphological characteristics which in turn determine the nature of the soil profile. The type of soil material such as loamy sediments, loess or sandy material all have an effect upon the yield of agronomic crops. Some important factors which are related to soil materials are nutrient storage and availability, water holding capacity and root penetration. Six groups are used to indicate the combinations of materials present in the soils of Indiana.

Base Saturation

Soils having low or very low base saturation (higher acidity) have reduced yield potential due to restricted root growth and decreased uptake of phosphorus, calcium, potassium and magnesium. Three levels of base saturation are considered: high (50%), low (35-50%) and very low (<35%).

Thickness and Organic Matter Content of Surface Horizons

The thickness and organic matter content of the surface horizon is important for crop yields in many ways. The surface horizon serves as the primary source of nutrients for the plant. Organic matter is an important factor in determining cation exchange capacity and water holding capacity of soils.

Calcareous Soils and/or Marl and Non-Calcareous Soils

Soils having an accumulation of calcium carbonate or calcium magnesium carbonate are termed calcareous. This condition is identified because it often interferes with the absorption of certain necessary plant nutrients. Soils are evaluated on the presence or absence of excess calcium carbonate and/or marl.

Presence of Clay-Iron Bands in Sandy Soils

Clay-iron bands formed in sandy and sandy skeletal soils influence the water holding capacity of the soils. The effects of the bands on yield depend on the depth at which they occur and their cumulative thickness. Thin bands total less than six inches within 20 to 50 inches of the surface. Thick bands total more than six inches in thickness within 20 to 50 inches of the surface.

Fragipans

Fragipans are very compact, slowly permeable subsurface horizons having relatively high bulk densities. Roots cannot penetrate strongly developed fragipans and the downward movement of water is greatly restricted even by weaker developed fragipans. As a result, the feeding zone of many commonly grown crops may be restricted. Crop yields are adversely affected depending upon the depth to the fragipan. This characteristic evaluates the effects of a fragipan on the yield based on the average depth to the pan.

Depth and Texture of the Upper Layer of Two-Layered Soil Profiles as Related to Texture of Lower Layer

Of major importance are soil materials that change from sandy, sandy skeletal, coarse loamy or loamy skeletal in the upper part to fine texture (35% clay or greater) in the lower part of the profile. The finer textured material will increase the water holding capacity of the soil. This characteristic evaluates the effect of contrasting upper and lower mineral materials.

Bottomland Soils as Related to Family and Drainage

The sandy, sandy-skeletal, loamy-skeletal, and coarse-loamy textured soils are benefitted by a better overall moisture regime than the same materials on upland or terrace positions. This provides soil moisture over and above that which falls on these soils. The coarse nature of the soil materials also permits good percolation and drainage of excess water from either rain or flood. The finer textured soil families with poor drainage, usually lying in the low bottom positions, are identified with yield reductions. Generally soils in these locations remain wet longer in the spring and are often difficult to drain due to the lack of an adequate outlet.

Thickness of Solum

This characteristic is a measure of the depth of the soil to a layer other than a fragipan that can or will affect root penetration and resultant plant growth. Examples of layers limiting solum depth are sand, gravel and bedrock. Solum, as used here, refers to the A and B horizons of a soil profile.

Soil Texture of the Surface Horizon

The texture of the surface horizons influences the crop yield in many ways. Surface textures influence infiltration rate, water holding capacity and nutrient storage capacity of a soil. Yield changes seem to result from interactions of surface texture and family texture. The exceptions are soils having a surface horizon texture of either clay or silty clay which lowers the yield. The remaining surface horizons are influenced by the family texture and ratings can be either positive or negative.

Natural Soil Drainage

Natural soil drainage is an important factor in crop production. In determination of effects on crop yield, it is assumed that artificial drainage, either tile or surface, is adequate. The determination of the effects of drainage requires the use of several other soil parameters. In addition to drainage, family texture and fragipan are also included. Four degrees of drainage are

identified: well (W), moderately well (MW), somewhat poorly (SP), and poorly drained (P). It is assumed that extra moisture available in level poorly drained and somewhat poorly drained soil

Slope Groups

The slope gradient is probably the most important characteristic of soil slope. Factors such as run-off and soil erosion are directly related to the degree of slope and as magnitude increases, reductions in yield increase.

Erosion

Erosion has a definite influence on remaining thickness of surface soil and thus on crop production. However, certain existing conditions may modify the yields. Therefore a combination of factors are included in evaluating crop yields under slight (1), moderate (2), and severe (3) degrees of erosion.

Organic Soils, Mucks and Peats

Due to the organic nature of muck and peat soils it is appropriate to evaluate the yield potential independently of mineral soils. Houghton muck which is a deep organic soil was selected as the base. Organic soils which are shallow, less than 50 inches, to underlying mineral materials are identified by the nature of the underlying materials.

Soil Productivity Ranking Factor Calculation

A soil productivity ranking factor (SRF) was generated from the corn yield prediction of the Dideriksen Model. It is important to note that the corn yield values themselves are not of interest, but instead, the yield value of each soil relative to all other soils can be used to establish a relative productivity ranking index. Corn yield was selective as the metric for SRF calculation because corn is a major agricultural product for Indiana and corn is sensitive to changes in soil properties.

To generate SRF values, the predicted corn yield from the Dideriksen Model for each soil map unit was divided by145 bu/acre. This value of 145 bu/acre was the model yield for the Miami soil mapping unit. In the previous version of the Productivity Index used for taxation, the Miami soil was considered to be the average corn producing soil in Indiana. Additionally, according to the USDA National Agricultural Statistics Agency, the average corn yield in Indiana was near 145 bu/acre (NASS, 2012). The absolute values are less important for tax purposes than the SRF for each soil.

Mapping units with modeled yields of 73 bu/acre have a SRF of 0.50, corresponding to the minimum allowable SRF. All mapping units with yields less than 73 bu/acre were given the minimum SRF of 0.50. Dideriksen model parameters and their effect on yield potential are described in Appendix A. Soil Productivity Ranking Factors are listed in Appendix B.

References

Foye, Debra Lynn. 2008. Classification of Surface Mined Soils and Prediction of Corn Yield Based on Soil Classification. Master's Thesis. Purdue Univeristy, West Lafayette.

National Agricultrual Statistics Service, United States Department of Agriculture. 2011 State Agriculture Overview for Indiana. 2012. Available online at http://www.nass.usda.gov/Statistics_by_State/Ag_Overview/AgOverview_IN.pdf.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for [Indiana]. Available online at http://soildatamart.nrcs.usda.gov.

Walker, Carl Francis. 1976. A Model to Estimate Corn Yields for Indiana Soils. Master's Thesis. Purdue University, West Lafayette.

Appendix A

The 14 Soil Factors of the Dideriksen Model
(Foye, 2008)

Factor	Sub selections		Yield change (kg/ha)
Soil Material	A. Greater than 40 inches of loamy sediments over glacial drift or bedrock		+628
	B. 20-40 inches of loamy sediments over glacial drift or bedrock		+314
	C. Deep sand (>40") or less than 20 inches of loess or loamy sediments over glacial drift or bedrock		0
	D. 20-40 inches of loess over glacial drift or bedrock		+628
	E. Greater than 40 inches of loess over glacial drift or bedrock		+942
	F. 20-40 inches of sandy material over loamy glacial drift or bedrock		-942
Base saturation	High *(>50%)*		0
	Low (35-50%)		-314
	Very Low (<35%)		-628
Thickness and organic matter content of the surface horizons	0-10 inches, 0-2%		0
	0-10 inches, >2%		+314
	10-24 inches, any organic matter		+628
	>24 inches, any organic matter		+942
Calcareous soils and/or marl and non-calcareous soils	Calcareous and/or marl		-628
	Non-calcareous		0
Presence of clay-iron bands in sandy soils	No bands above 50"		0
	Thin bands at 20-50"		+314
	Thick bands at *20-50"*		+628
Fragipans	0-40 inches		*-1255*
	40+ inches		-628
	No pan		0
Depth and texture of the upper layer of two-layered soil profiles as related to the texture of the lower layer	Underlying Material	Family Texture	
	35-45% clay	Sandy, sandy skeletal	+1883
	45-60% clay	Coarse loamy, loamy skeletal	+942
	>60% clay		
		Coarse silty, fine silty, fine loamy, *35-45%* clay, 45-60% clay, >60 % clay, clayey skeletal	0

h

Factor	Sub selections		Yield change (kg/ha)
Thickness of the solum	Family Texture (<18% clay in control section)	Solum Thickness	
	Sandy, Sandy skeletal, loamy, Loamy skeletal	60 inches or greater	0
		40-59	-314
		20-39	-942
		19 inches or less	-1883
	Family Texture (>18% clay in control section)	Solum Thickness	
	Coarse silty, fine silty, fine loamy, 35-45% clay, *45-* clay, >60 % clay, clayey skeletal	60 inches or greater	0
		40-59	-628
		20-39	-1883
		19 inches or less	-3766
Bottomland soils as related to family and drainage	Family Texture	Drainage	
	Sandy, sandy skeletal, loamy skeletal, coarse loamy	All classes	+628
	Fine loamy, fine silty, coarse silty, *35-45%* clay, 45-60% clay, >60% clay, clayey skeletal	Well, moderately well, somewhat poorly	0
	Fine loamy, fine silty, coarse silty, *35-45%* clay, 45-60% clay, >60 % clay, clayey skeletal	Poorly	-628
Soil texture of the surface horizon	Surface Texture	Family Texture	
	Silty clay, clay	Any texture	-314
	Silt loam, loam, silty clay loam, gravelly loam, shaley silt loam	Sandy, coarse loamy, sandy skeletal	+314
	Fine sandy loam, sandy loam, fine sand, loamy sand, loamy fine sand	Loamy skeletal, silty, fine loamy	-314
	Silt loam, loam, silty clay loam, shaley silt loam, clay loam	Coarse silty, loamy skeletal, fine silty, fine loamy, 35-45% clay, 45-60% clay, clayey skeletal	0

Factor	Sub selections		Yield change (kg/ha)
Natural soil drainage	Family Texture	Drainage[t]	
	All textures	W	0
	Sandy, sandy skeletal	MW	*+625*
		SP	*+1255*
		P	+2511
	Coarse loamy, loamy skeletal	MW	+314
		SP	+628
		P	*+1569*
	Coarse silty, fine silty, fine	MW	0
	35-45% clay, 45-60% clay, >60	SP	+628
	clay, clayey skeletal	P	*+1255*
	If fragipan present (all textures)	MW	0
		SP	+314
		P	+628
Slope	0-2 % (A), 2-6 % (B)		0
	6-12% (C)		-628
	12-18%(D)		-1569
	18-24%(E)		-4394
	24-35 % (F)		-4394
	35%+(G)		-6277
Erosion	Family Texture	Degree of Erosion	
	Sandy, sandy skeletal, coarse	1	0
	loamy, loamy skeletal	2	0
		3	-314
	Coarse silty, fine silty, fine	1	0
	loamy	2	-314
		3	-628
	Clayey skeletal, *35-45%* clay	1	0
		2	-314
		3	-942
	45-60%, >60 % clay	1	0
		2	-628
		3	-942
	If fragipan present	1	0
	(all family textures)	2	-628
		3	*-1255*
Organic soils	Underlying Material		
	Muck		0
	Loam		+314
	Sand		-628
	Clay, Marl		-1255
	Peat		-1833

W = Well drained, MW = Moderately well drained, SP = Somewhat poorly drained, P = drained. 1 = Slight, 2 = Moderate, 3 = Severe.

Appendix B

Soil Productivity Ranking Factors

County Name	MU Symbol	Productivity Ranking Factor
adams	Pmg	0.50
adams	Pps	0.50
adams	Ud	0.50
adams	W	0.50
adams	MoD2	0.69
adams	MoC2	0.79
adams	SaB2	0.79
adams	GoB	0.90
adams	Na	0.93
adams	BcA	0.97
adams	BcB	0.97
adams	Mk	1.03
adams	RdB	1.03
adams	Ch	1.07
adams	McA	1.07
adams	McB	1.07
adams	Sc	1.07
adams	HaA	1.10
adams	Pm	1.10
adams	Ho	1.14
adams	Sh	1.14
adams	Sl	1.14
adams	Wh	1.14
adams	Am	1.17
adams	Mh	1.17
adams	Tc	1.21
allen	Bp	0.50
allen	Ma	0.50
allen	Pmg	0.50
allen	Pps	0.50
allen	W	0.50
allen	ChD	0.52
allen	MsE3	0.52
allen	MrE2	0.59
allen	ChC	0.62
allen	MsD3	0.62
allen	ChB	0.69
allen	MrD2	0.69

allen	PlC	0.69
allen	MsC3	0.72
allen	ScC2	0.72
allen	FmC2	0.76
allen	PlB	0.76
allen	BkA	0.79
allen	MrC2	0.79
allen	MsB3	0.79
allen	ScB2	0.79
allen	MrC	0.83
allen	OfC2	0.83
allen	OsA	0.83
allen	OsB	0.83
allen	FmA	0.86
allen	FmB	0.86
allen	MmC3	0.86
allen	MrB2	0.86
allen	SaB	0.86
allen	MlC2	0.90
allen	MrB	0.90
allen	OfA	0.90
allen	OfB	0.90
allen	BmB2	0.93
allen	Gn	0.93
allen	MgC3	0.93
allen	Na	0.93
allen	Np	0.93
allen	RlC2	0.93
allen	Ta	0.93
allen	Wa	0.93
allen	Wc	0.93
allen	BlA	0.97
allen	BmA	0.97
allen	BmB	0.97
allen	Dr	0.97
allen	McC2	0.97
allen	MkB2	0.97
allen	MeA	1.00
allen	MeB	1.00
allen	RaB	1.00
allen	RlB2	1.00
allen	Wu	1.00
allen	BeB	1.03
allen	CsB2	1.03
allen	McB2	1.03
allen	Mn	1.03

allen	RlA	1.03
allen	BhA	1.07
allen	BhB	1.07
allen	Bn	1.07
allen	Bo	1.07
allen	CrA	1.07
allen	CsA	1.07
allen	CsB	1.07
allen	Ee	1.07
allen	Es	1.07
allen	Ge	1.07
allen	Gh	1.07
allen	Gm	1.07
allen	Go	1.07
allen	McA	1.07
allen	McB	1.07
allen	MfA	1.07
allen	Mo	1.07
allen	HaA	1.10
allen	HaB	1.10
allen	HnA	1.10
allen	Hs	1.10
allen	Ca	1.14
allen	HoA	1.14
allen	HoB	1.14
allen	HpA	1.14
allen	Le	1.14
allen	Ls	1.14
allen	Lw	1.14
allen	Pc	1.14
allen	Pe	1.14
allen	Sh	1.14
allen	Wh	1.14
allen	Mh	1.17
allen	Ws	1.21
allen	Wt	1.21
allen	Br	1.28
allen	Bs	1.28
allen	Rm	1.28
allen	Rn	1.28
allen	Ro	1.28
allen	Rs	1.28
bartholomew	BobE5	0.50
bartholomew	Omz	0.50
bartholomew	Pml	0.50
bartholomew	Ppu	0.50

bartholomew	RqaG	0.50
bartholomew	SujD5	0.50
bartholomew	Uaz	0.50
bartholomew	Uby	0.50
bartholomew	UemB	0.50
bartholomew	UemC	0.50
bartholomew	UenA	0.50
bartholomew	UenB	0.50
bartholomew	UepC	0.50
bartholomew	UfcB	0.50
bartholomew	UfdA	0.50
bartholomew	UfnA	0.50
bartholomew	UfoA	0.50
bartholomew	UfxA	0.50
bartholomew	UfyB	0.50
bartholomew	UhyA	0.50
bartholomew	UkbC	0.50
bartholomew	UkpA	0.50
bartholomew	UkqA	0.50
bartholomew	UkqB	0.50
bartholomew	UmqA	0.50
bartholomew	UnnA	0.50
bartholomew	Usl	0.50
bartholomew	W	0.50
bartholomew	GgbG	0.50
bartholomew	MrbF	0.50
bartholomew	KugG	0.50
bartholomew	RctD3	0.50
bartholomew	ConC3	0.55
bartholomew	ColD2	0.57
bartholomew	DbqE	0.59
bartholomew	HeoF	0.59
bartholomew	SifG	0.59
bartholomew	PnnF	0.60
bartholomew	FgqC3	0.61
bartholomew	GgfD2	0.61
bartholomew	BluC	0.63
bartholomew	MqbC2	0.66
bartholomew	BnuD3	0.68
bartholomew	MqbB2	0.72
bartholomew	SifE	0.72
bartholomew	BlhD2	0.73
bartholomew	SolC3	0.75
bartholomew	MhyC2	0.76
bartholomew	MmoD3	0.76
bartholomew	MqbA	0.76

bartholomew	PcrC3	0.76
bartholomew	CldB2	0.77
bartholomew	SoeC2	0.77
bartholomew	MnpD2	0.79
bartholomew	PcrC2	0.79
bartholomew	SuoAH	0.79
bartholomew	WolAV	0.79
bartholomew	XrkD2	0.79
bartholomew	AfsC2	0.80
bartholomew	SolC2	0.81
bartholomew	BlgC3	0.81
bartholomew	BcrAW	0.83
bartholomew	FexB2	0.83
bartholomew	MhyB	0.83
bartholomew	NpcA	0.83
bartholomew	NpcAQ	0.83
bartholomew	SucC2	0.83
bartholomew	BlgC2	0.85
bartholomew	PnnD	0.85
bartholomew	SulC2	0.85
bartholomew	FexA	0.86
bartholomew	FexAQ	0.86
bartholomew	MfxA	0.86
bartholomew	MmoC3	0.86
bartholomew	NaaB2	0.86
bartholomew	NpeB2	0.86
bartholomew	SfyA	0.86
bartholomew	MnpC2	0.90
bartholomew	NpeA	0.90
bartholomew	NpeAQ	0.90
bartholomew	PcrB2	0.90
bartholomew	WdlC2	0.90
bartholomew	WprAV	0.90
bartholomew	AfsB	0.91
bartholomew	XrbC2	0.92
bartholomew	MhuA	0.93
bartholomew	ObaA	0.93
bartholomew	SoaB	0.93
bartholomew	WprAW	0.93
bartholomew	CmzC2	0.97
bartholomew	CudA	0.97
bartholomew	CulB	0.97
bartholomew	HleAW	0.97
bartholomew	MnpB2	0.97
bartholomew	OfaAW	0.97
bartholomew	PlpAV	0.97

bartholomew	WdrB2	0.97
bartholomew	WufB2	0.97
bartholomew	BbiB	0.99
bartholomew	XfuB2	0.99
bartholomew	AddB2	1.00
bartholomew	BodAV	1.00
bartholomew	CmbAW	1.00
bartholomew	EcyAH	1.00
bartholomew	GccAH	1.00
bartholomew	StaAV	1.00
bartholomew	StdAV	1.00
bartholomew	StmB	1.00
bartholomew	ZboA	1.00
bartholomew	HctAW	1.03
bartholomew	AddA	1.03
bartholomew	AmkA	1.03
bartholomew	BbhA	1.03
bartholomew	BdhAH	1.03
bartholomew	BfbAH	1.03
bartholomew	CmzB2	1.03
bartholomew	EcyAW	1.03
bartholomew	EdeAW	1.03
bartholomew	EepAQ	1.03
bartholomew	GccAW	1.03
bartholomew	GcpAW	1.03
bartholomew	MfwB2	1.03
bartholomew	RywB2	1.03
bartholomew	XabB2	1.03
bartholomew	ClfA	1.07
bartholomew	CmzA	1.07
bartholomew	MecAQ	1.07
bartholomew	MecB	1.07
bartholomew	MfwA	1.07
bartholomew	MfwAQ	1.07
bartholomew	MjjAH	1.07
bartholomew	PhaA	1.07
bartholomew	RtxAH	1.07
bartholomew	SldAH	1.07
bartholomew	SnfA	1.07
bartholomew	StdAQ	1.07
bartholomew	WaaAV	1.07
bartholomew	FdqB	1.09
bartholomew	BgeAW	1.10
bartholomew	HcgAW	1.10
bartholomew	RtxAK	1.10
bartholomew	SldAW	1.10

bartholomew	WaaAW	1.10
bartholomew	WacAW	1.10
bartholomew	WbiAW	1.10
bartholomew	WokAW	1.10
bartholomew	WsyAQ	1.10
bartholomew	FdbA	1.14
bartholomew	SocAH	1.14
bartholomew	WsuA	1.14
bartholomew	LeaA	1.17
bartholomew	SocAW	1.17
bartholomew	WqlA	1.21
bartholomew	WqlAQ	1.21
bartholomew	RehA	1.23
bartholomew	ReyA	1.28
bartholomew	ReyAQ	1.28
bartholomew	CxdA	1.31
benton	Pn	0.50
benton	Pt	0.50
benton	W	0.50
benton	Wb	0.50
benton	BmA	0.76
benton	BeC2	0.79
benton	MlD2	0.79
benton	BdB2	0.86
benton	MmC3	0.86
benton	MbB2	0.90
benton	Sd	0.90
benton	VaB2	0.93
benton	Wa	0.93
benton	CsC2	0.97
benton	FpB2	0.97
benton	FrB2	0.97
benton	MlB2	0.97
benton	MuB3	0.97
benton	SxB2	0.97
benton	AyB2	1.00
benton	BaC2	1.00
benton	ElB2	1.00
benton	MxB2	1.00
benton	SxA	1.00
benton	CsB2	1.03
benton	ElA	1.03
benton	FoB2	1.03
benton	WhB2	1.03
benton	BaB2	1.07
benton	CsA	1.07

benton	Ct	1.07
benton	Dp	1.07
benton	Dr	1.07
benton	Ho	1.07
benton	RuB2	1.07
benton	TlA	1.07
benton	TlB	1.07
benton	WhA	1.07
benton	BbA	1.10
benton	Bt	1.10
benton	CpA	1.10
benton	Cu	1.10
benton	OlB2	1.10
benton	RuA	1.10
benton	Do	1.14
benton	LsA	1.14
benton	OlA	1.14
benton	WoA	1.14
benton	AnA	1.17
benton	AnB	1.17
benton	As	1.17
benton	GlA	1.17
benton	GlB	1.17
benton	Ck	1.21
benton	Cm	1.21
benton	Ft	1.21
benton	Dv	1.24
benton	Ch	1.28
benton	Du	1.28
benton	Dx	1.28
benton	Sh	1.28
benton	Sk	1.28
benton	Wt	1.28
blackford	Ud	0.50
blackford	W	0.50
blackford	EnC3	0.59
blackford	GsC3	0.62
blackford	MoD3	0.62
blackford	EnB3	0.66
blackford	GsB3	0.69
blackford	ElA	0.76
blackford	Wa	0.79
blackford	BlA	0.93
blackford	Ef	0.93
blackford	MaB2	1.03
blackford	Bo	1.07

blackford	Ee	1.07
blackford	MaA	1.07
blackford	St	1.07
blackford	Pm	1.10
blackford	Ho	1.14
blackford	Wh	1.14
blackford	Bs	1.17
boone	Ppu	0.50
boone	RqpG	0.50
boone	SvqG	0.50
boone	SvzG	0.50
boone	Uaz	0.50
boone	Uby	0.50
boone	UfnA	0.50
boone	UfoA	0.50
boone	UfxA	0.50
boone	UhuA	0.50
boone	UkbB	0.50
boone	UkbC	0.50
boone	UkbD	0.50
boone	UkpA	0.50
boone	UkpB	0.50
boone	UmyA	0.50
boone	UnhA	0.50
boone	UnuA	0.50
boone	UnvB	0.50
boone	Usl	0.50
boone	W	0.50
boone	SigE2	0.69
boone	FexC2	0.76
boone	MmoD3	0.76
boone	FexB2	0.83
boone	MmoC3	0.86
boone	MnpC2	0.86
boone	MnpD2	0.86
boone	WdrC2	0.90
boone	WdrD2	0.90
boone	XfuC2	0.92
boone	MmoB3	0.93
boone	CudA	0.97
boone	MnpB2	0.97
boone	ObxB2	0.97
boone	WdrB2	0.97
boone	WofB	0.97
boone	XfuB2	0.99
boone	ObxA	1.00

boone	WdrA	1.00
boone	EdeAW	1.01
boone	MjkAH	1.03
boone	RtuAH	1.03
boone	SldAH	1.07
boone	SngA	1.07
boone	SnlAP	1.07
boone	StjA	1.09
boone	CbaA	1.10
boone	SldAW	1.10
boone	WmnA	1.10
boone	FdhA	1.11
boone	FdbA	1.14
boone	SocAH	1.14
boone	WtaA	1.14
boone	SocAW	1.17
boone	SteA	1.17
boone	WqvA	1.21
boone	MaoA	1.24
boone	ThrA	1.28
boone	CxdA	1.31
boone	MamA	1.31
brown	BeG	0.50
brown	GnF	0.50
brown	Omz	0.50
brown	Sv	0.50
brown	Ud	0.50
brown	W	0.50
brown	GgbG	0.50
brown	BgF	0.50
brown	BpD3	0.50
brown	KugG	0.50
brown	CdF	0.50
brown	HkF	0.50
brown	HeoF	0.59
brown	SifG	0.59
brown	GgfD2	0.61
brown	BnD2	0.62
brown	SxD2	0.62
brown	GpD	0.66
brown	SwD3	0.66
brown	WeC2	0.69
brown	TlC2	0.72
brown	WaD	0.72
brown	BlgD2	0.73
brown	WeD2	0.76

brown	SoeC2	0.77
brown	Be	0.79
brown	CdD2	0.79
brown	HkD2	0.79
brown	BcrAW	0.83
brown	CnC2	0.83
brown	PeC2	0.83
brown	SucC2	0.83
brown	SulC2	0.85
brown	BlgC2	0.86
brown	MnC2	0.90
brown	RoB2	0.90
brown	SwC2	0.90
brown	TlB	0.90
brown	XrbC2	0.92
brown	SoaB	0.93
brown	CwB	0.97
brown	PeB	0.97
brown	BbiB	0.99
brown	XfuB2	0.99
brown	AvA	1.00
brown	StmB	1.00
brown	Ba	1.03
brown	BbhA	1.03
brown	Sf	1.07
brown	FdqB	1.09
brown	Hc	1.10
brown	WacAW	1.10
brown	WbiAW	1.10
brown	Wt	1.10
brown	XrkD2	1.10
brown	FdbA	1.14
brown	St	1.14
carroll	HnG	0.50
carroll	Omz	0.50
carroll	Pp	0.50
carroll	Pr	0.50
carroll	Ud	0.50
carroll	W	0.50
carroll	We	0.50
carroll	CeG	0.50
carroll	HkG	0.50
carroll	MuB	0.55
carroll	MxA	0.55
carroll	CtB	0.62
carroll	Mo	0.66

