

BIENNIAL REPORT

Short-Term and Long-Term Fund Viability



Petroleum Tank Release Cleanup Fund

2013- 2014

Petroleum Tank Release Compensation Board

1209 8th Avenue

P.O. Box 200902

Helena, Montana 59620-0902

Petroleum Tank Release Compensation Board

The Petroleum Tank Release Compensation Board, established under §2-15-2108, Montana Code Annotated (MCA), consists of seven members appointed by the Governor. The Board is administratively attached to the Department of Environmental Quality. The members presiding in the positions established by law, and their positions at the time of the writing of this report are:

Position Held	Member Name	City	Term Ends
Representative of the financial or banking industry	Susan Quigley	Shelby, MT	June 30, 2017
Representative of petroleum services industry or a representative of the petroleum release remediation consultant industry	Roger A. Noble Presiding Officer	Kalispell, MT	July 1, 2016
Representative of independent petroleum marketers and chain retailers	Jerry Breen	Choteau, MT	July 1, 2016
Representative of the general public	Timothy McDermott	Bozeman, MT	June 30, 2015
Representative of the service station dealers	Roy Morris Vice Presiding Officer	Butte, MT	June 30, 2015
Representative of the insurance industry	Tom Downey	Butte, MT	July 1, 2016
Person with a background in environmental regulation	Kate Cassidy	Whitefish, MT	June 30, 2017

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Executive Summary

Revenue from fuel use is expected to increase by no more than one percent per year over the next biennium so the best estimate would be to assume that revenues will remain steady. Total revenue from gas, diesel, and aviation fuel increased between 1995 and 2006, flattened between 2006 and 2008, declined in 2009, began increasing again in 2010, but remained flat between 2013 and 2014. The increase in total fuel revenue is due primarily to the use of diesel fuel for transportation. The U.S. Department of Energy predicts fuel use over the next several years to be essentially the same as recent years. Both the Montana Department of Transportation (MDT) and Legislative Fiscal Division (LFD) expect fuel use to be fairly flat in 2015 and 2016. Given all the information reviewed, revenues in the coming biennium are expected to remain near (within 1%) of the current annual revenues of seven million.

The fee on fuel has not changed since the inception of the program and, although revenues show some increase, that increase is being outpaced by the Consumer Price Index. The divergence between total fee revenue and the Consumer Price Index indicates that the fund currently has less buying power that it had in 1995.

Fund administrative expenses are consistent with the consumer price index. There are spikes in the administrative expenses due to subrogation activities, which are off-set by recovered funds from insurance carriers. The subrogation revenue continues to decline and was very low in 2013 and 2014. Claim expenditures are variable and difficult to predict. The Board is obligating funds based on a Department of Environmental Quality priority system developed to identify the highest priority corrective action needs and at a rate consistent with expected available funding. Current claim expenditures are considered to be the best estimate of the future expenditures, which is expected to be just over five million.

The number of releases discovered each year has slowed in recent years and the cleanup of existing releases continues. Release discoveries remain correlated to tank closures which have, in the past, resulted from imposed regulatory requirements. The rate of discovery has been decreasing in recent years and the number of discovered releases over the coming biennium is expected to continue to decline, though, only slightly.

The Environmental Quality Council (EQC) remained intimately involved in petroleum release cleanup and the status of the Petroleum Tank Release Cleanup Fund over the recent biennium. The EQC received several updates regarding the reporting requirements for petroleum tank release site closures (HB 613, 2011). The Council also received information regarding the Environmental Protection Agency (EPA) Tier II Audit that resulted from an analysis of the backlog of leaks from underground storage tanks. EPA issued its Tier II Fund Soundness Report which indicated concerns regarding the long-term soundness of the Fund and the rate at which cleanups were occurring. The report contained sixteen (16) recommendations to address those concerns (for improving the soundness of the Fund and increasing the rate of cleanups).

In addition, the EQC was informed about the strategic planning effort that is continuing between the Fund staff, tank permitting staff and the petroleum remediation staff. The planning is being conducted to develop strategies for reducing the backlog and maintaining the soundness of the fund.

Many of the states in the United States maintain a state fund for cleanup of some petroleum contamination. Michigan is among a few states trying to re-establish their state fund to help pay for cleanup at underground storage tank sites. States have discovered that there is limited private funding for historical contamination from old refueling operations, and the implementation of a state fund can assist with cleaning up the releases. The Montana petroleum fund continues to protect public health and safety, and the environment, as well as help UST owners meet federal requirements.

Introduction

The United States has used petroleum as an energy source since the 1850s. Kerosene was commonly used to light America's homes before the arrival of the electric light bulb. In 1892, the "horseless carriage" required gasoline as an energy source. By 1920 there were nine million motor vehicles in this country and gas stations were opening everywhere. However, this growth has left behind a legacy of industrial and commercial properties across Montana with a variety of real and perceived petroleum contamination problems.

The Petroleum Tank Release Cleanup Fund (Fund) assists Montana in meeting the cleanup challenges related to years of petroleum use in the State, as well as to current use of petroleum products. By working to clean up these contaminated properties we bring together government, businesses, community leaders, and citizens to assure that properties remain a vibrant part of the community and to maintain the healthy environment we have come to enjoy as Montanans – a place where our children can grow, our families can thrive and the economy can prosper.

The Fund was established in 1989 and is financed through a fee levied on distribution of petroleum products within the State. The Fund is a state special revenue fund established in §17-2-102, Montana Code Annotated (MCA). It is administered by the Petroleum Tank Release Compensation Board and is statutorily appropriated, as provided in §17-7-502, MCA, for the purposes provided for under subsections (3)(c) and (3)(d) of that section. Administrative costs under subsections (3)(a) and (3)(b) must be paid pursuant to a legislative appropriation.

The challenge put before us demands commitment, cooperation, and a common vision tailored to the needs of Montana. Communities, both urban and rural, need to make advances toward sustainability by continued use of properties affected by past petroleum contamination, and Montana should continue to develop processes that help prevent

contamination of properties in the coming decades. The purpose of this report is to provide information to assist and guide the Board, the Department of Environmental Quality (DEQ) and the legislative body in establishing those desirable goals that should be considered by those who are charged with ensuring and administering funding for environmental corrective action programs and projects to clean up petroleum contamination at properties across the state.

This report presents the findings, research methods and descriptive analyses used to examine the viability of the Fund. It is intended to provide useful information about factors impacting the petroleum release cleanup program and the Fund.

Trends in Fund Revenue

The main revenue source for the Fund is a fee levied on distribution of petroleum products within the state. The Fund was established to pay for allowable costs associated with cleanup of releases from petroleum storage tanks (§75-11-313, MCA). The Fund receives proceeds from fees levied on gasoline, diesel, and aviation fuels, which are, on average, 54%, 42%, and 4% of the fuel revenue, respectively. The diesel classification includes distributed fuels sold as heating oil. Additional revenue sources include the Board's subrogation activity and earned interest.

Fuel revenues, depicted in Table 1, below, indicate that there were localized peaks in total revenue in 2000, 2006 and 2012. Comparing the fuel revenue with the total revenues for those years indicate that there were other revenues that also contributed to the increase in total fund revenues for those years. Much of that other fund revenue is attributable to subrogation recoveries, especially for 2006.

Subrogation is a general principle of law that allows the Board to recover those payments from the insurance company legally liable for the corrective action, if there is an applicable insurance policy. In this recovery process, the Board assumes the legal rights of the owner/operator for whom the Board has paid expenses in regard to a claim against an insurance company for a covered loss paid on behalf of the owner/operator. To date, these additional revenues have contributed approximately 3% of total revenues.

