

Projection Modeling

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Agenda

- What is projection modeling
- Constraints
- High-Level Assumptions
- Timeline
- Reporting Deadlines
- Attrition
- Examples



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What is projection modeling?

- Analysis of application data to predict future expenditures
- Goal – establish awarding parameters to authorize student awards once appropriations enacted.
- Awarding parameter variables can include (where not statutorily established):
 - Student Aid Index range
 - Application deadline
 - Maximum award
- Programs:
 - All Iowa Opportunity Scholarship
 - Education and Training Voucher
 - Future Ready Iowa Grant
 - Future Ready Iowa Last-Dollar Scholarship
 - Iowa Tuition Grant (not-for-profit)
 - Iowa Tuition Grant (for-profit)
 - Iowa Vocational-Technical Tuition Grant
 - National Guard Service Scholarship (Iowa National Guard projects)
 - Skilled Workforce Shortage Tuition Grant (Kibbie Grant)
 - Workforce Grant and Incentive Program



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Constraints

- Predicting the future
- Historical data reliability
- Consumer behavior changes
- Transition to Student Aid Index
- Award the entire appropriation
- Do not overspend the appropriation



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High Level Assumptions

- How many eligible applications will we receive on or before a future date?
 - Provides us with data on how the upcoming year might differ from previous years in terms of the number of eligible applications we will have on or before a future deadline.
 - Key: Consistency in the date of application release for consistent year-over-year comparisons.
- Of those eligible applications, how many will enroll at an eligible institution and receive at least \$1 in funding?
 - Conversion rate
 - Key: Consistency in consumer behaviors (enrollment patterns)
- How much of the maximum award, on average, will recipients earn over the course of the academic year?
 - Average to maximum award rate
 - Key: Consistency in consumer behaviors (full-time vs part-time, withdrawal rates, etc)

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Timeline

- October 1, FAFSA available
 - We start looking on October 31
 - Look at applications 2 weeks prior
- Weekly monitoring
 - Specific dates to keep historical data consistent
- After Term 3 Initial Filing; Build Out
- Release parameters
 - Once appropriations bill signed by Governor
- Continue to monitor weekly until 2 weeks after deadline
- Monitor expenditures at each filing deadline



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Reporting Deadlines

- Review expenditures each deadline
 - Ensure all reporting completed
 - Data Validations
 - Consider Modular Adjustments
- Mid projection cycle we are able to build out year after Term 3 initial data



Payment Terms and Deadlines				
Term			Initial File Due	Final Updates Due
1	Fall	Semester/Quarter	October 15	December 1
2	Winter	Quarter	January 2	February 15
3	Spring	Semester/Quarter	February 15	May 1
4	Spring	Quarter	April 1	June 15
5	Late Spring	Semester	June 1	July 15
6	Summer	Semester/Quarter	June 15	July 31

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Attrition

- Compare payment rates by term
 - Historical review (trends/averages)
- Used to monitor expenditures throughout the year at each filing deadline

