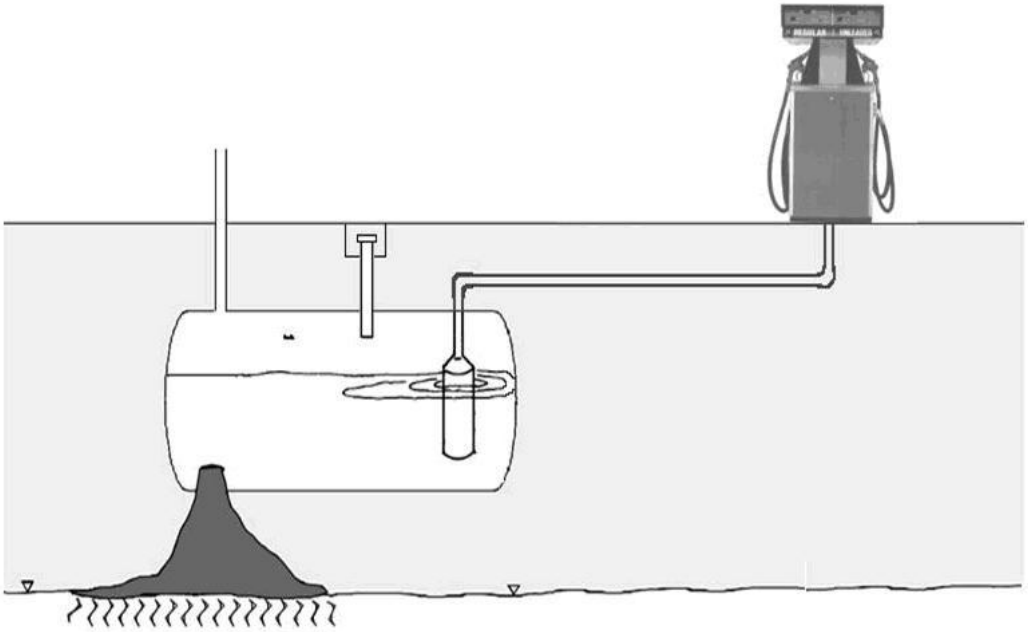
BIENNIAL REPORT

Short-Term and Long-Term Fund Viability



Petroleum Tank Release Cleanup Fund

2007- 2008

Petroleum Tank Release Compensation Board

1100 North Last Chance Gulch

P.O. Box 200902

Helena, Montana 59620-0902

Petroleum Tank Release Compensation Board

STATE OF MONTANA

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January 11, 2009

Richard Opper
Director
Department of Environmental Quality
1520 East 6th Avenue
Helena, Montana 59601

Tori Hunthausen
Legislative Auditor
Room 110
State Capitol
Helena, Montana 59601

Re: Biennial Report.

On behalf of the Petroleum Tank Release Compensation Board (PTRCB) members, I am pleased to present this biennial report. The report is intended to provide a summary analysis of the short-term and long-term viability of the Petroleum Tank Release Cleanup Fund (Fund), which is administered by the Board. I was privileged to be a small part of the political process that resulted in the birth of this Fund and the Board in 1989. The process was a very rewarding experience, and the results satisfying. When called to serve on the Board, I viewed the opportunity as a way to serve the petroleum industry and the people of Montana, who worked so hard to implement the tank release clean-up program.

As required by statute, the focus of this report is on six areas related to the viability of the Fund:

- Trends in Fund Revenue
- Trends in Expenditures
- Exposure to Long-term Liabilities
- Impacts of Changes in State and Federal Regulations to Underground Storage Tanks and Aboveground Storage Tanks
- Petroleum Storage Tank Liability Insurance
- Petroleum Tank Release Cleanup Fee

In 2008, the Environmental Quality Council and Legislative Finance Committee appointed a subcommittee to review this Fund. The review was quite thorough and

informative for the subcommittee members. The analysis report resulting from the subcommittee is available on the Legislative Services Division web site. The Board would encourage the readers of this report to also review this other available material.

While the next few years promise to be challenging and funding remains tight, the Board staff and the Department of Environmental Quality (DEQ) are committed to the continued success of this valuable resource. Cleanup processes engineered for new and historic release sites are continually reviewed and analyzed for effectiveness and reasonability. Where possible, work plans are modified to reflect new technology and the most effective cleanup methods, relative to the available funding. This review process requires the time and dedication of all involved: property owners, DEQ and PTRCB staff, board members, consultants, and contractors.

Your PTRC Board members willingly serve at the pleasure of Governor Schweitzer. We are committed to the task at hand, and will continue to be an effective advocate for the people we serve and the funding placed in our care.

Sincerely,

Greg Cross
Presiding Officer
Petroleum Tank Release Compensation Board

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	Term Ends
Representative of the financial or banking industry	A. J. King	June 30, 2008
Representative of petroleum services industry or a representative of the petroleum release remediation consultant industry	Roger A. Noble Vice Presiding Officer	June 30, 2010
Representative of independent petroleum marketers and chain retailers	Greg Cross Presiding Officer	June 30, 2010
Representative of the general public	Adele Michels	June 30, 2009
Representative of the service station dealers	Steve Michels	June 30, 2009
Representative of the insurance industry	Karl Hertel	June 30, 2010
Person with a background in environmental regulation	Theresa Blazicevich	June 30, 2008

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Executive Summary

Revenue from gas, diesel, and aviation fuel has been shown to be increasing on average; however, fuel use is expected to remain steady over the next biennium. The U.S. Department of Energy predicts an increase in fuel use over the next several years. The revenues from fuel use in Montana appear to remain steady and both the Montana Department of Transportation and Legislative Fiscal Division (LFD) expect fuel use to decline over the next biennium. Given all the information reviewed, the best estimator of fuel revenues in the coming biennium is current revenues.

Administrative expenses are consistent with the consumer price index. There are spikes in the administrative expenses due to subrogation recoveries, which are off-set by the funds recovered from owner/operators' insurance carriers. Other fluctuations in administrative expenses are caused by legal expenses associated with seeking cost recoveries. Claim expenditures are quite variable and are difficult to predict. The Board is obligating funds for the highest priority cleanup activity at a rate consistent with expected available funding. Current claim expenditures are considered to be the best estimate of the future expenditures.

The number of releases discovered each year appears to be declining and the cleanup of existing releases continues. Release discoveries appear to be correlated to tank closures which have, in the past, resulted from imposed regulatory requirements. There do not appear to be any regulatory changes in the coming years that would be expected to have any significant impact on tank closures. Therefore, the number of releases over the coming biennium is expected to stabilize.

Recent Federal and State regulatory changes are not expected to influence tank closures; however, they are aimed at reducing the number of releases and the severity of contamination resulting from new releases. The Energy Policy Act of 2005 has resulted in requirements that will lead to the use of double-wall tank systems. Double-

wall tank systems are considered to be more protective of the environment than single-wall tank systems. The Board has made a self-inspection checklist for aboveground storage tanks available to all owners and operators as an initial step towards improving aboveground storage tank operation and management that can lead to fewer releases. Recent SPCC regulations for aboveground storage tanks are expected to help prevent releases from occurring.

The Board is proposing legislation in the 61st legislature (SB 097) in an effort to stay synchronized with Federal and State regulatory changes. This legislation is also intended to assist the Board with program planning, management and assessment of liabilities.

The Board continues to look for ways to encourage insurance companies to make pollution coverage available for petroleum storage tank owners in Montana. Insurance for historical operations is not reasonably priced; however, insurance for current operating facilities is becoming more accessible. A subcommittee of the EQC and LFC determined Montana is not ready to transition to a system requiring insurance; however, it may be sensible to implement laws that begin to encourage the use of insurance and make this State more attractive to insurers. Until insurance and/or other financial mechanisms are in place, collection of the petroleum tank release cleanup fee and this program will be necessary to assist owners with meeting petroleum cleanup challenges and financial responsibility requirements.

Introduction

The rapid industrial growth and economic market cycles that our nation has experienced during the twentieth century have combined to produce one of the healthiest and most prosperous societies in the world today. However, this growth has left behind a legacy of industrial and commercial properties across the state 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 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 needs to 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 (the Department) and the legislative body in establishing those desirable qualities that must 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. This report is intended to provide useful information about factors impacting this 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, 61%, 35%, 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. To date, these additional revenue sources have contributed approximately 4% of total revenues.