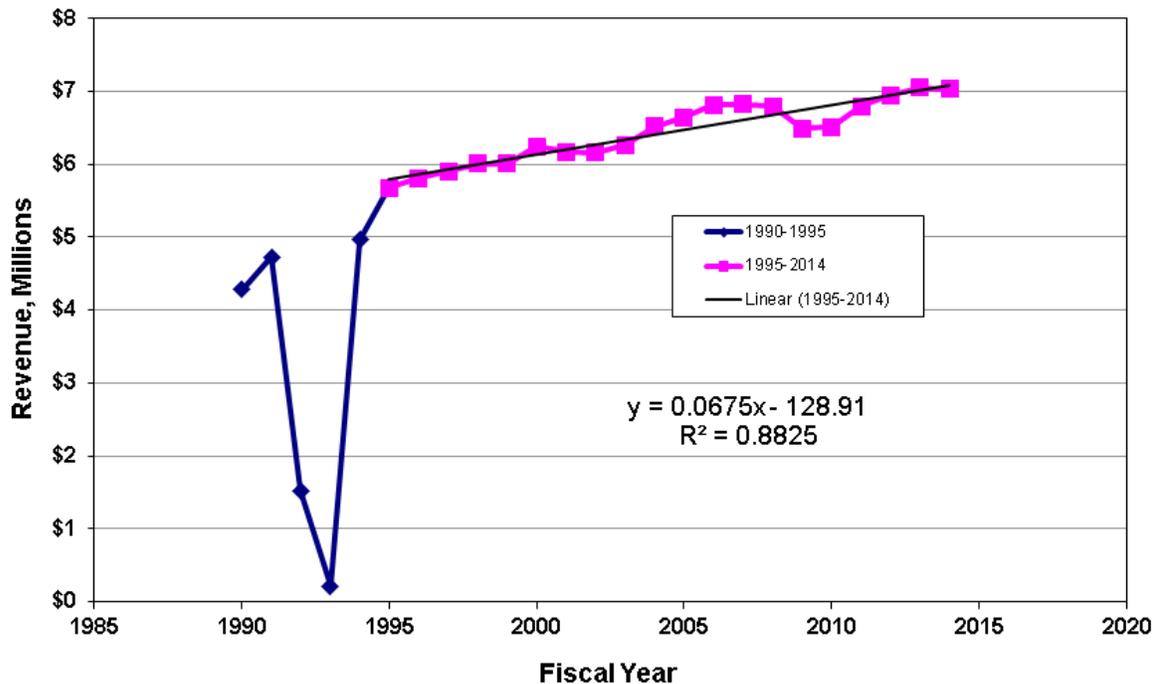
Historical

Revenues of nearly \$150 million have been received since the inception of the Fund. Table 1 lists the total revenue per year for fiscal year (FY) 1990 through FY 2014. This covers a period of twenty five consecutive years, with average annual fuel revenue of \$5.78 million per year and average annual total revenue of \$5.96 million. These averages include years when fees were not collected for the entire year and these averages are up by approximately \$100,000 per year from the averages in the last biennium. Collection of the fee was suspended during FY 1992, FY 1993, and FY 1994 because the fund balance had reached the legislatively established maximum, and collection was not resumed until the fund balance fell below the legislatively established minimum. The average annual fuel revenue increases to \$6.4 Million per year for the years beyond 1994. Revenue acquired

Table 1. Total Revenue by year		
Fiscal Year	Fuel Revenue	Revenue
1990	\$4,279,437.24	\$4,424,870.32
1991	\$4,732,448.59	\$5,167,398.46
1992	\$1,523,687.95	\$1,962,804.40
1993	\$206,400.18	\$208,585.18
1994	\$4,967,452.92	\$5,112,778.38
1995	\$5,675,845.97	\$5,901,317.96
1996	\$5,807,832.51	\$5,976,382.36
1997	\$5,910,993.62	\$6,027,122.56
1998	\$6,007,973.25	\$6,107,358.58
1999	\$6,013,468.40	\$6,183,625.77
2000	\$6,248,375.37	\$6,428,345.38
2001	\$6,169,082.64	\$6,319,922.17
2002	\$6,159,618.34	\$6,268,611.50
2003	\$6,268,885.49	\$6,333,823.91
2004	\$6,519,302.15	\$6,566,672.04
2005	\$6,654,184.36	\$6,696,950.09
2006	\$6,820,875.08	\$7,847,636.39
2007	\$6,825,951.12	\$6,994,593.97
2008	\$6,804,407.96	\$6,965,033.31
2009	\$6,487,586.16	\$6,491,533.88
2010	\$6,505,347.92	\$6,528,344.61
2011	\$6,802,571.91	\$6,914,969.82
2012	\$6,953,183.00	\$7,367,329.00
2013	\$7,048,774.26	\$7,078,350.51
2014	\$7,034,793.72	\$7,041,277.93

from petroleum fuels sold in the State exhibit an increasing trend for the years following 1994, when the fee was collected for the entire year. Annual revenues from fuel for FY 1990 through FY 2014 have been plotted against fiscal years in Figure 1, below.

Figure 1 — Revenue from Fuel by Year

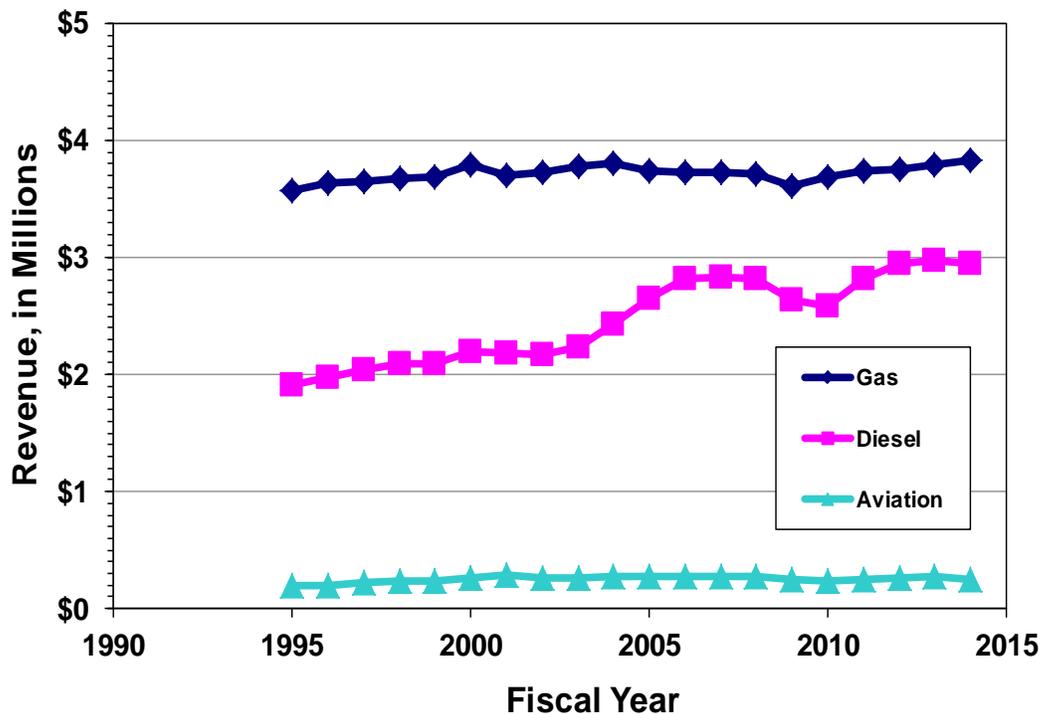


The suspension of the fee on fuel is clearly evident in the revenue from fuel received in both FY 1992 and FY 1993, and possibly in FY 1994. Given the suspension of the fee on fuel for part or all of fiscal years 1992 through 1994, and for the purposes of analysis, revenues have been separated into two parts: early revenue (FY 1990 – FY 1994), and subsequent revenue (FY 1995 – FY 2014). When attention is focused on the later twenty years, the data exhibit a fairly linear trend (see Figure 1, above). An incline is evident in the slope of a least-squares analysis (see definitions) representing a straight line that best fits the revenue from fuel for fiscal year 1995 through fiscal year 2014. The fitted line indicates that revenue from fuels sold in the State increases by approximately \$68,000 each year over the 20 years. This average increase (\$67,500) estimated from a linear regression of the fuel revenues from 1995 through 2014 is down from the last biennium

estimate (\$67,800); however, the number still rounds to \$68,000 and the coefficient of determination has increase from 85% to 88%.

The fuel revenue comes from fees levied on gasoline, diesel, and aviation fuels, each of which exhibits a different trend. Revenue produced from each of the three categories of petroleum product is shown in Figure 2, below.

Figure 2 — Revenues from Three Petroleum Products



The plotted data indicate that when comparing the three fuels, diesel fuel revenue still has the steepest incline over the period 1995 through 2014. This incline is evident in the least-squares analysis (see definitions) used to calculate a straight line that best fits the revenue data for the twenty-year period, for each of the fuel categories. The slopes of the lines predicted from a linear regression are \$6,220, \$59,186 and \$2,273 per year for gasoline, diesel, and aviation fuels, respectively. The slope provides an estimate of the annual increase in revenue for each category. Even though the slopes of the three trend

lines are all positive, gasoline and aviation fuel revenues do not exhibit as significant a trend as diesel fuel.

Revenue and Inflation

It is important to recognize that since the Fund's revenue is generated from a flat fee levied on each gallon of fuel distributed in Montana, the increases in the program's operating and site cleanup costs over time can only be offset by increased fuel use in the state. To obtain a better understanding of the status of the Fund, one needs to consider how the ever-increasing cost of goods and services compares to the revenue generated by the distribution of fuel.

