

Fiscal Analysis Department

Minnesota House of Representatives



To: Representative Wagenius

From: Brad Hagemeyer, Fiscal Analyst

Date: September 22, 2017

Subject: Environment and Natural Resources Trust Fund Revenue

This memo is in response to your question concerning the amount of revenue the environment and natural resources trust fund would have received over the past ten years if the provisions regarding making loans for water infrastructure in Minnesota Laws 2017, Chapter 96, Section 2, Subdivision 19, Paragraph (a) and the Minnesota Constitution Article 11, Section 14, were implemented ten years ago.

Using the ten year time frame with the most recent information available (FY 2008-FY2017), the corpus of the fund has grown from \$493.9 million to \$1,028.4 million. The amount of income provided by lottery proceeds was \$335.4 million, expenditures totaled \$308.3 million and investment gains totaled \$507.4 million (including FY 2008 and FY 2009 which had negative investment returns).

In order to estimate the effect of using five percent of the corpus of the fund for loans, a number of assumptions needed to be made; a list of assumptions appears on the next page. The figures used in the following paragraphs and in Table 2 are only estimates to give an approximation to the potential impact loans would have on the fund and any changes to the assumptions could change these estimates. Given these assumptions the original amount of loans that would have been made over the last ten years would be approximately \$60.5 million. Over the ten year period; \$18.0 million in loan principle would have been repaid and \$3.2 million in loan interest would have been paid.

The net result of this scenario would be total investment gains of \$485.2 million and an ending balance of the corpus being \$1,006.2 million. The corpus would include \$45.4 million in outstanding loan principle at the end of FY 2017. This balance is \$22.2 million less than what was actually achieved during the time period with the environment and natural resources trust fund. The estimated reduction of investment income is a result of the \$60.5 million used for loans over the ten year period only receiving a 1% rate of return compared to the actual average rate of return on the fund of 6.9% over the same time period.

The lower balance in the corpus would have also reduced the amount of the fund available to appropriate annually. The “Out-flow” represented in Table 2 is the amount available to appropriate each year and was not altered for this estimate but would have been different had the loans been made since these amounts would exceed the Constitutional limit of 5.5% of the corpus of the fund. The reduction to the amount available to appropriate would vary by year but would be in the range of \$3-4 million in total over the ten year period and would exceed \$1 million annually by FY 2017.

Assumptions:

- Five percent of the corpus is used for loans and held as an asset within the corpus, adjusting the current asset allocation proportionally. Investment gains from the SBI provided chart are reduced five percent to account for the reduced assets in the current asset allocation.
- The full five percent maximum available for loans was used in FY 2008. The amount of loans and amount available for loans was recalculated each fiscal year. If the amount of outstanding loans exceeded five percent of the corpus no additional loans were made that year. If the amount of outstanding loans was less than five percent of the corpus, additional loans were made in the amount necessary for the loans to meet the five percent maximum.
- All loans are made on July 1st of the fiscal year.
- All loan payments are made once annually on June 30th of the fiscal year, including the first fiscal year in which the loan was distributed.
- All loans are amortized over 20 years with equal payments (once annually) being made in each of the 20 years.
- All loans earn a 1% annual interest rate.
- Returns are not adjusted for inflation.
- All loans are repaid on time without any defaults.

TABLE 1

Environment and Natural Resources Trust Fund Actual Performance: FY 2008-FY 2017

	FY 17	FY 16	FY 15	FY 14	FY 13	FY 12	FY 11	FY 10	FY 09	FY 08	TOTALS
Beg. Balance	924,152,298	892,958,705	842,499,260	714,087,086	614,736,995	574,884,921	460,515,847	401,513,139	465,855,096	493,939,833	
Contributions	35,349,779	37,641,607	34,542,433	32,189,665	34,734,488	31,316,554	37,461,000	31,561,021	29,909,000	30,645,000	335,350,547
Out-flow	46,397,668	46,400,506	33,858,326	33,858,916	25,361,980	25,359,541	25,653,619	25,651,773	22,889,843	22,875,134	308,307,306
Investment Gain or (loss)	115,266,003	39,952,492	49,775,337	130,081,424	89,977,584	33,895,061	102,561,692	53,093,460	-71,361,114	-35,854,603	507,387,336
End Balance	1,028,370,411	924,152,298	892,958,705	842,499,260	714,087,086	614,736,995	574,884,921	460,515,847	401,513,139	465,855,096	
Net Change	104,218,114	31,193,593	50,459,445	128,412,174	99,350,091	39,852,074	114,369,074	59,002,708	-64,341,957	-28,084,737	534,430,579

source: Minnesota State Board of Investment (SBI)

TABLE 2

Environment and Natural Resources Trust Fund Estimated Performance Had Loans Been Made: FY 2008-FY2017

	FY 17	FY 16	FY 15	FY 14	FY 13	FY 12	FY 11	FY 10	FY 09	FY 08	TOTALS
NEW Beginning Bal	907,284,926	877,650,133	829,264,823	707,003,220	611,846,084	573,402,062	463,929,109	407,356,648	467,894,796		
Contributions	35,349,779	37,641,607	34,542,433	32,189,665	34,734,488	31,316,554	37,461,000	31,561,021	29,909,000	30,645,000	335,350,547
Out-flow	46,397,668	46,400,506	33,858,326	33,858,916	25,361,980	25,359,541	25,653,619	25,651,773	22,889,843	22,875,134	308,307,306
95% Investment Gain	109,502,703	37,954,867	47,286,570	123,577,353	85,478,705	32,200,308	97,433,607	50,438,787	-67,793,058	-34,061,873	482,017,969
Loan Amt Maximum	45,364,246	43,882,507	41,463,241	35,350,161	30,592,304	28,670,103	23,196,455	20,367,832	23,394,740	24,696,992	
Outstanding Loans	41,201,667	39,027,264	33,305,137	28,859,390	27,110,890	21,954,645	21,298,366	22,442,532	23,575,370		
Available For Loans	4,162,579	4,855,243	8,158,104	6,490,771	3,481,414	6,715,458	1,898,090	-2,074,700	-180,630	24,696,992	60,458,651
Loan Income	453,642	438,825	414,632	353,502	305,923	286,701	231,965	224,425	235,754	246,970	3,192,339
Total Income	109,956,345	38,393,692	47,701,203	123,930,854	85,784,628	32,487,009	97,665,572	50,663,212	-67,557,305	-33,814,903	485,210,308
Loan Principal Payment	2,896,693	2,680,839	2,435,977	2,045,024	1,732,915	1,559,213	1,241,810	1,144,166	1,132,838	1,121,622	17,991,097
NEW Ending Balance	1,006,193,382	907,284,926	877,650,133	829,264,823	707,003,220	611,846,084	573,402,062	463,929,109	407,356,648	467,894,796	