carroll	FtC3	0.72
carroll	MwB	0.72
carroll	OrA	0.72
carroll	OrB	0.72
carroll	MhD3	0.76
carroll	FsB2	0.79
carroll	Mv	0.79
carroll	Ck	0.83
carroll	FsA	0.83
carroll	KcB2	0.83
carroll	Ls	0.83
carroll	PnB	0.83
carroll	AsB2	0.86
carroll	KcA	0.86
carroll	OhC3	0.86
carroll	RmD2	0.86
carroll	Cg	0.90
carroll	MfC3	0.90
carroll	Cp	0.93
carroll	Cr	0.93
carroll	Ld	0.93
carroll	OfB2	0.93
carroll	RnC3	0.93
carroll	Wd	0.93
carroll	MkB2	0.97
carroll	Mt	0.97
carroll	OdB2	0.97
carroll	Pe	0.97
carroll	WvB2	0.97
carroll	Cn	1.00
carroll	Js	1.00
carroll	Lo	1.00
carroll	MdB2	1.00
carroll	OdA	1.00
carroll	RrB2	1.00
carroll	Jr	1.03
carroll	OgA	1.03
carroll	RmB2	1.03
carroll	CaB2	1.07
carroll	CvA	1.07
carroll	CyB	1.07
carroll	Pd	1.07
carroll	RoA	1.07
carroll	Ss	1.07
carroll	CaA	1.10
carroll	CwB	1.10

carroll	RwA	1.10
carroll	WoA	1.10
carroll	WpA	1.10
carroll	FaA	1.14
carroll	FbB	1.14
carroll	Hw	1.14
carroll	Pb	1.14
carroll	Rt	1.14
carroll	Sn	1.14
carroll	So	1.14
carroll	Wk	1.14
carroll	Ws	1.14
carroll	At	1.17
carroll	KfA	1.17
carroll	KgA	1.17
carroll	Mm	1.17
carroll	Mp	1.17
carroll	Ru	1.17
carroll	StA	1.17
carroll	Wr	1.21
carroll	Ba	1.24
carroll	Bb	1.24
carroll	Ma	1.24
carroll	Cz	1.28
carroll	Mb	1.28
carroll	Mc	1.28
carroll	Pg	1.28
carroll	Pk	1.28
cass	Pp	0.50
cass	Ps	0.50
cass	W	0.50
cass	HeE	0.50
cass	BmC	0.62
cass	ChC	0.62
cass	ObA	0.66
cass	KsC3	0.69
cass	NeC	0.69
cass	MxC3	0.72
cass	OsB	0.72
cass	MkC	0.76
cass	NeB	0.76
cass	Ge	0.79
cass	MnD2	0.79
cass	Mz	0.79
cass	KoB	0.83
cass	Ad	0.86

cass	MoC3	0.86
cass	St	0.86
cass	GwB	0.90
cass	MnC2	0.90
cass	BnA	0.97
cass	MnB2	0.97
cass	Ms	0.97
cass	WeB	0.97
cass	Ma	1.00
cass	RsC	1.00
cass	RuC	1.00
cass	Gg	1.03
cass	CpA	1.07
cass	Gf	1.07
cass	RsB	1.07
cass	RuB	1.07
cass	Sm	1.07
cass	XeA	1.07
cass	RtA	1.10
cass	RtB	1.10
cass	FcA	1.14
cass	Hh	1.14
cass	Sh	1.14
cass	SrA	1.17
cass	Rn	1.24
cass	Cy	1.28
cass	Po	1.28
clark	BobE5	0.50
clark	CcaG	0.50
clark	DbrG	0.50
clark	EesFQ	0.50
clark	EsaG	0.50
clark	GyaD5	0.50
clark	McnGQ	0.50
clark	Pml	0.50
clark	Ppu	0.50
clark	RbmD5	0.50
clark	RptG	0.50
clark	ThbD5	0.50
clark	Uaa	0.50
clark	UaoAK	0.50
clark	UedA	0.50
clark	UndAY	0.50
clark	UngB	0.50
clark	UnkB	0.50
clark	UnpA	0.50

clark	UnsB	0.50
clark	W	0.50
clark	BvoG	0.50
clark	GgbG	0.50
clark	ThcD3	0.50
clark	RblD3	0.50
clark	GmaG	0.50
clark	EbpD2	0.50
clark	ThdD	0.50
clark	ThbC3	0.50
clark	HtzD3	0.50
clark	HujD3	0.50
clark	KxlE3	0.50
clark	McuDQ	0.50
clark	ThaC2	0.52
clark	HuhD2	0.54
clark	ConC3	0.55
clark	HtwD2	0.55
clark	GgfE2	0.56
clark	ConD	0.57
clark	KxmE2	0.57
clark	KxpD2	0.57
clark	TsaC3	0.58
clark	KxlC3	0.61
clark	MdqDQ	0.62
clark	WhcD	0.64
clark	GgfD	0.65
clark	GyaD3	0.66
clark	GykD3	0.66
clark	McpC3	0.66
clark	BnyD3	0.69
clark	GyaD2	0.69
clark	GykD2	0.69
clark	DtvC2	0.70
clark	ComC	0.72
clark	HceC3	0.72
clark	McgC2	0.72
clark	MhyC3	0.72
clark	MhyC2	0.76
clark	PcrC3	0.76
clark	HerE	0.77
clark	HcdC2	0.77
clark	JafC3	0.78
clark	CxgC3	0.79
clark	CxnC3	0.79
clark	PcrC2	0.79

clark	KxoC2	0.80
clark	CldC3	0.81
clark	SolC2	0.81
clark	JafC2	0.81
clark	BcrAW	0.83
clark	BfcC3	0.83
clark	DdsAW	0.83
clark	JaeB2	0.83
clark	MhyB2	0.83
clark	CldC2	0.84
clark	KxkC2	0.84
clark	EesD2	0.85
clark	RztC3	0.86
clark	BcrAQ	0.86
clark	CkkB2	0.86
clark	CxhC2	0.86
clark	CxmC2	0.86
clark	HccB2	0.86
clark	MhyA	0.86
clark	NaaB2	0.86
clark	RzvC3	0.86
clark	SfyB	0.86
clark	SoaB	0.86
clark	SodB	0.86
clark	BfbC2	0.88
clark	BdoA	0.90
clark	BdoB	0.90
clark	NaaA	0.90
clark	PcrB2	0.90
clark	RztC2	0.90
clark	RzvC2	0.91
clark	MhuA	0.93
clark	SceB2	0.93
clark	WedB2	0.93
clark	WnmA	0.93
clark	WprAW	0.93
clark	EesC2	0.94
clark	OfbAW	0.97
clark	AddB2	1.00
clark	CtwB	1.00
clark	AddA	1.03
clark	BbhA	1.03
clark	BodAW	1.03
clark	CspB2	1.03
clark	CtrB2	1.03
clark	DfnA	1.03

clark	RtcB2	1.03
clark	RzrB2	1.03
clark	StdAW	1.03
clark	EesA	1.05
clark	EesB	1.05
clark	ClfA	1.07
clark	CspA	1.07
clark	CwaAQ	1.07
clark	HcaA	1.07
clark	HcgAH	1.07
clark	HcgAV	1.07
clark	LpoAK	1.07
clark	MsvA	1.07
clark	PhaA	1.07
clark	RtcA	1.07
clark	StaAQ	1.07
clark	StdAQ	1.07
clark	WaaAV	1.07
clark	WokAV	1.07
clark	HcgAW	1.10
clark	HufAK	1.10
clark	WaaAW	1.10
clark	WokAW	1.10
clark	NbhAK	1.14
clay	FcG	0.50
clay	W	0.50
clay	BmF	0.50
clay	BdF	0.50
clay	ChF	0.50
clay	HcF	0.50
clay	BmD	0.52
clay	GmE	0.62
clay	CeC3	0.72
clay	HcE	0.72
clay	CcC3	0.76
clay	HcD3	0.76
clay	AnC	0.79
clay	FcB	0.79
clay	WeD2	0.79
clay	CcC2	0.83
clay	HcD	0.83
clay	PaD2	0.86
clay	PnC	0.86
clay	AvB2	0.90
clay	PnB	0.93
clay	Cb	0.97

clay	PkC2	0.97
clay	Zp	0.97
clay	VgA	1.00
clay	Zs	1.00
clay	Ay	1.03
clay	PkB2	1.03
clay	Ca	1.07
clay	Lo	1.07
clay	Ly	1.07
clay	MuB2	1.07
clay	PkA	1.07
clay	Sk	1.07
clay	MuA	1.10
clay	No	1.10
clay	Nr	1.10
clay	Pf	1.10
clay	Wm	1.10
clay	Bo	1.14
clay	Sh	1.14
clay	Sn	1.14
clay	HbA	1.17
clay	IvA	1.17
clay	Ne	1.17
clay	Pg	1.17
clay	CoA	1.21
clay	Ev	1.24
clay	Ho	1.24
clay	Mt	1.24
clinton	Ho	0.50
clinton	Pc	0.50
clinton	Pr	0.50
clinton	Ud	0.50
clinton	W	0.50
clinton	HeF	0.52
clinton	Ox	0.66
clinton	Ou	0.69
clinton	MsD3	0.76
clinton	FsC	0.79
clinton	MnD	0.83
clinton	FsB	0.86
clinton	MsC3	0.86
clinton	Ce	0.93
clinton	La	0.93
clinton	MnC	0.93
clinton	Wa	0.93
clinton	MtB	1.00

clinton	OcA	1.00
clinton	OcB	1.00
clinton	Gn	1.03
clinton	McB2	1.03
clinton	MwA	1.03
clinton	CbA	1.07
clinton	McA	1.07
clinton	PgB	1.07
clinton	RuB	1.07
clinton	St	1.07
clinton	XeA	1.07
clinton	XeB	1.07
clinton	FdA	1.10
clinton	Sd	1.10
clinton	DaA	1.14
clinton	DaB	1.14
clinton	FcA	1.14
clinton	PtA	1.14
clinton	Su	1.14
clinton	Wh	1.14
clinton	Mx	1.17
clinton	Re	1.17
clinton	Sx	1.17
clinton	RdA	1.21
clinton	We	1.21
clinton	Be	1.24
clinton	Cy	1.28
clinton	Dr	1.28
clinton	Ma	1.28
clinton	Pn	1.28
clinton	Ra	1.28
clinton	Sa	1.28
clinton	Sc	1.28
clinton	Ty	1.28
crawford	AccG	0.50
crawford	AciG	0.50
crawford	AcmF	0.50
crawford	CbzG	0.50
crawford	CqyG	0.50
crawford	MdeG	0.50
crawford	Pml	0.50
crawford	TblG	0.50
crawford	Uaa	0.50
crawford	UbxD	0.50
crawford	W	0.50
crawford	AciE	0.50

crawford	AbqE3	0.50
crawford	JoeG	0.50
crawford	AbqE	0.50
crawford	AbqE2	0.50
crawford	AbqD3	0.50
crawford	AbqD2	0.50
crawford	HarE2	0.52
crawford	CbtD3	0.55
crawford	HafD3	0.55
crawford	McpD3	0.55
crawford	EabD3	0.58
crawford	WpmD3	0.61
crawford	HarD2	0.62
crawford	McgD2	0.62
crawford	AbvD3	0.63
crawford	EabD2	0.63
crawford	WppD2	0.64
crawford	AbvD2	0.66
crawford	HafC3	0.66
crawford	McpC3	0.66
crawford	GacAW	0.72
crawford	MscE2	0.72
crawford	WhfD3	0.72
crawford	AgrC3	0.76
crawford	WhfD2	0.76
crawford	AcwE2	0.79
crawford	AgrC2	0.79
crawford	MscC2	0.83
crawford	WhfC3	0.83
crawford	JoaA	0.86
crawford	PcrB	0.86
crawford	WhfC2	0.86
crawford	MsbC2	0.87
crawford	AgrA	0.90
crawford	AgrB	0.90
crawford	CspC3	0.90
crawford	WprAH	0.90
crawford	DduC2	0.93
crawford	EepC2	0.93
crawford	MscA	0.93
crawford	MscB2	0.93
crawford	CspC2	0.97
crawford	CwaAH	1.00
crawford	BbhA	1.03
crawford	CspB	1.03
crawford	CwaAK	1.03

crawford	EemAQ	1.03
crawford	EepB	1.03
crawford	AcuB2	1.07
crawford	HcgAH	1.07
crawford	WaaAH	1.07
crawford	HufAK	1.10
crawford	HfeA	1.17
daviess	Du	0.50
daviess	FbG	0.50
daviess	Omz	0.50
daviess	Pg	0.50
daviess	W	0.50
daviess	BlF	0.50
daviess	GbF	0.50
daviess	HkF	0.50
daviess	NeF	0.50
daviess	BlD	0.52
daviess	WeF	0.59
daviess	ZaD3	0.59
daviess	BlC	0.62
daviess	MaD2	0.62
daviess	CcD3	0.66
daviess	FaB	0.66
daviess	HoD3	0.66
daviess	ZaD2	0.66
daviess	BlB	0.69
daviess	HkE2	0.69
daviess	ZaC3	0.69
daviess	CcD2	0.72
daviess	HoD2	0.72
daviess	PrD2	0.72
daviess	WeE	0.72
daviess	AlE3	0.76
daviess	CcC3	0.76
daviess	HoC3	0.76
daviess	WeD3	0.76
daviess	ZaC2	0.76
daviess	AlE2	0.79
daviess	MaB2	0.79
daviess	WeD2	0.79
daviess	CcC2	0.83
daviess	HoB3	0.83
daviess	HoC2	0.83
daviess	PrC2	0.83
daviess	ZaB2	0.83
daviess	AlD3	0.86

daviess	PaD2	0.86
daviess	AlD2	0.90
daviess	CcB2	0.90
daviess	En	0.90
daviess	HoB2	0.90
daviess	PrB2	0.90
daviess	Mg	0.93
daviess	PaC3	0.93
daviess	PrA	0.93
daviess	AlC3	0.97
daviess	HoA	0.97
daviess	PaC2	0.97
daviess	AlC2	1.00
daviess	Vg	1.00
daviess	Zp	1.00
daviess	Zs	1.00
daviess	AlB3	1.03
daviess	Ay	1.03
daviess	Ba	1.03
daviess	Kn	1.03
daviess	PaB2	1.03
daviess	AlB2	1.07
daviess	Cu	1.07
daviess	IoB2	1.07
daviess	Ls	1.07
daviess	Mo	1.07
daviess	Bo	1.10
daviess	Hd	1.10
daviess	IoA	1.10
daviess	Ly	1.10
daviess	No	1.10
daviess	Pe	1.10
daviess	IvB2	1.14
daviess	Sr	1.14
daviess	Vn	1.14
daviess	Ar	1.17
daviess	IvA	1.17
daviess	Po	1.17
daviess	Re	1.17
daviess	Ro	1.17
daviess	Wa	1.17
daviess	Ra	1.28
dearborn	Du	0.50
dearborn	EdF	0.50
dearborn	Omz	0.50
dearborn	Pg	0.50

dearborn	RdG	0.50
dearborn	Ud	0.50
dearborn	W	0.50
dearborn	EdE3	0.50
dearborn	CcE3	0.50
dearborn	EcE2	0.50
dearborn	MaF2	0.50
dearborn	BeE	0.50
dearborn	CaE2	0.50
dearborn	CcD3	0.52
dearborn	HcG	0.52
dearborn	PaD2	0.52
dearborn	PaE2	0.52
dearborn	BeD3	0.55
dearborn	MbD3	0.55
dearborn	CaD2	0.59
dearborn	BeD2	0.62
dearborn	CcC3	0.62
dearborn	BeC3	0.66
dearborn	CaC2	0.66
dearborn	SwD2	0.69
dearborn	Df	0.72
dearborn	SwC3	0.72
dearborn	BeC2	0.76
dearborn	CnC3	0.76
dearborn	MaB2	0.76
dearborn	WbC3	0.76
dearborn	SwC2	0.79
dearborn	CnC2	0.83
dearborn	FoB2	0.83
dearborn	WbC2	0.83
dearborn	De	0.86
dearborn	St	0.86
dearborn	SwB2	0.86
dearborn	CnB2	0.90
dearborn	RoB2	0.90
dearborn	EkC2	0.97
dearborn	RoA	0.97
dearborn	WbB2	0.97
dearborn	WhA	0.97
dearborn	AvA	1.00
dearborn	OcA	1.00
dearborn	BaA	1.03
dearborn	EkB2	1.03
dearborn	Ju	1.03
dearborn	Ch	1.07

dearborn	Ct	1.07
dearborn	EkA	1.07
dearborn	RxB	1.10
dearborn	Or	1.14
dearborn	Hu	1.17
dearborn	Ne	1.17
dearborn	Ra	1.17
decatur	CnG	0.50
decatur	Omz	0.50
decatur	RoG	0.50
decatur	Ud	0.50
decatur	Usl	0.50
decatur	W	0.50
decatur	HeG	0.50
decatur	HkF	0.50
decatur	HkE2	0.69
decatur	MtB2	0.72
decatur	CkC3	0.76
decatur	HlD3	0.76
decatur	MoD3	0.76
decatur	MtA	0.76
decatur	HkD2	0.79
decatur	MmD2	0.79
decatur	CkC2	0.83
decatur	Ch	0.86
decatur	FoA	0.86
decatur	FoB	0.86
decatur	MoC3	0.86
decatur	St	0.86
decatur	CkB2	0.90
decatur	GfD	0.90
decatur	MmC2	0.90
decatur	RsB2	0.90
decatur	GrC2	0.97
decatur	MmB2	0.97
decatur	Ms	0.97
decatur	My	0.97
decatur	AvA	1.00
decatur	AvB	1.00
decatur	OcA	1.00
decatur	OcB	1.00
decatur	WmB	1.00
decatur	MeB2	1.03
decatur	Cg	1.07
decatur	Cm	1.07
decatur	CrA	1.07

decatur	Lb	1.07
decatur	MeA	1.07
decatur	RuB	1.07
decatur	XnA	1.07
decatur	XnB	1.07
decatur	FcA	1.14
decatur	FcB	1.14
decatur	Mr	1.14
decatur	Or	1.14
decatur	So	1.14
decatur	Sr	1.17
decatur	Cy	1.28
dekalb	Mc	0.50
dekalb	Ud	0.50
dekalb	W	0.50
dekalb	MoE2	0.59
dekalb	MrD3	0.62
dekalb	BoC	0.69
dekalb	MoD2	0.69
dekalb	StD3	0.69
dekalb	MrC3	0.72
dekalb	OdB	0.72
dekalb	BoB	0.76
dekalb	MoC2	0.79
dekalb	StC3	0.79
dekalb	MfB	0.83
dekalb	OhB	0.83
dekalb	SrC2	0.83
dekalb	GnB2	0.86
dekalb	HdB	0.86
dekalb	SrB2	0.90
dekalb	BaB2	0.93
dekalb	Ld	0.93
dekalb	Wa	0.93
dekalb	BaA	0.97
dekalb	RaB	1.00
dekalb	Bn	1.07
dekalb	Em	1.07
dekalb	Se	1.07
dekalb	CrA	1.10
dekalb	HaA	1.10
dekalb	Pe	1.10
dekalb	Hw	1.14
dekalb	Wt	1.14
dekalb	Re	1.28
delaware	BdsAU	0.50

delaware	GlyB3	0.50
delaware	HtbAU	0.50
delaware	LteG	0.50
delaware	MwzAU	0.50
delaware	Pmg	0.50
delaware	Pml	0.50
delaware	SvsG	0.50
delaware	Uam	0.50
delaware	UccA	0.50
delaware	Ucu	0.50
delaware	UdmA	0.50
delaware	UemB	0.50
delaware	UetB	0.50
delaware	UfuA	0.50
delaware	UhaB	0.50
delaware	W	0.50
delaware	EdxE2	0.50
delaware	LshD3	0.52
delaware	CdgC3	0.59
delaware	EdxD2	0.59
delaware	MvbD3	0.59
delaware	LshC3	0.62
delaware	LteE	0.63
delaware	FgrD3	0.63
delaware	SvsE2	0.65
delaware	EdxC2	0.66
delaware	MorA	0.66
delaware	MvbC3	0.68
delaware	MumD2	0.69
delaware	EdxB2	0.72
delaware	FgrC3	0.74
delaware	EdxA	0.76
delaware	FexC2	0.76
delaware	FgoC2	0.77
delaware	MoeC2	0.79
delaware	MumC2	0.79
delaware	MvxC2	0.79
delaware	WbgC3	0.79
delaware	FexB2	0.83
delaware	FgoB2	0.84
delaware	BdsAN	0.86
delaware	GlrB2	0.86
delaware	MoeB2	0.86
delaware	MvxB2	0.86
delaware	WbgB3	0.86
delaware	LdfAH	0.90

delaware	MmcC2	0.90
delaware	MvxA	0.90
delaware	WdrC2	0.90
delaware	BdlC2	0.97
delaware	BltA	0.97
delaware	BmlA	0.97
delaware	CudA	0.97
delaware	MmcB2	0.97
delaware	ObxB2	0.97
delaware	WdrB2	0.97
delaware	MwzAN	1.00
delaware	ObxA	1.00
delaware	WdrA	1.00
delaware	WonA	1.00
delaware	GlnAH	1.02
delaware	BdhAH	1.03
delaware	BdmB2	1.03
delaware	RrwB	1.03
delaware	RroAH	1.06
delaware	BdmA	1.07
delaware	MecA	1.07
delaware	MecB	1.07
delaware	DdxA	1.10
delaware	HtbAN	1.14
delaware	LneAW	1.14
delaware	MryA	1.14
delaware	PkkA	1.14
delaware	SgmAH	1.14
delaware	SmsAH	1.14
delaware	MphA	1.17
delaware	MprA	1.17
delaware	SnlA	1.17
delaware	PgaA	1.28
delaware	ReyA	1.28
delaware	ThrA	1.28
dubois	Omz	0.50
dubois	W	0.50
dubois	GoF	0.50
dubois	GuD	0.50
dubois	PrF	0.50
dubois	GlE3	0.50
dubois	GlE	0.52
dubois	GlD3	0.55
dubois	GlD2	0.59
dubois	NeF	0.62
dubois	ZnC3	0.69

dubois	Bu	0.76
dubois	ZnC2	0.76
dubois	AfE2	0.79
dubois	NeD3	0.79
dubois	OrD	0.79
dubois	NgD2	0.83
dubois	OtC2	0.83
dubois	PaD3	0.83
dubois	PeC2	0.83
dubois	PrC	0.86
dubois	WeC3	0.86
dubois	TlA	0.90
dubois	TlB	0.90
dubois	WeC2	0.90
dubois	JoA	0.93
dubois	MgA	0.93
dubois	NgC2	0.93
dubois	PrB	0.93
dubois	OtA	0.97
dubois	OtB	0.97
dubois	PaC2	0.97
dubois	PeB	0.97
dubois	AfC2	1.00
dubois	DuA	1.00
dubois	DuB	1.00
dubois	Ba	1.03
dubois	Ch	1.07
dubois	Cu	1.07
dubois	Mo	1.07
dubois	PaB	1.07
dubois	PkA	1.07
dubois	PkB	1.07
dubois	Sf	1.07
dubois	AfB	1.10
dubois	Bo	1.10
dubois	No	1.10
dubois	Pg	1.10
dubois	St	1.14
dubois	Ph	1.17
elkhart	AbhAU	0.50
elkhart	BtxE	0.50
elkhart	EchAU	0.50
elkhart	GodAI	0.50
elkhart	HhaAP	0.50
elkhart	HtbAU	0.50
elkhart	MwzAU	0.50

elkhart	Pmg	0.50
elkhart	PxlA	0.50
elkhart	Pxo	0.50
elkhart	RosE	0.50
elkhart	TxuF	0.50
elkhart	Uam	0.50
elkhart	UdeA	0.50
elkhart	UdkA	0.50
elkhart	UdoA	0.50
elkhart	UdpA	0.50
elkhart	UdpB	0.50
elkhart	UdrA	0.50
elkhart	UeaA	0.50
elkhart	UeqA	0.50
elkhart	UfzA	0.50
elkhart	UgaA	0.50
elkhart	UglA	0.50
elkhart	UgrA	0.50
elkhart	UgsB	0.50
elkhart	UgvA	0.50
elkhart	UgvB	0.50
elkhart	UgwA	0.50
elkhart	UhbA	0.50
elkhart	Usl	0.50
elkhart	VnxA	0.50
elkhart	VolA	0.50
elkhart	W	0.50
elkhart	TxuD	0.50
elkhart	BtxC	0.52
elkhart	BtxD2	0.52
elkhart	CnbC	0.52
elkhart	TxuC	0.52
elkhart	CnbB	0.55
elkhart	BtxA	0.59
elkhart	BtxB	0.59
elkhart	CnbA	0.59
elkhart	TxuA	0.59
elkhart	TxuB	0.59
elkhart	BteA	0.66
elkhart	BteB	0.66
elkhart	WcnAI	0.69
elkhart	RoqD2	0.70
elkhart	MsaA	0.72
elkhart	MvkA	0.72
elkhart	AahAK	0.76
elkhart	DdeA	0.76

elkhart	DdeB	0.76
elkhart	MmdD3	0.76
elkhart	OmgA	0.76
elkhart	OmgB	0.76
elkhart	SdzaB	0.77
elkhart	MmbD2	0.79
elkhart	RoqC2	0.81
elkhart	GlaC	0.83
elkhart	BaaA	0.86
elkhart	BaaB	0.86
elkhart	BufA	0.86
elkhart	MfrAN	0.86
elkhart	MmdC3	0.86
elkhart	WodC3	0.86
elkhart	CosA	0.90
elkhart	CosB	0.90
elkhart	GlaB	0.90
elkhart	MmbC2	0.90
elkhart	RopA	0.90
elkhart	RopB	0.90
elkhart	BshA	0.93
elkhart	MftA	0.93
elkhart	WoaC2	0.93
elkhart	SdzA	0.94
elkhart	BlaA	0.97
elkhart	BlaB	0.97
elkhart	DcrA	0.97
elkhart	GndA	0.97
elkhart	KimA	0.97
elkhart	EchAN	1.00
elkhart	GocAK	1.00
elkhart	MgcA	1.00
elkhart	MwzAN	1.00
elkhart	WoaA	1.00
elkhart	AbhAN	1.03
elkhart	WobB	1.03
elkhart	CvdA	1.07
elkhart	CvdB	1.07
elkhart	GczA	1.07
elkhart	GdnA	1.07
elkhart	JaaAK	1.07
elkhart	ScuA	1.07
elkhart	SdnA	1.07
elkhart	BbmA	1.14
elkhart	HtbAN	1.14
elkhart	PaaAN	1.14