ICAPS SCHEDULED PMT #1	ICAPS SCHEDULED STUDENTS	PAYMENT RATE	PROJECTED PMT #1	STUDENTS PAID	ACTUAL PMT #1	CURRENT PMT. RATE	UPDATED ROJ. PMT #1	SCHEDULED PMT #3	PAYMENT RATE	PROJECTED PMT #3	STUDENTS PAID	ACTUAL PMT #3	CURRENT PMT RATE	UPDATED PROJ. #3
Fall Sem./Qtr.								Spring Sem.						
\$ 3,631,550	6,068	13.17%	\$478,325	947	431128	11.87%	\$431,128	\$431,128	82.24%	\$354,572			0.00%	\$354,572
\$ 1,292,363	2,231	14.38%	\$185,811	375	159757	12.36%	\$159,757	\$159,757	84.90%	\$135,630			0.00%	\$135,630
\$ 191,600	304	8.52%	\$16,322	33	19525	10.19%	\$19,525	\$19,525	80.36%	\$15,690			0.00%	\$15,690
\$ 1,066,000	1,756	17.25%	\$183,880	355	191666	17.98%	\$191,666	\$191,666	83.11%	\$159,286			0.00%	\$159,286
\$ 438,254	1,113	21.14%	\$92,653	263	104914	23.94%	\$104,914							
\$ 1,153,650	1,988	18.31%	\$211,249	400	218651	18.95%	\$218,651	\$218,651	81.48%	\$178,166			0.00%	\$178,166
\$ 358,550	582	17.66%	\$63,331	116	64267	17.92%	\$64,267	\$64,267	85.70%	\$55,079			0.00%	\$55,079
\$ 801,750	1,340	12.83%	\$102,863	172	95030	11.85%	\$95,030	\$95,030	83.09%	\$78,965			0.00%	\$78,965
\$ 2,738,675	4,547	12.90%	\$353,179	717	355914	13.00%	\$355,914	\$355,914	91.04%	\$324,020			0.00%	\$324,020
\$ 343,175	585	19.30%	\$66,220	70	43105	12.56%	\$43,105	\$43,105	82.60%	\$35,606			0.00%	\$35,606
\$ 446,100	706	16.11%	\$71,849	111	63216	14.17%	\$63,216	\$63,216	87.12%	\$55,074			0.00%	\$55,074
\$ 612,900	1,014	20.98%	\$128,581	207	94819	15.47%	\$94,819	\$94,819	87.27%	\$82,748			0.00%	\$82,748
\$ 348,450	554	27.64%	\$96,302	142	64875	18.62%	\$64,875	\$64,875	93.63%	\$60,740			0.00%	\$60,740
\$ 566,050	999	14.12%	\$79,945	137	73623	13.01%	\$73,623	\$73,623	71.01%	\$52,280			0.00%	\$52,280
\$ 345,700	583	21.87%	\$75,588	95	51238	14.82%	\$51,238	\$51,238	86.10%	\$44,117			0.00%	\$44,117
\$ 1,008,500	1,766	10.41%	\$105,000	407	204175	20.26%	\$204,175	\$204,175	80.80%	\$164,964			0.00%	\$164,964
\$ 15,343,267.00	26,136	15.34%	\$ 2,311,097.29	4,547	\$ 2,235,903.00	14.57%	\$2,235,903	\$ 2,130,989	85.10%	\$1,796,937			0.00%	\$1,796,937

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Iowa Tuition Grant

- Applications to date
 - Total Applications
 - College Participating
 - EFC/SAI Range
- 23-24 Parameters released June 2
 - Decision based on May 29
 - Really looking at May 15 Data



	2022-23			2023-2024			% change last year
	0-15,000	Total apps	%	0-15,000	Total apps	%	
31-Oct	2706	12659	21.38%	2738			1.18%
7-Nov	3152	12659	24.90%	3217			2.06%
14-Nov	3591	12659	28.37%	3622			0.86%
21-Nov	3932	12659	31.06%	3947			0.38%
28-Nov	4271	12659	33.74%	4286			0.35%
5-Dec	4684	12659	37.00%	4675			-0.19%
12-Dec	4930	12659	38.94%	4914			-0.32%
19-Dec	5141	12659	40.61%	5168			0.53%
26-Dec	5319	12659	42.02%	5394			1.41%
2-Jan	5672	12659	44.81%	5706			0.60%
9-Jan	6035	12659	47.67%	6101			1.09%
16-Jan	6399	12659	50.55%	6612			3.33%
23-Jan	6704	12659	52.96%	6938			3.49%
30-Jan	7033	12659	55.56%	7321			4.09%
6-Feb	7387	12659	58.35%	7606			2.96%
13-Feb	7628	12659	60.26%	7825			2.58%
20-Feb	7862	12659	62.11%	8039			2.25%
27-Feb	8097	12659	63.96%	8295			2.45%
6-Mar	8361	12659	66.05%	8565			2.44%
13-Mar	8591	12659	67.86%	8798			2.41%
20-Mar	8771	12659	69.29%	9045			3.12%
27-Mar	8985	12659	70.98%	9281			3.29%
3-Apr	9225	12659	72.87%	9512			3.11%
10-Apr	9429	12659	74.48%	9688			2.75%
17-Apr	9617	12659	75.97%	9886			2.80%
24-Apr	9862	12659	77.91%	10118			2.60%
1-May	10087	12659	79.68%	10372			2.83%
8-May	10306	12659	81.41%	10627			3.11%
15-May	10508	12659	83.01%	10874			3.48%
22-May	10670	12659	84.29%	11059			3.65%
29-May	10910	12659	86.18%	11104			1.78%
5-Jun	11139	12659	87.99%				-100.00%
12-Jun	11362	12659	89.75%				-100.00%
19-Jun	11621	12659	91.80%				-100.00%
26-Jun	12010	12659	94.87%				-100.00%
3-Jul	12659	12659	100.00%				-100.00%