Table 2. Fund Revenue and Transformed Consumer Price Index

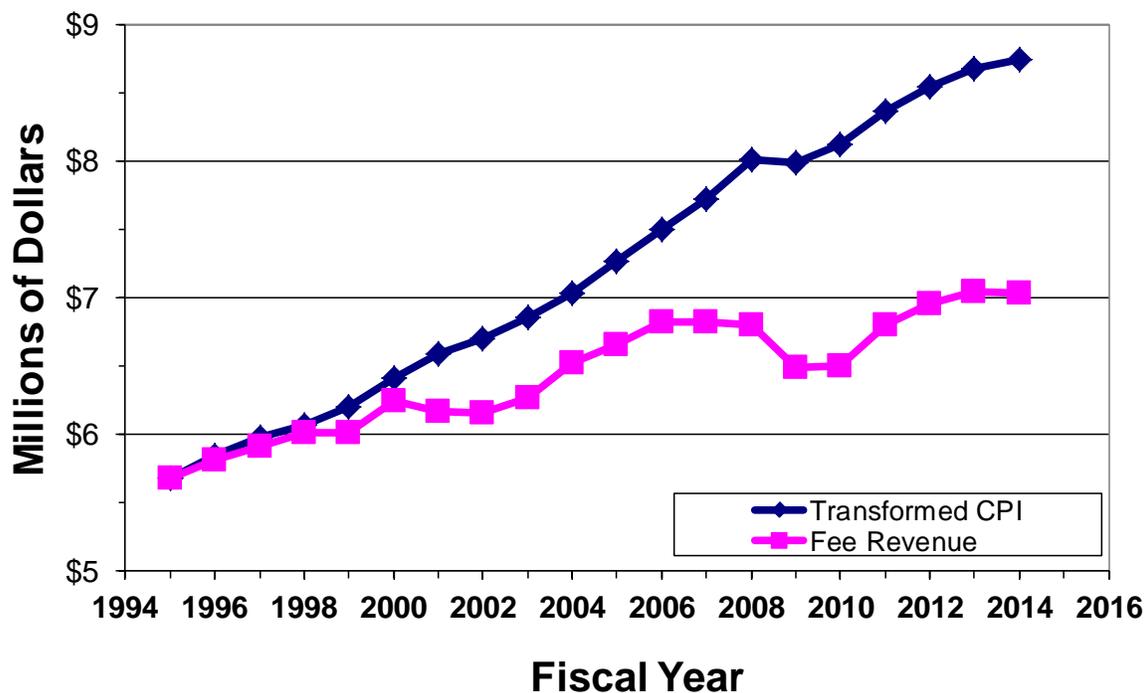
Year	Consumer Price Index	CPI Reindexed to 1995	Decimal Form	Transformed CPI	Fund Fee Revenue	Difference
1995	152.4	100.000	1.00	\$5.675846	\$5.675846	\$0
1996	156.9	102.953	1.03	\$5.843440	\$5.807833	-\$35,607
1997	160.5	105.315	1.05	\$5.977515	\$5.910994	-\$66,521
1998	163	106.955	1.07	\$6.070623	\$6.007973	-\$62,649
1999	166.6	109.318	1.09	\$6.204698	\$6.013468	-\$191,229
2000	172.2	112.992	1.13	\$6.413259	\$6.248375	-\$164,884
2001	177.1	116.207	1.16	\$6.595750	\$6.169083	-\$426,668
2002	179.9	118.045	1.18	\$6.700031	\$6.159618	-\$540,412
2003	184	120.735	1.21	\$6.852727	\$6.268885	-\$583,842
2004	188.9	123.950	1.24	\$7.035219	\$6.519302	-\$515,916
2005	195.3	128.150	1.28	\$7.273574	\$6.654184	-\$619,390
2006	201.6	132.283	1.32	\$7.508206	\$6.820875	-\$687,331
2007	207.3	136.024	1.36	\$7.720491	\$6.825951	-\$894,540
2008	215.3	141.273	1.41	\$8.018436	\$6.804408	-\$1,214,028
2009	214.5	140.748	1.41	\$7.988641	\$6.487586	-\$1,501,055
2010	218.1	143.110	1.43	\$8.122717	\$6.505348	-\$1,617,368
2011	224.9	147.572	1.48	\$8.375970	\$6.802572	-\$1,573,397
2012	229.6	150.656	1.51	\$8.551012	\$6.953183	-\$1,597,829
2013	233	152.887	1.53	\$8.677639	\$7.048774	-\$1,628,864
2014	235	154.199	1.54	\$8.752125	\$7.034794	-\$1,717,331

The Consumer Price Index (CPI) is used to measure inflation. The CPI, also called the cost-of-living index, is a measure of the price of a set group of goods and services. The amount of inflation is measured by the change in the cost of that group of goods and services over time. The CPI can be scaled to a base year to provide a clearer picture of what is happening to the cost of goods and its effects on the purchasing power of revenue or income. For example, a scaling of the CPI could indicate what the cost for a group of goods and services would be in FY 2014 if it cost \$6 million (the approximate annual revenue to the fund) to purchase those same goods and services in FY 1995.

Transformed consumer price index values and the Fund's fee revenue from FY 1995 through FY 2014 are provided in Table 2, above, along with the differences between the yearly values (*Annual Average Consumer Price Index for All Urban Consumers, U.S. Department of Labor and Statistics CPI Detailed Report* – May 2012). Take note that the base CPI of 152.4 is just a number; it is not dollars, nor is it what a typical consumer actually pays. It is just an index number that is used as a base to determine the inflation rate in subsequent years. The number 152.4 is set to the CPI base equaling 100 percent, which can also be expressed in decimal form. In subsequent years, the base number of 100 percent will be increased by the same amount as the increase in general prices of goods and services. The fund fee revenue and transformed CPI (see table 2) indicates that the purchasing power of the Fund continues to decline each year. The cost of goods and services, indicated by the transformed CPI, is growing more rapidly than Fund revenue.

The Fund Fee Revenue did trend closely with the CPI between 1999 and 2000, 2002 to 2006, and from 2010 to 2013. The overall departure of revenue from the CPI is evident in Figure 3, below, which depicts the transformed CPI and Fund's fee revenue for FY 1995 through FY 2014. The approximate cost of \$5.5 million worth of goods and services purchased in FY 1995 is estimated to have increased each year by about \$171,000, compared to the average increase in fuel revenue of \$68,000. Annual increases for CPI and fuel revenue were estimated using a least-squares regression analysis to fit a linear

Figure 3 — Transformed CPI and Fund Fee Revenue



line through the data. The average difference between the CPI and the Fund revenue values is approximately \$104,000 per year. The divergence leads to a reduction of more than \$1.7 million in purchasing power from 1995 to 2014.

Future Revenue Projections

The U.S. Energy Information Administration (EIA) uses a National Energy Modeling System (NEMS) organized and implemented as a modular system where the modules represent each of the fuel supply markets, conversion sectors, and end-use consumption sectors of the energy system to generate the annual energy outlook projections through 2040. They predict that consumption of petroleum use in the transportation sector will be nearly the same through the next several years but will decline in the years 2025 through 2040 (*Annual Energy Outlook 2014 with Projections to 2040*, released in April 2014 (Report #: DOE/EIA-0383(2014)).

Future revenues, predicted from the historical sale of fuels in Montana, would be expected to increase over the next several years. Performing a least-squares analysis to calculate a straight line that best fits the historical fuel revenue data for the years that were considered to be representative of a complete year (1995 - 2014) yields the linear function $y = 0.0675x - 128.91$. This regression, as noted above, indicates that fuel revenues increased by approximately \$68,000 each year, on average, from 1995 - 2014. The Biennial Report for 2012 also estimated an annual increase of \$68,000 each year between 1995 and 2012 from a linear function of $y = 0.0678x - 129.39$. It is important to recognize that gasoline sales are a function of the price per gallon of gasoline, vehicle fuel economy, and economic conditions, and as such are variable. The best estimate for future fuel revenue is to expect somewhere between nearly the same and an increase consistent with the least-squares predictions for fuel revenues. The linear trends indicate that the Fund could expect combined fuel revenues to increase by approximately \$68,000 each year, with diesel contributing \$54,000.00 to the expected annual revenue increase, gasoline accounting for \$6,000.00, and aviation fuel accounting for \$2,000.00.

The November 19, 2012 Revenue Estimate Recommendations report prepared by the Montana Legislative Fiscal Division (LFD) predicts that fuel use will increase by less than 1% per year. Although this indicates an increase in revenue, it probably is not significant enough to consider in a future estimate.

The 2012 Biennial Report predictions estimated fuel revenues would increase by approximately \$68,000 each year. This method resulted in a revenue prediction that was slightly higher than revenues received (\$57,270.10) for 2013 and slightly lower than revenues received (\$ -54,183.97) for 2014. Therefore, the estimate revenues were off from the actual revenue by less than one percent per year, indicating that the linear regression was a good predictive tool for those years and perhaps for the coming biennium.

The revenues for Gas and Diesel increased in recent years (2009-2014) with good correlation to a linear regression for only Diesel. Gas and Aviation fuel did not have as good a correlation. The linear regression line may still be the best predictor of future revenues. This prediction of fuel revenues using the linear least-squares function is

Table 3. Projected Revenue

Fiscal Year	Projected Revenue
2015	\$7.16
2016	\$7.23
2017	\$7.29
2018	\$7.36

depicted in Table 3. If revenues were predicted to remain nearly the same for the next decade, as predicted by the Energy Information Administration, the revenue predictions for 2015 through 2018 would be predicted to be \$7 million annually. Therefore, the linear least-squares function prediction differs from EIA predictions by no more than 5 percent in the next four years.

Trends In Expenditures

Fund administrative expenses appear to have a pattern consistent with the cost of living, while claim expenditures exhibit no definable pattern. Following an initial rapid growth period (FY 1990 - FY 1994), personal services and operating expenses indicate a pattern and trend correlated to the consumer price index. An analysis of claim expenditures indicates the average expenditures for the last twenty years, which follow a start-up period, is likely the best predictive technique of future expenditures.

Administrative Expenses

The growth of Board administrative expenses is similar to the increase in the consumer price index. The expenses incurred by the Fund that are associated with administrative activities by the Board and regulatory activities by the Department of Environmental Quality (Department) consist primarily of two categories; operating expenses and personnel expenses. Because Fund-supported Department costs have not always been separate from Board costs in the State of Montana financial system, the summary

provided in this report will examine the combined expenses for both the Board and the Department. Personal services, operating expenses, and the combined total

administrative

expenditures (in

millions) for FY 1990

through FY 2014 are

provided in Table 4,

right. Personal services

consist of salaries and

benefits for persons

engaged in the

following: review of

materials for eligibility

determination; analysis

of claims for actual,

reasonable, and

necessary costs;

evaluation of work plans

for cost control;

technical management

of corrective action for

releases; regulatory

oversight and other

associated

administrative activities.