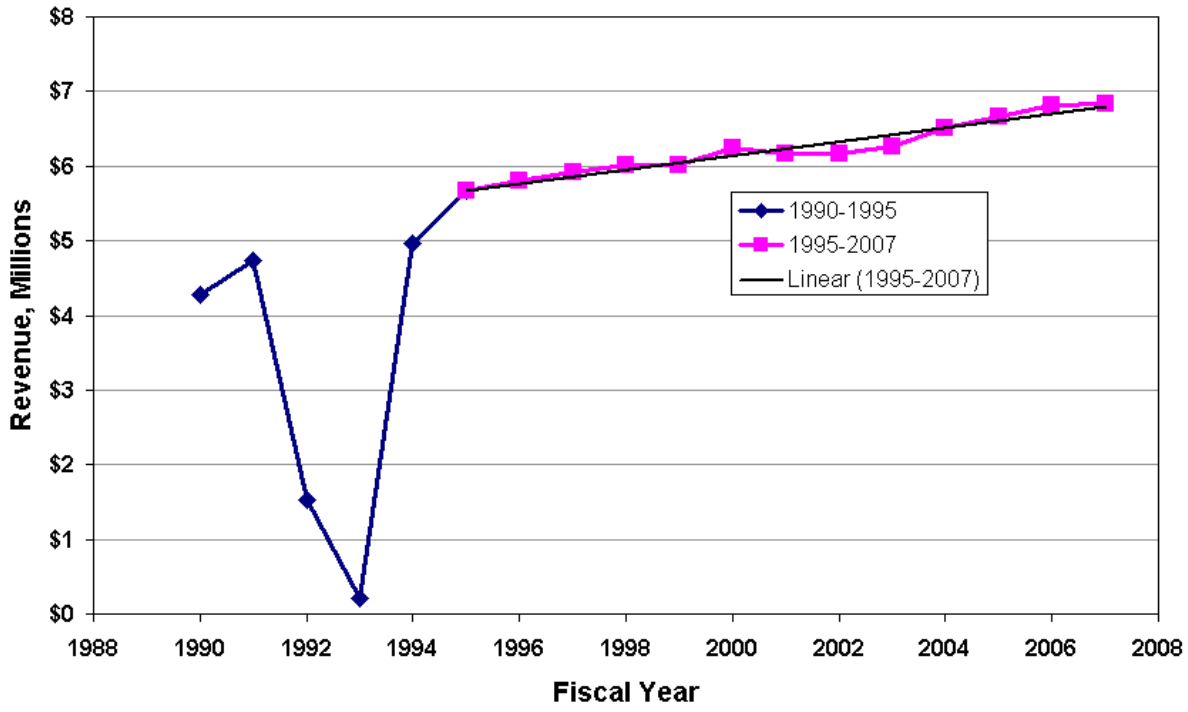
Table 1. Total Revenue by year.

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

Historical

Revenues of over $100 million have been received since the inception of the Fund. Table 1, above, lists the total revenue per year for fiscal year (FY) 1990 through FY 2007. This covers a consecutive period of eighteen years, with average annual revenue of $5.6 million. This average, however, includes years when fees were not collected for the entire year (1992, 1993, and 1994). Excluding those three years increases the average annual revenue to $6.2 Million. Revenue acquired from petroleum fuels sold in the State exhibit an increasing trend for those years when the fee was collected for the entire year. Annual revenues from fuel for FY 1990 through FY 2007 have been plotted against fiscal years in Figure 1. The suspension of the fee on fuel is clearly

Figure 1. Revenue from Fuel by Year

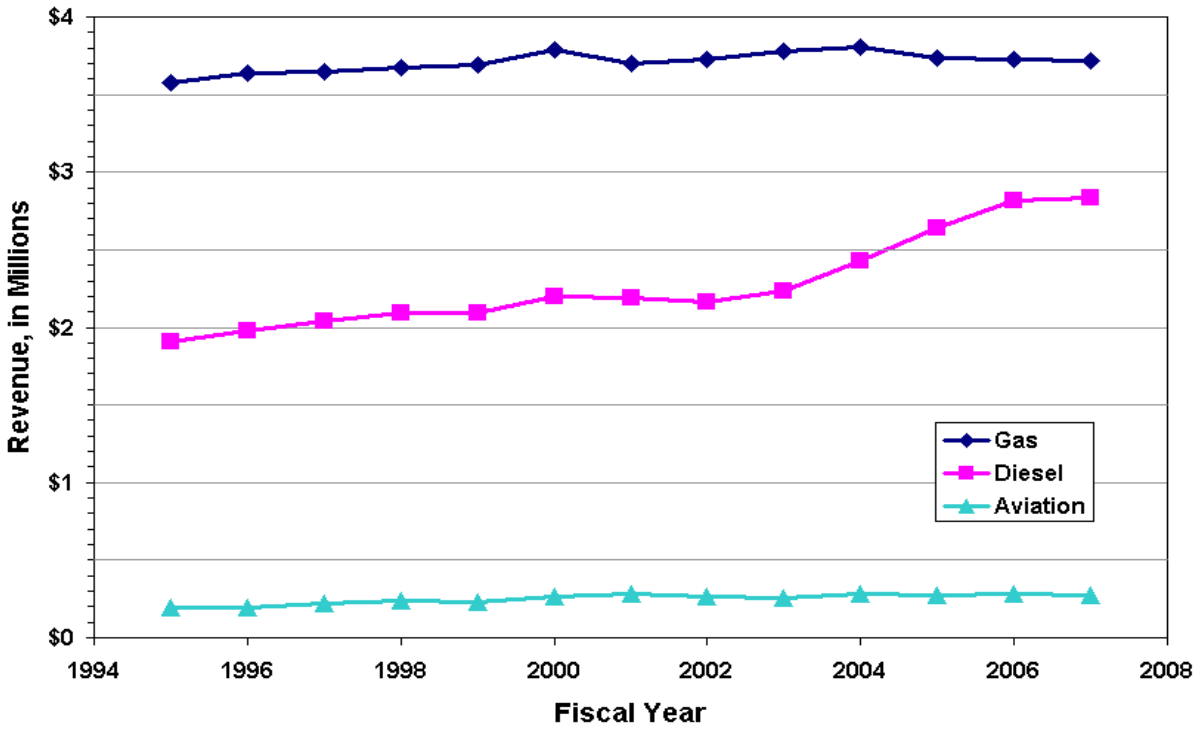


evident in the revenue from fuel received in both FY 1992 and FY 1993, and possibly in FY 1994. Given the suspension of the fee on fuel for part or all of fiscal years 1992 through 1994, and for the purposes of analysis, revenues have been partitioned into two

parts: early revenue (FY 1990 – FY 1994), and subsequent revenue (FY 1995 – FY 2007). When attention is focused on the thirteen years for which the fee was collected for an entire year (FY 1995 – FY 2007) the data exhibit a fairly linear trend (see Figure 1). 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. The fitted line indicates that revenue from fuels sold in the State increased by approximately $93 thousand each year over the thirteen years. Although the trend line indicates an increasing trend, there have been periods when revenue has remained flat and other periods when revenue has declined slightly.

The fuel revenue is made up of proceeds from fees levied on gasoline, diesel, and aviation fuels, each of which exhibits a different trend. Revenue produced from the

Figure 2. Revenues from Three Petroleum Products



three categories of petroleum product has been plotted over time in Figure 2. The plotted data indicate that diesel fuel revenue, which includes heating oil, appears to have the steepest incline. 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 thirteen-year period for each of the fuel categories. The slopes of the lines predicted from a linear regression are 0.0120, 0.074 and 0.0089 for gasoline, diesel, and aviation fuels, respectively. Even though the slopes of the trend lines are all positive, gasoline and aviation fuel revenues exhibited no increase between 2005 and 2006 and showed a decline between 2006 and 2007. Therefore, the increase in fuel revenue from 2005 to 2006 and from 2006 to 2007 (see table 1) is a result of the increase in the amount of diesel fuel sold in the State.

Although the revenue from fees levied on gasoline, diesel, and aviation fuels exhibit increasing trends, the best estimate for total revenue for 2008 and 2009 would be to expect no increase in revenues over the 2007 revenues. The linear trends indicate that the Fund could expect total revenues to increase by approximately $93,000 each year, with diesel contributing $74,000.00 to the expected annual revenue increase, gasoline accounting for $12,000.00, and aviation fuel accounting for only $7,000.00. However, given the recent decline in revenues from gasoline and aviation fuel, the less than 1% increase in diesel revenues, and the less than one-tenth of one percent change in total fuel revenue between 2006 and 2007, the best estimate of expected fuel revenues in the coming biennium is the amount received in 2007.