elkhart	PkdA	1.14
elkhart	MouA	1.17
elkhart	SnlA	1.17
elkhart	WrxAN	1.17
elkhart	BuuA	1.24
elkhart	ReyA	1.28
fayette	Bp	0.50
fayette	FaF	0.50
fayette	FaG	0.50
fayette	Gv	0.50
fayette	La	0.50
fayette	Ma	0.50
fayette	RgE1	0.50
fayette	RgE2	0.50
fayette	RgF2	0.50
fayette	Rw	0.50
fayette	W	0.50
fayette	HeG2	0.50
fayette	HeG1	0.50
fayette	RgD2	0.50
fayette	CcF2	0.50
fayette	FtE2	0.50
fayette	FaE	0.50
fayette	FvD3	0.50
fayette	FxD3	0.50
fayette	HeF2	0.50
fayette	FaC	0.52
fayette	FaD	0.52
fayette	FsD2	0.52
fayette	FtD2	0.52
fayette	HeF1	0.52
fayette	CnE3	0.55
fayette	CcE2	0.62
fayette	FaB	0.62
fayette	MsE3	0.62
fayette	CnD3	0.66
fayette	FnD2	0.66
fayette	WnC2	0.66
fayette	WnD2	0.66
fayette	WyC3	0.66
fayette	CcE1	0.69
fayette	FnD1	0.69
fayette	MmE2	0.69
fayette	WnB2	0.69
fayette	CcD2	0.72
fayette	FpC3	0.72

fayette	FrC3	0.72
fayette	MmE1	0.72
fayette	MtB2	0.72
fayette	RtE3	0.72
fayette	CnC3	0.76
fayette	FmC2	0.76
fayette	FnC2	0.76
fayette	FoC2	0.76
fayette	MsD3	0.76
fayette	MtB1	0.76
fayette	RsE2	0.76
fayette	CcD1	0.79
fayette	MmD2	0.79
fayette	RsE1	0.79
fayette	CcC2	0.83
fayette	FmB2	0.83
fayette	FnB2	0.83
fayette	FoB2	0.83
fayette	MmD1	0.83
fayette	RtD3	0.83
fayette	FmA	0.86
fayette	FmB1	0.86
fayette	FnA	0.86
fayette	FnB1	0.86
fayette	McD2	0.86
fayette	MsC3	0.86
fayette	OkC3	0.86
fayette	RsD2	0.86
fayette	CcB2	0.90
fayette	CcC1	0.90
fayette	MmC2	0.90
fayette	OcC2	0.90
fayette	RsD1	0.90
fayette	RvC3	0.90
fayette	AvB2	0.93
fayette	Ho	0.93
fayette	MmC1	0.93
fayette	MsB3	0.93
fayette	Nn	0.93
fayette	OkB3	0.93
fayette	RtC3	0.93
fayette	RuC2	0.93
fayette	XnB2	0.93
fayette	CcB1	0.97
fayette	McC2	0.97
fayette	MmB2	0.97

fayette	OcB2	0.97
fayette	RsC2	0.97
fayette	RuC1	0.97
fayette	RvB3	0.97
fayette	XnA	0.97
fayette	XnB1	0.97
fayette	AvA	1.00
fayette	MmA	1.00
fayette	MmB1	1.00
fayette	OcA	1.00
fayette	OcB1	1.00
fayette	RsC1	1.00
fayette	RtB3	1.00
fayette	RuB2	1.00
fayette	CrB2	1.03
fayette	Ge	1.03
fayette	McB2	1.03
fayette	RsB2	1.03
fayette	RuA	1.03
fayette	RuB1	1.03
fayette	XeB2	1.03
fayette	BbB2	1.07
fayette	CrA	1.07
fayette	CrB1	1.07
fayette	Ee	1.07
fayette	Es	1.07
fayette	FeB2	1.07
fayette	Gg	1.07
fayette	Gm	1.07
fayette	Go	1.07
fayette	Gs	1.07
fayette	Gt	1.07
fayette	MbB2	1.07
fayette	McA	1.07
fayette	McB1	1.07
fayette	RsA	1.07
fayette	RsB1	1.07
fayette	XeA	1.07
fayette	XeB1	1.07
fayette	BbA	1.10
fayette	BbB1	1.10
fayette	FcB2	1.10
fayette	FeA	1.10
fayette	FeB	1.10
fayette	MbA	1.10
fayette	MbB1	1.10

fayette	De	1.14
fayette	FcA	1.14
fayette	FcB1	1.14
fayette	ReB2	1.14
fayette	Sh	1.14
fayette	Sn	1.14
fayette	WhA	1.14
fayette	WhB	1.14
fayette	Ko	1.17
fayette	ReA	1.17
fayette	ReA2	1.17
fayette	Ro	1.17
fayette	Co	1.21
fayette	Cp	1.21
fayette	We	1.21
fayette	Br	1.28
fayette	By	1.28
floyd	BgeAZ	0.50
floyd	CcaG	0.50
floyd	McnGQ	0.50
floyd	Pml	0.50
floyd	Ppu	0.50
floyd	Uaa	0.50
floyd	UaoAK	0.50
floyd	UedA	0.50
floyd	UndAY	0.50
floyd	UneC	0.50
floyd	UngB	0.50
floyd	UnkB	0.50
floyd	UnlC	0.50
floyd	UnpA	0.50
floyd	UnrD	0.50
floyd	W	0.50
floyd	GgbG	0.50
floyd	GmaG	0.50
floyd	RctD3	0.50
floyd	KxlE3	0.50
floyd	McuDQ	0.50
floyd	ConC3	0.55
floyd	GgfE2	0.56
floyd	KxmE2	0.57
floyd	KxpD2	0.57
floyd	KxlC3	0.61
floyd	EepGQ	0.62
floyd	GgfD	0.65
floyd	McpC3	0.66

floyd	WhdD2	0.68
floyd	PcrC2	0.79
floyd	KxoC2	0.80
floyd	SolC2	0.81
floyd	BcrAW	0.83
floyd	BlvAW	0.83
floyd	MhyB2	0.83
floyd	CldC2	0.84
floyd	KxkC2	0.84
floyd	BcrAQ	0.86
floyd	CkkB2	0.86
floyd	MhyA	0.86
floyd	NaaB2	0.86
floyd	ScbB2	0.86
floyd	SfyB	0.86
floyd	SoaB	0.86
floyd	SodB	0.86
floyd	WomAK	0.86
floyd	NaaA	0.90
floyd	PcrA	0.90
floyd	PcrB2	0.90
floyd	ScbA	0.90
floyd	MhuA	0.93
floyd	SceB2	0.93
floyd	CtwB	1.00
floyd	BbhA	1.03
floyd	EepB	1.03
floyd	BuoA	1.07
floyd	CwaAQ	1.07
floyd	HcbAQ	1.07
floyd	HcgAH	1.07
floyd	HcgAV	1.07
floyd	LpoAK	1.07
floyd	PhaA	1.07
floyd	StaAQ	1.07
floyd	StdAQ	1.07
floyd	WaaAV	1.07
floyd	WokAV	1.07
floyd	HcgAW	1.10
floyd	HufAK	1.10
floyd	WaaAW	1.10
floyd	WokAW	1.10
floyd	NbhAK	1.14
fountain	AbhAI	0.50
fountain	CfrG	0.50
fountain	JcfG	0.50

fountain	LuhC	0.50
fountain	MqlG	0.50
fountain	Pg	0.50
fountain	RqaE	0.50
fountain	RqaG	0.50
fountain	RzcE	0.50
fountain	SvqE	0.50
fountain	SvqG	0.50
fountain	SwdE	0.50
fountain	SwdG	0.50
fountain	UbyE	0.50
fountain	Uea	0.50
fountain	W	0.50
fountain	CnaC	0.55
fountain	SlzD2	0.59
fountain	CnaB	0.62
fountain	PgaA	0.66
fountain	FamB	0.69
fountain	SlzC2	0.69
fountain	LugC2	0.76
fountain	SlyB2	0.76
fountain	SlzB2	0.76
fountain	KnqD2	0.79
fountain	ObxD2	0.79
fountain	SlyA	0.79
fountain	SlzA	0.79
fountain	AbfA	0.83
fountain	LugB2	0.83
fountain	PnwBQ	0.83
fountain	PvsC2	0.83
fountain	EmdA	0.86
fountain	EmdB	0.86
fountain	LugA	0.86
fountain	MrcA	0.86
fountain	RywD2	0.86
fountain	LfuAI	0.90
fountain	ObxC2	0.90
fountain	PvsB2	0.90
fountain	XfuC2	0.92
fountain	LdxAK	0.93
fountain	ObmC2	0.93
fountain	PvsA	0.93
fountain	RosAK	0.93
fountain	AplC2	0.97
fountain	CudA	0.97
fountain	ObxB2	0.97

fountain	RbuC2	0.97
fountain	RywC2	0.97
fountain	WufB2	0.97
fountain	XfuB2	0.99
fountain	ObmB2	1.00
fountain	ObxA	1.00
fountain	EdeAK	1.01
fountain	AplB2	1.03
fountain	AzqA	1.03
fountain	MecB2	1.03
fountain	RbuB2	1.03
fountain	RywB2	1.03
fountain	WmpB2	1.03
fountain	XabB2	1.03
fountain	ApkA	1.07
fountain	AplA	1.07
fountain	BhyB2	1.07
fountain	CbaB2	1.07
fountain	CsuA	1.07
fountain	GcaAK	1.07
fountain	LfzB2	1.07
fountain	RyfB2	1.07
fountain	SngA	1.07
fountain	SnlAP	1.07
fountain	WmpA	1.07
fountain	WvaB2	1.07
fountain	XabA	1.07
fountain	BcgAI	1.10
fountain	BhyA	1.10
fountain	CbaA	1.10
fountain	MjuA	1.10
fountain	RyfA	1.10
fountain	SseB2	1.10
fountain	TfdA	1.10
fountain	TfdB	1.10
fountain	WmnA	1.10
fountain	WvaA	1.10
fountain	FdbA	1.14
fountain	FdbB	1.14
fountain	SldAK	1.14
fountain	WkmB2	1.14
fountain	WsuA	1.14
fountain	WtaA	1.14
fountain	FdnA	1.14
fountain	RtxAK	1.17
fountain	SteA	1.17

fountain	TlxA	1.17
fountain	TmcA	1.17
fountain	WkmA	1.17
fountain	YedA	1.17
fountain	AjaAI	1.21
fountain	LbrA	1.21
fountain	RdvA	1.21
fountain	RuxA	1.21
fountain	SobAI	1.21
fountain	WqvA	1.21
fountain	BvlAK	1.24
fountain	EcoA	1.24
fountain	MaoA	1.24
fountain	ChqA	1.28
fountain	MapA	1.28
fountain	RetA	1.28
fountain	ThrA	1.28
fountain	DpbA	1.31
fountain	MamA	1.31
fountain	RbfA	1.31
franklin	CoG	0.50
franklin	Omz	0.50
franklin	Pg	0.50
franklin	Ph	0.50
franklin	RkF	0.50
franklin	W	0.50
franklin	HeG	0.50
franklin	EbE2	0.50
franklin	EdG	0.50
franklin	BnF	0.50
franklin	BoE2	0.55
franklin	BpD3	0.55
franklin	EeD2	0.59
franklin	BoD2	0.62
franklin	BrC3	0.66
franklin	CbC2	0.66
franklin	WrC2	0.66
franklin	WyC3	0.66
franklin	FxC3	0.72
franklin	Mt	0.72
franklin	Mx	0.72
franklin	WrB	0.72
franklin	BoC2	0.76
franklin	CkC3	0.76
franklin	ElA	0.76
franklin	ElB	0.76

franklin	MoD3	0.76
franklin	UnD2	0.76
franklin	MmD2	0.79
franklin	CkC2	0.83
franklin	AlA	0.86
franklin	AlB	0.86
franklin	Db	0.86
franklin	MoC3	0.86
franklin	PrC	0.86
franklin	CkB2	0.90
franklin	MmC2	0.90
franklin	RsB2	0.90
franklin	Wn	0.90
franklin	Og	0.93
franklin	WoB	0.93
franklin	Ht	0.97
franklin	MmB2	0.97
franklin	OcB2	0.97
franklin	RsA	0.97
franklin	WeB2	0.97
franklin	AvA	1.00
franklin	Gd	1.00
franklin	Ge	1.00
franklin	OcA	1.00
franklin	RvA	1.00
franklin	RvB	1.00
franklin	WmB	1.00
franklin	RuB2	1.03
franklin	XnB2	1.03
franklin	Cm	1.07
franklin	UaB	1.07
franklin	XnA	1.07
franklin	FcB	1.14
franklin	FfA	1.14
franklin	SdB	1.14
franklin	Mr	1.17
franklin	Rm	1.17
franklin	Cy	1.28
fulton	Hh	0.50
fulton	Ho	0.50
fulton	Pk	0.50
fulton	Usl	0.50
fulton	W	0.50
fulton	PlC	0.59
fulton	KoC	0.66
fulton	PlA	0.66

fulton	PlB	0.66
fulton	ChB	0.69
fulton	BtA	0.72
fulton	KoA	0.72
fulton	KoB	0.72
fulton	MsC3	0.72
fulton	OmA	0.72
fulton	OmB	0.72
fulton	MeC	0.76
fulton	Ah	0.79
fulton	BsA	0.79
fulton	Mu	0.79
fulton	WkD	0.79
fulton	MeA	0.83
fulton	MeB	0.83
fulton	MrB2	0.86
fulton	WkC2	0.86
fulton	Hk	0.90
fulton	MaA	0.90
fulton	Ad	0.93
fulton	Br	0.93
fulton	RlC2	0.93
fulton	Wa	0.93
fulton	BlA	0.97
fulton	Co	0.97
fulton	Ne	0.97
fulton	WkB	0.97
fulton	Ed	1.00
fulton	Mx	1.00
fulton	RlB2	1.00
fulton	RlA	1.03
fulton	CrA	1.07
fulton	Gf	1.07
fulton	Se	1.07
fulton	Gh	1.14
fulton	Hm	1.14
fulton	Pe	1.14
fulton	Wh	1.14
fulton	Bb	1.21
gibson	Ao	0.50
gibson	Bp	0.50
gibson	Du	0.50
gibson	FaG	0.50
gibson	Pw	0.50
gibson	Ud	0.50
gibson	W	0.50

gibson	BlF	0.50
gibson	GnF	0.50
gibson	BlD	0.52
gibson	GuD3	0.59
gibson	BlC	0.62
gibson	AmF	0.66
gibson	AnD3	0.66
gibson	AnD2	0.69
gibson	BlA	0.69
gibson	BlB	0.69
gibson	GuC3	0.69
gibson	SyF	0.69
gibson	Mh	0.72
gibson	AnC3	0.76
gibson	HoC3	0.76
gibson	TaE	0.76
gibson	AnC2	0.79
gibson	SvC	0.79
gibson	TaD3	0.79
gibson	AlE	0.83
gibson	Ay	0.83
gibson	HoB3	0.83
gibson	UmD3	0.83
gibson	Wr	0.83
gibson	AlD3	0.86
gibson	AnB	0.86
gibson	AlD2	0.90
gibson	HoB2	0.90
gibson	HoC	0.90
gibson	Ad	0.93
gibson	La	0.93
gibson	SyD	0.93
gibson	UnC3	0.93
gibson	AlC3	0.97
gibson	Pv	0.97
gibson	SyC3	0.97
gibson	Zp	0.97
gibson	AlC2	1.00
gibson	SbA	1.00
gibson	ScA	1.00
gibson	UnB3	1.00
gibson	Wo	1.00
gibson	AlB3	1.03
gibson	Cr	1.03
gibson	UnB2	1.03
gibson	AlB2	1.07

gibson	Cg	1.07
gibson	EkA	1.07
gibson	EkB	1.07
gibson	Ju	1.07
gibson	Ly	1.07
gibson	Mg	1.07
gibson	MuB2	1.07
gibson	Sf	1.07
gibson	SyB2	1.07
gibson	UnA	1.07
gibson	AlA	1.10
gibson	Bo	1.10
gibson	Hd	1.10
gibson	Lz	1.10
gibson	MuA	1.10
gibson	Nn	1.10
gibson	No	1.10
gibson	Po	1.10
gibson	Wk	1.10
gibson	Ln	1.14
gibson	Md	1.14
gibson	Me	1.14
gibson	Sr	1.14
gibson	Vn	1.14
gibson	Vo	1.14
gibson	Ar	1.17
gibson	As	1.17
gibson	Bd	1.17
gibson	HhA	1.17
gibson	IvA	1.17
gibson	IvB	1.17
gibson	Ma	1.17
gibson	Nk	1.17
gibson	Pp	1.17
gibson	RlA	1.17
gibson	Wa	1.17
gibson	Ev	1.24
gibson	Rb	1.24
gibson	Rr	1.24
gibson	Pn	1.28
gibson	Ra	1.28
grant	Py	0.50
grant	Ud	0.50
grant	UfB	0.50
grant	UhB	0.50
grant	UmC	0.50

grant	Ut	0.50
grant	W	0.50
grant	Wa	0.50
grant	HeG	0.50
grant	FtC3	0.72
grant	MvD	0.72
grant	MxC3	0.72
grant	GsB3	0.76
grant	MwC2	0.79
grant	FsB2	0.83
grant	FvB	0.83
grant	MvC	0.83
grant	FsA	0.86
grant	GrB2	0.86
grant	BkB2	0.93
grant	Lc	0.93
grant	BhA	0.97
grant	OcA	1.00
grant	Bn	1.07
grant	CuA	1.07
grant	St	1.07
grant	Ht	1.14
grant	Mg	1.14
grant	Pw	1.14
grant	Sn	1.14
grant	Pg	1.28
greene	FcE	0.50
greene	FcG	0.50
greene	Ud	0.50
greene	W	0.50
greene	BlG	0.50
greene	GfF	0.50
greene	BfG	0.50
greene	BcF	0.50
greene	BlE	0.50
greene	CcF	0.50
greene	HeG	0.50
greene	GcE2	0.50
greene	GgE	0.52
greene	CcE2	0.55
greene	EcD	0.62
greene	EfD2	0.62
greene	GmE	0.62
greene	HaE2	0.62
greene	CfD3	0.66
greene	ZaC3	0.69

greene	AnC	0.72
greene	CfD2	0.72
greene	HeE	0.72
greene	CfC3	0.76
greene	WeD3	0.76
greene	ZaC2	0.76
greene	AnB	0.79
greene	FaB	0.79
greene	FcC	0.79
greene	HeD2	0.79
greene	MbB2	0.79
greene	UnE	0.79
greene	WeD2	0.79
greene	WgD2	0.79
greene	CfC2	0.83
greene	ChC2	0.83
greene	ZaB2	0.83
greene	PbD2	0.86
greene	PrC	0.86
greene	AvB2	0.90
greene	EnA	0.90
greene	PdB2	0.90
greene	RmA	0.90
greene	Wt	0.90
greene	ZaA	0.90
greene	MgA	0.93
greene	PrB	0.93
greene	Br	0.97
greene	Bs	0.97
greene	PbC2	0.97
greene	PkC2	0.97
greene	Zp	0.97
greene	AlC2	1.00
greene	Mu	1.00
greene	Pg	1.00
greene	ScA	1.00
greene	VgA	1.00
greene	Wm	1.00
greene	Ay	1.03
greene	Bb	1.03
greene	PkB2	1.03
greene	AlB2	1.07
greene	Cu	1.07
greene	Mo	1.07
greene	So	1.07
greene	Sr	1.07

greene	Bo	1.10
greene	Hb	1.10
greene	Hc	1.10
greene	No	1.10
greene	Nr	1.10
greene	Pf	1.10
greene	St	1.14
greene	Ar	1.17
greene	HdA	1.17
greene	Ne	1.17
greene	RaA	1.17
greene	WcA	1.17
greene	Ao	1.21
greene	Ev	1.24
greene	Rb	1.24
greene	Pc	1.28
greene	Rd	1.28
hamilton	Omz	0.50
hamilton	Or	0.50
hamilton	Pt	0.50
hamilton	W	0.50
hamilton	HeF	0.52
hamilton	FxC3	0.62
hamilton	MxA	0.69
hamilton	MoD3	0.76
hamilton	MmD2	0.79
hamilton	FnB2	0.83
hamilton	FnA	0.86
hamilton	MoC3	0.86
hamilton	MmC2	0.90
hamilton	NnA	0.93
hamilton	MmB2	0.97
hamilton	OcB2	0.97
hamilton	MmA	1.00
hamilton	OcA	1.00
hamilton	CrA	1.07
hamilton	Ge	1.07
hamilton	Ra	1.07
hamilton	St	1.07
hamilton	Sx	1.07
hamilton	Ho	1.14
hamilton	Pa	1.14
hamilton	Sh	1.14
hamilton	Wh	1.14
hamilton	Ro	1.17
hamilton	Ps	1.21

hamilton	We	1.21
hamilton	Br	1.28
hamilton	Pn	1.28
hancock	Gp	0.50
hancock	Or	0.50
hancock	W	0.50
hancock	MpD3	0.76
hancock	MmD2	0.79
hancock	MpC3	0.86
hancock	MmC2	0.90
hancock	OkC2	0.90
hancock	MmB2	0.97
hancock	OcB2	0.97
hancock	MmA	1.00
hancock	OcA	1.00
hancock	MaB2	1.03
hancock	CrA	1.07
hancock	Ee	1.07
hancock	Ge	1.07
hancock	MaA	1.07
hancock	Ps	1.14
hancock	Sh	1.14
hancock	So	1.14
hancock	Wh	1.14
hancock	Ko	1.17
hancock	Mr	1.17
hancock	We	1.21
hancock	Br	1.28
hancock	Re	1.28
harrison	BtD5	0.50
harrison	CoF	0.50
harrison	GuD5	0.50
harrison	Pn	0.50
harrison	Qu	0.50
harrison	Ud	0.50
harrison	W	0.50
harrison	MaF	0.50
harrison	WbF	0.50
harrison	BeF2	0.50
harrison	GpF	0.50
harrison	BmE3	0.50
harrison	GlE2	0.50
harrison	BeE2	0.55
harrison	GlD3	0.55
harrison	HgE3	0.55
harrison	McD3	0.55

harrison	BmD3	0.59
harrison	BpD3	0.59
harrison	GlD2	0.59
harrison	HaE2	0.62
harrison	MaD2	0.62
harrison	BcD2	0.66
harrison	BeD2	0.66
harrison	BfD2	0.66
harrison	HgD3	0.66
harrison	WhE2	0.66
harrison	ZaD2	0.66
harrison	AfF2	0.69
harrison	BbD2	0.69
harrison	BlC3	0.69
harrison	BmC3	0.69
harrison	BpC3	0.69
harrison	ZaC3	0.69
harrison	BkC3	0.72
harrison	BnB3	0.72
harrison	PrD2	0.72
harrison	BcC2	0.76
harrison	BeC2	0.76
harrison	BfC2	0.76
harrison	BlB3	0.76
harrison	HaD2	0.76
harrison	HgC3	0.76
harrison	WeD3	0.76
harrison	ZaC2	0.76
harrison	BbC2	0.79
harrison	BnB2	0.79
harrison	MaB2	0.79
harrison	WeD2	0.79
harrison	BcB2	0.83
harrison	HaC2	0.83
harrison	PrC2	0.83
harrison	TlB2	0.83
harrison	WhC3	0.83
harrison	BnA	0.86
harrison	ScB2	0.86
harrison	WeC3	0.86
harrison	WhC2	0.86
harrison	PeB2	0.90
harrison	WeC2	0.90
harrison	CsC3	0.93
harrison	CtC3	0.93
harrison	ElC3	0.93

harrison	Jo	0.93
harrison	Mg	0.93
harrison	ScA	0.93
harrison	WgB2	0.93
harrison	CrC2	0.97
harrison	CtC2	0.97
harrison	ElC2	0.97
harrison	PeA	0.97
harrison	WgA	0.97
harrison	AfC2	1.00
harrison	CsB3	1.00
harrison	Wc	1.00
harrison	Ba	1.03
harrison	CrB2	1.03
harrison	ElB2	1.03
harrison	ElA	1.07
harrison	Mo	1.07
harrison	AfB	1.10
harrison	Hm	1.10
harrison	Ho	1.10
harrison	No	1.10
harrison	Hu	1.17
harrison	Ne	1.17
hendricks	Pmg	0.50
hendricks	W	0.50
hendricks	HeF	0.50
hendricks	MmE2	0.69
hendricks	FxC3	0.72
hendricks	Gs	0.72
hendricks	FoC2	0.76
hendricks	MsD3	0.76
hendricks	MmD2	0.79
hendricks	FoB2	0.83
hendricks	FoA	0.86
hendricks	MsC3	0.86
hendricks	MmC2	0.90
hendricks	MsB3	0.93
hendricks	MmB2	0.97
hendricks	OcB2	0.97
hendricks	RuC2	0.97
hendricks	CsB2	1.00
hendricks	OcA	1.00
hendricks	MeB2	1.03
hendricks	OsB2	1.03
hendricks	RuB2	1.03
hendricks	XeB2	1.03

hendricks	CrA	1.07
hendricks	Gn	1.07
hendricks	MeA	1.07
hendricks	OsA	1.07
hendricks	XeA	1.07
hendricks	FcA	1.14
hendricks	Sh	1.14
hendricks	Wh	1.14
hendricks	Mc	1.17
hendricks	Br	1.24
hendricks	Bs	1.28
hendricks	Ra	1.28
hendricks	Rn	1.28
henry	EdE2	0.50
henry	Omz	0.50
henry	Ot	0.50
henry	Pt	0.50
henry	W	0.50
henry	LsE2	0.50
henry	LxD3	0.50
henry	ExD3	0.50
henry	LeE2	0.50
henry	LhD3	0.52
henry	EdD2	0.55
henry	LxC3	0.55
henry	ExC3	0.59
henry	LeD2	0.59
henry	LsD2	0.59
henry	LhC3	0.62
henry	EdC2	0.66
henry	LsC2	0.66
henry	LeC2	0.69
henry	EdB2	0.72
henry	LsB2	0.72
henry	EdA	0.76
henry	LeB2	0.76
henry	Ma	0.79
henry	CfB2	0.83
henry	MoB2	0.83
henry	CeB2	0.86
henry	MmB2	0.86
henry	La	0.97
henry	MlB2	0.97
henry	MlA	1.00
henry	CsA	1.03
henry	CrA	1.07