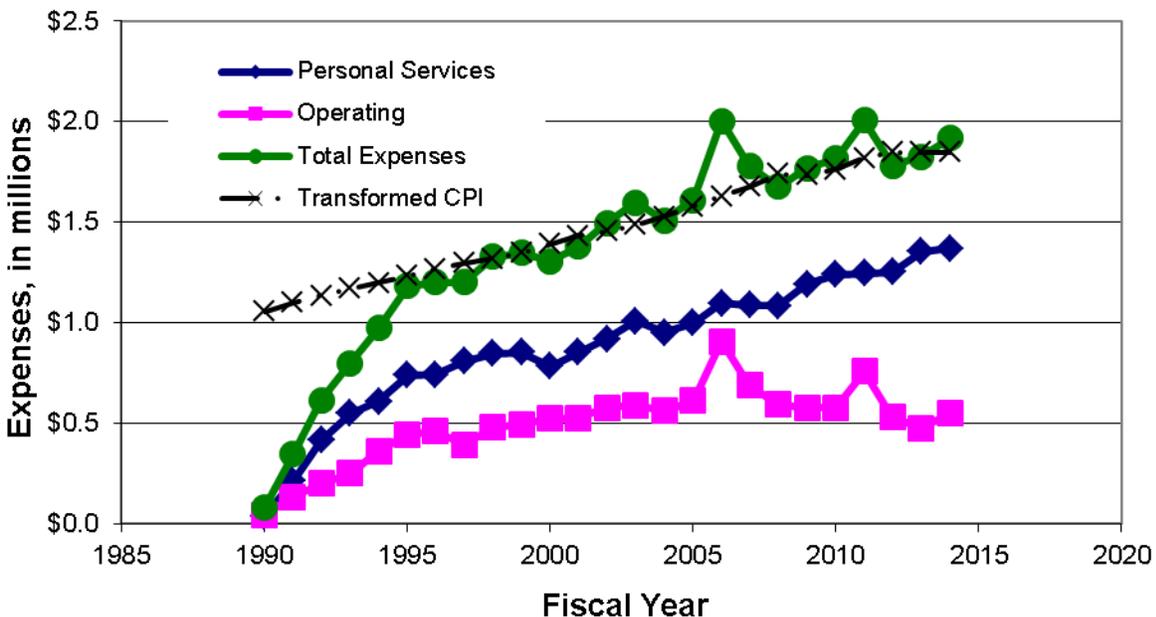
Table 4. Personal Services and Operating Expenses (Millions)

Fiscal Year	Personal Services	Operating Expenses	Total	Transformed CPI
1990	\$0.04	\$0.05	\$0.08	\$1.06
1991	\$0.21	\$0.13	\$0.34	\$1.10
1992	\$0.41	\$0.20	\$0.62	\$1.13
1993	\$0.55	\$0.25	\$0.80	\$1.17
1994	\$0.61	\$0.36	\$0.97	\$1.20
1995	\$0.74	\$0.44	\$1.18	\$1.23
1996	\$0.74	\$0.46	\$1.20	\$1.27
1997	\$0.81	\$0.39	\$1.20	\$1.30
1998	\$0.85	\$0.48	\$1.33	\$1.32
1999	\$0.85	\$0.49	\$1.35	\$1.35
2000	\$0.78	\$0.52	\$1.31	\$1.39
2001	\$0.85	\$0.53	\$1.38	\$1.43
2002	\$0.92	\$0.58	\$1.50	\$1.45
2003	\$1.01	\$0.59	\$1.60	\$1.49
2004	\$0.95	\$0.56	\$1.51	\$1.53
2005	\$1.00	\$0.61	\$1.61	\$1.58
2006	\$1.10	\$0.91	\$2.00	\$1.63
2007	\$1.09	\$0.69	\$1.78	\$1.68
2008	\$1.08	\$0.59	\$1.68	\$1.74
2009	\$1.19	\$0.58	\$1.77	\$1.73
2010	\$1.24	\$0.58	\$1.82	\$1.76
2011	\$1.25	\$0.76	\$2.00	\$1.82
2012	\$1.25	\$0.53	\$1.78	\$1.85
2013	\$1.35	\$0.47	\$1.83	\$1.85
2014	\$1.37	\$0.55	\$1.92	\$1.85

Operating expenses include direct operating, contracting, general and administrative expenses. Personal services, operating expenses, and the combined total administrative expenditures for FY 1990 through FY 2014 along with the transformed CPI, are depicted in Figure 4, below. Figure 4 shows a sharp rise in expenses as the program matured over the first four years. Total combined expenditures then begin to trend more closely with the CPI. In 2006 and 2011 there were temporary increases in operating expenses.

The 2006 increase is associated with a subrogation contract and reflects contingent expenses connected with a significant insurance subrogation recovery. Contingent contract expenses are only incurred when there is an insurance subrogation recovery. The 2011 increase is also associated with legal activity on a subrogation contract. The slope of a linear regression of the total expenses from 1995 to 2014 indicates that the trend of expenses has dipped slightly from the trend seen in the 2012 Biennial Report.

Figure 4 — Personal Services, Operating Expenses, and Combined Total Expenditures



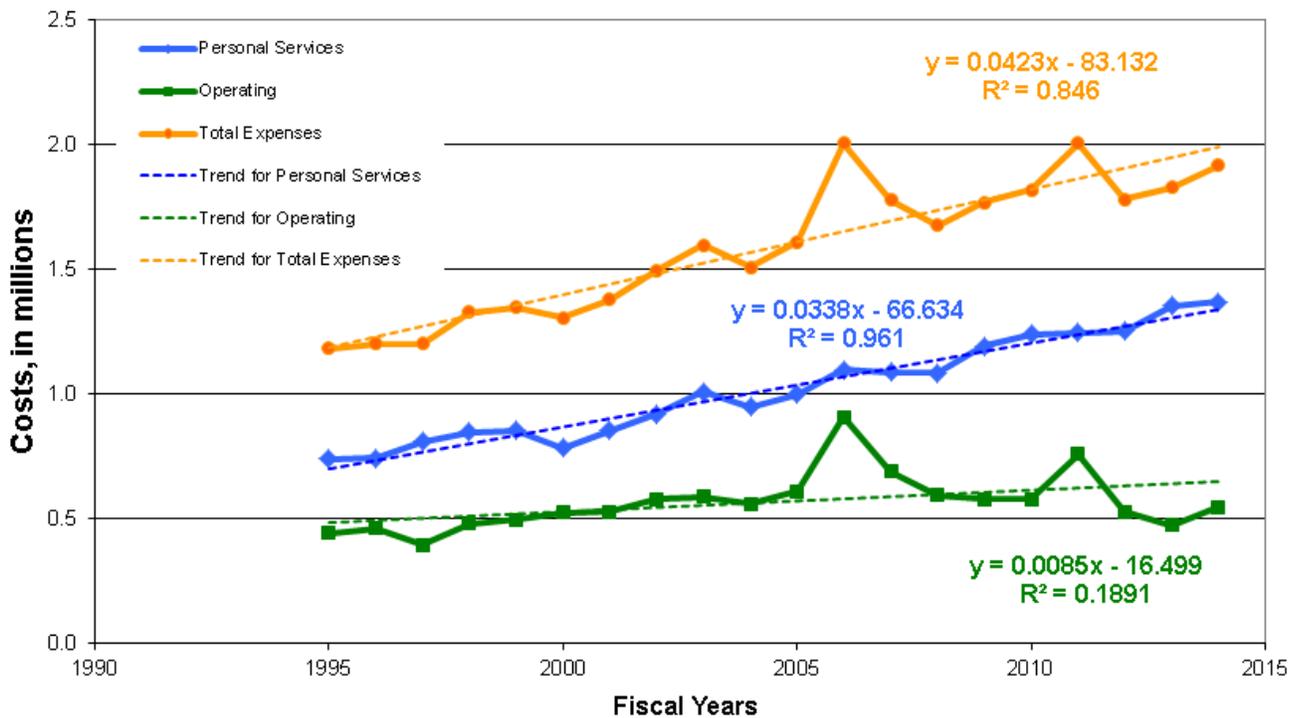
Future Administrative Expense Projections

The more recent expenditures (1995 through 2014) are likely the best available information to use to provide an estimate for future administrative expense projections. The expense curves presented in Figure 4, above, can be viewed in two parts. These two periods have differing rates of growth. The two periods are most evident in the combined total curve, but can be observed to a lesser extent in the curves representing personal services and operating expenses. The early period (FY 1990 – FY 1995) is associated with the initial growth and development of the program and reflects a steeply

increasing trend as the program staffed-up to meet legislative expectations. The later years (FY 1995 – FY 2014) reveal a shallower increasing curve that is more representative of stabilized operations.