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 cleanup costs over time can only be offset by increased fuel use. To obtain a better understanding of the status of the Fund one needs to consider how the ever-increasing costs of goods and services compares to the revenue generated by the distribution of fuel.

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 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 2007 if those same goods and services cost $6 million in FY 1995. Transformed consumer price index values and the Fund revenue from FY 1995 through FY 2007 are provided in Table 2, along with the differences between the yearly values (U.S. Department of Labor, CPI Detailed Report-June 2008).

The purchasing power of the Fund is declining each year. The cost of goods and services, indicated by the transformed CPI, are growing more rapidly than Fund

Table 2. Fund revenue and Transformed Consumer Price Index.

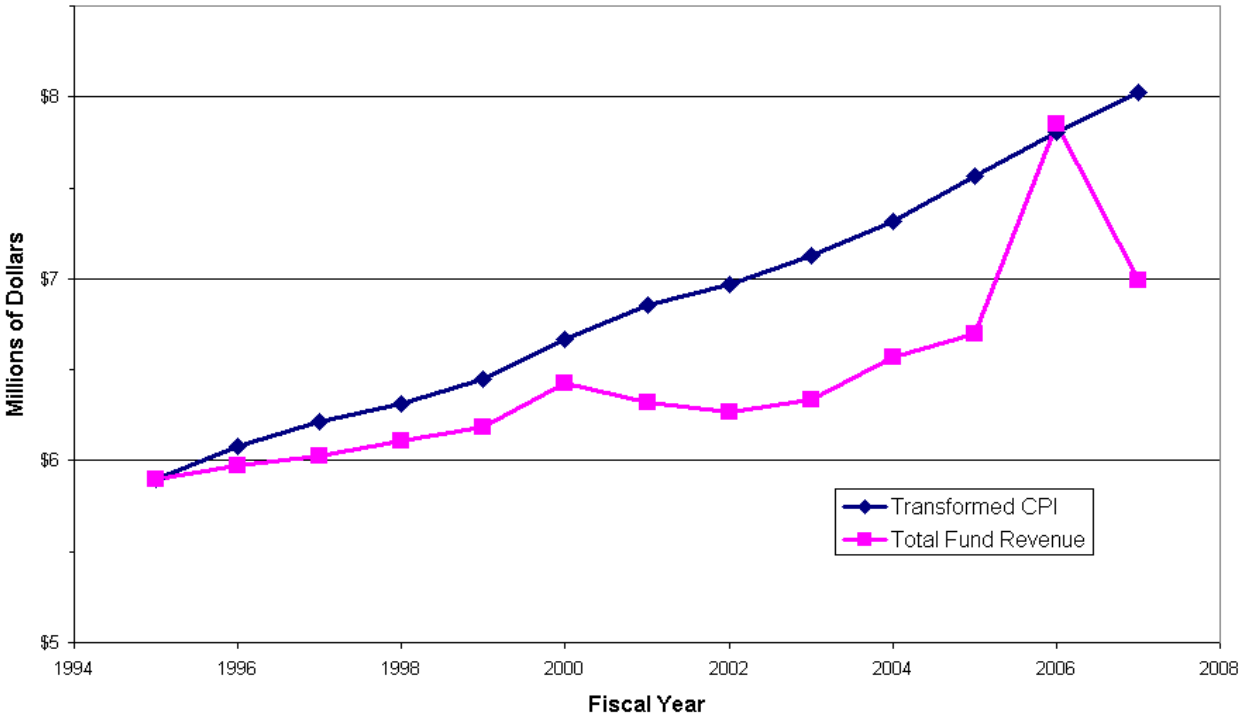
Year	Consumer Price Index	CPI Reindexed to 1995	Decimal Form	Transformed CPI	Fund Revenue	Difference
1995	152.4	100.000	1.00	$5.901318	$5.901318	$0.00
1996	156.9	102.953	1.03	$6.075569	$5.976382	-$99,187.11
1997	160.5	105.315	1.05	$6.214971	$6.027123	-$187,848.12
1998	163	106.955	1.07	$6.311777	$6.107359	-$204,418.50
1999	166.6	109.318	1.09	$6.451178	$6.183626	-$267,552.52
2000	172.2	112.992	1.13	$6.668025	$6.428345	-$239,679.24
2001	177.1	116.207	1.16	$6.857765	$6.319922	-$537,842.99
2002	179.9	118.045	1.18	$6.966188	$6.268612	-$697,576.82
2003	184	120.735	1.21	$7.124951	$6.333824	-$791,126.90
2004	188.9	123.950	1.24	$7.314691	$6.566672	-$748,019.31
2005	195.3	128.150	1.28	$7.562516	$6.696950	-$865,565.64
2006	201.6	132.283	1.32	$7.806468	$7.847636	$41,168.54
2007	207.3	136.024	1.36	$8.027186	$6.994594	-$1,032,592.46

revenue. This divergence is evident in Figure 3, below, which depicts the transformed CPI and Fund revenue for FY 1995 through FY 2007. The approximate cost of $6 million worth of goods and services purchased in FY 1995 increased each year by about $173,000, compared to the average increase in total Fund revenue of about

$110,500 and the annual increase in fuel revenue of $92,800. Annual increases for total Fund revenue and fuel revenue were estimated using a regression analysis to fit a linear line through the data. The average difference between the CPI and the fund revenue values is approximately $71,000 per year. The divergence leads to a reduction of more than $1 million in purchasing power over the life of the Fund.

Spikes in the total Fund revenue depicted in Figure 3 for years 2000 and 2006 are the result of revenues associated with subrogation recoveries and relatively high fuel revenues. Fuel revenues, depicted in Table 1, indicate that 2000 and 2006 had relatively high revenues. As can be seen from the total revenues depicted in Table 1,

Figure 3. Transformed CPI and Fund Revenue.



there were other revenues that also contributed to the spike in total fund revenues for those years. Much of the other fund revenue is attributable to subrogation recoveries, especially for 2006.

Subrogation is a general principle of law that allows the Board, who covers the cost of the corrective action, to eventually 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.

Future Projections

Revenues predicted from the sale of fuels are not expected to increase. Historical revenues usually provide the best available estimate for future revenue projections. Performing a least-squares analysis to calculate a straight line that best fits the historical revenue data for the years that were considered to be representative of a complete year (1995 - 2007) yields the linear function **y = 0.0928x - 179.51**. This regression, as noted above, indicates that fuel revenues increased by approximately $92,800.00 each year, on average, from 1995 - 2007. The Biennial Report for 2006 estimated an annual increase of $70,200 each year between 1995 and 2005 from a linear function of **y = 0.0702x - 134.08,** which was used to provide a prediction of fuel revenue. It is important to recognize that gasoline sales are a function of the price per gallon of gasoline, and as such are highly variable. Linear regression of historical revenues between 1995 and 2005 provided a reasonable estimate for FY 2006 and FY 2007 projections; however, the increase in fuel prices in late 2007 and early 2008 appears to have resulted in a flattened revenue curve.

An increase in the use of liquid fuels has been predicted to occur through 2030 by the U.S. Department of Energy. The Energy Information Administration (EIA), which provides official energy statistics from the U.S. Government, also predicts an increase in fuel use through 2030. In their report entitled *Annual Energy Outlook 2008 with Projections to 2030* released in June of 2008 (Report #:DOE/EIA-0383(2008)), the EIA

predicts the demand for liquid transportation fuels will increase by 17 percent from 2006 to 2030, dominated by growing fuel use for light-duty vehicles, trucking, and air travel. The report indicates that growth in demand for liquid fuels is led by the transportation sector, as rising population, incomes, and economic output boost demand for travel, partially offsetting improvements in vehicle efficiency. However, the report recognizes that high and low oil prices exhibit the widest range for liquid fuel use.

Although the 2006 Biennial Report predictions that were made using the linear regression as a predictive tool resulted in a revenue prediction that was within approximately 1 percent of the actual revenues, linear regression may not be a good predictive tool for the coming biennium. High oil prices appear to be affecting fuel use and the fuel revenues do not appear to be increasing. Fuel use is a function of the price per gallon of fuel, and high fuel prices can result in a significant decrease in demand. The actual change in total fuel revenue from all three categories between 2006 and 2007 was only $5,076.04, indicating that fuel sales leveled off. The high fuel costs and flattening of the revenue curve indicate that the linear regression line may not be the best predictor of future revenues.

