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Over the last several years there has been extensive discussion about the proposed Lake Powell Pipeline (“LPP”) and the consequent repayment obligations of the taxpayers of Washington County. The Kane County Water Conservancy District (“KCWD”) has also expressed an interest in participating in the LPP, despite water from the LPP not being needed for Kane County’s growth to 2060 based on the 2011 Water Needs Assessment of the Utah Division of Water Resources. We have conducted an initial analysis of the indebtedness to the KCWD and the taxpayers of Kane County by virtue of their participation in the LPP. The following pages summarize our initial findings, based on public documents made available by various Utah agencies.

Based on this analysis, we have major concerns about the ability of the KCWD to repay debt associated with the LPP. If the Kane County Water District receives its desired 5.5% share of the LPP’s water and of the LPP’s roughly \$1 billion cost, then assuming an interest rate of 4% and a 50-year repayment period, the KCWD will have to repay \$2.5 million of LPP costs every year (\$344 for every man, woman, and child currently in the county), in addition to its existing debt schedule. Unless the District increased its property tax rate, water rates, impact fees, or revenue from other sources, KCWD’s cumulative debt would grow to \$663 million by the end of the project repayment period, even assuming its property tax revenue, water sales revenue, and impact fee revenue all rise with its projected rate of population growth.

Although one potential source of revenue to repay Kane County’s portion of the debt would be payments commencing on the completion of the proposed Green River Nuclear Power Plant, no nuclear power plant has been constructed in the United

States since 1977, and this plant faces strong opposition. Counting on this plant being built may be imprudent.

Moreover, even if this nuclear power plant is constructed, KCWD will be forced to raise property taxes, water rates or impact fees significantly to repay its LPP debt. For example, our analysis indicates that if one assumes that the proposed nuclear power plant is constructed by 2024, one way for KCWD to repay its debt would be to:

- raise impact fees 344%, to an average of \$28,577 per connection; together with
- raising water rates by 538%; together with
- raising property tax rates by 61%.

Of course, increasing water rates this much would significantly decrease Kane County residents' demand for water, making the LPP's water even more superfluous than the Division of Water Resources currently calculates it to be. Furthermore, if the proposed nuclear power plant is not constructed by 2024, these increases in water rates, impact fees and property taxes will fall short of what will be needed to make the debt payments.

We conclude from our initial analysis that these debt obligations raise serious questions about the KCWD's participation in the LPP. The State should not facilitate Kane County's acquisition of this debt without a careful and thoroughly detailed study of whether Kane County residents have the capacity to repay it.

Thank you for the opportunity to contribute to this discussion.

Sincerely,

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## Lake Powell Pipeline Feasibility for Kane County Water District

The following summarizes concerns about the ability of the Kane County Water Conservancy District (KCWD) to repay debt issued by the State of Utah for their financial obligation for participating in the proposed Lake Powell Pipeline. The Lake Powell Pipeline (LPP) Development Act (Utah Code 73-28-402) mandates the entire project cost be repaid to the State of Utah with interest.

**1. Kane County Water District (KCWD) Questionable Water Needs.** The Governor’s Office of Planning and Budget 2012 Baseline Population Projections estimates Kane County will grow by 11,375 residents by the year 2060.<sup>1</sup> Based on this growth, projected water demands indicate no need for additional water in Kane County from the Lake Powell Pipeline, according to the 2011 Water Needs Assessment prepared for the Utah Division of Water Resources (DWRe):<sup>2</sup>

*“The difference between the projected KCWCD 2060 demand of 5,850 ac-ft/yr and the existing supply of 4,040 ac-ft/yr is 1,810 ac-ft/yr. For all four subbasins, a combination of existing and new ground water supplies is sufficient to meet all future needs within the planning horizon. Thus based strictly on water need, LPP supplies are not needed in the KCWCD service area within the 2060 planning horizon.” (Page ES-24)*

If KCWD does not receive water from the LPP it will still have 10,810 acre-feet of additional supply in 2060 from “likely projects,” and they will only have need for 1,810 ac-ft/year of that.<sup>3</sup> Kane County clearly has no need for LPP water.

According to the 2011 DWRe Water Needs Assessment, KCWD uses 420.3 gallons per capita per day (“GPCD”; p. ES-7) and had 0% water conservation savings from 2000-2009 (p. ES-10). If KCWD encouraged residents to get closer to the national average of 171 GPCD, estimated by USGS,<sup>4</sup> or state average of 295 GPCD, estimated by the Utah Division of Water Resources,<sup>5</sup> the district could extend their water supply even further into the future.