henry	Ge	1.07
henry	Sk	1.07
henry	Mx	1.14
henry	Sg	1.14
henry	Sn	1.14
henry	Wb	1.14
henry	We	1.21
henry	Ts	1.24
henry	Cy	1.28
howard	Gp	0.50
howard	Ma	0.50
howard	Qu	0.50
howard	W	0.50
howard	HeE	0.50
howard	FsC3	0.72
howard	MsC3	0.72
howard	MmD3	0.76
howard	MsB3	0.79
howard	FoB2	0.83
howard	FoA	0.86
howard	MmC3	0.86
howard	MrB2	0.86
howard	MlC2	0.90
howard	BmB2	0.93
howard	MmB3	0.93
howard	BmA	0.97
howard	MlB2	0.97
howard	OcB2	0.97
howard	CyB2	1.00
howard	OcA	1.00
howard	CsB2	1.03
howard	OkB2	1.03
howard	RuB2	1.03
howard	CsA	1.07
howard	Gh	1.07
howard	OkA	1.07
howard	RuA	1.07
howard	Ca	1.14
howard	Fc	1.14
howard	Ko	1.14
howard	Lw	1.14
howard	Pe	1.14
howard	Sh	1.14
howard	Kk	1.17
howard	Bs	1.28
howard	Pa	1.28

howard	Pc	1.28
huntington	Omz	0.50
huntington	Px	0.50
huntington	Py	0.50
huntington	Ud	0.50
huntington	W	0.50
huntington	HeG	0.50
huntington	MxE2	0.59
huntington	ChB	0.62
huntington	MzD3	0.62
huntington	MtC	0.69
huntington	MxD2	0.69
huntington	MzC3	0.72
huntington	FoC2	0.76
huntington	MtA	0.76
huntington	MtB	0.76
huntington	RcA	0.76
huntington	RgC	0.76
huntington	MxC2	0.79
huntington	FoA	0.86
huntington	FoB	0.86
huntington	GlB2	0.86
huntington	RgB	0.86
huntington	BcB2	0.93
huntington	Ms	0.97
huntington	OcA	1.00
huntington	OcB	1.00
huntington	Ee	1.07
huntington	Ge	1.07
huntington	HcA	1.07
huntington	McA	1.07
huntington	McB	1.07
huntington	Ho	1.14
huntington	Pg	1.14
huntington	Sh	1.14
huntington	Sm	1.14
huntington	Wo	1.14
huntington	ApA	1.17
huntington	Pa	1.28
huntington	Pe	1.28
huntington	Rk	1.28
jackson	BeG	0.50
jackson	BlF	0.50
jackson	GnF	0.50
jackson	KtF	0.50
jackson	Omz	0.50

jackson	W	0.50
jackson	RdD3	0.50
jackson	RaC3	0.50
jackson	GnD3	0.52
jackson	BpD3	0.62
jackson	CoD	0.62
jackson	BmC2	0.63
jackson	BoD2	0.66
jackson	GpD	0.66
jackson	MmC3	0.66
jackson	FrD2	0.70
jackson	HrE	0.72
jackson	TlC2	0.72
jackson	MtC2	0.76
jackson	NgE	0.76
jackson	OtC3	0.76
jackson	WeD2	0.76
jackson	CcC2	0.79
jackson	CcC3	0.79
jackson	MkB2	0.79
jackson	OtC2	0.79
jackson	St	0.79
jackson	Wt	0.79
jackson	BmB	0.81
jackson	BcrAW	0.83
jackson	MtB2	0.83
jackson	NeD2	0.83
jackson	CcB2	0.86
jackson	HdB2	0.86
jackson	MfxA	0.86
jackson	NaaB2	0.86
jackson	PeB2	0.86
jackson	TlB2	0.86
jackson	Ud	0.87
jackson	BdB	0.90
jackson	FoA	0.90
jackson	HdA	0.90
jackson	NaaA	0.90
jackson	NnA	0.90
jackson	RoA	0.90
jackson	SsC2	0.90
jackson	MrA	0.93
jackson	PaC2	0.93
jackson	Bn	0.97
jackson	Pp	0.97
jackson	SyA	0.97

jackson	AddB2	1.00
jackson	BodAV	1.00
jackson	Df	1.00
jackson	DuB2	1.00
jackson	PaB2	1.00
jackson	Sn	1.00
jackson	Zp	1.00
jackson	AddA	1.03
jackson	Ay	1.03
jackson	BbhA	1.03
jackson	BdhAH	1.03
jackson	DuA	1.03
jackson	Ly	1.03
jackson	Bf	1.07
jackson	ClfA	1.07
jackson	Ge	1.07
jackson	Hm	1.07
jackson	PhaA	1.07
jackson	RtxAH	1.07
jackson	Sf	1.07
jackson	Sg	1.07
jackson	SldAH	1.07
jackson	StdAQ	1.07
jackson	Wa	1.07
jackson	Wr	1.07
jackson	Ar	1.10
jackson	Ru	1.10
jackson	Wk	1.10
jackson	WsyAQ	1.10
jackson	Wo	1.14
jasper	Ne	0.50
jasper	Pf	0.50
jasper	Pmg	0.50
jasper	So	0.50
jasper	Usl	0.50
jasper	W	0.50
jasper	OaC	0.59
jasper	OtB	0.59
jasper	OaB	0.66
jasper	ChB	0.69
jasper	ObB	0.69
jasper	BeB	0.72
jasper	OrB	0.72
jasper	SpB	0.72
jasper	LuB2	0.79
jasper	Mu	0.79

jasper	NaB	0.79
jasper	RxB	0.79
jasper	SsB	0.79
jasper	Ab	0.86
jasper	AyB	0.86
jasper	MkB	0.86
jasper	We	0.86
jasper	Wb	0.90
jasper	As	0.93
jasper	GzB	0.93
jasper	MaB	0.93
jasper	OcC2	0.93
jasper	Px	0.93
jasper	Wm	0.93
jasper	Mz	0.97
jasper	PdB	0.97
jasper	WsB2	0.97
jasper	Cp	1.00
jasper	Ed	1.00
jasper	Mw	1.00
jasper	St	1.00
jasper	Sx	1.00
jasper	Za	1.00
jasper	Fa	1.03
jasper	McB	1.03
jasper	PaB	1.03
jasper	SmA	1.03
jasper	CoB	1.07
jasper	Gf	1.07
jasper	Mp	1.07
jasper	Dg	1.10
jasper	Wt	1.10
jasper	Dc	1.14
jasper	Ho	1.14
jasper	Hp	1.14
jasper	MeA	1.14
jasper	MeB	1.14
jasper	AtA	1.17
jasper	Pa	1.17
jasper	Ir	1.21
jasper	Rs	1.21
jasper	Rd	1.24
jasper	Rw	1.24
jasper	Br	1.28
jasper	Re	1.28
jay	Ud	0.50

jay	W	0.50
jay	EnC3	0.59
jay	GsC3	0.62
jay	MoD3	0.62
jay	EnB3	0.66
jay	GsB3	0.69
jay	ElA	0.76
jay	Wa	0.79
jay	BlA	0.93
jay	Ef	0.93
jay	MaB2	1.03
jay	Bo	1.07
jay	Ee	1.07
jay	MaA	1.07
jay	St	1.07
jay	Pm	1.10
jay	So	1.10
jay	Ho	1.14
jay	Wh	1.14
jay	Bs	1.17
jefferson	BpE5	0.50
jefferson	Du	0.50
jefferson	Pu	0.50
jefferson	Ud	0.50
jefferson	W	0.50
jefferson	EfF	0.50
jefferson	EgG	0.50
jefferson	CaF	0.50
jefferson	TtD3	0.50
jefferson	EeD2	0.50
jefferson	PeE	0.50
jefferson	BnE	0.50
jefferson	TrD2	0.50
jefferson	TtC3	0.52
jefferson	BeD3	0.55
jefferson	BnD3	0.55
jefferson	HcD2	0.55
jefferson	HkE	0.59
jefferson	TrC2	0.59
jefferson	BmC	0.62
jefferson	BnD2	0.62
jefferson	CdC3	0.62
jefferson	BnC3	0.66
jefferson	CcC2	0.66
jefferson	JnC3	0.69
jefferson	HeC3	0.72

jefferson	MaC2	0.72
jefferson	NgD3	0.72
jefferson	BnC2	0.76
jefferson	CnC3	0.76
jefferson	DeC3	0.76
jefferson	HkD3	0.76
jefferson	JnC2	0.76
jefferson	HeC2	0.77
jefferson	DeC2	0.79
jefferson	HkD2	0.79
jefferson	MaB2	0.79
jefferson	SxC2	0.79
jefferson	WgC2	0.79
jefferson	CnC2	0.83
jefferson	GrD3	0.83
jefferson	JnB2	0.83
jefferson	MdB2	0.83
jefferson	Da	0.86
jefferson	Db	0.86
jefferson	DeB2	0.86
jefferson	GrD2	0.86
jefferson	HdB2	0.86
jefferson	HkC3	0.86
jefferson	NnB2	0.86
jefferson	SwB2	0.86
jefferson	WgB2	0.86
jefferson	CnB2	0.90
jefferson	HkC2	0.90
jefferson	PkA	0.90
jefferson	RoB2	0.90
jefferson	Wz	0.90
jefferson	AvB2	0.93
jefferson	CrB2	0.93
jefferson	GrC3	0.93
jefferson	NeC2	0.93
jefferson	RyC3	0.93
jefferson	ScB2	0.93
jefferson	WmA	0.93
jefferson	Wt	0.93
jefferson	GrC2	0.97
jefferson	Ho	0.97
jefferson	OdA	0.97
jefferson	PkB	0.97
jefferson	RoA	0.97
jefferson	RyC2	0.97
jefferson	ScA	0.97

jefferson	AvA	1.00
jefferson	NeB2	1.00
jefferson	BaA	1.03
jefferson	DfA	1.03
jefferson	RyB2	1.03
jefferson	Co	1.07
jefferson	EkA	1.07
jefferson	EkB	1.07
jefferson	PoA	1.07
jefferson	RyA	1.07
jefferson	Hg	1.10
jefferson	Wa	1.10
jefferson	Wr	1.10
jefferson	Hu	1.17
jefferson	Ra	1.17
jennings	CrbF	0.50
jennings	Gxb	0.50
jennings	HeeG	0.50
jennings	Pml	0.50
jennings	RpuE2	0.50
jennings	W	0.50
jennings	ThbD3	0.50
jennings	ThaD2	0.50
jennings	ThbC3	0.50
jennings	GufE2	0.50
jennings	ThaC2	0.52
jennings	JaeD3	0.62
jennings	GmcD3	0.66
jennings	GmcD2	0.69
jennings	HeeE2	0.72
jennings	JaeC3	0.72
jennings	CkkC3	0.76
jennings	CkkD3	0.76
jennings	GmcC3	0.76
jennings	JaeC2	0.76
jennings	JaeD2	0.76
jennings	CkkC2	0.79
jennings	CkkD2	0.79
jennings	GmcC2	0.79
jennings	MnpD2	0.79
jennings	PcrC2	0.79
jennings	CklC2	0.82
jennings	JaeB2	0.83
jennings	NaaB3	0.83
jennings	CkkB2	0.86
jennings	MmoC3	0.86

jennings	NaaB2	0.86
jennings	PcrB2	0.86
jennings	MnpC2	0.90
jennings	NaaA	0.90
jennings	PcrA	0.90
jennings	GccAH	0.93
jennings	PbbC3	0.93
jennings	EdcAH	0.97
jennings	PbbC2	0.97
jennings	AddB2	1.00
jennings	BodAH	1.00
jennings	StaAH	1.00
jennings	StdAH	1.00
jennings	AddA	1.03
jennings	BbhA	1.03
jennings	PbbB2	1.03
jennings	RtcB2	1.03
jennings	ClfA	1.07
jennings	EepA	1.07
jennings	EepB2	1.07
jennings	EepC2	1.07
jennings	HcgAH	1.07
jennings	PhaA	1.07
jennings	WaaAH	1.07
jennings	WokAH	1.07
jennings	FdmB2	1.08
jennings	FdbA	1.14
jennings	CxdA	1.31
johnson	Omz	0.50
johnson	Pa	0.50
johnson	Pmg	0.50
johnson	Uby	0.50
johnson	W	0.50
johnson	GgbG	0.50
johnson	MxG	0.50
johnson	HeF	0.50
johnson	HkF	0.59
johnson	SifG	0.59
johnson	GgfD2	0.61
johnson	MnE	0.72
johnson	FexC2	0.76
johnson	FxC2	0.76
johnson	MtD3	0.76
johnson	HkD2	0.79
johnson	MnD2	0.79
johnson	SuoAH	0.79

johnson	XrkD2	0.79
johnson	FexB2	0.83
johnson	FoB2	0.83
johnson	SulC2	0.85
johnson	FoA	0.86
johnson	MtC3	0.86
johnson	MnC2	0.90
johnson	WdC2	0.90
johnson	WdlC2	0.90
johnson	XrbC2	0.92
johnson	MtB3	0.93
johnson	NnA	0.93
johnson	ObaA	0.93
johnson	CudA	0.97
johnson	CulB	0.97
johnson	MnB2	0.97
johnson	OcB2	0.97
johnson	PkC2	0.97
johnson	WdrB2	0.97
johnson	XfuB2	0.99
johnson	CmbAW	1.00
johnson	CsB2	1.00
johnson	EcyAH	1.00
johnson	GccAH	1.00
johnson	OcA	1.00
johnson	HctAW	1.03
johnson	BfbAH	1.03
johnson	EdeAW	1.03
johnson	GcpAW	1.03
johnson	PkB2	1.03
johnson	CrA	1.07
johnson	Ee	1.07
johnson	Ge	1.07
johnson	MecAQ	1.07
johnson	Sk	1.07
johnson	SldAH	1.07
johnson	FdqB	1.09
johnson	MuA	1.10
johnson	SldAW	1.10
johnson	FdbA	1.14
johnson	FnA	1.14
johnson	Sh	1.14
johnson	Sn	1.14
johnson	SocAH	1.14
johnson	Wh	1.14
johnson	WsuA	1.14

johnson	Rs	1.17
johnson	We	1.21
johnson	RehA	1.23
johnson	Br	1.28
johnson	Re	1.28
knox	Du	0.50
knox	FbG	0.50
knox	UdB	0.50
knox	W	0.50
knox	Wb	0.50
knox	ClF	0.50
knox	HkF	0.50
knox	BlD	0.52
knox	BlB	0.62
knox	ChC	0.62
knox	HoD3	0.66
knox	AnD	0.69
knox	SyF	0.69
knox	AdB	0.76
knox	CoA	0.76
knox	HoC3	0.76
knox	AnC	0.79
knox	FaB	0.79
knox	MbB2	0.79
knox	SdA	0.83
knox	AlD3	0.86
knox	AnB	0.86
knox	Ed	0.86
knox	ElA	0.86
knox	SyD3	0.86
knox	HoB2	0.90
knox	La	0.93
knox	McA	0.93
knox	Wc	0.93
knox	Hc	0.97
knox	HoA	0.97
knox	Lo	0.97
knox	SyC3	0.97
knox	Zp	0.97
knox	Zt	0.97
knox	AlC2	1.00
knox	Ay	1.03
knox	Kn	1.03
knox	AlB2	1.07
knox	EkA	1.07
knox	Ly	1.07

knox	SyB2	1.07
knox	Vo	1.07
knox	AlA	1.10
knox	Ha	1.10
knox	Hb	1.10
knox	IoA	1.10
knox	No	1.10
knox	Pg	1.14
knox	PsA	1.14
knox	Vn	1.14
knox	Ar	1.17
knox	Bd	1.17
knox	HeA	1.17
knox	IvA	1.17
knox	Po	1.17
knox	ReA	1.17
knox	Wa	1.17
knox	Pb	1.28
knox	Ra	1.28
knox	Sa	1.28
knox	Sc	1.28
kosciusko	Ao	0.50
kosciusko	Gr	0.50
kosciusko	He	0.50
kosciusko	Ht	0.50
kosciusko	Pg	0.50
kosciusko	Ud	0.50
kosciusko	Uf	0.50
kosciusko	W	0.50
kosciusko	MxD3	0.52
kosciusko	KoE	0.55
kosciusko	ClC	0.59
kosciusko	KxC3	0.59
kosciusko	ClB	0.66
kosciusko	OrC	0.66
kosciusko	OtC	0.66
kosciusko	BoC	0.69
kosciusko	ShA	0.69
kosciusko	ShB	0.69
kosciusko	MsD	0.72
kosciusko	MxC3	0.72
kosciusko	OrA	0.72
kosciusko	OrB	0.72
kosciusko	OtA	0.72
kosciusko	OtB	0.72
kosciusko	Ab	0.76

kosciusko	BoB	0.76
kosciusko	KoC	0.76
kosciusko	MbC	0.76
kosciusko	MeC	0.76
kosciusko	MrD3	0.76
kosciusko	RxC	0.76
kosciusko	WlD2	0.76
kosciusko	KoA	0.79
kosciusko	KoB	0.79
kosciusko	KtA	0.83
kosciusko	MbA	0.83
kosciusko	MbB	0.83
kosciusko	MeA	0.83
kosciusko	MeB	0.83
kosciusko	MvC	0.83
kosciusko	RxB	0.83
kosciusko	BrA	0.86
kosciusko	CaA	0.86
kosciusko	MrC3	0.86
kosciusko	RlD	0.86
kosciusko	WlC2	0.86
kosciusko	ArA	0.90
kosciusko	Ho	0.90
kosciusko	MsB	0.90
kosciusko	MzB	0.90
kosciusko	AtA	0.93
kosciusko	BnB	0.93
kosciusko	Bp	0.93
kosciusko	MlC	0.93
kosciusko	Wa	0.93
kosciusko	BlA	0.97
kosciusko	De	0.97
kosciusko	MaC	0.97
kosciusko	RlC	0.97
kosciusko	WlB	0.97
kosciusko	Ed	1.00
kosciusko	Gf	1.00
kosciusko	Gm	1.00
kosciusko	Go	1.00
kosciusko	MlB	1.00
kosciusko	MaA	1.03
kosciusko	MaB	1.03
kosciusko	RlA	1.03
kosciusko	RlB	1.03
kosciusko	Sa	1.03
kosciusko	CrA	1.07

kosciusko	CrB	1.07
kosciusko	GtA	1.07
kosciusko	Se	1.07
kosciusko	Sf	1.07
kosciusko	Sn	1.07
kosciusko	To	1.07
kosciusko	We	1.07
kosciusko	Pb	1.10
kosciusko	Hx	1.14
kosciusko	Pa	1.14
kosciusko	Pe	1.14
kosciusko	Wc	1.14
kosciusko	Wt	1.14
kosciusko	Bc	1.21
kosciusko	Re	1.28
lagrange	Ad	0.50
lagrange	Ed	0.50
lagrange	Ht	0.50
lagrange	Hx	0.50
lagrange	Mc	0.50
lagrange	Pv	0.50
lagrange	Ud	0.50
lagrange	W	0.50
lagrange	OsE	0.50
lagrange	OsD	0.55
lagrange	BoD	0.59
lagrange	PxC	0.59
lagrange	ShC	0.59
lagrange	ChC	0.62
lagrange	OsC	0.66
lagrange	OuC	0.66
lagrange	PxB	0.66
lagrange	PzA	0.66
lagrange	BoC	0.69
lagrange	ChB	0.69
lagrange	ShA	0.69
lagrange	ShB	0.69
lagrange	BtA	0.72
lagrange	OsA	0.72
lagrange	OsB	0.72
lagrange	OuB	0.72
lagrange	BoA	0.76
lagrange	BoB	0.76
lagrange	MeC	0.76
lagrange	WhD3	0.76
lagrange	HdC	0.79

lagrange	MoC2	0.79
lagrange	WeD2	0.79
lagrange	MeB	0.83
lagrange	BxA	0.86
lagrange	HdA	0.86
lagrange	HdB	0.86
lagrange	MoB2	0.86
lagrange	WeC2	0.86
lagrange	WhC3	0.86
lagrange	Ho	0.90
lagrange	Am	0.93
lagrange	Bp	0.93
lagrange	NaA	0.93
lagrange	Wa	0.93
lagrange	BaA	0.97
lagrange	WeA	0.97
lagrange	WeB	0.97
lagrange	Gr	1.00
lagrange	RaB	1.00
lagrange	MbB	1.03
lagrange	Gf	1.07
lagrange	PrA	1.07
lagrange	Se	1.07
lagrange	CrA	1.10
lagrange	HaA	1.10
lagrange	Wt	1.10
lagrange	Hw	1.14
lagrange	Pm	1.14
lagrange	Pt	1.14
lagrange	Rb	1.28
lake	Bp	0.50
lake	Cp	0.50
lake	Du	0.50
lake	Lb	0.50
lake	Mb	0.50
lake	Mh	0.50
lake	Pmg	0.50
lake	Ur	0.50
lake	Usl	0.50
lake	W	0.50
lake	MvE3	0.52
lake	OaE	0.52
lake	PlC	0.59
lake	MuE	0.62
lake	PlB	0.66
lake	MuD2	0.69

lake	BsB	0.72
lake	MvC3	0.72
lake	SpB	0.72
lake	TyB	0.72
lake	OsC	0.76
lake	MuC2	0.79
lake	MvB3	0.79
lake	OkB	0.79
lake	SrB	0.79
lake	TcC	0.79
lake	OsA	0.83
lake	OsB	0.83
lake	TcA	0.86
lake	TcB	0.86
lake	Wk	0.86
lake	Wl	0.86
lake	MaB2	0.90
lake	MuB	0.90
lake	Br	0.93
lake	Ta	0.93
lake	TrB	0.93
lake	Wa	0.93
lake	We	0.93
lake	BlA	0.97
lake	De	0.97
lake	LyA	0.97
lake	LyB	0.97
lake	Ad	1.00
lake	Mm	1.00
lake	Al	1.03
lake	Dl	1.03
lake	DoA	1.03
lake	DoB	1.03
lake	DrB	1.03
lake	El	1.03
lake	Mn	1.03
lake	Pe	1.03
lake	Bn	1.07
lake	Gd	1.07
lake	Gf	1.07
lake	Rn	1.07
lake	Rr	1.07
lake	Gm	1.10
lake	Wo	1.10
lake	Ca	1.14
lake	Da	1.14

lake	Lm	1.14
lake	Mo	1.14
lake	Pc	1.14
lake	Wt	1.14
lake	Mr	1.17
lake	Ms	1.17
lake	Mt	1.17
lake	Rs	1.24
lake	Re	1.28
laporte	Du	0.50
laporte	Fh	0.50
laporte	Hh	0.50
laporte	Hm	0.50
laporte	Ua	0.50
laporte	Uc	0.50
laporte	UoC	0.50
laporte	Usl	0.50
laporte	Uv	0.50
laporte	W	0.50
laporte	OaE	0.50
laporte	ChD	0.52
laporte	RlF	0.52
laporte	TcF	0.52
laporte	OaC	0.59
laporte	ChC	0.62
laporte	Sa	0.66
laporte	TcD2	0.66
laporte	ChB	0.69
laporte	MrD2	0.69
laporte	BtA	0.72
laporte	TyA	0.72
laporte	TcC2	0.76
laporte	Md	0.79
laporte	MrC2	0.79
laporte	Mx	0.79
laporte	CoA	0.83
laporte	CoB	0.83
laporte	TcA	0.83
laporte	TcB	0.83
laporte	Br	0.86
laporte	HaA	0.86
laporte	Mn	0.86
laporte	MrB2	0.86
laporte	RlD2	0.86
laporte	EsA	0.90
laporte	EsB	0.90

laporte	Ad	0.93
laporte	Cd	0.93
laporte	Hk	0.93
laporte	Nf	0.93
laporte	Wa	0.93
laporte	We	0.93
laporte	BaA	0.97
laporte	Ck	0.97
laporte	RlC2	0.97
laporte	SeA	0.97
laporte	SeB	0.97
laporte	Ed	1.00
laporte	Mm	1.00
laporte	Mz	1.00
laporte	Qu	1.00
laporte	So	1.00
laporte	Ph	1.03
laporte	RlB2	1.03
laporte	Gf	1.07
laporte	RlA	1.07
laporte	Sb	1.07
laporte	Pa	1.10
laporte	Ho	1.14
laporte	Pe	1.14
laporte	Wh	1.14
laporte	Mp	1.17
laporte	Tr	1.17
lawrence	AclF	0.50
lawrence	AcmF	0.50
lawrence	BvmG	0.50
lawrence	CbxG	0.50
lawrence	FklD5	0.50
lawrence	Omz	0.50
lawrence	Uas	0.50
lawrence	UcuA	0.50
lawrence	W	0.50
lawrence	WozD5	0.50
lawrence	WpfG	0.50
lawrence	BvoG	0.50
lawrence	AcjE	0.50
lawrence	CbpD2	0.50
lawrence	AmoE	0.54
lawrence	BlrC	0.55
lawrence	CbpC2	0.59
lawrence	GgeD	0.63
lawrence	WppD2	0.64

lawrence	AmeE	0.66
lawrence	AmoC2	0.66
lawrence	GghD	0.66
lawrence	HarD	0.66
lawrence	MvnAH	0.66
lawrence	WpoD2	0.67
lawrence	WyqD	0.68
lawrence	FkhD2	0.69
lawrence	WymD	0.69
lawrence	WymD5	0.69
lawrence	EbeE	0.70
lawrence	EbdD2	0.70
lawrence	GacAW	0.72
lawrence	WhfD3	0.72
lawrence	FkoD2	0.73
lawrence	CtzD2	0.74
lawrence	EaaC2	0.76
lawrence	FkhC2	0.76
lawrence	WhfD2	0.76
lawrence	WymC2	0.76
lawrence	CtxD2	0.79
lawrence	PcrC2	0.79
lawrence	SfvB2	0.79
lawrence	WhfC3	0.79
lawrence	BkeB	0.81
lawrence	BcrAW	0.83
lawrence	ZamC2	0.83
lawrence	FknC2	0.83
lawrence	CspD2	0.86
lawrence	HsaB2	0.86
lawrence	NaaB2	0.86
lawrence	PcrB	0.86
lawrence	WhfC2	0.86
lawrence	PwdB	0.89
lawrence	AgrB	0.90
lawrence	BdoB	0.90
lawrence	WprAH	0.90
lawrence	ZamB2	0.90
lawrence	BdyB	0.91
lawrence	CspC2	0.93
lawrence	MikAH	0.93
lawrence	SoaB	0.93
lawrence	SvgA	0.97
lawrence	BodAH	1.00
lawrence	StwAH	1.00
lawrence	BbhAQ	1.03