The Montana Department of Transportation has seen declines in fuel revenues in recent months. Their third quarter 2008 report indicates that, although taxable gasoline gallons were 0.28% greater than the same period a year ago, use of gasoline is down from the 5-year YTD average. The report indicates that the use of diesel, the fuel exhibiting the largest annual increase, is 0.71% less than the same period last year, though it is still up from the 5-year average.

The November 15, 2006 Revenue Estimate Profile report prepared by the Legislative Fiscal Division (LFD) over-predicted gasoline and diesel fuel sales for 2007. Fuel-use growth rate estimates were based on the average growth predicted by a log model of taxable gallons of fuel produced. The report predicted average gasoline sales growth at a rate of 0.41 percent, which was used to estimate the annual revenue from gasoline. Actual revenues from gasoline did not exhibit any growth. In fact, gasoline sales

declined 0.2 percent between 2006 and 2007. The average growth rate predicted for sales of diesel was estimated at 5.2 percent; however, the actual growth rate of diesel fuel was less than 1 percent.

Recent Legislative Fiscal Division information indicates a decline in expected revenues. The LFD published a report entitled Budget Analysis for the 2011 Biennium dated November 17, 2008, with a revision dated December 2008. A review of these reports indicates that diesel consumption has not been consistent with the historic trend, diesel prices are expected to be volatile over the next three years, and consumption is expected to decline in the near future.

With revenue predictions shown to be increasing as well as decreasing, the best likely predictor of fuel revenues is current revenues. The leveling of fuel revenues in recent years, along with the over-prediction by the statistical predictors, indicates that these methods may not be the best predictors of revenue. The over-prediction of fuel revenues by the straight line best-fit least-squares analysis model and the fuel use growth rate estimated by a log model of taxable gallons of fuel produced indicate that actual fuel sales are flattening compared to historical trends. Since the sales of fuel appear to be flattening for the foreseeable future, one would expect the revenues from fuel to be best predicted by fuel revenues obtained in 2007. This prediction of fuel revenues remaining constant is depicted in Table 3.

Table 3. Projected revenue

Fiscal Year	Projected Revenue
2008	6.826
2009	6.826
2010	6.826
2011	6.826

Trends In Expenditures

Fund administrative expenses appear to have a pattern, consistent with 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. A detailed analysis of claim

expenditures indicates the average expenditures for the last thirteen years, which follow a start-up period, is likely the best predictive technique.

Administrative Expenses

The growth of administrative expenses continues to be consistent with 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) can be grouped into 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.

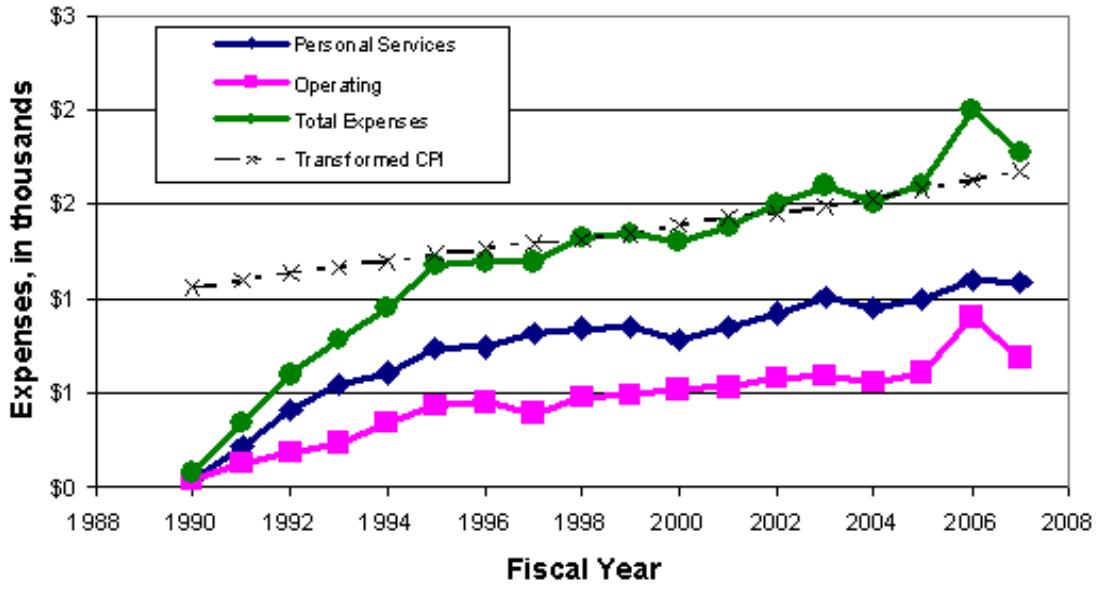
Personal services, operating expenses, and the combined total administrative expenditures for FY 1990 through FY 2007 are provided in Table 4. Personal services consist of salaries and benefits for persons engaged in the following: review of materials for eligibility determination; analysis of claims for actual, reasonable, and necessary costs; evaluation of work plans for cost control;

Table 4. Personal services and operating expenses.

Fiscal Year	Personal Services	Operating Expenses	Total	Transformed CPI
1990	$0.04	$0.04	$0.08	$1.06
1991	$0.21	$0.13	$0.34	$1.10
1992	$0.41	$0.19	$0.60	$1.13
1993	$0.55	$0.23	$0.78	$1.17
1994	$0.61	$0.34	$0.95	$1.20
1995	$0.74	$0.44	$1.17	$1.23
1996	$0.74	$0.45	$1.19	$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	$1.34	$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	$0.90	$2.00	$1.63
2007	$1.09	$0.69	$1.78	$1.68

technical management of corrective action for releases; and other associated administrative activities. 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 2007, along with the transformed CPI, are depicted in Figure 4. 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 there was a temporary increase in operating expenses. This 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.

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



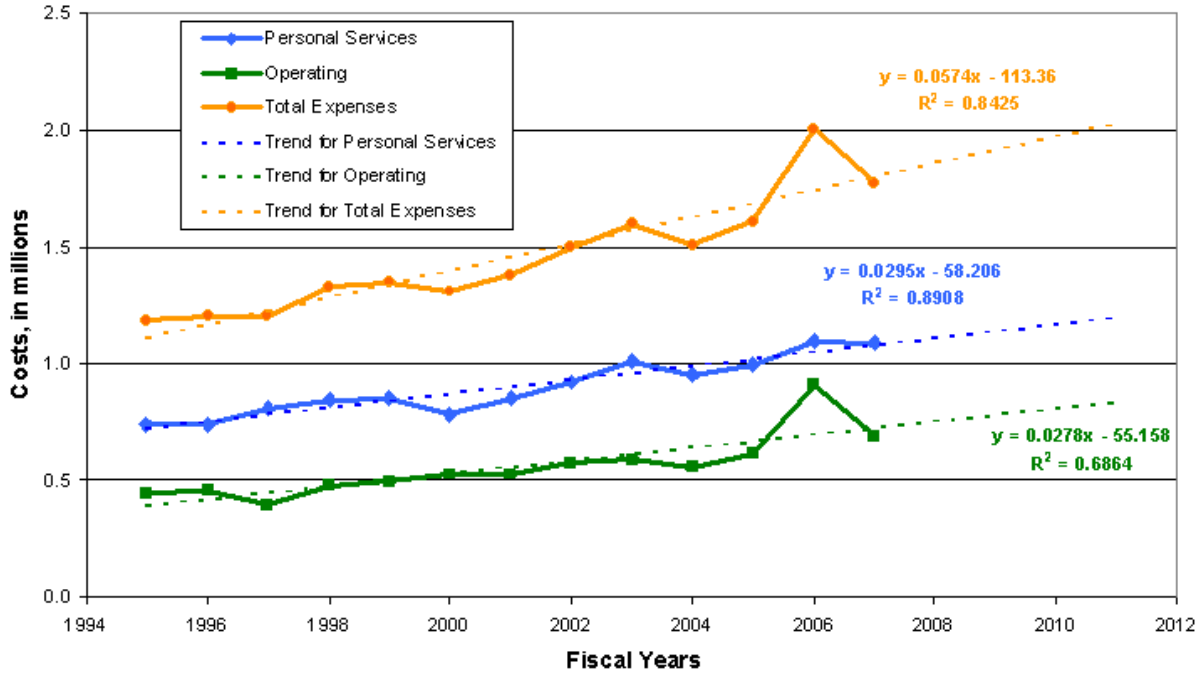
Future Administrative Expense Projections

The more recent expenditures are likely the best available information to use to provide an estimate for future administrative expense projections. The expense curves

presented in Figure 4 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 2007) 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 2007 are depicted in Figure 5. Since the operating expenses include contingent contracted expenses, so does the total, which consists of the operating and personal services expenses. There have been contingent contract

Figure 5. Linear Regression Using Recent Expenes.



expenses associated with subrogation recoveries since 2002; however, they have been less than 2% of the total operating expenses until 2006. Much of the foundation of the subrogation program has been established and the contingent contract expenses are expected to increase in response to a successful subrogation program. These

expenses are quite variable and are not easily predicted. They have been included in the data presented in Figure 5 in an effort to provide comprehensive information; however, these expenses will be removed from the predictive model to provide a more reliable expenditure projection.