### 2. Estimate of Existing Revenues vs. Debt Service for KCWD.

One important question is whether or not local taxpayers can support Kane County’s repayment obligation for the LPP. A review of the KCWD’s revenue streams is warranted, based on the 2012 Audited Financial Statement Prepared for KCWD, the “2012 KCWD AFS”.<sup>6</sup>

**Water Sales Revenues.** KCWD received \$713,865 in water sales revenue (page 9 of the 2012 KCWD AFS):

	2012	2011
<b>Operating revenues:</b>		
Water sales revenue	\$ 713,865	\$ 587,721
Total operating revenues	713,865	587,721

<sup>1</sup> <http://governor.utah.gov/DEA/projections.html>, 2012 Baseline Projections, “Population and Households by Area.” Available as [governor.utah.gov/DEA/ERG/ERG2012/Households%20by%20Area.xlsx](http://governor.utah.gov/DEA/ERG/ERG2012/Households%20by%20Area.xlsx).

<sup>2</sup> <http://citizensfordixie.org/wp-content/uploads/2012/04/19DraftWaterNeedsAssessmentReport-1.pdf>

<sup>3</sup> Pages ES-27 and 6-12, 2011 LPP Water Needs Assessment.

<sup>4</sup> USGS, <http://pubs.usgs.gov/sir/2012/5163/>.

<sup>5</sup> Utah baseline per capita water use: <http://state.awra.org/utah/sites/default/files/AdamsMillis-WaterNeeds.pdf>.

<sup>6</sup> “Kane County Water Conservancy District Financial Statements With Other Government Reports For the year ending June 30, 2012 and 2011.”

**Property Tax Revenues.** In 2012 KCWD collected \$769,298 from property taxes (see the source in the next paragraph). Its levy rate was 0.000621 times the taxable value (p. 7 of the 2012 KCWDAFS).

**Impact Fee Revenues.** KCWD collected \$259,042 in impact fees in 2012 (page 9 of the 2012 KCWDAFS):

**Nonoperating income (expense):**

Property tax revenues	769,298	767,223
Grant revenues	1,776,373	4,096,810
Investment earnings	126,204	130,919
Impact fees	259,042	48,750

**Existing Debt Service by KCWD (not including LPP).** The KCWD has \$1,160,969 in annual debt service for previous obligations for FYE 2013, not including debt from the Lake Powell Pipeline, as shown on the 2013 row of the District’s debt service schedule (p. 17 of the 2012 KCWDAFS). This non-LPP debt service increases annually through 2037 before being extinguished in 2052, totaling \$34.6 million.

The District’s debt service for the next forty year period is as follows.

<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2013	569,003	591,966	\$ 1,160,969
2014	481,383	577,194	1,058,577
2015	491,727	565,123	1,056,850
2016	504,344	552,613	1,056,957
2017	501,127	539,841	1,040,968
2018-22	3,086,184	2,491,604	5,577,788
2023-27	3,343,276	2,114,186	5,457,462
2028-32	3,701,705	1,698,463	5,400,168
2033-37	4,171,155	1,243,653	5,414,808
2038-42	3,059,745	744,593	3,804,338
2043-47	2,497,553	247,184	2,744,737
2048-52	754,373	32,775	787,148
	<u>\$ 23,161,575</u>	<u>\$ 11,399,195</u>	<u>\$ 34,560,770</u>

**3. Estimate of Additional Debt Service on KCWD from the Lake Powell Pipeline**

**50-Year Repayment Obligation for Lake Powell Pipeline by Kane County Taxpayers.** The following is the calculation of total annual debt service to the KCWD to participate in the LPP. The KCWD has announced they intend to receive 5.5% of the project water<sup>7</sup>, meaning they will be required to repay 5.5% of the roughly \$1.0 billion cost,<sup>8</sup> although some believe project costs will be higher. The KCWD can therefore expect to pay \$55 million in capital costs (or more).

<sup>7</sup> 4000 af / 73,000 af, Page ES-5, 2011 LPP Water Needs Assessment. (For the CICWCD see “Iron County pulls out of Lake Powell pipeline project,” Salt Lake Tribune, March 22, 2012.)

<sup>8</sup> <http://www.water.utah.gov/LakePowellPipeline/projectUpdates/default.asp> says “The Division of Water Resources’ current cost estimate (June 2008) for the entire project is \$1.064 billion” (accessed 9/24/2013).