lawrence	BuoA	1.03
lawrence	CspB	1.03
lawrence	EhrB2	1.07
lawrence	HcgAH	1.07
lawrence	NprAH	1.07
lawrence	WokAH	1.07
lawrence	MwhA	1.10
lawrence	NbhAH	1.10
lawrence	PkaAH	1.10
lawrence	PhfA	1.14
lawrence	HfiAQ	1.17
lawrence	HnoA	1.24
madison	Cp	0.50
madison	Ed	0.50
madison	Gr	0.50
madison	Ma	0.50
madison	Uby	0.50
madison	Usl	0.50
madison	W	0.50
madison	RdE2	0.50
madison	HeF2	0.50
madison	MsD3	0.59
madison	MpE3	0.62
madison	FoD2	0.66
madison	MnE2	0.69
madison	FtC3	0.72
madison	MrD	0.72
madison	MsC3	0.72
madison	FoC2	0.76
madison	MpD3	0.76
madison	FsC2	0.79
madison	MnD2	0.79
madison	MrC2	0.79
madison	MsB3	0.79
madison	FaA	0.83
madison	FaB	0.83
madison	FoB2	0.83
madison	FsC	0.83
madison	FxB3	0.83
madison	CnB2	0.86
madison	FoA	0.86
madison	FrA	0.86
madison	FsB2	0.86
madison	Hn	0.86
madison	MpC3	0.86
madison	MrB2	0.86

madison	CnA	0.90
madison	FsA	0.90
madison	FsB	0.90
madison	MnC2	0.90
madison	BoB2	0.93
madison	Hm	0.93
madison	MpB3	0.93
madison	Wa	0.93
madison	BoA	0.97
madison	MnB2	0.97
madison	MnA	1.00
madison	OcA	1.00
madison	OcB	1.00
madison	CrB2	1.03
madison	CaB2	1.07
madison	CrA	1.07
madison	Es	1.07
madison	Gn	1.07
madison	Sl	1.07
madison	Ws	1.07
madison	CaA	1.10
madison	Kg	1.10
madison	Kt	1.10
madison	Cm	1.14
madison	Lm	1.14
madison	Pc	1.14
madison	Sh	1.14
madison	Sm	1.14
madison	So	1.14
madison	Wc	1.14
madison	Kc	1.17
madison	Km	1.17
madison	Ks	1.17
madison	Ro	1.17
madison	Rs	1.17
madison	Wd	1.21
madison	Mm	1.24
madison	Br	1.28
madison	Bs	1.28
madison	Mh	1.28
madison	Ml	1.28
marion	Omz	0.50
marion	Pg	0.50
marion	Pml	0.50
marion	Ua	0.50
marion	Ub	0.50

marion	Uc	0.50
marion	UfA	0.50
marion	UfC	0.50
marion	Ug	0.50
marion	UmB	0.50
marion	UmC	0.50
marion	Uw	0.50
marion	W	0.50
marion	HeF	0.50
marion	MxE2	0.69
marion	FxC2	0.76
marion	MxD2	0.79
marion	FoB2	0.83
marion	FoA	0.86
marion	MmC2	0.90
marion	MmB2	0.97
marion	OcB2	0.97
marion	CsB2	1.00
marion	MmA	1.00
marion	OcA	1.00
marion	MgB2	1.03
marion	CrA	1.07
marion	Ee	1.07
marion	Ge	1.07
marion	MgA	1.07
marion	Sk	1.07
marion	Sh	1.14
marion	Sn	1.14
marion	Wh	1.14
marion	We	1.21
marion	Br	1.28
marion	Re	1.28
marshall	Fc	0.50
marshall	Hp	0.50
marshall	Ua	0.50
marshall	W	0.50
marshall	PsD	0.50
marshall	OsD	0.55
marshall	PsC	0.59
marshall	ChC	0.62
marshall	OsC	0.66
marshall	PsA	0.66
marshall	TyC	0.66
marshall	ChB	0.69
marshall	SpA	0.69
marshall	BeA	0.72

marshall	FsC2	0.72
marshall	OsA	0.72
marshall	OsB	0.72
marshall	TyA	0.72
marshall	TyB	0.72
marshall	MgC	0.76
marshall	WmD3	0.76
marshall	FsA	0.83
marshall	FsB	0.83
marshall	MgB	0.83
marshall	OwA	0.83
marshall	BoA	0.86
marshall	EsA	0.86
marshall	HdB	0.86
marshall	RsD	0.86
marshall	St	0.86
marshall	WkC2	0.86
marshall	AuA	0.90
marshall	Ad	0.93
marshall	Bd	0.93
marshall	Ne	0.93
marshall	RsC2	0.93
marshall	Wa	0.93
marshall	MeC2	0.97
marshall	WkB	0.97
marshall	Ed	1.00
marshall	PdA	1.00
marshall	RsA	1.03
marshall	RsB	1.03
marshall	CtA	1.07
marshall	Gf	1.07
marshall	MeA	1.07
marshall	MeB	1.07
marshall	LnA	1.10
marshall	LnB	1.10
marshall	Ho	1.14
marshall	Pa	1.14
marshall	Wh	1.14
marshall	Wt	1.14
marshall	Mn	1.17
marshall	Tx	1.17
marshall	Br	1.28
marshall	Re	1.28
martin	AciG	0.50
martin	AclF	0.50
martin	AcmF	0.50

martin	FamF	0.50
martin	NamF	0.50
martin	Omz	0.50
martin	UcuA	0.50
martin	Usl	0.50
martin	W	0.50
martin	WozD5	0.50
martin	WpfG	0.50
martin	AbqE3	0.50
martin	AbqE	0.50
martin	AbqD3	0.50
martin	OmrE	0.50
martin	AbqD2	0.50
martin	AcmE	0.52
martin	AgyC	0.54
martin	AmoE	0.54
martin	WpvD	0.54
martin	FanC	0.55
martin	WpnE	0.58
martin	AgyB	0.59
martin	CtwD2	0.61
martin	WppD2	0.64
martin	AmoC2	0.66
martin	HarD	0.66
martin	McpC3	0.66
martin	MvnAH	0.66
martin	WpoD2	0.67
martin	EbdD2	0.70
martin	GacAW	0.72
martin	WhfD3	0.72
martin	AgrC3	0.76
martin	EaaC2	0.76
martin	WhfD2	0.76
martin	AgrC2	0.79
martin	PcrC2	0.79
martin	SfyB2	0.79
martin	ClmC	0.83
martin	PbbD2	0.83
martin	ZamC2	0.83
martin	HsaB2	0.86
martin	JoaA	0.86
martin	PcrB	0.86
martin	WhfC2	0.86
martin	AgrA	0.90
martin	AgrB	0.90
martin	WprAH	0.90

martin	ZamB2	0.90
martin	MikAQ	0.93
martin	PbbC2	0.93
martin	PlcAV	0.93
martin	CtnC	0.97
martin	WhfB	0.97
martin	ZcaAQ	0.97
martin	BodAH	1.00
martin	CwaAH	1.00
martin	StaAH	1.00
martin	BbhA	1.03
martin	MhhAH	1.03
martin	BgeAH	1.07
martin	CbaB	1.07
martin	HcgAH	1.07
martin	MecA	1.07
martin	PlfB	1.07
martin	WaaAH	1.07
martin	WokAH	1.07
martin	NbhAH	1.10
miami	Omz	0.50
miami	Or	0.50
miami	Pz	0.50
miami	W	0.50
miami	HeG	0.50
miami	MtD3	0.52
miami	ChB	0.69
miami	FzC3	0.72
miami	MsD	0.72
miami	MtC3	0.72
miami	MhD3	0.76
miami	Mp	0.76
miami	OsB	0.76
miami	WsD3	0.76
miami	MeB	0.83
miami	MsC	0.83
miami	OtA	0.83
miami	FsA	0.86
miami	FsB	0.86
miami	MhC3	0.86
miami	MrB	0.86
miami	St	0.86
miami	WsC3	0.86
miami	Au	0.90
miami	MsB	0.90
miami	WsC	0.90

miami	Ba	0.97
miami	Bc	0.97
miami	Mm	0.97
miami	WsB	0.97
miami	Ge	1.00
miami	MhB	1.00
miami	OcA	1.00
miami	OcB	1.00
miami	MaA	1.03
miami	Cr	1.07
miami	Gr	1.07
miami	Se	1.07
miami	Sn	1.07
miami	Fn	1.14
miami	Hx	1.14
miami	Mk	1.14
miami	Pm	1.14
miami	Pw	1.14
miami	Sh	1.14
miami	So	1.14
miami	Wh	1.14
miami	Ro	1.17
miami	Br	1.28
miami	Pt	1.28
miami	Re	1.28
miami	Tr	1.28
monroe	CtB	0.50
monroe	CtC	0.50
monroe	HtB	0.50
monroe	Omz	0.50
monroe	Ua	0.50
monroe	Ud	0.50
monroe	W	0.50
monroe	CoF	0.50
monroe	GrD	0.50
monroe	BkF	0.50
monroe	ChF	0.50
monroe	HkF	0.50
monroe	CaD	0.50
monroe	Hc	0.50
monroe	EbE	0.55
monroe	Cb	0.59
monroe	EdD	0.62
monroe	GpD	0.62
monroe	EkF	0.66
monroe	HbD3	0.66

monroe	HaE	0.69
monroe	PrE	0.69
monroe	WmC	0.72
monroe	Bu	0.76
monroe	CsC	0.79
monroe	HaD	0.79
monroe	ZnC	0.83
monroe	BdB	0.86
monroe	HaC	0.86
monroe	PcD	0.86
monroe	CrD	0.90
monroe	HoC	0.90
monroe	PeC	0.90
monroe	PrC	0.90
monroe	RcD	0.90
monroe	Sx	0.90
monroe	TlA	0.90
monroe	TlB	0.90
monroe	WeC	0.93
monroe	Zs	0.93
monroe	HoA	0.97
monroe	HoB	0.97
monroe	PeA	0.97
monroe	PeB	0.97
monroe	CrC	1.00
monroe	PaC	1.00
monroe	RcC	1.00
monroe	Zo	1.00
monroe	Zp	1.00
monroe	Ba	1.03
monroe	CrB	1.07
monroe	Cu	1.07
monroe	EkB	1.07
monroe	MbB	1.07
monroe	PaB	1.07
monroe	RcB	1.07
monroe	Sf	1.07
monroe	AfB	1.10
monroe	Bo	1.10
monroe	Hd	1.10
monroe	Po	1.10
monroe	Wr	1.10
monroe	St	1.14
monroe	Wo	1.14
monroe	IvA	1.17
monroe	Wa	1.17

montgomery	HxF	0.50
montgomery	My	0.50
montgomery	Po	0.50
montgomery	Pq	0.50
montgomery	RoG	0.50
montgomery	Sa	0.50
montgomery	Ud	0.50
montgomery	W	0.50
montgomery	WfG	0.50
montgomery	CcF	0.50
montgomery	HeF	0.52
montgomery	Sv	0.55
montgomery	BpC3	0.66
montgomery	Ms	0.66
montgomery	MoE2	0.69
montgomery	OsB	0.72
montgomery	Lb	0.76
montgomery	MpD3	0.76
montgomery	MdD2	0.83
montgomery	MpC3	0.86
montgomery	MoC2	0.90
montgomery	OcC2	0.90
montgomery	OfC2	0.90
montgomery	Su	0.90
montgomery	Be	0.93
montgomery	Ce	0.93
montgomery	MrC2	0.93
montgomery	SdB	0.93
montgomery	Wa	0.93
montgomery	Bc	0.97
montgomery	MeC	0.97
montgomery	Mt	0.97
montgomery	OfB2	0.97
montgomery	OnC	0.97
montgomery	CbC2	1.00
montgomery	Ck	1.00
montgomery	CyB2	1.00
montgomery	FgB2	1.00
montgomery	Mw	1.00
montgomery	ObA	1.00
montgomery	OcA	1.00
montgomery	OcB	1.00
montgomery	OhB	1.00
montgomery	RxC	1.00
montgomery	MeB	1.03
montgomery	OnB	1.03

montgomery	Sb	1.03
montgomery	XgB2	1.03
montgomery	Cg	1.07
montgomery	CwA	1.07
montgomery	Lo	1.07
montgomery	PfB	1.07
montgomery	WeB	1.07
montgomery	WkA	1.07
montgomery	AfA	1.10
montgomery	BoA	1.10
montgomery	CbA	1.10
montgomery	CbB	1.10
montgomery	JaB	1.10
montgomery	MvA	1.10
montgomery	RtA	1.10
montgomery	RtB	1.10
montgomery	RwA	1.10
montgomery	SrA	1.10
montgomery	StB	1.10
montgomery	WdA	1.10
montgomery	FdA	1.14
montgomery	FdB	1.14
montgomery	Pd	1.14
montgomery	PrA	1.14
montgomery	PrB	1.14
montgomery	RnA	1.14
montgomery	Sf	1.14
montgomery	Wb	1.14
montgomery	RlA	1.17
montgomery	SlA	1.17
montgomery	TgA	1.17
montgomery	WcA	1.17
montgomery	BxA	1.21
montgomery	MuA	1.21
montgomery	ReA	1.21
montgomery	BrA	1.24
montgomery	Mc	1.24
montgomery	Cz	1.28
montgomery	Du	1.28
montgomery	Mb	1.28
montgomery	Ph	1.28
montgomery	Ra	1.28
montgomery	Ty	1.28
morgan	Omz	0.50
morgan	Ps	0.50
morgan	W	0.50

morgan	WcG	0.50
morgan	BfG	0.50
morgan	ChF	0.50
morgan	GpE	0.52
morgan	MnF	0.52
morgan	HkF	0.59
morgan	MbE	0.59
morgan	BmC	0.62
morgan	GpD	0.62
morgan	MbD2	0.62
morgan	CnD3	0.66
morgan	PrE	0.66
morgan	BeC2	0.72
morgan	CnD2	0.72
morgan	GpC	0.72
morgan	MnE	0.72
morgan	CnC3	0.76
morgan	FxC2	0.76
morgan	MoD3	0.76
morgan	PrD	0.76
morgan	MnD2	0.79
morgan	CnC2	0.83
morgan	FoB2	0.83
morgan	ZaC	0.83
morgan	BeB	0.86
morgan	FoA	0.86
morgan	GrD2	0.86
morgan	MoC3	0.86
morgan	PrC	0.86
morgan	St	0.86
morgan	MnC2	0.90
morgan	PkD	0.90
morgan	ZaB	0.90
morgan	PrA	0.93
morgan	PrB	0.93
morgan	WfC	0.93
morgan	AvB	0.97
morgan	EsC2	0.97
morgan	MnB2	0.97
morgan	OcB2	0.97
morgan	PkC2	0.97
morgan	PnB	0.97
morgan	AfC2	1.00
morgan	CsB2	1.00
morgan	GrC	1.00
morgan	OcA	1.00

morgan	VoA	1.00
morgan	Zp	1.00
morgan	Bd	1.03
morgan	PpB2	1.03
morgan	XeB2	1.03
morgan	CrA	1.07
morgan	Ge	1.07
morgan	MeA	1.07
morgan	MeB	1.07
morgan	Mu	1.07
morgan	PpA	1.07
morgan	RuB	1.07
morgan	AfA	1.10
morgan	AfB	1.10
morgan	Bo	1.10
morgan	Ha	1.10
morgan	Wu	1.10
morgan	Ba	1.14
morgan	FcA	1.14
morgan	Sh	1.14
morgan	Sn	1.14
morgan	Wr	1.14
morgan	Ar	1.17
morgan	IvA	1.17
morgan	Mp	1.17
morgan	Rd	1.17
morgan	Ro	1.17
morgan	Ta	1.17
morgan	Wa	1.17
morgan	Ev	1.24
morgan	Br	1.28
morgan	Pm	1.28
morgan	Re	1.28
newton	Ap	0.50
newton	Ar	0.50
newton	Co	0.50
newton	Cz	0.50
newton	Nw	0.50
newton	Pt	0.50
newton	Py	0.50
newton	Sd	0.50
newton	Ud	0.50
newton	W	0.50
newton	OaC	0.59
newton	OaB	0.66
newton	Pp	0.66

newton	Wa	0.66
newton	ZbB	0.66
newton	ObB	0.69
newton	ZaA	0.69
newton	BmB	0.72
newton	MnE	0.72
newton	OrB	0.72
newton	SrB	0.72
newton	Ac	0.79
newton	MuA	0.79
newton	NsA	0.79
newton	NsB	0.79
newton	TaA	0.79
newton	Wc	0.79
newton	OpB2	0.83
newton	To	0.83
newton	AyB	0.86
newton	AzA	0.86
newton	EsB	0.86
newton	OnB2	0.86
newton	WeA	0.86
newton	MnC2	0.90
newton	OnA	0.90
newton	SeA	0.90
newton	Ad	0.93
newton	Af	0.93
newton	OcC2	0.93
newton	Pu	0.93
newton	Px	0.93
newton	RuA	0.93
newton	SzC2	0.93
newton	AuA	0.97
newton	Cr	0.97
newton	FrA	0.97
newton	FrB2	0.97
newton	FtB2	0.97
newton	MrB2	0.97
newton	OkB2	0.97
newton	RtA	0.97
newton	CtB2	1.00
newton	Cv	1.00
newton	FtA	1.00
newton	FwA	1.00
newton	Gn	1.00
newton	Gt	1.00
newton	Ke	1.00

newton	MeB2	1.00
newton	Mh	1.00
newton	Mk	1.00
newton	SwA	1.00
newton	SyA	1.00
newton	SzB2	1.00
newton	WkA	1.00
newton	Zg	1.00
newton	BfB2	1.03
newton	CtA	1.03
newton	DdA	1.03
newton	FeA	1.03
newton	FoB2	1.03
newton	MeA	1.03
newton	SmB	1.03
newton	DgA	1.07
newton	FoA	1.07
newton	Gf	1.07
newton	Mp	1.07
newton	BbA	1.10
newton	DaA	1.10
newton	GhB	1.10
newton	SxA	1.10
newton	Bh	1.14
newton	By	1.14
newton	DcA	1.14
newton	Ho	1.14
newton	GbA	1.17
newton	PaA	1.17
newton	PaB	1.17
newton	Rv	1.17
newton	Ir	1.21
newton	Sf	1.24
newton	Sh	1.24
newton	Sg	1.28
newton	Sk	1.28
noble	Ad	0.50
noble	Ed	0.50
noble	Gp	0.50
noble	Hm	0.50
noble	La	0.50
noble	Ma	0.50
noble	Mb	0.50
noble	W	0.50
noble	FsE2	0.50
noble	CcC3	0.52

noble	FsD2	0.52
noble	BoD2	0.59
noble	ChC	0.62
noble	MsD3	0.62
noble	MtE	0.62
noble	OsC	0.66
noble	BoC	0.69
noble	ChB	0.69
noble	MfE2	0.69
noble	MrD2	0.69
noble	FoC2	0.72
noble	MsC3	0.72
noble	OsB	0.72
noble	BoB	0.76
noble	MgD3	0.76
noble	MfD2	0.79
noble	MrC2	0.79
noble	MuC2	0.79
noble	FoA	0.83
noble	FoB	0.83
noble	MeB	0.83
noble	OtA	0.83
noble	RsD2	0.83
noble	MgC3	0.86
noble	MrB2	0.86
noble	Au	0.90
noble	MfC2	0.90
noble	RaC2	0.90
noble	Am	0.93
noble	BlB2	0.93
noble	Br	0.93
noble	Fu	0.93
noble	Hh	0.93
noble	RdB2	0.93
noble	RsC2	0.93
noble	Wa	0.93
noble	WrA	0.93
noble	BlA	0.97
noble	MfB2	0.97
noble	MhB2	0.97
noble	Em	1.00
noble	MhA	1.00
noble	RaB	1.00
noble	MdB	1.03
noble	RbA	1.03
noble	RbB	1.03

noble	RsA	1.03
noble	RsB	1.03
noble	CrA	1.07
noble	Gf	1.07
noble	PdA	1.07
noble	Se	1.07
noble	To	1.07
noble	HaA	1.10
noble	Ho	1.14
noble	Pb	1.14
noble	Pe	1.14
noble	Sh	1.14
noble	Ws	1.14
noble	Wt	1.14
noble	Mn	1.17
noble	Bx	1.28
noble	Re	1.28
ohio	EdF	0.50
ohio	Pg	0.50
ohio	RdG	0.50
ohio	Ud	0.50
ohio	W	0.50
ohio	EdE3	0.50
ohio	CcE3	0.50
ohio	EcE2	0.50
ohio	BeE	0.50
ohio	CaE2	0.50
ohio	CcD3	0.52
ohio	PaE2	0.52
ohio	BeD3	0.55
ohio	MbD3	0.55
ohio	CaD2	0.59
ohio	BeD2	0.62
ohio	CcC3	0.62
ohio	PaD2	0.62
ohio	BeC3	0.66
ohio	CaC2	0.66
ohio	SwD2	0.69
ohio	Df	0.72
ohio	SwC3	0.72
ohio	BeC2	0.76
ohio	CnC3	0.76
ohio	MaB2	0.76
ohio	WbC3	0.76
ohio	SwC2	0.79
ohio	CnC2	0.83

ohio	FoB2	0.83
ohio	WbC2	0.83
ohio	De	0.86
ohio	St	0.86
ohio	SwB2	0.86
ohio	CnB2	0.90
ohio	RoB2	0.90
ohio	EkC2	0.97
ohio	RoA	0.97
ohio	WbB2	0.97
ohio	WhA	0.97
ohio	AvA	1.00
ohio	OcA	1.00
ohio	BaA	1.03
ohio	EkB2	1.03
ohio	Ju	1.03
ohio	Ch	1.07
ohio	Ct	1.07
ohio	EkA	1.07
ohio	Or	1.14
ohio	Hu	1.17
ohio	Ne	1.17
ohio	Ra	1.17
orange	AcgF	0.50
orange	AciG	0.50
orange	AcmF	0.50
orange	CbzG	0.50
orange	FkhF	0.50
orange	Omz	0.50
orange	Pml	0.50
orange	TblG	0.50
orange	Ubx	0.50
orange	Usl	0.50
orange	W	0.50
orange	WozD5	0.50
orange	WpfG	0.50
orange	AciE	0.50
orange	AbqE3	0.50
orange	AbqE2	0.50
orange	AbqD2	0.50
orange	HarE2	0.52
orange	CbtD3	0.55
orange	CbuE	0.55
orange	HafD3	0.55
orange	WpmD3	0.61
orange	WppD2	0.61

orange	FkhD2	0.66
orange	WpoD2	0.67
orange	WymD	0.69
orange	GacAW	0.72
orange	WhfD3	0.72
orange	CtwD2	0.74
orange	AgrC3	0.76
orange	CtyC2	0.76
orange	WhfD2	0.76
orange	WymC2	0.76
orange	AgrC2	0.79
orange	PcrC2	0.79
orange	WhfC3	0.79
orange	BcrAW	0.83
orange	HsaB2	0.86
orange	JoaA	0.86
orange	PcrB	0.86
orange	WhfC2	0.86
orange	AgrA	0.90
orange	AgrB	0.90
orange	BbhA	0.90
orange	BdoA	0.90
orange	BdoB	0.90
orange	CspC3	0.90
orange	CspC2	0.93
orange	EepC2	0.93
orange	CwaAH	1.00
orange	BuoA	1.03
orange	CspB	1.03
orange	EepA	1.07
orange	EepB	1.07
orange	HcgAH	1.07
orange	MsvA	1.07
orange	StdAH	1.07
orange	WaaAH	1.07
orange	WokAH	1.07
orange	PhfA	1.14
owen	AbgAU	0.50
owen	AffE	0.50
owen	BgeAH	0.50
owen	EaaD2	0.50
owen	GaaE2	0.50
owen	GabG	0.50
owen	GmcE2	0.50
owen	GmpE2	0.50
owen	GmpF	0.50

owen	HasE2	0.50
owen	HefG	0.50
owen	HeoE	0.50
owen	HeoE3	0.50
owen	HeoG	0.50
owen	HepG	0.50
owen	HesG	0.50
owen	HeuE	0.50
owen	HeuF	0.50
owen	MrcG	0.50
owen	PhaAP	0.50
owen	Pml	0.50
owen	PsaD3	0.50
owen	PsaG	0.50
owen	PsbF	0.50
owen	Rnn	0.50
owen	RpzG	0.50
owen	SneD5	0.50
owen	StgD2	0.50
owen	SwhG	0.50
owen	TcgG	0.50
owen	TtaG	0.50
owen	TtcE	0.50
owen	Uaa	0.50
owen	W	0.50
owen	WpyBJ	0.50
owen	ZamD5	0.50
owen	SneD3	0.50
owen	MvrAH	0.55
owen	AfeD	0.57
owen	HarD3	0.59
owen	HarD2	0.62
owen	TahB	0.63
owen	CkkD3	0.66
owen	OmkD3	0.66
owen	AfeC	0.68
owen	CkkD2	0.69
owen	GmcD3	0.69
owen	SfyC2	0.72
owen	SneC3	0.72
owen	SneD2	0.72
owen	ZamD2	0.72
owen	AftD	0.73
owen	CkkC3	0.76
owen	HccC3	0.76
owen	OmkC3	0.76