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Iowa Tuition Grant

- Determining Percentages (Build Out)
 - Average to Max
 - Application to Recipient Rate (Conversion Rate)
 - Annual, 2 year, and 3 year averages
 - Remove any special priority to keep historical data consistent



EFC Ranges (in increments of 100)	2022-23 ITG max award	2022-23 EDExpress applicants	2022-23 Recipients minus SP	App to Rec %	2022-23 \$ \$			Awd to Max %	2 year average		2 - year average			
					Awarded	Max AY awards per recipient category			EDExpress applicants	2YR average recipients	2YR ave \$ Awarded	2YR Ave Max Awards	2YR Ave App to Rec %	2YR Ave Award to Max %
0	7500	4132	2210	53.48%	12528433	16575000	75.59%	4,727	2,497	12,323,940	16,203,800	52.82%	76.06%	
1	7500	161	122	75.78%	627675	915000	68.60%	216	141	791,426	919,800	65.43%	86.04%	
101	7500	96	58	60.42%	362536	435000	83.34%	115	73	406,656	469,600	63.04%	86.60%	

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Iowa Tuition Grant

- Determining Recipients
 - Review Different SAI maximums

ENTRYDATE		0	1-100
	ISIRs from: 5.15.23	3770	144
	apps as of 7.1.2023 (C:EW)	83.01%	4542
	*eligible applicants to recipients = last year percentage		2,429
	0 EFC	53.48%	
	all other EFC	65.38%	
Projected eligible applications to recipients calculation »			Recipients
	Projected recipients:	0 - 15,000	8,024
	Projected recipients:	0 - 15,500	8,145
	Projected recipients:	0 - 16,000	8,254

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Iowa Tuition Grant

- Determining Maximum Amount
 - Looking at student count
 - Adjust maximum award

	award		
0 - 15,000	7,750	7,750	7,750
0 - 15,500	7,620	7,620	7,620
0 - 16,000	7,500	7,500	7,500
Award Formula 0 - 15,000		18,823,659	878,979
Award Formula 0 - 15,500	W/Avg to Max	14,228,804	744,583
Award Formula 0 - 16,000	W/Avg to Max	13,990,127	732,094
Award Formula 0 - 16,000	W/Avg to Max	18,216,444	850,625
	W/Avg to Max	13,769,810	720,565
**Ave to Max %	0 EFC		75.59%
	> 0 EFC		84.71%

	51,421,531	2.60%		
	Approp	Expenditures	Remaining	Award Amt
Award Formula 0 - 15,000	51,421,531	50,961,587	459,944	7,750
		6,351		
Award Formula 0 - 15,500	51,421,531	50,884,597	536,934	7,620
		6,248		
Award Formula 0 - 16,000	51,421,531	50,778,810	642,721	7,500
		6,152		

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Iowa Tuition Grant

- 2023-24 Year in Review - Decision Points
 - Weekly expenditure projections
 - Appropriations enacted
 - Estimated expenditure after application deadline
 - Estimated expenditures after Initial Filing Deadline Term 1
 - Expanded Eligibility
 - Estimated expenditures after Initial Filing Deadline Term 3
 - Actual expenditures at year end
 - Appropriation - 51,421,531
 - Expenditures - 51,374, 755
 - Remainder Reserve Fund



Skilled Workforce Shortage Tuition Grant (Kibbie Grant)