Assuming a 50-year repayment period, the annual debt service varies with the interest rate as follows<sup>9</sup>

**Annual Debt Service Payments  
by the Kane County Water Conservancy District**

Repayment Cost	Interest Rate			
	0.03	0.04	0.05	0.07
\$55 Million	\$ 2,137,602	\$ 2,560,261	\$ 3,012,720	\$ 3,985,292

In other words, the repayment obligation from the LPP will add between \$2 and \$4 million in additional annual debt burden onto KCWD’s existing debt service.

A reasonable assumption for a 50-year interest rate is 4%, meaning an additional \$2.56 million in new annual debt payment due to the LPP, shown in the attached spreadsheet’s Column F. In addition to its debt obligations, KCWD has operating expenses that are assumed to grow proportionally to the number of new households in the county, shown in Column I. This is a conservative estimate because no operating and maintenance costs have been included as part of LPP participation. It is likely there will be additional operation and maintenance costs associated with long-term management of KCWD’s portion of the LPP. Our estimates of KCWD Total Expenses are shown in Column J.

Based on the expected growth of existing revenue streams due to population increase in the county, KCWD’s revenues can be projected over the next 50 years, as shown in Column K. The deficit schedule for the repayment period can be seen in Columns O and P. These columns show that the District’s revenues fall significantly short of the District’s expenses for every year of the 50-year repayment schedule. Unless the District has an increase in revenues, KCWD’s cumulative debt would grow to \$663 million (cell P73) by the end of the project repayment period. Clearly, participation by the KCWD in the LPP will require significant increases in property taxes, impact fees and/or water rates.

**4. Repaying Debt Through Revenues from Proposed Green River Nuclear Power.** KCWD has entered into a contract with Blue Castle Holdings to lease 29,600 acre-feet<sup>10</sup> of water for a proposed nuclear power plant in Green River, Utah. The water for this lease will come from the water supply of the Green River, not out of Kane County’s water delivery system. The contract stipulates Blue Castle Holdings would pay KCWD \$1,000,000 per year once the plant comes online and \$100,000 per year while the project goes through the permitting process<sup>11</sup>. The \$1 million in revenues are contingent upon nuclear power plant construction, which is problematic since a new nuclear power facility has not been constructed in the U. S. since 1977<sup>12</sup>.

This raises the probability that if the nuclear facility is not licensed, KCWD would have to find another way to pay a major portion of their debt service. In our analysis we assumed KCWD

<sup>9</sup> N15—N18 of the attached spreadsheet.

<sup>10</sup> <http://www.deseretnews.com/article/705393416/Nuclear-power-plant-in-Utah-First-step-is-securing-water-rights.html?pg=all>

<sup>11</sup> [http://www.bluecastleproject.com/files/news\\_items/60-35353680.pdf](http://www.bluecastleproject.com/files/news_items/60-35353680.pdf)

<sup>12</sup>Of the 104 reactors now operating in the U.S., construction was started on all of them in 1977 or earlier. The two plants in operation that broke ground in 1977 are River Bend Nuclear Generating Station in Louisiana and Wolf Creek Generating Station in Kansas. [http://www.eia.gov/nuclear/reactors/stats\\_table3.html](http://www.eia.gov/nuclear/reactors/stats_table3.html)

would begin to receive \$1 million annually from the plant beginning in 2024, which is generous due to the length of time it takes for nuclear power plants to go through permitting and construction. This is shown in Column M. If the nuclear power plant is licensed on this timeline, but impact fees, water rates, and property taxes are kept at their current level, the KCWD will run a deficit every year of their operation, totaling a \$566 million deficit in 2062 (Columns Q and R; cell R73). Clearly, then, revenues from nuclear power alone will not be sufficient to avoid financial difficulty.

## **5. Tax, Water Rate and Impact Fee Increases Required to Repay Debt**

The fundamental question is whether the KCWD can make these debt payments via an increase in revenue, and if so how they will raise this revenue.

**Increasing Property Taxes.** Water conservancy districts in the Lower Colorado River Basin may not tax higher than 0.001 per dollar of taxable value of taxable property in the district.<sup>13</sup> If KCWD increased taxes on homeowners and businesses to the highest possible rate of 0.001, they would collect \$1.24 million in 2012 tax dollars  $(\$769,298 / .000621) * .001$  (based on 2012 values; see spreadsheet Column B). This represents a 61% increase in property taxes on Kane County homeowners and businesses to fund the LPP. However, even with this increase in property taxes, KCWD revenues would fall short of their expenses by many millions of dollars each year, cumulating to a deficit of \$560 million dollars at the end of the 50-year repayment period, if the proposed nuclear power plants are not constructed (Columns S and T; cell T73). If the nuclear power plants are constructed by 2024 and property taxes are raised to the maximum levy amount, KCWD would still experience large deficits annually and a cumulative deficit of \$463 million at the end of the 50-year repayment period (Columns U and V; cell V73).