owen	WhfD2	0.76
owen	ZapD3	0.77
owen	CkkC2	0.79
owen	OmkC2	0.79
owen	PbbD3	0.79
owen	PcrC2	0.79
owen	PrwAV	0.79
owen	SfyB2	0.79
owen	SneC2	0.79
owen	SupAH	0.79
owen	WolAI	0.79
owen	ZamC3	0.79
owen	GmhD2	0.81
owen	HkaB	0.81
owen	PbbD2	0.83
owen	WomAH	0.83
owen	ZamC2	0.83
owen	AfsC	0.84
owen	HelD2	0.84
owen	AloB2	0.86
owen	CkkB2	0.86
owen	HccB2	0.86
owen	OfcAV	0.86
owen	PcrB2	0.86
owen	CspC3	0.90
owen	HccA	0.90
owen	PbbC3	0.90
owen	PcrAQ	0.90
owen	WpuAV	0.90
owen	ZamB2	0.90
owen	AfsB	0.90
owen	StgC2	0.91
owen	CspC2	0.93
owen	HleAV	0.93
owen	MhuA	0.93
owen	OfaAV	0.93
owen	PbbC2	0.93
owen	PlcAV	0.93
owen	RtcC3	0.93
owen	WeaA	0.93
owen	WeaAQ	0.93
owen	WpuAK	0.93
owen	GblAH	0.97
owen	PryB	0.97
owen	SfoA	0.97
owen	StfC2	0.97

owen	WprAQ	0.97
owen	BodAV	1.00
owen	PcnA	1.00
owen	StaAV	1.00
owen	BdxAV	1.01
owen	AkeB2	1.03
owen	AmkA	1.03
owen	DfnA	1.03
owen	MhhAH	1.03
owen	PlfB2	1.03
owen	StfB2	1.03
owen	WlmAK	1.03
owen	HcgAH	1.07
owen	LnfA	1.07
owen	LnfB	1.07
owen	MecA	1.07
owen	MecAQ	1.07
owen	MecB	1.07
owen	MhhAK	1.07
owen	MsvA	1.07
owen	OfeB	1.07
owen	PhaA	1.07
owen	PlfA	1.07
owen	StdAH	1.07
owen	VdgA	1.07
owen	WokAH	1.07
owen	HchA	1.10
owen	NbhAH	1.10
owen	AhrAK	1.14
owen	TadA	1.17
owen	HnoA	1.24
parke	Cp	0.50
parke	Gr	0.50
parke	Mp	0.50
parke	Omz	0.50
parke	RoE	0.50
parke	RoF	0.50
parke	St	0.50
parke	W	0.50
parke	ChF	0.50
parke	HnF	0.50
parke	HsF	0.50
parke	NsE	0.50
parke	ChC	0.62
parke	ChD	0.62
parke	PrE	0.66

parke	ChB	0.69
parke	CnD3	0.69
parke	HrE2	0.69
parke	FsD2	0.72
parke	HsE	0.72
parke	PrD2	0.72
parke	CnD2	0.76
parke	FmD2	0.76
parke	FtD2	0.76
parke	EsC2	0.79
parke	FmC2	0.83
parke	FsA	0.83
parke	FsB	0.83
parke	FsC	0.83
parke	PrC2	0.83
parke	RuD3	0.83
parke	WbC2	0.83
parke	EsA	0.86
parke	FmA	0.86
parke	FmB	0.86
parke	FtA	0.86
parke	FtB	0.86
parke	PaD2	0.86
parke	EoA	0.90
parke	OcC2	0.90
parke	PrA	0.93
parke	PrB	0.93
parke	RuC3	0.93
parke	WbA	0.93
parke	WbB	0.93
parke	WcA	0.93
parke	WcB	0.93
parke	AhC3	0.97
parke	CdC2	0.97
parke	PaC2	0.97
parke	RtC2	0.97
parke	RtD2	0.97
parke	AfC2	1.00
parke	OaA	1.00
parke	OaB	1.00
parke	OcA	1.00
parke	OcB	1.00
parke	RsC	1.00
parke	RuB3	1.00
parke	Zc	1.00
parke	As	1.03

parke	Bp	1.03
parke	Gf	1.03
parke	RtB2	1.03
parke	AfB2	1.07
parke	Ea	1.07
parke	Eb	1.07
parke	El	1.07
parke	Em	1.07
parke	En	1.07
parke	Gh	1.07
parke	Gm	1.07
parke	Gn	1.07
parke	Go	1.07
parke	PaB	1.07
parke	RsB	1.07
parke	CaA	1.10
parke	CaB	1.10
parke	CdA	1.10
parke	CdB	1.10
parke	FcA	1.14
parke	FcB	1.14
parke	Lm	1.14
parke	Sb	1.14
parke	ShA	1.14
parke	SmA	1.14
parke	Ar	1.17
parke	IvA	1.17
parke	IvB	1.17
parke	ReA	1.17
parke	ReB	1.17
parke	Al	1.21
parke	Hu	1.21
parke	Wd	1.21
parke	Wo	1.21
parke	Wp	1.21
parke	Wr	1.21
parke	Ww	1.24
parke	Ra	1.28
parke	Rc	1.28
perry	AcuF	0.50
perry	AfzG	0.50
perry	BodAM	0.50
perry	EesFQ	0.50
perry	McnGQ	0.50
perry	Uaa	0.50
perry	Uas	0.50

perry	UddD	0.50
perry	UehB	0.50
perry	UffY	0.50
perry	W	0.50
perry	AccG	0.50
perry	JoeG	0.50
perry	TakD	0.50
perry	McuDQ	0.50
perry	TakC	0.55
perry	EabD3	0.58
perry	AbvD3	0.62
perry	UabBK	0.62
perry	EabD2	0.63
perry	AbvD2	0.66
perry	McpC3	0.66
perry	BkeC2	0.67
perry	GacAW	0.72
perry	McgC2	0.72
perry	AgrC3	0.76
perry	EesD2	0.79
perry	EesDQ	0.79
perry	AgrC2	0.79
perry	SfyB2	0.79
perry	RgvD3	0.83
perry	HsaB2	0.86
perry	MsbC2	0.87
perry	MsbCQ	0.87
perry	AgrA	0.90
perry	AgrB	0.90
perry	ScbA	0.90
perry	ScbAQ	0.90
perry	ScdB	0.90
perry	ScdBQ	0.90
perry	WprAH	0.90
perry	CndAH	0.93
perry	DduC2	0.93
perry	JoaA	0.93
perry	MhuA	0.93
perry	PsmA	0.93
perry	RgvC3	0.93
perry	MsbB	0.97
perry	MsbBQ	0.97
perry	RgvC2	0.97
perry	RtcC2	0.97
perry	ZcaA	0.97
perry	EesA	0.98

perry	EesAQ	0.98
perry	BodAH	1.00
perry	CwaAH	1.00
perry	EemAQ	1.03
perry	MhkAH	1.03
perry	RtcB2	1.03
perry	TckA	1.03
perry	TckB	1.03
perry	WrlAH	1.03
perry	HcaA	1.07
perry	HcbAQ	1.07
perry	HcgAH	1.07
perry	PhwB2	1.07
perry	RatAH	1.07
perry	RgvB	1.07
perry	StdAH	1.07
perry	WaaAH	1.07
perry	WokAH	1.07
perry	HbhA	1.10
perry	HubAH	1.10
perry	NbgAH	1.10
perry	PhwA	1.10
perry	PkaAH	1.10
perry	HcgAQ	1.14
perry	LeaA	1.17
perry	GhaA	1.21
pike	Bp	0.50
pike	Du	0.50
pike	FbG	0.50
pike	Omz	0.50
pike	Ud	0.50
pike	W	0.50
pike	BlF	0.50
pike	GoF	0.50
pike	ClF	0.50
pike	GnE3	0.50
pike	GnE	0.52
pike	HkF	0.59
pike	SyF	0.59
pike	ZaD3	0.59
pike	HoD3	0.66
pike	MbC3	0.66
pike	OtD3	0.66
pike	FbC	0.69
pike	ZaC3	0.69
pike	AoC	0.72

pike	WeE	0.72
pike	HoC3	0.76
pike	OtC3	0.76
pike	FaB	0.79
pike	PpD3	0.83
pike	AnB	0.86
pike	Sw	0.86
pike	HoB2	0.90
pike	OtB2	0.90
pike	ZaB	0.90
pike	MgA	0.93
pike	PrA	0.93
pike	HbB	0.97
pike	HoA	0.97
pike	PcB	0.97
pike	Pm	0.97
pike	SyC3	0.97
pike	AdC2	1.00
pike	DbA	1.00
pike	Ba	1.03
pike	Mt	1.03
pike	Wh	1.03
pike	AdB2	1.07
pike	Ay	1.07
pike	EkA	1.07
pike	Se	1.07
pike	Sf	1.07
pike	SyB2	1.07
pike	AdA	1.10
pike	Bo	1.10
pike	Hd	1.10
pike	IoA	1.10
pike	MuA	1.10
pike	No	1.10
pike	Pe	1.10
pike	Bf	1.14
pike	Bg	1.14
pike	Ln	1.14
pike	So	1.14
pike	Vn	1.14
pike	Ar	1.17
pike	Bh	1.17
pike	Bk	1.17
pike	HeA	1.17
pike	IvA	1.17
pike	Ph	1.17

pike	ReA	1.17
pike	Wa	1.17
pike	Hu	1.21
pike	Bb	1.24
porter	Du	0.50
porter	Fh	0.50
porter	Hm	0.50
porter	Mn	0.50
porter	Pk	0.50
porter	UbA	0.50
porter	Uc	0.50
porter	UcG	0.50
porter	Ud	0.50
porter	Ue	0.50
porter	UmB	0.50
porter	UpB	0.50
porter	Uw	0.50
porter	W	0.50
porter	OaE	0.50
porter	OaC	0.59
porter	PlC	0.59
porter	ChC	0.62
porter	MrE	0.62
porter	PlB	0.66
porter	TcD	0.66
porter	ChB	0.69
porter	MrD2	0.69
porter	BtA	0.72
porter	MsC3	0.72
porter	TyA	0.72
porter	MrC2	0.79
porter	Mx	0.79
porter	MoB	0.83
porter	Br	0.86
porter	HaA	0.86
porter	MrB2	0.86
porter	RmD2	0.86
porter	TcC	0.86
porter	EsA	0.90
porter	Ad	0.93
porter	McA	0.93
porter	McB	0.93
porter	Nf	0.93
porter	RaC2	0.93
porter	TcA	0.93
porter	TcB	0.93

porter	Wa	0.93
porter	We	0.93
porter	BaA	0.97
porter	De	0.97
porter	LyA	0.97
porter	LyB	0.97
porter	RmC2	0.97
porter	Se	0.97
porter	Ed	1.00
porter	Mm	1.00
porter	So	1.00
porter	Ag	1.03
porter	DoA	1.03
porter	ElA	1.03
porter	Ph	1.03
porter	RaB	1.03
porter	Gf	1.07
porter	MfA	1.07
porter	MfB	1.07
porter	RlA	1.07
porter	RlB	1.07
porter	Sb	1.07
porter	HkA	1.10
porter	Ho	1.14
porter	Pa	1.14
porter	Pe	1.14
porter	Wh	1.14
porter	Wt	1.14
porter	Mp	1.17
posey	Du	0.50
posey	Ppu	0.50
posey	Ps	0.50
posey	Ud	0.50
posey	W	0.50
posey	BlF	0.50
posey	BlD	0.52
posey	PnB	0.59
posey	WeF	0.59
posey	BlC	0.62
posey	HoD3	0.66
posey	BlB	0.69
posey	SyF	0.69
posey	WeE	0.72
posey	HoC3	0.76
posey	WeD3	0.76
posey	AlE	0.83

posey	AlD3	0.86
posey	Ju	0.86
posey	PrC2	0.86
posey	St	0.86
posey	SyD3	0.86
posey	WhC2	0.86
posey	HoB2	0.90
posey	OnA	0.90
posey	PeB2	0.90
posey	AlD	0.93
posey	Ld	0.93
posey	PrB2	0.93
posey	UnC3	0.93
posey	AlC3	0.97
posey	PeA	0.97
posey	SyC3	0.97
posey	WhA	0.97
posey	WhB	0.97
posey	Zu	0.97
posey	AlC2	1.00
posey	UnB3	1.00
posey	WbA	1.00
posey	Zp	1.00
posey	AlB3	1.03
posey	EkB2	1.03
posey	Gn	1.03
posey	IoB3	1.03
posey	SyB3	1.03
posey	UnB2	1.03
posey	Wm	1.03
posey	AlB2	1.07
posey	EkA	1.07
posey	Ge	1.07
posey	IoB2	1.07
posey	Ly	1.07
posey	Mc	1.07
posey	UnA	1.07
posey	AlA	1.10
posey	Ha	1.10
posey	IoA	1.10
posey	Pg	1.10
posey	Wz	1.10
posey	Vn	1.14
posey	Ar	1.17
posey	As	1.17
posey	Bd	1.17

posey	HeA	1.17
posey	Nk	1.17
posey	Ph	1.17
posey	Rh	1.17
posey	RlA	1.17
posey	Wa	1.17
posey	Ev	1.24
posey	Pa	1.28
posey	Ra	1.28
posey	Rn	1.28
pulaski	AatAU	0.50
pulaski	AbhAU	0.50
pulaski	ApuAU	0.50
pulaski	CmbAI	0.50
pulaski	EchAU	0.50
pulaski	EcrAU	0.50
pulaski	HtbAU	0.50
pulaski	MfrAU	0.50
pulaski	MvhAU	0.50
pulaski	MwzAU	0.50
pulaski	Pmg	0.50
pulaski	Pps	0.50
pulaski	TmaAU	0.50
pulaski	UbrA	0.50
pulaski	W	0.50
pulaski	OaeD	0.50
pulaski	CjfD	0.50
pulaski	OaeC	0.52
pulaski	CjfC	0.55
pulaski	OacB	0.61
pulaski	OacA	0.62
pulaski	BstA	0.66
pulaski	BstB	0.66
pulaski	DbsA	0.66
pulaski	DbsB	0.66
pulaski	CnzAI	0.68
pulaski	MlwB	0.68
pulaski	BswA	0.69
pulaski	AadAK	0.76
pulaski	MupA	0.76
pulaski	SdzcB	0.77
pulaski	MtoA	0.80
pulaski	MtoB	0.80
pulaski	NofA	0.80
pulaski	ShaA	0.84
pulaski	BupB	0.86

pulaski	MfrAN	0.86
pulaski	MmyC2	0.86
pulaski	WpaA	0.86
pulaski	WpbA	0.86
pulaski	WpbB	0.86
pulaski	HnbA	0.90
pulaski	MtpA	0.90
pulaski	WmgA	0.90
pulaski	ApuAN	0.93
pulaski	BrvA	0.93
pulaski	BwfA	0.93
pulaski	GrfA	0.93
pulaski	MgzA	0.93
pulaski	MhaA	0.93
pulaski	MhbA	0.93
pulaski	SgzA	0.93
pulaski	WoxB	0.93
pulaski	WoxA	0.94
pulaski	RhcA	0.97
pulaski	MnzB	0.97
pulaski	GsaA	0.98
pulaski	EchAN	1.00
pulaski	EcrAN	1.00
pulaski	MvhAN	1.00
pulaski	MwzAN	1.00
pulaski	SwiA	1.00
pulaski	TmaAN	1.00
pulaski	WogA	1.00
pulaski	MgyA	1.01
pulaski	WoeB	1.01
pulaski	HbzA	1.03
pulaski	AatAN	1.03
pulaski	AbhAN	1.03
pulaski	CqmA	1.03
pulaski	CuyA	1.03
pulaski	WmiA	1.03
pulaski	GdvA	1.04
pulaski	OecA	1.06
pulaski	GcwA	1.07
pulaski	GmnA	1.07
pulaski	MhnA	1.07
pulaski	ScuA	1.07
pulaski	SwxA	1.07
pulaski	CpcA	1.10
pulaski	OeaA	1.10
pulaski	HtbAN	1.14

pulaski	MouA	1.17
pulaski	SmsAK	1.17
pulaski	SnlA	1.17
pulaski	WrxAN	1.17
pulaski	BuzA	1.21
pulaski	RebA	1.23
pulaski	BuuA	1.24
pulaski	RevA	1.28
pulaski	ReyA	1.28
putnam	CoG	0.50
putnam	Omz	0.50
putnam	Po	0.50
putnam	Ud	0.50
putnam	W	0.50
putnam	WeG	0.50
putnam	HeG	0.50
putnam	CkG	0.50
putnam	HoG	0.50
putnam	GnE	0.52
putnam	CnD2	0.72
putnam	FxC3	0.72
putnam	Sm	0.72
putnam	GrE2	0.76
putnam	MgD3	0.76
putnam	AnC	0.79
putnam	MeD2	0.79
putnam	AwC2	0.83
putnam	CnC2	0.83
putnam	FoB2	0.83
putnam	GrD2	0.86
putnam	MgC3	0.86
putnam	Sw	0.86
putnam	AwB2	0.90
putnam	AvB	0.97
putnam	GrC2	0.97
putnam	OcB2	0.97
putnam	PeC2	0.97
putnam	AlC2	1.00
putnam	OcA	1.00
putnam	RuC	1.00
putnam	Ba	1.03
putnam	PeB2	1.03
putnam	XeB2	1.03
putnam	Ch	1.07
putnam	ElB	1.07
putnam	McA	1.07

putnam	McB	1.07
putnam	RuB	1.07
putnam	XeA	1.07
putnam	AlB	1.10
putnam	Hb	1.10
putnam	MuB	1.10
putnam	FdA	1.14
putnam	Sh	1.14
putnam	Wh	1.14
putnam	Bd	1.17
putnam	IvA	1.17
putnam	ReA	1.17
putnam	Wa	1.17
putnam	Ev	1.24
putnam	Hv	1.24
putnam	Ra	1.28
putnam	Rn	1.28
randolph	Ca	0.50
randolph	Lw	0.50
randolph	Ud	0.50
randolph	W	0.50
randolph	Wa	0.50
randolph	LtD3	0.50
randolph	LnE	0.52
randolph	LoD3	0.52
randolph	LtC3	0.55
randolph	LoC3	0.62
randolph	FxC3	0.72
randolph	LsB2	0.72
randolph	MyC3	0.72
randolph	LnB2	0.76
randolph	EnA	0.83
randolph	CkB	0.86
randolph	FoA	0.86
randolph	FoB	0.86
randolph	GnB2	0.86
randolph	CeB	0.90
randolph	MuB	0.90
randolph	BlA	0.97
randolph	MoB2	0.97
randolph	MoA	1.00
randolph	An	1.03
randolph	CnB	1.03
randolph	Ee	1.07
randolph	Sa	1.07
randolph	Sm	1.07

randolph	FcA	1.10
randolph	Px	1.10
randolph	Pw	1.14
randolph	So	1.14
randolph	Wo	1.14
randolph	Ts	1.24
randolph	Pn	1.28
randolph	Tr	1.28
ripley	EdF	0.50
ripley	ErF	0.50
ripley	Omz	0.50
ripley	Pt	0.50
ripley	W	0.50
ripley	CbE	0.50
ripley	EdE	0.50
ripley	BeE	0.50
ripley	BeD3	0.55
ripley	CbD2	0.59
ripley	HkE	0.59
ripley	SwD2	0.69
ripley	CcD2	0.72
ripley	BeC2	0.76
ripley	CcC3	0.76
ripley	HkD3	0.76
ripley	GrE	0.79
ripley	HkD2	0.79
ripley	SwC2	0.79
ripley	CcC2	0.83
ripley	Wr	0.83
ripley	Dr	0.86
ripley	GrD2	0.86
ripley	CcB2	0.90
ripley	PeB2	0.90
ripley	RoB2	0.90
ripley	St	0.90
ripley	Wt	0.90
ripley	AvB2	0.93
ripley	EkC2	0.97
ripley	Hn	0.97
ripley	RoA	0.97
ripley	RyC2	0.97
ripley	AvA	1.00
ripley	BaA	1.03
ripley	Cm	1.07
ripley	EkB	1.07
ripley	Lb	1.07

ripley	Hd	1.10
ripley	No	1.10
ripley	Ag	1.14
ripley	Wa	1.17
rush	Omz	0.50
rush	Px	0.50
rush	W	0.50
rush	ElD3	0.50
rush	MpE	0.50
rush	ElC3	0.59
rush	MmE	0.59
rush	MuD3	0.62
rush	EdB2	0.72
rush	MpD	0.72
rush	MuC3	0.72
rush	MoD3	0.76
rush	MzA	0.76
rush	MmD	0.83
rush	MpC	0.83
rush	CeB2	0.86
rush	MoC3	0.86
rush	MpB2	0.86
rush	St	0.86
rush	MmB2	0.97
rush	Mx	0.97
rush	OcB2	0.97
rush	WwB2	0.97
rush	Ge	1.00
rush	MrA	1.00
rush	OcA	1.00
rush	CrA	1.07
rush	RuB	1.07
rush	Sm	1.07
rush	XeB	1.07
rush	FnA	1.14
rush	Sh	1.14
rush	So	1.14
rush	Ws	1.21
rush	Cy	1.28
rush	Pn	1.28
rush	Tr	1.28
scott	BobE5	0.50
scott	CleC5	0.50
scott	DbrG	0.50
scott	DfoA	0.50
scott	EepF	0.50

scott	HcfB	0.50
scott	HeeG	0.50
scott	NamF	0.50
scott	Pml	0.50
scott	RbmD5	0.50
scott	RptG	0.50
scott	ThbD5	0.50
scott	Uaa	0.50
scott	W	0.50
scott	WomAM	0.50
scott	BvoG	0.50
scott	ThcD3	0.50
scott	RblD3	0.50
scott	GmaG	0.50
scott	ThdD	0.50
scott	ThbC3	0.50
scott	RblC3	0.50
scott	ThaC2	0.52
scott	ConD	0.57
scott	ComC3	0.62
scott	WhcD	0.64
scott	GgfD	0.65
scott	HceC3	0.67
scott	BnyD3	0.69
scott	HcdC2	0.72
scott	ComC	0.72
scott	MhyC3	0.72
scott	NanD3	0.72
scott	SoaC2	0.72
scott	MhyC2	0.76
scott	PcrC3	0.76
scott	HerE	0.77
scott	JafC3	0.78
scott	DddC3	0.79
scott	PcrC2	0.79
scott	CldC3	0.81
scott	JafC2	0.81
scott	BcrAW	0.83
scott	BfcC3	0.83
scott	DddC2	0.83
scott	JaeB2	0.83
scott	MhyB2	0.83
scott	CldC2	0.84
scott	CkkB2	0.86
scott	HccB2	0.86
scott	MhyA	0.86

scott	NaaB2	0.86
scott	PcrB2	0.86
scott	SoaB	0.86
scott	BfbC2	0.88
scott	BdoB	0.90
scott	DddB2	0.90
scott	HccA	0.90
scott	NaaA	0.90
scott	WpuAH	0.90
scott	PcrA	0.93
scott	SceB2	0.93
scott	StmC	0.93
scott	WedB2	0.93
scott	WnmA	0.93
scott	WprAW	0.93
scott	HleAW	0.97
scott	OfbAW	0.97
scott	PlpAH	0.97
scott	SceA	0.97
scott	StmB2	0.97
scott	AddB2	1.00
scott	BodAH	1.00
scott	DfnB2	1.00
scott	StdAH	1.00
scott	AddA	1.03
scott	BbhA	1.03
scott	BbhB	1.03
scott	BodAW	1.03
scott	DfnA	1.03
scott	StaAW	1.03
scott	StdAW	1.03
scott	ClfA	1.07
scott	CwaAQ	1.07
scott	EepA	1.07
scott	EepB	1.07
scott	HcgAH	1.07
scott	PhaA	1.07
scott	StaAH	1.07
scott	StaAQ	1.07
scott	StdAQ	1.07
scott	WaaAH	1.07
scott	WokAH	1.07
scott	HcgAW	1.10
scott	WaaAW	1.10
scott	WokAW	1.10
scott	HcgAQ	1.14

shelby	Bp	0.50
shelby	CoE	0.50
shelby	Gp	0.50
shelby	Qu	0.50
shelby	RoE	0.50
shelby	W	0.50
shelby	HeF	0.50
shelby	HeE	0.59
shelby	FoD2	0.66
shelby	NeE	0.69
shelby	FxC3	0.72
shelby	FoC2	0.76
shelby	FxB3	0.76
shelby	MmD3	0.76
shelby	MtB	0.76
shelby	Ra	0.76
shelby	Gn	0.79
shelby	MlD2	0.79
shelby	FoB2	0.83
shelby	NeD2	0.83
shelby	FoA	0.86
shelby	MmC3	0.86
shelby	PrC	0.86
shelby	FsA	0.90
shelby	MlC2	0.90
shelby	MmB3	0.93
shelby	NnA	0.93
shelby	NnB	0.93
shelby	PrA	0.93
shelby	PrB	0.93
shelby	Rs	0.93
shelby	MlB2	0.97
shelby	Ms	0.97
shelby	PaC2	0.97
shelby	OcA	1.00
shelby	Ay	1.03
shelby	CsB	1.03
shelby	MaB2	1.03
shelby	MrB	1.03
shelby	PaB2	1.03
shelby	CrA	1.07
shelby	CrB	1.07
shelby	Ee	1.07
shelby	Ge	1.07
shelby	MaA	1.07
shelby	Se	1.07

shelby	Sm	1.07
shelby	Sa	1.10
shelby	Lm	1.14
shelby	Me	1.14
shelby	Sh	1.14
shelby	Wh	1.14
shelby	Ko	1.17
shelby	Rt	1.17
shelby	Wc	1.21
shelby	We	1.21
shelby	Br	1.28
shelby	Re	1.28
spencer	Du	0.50
spencer	FbG	0.50
spencer	Md	0.50
spencer	Omz	0.50
spencer	Pml	0.50
spencer	Uaa	0.50
spencer	UfD	0.50
spencer	UlD	0.50
spencer	W	0.50
spencer	GmF	0.50
spencer	MlD3	0.55
spencer	MkE	0.59
spencer	ZaD3	0.59
spencer	MkD2	0.62
spencer	FaB	0.66
spencer	MlC3	0.66
spencer	WeE3	0.66
spencer	ZaD2	0.66
spencer	AfF	0.69
spencer	WeE2	0.69
spencer	ZaC3	0.69
spencer	MkC2	0.72
spencer	MlB3	0.72
spencer	PrD2	0.72
spencer	HoC3	0.76
spencer	TsB3	0.76
spencer	WeD3	0.76
spencer	ZaC2	0.76
spencer	MkB2	0.79
spencer	UnE2	0.79
spencer	WeD2	0.79
spencer	AfE	0.83
spencer	HoB3	0.83
spencer	HoC2	0.83

spencer	Ph	0.83
spencer	TsB2	0.83
spencer	WhC3	0.83
spencer	ZaB2	0.83
spencer	AfD3	0.86
spencer	Ht	0.86
spencer	ScB2	0.86
spencer	WeC3	0.86
spencer	WhC2	0.86
spencer	AfD2	0.90
spencer	HoB2	0.90
spencer	PeB2	0.90
spencer	PrB2	0.90
spencer	TsA	0.90
spencer	WeC2	0.90
spencer	WhB3	0.90
spencer	Co	0.93
spencer	JoA	0.93
spencer	Mr	0.93
spencer	ScA	0.93
spencer	UnC3	0.93
spencer	WhB2	0.93
spencer	AfC3	0.97
spencer	PeA	0.97
spencer	UnC2	0.97
spencer	WhA	0.97
spencer	WlA	0.97
spencer	AfC2	1.00
spencer	Bo	1.00
spencer	UnB3	1.00
spencer	WbA	1.00
spencer	WcA	1.00
spencer	WeB	1.00
spencer	Zp	1.00
spencer	AfB3	1.03
spencer	Ba	1.03
spencer	Gn	1.03
spencer	UnB2	1.03
spencer	AfB2	1.07
spencer	Cu	1.07
spencer	IoB2	1.07
spencer	Ms	1.07
spencer	UnA	1.07
spencer	AfA	1.10
spencer	Ha	1.10
spencer	IoA	1.10

spencer	Wr	1.10
spencer	Ws	1.10
spencer	Ag	1.14
spencer	Ls	1.14
spencer	Sn	1.14
spencer	Vn	1.14
spencer	He	1.17
spencer	Hu	1.17
spencer	Ne	1.17
spencer	Rh	1.17
spencer	Wa	1.17
spencer	Ra	1.28
St. Joseph	AbhAU	0.50
St. Joseph	CmbAI	0.50
St. Joseph	EchAU	0.50
St. Joseph	EcrAU	0.50
St. Joseph	HfbAU	0.50
St. Joseph	HtbAU	0.50
St. Joseph	MfrAU	0.50
St. Joseph	MvhAU	0.50
St. Joseph	MwzAU	0.50
St. Joseph	PaaAU	0.50
St. Joseph	Pmg	0.50
St. Joseph	PxlA	0.50
St. Joseph	Pxo	0.50
St. Joseph	TxuF	0.50
St. Joseph	Uam	0.50
St. Joseph	UdeA	0.50
St. Joseph	UdeB	0.50
St. Joseph	UdeC	0.50
St. Joseph	UdkA	0.50
St. Joseph	UdzA	0.50
St. Joseph	UeaA	0.50
St. Joseph	UeqA	0.50
St. Joseph	UewA	0.50
St. Joseph	UfbA	0.50
St. Joseph	UfhA	0.50
St. Joseph	UfhB	0.50
St. Joseph	UfhC	0.50
St. Joseph	UfmA	0.50
St. Joseph	UfrA	0.50
St. Joseph	UftA	0.50
St. Joseph	UfzA	0.50
St. Joseph	UgaA	0.50
St. Joseph	UglA	0.50
St. Joseph	UgrA	0.50