- Applications to date
 - Total Applications
 - College Participating
 - Program Code on FAFSA (i.e. associate or less)
 - EFC/SAI Range
- 23-24 Parameters released June 2
 - Decision based on May 29
 - Really looking at May 15 Data

	2 Year Average				2023-24			
	Elig Proj	0-6000	To Total Apps	%	Elig Proj	0-6000	To Total App	%
31-Oct	3,580	1,439	11,071	13.00%				
7-Nov	3,478	1,762	11,071	15.91%	3,725	1,344		#DM/0!
14-Nov	3,492	2,093	11,071	18.91%	3,702	1,636		#DM/0!
21-Nov	3,506	2,402	11,071	21.70%	3,646	1,915		#DM/0!
28-Nov	3,474	2,610	11,071	23.58%	3,568	2,155		#DM/0!
5-Dec	3,460	2,929	11,071	26.46%	3,615	2,374		#DM/0!
12-Dec	3,436	3,162	11,071	28.56%	3,669	2,927		#DM/0!
19-Dec	3,428	3,394	11,071	30.65%	3,691	3,169		#DM/0!
26-Dec	3,469	3,586	11,071	32.39%	3,691	3,353		#DM/0!
2-Jan	3,499	3,806	11,071	34.37%	3,724	3,589		#DM/0!
9-Jan	3,459	4,062	11,071	36.69%	3,828	3,941		#DM/0!
16-Jan	3,492	4,357	11,071	39.35%	4,011	4,442		#DM/0!
23-Jan	3,552	4,641	11,071	41.92%	4,044	4,776		#DM/0!
30-Jan	3,663	4,960	11,071	44.80%	4,075	5,152		#DM/0!
6-Feb	3,857	5,266	11,071	47.56%	4,052	5,441		#DM/0!
13-Feb	3,856	5,500	11,071	49.67%	4,034	5,662		#DM/0!
20-Feb	3,847	5,712	11,071	51.59%	4,953	5,857		#DM/0!
27-Feb	3,827	5,935	11,071	53.61%	4,986	6,154		#DM/0!
6-Mar	3,753	6,197	11,071	55.98%	5,012	6,455		#DM/0!
13-Mar	3,708	6,436	11,071	58.13%	5,014	6,706		#DM/0!
20-Mar	3,892	6,654	11,071	60.10%	5,036	6,964		#DM/0!
27-Mar	3,918	6,888	11,071	62.21%	5,061	7,239		#DM/0!
3-Apr	3,945	7,125	11,071	64.35%	5,041	7,462		#DM/0!
10-Apr	3,983	7,389	11,071	66.74%	5,036	7,729		#DM/0!
17-Apr	3,991	7,660	11,071	69.19%	5,024	7,998		#DM/0!
24-Apr	4,031	7,977	11,071	72.05%	5,002	8,301		#DM/0!
1-May	4,047	8,257	11,071	74.58%	5,116	8,793		#DM/0!
8-May	4,072	8,558	11,071	77.30%	5,125	9,137		#DM/0!
15-May	4,068	8,869	11,071	80.11%	5,140	9,503		#DM/0!
22-May	4,073	9,188	11,071	82.99%		9,846		#DM/0!
29-May	4,078	9,454	11,071	85.39%		9,939		#DM/0!
5-Jun	4,083	9,691	11,071	87.53%				#DM/0!
12-Jun	4,076	9,940	11,071	89.78%				#DM/0!
19-Jun	4,081	10,231	11,071	92.41%				#DM/0!
26-Jun	4,079	10,563	11,071	95.41%				#DM/0!

Skilled Workforce Shortage Tuition Grant (Kibbie Grant)

- Determining Percentages
 - Average to Max
 - Application to Recipient Rate
 - Annual, 2 year, and 3 year averages