**Increasing Water Rates.** Although one might think the KCWD could simply increase water rates to raise revenues, raising water rates will result in a decrease in total water demand. Because the debt is relatively large, in order for water sales to cover the debt obligations of the project, water sales revenues would need to increase by 305% (spreadsheet cell B10), even if property taxes were increased to the maximum allowable rate and the District received revenue from the Green River Nuclear Plant. This would still require the KCWD to shoulder significant deficits over time, but would result in a balance of essentially zero in 2062 (Columns W and X; cell X73). Due to the fact that the price elasticity of demand for water is conservatively estimated to be -0.5, repayment through water sales alone would require rate increases of 1542% (cell B12). This enormous increase in water rates would lead Kane County water users to demand in 2060 about a quarter (cell B13) of the water they demanded in 2010.

**Increasing Impact Fees.** There has been some discussion about making debt payments through an increase in impact fees, the fee new development pays to hook up to the water system. Currently KCWD has an average impact fee of \$6,438<sup>14</sup> and if the District chose to repay debt using impact fees, revenues from impact fees would need to go up by 688% (cell B15), requiring an average impact fee of over \$50,000 (cell B17), even if property taxes were increased to the maximum allowable rate and the District received revenue from the Green River Nuclear Plant (Columns Y and Z; cell Z73).

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<sup>13</sup>Utah Code, Section 17B-2a-1006. See <http://le.utah.gov/code/TITLE17B/htm/17B02a100600.htm>.

<sup>14</sup> 2010 and 2011 KCWD "Certification of Impact Fee Report" (Form CIF-CERT-1-2010). Reports (Note: KCWD has made the 2012 Impact Fee Report available to the public.)

The massive impact fees required would be among the highest in the nation,<sup>15</sup> likely deterring new growth in the county and significantly lowering property values. Both effects would add even more problems for KCWD's repayment obligations: the first would lower the amount of impact fees collected, and the second would lower property values and thus lower the total property taxes collected by the district. Our analysis did not compensate for these factors.

**Combination of Increased Water Rates and Impact Fees.** The significant debt to participate in the LPP will quite likely lead KCWD to raise property taxes to the maximum allowable by law. The District's only real flexibility in raising revenues for its debt payments comes from deciding the proportion of increased revenues which will come from increased water rates versus from increased impact fees. KCWD could, for example:

- raise impact fees 344% (cell B21), to an average of \$28,564 per connection (cell B22); together with
- raising water rates 538% (cell B20), when considering -0.5 elasticity; together with
- raising property tax rates by 61%.

If one assumes the proposed nuclear power plant will be constructed by 2024, Columns AA and AB of the spreadsheet (and cell AB73) show that these increases would eliminate KCWD's debt by 2060 (though it would carry substantial deficits for much of the repayment period). If the proposed nuclear power plant is not constructed by 2024, these increases in water rates, impact fees and property taxes would need to be larger. In addition, the 538% increase in water rates means that Kane County water users would demand in 2060 less water than they demanded in 2010.<sup>16</sup>

**6. Kane County Water District does not have a repayment plan.** According to Section 11-36a-301 of Utah Code, districts that assess impact fees with service area populations greater than 5,000, as of the latest US census, must prepare an Impact Fee Facilities Plan (or General Plan that covers the impact fee schedule) to determine the public facilities required to serve development resulting from new development activity.<sup>17</sup> KCWD has not made such a plan available to the public despite collecting impact fees on a service area population of approximately 7,125 people<sup>18</sup> from 2685 accounts<sup>19</sup> in 2010.

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<sup>15</sup> 2012 National Impact Fee Survey, Duncan Associates:  
[http://www.impactfees.com/publications%20pdf/2012\\_survey.pdf](http://www.impactfees.com/publications%20pdf/2012_survey.pdf)

<sup>16</sup> This is because cell B20 is larger than cell B8.