A linear regression model applied to the non-contingent expense data for later years is likely the most reliable predictor of future administrative expenses. If one ignores the expenses associated with recovery from subrogation that may impact administrative expenditures, the fiscal year can be used as the dependent variable in a valuable predictive model. Performing a least-squares linear regression analysis to calculate a straight line that best fits the non-contingent expense data for these later years, which is considered to be representative of stabilized operations, yields a function that can reasonably predict future expenses. The linear regression equation for combined total expenses estimates that total costs (excluding contingent subrogation contracting expenses) will increase approximately $44,000.00 per year. This indicates that expenditures will likely be in step with the cost of living, resulting in total expenditures of $1.9 million in FY 2011.

Table 5. Claim expenditures by fiscal year.

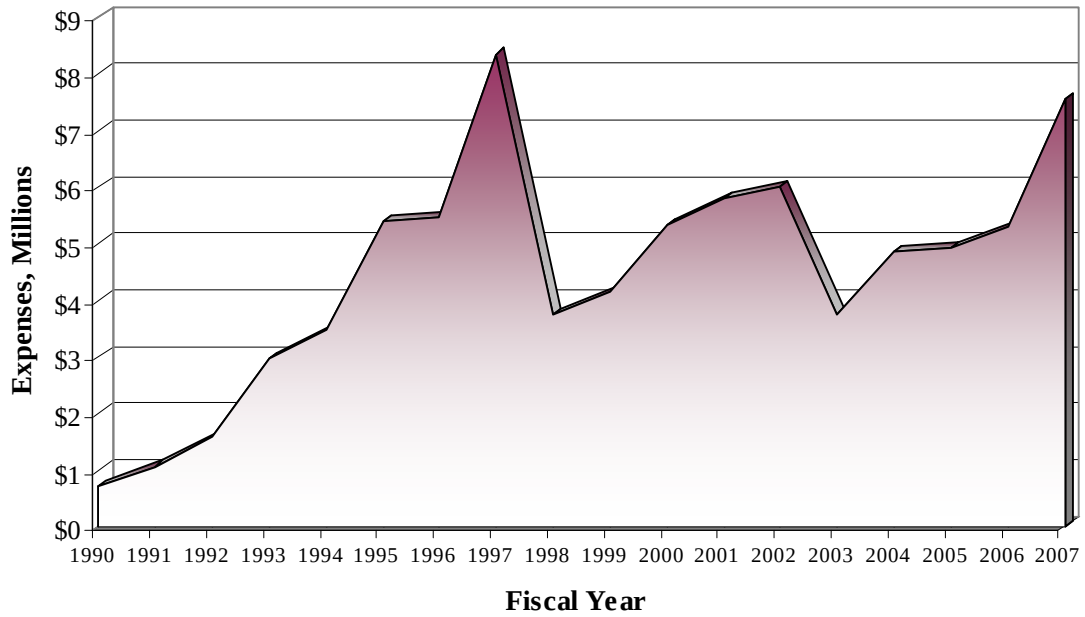
Fiscal Year	Claims
1990	$703,653.28
1991	$1,065,514.92
1992	$1,585,906.16
1993	$2,960,965.77
1994	$3,480,161.88
1995	$5,394,682.48
1996	$5,465,402.00
1997	$6,339,423.82
1998	$3,748,623.21
1999	$4,153,031.36
2000	$5,334,095.37
2001	$5,799,130.55
2002	$5,985,691.11
2003	$3,731,611.03
2004	$4,844,535.10
2005	$4,911,911.04
2006	$5,294,311.24
2007	$7,554,982.16
Total	$72,798,650.32

The subrogation program is an important element to be considered in the next biennium. Although subrogation activity costs are included in the expenses mention above, recoveries were not evaluated. Recoveries associated with the subrogation activity are not easily predicted annually due to the nature of the recoveries. The legal uncertainties in the program preclude reliable predictive analysis.

Claim Expenditures

Identifying the controlling parameters for claim expenditure is difficult. The annual claim expenditures for FY 1990 through FY 2007 are listed in Table 5. Annual claim expenditures climbed from $703,653.28 in FY 1990 to $5.4 million by FY 1995. Taking into account a $2 million litigation settlement paid as claims in FY 1997 indicates that expenditures for claims from FY 1995 through FY 2007 were variable, having a range from about $4 million to around $8 Million. A graph of the data is provided in Figure 6. These data were analyzed using regression techniques on all the data (FY 1990 – FY 2007), as well as on various groupings of the data. Attempts were made to identify the leading influential parameter(s), including litigation settlements, discovered releases, work plan activity and personal services expenditures. However, no leading indicator was identifiable as a result of the analysis and no predictive model was found to be representative of the data.

Figure 6. Claim Expenditures by Fiscal Year.



Future Claim Projections

The average annual claim expenditure is likely 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.

Since no sufficient regression model was found to have a significant coefficient of determination, and no other parameter was found to be sufficiently correlated to be used as a predictive tool, the best predictor of future claim payments is the average expenditures. It is worth noting that 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 just the last thirteen years. The average for the complete set of claim expenditures is $4,464,090.69 and the average of the past thirteen years is $5,427,494.65. The average expenditures between FY 1995 and FY 2007 has increased over the average for FY1995 through FY 2005, which was reported in the 2006 Biennial Report. The average for FY1995 through FY 2005 was reported as $5.06 million per year and the average for FY 1995 and FY 2007 is $5.43 million per year. The slope of a least-squares linear trend through the FY 1995 to FY 2005 expenditures indicated a negative trend; however, both the 2006 and 2007 expenditures were above both the average and the least-squares linear projection for FY 1995 to FY 2005 expenditures. The slope of a least-squares linear trend through the FY 1995 to FY 2007 expenditures indicates a positive trend and only the 2007 expenditures were above both the average and the least-squares trend for FY 1995 to FY 2007 expenditures. The strong change in the average and the slope of the linear regressed line indicates that a simple average is the best predictor of future claim expenditures, so the annual claim expenditures for the next several years continue to be projected at $5 million per year.

Exposure to Long-Term Liabilities

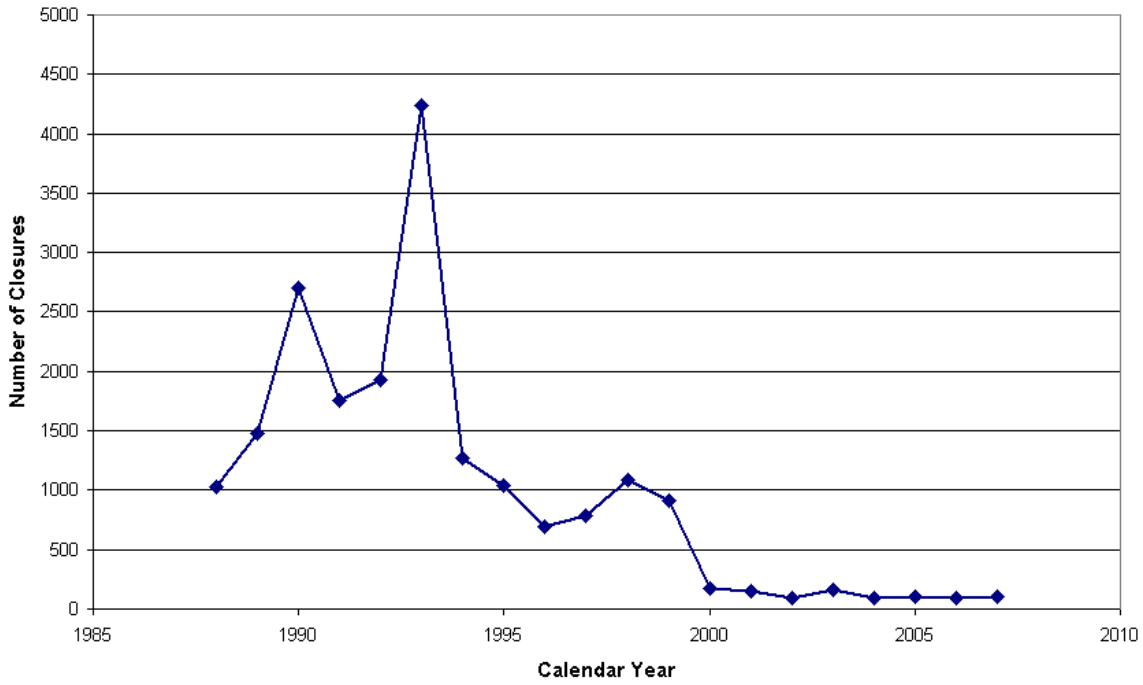
Liabilities for the fund consist of cleanup for current releases and future releases. The liabilities associated with current active releases are impacted by the amount of on-going effort required to accomplish cleanup, amount of insurance coverage for the release, and the facility's compliance. The 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.