Expected Family Contribution Ranges (in increments of 100; 1-100, 101-200, etc)	Kibbie Grant AY:		2022-23 Applicants	2022-23 AY Recipients	AY App to Rec Percentage	2022-23 AY \$	Max AY awards per Recipient Category	AY Award to Max Percentage	2022-23 Summ Rec	2022-23 Sum Awarded	2022-23 Max Awards	2022-23 App to Rec %	2022-23 Sum Award to Max %
	2022-23 award formula	Summer Max Award											
2022-2023 Initial Build Out as of March 1, 2023													
0	900	450	6644	2533	38.13%	1465401	2,280,141	64.27%	812	215004	365,604	12.23%	58.81%
1	900	450	152	76	49.77%	46065	68,086	67.66%	30	9779	13,639	19.94%	71.70%
101	900	450	91	37	40.96%	24787	33,550	73.88%	11	3533	5,162	12.61%	68.44%

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Skilled Workforce Shortage Tuition Grant (Kibbie Grant)

- Determining Percentages
 - Blue were the figures we went with
 - Higher than the two year or previous year (conservative estimate)
 - Average to Max trending different than others in build out so we went with 2 year average
 - Historically 0 EFC have matriculated at a lower rate

2022-2023 Initial Build Out as of March 1, 2023														2 Year Average of Final Without Special Priority													
0	9.56%	56.73%	900	450	6644	2533	38.13%	1465401	2,280,141	64.27%	812	289004	365,604	12.23%	58.81%	13,944	4,749	3,91501	4,717,741	34.06%	67.00%	13,944	1,550	432,790	743,504	10.82%	57.74%
4601	12.68%	41.67%	3,000	1500	69	34	49.29%	7147	89,965	69.97%	10	5953	16,714	14.22%	37.74%	140	61	134,597	92,265	43.60%	72.50%	140	19	11,919	22,244	12.44%	28.22%
4701	12.70%	50.00%	3,000	1500	62	32	51.28%	7862	95,387	75.95%	10	5823	16,286	16.44%	36.76%	125	69	136,507	97,387	46.24%	79.64%	125	18	11,923	27,296	14.95%	43.70%
4801	13.89%	50.00%	3,000	1500	79	41	51.36%	78535	121,700	64.53%	13	7404	19,382	16.30%	39.20%	151	68	143,708	202,700	44.75%	79.93%	151	23	14,904	34,382	15.91%	43.35%
4901	12.33%	44.44%	3,000	1500	62	30	61.89%	76269	111,022	65.30%	11	6023	16,489	17.73%	35.52%	135	70	146,625	211,022	52.33%	63.97%	135	20	13,623	25,989	14.61%	29.76%
5001	15.91%	47.50%	3,000	1500	61	34	55.72%	62463	101,965	61.28%	11	7034	16,822	17.40%	44.18%	127	60	121,905	173,965	47.23%	68.85%	127	21	14,939	30,922	16.23%	45.79%
5101	21.05%	52.08%	3,000	1500	61	32	52.52%	70287	95,387	73.67%	12	6295	16,051	19.73%	51.27%	118	59	132,292	176,387	49.82%	75.06%	118	24	16,630	36,091	20.37%	51.68%
5201	15.00%	50.00%	3,000	1500	56	24	42.87%	55727	72,262	77.60%	9	6064	12,317	15.89%	50.04%	116	49	99,268	144,262	41.60%	68.57%	116	11	12,414	26,037	16.4%	50.82%
5301	25.33%	50.00%	3,000	1500	56	27	48.36%	49676	62,230	60.41%	11	6366	16,404	19.53%	63.18%	110	63	131,575	190,230	57.65%	69.17%	110	25	20,866	37,494	22.67%	55.78%
5401	17.33%	47.22%	3,000	1500	67	45	67.09%	60963	124,087	74.98%	12	6293	16,067	17.98%	34.82%	119	78	172,333	233,087	65.93%	73.69%	119	21	12,668	31,567	17.68%	40.33%
5501	16.47%	39.90%	3,000	1500	59	23	46.05%	49596	63,073	68.33%	9	6309	12,307	17.74%	47.98%	116	52	106,974	156,073	44.85%	68.94%	116	20	12,621	29,997	17.31%	43.31%
5601	12.50%	56.25%	3,000	1500	55	33	59.80%	79504	98,676	76.52%	11	6664	16,225	19.47%	41.07%	119	59	134,872	176,676	49.49%	76.34%	119	19	14,144	28,225	15.8%	47.52%
5701	17.18%	61.38%	3,000	1500	52	32	61.85%	64990	95,387	67.82%	16	9995	24,006	30.78%	41.64%	116	62	136,573	195,387	53.27%	73.67%	116	27	20,520	40,506	23.28%	49.67%
5801	12.60%	64.17%	3,000	1500	57	36	63.49%	64600	108,544	69.39%	12	4833	18,061	21.52%	26.60%	105	58	116,432	174,844	58.41%	62.37%	105	11	9,688	21,061	17.8%	36.69%
5901	10.7%	45.82%	3,000	1500	53	22	41.37%	57803	65,784	67.87%	5	4072	8,191	10.30%	49.78%	109	49	120,964	146,784	44.89%	81.86%	109	11	8,197	17,391	10.5%	47.68%
11.92%	54.67%				10,832	4,723	43.60%	4467905	6,598,201	67.70%	1,596	594594	1,137,436	14.73%	51.42%	22,681	8,335	9,092,290	12,891,601	39.59%	69.99%	22,681	3,008	1,177,377	2,233,296	13.26%	52.72%
3.96%	56.73%	Zero EFC	6,644	2,537	38.13%	1465401	2,280,141	64.27%	812	289004	365,604	12.23%	58.81%	Zero EFC	13,944	4,749	3,91501	4,717,741	34.06%	67.00%	Zero EFC	13,944	1,550	432,790	743,504	10.82%	57.74%
15.70%	52.62%	non-zero EFC	4,988	2,190	52.28%	3002404	4,718,060	69.52%	783	369889	771,632	18.70%	47.82%	non-zero EFC	8,737	4,186	5,930,879	8,273,860	47.91%	71.68%	non-zero EFC	8,737	1,497	744,578	1,491,792	17.16%	59.98%