<sup>17</sup> [http://le.utah.gov/code/TITLE11/htm/11\\_36a030100.htm](http://le.utah.gov/code/TITLE11/htm/11_36a030100.htm)

<sup>18</sup> 2010 US Census: <http://quickfacts.census.gov/qfd/states/49/49025.html>.

<sup>19</sup> Page 7 of "Kane County Water Conservancy District Financial Statements With Other Government Reports For the year ending June 30, 2012 and 2011."



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11. Capital facilities plan or general plan required - Utah Code, Section 11-36a-301 - <http://le.utah.gov/UtahCode/title.jsp>
12. KCWD Census population - 2010 US Census -  
<http://quickfacts.census.gov/qfd/states/49/49025.html>
13. GOPB Population Projections  
<http://governor.utah.gov/DEA/projections.html>



	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
	Cumulative Surplus (Deficit) w/ Current P. Tax	Annual Surplus (Deficit) w/ Current P. Tax and GR Nuke	Cumulative Surplus (Deficit) w/ Current P. Tax and GR Nuke	Annual Surplus (Deficit) w/ Max P. Tax	Cumulative Surplus (Deficit) w/ Max P. Tax	Annual Surplus (Deficit) w/ Max P. Tax and GR Nuke	Cumulative Surplus (Deficit) w/ Max P. Tax and GR Nuke	Annual Surplus (Deficit) w/ Max P. Tax and GR Nuke and Increased Water Sales	Cumulative Surplus (Deficit) w/ Max P. Tax and GR Nuke and Increased Water Sales	Annual Surplus (Deficit) w/ Max P. Tax and GR Nuke and Increased Impact Fees	Cumulative Surplus (Deficit) w/ Max P. Tax and GR Nuke and Increased Impact Fees	Annual Surplus (Deficit) w/ Max P. Tax and GR Nuke and 50/50 Split Between Impact Fees and Water Rates	Cumulative Surplus (Deficit) w/ Max P. Tax and GR Nuke and 50/50 Split Between Impact Fees and Water Rates
23													
24	(\$4,367,050)	(\$4,267,050)	(\$4,267,050)	(\$3,876,162)	(\$3,876,162)	(\$3,776,162)	(\$3,776,162)	(\$1,559,996)	(\$1,559,996)	(\$1,559,995)	(\$1,559,995)	(\$1,559,996)	(\$1,559,996)
25	(\$8,817,537)	(\$4,175,804)	(\$8,613,537)	(\$3,776,444)	(\$7,807,653)	(\$3,676,444)	(\$7,603,653)	(\$1,422,030)	(\$3,044,426)	(\$1,422,028)	(\$3,044,423)	(\$1,422,029)	(\$3,044,425)
26	(\$13,455,654)	(\$4,185,416)	(\$13,143,494)	(\$3,777,438)	(\$11,897,397)	(\$3,677,438)	(\$11,585,237)	(\$1,384,114)	(\$4,550,317)	(\$1,384,112)	(\$4,550,313)	(\$1,384,113)	(\$4,550,315)
27	(\$18,290,937)	(\$4,197,057)	(\$17,866,291)	(\$3,780,312)	(\$16,153,605)	(\$3,680,312)	(\$15,728,958)	(\$1,347,407)	(\$6,079,737)	(\$1,347,406)	(\$6,079,731)	(\$1,347,407)	(\$6,079,734)
28	(\$23,315,376)	(\$4,192,802)	(\$22,773,744)	(\$3,767,137)	(\$20,566,886)	(\$3,667,137)	(\$20,025,254)	(\$1,293,970)	(\$7,616,896)	(\$1,293,968)	(\$7,616,889)	(\$1,293,969)	(\$7,616,892)
29	(\$28,627,319)	(\$4,279,327)	(\$27,964,021)	(\$3,844,590)	(\$25,234,152)	(\$3,744,590)	(\$24,570,855)	(\$1,330,464)	(\$9,252,036)	(\$1,330,463)	(\$9,252,027)	(\$1,330,463)	(\$9,252,031)