The decline in newly discovered releases, the reduced severity of those releases, the existence of some private insurance coverage for some releases, the implementation of Board initiatives, and ongoing efforts to close releases reduces the Fund's exposure to long-term liabilities. On a release-by-release basis, existing obligations continue to decline because of ongoing corrective action meeting cleanup objectives. Future obligations may be further reduced as a result of federal requirements focused on preventing releases. Future obligations may temporarily increase depending on whether aboveground storage tank owners are required to upgrade systems to current standards.

The increase in the number of tank closures, which apparently occurred as a result of Legislative activity, influences the number of releases applying for eligibility. This impacts the Fund's long-term liability. In 1984, Congress responded to the increasing threat to groundwater posed by underground storage tanks by adding Subtitle I to the Solid Waste Disposal Act (SWDA). The Environmental Protection Agency's (EPA's) 1988 regulations set minimum standards for new tanks and required owners of existing tanks to upgrade, replace, or close them within ten years (40 CFR Ch. I 280.21). The transition period was characterized by the continuing growth of a national underground storage tank program, realized through the building of state and local programs.

During Montana's 51st Legislative session (1989), the legislature approved three major underground storage tank bills that had an impact on the closure of underground storage tanks. HB 603 established the Montana Petroleum Storage Tank Release Cleanup Fund to provide underground storage tank owners and operators with a financial assurance program for cleanup of tank releases. SB 321 amended the Montana Hazardous Waste Act to specifically include underground storage tanks, and authorized the Department of Health and Environmental Services (Department of Health, predecessor to the Department of Environmental Quality) to establish annual tank registration fees to defray state and local government costs for implementing an underground storage tank leak-prevention program. The Act established leak detection requirements for all existing tanks and performance and design standards for new underground storage tank systems. HB 552 required tank owners to obtain permits for

Figure 7. Tank Closures by Calendar Year



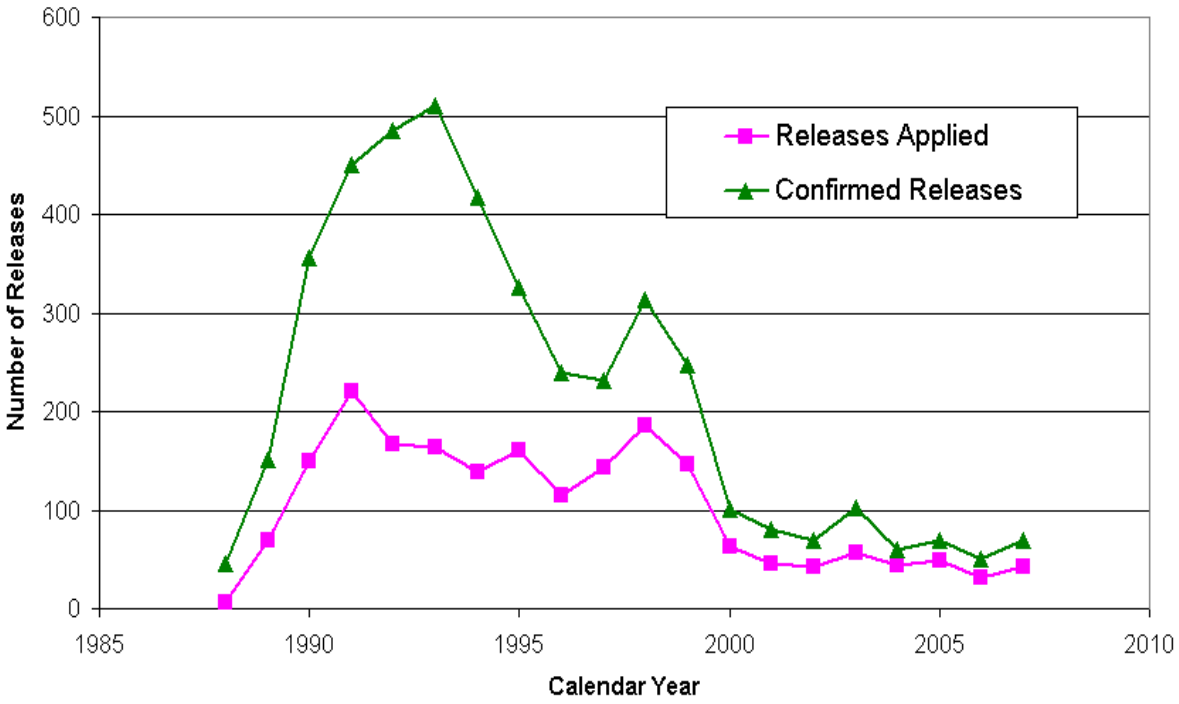
underground storage tank installations, repairs, and closures; required those who remove and install underground storage tanks to be licensed; and authorized the

Department to adopt rules establishing fees for licenses, a permitting process, and inspections of tank installations and closures.

The following November, 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 196 exempted certain underground storage tanks from the closure requirements of the Montana Hazardous Waste and Underground Storage Tank Act until December 31, 1993. Although the owners and operators could remove a tank without a permit and without the services of a licensed installer, they were still required to notify the Department of Health of the removal and report any releases. The large number of tank closures in 1993 appears to have resulted from this temporary exemption legislation. The number of tank closures per year declined between 1993 and 2000 as rapidly as they had increased in the prior 6 years. The spike in 1998 was a result of underground storage tank owners and operators attempting to comply with the federal 1998 deadline for upgrading, replacing, or closing underground storage tanks. The next significant regulatory activity was the Energy Policy Act of 2005 (the Energy Policy Act, or Act), enacted in August 2005 and effective February 2007. The Energy Policy Act is discussed in the *Impacts of Changes in State and Federal Regulations* section of this report.

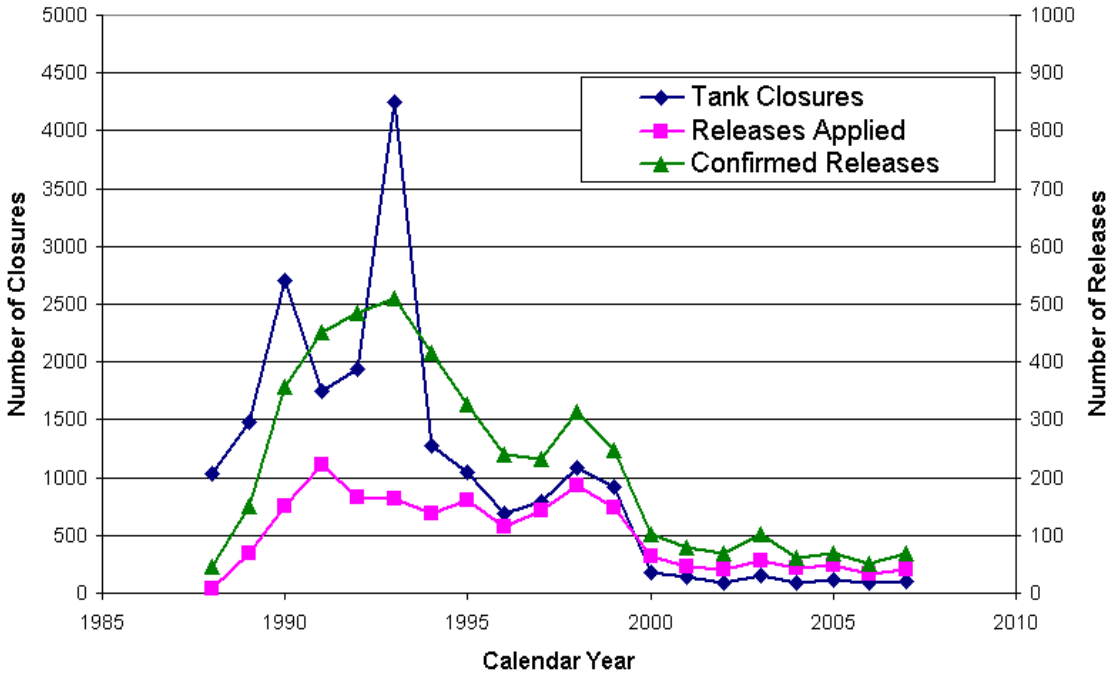
The number of releases applying for eligibility is most certainly affected by the number of confirmed releases. The number of releases applying for eligibility, along with the number of confirmed releases between 1988 and 2007, is depicted in Figure 8. A visual inspection of the two curves indicates that the number of releases applying for eligibility each year correlates with the number of confirmed releases each year. The correlation coefficient of the confirmed releases and the number of releases applying for eligibility (0.916) indicates a very high positive relationship between the two sets of data.