The personal services, operating, and total expenses for the stabilized operations period from 1995 through 2014 are depicted in Figure 5, above. The total operating expenses

Figure 5 — Linear Regression Using Recent Expenses



include the contingent contracted expenses and therefore exhibit a similar localized increase in 2006 and 2011. There have been contingent contract expenses associated with subrogation activities since 2002. These expenses are quite variable and are not easily predicted. They have been included in the data presented in Figure 5, above, in an effort to provide comprehensive information.

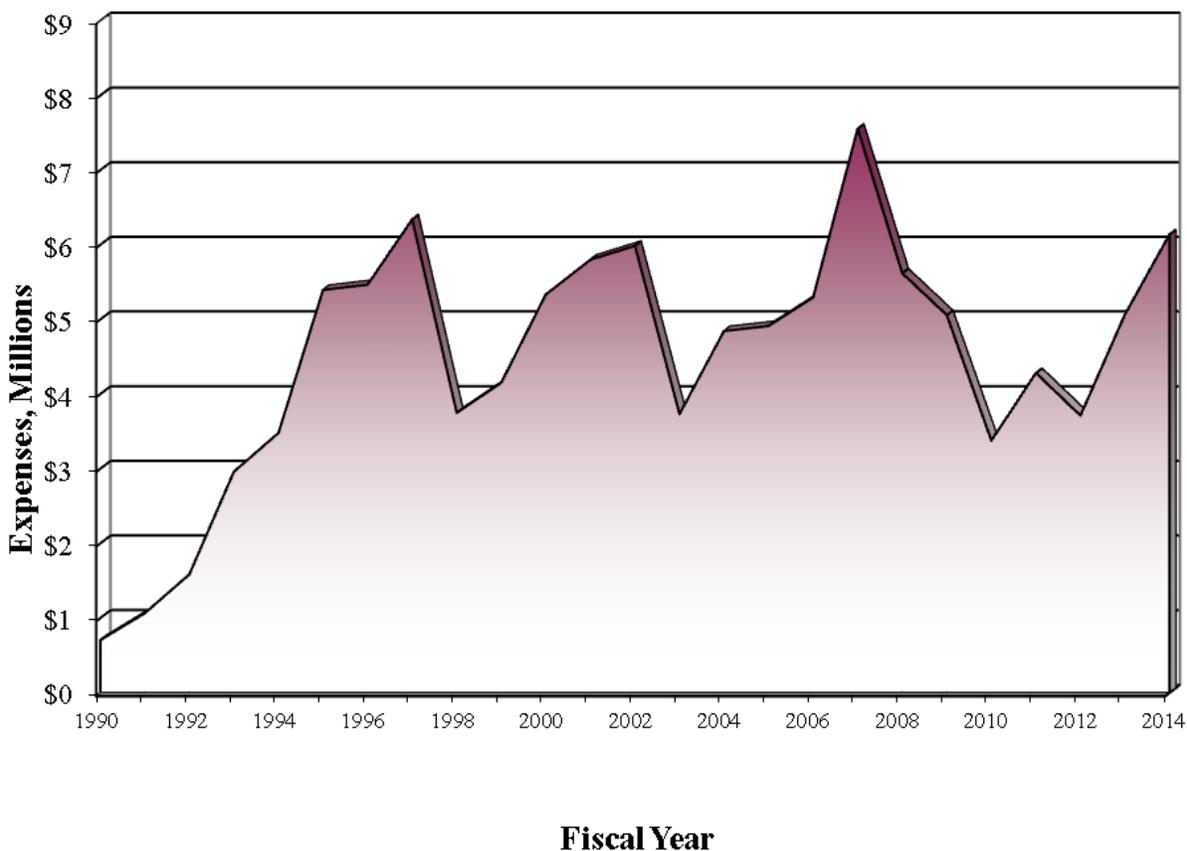
A linear regression model applied to the expense data for later years is likely the most reliable predictor of future administrative expenses. Performing a least-squares linear regression analysis to calculate a straight line that best fits the expense data for these later years yields a function that can reasonably predict future expenses. The later years are considered to be representative of more stabilized operations. The linear regression equation for combined total expenses ($y = 0.0423x - 83.132$) estimates that total costs will increase approximately \$42,000.00 per year. This indicates that expenditures will likely be in step with the cost of living, resulting in total program expenditures of \$2 million in FY 2015.

Claim Expenditures

Identifying the controlling parameters for claim expenditure is difficult. The annual claim expenditures for FY 1990 through FY 2014 are listed in Table 5, right. Annual claim expenditures climbed from \$703,653.28 in FY 1990 to \$5.4 million by FY 1995 and reflect a steeply increasing trend associated with the initial growth and development of the program. Taking into account a \$2 million litigation settlement paid as claims in FY 1997 indicates that expenditures for claims from FY 1995 through FY 2014 were quite variable, having a range from about \$3.7 million to \$7.6 million. A graph of the data is provided in Figure 6, below. These claim expenditure data were analyzed using regression techniques on all the data (FY 1990 – FY 2014), as well as on various subgroups of the data. Attempts were made to identify the leading influential parameter(s), including litigation settlements, board of investment loans, discovered releases, work plan activity and personal services expenditures.

Fiscal Year	Claims
1990	\$703,653.28
1991	\$1,065,514.92
1992	\$1,585,906.16
1993	\$2,960,965.77
1994	\$3,480,161.88
1995	\$5,394,682.48
1996	\$5,465,402.00
1997	\$6,339,423.82
1998	\$3,748,623.21
1999	\$4,153,031.36
2000	\$5,334,095.37
2001	\$5,799,130.55
2002	\$5,985,691.11
2003	\$3,731,611.03
2004	\$4,844,535.10
2005	\$4,911,911.04
2006	\$5,294,311.24
2007	\$7,554,982.16
2008	\$5,618,087.36
2009	\$5,057,747.82
2010	\$3,375,647.35
2011	\$4,281,917.67
2012	\$3,712,035.13
2013	\$5,066,970.39
2014	\$6,138,648.92
Total	\$113,604,687.12

Figure 6 — Claim Expenditures by Fiscal Year



However, no leading indicators were identifiable in the analysis and no predictive model was found to be representative of the data. Performing a least-squares linear regression analysis to calculate a straight line that best fits the claim expenditure data for later years (1994-2014 or 1995-2014) yields a relatively flat regression line. The regression estimate for 1994 through 2014 exhibits a slight increasing trend and the regression estimate for 1995 through 2014 exhibits a slight decreasing trend. Regression analysis for both of these subgroups of data yields a very poor coefficient of determination (0.0112 and 0.0008 respectively) and is therefore not likely the most reliable predictor of future claim expenditures.

Future Claim Projections

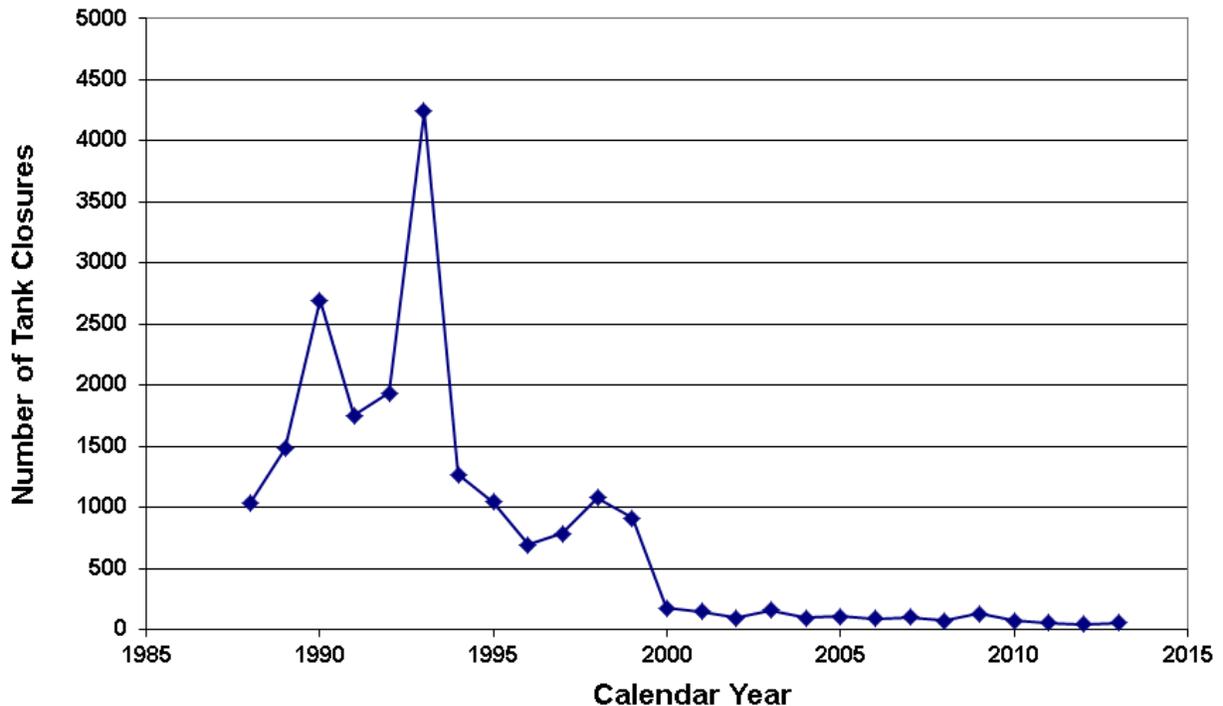
The average annual claim expenditure is probably the best available predictor to provide an estimate for future claim expenditure projections. This analysis focused on the data and did not take into consideration any impacts from potential influential outside actions, such as regulatory changes, or any long-term strategic plans. The claim expenditures exhibit what appears to be a ramp-up period between FY 1990 and FY 1995. An average can be calculated using the complete set of claim expenditures, or by using the more representative data of the last 20 years. The average for the complete set of claim expenditures is \$4,464,187.48 and the average of the past 20 years is \$5,090,424.26. The biennial report for 2012 projected claim expenditures to be at approximately \$5 million based on the average calculated from the prior 18 years (\$5,056,276.59). The actual annual claim expenditures for 2013 missed this prediction by less than 2%; however, actual annual claim expenditures for 2014 missed the prediction by more than 22%. The claim expenditures are predominantly a function of available revenue and therefore the best predictor would be an average of the more recent years. Using the average of claim expenditures for the past 20 years would project the expenditures for the next few years to be at approximately \$5.1 million.