30	(\$34,163,880)	(\$4,291,469)	(\$33,374,051)	(\$3,847,503)	(\$30,091,022)	(\$3,747,503)	(\$29,301,192)	(\$1,291,711)	(\$10,913,828)	(\$1,291,710)	(\$10,913,818)	(\$1,291,711)	(\$10,913,823)
31	(\$39,934,256)	(\$4,303,820)	(\$39,012,833)	(\$3,850,466)	(\$35,145,129)	(\$3,750,466)	(\$34,223,706)	(\$1,252,290)	(\$12,602,671)	(\$1,252,289)	(\$12,602,659)	(\$1,252,289)	(\$12,602,665)
32	(\$45,948,011)	(\$4,316,385)	(\$44,889,731)	(\$3,853,481)	(\$40,404,415)	(\$3,753,481)	(\$39,346,135)	(\$1,212,188)	(\$14,318,966)	(\$1,212,187)	(\$14,318,952)	(\$1,212,187)	(\$14,318,959)
33	(\$52,215,098)	(\$4,329,166)	(\$51,014,487)	(\$3,856,547)	(\$45,877,138)	(\$3,756,547)	(\$44,676,527)	(\$1,171,394)	(\$16,063,119)	(\$1,171,393)	(\$16,063,103)	(\$1,171,393)	(\$16,063,111)
34	(\$58,721,805)	(\$4,318,103)	(\$57,373,170)	(\$3,835,601)	(\$51,547,825)	(\$3,735,601)	(\$50,199,189)	(\$1,105,831)	(\$17,811,475)	(\$1,105,829)	(\$17,811,456)	(\$1,105,830)	(\$17,811,466)
35	(\$65,502,007)	(\$3,431,330)	(\$63,099,426)	(\$3,838,774)	(\$57,448,512)	(\$2,838,774)	(\$55,045,931)	(\$163,617)	(\$18,687,551)	(\$163,615)	(\$18,687,530)	(\$163,616)	(\$18,687,540)
36	(\$72,566,871)	(\$3,444,784)	(\$69,068,188)	(\$3,842,002)	(\$63,588,454)	(\$2,842,002)	(\$60,089,770)	(\$120,674)	(\$19,555,727)	(\$120,672)	(\$19,555,703)	(\$120,673)	(\$19,555,715)
37	(\$79,928,018)	(\$3,458,471)	(\$75,289,386)	(\$3,845,285)	(\$69,977,277)	(\$2,845,285)	(\$65,338,646)	(\$76,990)	(\$20,414,946)	(\$76,988)	(\$20,414,920)	(\$76,989)	(\$20,414,933)
38	(\$87,597,533)	(\$3,472,394)	(\$81,773,356)	(\$3,848,625)	(\$76,624,994)	(\$2,848,625)	(\$70,800,817)	(\$32,552)	(\$21,264,096)	(\$32,551)	(\$21,264,067)	(\$32,551)	(\$21,264,082)
39	(\$95,576,533)	(\$3,475,099)	(\$88,519,390)	(\$3,840,564)	(\$83,530,558)	(\$2,840,564)	(\$76,473,414)	\$24,111	(\$22,090,548)	\$24,113	(\$22,090,517)	\$24,112	(\$22,090,533)
40	(\$103,889,102)	(\$3,489,507)	(\$95,549,672)	(\$3,844,021)	(\$90,715,801)	(\$2,844,021)	(\$82,376,372)	\$70,096	(\$22,904,074)	\$70,098	(\$22,904,040)	\$70,097	(\$22,904,057)
41	(\$112,548,829)	(\$3,504,164)	(\$102,875,823)	(\$3,847,537)	(\$98,191,970)	(\$2,847,537)	(\$88,518,964)	\$116,875	(\$23,703,362)	\$116,877	(\$23,703,324)	\$116,876	(\$23,703,343)
42	(\$121,569,856)	(\$3,519,073)	(\$110,509,929)	(\$3,851,114)	(\$105,970,763)	(\$2,851,114)	(\$94,910,836)	\$164,461	(\$24,487,035)	\$164,463	(\$24,486,994)	\$164,462	(\$24,487,015)
43	(\$130,966,890)	(\$3,534,240)	(\$118,464,566)	(\$3,854,752)	(\$114,064,346)	(\$2,854,752)	(\$101,562,022)	\$212,869	(\$25,253,648)	\$212,870	(\$25,253,604)	\$212,869	(\$25,253,626)
44	(\$140,758,162)	(\$3,552,597)	(\$126,755,745)	(\$3,861,382)	(\$122,488,301)	(\$2,861,382)	(\$108,485,885)	\$259,183	(\$26,004,610)	\$259,185	(\$26,004,563)	\$259,184	(\$26,004,587)