St. Joseph	UgsA	0.50
St. Joseph	UgsB	0.50
St. Joseph	UgvA	0.50
St. Joseph	UgvB	0.50
St. Joseph	UgvC	0.50
St. Joseph	UgvD	0.50
St. Joseph	UhmA	0.50
St. Joseph	UhmB	0.50
St. Joseph	UhoC	0.50
St. Joseph	UhoD	0.50
St. Joseph	UhpC	0.50
St. Joseph	UhpD	0.50
St. Joseph	UhwA	0.50
St. Joseph	UhwB	0.50
St. Joseph	UhwC	0.50
St. Joseph	UkaA	0.50
St. Joseph	UkeA	0.50
St. Joseph	UkxA	0.50
St. Joseph	UkxB	0.50
St. Joseph	UkxC	0.50
St. Joseph	UmfB	0.50
St. Joseph	UmfC	0.50
St. Joseph	UmfD	0.50
St. Joseph	UmpA	0.50
St. Joseph	UmuA	0.50
St. Joseph	UmwA	0.50
St. Joseph	UmwB	0.50
St. Joseph	UmwC	0.50
St. Joseph	UmwD	0.50
St. Joseph	UmxA	0.50
St. Joseph	UnoA	0.50
St. Joseph	UnqB	0.50
St. Joseph	UntA	0.50
St. Joseph	Usl	0.50
St. Joseph	W	0.50
St. Joseph	TxuD	0.50
St. Joseph	CnbD	0.50
St. Joseph	CnbC	0.52
St. Joseph	TxuC	0.52
St. Joseph	CnbB	0.55
St. Joseph	CnbA	0.59
St. Joseph	TxuA	0.59
St. Joseph	TxuB	0.59
St. Joseph	BteA	0.66
St. Joseph	MubD3	0.66
St. Joseph	OkrD	0.66

St. Joseph	OlcD	0.66
St. Joseph	HknD2	0.68
St. Joseph	BsxA	0.69
St. Joseph	HkpD2	0.69
St. Joseph	TmpD	0.69
St. Joseph	WcnAI	0.69
St. Joseph	RoqD2	0.70
St. Joseph	MsaA	0.72
St. Joseph	MvkA	0.72
St. Joseph	AahAK	0.76
St. Joseph	MmdD3	0.76
St. Joseph	OkrC2	0.76
St. Joseph	OlcC2	0.76
St. Joseph	OmgA	0.76
St. Joseph	HknC2	0.77
St. Joseph	SdzaB	0.77
St. Joseph	BaaC2	0.79
St. Joseph	HkpC2	0.79
St. Joseph	TmpC2	0.79
St. Joseph	RoqB	0.81
St. Joseph	RoqC2	0.81
St. Joseph	CrrA	0.83
St. Joseph	HkkA	0.83
St. Joseph	HkkB	0.83
St. Joseph	MtsC2	0.83
St. Joseph	OkrA	0.83
St. Joseph	OkrB	0.83
St. Joseph	OlcA	0.83
St. Joseph	OlcB	0.83
St. Joseph	RopD2	0.83
St. Joseph	BaaA	0.86
St. Joseph	BaaB	0.86
St. Joseph	MfrAN	0.86
St. Joseph	MgdAN	0.86
St. Joseph	MmdC3	0.86
St. Joseph	TmpA	0.86
St. Joseph	TmpB	0.86
St. Joseph	RopC2	0.87
St. Joseph	CwkA	0.90
St. Joseph	CwkB	0.90
St. Joseph	MmbC2	0.90
St. Joseph	MtsB2	0.90
St. Joseph	RopA	0.90
St. Joseph	RopB	0.90
St. Joseph	ApuAN	0.93
St. Joseph	AxvA	0.93

St. Joseph	BshA	0.93
St. Joseph	EmeA	0.93
St. Joseph	MhaA	0.93
St. Joseph	MhbA	0.93
St. Joseph	WoaC2	0.93
St. Joseph	WujB	0.93
St. Joseph	SdzA	0.94
St. Joseph	BmgA	0.97
St. Joseph	DcrA	0.97
St. Joseph	MfaC2	0.97
St. Joseph	EchAN	1.00
St. Joseph	EcrAN	1.00
St. Joseph	MgcA	1.00
St. Joseph	MvhAN	1.00
St. Joseph	MwzAN	1.00
St. Joseph	QuiA	1.00
St. Joseph	QujA	1.00
St. Joseph	WoaA	1.00
St. Joseph	WoaB2	1.00
St. Joseph	AatAN	1.03
St. Joseph	AbhAN	1.03
St. Joseph	MfaB2	1.03
St. Joseph	WobB	1.03
St. Joseph	CvdA	1.07
St. Joseph	CvdB	1.07
St. Joseph	GczA	1.07
St. Joseph	GdnA	1.07
St. Joseph	JaaAK	1.07
St. Joseph	MfaA	1.07
St. Joseph	SesA	1.07
St. Joseph	BbmA	1.14
St. Joseph	HtbAN	1.14
St. Joseph	PaaAN	1.14
St. Joseph	TnwA	1.14
St. Joseph	WtbA	1.14
St. Joseph	MouA	1.17
St. Joseph	SnlA	1.17
St. Joseph	WrxAN	1.17
St. Joseph	BuuA	1.24
St. Joseph	HfbAN	1.28
St. Joseph	RenA	1.28
St. Joseph	ReyA	1.28
starke	Na	0.50
starke	Ud	0.50
starke	W	0.50
starke	PlC	0.59

starke	ChB	0.66
starke	PlA	0.66
starke	PlB	0.66
starke	BeA	0.72
starke	OrB	0.72
starke	PtA	0.72
starke	OvA	0.76
starke	PvB	0.76
starke	An	0.79
starke	Mr	0.79
starke	MpB	0.83
starke	To	0.83
starke	Mn	0.86
starke	Wk	0.86
starke	MdA	0.90
starke	Ad	0.93
starke	Af	0.93
starke	Nf	0.93
starke	Px	0.93
starke	WwB	0.97
starke	As	1.00
starke	Co	1.00
starke	Ed	1.00
starke	Me	1.00
starke	Mh	1.00
starke	So	1.00
starke	Cp	1.03
starke	CrA	1.03
starke	Gf	1.07
starke	Sh	1.10
starke	Ho	1.14
steuben	Be	0.50
steuben	Hn	0.50
steuben	Ht	0.50
steuben	Mc	0.50
steuben	Pg	0.50
steuben	Ud	0.50
steuben	W	0.50
steuben	CaD2	0.50
steuben	BoD	0.55
steuben	CaC	0.59
steuben	MoE2	0.59
steuben	ChC	0.62
steuben	MrD3	0.62
steuben	BoC	0.66
steuben	PnA	0.66

steuben	PnB	0.66
steuben	ChB	0.69
steuben	MoD2	0.69
steuben	OhC	0.69
steuben	Ry	0.69
steuben	BoB	0.72
steuben	BtA	0.72
steuben	KsC	0.72
steuben	MhE	0.72
steuben	MrC3	0.72
steuben	OsC	0.72
steuben	WsE	0.72
steuben	MfC	0.76
steuben	MkD3	0.76
steuben	OhA	0.76
steuben	OhB	0.76
steuben	WvD3	0.76
steuben	CcA	0.79
steuben	KoA	0.79
steuben	KoB	0.79
steuben	MoC2	0.79
steuben	Mx	0.79
steuben	MfB	0.83
steuben	MhD	0.83
steuben	WsD	0.83
steuben	MkC3	0.86
steuben	RxD	0.86
steuben	WvC3	0.86
steuben	GnB	0.90
steuben	WsC	0.90
steuben	Ad	0.93
steuben	MhC	0.93
steuben	Wa	0.93
steuben	BnA	0.97
steuben	Co	0.97
steuben	Dr	0.97
steuben	RxC	0.97
steuben	Ed	1.00
steuben	MbC	1.00
steuben	MhB	1.00
steuben	Mz	1.00
steuben	WsB	1.00
steuben	RaB	1.03
steuben	RxA	1.03
steuben	RxB	1.03
steuben	CrA	1.07

steuben	Gs	1.07
steuben	MbA	1.07
steuben	MbB	1.07
steuben	HaA	1.10
steuben	Hw	1.14
steuben	Mm	1.14
steuben	Pa	1.14
steuben	Pe	1.14
steuben	Sh	1.14
steuben	Wh	1.14
steuben	Wx	1.14
steuben	Mn	1.17
steuben	Bz	1.28
steuben	Rb	1.28
sullivan	Bp	0.50
sullivan	Du	0.50
sullivan	Gu	0.50
sullivan	Mn	0.50
sullivan	Pg	0.50
sullivan	Rr	0.50
sullivan	Rs	0.50
sullivan	St	0.50
sullivan	Ud	0.50
sullivan	W	0.50
sullivan	BlF	0.50
sullivan	FcE	0.50
sullivan	HkG	0.50
sullivan	BlD	0.52
sullivan	HkF3	0.52
sullivan	PrG	0.52
sullivan	MaE2	0.55
sullivan	HkF	0.59
sullivan	BlC	0.62
sullivan	MaD2	0.62
sullivan	McD3	0.62
sullivan	PrE2	0.62
sullivan	CnD3	0.66
sullivan	AdC	0.69
sullivan	AfF	0.69
sullivan	BlB	0.69
sullivan	CnD2	0.72
sullivan	HkE	0.72
sullivan	PrD2	0.72
sullivan	AdB	0.76
sullivan	CnC3	0.76
sullivan	MaB2	0.79

sullivan	WrC2	0.79
sullivan	AfE	0.83
sullivan	AlB3	0.83
sullivan	CnC2	0.83
sullivan	FsA	0.83
sullivan	FsB	0.83
sullivan	PaD3	0.83
sullivan	PrC2	0.83
sullivan	AfD3	0.86
sullivan	EtA	0.86
sullivan	EtB	0.86
sullivan	FxA	0.86
sullivan	AfD2	0.90
sullivan	AlB2	0.90
sullivan	CnB2	0.90
sullivan	EuA	0.90
sullivan	EuB	0.90
sullivan	PrB2	0.90
sullivan	WrA	0.90
sullivan	WrB	0.90
sullivan	Gn	0.93
sullivan	Mg	0.93
sullivan	PaC3	0.93
sullivan	PrA	0.93
sullivan	Sh	0.93
sullivan	VgB2	0.93
sullivan	WsA	0.93
sullivan	AfC3	0.97
sullivan	AlA	0.97
sullivan	Zc	0.97
sullivan	AfC2	1.00
sullivan	VgA	1.00
sullivan	AfB3	1.03
sullivan	AsA	1.03
sullivan	AsB	1.03
sullivan	IoB3	1.03
sullivan	Kg	1.03
sullivan	AfB2	1.07
sullivan	AyA	1.07
sullivan	Cu	1.07
sullivan	Es	1.07
sullivan	Gs	1.07
sullivan	IoB2	1.07
sullivan	MuB2	1.07
sullivan	Wv	1.07
sullivan	IoA	1.10

sullivan	Ly	1.10
sullivan	Ww	1.10
sullivan	Ak	1.14
sullivan	Ca	1.14
sullivan	HeB2	1.14
sullivan	IvB2	1.14
sullivan	ReB2	1.14
sullivan	Sn	1.14
sullivan	HeA	1.17
sullivan	IvA	1.17
sullivan	Po	1.17
sullivan	ReA	1.17
sullivan	Rt	1.17
sullivan	Wa	1.17
sullivan	Co	1.21
sullivan	Wt	1.21
sullivan	Pc	1.28
sullivan	Ra	1.28
sullivan	Rm	1.28
switzerland	Ud	0.50
switzerland	W	0.50
switzerland	EeE2	0.50
switzerland	EdF2	0.50
switzerland	PaE2	0.52
switzerland	BoE2	0.55
switzerland	WhE	0.55
switzerland	BmC	0.62
switzerland	CaC3	0.62
switzerland	CaC2	0.66
switzerland	Dr	0.72
switzerland	MaC2	0.72
switzerland	BoC2	0.76
switzerland	CnC3	0.76
switzerland	MaB2	0.79
switzerland	SwC2	0.79
switzerland	CnC2	0.83
switzerland	WgC2	0.83
switzerland	Dn	0.86
switzerland	SwB2	0.86
switzerland	WvC	0.86
switzerland	CnB2	0.90
switzerland	RoB2	0.90
switzerland	WhC	0.90
switzerland	AvB2	0.93
switzerland	PkB	0.97
switzerland	RoA	0.97

switzerland	WgB2	0.97
switzerland	WhA	0.97
switzerland	WhB	0.97
switzerland	AvA	1.00
switzerland	Ch	1.07
switzerland	Co	1.07
switzerland	EkA	1.07
switzerland	EkB	1.07
switzerland	Hu	1.17
switzerland	Ne	1.17
tippecanoe	Hv	0.50
tippecanoe	M-W	0.50
tippecanoe	Pd	0.50
tippecanoe	Pt	0.50
tippecanoe	RsF	0.50
tippecanoe	Ua	0.50
tippecanoe	UbB	0.50
tippecanoe	UcA	0.50
tippecanoe	UmB	0.50
tippecanoe	UmC	0.50
tippecanoe	UsA	0.50
tippecanoe	W	0.50
tippecanoe	BkF	0.50
tippecanoe	DpD2	0.50
tippecanoe	HnB	0.50
tippecanoe	SyF	0.50
tippecanoe	HoA	0.55
tippecanoe	CrC	0.62
tippecanoe	StC	0.62
tippecanoe	DoC2	0.66
tippecanoe	Hd	0.66
tippecanoe	KoD2	0.66
tippecanoe	Mu	0.66
tippecanoe	Ox	0.66
tippecanoe	Pk	0.66
tippecanoe	DmC2	0.69
tippecanoe	KpC3	0.69
tippecanoe	Ou	0.69
tippecanoe	Oy	0.69
tippecanoe	Pg	0.69
tippecanoe	SrC	0.69
tippecanoe	OaB2	0.72
tippecanoe	HfC2	0.76
tippecanoe	KcC2	0.76
tippecanoe	MtD3	0.76
tippecanoe	SrB	0.76

tippecanoe	AtB2	0.79
tippecanoe	BlA	0.79
tippecanoe	BlB2	0.79
tippecanoe	CfB	0.79
tippecanoe	MsD2	0.79
tippecanoe	BnA	0.83
tippecanoe	BnB2	0.83
tippecanoe	EkA	0.83
tippecanoe	HfB2	0.83
tippecanoe	KaB2	0.83
tippecanoe	KbB2	0.83
tippecanoe	KcB2	0.83
tippecanoe	PmB	0.83
tippecanoe	CgA	0.86
tippecanoe	Ck	0.86
tippecanoe	EmA	0.86
tippecanoe	KaA	0.86
tippecanoe	MtC3	0.86
tippecanoe	Wb	0.86
tippecanoe	Cl	0.90
tippecanoe	Co	0.90
tippecanoe	Lm	0.90
tippecanoe	MsC2	0.90
tippecanoe	OpC3	0.90
tippecanoe	BmA	0.93
tippecanoe	Cp	0.93
tippecanoe	OmC2	0.93
tippecanoe	ShB	0.93
tippecanoe	RdC2	0.97
tippecanoe	BgA	1.00
tippecanoe	CwB2	1.00
tippecanoe	LvB2	1.00
tippecanoe	LwB2	1.00
tippecanoe	MmB2	1.00
tippecanoe	Mz	1.00
tippecanoe	OgA	1.00
tippecanoe	OmB2	1.00
tippecanoe	So	1.00
tippecanoe	TcA	1.00
tippecanoe	RaB2	1.03
tippecanoe	RdB2	1.03
tippecanoe	CtA	1.07
tippecanoe	LnB2	1.07
tippecanoe	RdA	1.07
tippecanoe	RoB	1.07
tippecanoe	Sf	1.07

tippecanoe	SmA	1.07
tippecanoe	TnB2	1.07
tippecanoe	WtA	1.07
tippecanoe	WuA	1.07
tippecanoe	Ba	1.10
tippecanoe	Bb	1.10
tippecanoe	BoA	1.10
tippecanoe	BpA	1.10
tippecanoe	CaA	1.10
tippecanoe	Dy	1.10
tippecanoe	FcB	1.10
tippecanoe	LnA	1.10
tippecanoe	MoA	1.10
tippecanoe	MwA	1.10
tippecanoe	TfB	1.10
tippecanoe	WmA	1.10
tippecanoe	LeA	1.14
tippecanoe	LoA	1.14
tippecanoe	LoB	1.14
tippecanoe	Pc	1.14
tippecanoe	Sd	1.14
tippecanoe	Sn	1.14
tippecanoe	TbA	1.14
tippecanoe	We	1.14
tippecanoe	Rz	1.17
tippecanoe	SwA	1.17
tippecanoe	TmA	1.17
tippecanoe	TtA	1.17
tippecanoe	WgA	1.17
tippecanoe	WhA	1.17
tippecanoe	Am	1.21
tippecanoe	Ap	1.21
tippecanoe	LaA	1.21
tippecanoe	RcA	1.21
tippecanoe	Tg	1.21
tippecanoe	Mb	1.24
tippecanoe	Mc	1.24
tippecanoe	Cm	1.28
tippecanoe	Du	1.28
tippecanoe	Md	1.28
tipton	Pc	0.50
tipton	Ud	0.50
tipton	W	0.50
tipton	SaC2	0.97
tipton	DeA	1.00
tipton	WkB	1.00

tipton	TuB2	1.03
tipton	Sh	1.07
tipton	Pa	1.14
tipton	Pn	1.28
tipton	Ps	1.28
union	Bp	0.50
union	FaF	0.50
union	FaG	0.50
union	Gv	0.50
union	La	0.50
union	Ma	0.50
union	RgE1	0.50
union	RgE2	0.50
union	RgF2	0.50
union	Rw	0.50
union	W	0.50
union	HeG2	0.50
union	HeG1	0.50
union	RgD2	0.50
union	FtE2	0.50
union	FaE	0.50
union	FvD3	0.50
union	FxD3	0.50
union	HeF2	0.50
union	FaC	0.52
union	FaD	0.52
union	FsD2	0.52
union	FtD2	0.52
union	HeF1	0.52
union	FaB	0.62
union	MsE3	0.62
union	FnD2	0.66
union	WnC2	0.66
union	WnD2	0.66
union	WyC3	0.66
union	FnD1	0.69
union	MmE2	0.69
union	WnB2	0.69
union	FpC3	0.72
union	FrC3	0.72
union	MmE1	0.72
union	MtB2	0.72
union	RtE3	0.72
union	WnB1	0.72
union	FmC2	0.76
union	FnC2	0.76

union	FoC2	0.76
union	MsD3	0.76
union	MtB1	0.76
union	RsE2	0.76
union	MmD2	0.79
union	RsE1	0.79
union	FmB2	0.83
union	FnB2	0.83
union	FoB2	0.83
union	MmD1	0.83
union	RtD3	0.83
union	FmA	0.86
union	FmB1	0.86
union	FnA	0.86
union	FnB1	0.86
union	MsC3	0.86
union	OkC3	0.86
union	RsD2	0.86
union	MmC2	0.90
union	OcC2	0.90
union	RsD1	0.90
union	RvC3	0.90
union	Ho	0.93
union	MmC1	0.93
union	MsB3	0.93
union	Nn	0.93
union	OkB3	0.93
union	RtC3	0.93
union	RuC2	0.93
union	XnB2	0.93
union	McC2	0.97
union	MmB2	0.97
union	OcB2	0.97
union	RsC2	0.97
union	RuC1	0.97
union	RvB3	0.97
union	XnA	0.97
union	XnB1	0.97
union	MmA	1.00
union	MmB1	1.00
union	OcA	1.00
union	OcB1	1.00
union	RsC1	1.00
union	RtB3	1.00
union	RuB2	1.00
union	CrB2	1.03

union	Ge	1.03
union	McB2	1.03
union	RsB2	1.03
union	RuA	1.03
union	RuB1	1.03
union	XeB2	1.03
union	BbB2	1.07
union	CrA	1.07
union	Ee	1.07
union	Es	1.07
union	FeB2	1.07
union	Gg	1.07
union	Gm	1.07
union	Go	1.07
union	Gs	1.07
union	Gt	1.07
union	MbB2	1.07
union	McA	1.07
union	McB1	1.07
union	RsA	1.07
union	RsB1	1.07
union	XeA	1.07
union	XeB1	1.07
union	BbA	1.10
union	BbB1	1.10
union	FeA	1.10
union	FeB	1.10
union	MbA	1.10
union	MbB1	1.10
union	De	1.14
union	FcA	1.14
union	FcB1	1.14
union	ReB2	1.14
union	Sh	1.14
union	Sn	1.14
union	Ko	1.17
union	ReA	1.17
union	ReA2	1.17
union	Ro	1.17
union	Co	1.21
union	Cp	1.21
union	We	1.21
union	Br	1.28
union	By	1.28
vanderburgh	Br	0.50
vanderburgh	Gu	0.50

vanderburgh	Ma	0.50
vanderburgh	Pml	0.50
vanderburgh	W	0.50
vanderburgh	WeF	0.50
vanderburgh	ZaD3	0.59
vanderburgh	MkC2	0.62
vanderburgh	MlC3	0.62
vanderburgh	HoD3	0.66
vanderburgh	ZaD2	0.66
vanderburgh	WeE2	0.69
vanderburgh	ZaC3	0.69
vanderburgh	HoC3	0.76
vanderburgh	WeD3	0.76
vanderburgh	ZaC2	0.76
vanderburgh	MkB2	0.79
vanderburgh	WeD2	0.79
vanderburgh	HoB3	0.83
vanderburgh	HoC2	0.83
vanderburgh	AlD3	0.86
vanderburgh	Hu	0.86
vanderburgh	ScB2	0.86
vanderburgh	AlD2	0.90
vanderburgh	HoB2	0.90
vanderburgh	Mr	0.93
vanderburgh	PrB	0.93
vanderburgh	ScA	0.93
vanderburgh	WhB2	0.93
vanderburgh	AlC3	0.97
vanderburgh	HoA	0.97
vanderburgh	WhA	0.97
vanderburgh	Zp	0.97
vanderburgh	AlC2	1.00
vanderburgh	Wb	1.00
vanderburgh	Ba	1.03
vanderburgh	Gn	1.03
vanderburgh	UnB2	1.03
vanderburgh	AlB2	1.07
vanderburgh	IoB2	1.07
vanderburgh	MuB2	1.07
vanderburgh	Bo	1.10
vanderburgh	IoA	1.10
vanderburgh	MuA	1.10
vanderburgh	Wm	1.10
vanderburgh	Wo	1.10
vanderburgh	Ln	1.14
vanderburgh	St	1.14

vanderburgh	Bd	1.17
vanderburgh	He	1.17
vanderburgh	Ht	1.17
vanderburgh	Iv	1.17
vanderburgh	Nw	1.17
vanderburgh	Rh	1.17
vanderburgh	Rs	1.17
vanderburgh	Wa	1.17
vanderburgh	Ev	1.24
vanderburgh	Pa	1.28
vanderburgh	Ra	1.28
vermillion	Dm	0.50
vermillion	M-W	0.50
vermillion	OrB	0.50
vermillion	OrG	0.50
vermillion	Pg	0.50
vermillion	RoF	0.50
vermillion	W	0.50
vermillion	GpG	0.50
vermillion	HeF	0.50
vermillion	FoC2	0.72
vermillion	FxC3	0.72
vermillion	SgA	0.72
vermillion	SgB	0.72
vermillion	MsD3	0.76
vermillion	FoB2	0.79
vermillion	MeD2	0.79
vermillion	EoA	0.86
vermillion	EoB	0.86
vermillion	FsA	0.86
vermillion	HgB	0.86
vermillion	MsC3	0.86
vermillion	PrC	0.86
vermillion	Sp	0.86
vermillion	SeA	0.93
vermillion	RuC2	0.97
vermillion	AlC2	1.00
vermillion	OcA	1.00
vermillion	OcB	1.00
vermillion	McB2	1.03
vermillion	RuB2	1.03
vermillion	AlB2	1.07
vermillion	Ee	1.07
vermillion	Ge	1.07
vermillion	McA	1.07
vermillion	RtB2	1.07