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Skilled Workforce Shortage Tuition Grant (Kibbie Grant)

- Determining recipients based on applications
 - Term 1-5 (Below)
 - Term 6 different percentages used

ENTRYDATE		0	1-100	101-200	201-300	301-400	401-500
20230515		6012	129	83	78	72	70
	80.11%	7505	161	104	97	90	87
*eligible applicants to recipients =		2,862	84	54	51	47	46
Projected eligible applications to recipients calculation : Academic Year Recipients; Does not include summer recipients							
Projected recipients:		0 - 6,000	5,140				
0 - 6,000		900	900	900	900	900	900
Award Formulas - Term 1 through 4							
Award Formula 0 - 6,000		2,575,520	75,771	48,752	45,815	42,291	41,116
		1,725,940	54,314	34,947	32,841	30,315	29,473
<i>If projection is</i>		<i>2,446,744</i>	<i>71,983</i>	<i>46,314</i>	<i>43,524</i>	<i>40,178</i>	<i>39,060</i>
		<i>1,633,643</i>	<i>51,599</i>	<i>33,199</i>	<i>31,199</i>	<i>28,799</i>	<i>27,999</i>
**Ave to Max %		0 EFC	67.01%				
		> 0 EFC	71.68%				

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Skilled Workforce Shortage Tuition Grant (Kibbie Grant)

- Evaluating expenditures compared to appropriations
- If new programs of study approved
 - Average per recipient estimated for the year
 - Proposed programs are vetted with each eligible college to determine potential recipients and expenditures

	Approp	Expenditures	Remaining	PROJ Summer
Award Formula 0 - 6,000*	5,000,000	4,444,048	555,952	567,900
		5,140		

	2023-2024	Additional exp Proj for new POS	Over/(Under) Committed	0 New Recipients
After Summer	Additional from new POS			
-11,948	0	11,948	Average Per Recipient	975

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Skilled Workforce Shortage Tuition Grant (Kibbie Grant)

- Year in Review - Decision Points
 - Weekly expenditure projections
 - Appropriations Enacted
 - Estimated expenditure after application deadline
 - Estimated expenditures after Initial Filing Deadline Term 1
 - Estimated expenditures after Initial Filing Deadline Term 3
 - Actual expenditures at year end
 - Appropriation - 5,000,000
 - Expenditure - 5,210,892
 - Carryover from previous year



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Questions

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