45	(\$150,956,780)	(\$3,568,292)	(\$135,394,267)	(\$3,865,147)	(\$131,252,980)	(\$2,865,147)	(\$115,690,467)	\$309,276	(\$26,735,519)	\$309,278	(\$26,735,467)	\$309,277	(\$26,735,493)
46	(\$161,579,308)	(\$3,584,257)	(\$144,394,295)	(\$3,868,977)	(\$140,372,076)	(\$2,868,977)	(\$123,187,063)	\$360,233	(\$27,444,706)	\$360,235	(\$27,444,651)	\$360,234	(\$27,444,679)
47	(\$172,692,979)	(\$3,600,499)	(\$153,770,565)	(\$3,872,873)	(\$149,859,833)	(\$2,872,873)	(\$130,987,418)	\$412,070	(\$28,130,425)	\$412,072	(\$28,130,365)	\$412,071	(\$28,130,395)
48	(\$184,165,719)	(\$3,617,020)	(\$163,538,408)	(\$3,876,837)	(\$159,731,063)	(\$2,876,837)	(\$139,103,752)	\$464,801	(\$28,790,840)	\$464,803	(\$28,790,777)	\$464,802	(\$28,790,809)
49	(\$195,844,081)	(\$3,311,733)	(\$173,391,677)	(\$3,558,775)	(\$169,679,080)	(\$2,558,775)	(\$147,226,677)	\$840,537	(\$29,101,937)	\$840,539	(\$29,101,869)	\$840,538	(\$29,101,903)
50	(\$208,006,674)	(\$3,328,830)	(\$183,656,174)	(\$3,562,876)	(\$180,229,120)	(\$2,562,876)	(\$155,678,621)	\$895,104	(\$29,370,911)	\$895,106	(\$29,370,838)	\$895,105	(\$29,370,875)
51	(\$220,673,162)	(\$3,346,222)	(\$194,348,643)	(\$3,567,049)	(\$190,797,334)	(\$2,567,049)	(\$164,472,814)	\$950,613	(\$29,595,134)	\$950,615	(\$29,595,057)	\$950,614	(\$29,595,096)
52	(\$233,864,003)	(\$3,363,914)	(\$205,486,503)	(\$3,571,293)	(\$202,000,520)	(\$2,571,293)	(\$173,623,020)	\$1,007,080	(\$29,771,860)	\$1,007,082	(\$29,771,777)	\$1,007,081	(\$29,771,818)
53	(\$247,600,474)	(\$3,381,911)	(\$217,087,874)	(\$3,575,611)	(\$213,656,152)	(\$2,575,611)	(\$183,143,551)	\$1,064,522	(\$29,898,213)	\$1,064,524	(\$29,898,124)	\$1,064,523	(\$29,898,169)
54	(\$261,692,783)	(\$3,188,289)	(\$228,959,678)	(\$3,368,073)	(\$225,570,470)	(\$2,368,073)	(\$192,837,366)	\$1,334,885	(\$29,759,256)	\$1,334,887	(\$29,759,163)	\$1,334,886	(\$29,759,210)
55	(\$276,367,407)	(\$3,206,913)	(\$241,324,979)	(\$3,372,541)	(\$237,965,829)	(\$2,372,541)	(\$202,923,401)	\$1,394,326	(\$29,555,300)	\$1,394,328	(\$29,555,201)	\$1,394,327	(\$29,555,251)
56	(\$291,647,962)	(\$3,225,859)	(\$254,203,837)	(\$3,377,086)	(\$250,861,548)	(\$2,377,086)	(\$213,417,423)	\$1,454,794	(\$29,282,719)	\$1,454,796	(\$29,282,613)	\$1,454,795	(\$29,282,666)
57	(\$307,559,012)	(\$3,245,131)	(\$267,617,121)	(\$3,381,709)	(\$264,277,719)	(\$2,381,709)	(\$224,335,829)	\$1,516,305	(\$28,937,723)	\$1,516,307	(\$28,937,611)	\$1,516,306	(\$28,937,667)
58	(\$324,126,109)	(\$3,264,736)	(\$281,586,543)	(\$3,386,412)	(\$278,235,240)	(\$2,386,412)	(\$235,695,674)	\$1,578,877	(\$28,516,355)	\$1,578,879	(\$28,516,236)	\$1,578,878	(\$28,516,295)
59	(\$340,984,325)	(\$2,893,172)	(\$295,743,176)	(\$2,999,689)	(\$292,364,339)	(\$1,999,689)	(\$247,123,190)	\$2,034,038	(\$27,622,971)	\$2,034,040	(\$27,622,845)	\$2,034,039	(\$27,622,908)