vermillion	Sm	1.07
vermillion	WeA	1.07
vermillion	XeB	1.07
vermillion	RtA	1.10
vermillion	DaB	1.14
vermillion	FcA	1.14
vermillion	FgA	1.14
vermillion	IpA	1.14
vermillion	Pa	1.14
vermillion	PtA	1.14
vermillion	PtB	1.14
vermillion	Sh	1.14
vermillion	Sn	1.14
vermillion	Wx	1.14
vermillion	Ar	1.17
vermillion	PlA	1.17
vermillion	ReA	1.17
vermillion	So	1.17
vermillion	TaB	1.17
vermillion	RbA	1.21
vermillion	Wt	1.21
vermillion	Ra	1.28
vermillion	Sa	1.28
vermillion	Sb	1.28
vigo	Bp	0.50
vigo	Gp	0.50
vigo	Ma	0.50
vigo	RoG	0.50
vigo	St	0.50
vigo	W	0.50
vigo	HeG	0.50
vigo	BlD	0.52
vigo	HkF	0.59
vigo	BlC	0.62
vigo	NeF	0.62
vigo	PrE2	0.62
vigo	CnD3	0.66
vigo	AdC	0.69
vigo	AlF	0.69
vigo	BlB	0.69
vigo	NeE	0.69
vigo	FxC3	0.72
vigo	HkE	0.72
vigo	PrD2	0.72
vigo	AdB	0.76
vigo	CnC3	0.76

vigo	RdA	0.76
vigo	AlE2	0.79
vigo	FoB2	0.79
vigo	CnC2	0.83
vigo	FoA	0.83
vigo	PrC2	0.83
vigo	AlD3	0.86
vigo	ElA	0.86
vigo	ElB	0.86
vigo	PaD2	0.86
vigo	RuD2	0.86
vigo	WrB2	0.86
vigo	AlD2	0.90
vigo	AvB2	0.90
vigo	WrA	0.90
vigo	Gf	0.93
vigo	PrB	0.93
vigo	RuC3	0.93
vigo	AlC3	0.97
vigo	Md	0.97
vigo	RuC2	0.97
vigo	Zp	0.97
vigo	AlC2	1.00
vigo	Ay	1.03
vigo	Ba	1.03
vigo	PaB2	1.03
vigo	RuB2	1.03
vigo	XeB2	1.03
vigo	AlB2	1.07
vigo	Cr	1.07
vigo	Ee	1.07
vigo	Ge	1.07
vigo	MuB2	1.07
vigo	Tp	1.07
vigo	CaA	1.10
vigo	CaB	1.10
vigo	MuA	1.10
vigo	Fn	1.14
vigo	Pt	1.14
vigo	Sh	1.14
vigo	So	1.14
vigo	Vn	1.14
vigo	Ws	1.14
vigo	Wx	1.14
vigo	Ar	1.17
vigo	IvA	1.17

vigo	IvB	1.17
vigo	Pe	1.17
vigo	Re	1.17
vigo	Wa	1.17
vigo	Co	1.21
vigo	Wt	1.21
vigo	Ra	1.28
vigo	Rg	1.28
vigo	Rn	1.28
wabash	Ht	0.50
wabash	Md	0.50
wabash	MtG	0.50
wabash	Or	0.50
wabash	Pa	0.50
wabash	Px	0.50
wabash	Py	0.50
wabash	RmG	0.50
wabash	W	0.50
wabash	HeG	0.50
wabash	MxD3	0.52
wabash	FtD3	0.59
wabash	MvE2	0.59
wabash	ChC	0.62
wabash	FsD2	0.66
wabash	MkD3	0.66
wabash	MsC2	0.66
wabash	OmC	0.66
wabash	MfE2	0.69
wabash	MvD2	0.69
wabash	FtC3	0.72
wabash	GoC3	0.72
wabash	MsB2	0.72
wabash	OmA	0.72
wabash	OmB	0.72
wabash	FsC2	0.76
wabash	KsC	0.76
wabash	MeC	0.76
wabash	MsA	0.76
wabash	RaA	0.76
wabash	KsA	0.79
wabash	KsB	0.79
wabash	MfD2	0.79
wabash	MvC2	0.79
wabash	FsB2	0.83
wabash	KaA	0.83
wabash	KaB	0.83

wabash	MeB	0.83
wabash	FsA	0.86
wabash	GnB2	0.86
wabash	MkC3	0.86
wabash	MlC3	0.86
wabash	MfC2	0.90
wabash	MhC2	0.90
wabash	RcC2	0.90
wabash	BaB2	0.93
wabash	Ho	0.93
wabash	Wc	0.93
wabash	BaA	0.97
wabash	MbC2	0.97
wabash	MfB2	0.97
wabash	MhB2	0.97
wabash	Mp	0.97
wabash	OcB2	0.97
wabash	Pp	0.97
wabash	RcB2	0.97
wabash	RhC2	0.97
wabash	OcA	1.00
wabash	RcA	1.00
wabash	RhB2	1.03
wabash	CrA	1.07
wabash	CsA	1.07
wabash	Ge	1.07
wabash	MbA	1.07
wabash	MbB	1.07
wabash	RhA	1.07
wabash	Se	1.07
wabash	HaA	1.10
wabash	Sf	1.10
wabash	FnA	1.14
wabash	Hx	1.14
wabash	Pm	1.14
wabash	Pw	1.14
wabash	Sh	1.14
wabash	So	1.14
wabash	Wh	1.14
wabash	Wt	1.14
wabash	Mm	1.17
wabash	Ws	1.21
wabash	Br	1.28
wabash	Cy	1.28
wabash	Pt	1.28
wabash	Re	1.28

warren	Be	0.50
warren	Cs	0.50
warren	Ho	0.50
warren	Pp	0.50
warren	RpG	0.50
warren	Ud	0.50
warren	W	0.50
warren	GoF	0.50
warren	WpG	0.50
warren	HeG	0.50
warren	BpD2	0.55
warren	MvE2	0.59
warren	Mr	0.66
warren	Pm	0.66
warren	MoE2	0.69
warren	MzB2	0.69
warren	EdB2	0.72
warren	MwC3	0.72
warren	MyA	0.72
warren	OpB	0.72
warren	EgA	0.76
warren	HhC2	0.76
warren	MpD3	0.76
warren	BnC2	0.79
warren	Sr	0.79
warren	StC3	0.79
warren	Ur	0.79
warren	HfB	0.83
warren	HhB2	0.83
warren	MaB3	0.83
warren	MxC2	0.83
warren	OsA	0.83
warren	OsB	0.83
warren	Po	0.83
warren	SeA	0.83
warren	SyB	0.83
warren	BmB2	0.86
warren	CfA	0.86
warren	EvA	0.86
warren	Lp	0.86
warren	MpC3	0.86
warren	StB3	0.86
warren	TuC2	0.90
warren	McB2	0.93
warren	We	0.93
warren	WtC2	0.93

warren	Am	0.97
warren	Bk	0.97
warren	BoA	0.97
warren	MdC2	0.97
warren	MuC2	0.97
warren	ObB2	0.97
warren	OcB2	0.97
warren	TwB2	0.97
warren	Wg	0.97
warren	OcA	1.00
warren	RfB2	1.00
warren	BdB2	1.03
warren	CaB2	1.03
warren	CdB2	1.03
warren	CtB2	1.03
warren	GkB2	1.03
warren	Ju	1.03
warren	MdB2	1.03
warren	RoB2	1.03
warren	AfB2	1.07
warren	CbB2	1.07
warren	GhB2	1.07
warren	IoB2	1.07
warren	MdA	1.07
warren	PuB2	1.07
warren	RdA	1.07
warren	RoA	1.07
warren	RtB2	1.07
warren	WrA	1.07
warren	BbA	1.10
warren	CbA	1.10
warren	Dy	1.10
warren	Lk	1.10
warren	PrB2	1.10
warren	PuA	1.10
warren	RtA	1.10
warren	SlA	1.10
warren	Hm	1.14
warren	IpA	1.14
warren	Ld	1.14
warren	PrA	1.14
warren	Wh	1.14
warren	GgA	1.17
warren	MtA	1.17
warren	RlA	1.17
warren	Wc	1.17

warren	WlA	1.17
warren	BsA	1.21
warren	BwA	1.21
warren	Cg	1.21
warren	LcA	1.21
warren	BrA	1.24
warren	Dx	1.24
warren	Cz	1.28
warren	Dw	1.28
warren	Rb	1.28
warren	Sb	1.28
warrick	OrG	0.50
warrick	OsF	0.50
warrick	OsG	0.50
warrick	Ud	0.50
warrick	W	0.50
warrick	GnF	0.50
warrick	GpD	0.50
warrick	ZaD3	0.59
warrick	MoC3	0.62
warrick	HoD3	0.66
warrick	MkC	0.69
warrick	WeE2	0.69
warrick	ZaC3	0.69
warrick	ZaD	0.72
warrick	HoC3	0.76
warrick	WeD3	0.76
warrick	HoD	0.79
warrick	MkB2	0.79
warrick	OrB	0.79
warrick	OrD	0.79
warrick	AfE	0.83
warrick	HoB3	0.83
warrick	TtB2	0.83
warrick	WeD	0.83
warrick	ZaB2	0.83
warrick	ZaC	0.83
warrick	AfD3	0.86
warrick	HoC	0.90
warrick	PeB2	0.90
warrick	TtA	0.90
warrick	UnD	0.90
warrick	AfD	0.93
warrick	JoA	0.93
warrick	MrA	0.93
warrick	ScA	0.93

warrick	UtC3	0.93
warrick	WhB2	0.93
warrick	AfC3	0.97
warrick	HoA	0.97
warrick	HoB	0.97
warrick	WhA	0.97
warrick	UnC	1.00
warrick	WbA	1.00
warrick	Zp	1.00
warrick	AfC	1.03
warrick	Ba	1.03
warrick	UnB2	1.03
warrick	AfB2	1.07
warrick	MuB2	1.07
warrick	Se	1.07
warrick	Bn	1.10
warrick	MuA	1.10
warrick	Pg	1.10
warrick	Wm	1.10
warrick	Wo	1.10
warrick	Sn	1.14
warrick	Bd	1.17
warrick	HeA	1.17
warrick	Hu	1.17
warrick	IvA	1.17
warrick	Ne	1.17
warrick	Wa	1.17
warrick	Ev	1.24
warrick	Pa	1.28
washington	Omz	0.50
washington	Pt	0.50
washington	W	0.50
washington	BmF	0.50
washington	CdF	0.50
washington	BhF	0.50
washington	GnF	0.50
washington	GpF	0.50
washington	CaE2	0.50
washington	CeF	0.52
washington	BmC	0.59
washington	GlD2	0.59
washington	HeD2	0.59
washington	FwD2	0.62
washington	CtD2	0.69
washington	BdC2	0.72
washington	FxC2	0.72

washington	Bu	0.76
washington	HcC3	0.76
washington	ZaC2	0.76
washington	CeD2	0.79
washington	HrD2	0.79
washington	MaB	0.79
washington	ChC2	0.83
washington	CrD3	0.83
washington	HaC2	0.83
washington	OtC2	0.83
washington	PeC2	0.83
washington	WeD	0.83
washington	AlB	0.86
washington	BdA	0.86
washington	BdB	0.86
washington	CoD2	0.86
washington	CsC2	0.90
washington	HhA	0.90
washington	WeC2	0.90
washington	ZaB	0.90
washington	CrC3	0.93
washington	MgA	0.93
washington	ChB	0.97
washington	CoC2	0.97
washington	ElC2	0.97
washington	HhB	0.97
washington	PeA	0.97
washington	PeB	0.97
washington	RsB	0.97
washington	Zp	0.97
washington	AvA	1.00
washington	DbA	1.00
washington	Ba	1.03
washington	Br	1.07
washington	CoB	1.07
washington	Cu	1.07
washington	Cw	1.07
washington	ElB	1.07
washington	Mo	1.07
washington	Ph	1.07
washington	Bo	1.10
washington	Hm	1.10
washington	No	1.10
washington	Pg	1.10
washington	Sf	1.14
washington	So	1.14

washington	Wa	1.17
wayne	Hb	0.50
wayne	Hu	0.50
wayne	Or	0.50
wayne	Pr	0.50
wayne	RmD	0.50
wayne	RmF	0.50
wayne	UmB	0.50
wayne	UmC	0.50
wayne	UoA	0.50
wayne	UoB	0.50
wayne	Us	0.50
wayne	W	0.50
wayne	EdF	0.50
wayne	HeF	0.50
wayne	LcD3	0.52
wayne	MnF	0.52
wayne	EoD2	0.55
wayne	LxC3	0.55
wayne	ExC3	0.59
wayne	LbD2	0.59
wayne	LcC3	0.62
wayne	EoC2	0.66
wayne	ExB3	0.66
wayne	WyC2	0.66
wayne	WyD2	0.66
wayne	LbC2	0.69
wayne	SuD3	0.69
wayne	WyB2	0.69
wayne	EoB2	0.72
wayne	LeB2	0.72
wayne	MnE	0.72
wayne	EoA	0.76
wayne	LbB2	0.76
wayne	RhA	0.76
wayne	MnD2	0.79
wayne	SuC3	0.79
wayne	CeB2	0.86
wayne	SuB3	0.86
wayne	MxB2	0.88
wayne	MnC2	0.90
wayne	MrC2	0.90
wayne	St	0.90
wayne	MwB2	0.94
wayne	CrB	0.97
wayne	MnB2	0.97

wayne	MrB2	0.97
wayne	Ms	0.97
wayne	OcB2	0.97
wayne	RsC2	0.97
wayne	MrA	1.00
wayne	OcA	1.00
wayne	CtA	1.03
wayne	RsB2	1.03
wayne	XeB2	1.03
wayne	CrA	1.07
wayne	Ge	1.07
wayne	Sk	1.07
wayne	FcA	1.14
wayne	Sh	1.14
wayne	Sn	1.14
wayne	RkA	1.17
wayne	We	1.21
wayne	Ts	1.24
wayne	Ma	1.28
wayne	Rc	1.28
wayne	Tr	1.28
wells	Py	0.50
wells	Ud	0.50
wells	W	0.50
wells	Wd	0.50
wells	EpC3	0.59
wells	MuE	0.59
wells	MsA	0.62
wells	EsB2	0.69
wells	EoB2	0.72
wells	MxC3	0.72
wells	EoA	0.76
wells	RdA	0.76
wells	RlC	0.76
wells	GpB3	0.79
wells	MvC2	0.79
wells	GnB2	0.86
wells	RlB	0.86
wells	Wa	0.86
wells	MuB2	0.90
wells	GtA	0.93
wells	An	0.97
wells	BkB2	0.97
wells	DeA	0.97
wells	Mo	0.97
wells	TuB2	0.97

wells	Ee	1.07
wells	HaA	1.07
wells	Co	1.10
wells	HbA	1.10
wells	Se	1.10
wells	BdA	1.14
wells	DkA	1.14
wells	Mn	1.14
wells	Pm	1.14
wells	Sp	1.14
wells	Sv	1.14
wells	WsA	1.14
wells	Mh	1.17
wells	Mk	1.17
wells	Rz	1.17
wells	Pg	1.28
wells	Pk	1.28
wells	Rr	1.28
white	Pt	0.50
white	W	0.50
white	ChC	0.62
white	ChB	0.69
white	OaA	0.69
white	Ab	0.72
white	BmA	0.72
white	SpA	0.72
white	Mr	0.79
white	Sf	0.79
white	An	0.86
white	AsA	0.86
white	AsB	0.86
white	Wa	0.86
white	AuA	0.90
white	Se	0.90
white	OcC2	0.93
white	OwA	0.93
white	VaB2	0.93
white	Ck	0.97
white	Gv	1.00
white	Mb	1.00
white	Mw	1.00
white	ElA	1.03
white	MaB2	1.03
white	MoA	1.03
white	OcB	1.03
white	RsB2	1.03

white	CsA	1.07
white	FoA	1.07
white	Gf	1.07
white	MaA	1.07
white	Rm	1.07
white	RsA	1.07
white	CnA	1.10
white	WnB2	1.10
white	Dc	1.14
white	OeA	1.14
white	Wh	1.14
white	ToA	1.17
white	MuA	1.21
white	Rg	1.21
white	Wv	1.21
white	Ca	1.28
white	Pa	1.28
white	Ph	1.28
white	Re	1.28
white	Wo	1.28
whitley	Bt	0.50
whitley	Hs	0.50
whitley	Pa	0.50
whitley	Px	0.50
whitley	Ud	0.50
whitley	W	0.50
whitley	HeG	0.50
whitley	MxE3	0.52
whitley	BvD	0.59
whitley	ByC3	0.59
whitley	MvE2	0.59
whitley	MxD3	0.62
whitley	SpC	0.62
whitley	MmE2	0.66
whitley	BvC	0.69
whitley	BwC	0.69
whitley	MvD2	0.69
whitley	SpB	0.69
whitley	MxC3	0.72
whitley	OmB	0.72
whitley	BvB	0.76
whitley	BwA	0.76
whitley	BwB	0.76
whitley	MmD2	0.76
whitley	MoD3	0.76
whitley	SfC	0.76

whitley	GtB3	0.79
whitley	Md	0.79
whitley	MvC2	0.79
whitley	KaA	0.83
whitley	KaB	0.83
whitley	OsA	0.83
whitley	SfB	0.83
whitley	GsB2	0.86
whitley	MmC2	0.86
whitley	MoC3	0.86
whitley	MvB2	0.86
whitley	Wc	0.86
whitley	WmC	0.90
whitley	Ae	0.93
whitley	BmB2	0.93
whitley	Fu	0.93
whitley	Ho	0.93
whitley	MmB2	0.93
whitley	RcC	0.93
whitley	Wa	0.93
whitley	BmA	0.97
whitley	RhC	0.97
whitley	St	0.97
whitley	WmB	0.97
whitley	Gw	1.00
whitley	MbC	1.00
whitley	Mz	1.00
whitley	RcA	1.00
whitley	RcB	1.00
whitley	CsA	1.03
whitley	RhB	1.03
whitley	Sa	1.03
whitley	MbB	1.07
whitley	Pb	1.07
whitley	Se	1.07
whitley	Sh	1.07
whitley	So	1.07
whitley	Co	1.10
whitley	HbA	1.10
whitley	Ht	1.14
whitley	Pw	1.14
whitley	Wt	1.14
whitley	Mg	1.17
whitley	Ms	1.17
whitley	Bz	1.28
whitley	Re	1.28

Exhibit H
CSTFP #1
11/13/13

LEGISLATIVE SERVICES AGENCY
Office of Fiscal and Management Analysis
200 W. Washington Street, Suite 302
Indianapolis, Indiana 46204-2789
(317) 233-0696
(317) 232-2554 (FAX)

MEMORANDUM

To: Commission on State Tax and Financing Policy

From: Bob Sigalow

Re: Soil Productivity Factors

Date: November 6, 2013

The Department of Local Government Finance (DLGF) is proposing changes to the updated soil productivity factors previously announced in 2012. LSA has analyzed the latest updates that the DLGF is proposing.

The analysis suggests that the statewide weighted average of the latest proposed soil productivity factors would be 1.006 with a range of 0.5 to 1.31. The current soil productivity factors range from 0.5 to 1.28 with a weighted average of 0.951. The proposed factors represent an average 5.9% increase over the current factors. This means that if these new factors are implemented, the assessed value of farmland would increase by an average of 5.9% in addition to any change due to fluctuation in the farmland base value.

The estimated percentage change in the average soil productivity factor by county is presented in the table at the end of this memo. The estimated change in farmland assessed value by county ranges from a 3.3% decline in Floyd County to a 13.2% increase in Lawrence County.

LSA's property tax database contains detailed land data from each county. This analysis is based on Pay 2014 land data that has been submitted by 77 county assessors and Pay 2013 land data for the remaining 15 counties which have yet to submit their Pay 2014 data. All 92 counties are included in this analysis.

A similar analysis performed in 2012 included only 69 counties. For the other 23 counties in that year, the soil ID codes could not be matched between the county land data and the new soil productivity factor list. So we were unable to determine the new factors for each parcel in those 23 counties. The DLGF has since provided a soil ID conversion chart that has allowed us to analyze these counties.

Background

Each farmland assessment begins with the base value which is $1,630 per acre for taxes payable in 2013 and $1,760 for taxes payable in 2014. The base value is then adjusted by the soil productivity factor and influence factors to determine the assessed value for a particular parcel. Each parcel may have multiple soil types.

On February 2, 2012, the DLGF announced that it had received updated soil productivity factors from the USDA's Natural Resources Conservation Service and that the new factors would be effective with taxes payable in 2013.

On February 15, 2012, LSA released the results of an analysis based on the data available at that time for 69 counties. That analysis estimated that the new state average factor (for 69 counties) would have been 1.203 as compared to the current average for those counties of 0.958, or a 25.5% increase.

The implementation of the new factors was delayed for one year, until taxes payable in 2014, under SEA 19 (2012).

Subsequently, the new factors were delayed for an additional year, until taxes payable in 2015, under SEA 319 (2013). This act requires the DLGF to work with the Purdue University College of Agriculture to develop new soil productivity factors, which have been analyzed for this memo.

Estimated County Average Change
DLGF Proposed Soil Productivity Factors

Cnty	County	Average Soil Factor Current	Proposed	Change
01	Adams	0.960	1.022	6.5%
02	Allen	0.984	1.039	5.6%
03	Bartholomew	0.973	1.007	3.5%
04	Benton	1.112	1.141	2.6%
05	Blackford	0.830	0.915	10.2%
06	Boone	1.100	1.122	2.0%
07	Brown	0.709	0.796	12.2%
08	Carroll	1.072	1.108	3.3%
09	Cass	1.027	1.071	4.3%
10	Clark	0.862	0.908	5.4%
11	Clay	0.983	1.034	5.2%
12	Clinton	1.119	1.147	2.5%
13	Crawford	0.682	0.765	12.1%
14	Daviess	0.915	0.980	7.0%
15	Dearborn	0.705	0.763	8.3%
16	Decatur	1.007	1.055	4.7%
17	DeKalb	0.877	0.952	8.5%
18	Delaware	1.002	1.027	2.5%
19	Dubois	0.778	0.850	9.2%
20	Elkhart	0.884	0.952	7.7%
21	Fayette	0.967	1.022	5.7%
22	Floyd	0.910	0.880	-3.3%
23	Fountain	1.081	1.138	5.2%
24	Franklin	0.865	0.928	7.3%
25	Fulton	0.909	0.976	7.4%
26	Gibson	0.968	1.026	6.0%
27	Grant	0.942	1.003	6.5%
28	Greene	0.867	0.936	7.9%
29	Hamilton	1.091	1.125	3.1%
30	Hancock	1.089	1.124	3.2%
31	Harrison	0.754	0.814	7.9%
32	Hendricks	1.080	1.115	3.2%
33	Henry	0.959	1.014	5.7%
34	Howard	1.094	1.127	3.0%
35	Huntington	0.955	1.014	6.2%
36	Jackson	0.881	0.936	6.2%
37	Jasper	0.941	1.003	6.5%
38	Jay	0.807	0.896	11.0%
39	Jefferson	0.832	0.892	7.2%
40	Jennings	0.983	1.039	5.7%
41	Johnson	1.037	1.081	4.2%
42	Knox	0.979	1.030	5.3%
43	Kosciusko	0.898	0.966	7.6%
44	LaGrange	0.775	0.863	11.3%
45	Lake	0.935	0.998	6.8%
46	LaPorte	0.828	0.911	10.0%
47	Lawrence	0.720	0.815	13.2%
48	Madison	1.060	1.099	3.7%
49	Marion	0.989	1.008	1.9%
50	Marshall	0.961	1.017	5.8%
51	Martin	0.775	0.812	4.8%
52	Miami	0.935	0.998	6.7%
53	Monroe	0.805	0.864	7.3%
54	Montgomery	1.078	1.112	3.2%
55	Morgan	0.982	1.028	4.7%
56	Newton	0.959	1.017	6.1%
57	Noble	0.875	0.946	8.2%
58	Ohio	0.722	0.780	8.0%
59	Orange	0.778	0.856	10.1%
60	Owen	0.787	0.859	9.2%
61	Parke	1.007	1.062	5.5%
62	Perry	0.742	0.835	12.5%
63	Pike	0.828	0.900	8.7%
64	Porter	0.923	0.987	6.9%
65	Posey	0.977	1.057	8.1%
66	Pulaski	0.916	0.944	3.1%
67	Putnam	0.996	1.039	4.4%
68	Randolph	0.963	1.018	5.7%
69	Ripley	0.869	0.940	8.2%
70	Rush	1.051	1.091	3.8%
71	St. Joseph	0.941	0.997	5.9%
72	Scott	0.900	0.958	6.5%
73	Shelby	1.037	1.081	4.2%
74	Spencer	0.865	0.928	7.3%
75	Starke	0.802	0.890	11.0%
76	Steuben	0.832	0.908	9.2%
77	Sullivan	0.977	1.029	5.4%
78	Switzerland	0.704	0.768	9.0%
79	Tippecanoe	1.065	1.105	3.7%
80	Tipton	1.139	1.162	2.0%
81	Union	0.978	1.031	5.4%
82	Vanderburgh	0.958	1.019	6.3%
83	Vermillion	1.047	1.084	3.5%
84	Vigo	1.018	1.061	4.2%
85	Wabash	0.965	1.021	5.8%
86	Warren	1.022	1.067	4.3%
87	Warrick	0.885	0.961	8.6%
88	Washington	0.846	0.918	8.5%
89	Wayne	0.885	0.955	7.9%
90	Wells	0.973	1.029	5.8%
91	White	1.020	1.067	4.6%
92	Whitley	0.865	0.937	8.3%
	Statewide	**0.951**	**1.006**	**5.8%**