Figure 8. Releases by Calendar Year



The number of confirmed releases, and therefore the number of releases applying for eligibility, appears to be related to the number of tank closures. The number of releases applying for eligibility, the number of confirmed releases, and the number of tank closures between 1988 and 2007 have been plotted in Figure 9. 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. Visual inspections of the curves indicate that the number of releases confirmed each year may be related to the number of tank closures. The correlation coefficient of the number of tank closures by year and the number of confirmed releases by year (0.810) indicates a high positive relationship between the two sets of data. The correlation coefficient between of the number of tank closures by year and the number of releases applying for eligibility each year (0.635) indicates there is a moderate relationship between closures and requested assistance from the Fund.

Figure 9. Comparing Tank Closures to Releases



The spike in closures that occurred in 1993 affects the correlation with releases, though not significantly.

New Releases

The number of new releases appears to be decreasing. As described in the previous section, the number of releases is related to the number of tank closures. Tank closures are seen as a function of the regulatory environment. Since the number of releases is related to the number of tank closures, it is important to understand the regulatory environment. New Department requirements are focused on newly replaced or installed underground storage tanks, so no dramatic rise in releases is expected.

An estimate of new releases cannot adequately be obtained by using all of the nearly two decades of tank closures and releases. However, the last eight 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 eight 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 2000 through 2008 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 nine each year, confirmed releases decline by nearly five each year and releases applying for eligibility decline by more than two each year during the eight year period. While regulatory changes are expected to have negligible impact on tank closures and releases discovered, there still remains some uncertainty. It is prudent, therefore, to estimate new releases by looking at simple statistics over this recent period of time. The average number of confirmed releases between 2000 and 2007 is 75, with a standard deviation of 18 releases. The average number of releases applying for eligibility between 2000 and 2007 is 46, with a standard deviation of 9.5 releases. These statistics estimate the number of confirmed release per year to be between 57 and 93, with approximately 36 to 56 applying for eligibility. The Board is proposing legislation in the 61st legislature that places a statute of limitation on applying for eligibility to the fund. If the legislation is passed, a spike in releases applying for eligibility is likely to occur.

The Board is examining strategies associated with development of inspection requirements for aboveground storage tanks. This effort is intended to reduce the number of releases from aboveground storage tanks and encourage owners to purchase tank insurance. Not all aboveground storage tanks 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 necessary if the aboveground storage tank system is upgraded. The Board has recently developed a checklist aimed at assisting aboveground storage tank owners with recognizing the systems that fall short of current standards, in an effort to encourage owners and operators to work towards updating

their systems so those systems would be considered more protective of human health and the environment and in compliance with current standards. This effort will most likely result in an initial increase in reported releases. The Board believes that over the long term, compliance with current standards will result in a decline in the number of releases from aboveground storage tanks. The Board also recognizes that it is important to balance this strategy with available funds.

Other Potential Impacts

Although we may have expectations associated with new and historical releases, possible regulatory changes, the role of insurance, and changes in the fee would change long-term Fund liabilities. For instance, making acceptable levels of petroleum constituents in the environment more stringent would impact release closures and cleanup activity and result in a shifting of the predicted trends.

Impacts of Changes in State and Federal Regulations

The Board is following the progress of State and Federal regulations that may impact the Fund. The federal regulations being watched include the Energy Policy Act of 2005 and the requirements for Spill Prevention Control and Countermeasure (SPCC) Plans under the Oil Pollution Prevention and Response (Oil Pollution Prevention) regulations. State regulatory changes with potential impact to the Fund include rule changes promulgated by the Department in response to the Energy Policy Act.

Energy Policy Act of 2005

The underground storage tank provisions of the Energy Policy Act addressed secondary containment, financial responsibility for underground storage tanks, and cleanup of releases that contain oxygenated fuel additives. This law affects federal and state underground storage tank programs, requires changes to state programs, and is aimed

at reducing underground storage tank releases to the environment. The provisions of the Energy Policy Act focus on preventing releases. Among other things, it includes provisions regarding inspections, operator training, delivery prohibition, secondary containment and financial responsibility.

Montana's Underground Storage Tank Program currently has requirements meeting EPA's initiatives, including underground storage tank inspections, operator training, delivery prohibition, and financial responsibility. The Department promulgated rule changes that implement the containment requirement of the Energy Policy Act. Section1530 of the Act requires that each new underground storage tank, or piping connected to any such new tank installed after February 8, 2007, either have secondary containment if it is within 1,000 feet of any existing community water system or existing potable drinking water well, or the person who manufactures or installs the underground storage tank system shall maintain financial responsibility for the costs of corrective action. Because the vast majority of underground storage tanks are located within 1,000 feet of a community water system and it is difficult to determine the exact distance to a community water system, the Department requires all underground storage tanks, newly replaced or installed, to have secondary containment. The Department believes this is both environmentally sound and administratively expedient.

The new law is aimed at reducing underground storage tank releases to the environment. Reducing the number of releases, and possibly the severity of contamination will help to reduce the burden on the Fund. However, the current reimbursement statute for double-walled tank system releases requires the Fund to reimburse 100% of the eligible costs. Now that Department rules require secondary containment, there is no longer a need for a statutory incentive for installing double-walled tank systems. The Board has proposed legislation for the 2009 legislature to remove this incentive language from the statute, resulting in a co-payment requirement for secondarily contained (double-walled) tank systems.

Spill Prevention Control and Countermeasure

The Oil Pollution Prevention regulation, promulgated under the authority of the Clean Water Act, sets forth requirements for prevention of, preparedness for, and response to oil discharges at specific non-transportation-related facilities. To prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil, the regulation requires facilities to develop and implement Spill Prevention Control and Countermeasure (SPCC) Plans and establishes procedures, methods, and equipment requirements. To be subject to the SPCC rule, a facility must meet three criteria: 1) be non-transportation-related; 2) have an aggregate, aboveground storage capacity greater than 1,320 gallons, or a completely buried storage capacity greater than 42,000 gallons; and 3) have a reasonable expectation of a discharge into or upon navigable waters of the United States or adjoining shorelines.

On July 17th, 2002, EPA issued a final rule amending the Oil Pollution Prevention regulations promulgated under the authority of the Federal Water Pollution Control Act (Clean Water Act). The rule addressed requirements for SPCC Plans, and some provisions of Facility Response Plans (FRPs). The SPCC rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The main thrust of the SPCC regulation is prevention, as opposed to after-the-fact reactive measures commonly described in Oil Spill Contingency Plans. In May 2007 EPA extended the SPCC rule compliance dates for owners and operators of facilities to prepare or amend and implement SPCC Plans. This proposed rule extended the dates by which a facility must prepare or amend and implement its SPCC Plan until July 1, 2009. On October 1, 2007 EPA Administrator Stephen L. Johnson signed a proposed rule to amend the SPCC rule (40 CFR Part 112). EPA intends to provide clarity, tailor requirements, and streamline requirements in order to encourage greater compliance with the SPCC regulations.

The SPCC regulation is largely performance-based, which allows flexibility in meeting the rule requirements to prevent discharges of oil to navigable waters and adjoining shorelines. Subparts A through C of Part 112 is often referred to as the "SPCC rule." Focusing on oil spill prevention, preparedness, and response, the SPCC rule is designed to protect public health, public welfare, and the environment from potential harmful effects of oil discharges to navigable waters and adjoining shorelines but not necessarily to local soils and groundwater. The rule requires facilities that could reasonably be expected to discharge oil in quantities that may be harmful into navigable waters of the United States and adjoining shorelines to develop and implement SPCC Plans. The Plans ensure that these facilities put in place containment and countermeasures that will prevent oil discharges. The requirement to develop, implement, and revise the SPCC Plan, as well as train employees to carry it out, will allow owners and operators to achieve the goal of preventing, preparing for, and responding to oil discharges that threaten navigable waters and adjoining shorelines.