60	(\$358,537,158)	(\$2,913,460)	(\$310,486,363)	(\$3,004,556)	(\$307,063,468)	(\$2,004,556)	(\$259,012,673)	\$2,098,789	(\$26,629,102)	\$2,098,791	(\$26,628,968)	\$2,098,790	(\$26,629,035)
61	(\$376,812,741)	(\$2,934,097)	(\$325,839,915)	(\$3,009,507)	(\$322,355,514)	(\$2,009,507)	(\$271,382,687)	\$2,164,657	(\$25,529,667)	\$2,164,660	(\$25,529,467)	\$2,164,659	(\$25,529,537)
62	(\$395,840,342)	(\$2,955,091)	(\$341,828,603)	(\$3,014,543)	(\$338,264,278)	(\$2,014,543)	(\$284,252,538)	\$2,231,663	(\$24,319,130)	\$2,231,665	(\$24,318,980)	\$2,231,664	(\$24,319,055)
63	(\$415,650,404)	(\$2,976,448)	(\$358,478,195)	(\$3,019,667)	(\$354,814,516)	(\$2,019,667)	(\$297,642,306)	\$2,299,825	(\$22,992,070)	\$2,299,827	(\$22,991,912)	\$2,299,826	(\$22,991,991)
64	(\$436,117,163)	(\$2,840,743)	(\$375,658,065)	(\$2,867,449)	(\$371,874,545)	(\$1,867,449)	(\$311,415,448)	\$2,526,593	(\$21,385,160)	\$2,526,595	(\$21,384,993)	\$2,526,594	(\$21,385,077)
65	(\$457,424,692)	(\$2,862,843)	(\$393,547,231)	(\$2,872,751)	(\$389,622,278)	(\$1,872,751)	(\$325,744,816)	\$2,597,128	(\$19,643,439)	\$2,597,130	(\$19,643,262)	\$2,597,129	(\$19,643,351)
66	(\$479,607,004)	(\$2,885,324)	(\$412,174,444)	(\$2,878,144)	(\$408,085,313)	(\$1,878,144)	(\$340,652,753)	\$2,668,880	(\$17,760,296)	\$2,668,883	(\$17,760,110)	\$2,668,882	(\$17,760,203)
67	(\$502,699,478)	(\$2,908,193)	(\$431,569,615)	(\$2,883,630)	(\$427,292,356)	(\$1,883,630)	(\$356,162,493)	\$2,741,871	(\$15,728,837)	\$2,741,874	(\$15,728,641)	\$2,741,872	(\$15,728,739)
68	(\$526,738,914)	(\$2,931,457)	(\$451,763,857)	(\$2,889,211)	(\$447,273,261)	(\$1,889,211)	(\$372,298,204)	\$2,816,122	(\$13,541,868)	\$2,816,124	(\$13,541,662)	\$2,816,123	(\$13,541,765)
69	(\$551,763,594)	(\$2,955,123)	(\$472,789,535)	(\$2,894,889)	(\$468,059,080)	(\$1,894,889)	(\$389,085,021)	\$2,891,654	(\$11,191,889)	\$2,891,656	(\$11,191,672)	\$2,891,655	(\$11,191,781)
70	(\$577,813,334)	(\$2,979,197)	(\$494,680,313)	(\$2,900,664)	(\$489,682,108)	(\$1,900,664)	(\$406,549,068)	\$2,968,489	(\$8,671,075)	\$2,968,492	(\$8,670,846)	\$2,968,491	(\$8,670,961)
71	(\$604,929,554)	(\$3,003,686)	(\$517,471,212)	(\$2,906,539)	(\$512,175,931)	(\$1,906,539)	(\$424,717,589)	\$3,046,651	(\$5,971,267)	\$3,046,654	(\$5,971,026)	\$3,046,653	(\$5,971,147)
72	(\$633,155,335)	(\$3,028,598)	(\$541,198,659)	(\$2,912,516)	(\$535,575,484)	(\$1,912,516)	(\$443,618,808)	\$3,126,162	(\$3,083,956)	\$3,126,165	(\$3,083,702)	\$3,126,163	(\$3,083,829)
73	(\$662,535,488)	(\$3,053,940)	(\$565,900,545)	(\$2,918,595)	(\$559,917,098)	(\$1,918,595)	(\$463,282,155)	\$3,207,045	(\$269)	\$3,207,048	(\$3)	\$3,207,046	(\$136)
74									this is close enough to zero↑		this is close enough to zero↑		this is close enough to zero↑
75									Estimated Factors to make Final-Year Debt almost zero: 3.05179		6.87761		