Exposure to Long-Term Liabilities

Liabilities for the Fund consist of cleanup costs for current eligible releases, future eligible releases and possibly releases where ineligibility has been contested. The liabilities associated with the current eligible releases is the total cleanup for each current active release reduced by the amount of on-going effort required to accomplish cleanup, the amount of insurance coverage for the release, and the facility's compliance. The liabilities associated with future releases are affected by those aspects mentioned for current releases as well as the rate at which new releases are being discovered, and eligibility applications filed. Although contested-eligibility releases may be overturned through a Montana Administrative Procedures Act (MAPA) contested case hearing process or by

the Montana District Court, given past activities the probability of expenditures for these releases appears to be quite low.

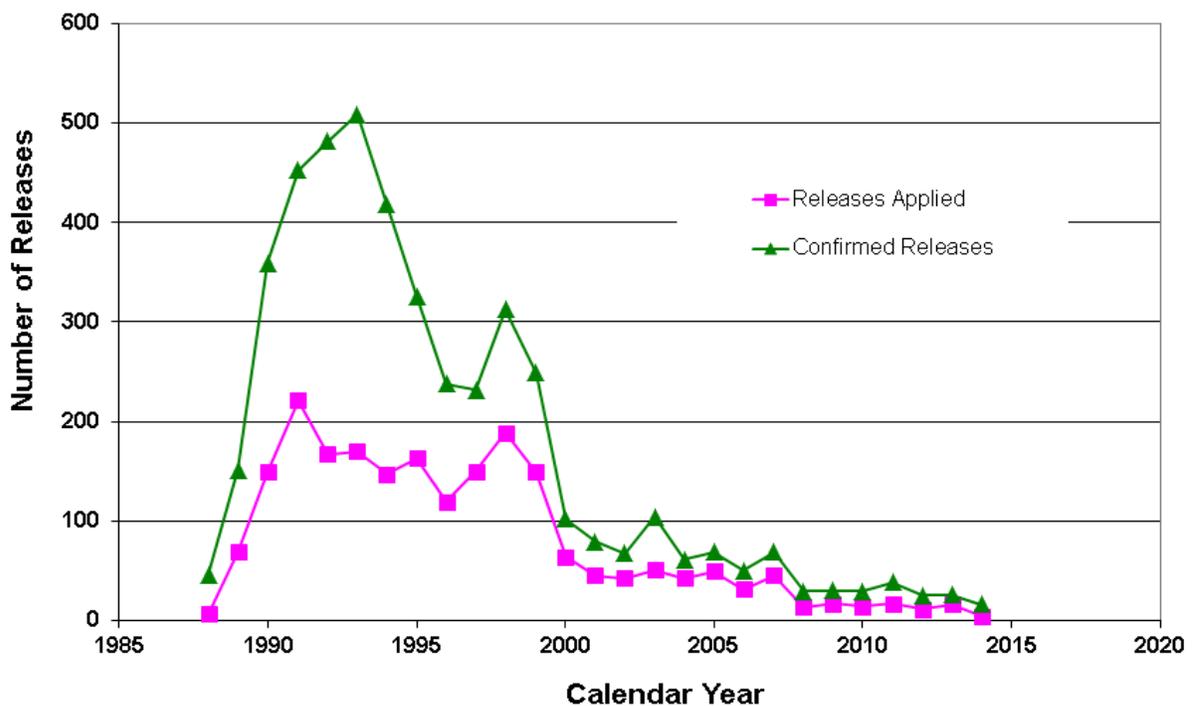
Figure 7 — Tank Closures by Calendar Year



A decrease in newly discovered releases has been seen from 2005 to 2013. An autopsy of leaks for 2012 and 2013 is available in DEQ MUST News publications. Autopsies for calendar year 2012 can be found in the *Spring Issue 2013* and those for 2013 can be found in the *Spring Issues 2014*. Thirty-two new leaks were discovered in calendar year 2012 from both aboveground tanks (8) and underground tanks (24). Thirty-eight percent of the releases discovered in 2012 were from historical contamination. Calendar year 2013 had twenty three new leaks discovered. Just over half of these releases (13) were from historical contamination. As more of the historical contamination is discovered and addressed, fewer releases are left as a future liability to the Fund. Also, the ongoing effort by the Department to close releases helps reduce the Fund's exposure to long-term liabilities.

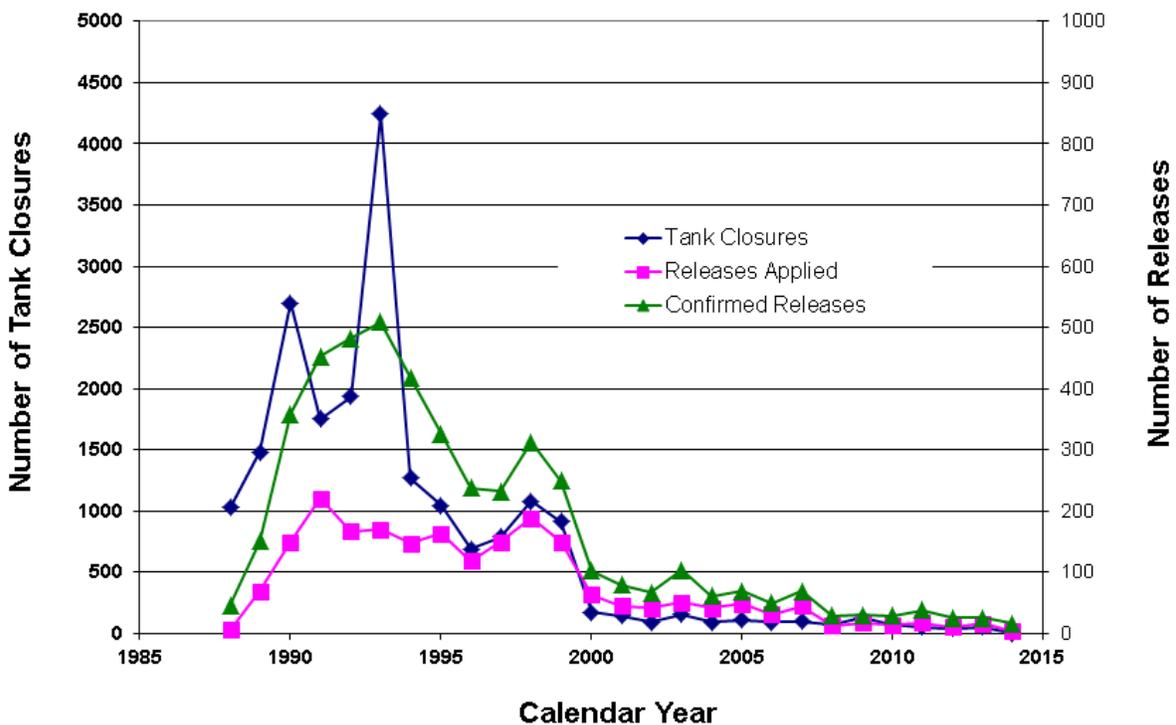
The number of tank closures influences the number of releases applying for eligibility. This impacts the Fund's long-term liability. In the late 1980s the Department adopted rules implementing new underground storage tank regulations. These underground storage tank regulations likely produced the increase in the number of tank closures seen in the late 1980s and early 1990s, as depicted in Figure 7, above. In 1993 Senate Bill (SB) 196 exempted certain underground storage tanks from the closure requirements of the Montana Hazardous Waste and Underground Storage Tank Act until December 31, 1993. The large number of tank closures in 1993 appears to have resulted from the expiration of this temporary exemption. The number of tank closures per year declined as rapidly between 1993 and 2000 as it had increased in the prior six years. The spike in 1998 was a result of UST owners and operators attempting to comply with the federally mandated 1998 deadline for upgrading, replacing, or closing underground storage tanks. Although the tank closures between 2000 and 2014 appear to be fairly flat a least-squares regression analysis of this data indicates that the number of releases is trending downward, with nearly eight fewer releases being discovered each year.

Figure 8 — Releases by Calendar Year



The number of releases applying for eligibility is most certainly affected by the number of confirmed releases. The number of releases eventually applying for eligibility, along with the number of confirmed releases, by discovery date, between 1988 and 2014, is depicted in Figure 8, above. A visual inspection of the two curves indicates that the number of releases discovered in each year that eventually apply for eligibility correlates with the number of confirmed releases each year. The correlation coefficient of the confirmed releases and the number of releases eventually applying for eligibility (0.940) indicates a very positive relationship between the two sets of data.

Figure 9 — Comparing Tank Closures to Releases



The number of confirmed releases, and therefore the number of releases applying for eligibility, still appears to be related to the number of tank closures. The number of releases applying for eligibility by discovery date, the number of confirmed releases by discovery date, and the number of tanks closed in a particular year for 1988 through 2014 have been plotted in Figure 9, above. The scale for the number of closures is indicated on the left, while the scale for the number of releases is provided on the right. The

correlation coefficient of the number of tank closures by year and the number of confirmed releases by year (0.842) indicates a high positive relationship between the two sets of data. The correlation coefficient between the number of tank closures by year and the number of releases applying for eligibility each year (0.705) indicates there is a moderate relationship between closures and requested assistance from the Fund. The spike in closures that occurred in 1993 affects the correlation with releases, though not significantly.

New Releases

An estimate of new releases cannot adequately be obtained from all of the available data on tank closures and releases. However, the last seven years may provide a reasonable estimate. In the three curves depicted in Figure 9, above, the number of tank closures and release discoveries are shown to increase during implementation of the federal and State regulatory framework, to peak in relation to regulatory changes, to decline over a period of several years, and then remain steady for a period of several years. With no expectation of significant regulatory changes, it is this steady period that may provide the best estimate of future releases. Although the period from 2008 through 2014 appears to be constant, each of the curves actually exhibits a declining trend over that period of time. Regression analysis indicates that closures decline by about fourteen each year, confirmed releases decline by nearly two each year and releases applying for eligibility decline by more than one each year during the seven year period. While regulatory changes are expected to have negligible impact on tank closures and releases discovered, there still remains some uncertainty. The average number of confirmed releases between 2008 and 2014 is 28, with a standard deviation of 7 releases. The average number of releases applying for eligibility between 2008 and 2014 is 13, with a standard deviation of 4.6 releases. These statistics estimate the number of confirmed releases per year to be 28 with approximately 13 applying for eligibility.

The Board is examining strategies associated with development of inspection requirements for aboveground storage tanks (ASTs). This effort is intended to reduce the

number and severity of releases from aboveground storage tanks. Many ASTs do not comply with current storage tank standards. Older installations are only required to be in compliance with regulations in place at the time of tank installation. Compliance of existing tanks with current standards is often only required if the AST system is upgraded. Over the long term, compliance with current standards will result in a decline in the number of releases from ASTs. The Board also recognizes that it is important to balance this strategy with available funds.

The Board is encouraging owners to purchase tank insurance to cover their copay requirements. The Board believes that encouraging owners to have some insurance will help reduce the liability to the Fund.

Impacts of Changes in State and Federal Regulations

The Board monitors developments in various federal and state programs for potential effects on the Fund and that may be related to the Fund. In September 2013 EPA released a publication entitled *“The Responsible Party Search Guide For The Underground Storage Tank Program”*. *The Responsible Party Search Guide* provides information to federal, state and tribal underground storage tank program staff searching for owners and operators of UST systems. The identification of the owner or operator responsible for UST systems is an important component ensuring that systems are in compliance with UST regulatory requirements and that releases from leaking USTs are cleaned up. Generally, the implementing agency knows the identity of the UST owners and operators and works with them to ensure they are in compliance with UST regulations, including cleanup requirements. In some cases, however, identifying the responsible owner or operator for a particular UST involves sorting through complicated tank histories or drawing reasonable conclusions where evidence is scarce. The Guide provides general assistance for responsible party search work and imposes no new or additional requirements.

In 2012 the Michigan Legislature created an Underground Storage Tank System Cleanup Advisory Board to make recommendations on developing a cleanup program. Funded by the Michigan Refined Petroleum Fund, the program is intended to help owners and operators comply with UST requirements. In March of 2013, the board issued a report that recommends developing new legislation to restore all of the annual Refined Petroleum Fund revenue to the UST program. The revenue would be used to:

- Provide a financial responsibility mechanism for UST owners and operators on future releases,
- Fund a reimbursement program for corrective action related to unknown historical releases, and
- Conduct corrective action to respond to imminent and substantial threats to public health or the environment posed by leaking USTs without a viable owner or operator.

These are similar to the goals and objectives of the Montana petroleum cleanup fund.

Other Activities

During 2013 and 2014, the state Environmental Quality Council (EQC) conducted several meetings in which testimony was provided related to petroleum release cleanup or the status of the Petroleum Tank Release Cleanup Fund. The EQC received an update as part of the reporting requirements for petroleum tank release site closures (HB 613, 2011) at their June 19 and 20, 2003; September 11 and 12, 2013; January 8 and 9, 2014; and July 9 and 10, 2014 meetings. At their July 9 and 10, 2014 meeting they also received information regarding the EPA Tier II Audit and DEQ's response. At their September 10 and 11, 2014 the council heard about the strategic planning effort between the Fund staff, tank permitting staff and the petroleum remediation staff.

The Office of Underground Storage Tanks (OUST) within the U.S. Environmental Protection Agency (EPA) undertook an analysis of the backlog of leaks from underground storage tanks. They conducted the analysis to understand the reasons for the backlog of

UST releases and assist states in development of strategies to address the backlog. The study compiled and analyzed available data from 14 state leaky underground storage tank (LUST) programs, including Montana. It identified key findings and potential opportunities to help reduce the number of UST cleanups remaining. Using this report, EPA entered into discussions with the Montana about specific strategies that could help reduce the backlog.

The initial findings in EPA's 2012 draft assessment indicated a more detailed analysis was needed to evaluate the soundness of Montana's fund. EPA asked the Montana Petroleum Tank Release Compensation Board (PTRCB) and the Montana DEQ to participate in a Tier II review of the release backlog and the Montana State Fund. The Board and DEQ agreed to participate and a review was conducted in fiscal year 2013. EPA intends to work with Montana to develop detailed strategies for reducing the backlog and improving the soundness of the fund. The strategies could involve actions from EPA or from the state.

On April 22, 2014, EPA issued an FY 2013 Tier II Fund Soundness Report for Montana's Petroleum Tank Release Cleanup Fund (Montana Petro-Fund). The report was completed in close consultation with the staff and managers within the Department and the Board. The time frame evaluated in the report covered FY 2010, FY 2011 and FY 2012. At the time of the evaluation, there were an estimated 841 open, eligible releases in Montana; 228 requiring assessment, and 613 in active cleanup.

From EPA's perspective, the report raised concerns regarding the long-term soundness of the Fund and the rate at which cleanups were occurring. The report contained sixteen (16) recommendations for improving the soundness of the Fund and increasing the rate of cleanups. The recommendations addressed three areas: Environmental Performance, Management / Administrative Processes, and funding. Several recommendations were specific to the Board, others require cooperative efforts of both the Board and the Department, and some were specific to the Department. The recommendations included:

- *The Department and the Board should develop a comprehensive strategic plan for federally-regulated fund-eligible sites, to be submitted to EPA Region 8 on June 1, 2014. The plan should address standardized deadlines for site assessments, in-house reviews and should include incentives to mobilize owners/operators and contractors to follow a standardized timeline and schedule for cleanup.*
- *The Department should established a team of project managers to evaluate the priority and current assessment and/or cleanup status of all open sites, and report findings to EPA Region 8 by July 2014.*
- *The Board and the Department need to implement their unified goals into a shared strategic plan through developing protocols and delineating roles and responsibilities, and share a mutual understanding of risk-based decision making.*
- *The Department should continue development of a risk-based closure process, and consider implementing Tier 2 risk-based corrective action (RBCA).*
- *The Department should meet with EPA Region 8 to discuss the pace of cleanups, goals for future cleanup and implement the results of the discussions into the strategic plan*
- *The Department should establish new protocols and deadlines for assessment and cleanup of releases.*
- *Revise the co-pay to be more affordable, or establish a low-interest loan program to provide funding for the \$17,500 co-pay.*
- *Increase rates of enforcement to require timely cleanup.*
- *Improve incentives and other solutions to motivate owners/operators to upgrade UST systems and clean up sites.*
- *Develop a standard operating plan by integrating protocols, procedures and business practices between the Department and the Board.*
- *Develop a new remediation database that allows for project management and tracking. Ensure that project management is streamlined by the new database.*
- *Implement cost controls and deadlines to assure that cleanup costs are contained and releases cleaned up in an efficient manner.*
- *Take measures to increase cleanup productivity with current staff once the status of the 841 open sites is determined.*
- *Work with EPA to determine a more accurate number for the average cost of cleanup. This will aid in identifying a reliable estimate of the Fund's liabilities*
- *Consider having an independent actuarial review of the Fund.*

At the July 10, 2014 EQC meeting (during the Petroleum Tank Release Site Closure Update) the Department discussed the EPA Tier II Audit and the State's response. It was shown that tank system upgrade requirements that were required shortly after the implementation of the Fund lead to a large number of releases being discovered, which resulted in the current backlog of releases. The EPA report focuses on federally regulated, Fund eligible (FRFE) releases, which are a subset of the releases the fund covers and that the Department is handling. Several things have been done to assist with reducing the backlog: The number of releases discovered per year has decreased; the Department Petroleum Tank Cleanup Section streamlined the cleanup process; the Department restructured an information database to help manage and prioritize releases; HB216 mandated a certain number of closures and clarified closures as a state priority; and the Department closed numerous small releases without investigation.

The Department evaluated the priority and current assessments of numerous open sites and reported their findings to EPA Region 8. This is an ongoing effort; however the Department has sufficiently assessed the releases so that a priority could be established to ensure that the releases do not affect human health.

EPA is encouraging Montana to use more Tier 2 risk-based corrective action in their closure process. The legislature instituted Petroleum Mixing Zones (PMZ) in the statute providing the opportunity for owners and operators to employ a PMZ as a cleanup strategy. The Department plans to request some fine tuning of the PMZ statutes in the upcoming 2015 legislative session.

Montana is at or below the National average for cleanup costs therefore, Montana is closing releases with fewer funds than other states; however, Montana still has a number of open releases and therefore it appears that the closure of a release is limited by the amount of money available to cleanup releases. Based on the current cash flow it is estimated that it will take between twelve and twenty-two years to close the current releases.

The Department and the Board are working on a unified strategic plan to assist in determining how to allocate current cash flow to the remaining releases. A collaborative strategic planning meeting between the Department's remediation, brownfields and tanks sections, along with Board staff, was conducted to identify and prioritize unified goals and objectives.

The Department and the Board reported back to the Environmental Quality Council on the strategic planning effort at its September 10, 2014 meeting. That update informed the Council that the Department and the Board continue to work with Federal & State Partners, as well as stakeholders to find ways to solve challenges and make program improvements. Part of that collaboration has involved an assessment of Montana's State Petro-Fund and the strategic planning effort.

The update focused on three main areas that were determined to be most important to the strategic planning for the tanks program. The planning effort identified risk as an important factor in preventing releases, in determining the conditions necessary to resolve (close) a release and where to put resources. Understanding and managing risks associated with the Petroleum Storage Tank universe is an important component of Fund management, and perhaps there are ways to encourage replacement of a subset of riskier tank systems. The Department indicated that work resources are put on the highest risk sites – starting from the emergency response sites and going down to the more routine cleanups. The Department and the Board are working with stakeholders to improve the current Petroleum Mixing Zone administrative rules and statues. The Department is requesting public comment on a rule amendment and with the help of stakeholders the Department has helped craft a bill proposal for consideration by the legislature.

The second area involves the optimization of business processes. The implementation of an Information Management Solution required an assessment of the business processes, and the assessment identified that strategic planning for all of the "Tanks" programs would assist in understanding and improve the business processes and

optimize the cleanup processes. Implementation of the system will help to improve the speed, availability and exchange of information between and among state programs and the community.

The third area involved managing the financial aspect of Petroleum cleanup. The Fund works very well for the active gas stations; however many of the former facility owners have difficulty raising the \$17,500 to satisfy the co-pay requirements, especially for those where: the property does not generate any revenue; the owners are on fixed incomes; or the copay is a large portion of the property value. Another group struggling with the financial aspects of cleanup are those owners of former tank facilities who are ineligible for the Petro Fund and must fund the entire cleanup.

The Department was able to use Senators Brenden's and Keene's financial allocation from the Orphan Share Fund ("Senator Brenden's boots on the ground initiative") to assist some property owners with overcoming the aforementioned financial challenges. That financial initiative identified an ongoing financial need related to "orphaned" tank sites, and the common goal to leverage partnerships to meet the financial needs of petroleum cleanup. The initiative encouraged the leveraging of Petro-Fund assistance with other available funding sources such as the Orphan Share allocated funds, Department of Natural Resources and Conservation (DNRC-RDG) grants, Brownfields Funding, Economic Development Authority (EDA) / Local Government Grants, Assessment Grants, LUST Trust, etc.

Availability of Petroleum Storage Tank Liability Insurance

EPA maintains a List of Known Insurance Providers for Underground Storage Tank Owners and Operators at www.epa.gov/oust/pubs/inlist.htm. This booklet (EPA 510-K-13-002) provides UST owners and operators with a list of insurance providers who may be able to help them comply with financial responsibility (FR) requirements by providing a suitable insurance mechanism. The booklet was last updated in December 2013.

EPA undertook a study to assess the effectiveness of UST insurance as a, FR mechanism, as well as to more broadly examine whether the current UST insurance structure provides owners and operators with the financial assurance EPA originally intended. In December 2011, EPA released a publication entitled *EPA Study on the Effectiveness of UST Insurance as a Financial Responsibility (FR) Mechanism* (EPA-510-R-11-005), December 2011.

This EPA document summarizes the results of the study, identifies certain areas of concerns, and discusses potential next steps. EPA set out to explore the effectiveness of UST insurance as a financial responsibility (FR) mechanism. They considered their findings to be inconclusive; however, they discuss that the study identified several issues that may hinder the effectiveness of UST insurance policies. They determined that what has evolved over time and exists today is an assortment of UST insurance policies purchased by owners and operators which, depending on a lengthy set of circumstances and contingencies, *may cover* remediation and third-party expenses arising out of releases from regulated USTs. As a result, it could be possible to conclude that UST pollution insurance is not effective in all cases as an FR mechanism, and that some UST insurance may be at odds with EPA's ideal of how and when an FR mechanism should

respond to releases. EPA, concerned about the effectiveness of the insurance policies, presents several ideas for potential revisions to the current regulations.

It is important to understand that insurance is a financing mechanism, not a financial guarantee. Insurance policies are contracts between two parties (i.e., the insurance carrier and the insured owner or operator); a claim qualifies as an insured loss and payable by the policy only if the contracting parties have met their respective contractual obligations and all of the policy's terms and conditions have been fulfilled. Insurance carriers have an obligation to ensure that reimbursements are reasonable and consistent with the terms of the policies.

Montana's Petro-Fund allows the use of insurance to offset the owners copay requirement {§75-11-307(5) MCA}. If an insurer pays or reimburses an owner or operator for costs that qualify as eligible costs, the costs paid or reimbursed by the insurer are considered to have been paid by the owner or operator toward satisfaction of the 50% share requirements, as long as the owner or operator receives the payment or reimbursement before applying for reimbursement from the board.

The Petroleum Tank Release Cleanup Fee

The Petroleum Fund continues to protect public health and safety and the environment, and allow underground storage tank owners to demonstrate financial responsibility as required by the EPA. The fund continues to provide financial resources for partial reimbursement for costs, expenses and other obligations incurred as a result of releases of petroleum products from active, inactive and historical petroleum storage tank systems. The Board and the Department continue to find ways to encourage owners to improve tank facilities in an effort to minimize the likelihood of accidental releases.

The Fund continues to play a significant role in the cleanup of releases from underground and aboveground petroleum storage tanks. Since financial responsibility is only required for active underground storage tanks, many of the discovered releases would not likely be

remediated without the Fund. Many of the owners are unaware of the subsurface contamination and most environmental insurance policies are focused on coverage for active UST systems. Without the Fund, remediation of releases from historical contamination, releases from most aboveground petroleum storage tanks, and some underground storage tanks would be stalled, resulting in delayed cleanup and less protection of public health and safety and the environment.

Many of the states in the United States maintain a state fund for cleanup of some petroleum contamination. Michigan is among a few states trying to re-establish their state fund to help cleanup at UST sites.

The fee should remain imposed and collected to help owners and operators comply with UST obligations under federal requirements, and to fund reimbursement of corrective action related to historical releases in order to protect public health and safety and the improve the condition of the environment. Given the cleanup activity associated with the discovered releases, the fund balance has not approached the ceiling established by law (§75-11-314 MCA). The CPI clearly indicates that the cost of cleanups has gone up and the value of the dollar has declined. The fund continues to only collect \$0.0075 on each gallon of fuel sold. Therefore, the fund continues to reimburse cleanup costs with funds as they come available, which, to some extent, delays the cleanup process. At some point raising the fee on each gallon of fuel sold may have to be considered.

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Definitions

Consumer Price Index - An index prepared and published by the Bureau of Labor Statistics of the U.S. Department of Labor which measures average change in prices over time in a fixed market basket of goods and services typically purchased by consumers. The Consumer Price Index is one way the government measures the general level of inflation. <http://www.bls.gov/cpi/>

Coefficient of Determination - Compares the fitted (estimated) curve and actual data, and ranges in value from 0 to 1. If it is 1, there is a perfect correlation between the fitted curve and the data. — At the other extreme, if the coefficient of determination is 0, the fitted equation is not helpful in predicting values.

Correlation - Refers to relationship between two variables during a period of time which indicates whether and how strongly pairs of variables are related.

Fiscal Year - The State of Montana Fiscal Year begins on July 1 of each year and ends on June 30 of the following year.

Least-squares - The method of least-squares analysis assumes that the best-fit curve of a given type is the curve that has the minimal sum of the deviations squared (least square error) from a given set of data. The least-squares line method uses a straight line ($y=mX+b$) to approximate the given set of data $(x_1,y_1), (x_2,y_2), \dots,(x_n,Y_n)$.

Subrogation - Assuming the legal rights of a person for whom expenses or a debt has been paid. Typically, subrogation occurs when the Board, which pays owners and operators for corrective action costs, sues the insurance company which the owner or operator contends had obligation to indemnify them.

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