Other Board Activities

The Board established a workgroup in 2006 to assist in assessing fund solvency and to provide recommendations to the Board. This workgroup has discussed several topics including: Energy Policy Act regulatory changes, insurance availability and coverage, change in co-payment for non-regulated and non-inspected tanks, site closure requirements, Board direct-contracting for site cleanup, groundwater monitoring requirements, indoor air quality sampling, mileage restrictions, area management, aboveground storage tank regulations and inspection, and risk-based cleanup through petroleum mixing zones. The work group has proposed legislative changes, as well as strategic planning initiatives, and continues to explore areas of concern.

Aboveground Storage Tank Activities

Since the SPCC rule is focused on oil discharges to navigable waters and adjoining shorelines but not necessarily to local soils and groundwater, the board is evaluating ways to minimize releases from aboveground storage tanks. A work group established by the Board has recommended that the Board consider an aboveground storage tank inspection program. An inspection program would likely reduce the possibility of a release occurring, reduce the severity of discovered releases, and promote aboveground storage tank insurance. The strategy proposed by the workgroup involves self-inspection by owners/operators, which would become the foundation of an inspection program required for Fund eligibility. The intent is to encourage owners and operators to upgrade facilities to current standards and implement measures to prevent spills. The Board has worked with the State fire marshal and other interested parties to develop a draft checklist, which is available on the Board's web site, http://deq.mt.gov/pet/index.asp. Over the coming Biennium, the Board intends to conduct outreach in an effort to obtain feedback from additional interested parties.

Board Legislation

A fund solvency workgroup consisting of Board members, petroleum service station industry representatives, environmental consultants, and Department of Environmental Quality staff assisted the Board in developing the concepts that were later drafted into proposed legislative changes. The proposed changes included self-inspection for aboveground storage tanks, a change in owner/operator co-payment for all classes of petroleum storage tanks, changes to available coverage for non-regulated, non-inspected and double-wall petroleum storage tanks, increasing the fee collected on fuel to one cent per gallon, removal of regulatory administrative costs from the Fund, an increase in the Fund's floor and ceiling, incentives for owner/operator insurance coverage, limits on the time allowed to apply for eligibility, and Fund controls. These legislative proposals were discussed before the Petroleum Tank Release Fund

Subcommittee, which was formed in the spring of 2008 by the Environmental Quality Council (EQC) and the Legislative Finance Committee (LFC) to consider options for improving the solvency of the Petroleum Tank Release Cleanup Fund.

Language in the final proposed bill, LC402 (SB097), is a product of several of the proposed legislative changes. The federal Energy Policy Act of 2005 resulted in a State requirement that owners/operators must upgrade to double-wall underground storage tank systems if significant alteration to the petroleum storage tank system is required. There is no longer a need for the Fund to provide an incentive for owners/operators to install a double-wall tank. If the proposed legislation is enacted, releases from a double-wall tank system discovered on or after October 1, 2009 will have the same co-payment as releases from single-wall tank systems.

The Board proposes language that will provide an incentive for owners to have private insurance and to require owners/operators to make an insurance claim before applying to the Fund for cost reimbursement.

The intent of the statute of limitation proposal is to require the owner/operators to file for eligibility or contest a Board decision in a timely fashion. This change is intended to enable the Board to more effectively manage potential liabilities, improve the success of fact finding and discovery efforts, allow witnesses to testify on more recent activities, and improve business planning for the release. Additionally, timely eligibility application will provide the Board every opportunity to recover costs from any insurance the owner/operator may have.

Available funds were significantly impacted by the original ceiling and floor of the Fund, which were established at the inception of the Fund, see Figure 1. Adjustment of both the ceiling and the floor are proposed to be more in line with current consumer costs and minimize future impacts of a similar nature.

Availability of Petroleum Storage Tank Liability Insurance

The Board staff conducted a phone survey of Montana independent insurance agents who sell pollution insurance products in Montana. An independent agent is one who is licensed to sell the products of many different companies, as distinguished from a captive agent, who can sell only the product of a single insurance company. Most of these carriers are accessed through the Montana Independent Agent system. It would be suggested that an owner/operator go through several independent agents and have agents provide quotes from different companies according to the owner's particular business. Pollution coverage is risk-specific and varies from company to company according to the specific risk. One size does not fit all, which is why owners/operators should select the insurance company that best meets their needs. The following table provides a summary of the survey.

INSURANCE SURVEY	
Zurich Insurance	Will not provide "stand alone" coverage for pollution for an amount less than 1 million dollars. Prefer that owner insures all his business exposure with the carrier.
Federated Insurance	Will not provide "stand alone" coverage for pollution for less than 1 million dollars. Prefer that owner insures all his business exposure with the carrier.
AIG	Will provide pollution coverage for both monoline and package policies.
XL Environmental	Will provide monoline pollution policy and will tailor package policies.
Chubb Group	Provides pollution coverage as part of a package.
American Safety Insurance	Will provide some pollution coverage.

Gulf Insurance (subsidiary of Travelers)	Offers pollution coverage, but agent did not know to what extent.
ACE Insurance	Provides pollution coverage as both a monoline policy and as part of a package

A monoline policy is a stand-alone policy which provides coverage for a specific purpose usually written in the form of a single line policy.

Petroleum storage tank pollution insurance coverage is available in Montana. However, the ability for all facilities who are currently storing or who have stored petroleum to obtain insurance at a reasonable cost is not yet practicable. Most insurance companies are willing to provide pollution coverage for facilities that are in compliance with federal and state tank requirements and that have no historical contamination. Most newly constructed facilities meet these criteria. Other insurance companies will provide coverage for facilities that have been cleaned up to state standards and have been provided a "no further corrective action" letter by the State. These would be active facilities that have had a release and have completed all necessary corrective action at the site. It is difficult to obtain insurance for facilities that have releases and are currently being investigated or remediated.

It is important to recognize that insurance companies base premiums and availability of insurance on the existence of a regulatory framework. Insurance policies and their rates depend upon the potential for a release and the severity of a release. Both the potential for a release and the severity of releases have been shown to be reduced under a regulatory framework of tank management and closure. Requiring inspections of aboveground storage tanks would likely bring about these benefits.

The role of insurance in the future of the Fund has been the subject of past reports and was examined by the Subcommittee, a joint body of the LFC and the EQC. A 2003 LFC audit recommended that Montana transition from reliance on the Fund to private insurance coverage and considered options that would ease the transition. Ten other states have transitioned to private insurance, with mixed results. Some insurers are

declining to cover petroleum releases or are taking long periods of time to conduct cleanups or reimburse claims. The Subcommittee determined that Montana is not ready to transition to a system that requires tank owners and operators to obtain private insurance to pay for petroleum cleanups. The Board has proposed legislative language in an effort to encourage insurance. That language would be more effective if a co-payment increase had also been included in the proposed bill.

The Petroleum Tank Release Cleanup Fee

The petroleum fund program was established to protect public health and safety and the environment, provide adequate financial resources for partial reimbursement to owners or operators of petroleum storage tank systems for costs, expenses and other obligations incurred as a result of releases of petroleum products from petroleum storage tank systems, provide petroleum storage tank owners with incentives to improve tank facilities in order to minimize the likelihood of accidental releases, and to allow underground storage tank owners to demonstrate financial responsibility as required by the EPA. The Fund is financed by a per gallon fee imposed on the delivery of petroleum products paid by persons who use and receive the benefits of the petroleum products. Financial responsibility, as defined by the EPA, means that owner/operators must be able to pay for the costs of damage to natural resources, personal injury, or property damage as a result of a leak. Financial responsibility may be demonstrated by any combination of the following: private insurance, self insurance, trust fund, guarantee, surety bond, letter of credit, state assurance fund. The Montana Petroleum Tank Release Cleanup Fund is approved by the EPA as a state assurance mechanism. Even with all the available financial responsibility methods, with limited exceptions the Fund is the default payer for cleanup of releases from underground and aboveground petroleum storage tanks, especially home heating oil tanks.

As the number and severity of releases continues to decline, along with more releases being closed, less long-term liability exists for the Fund. However, collection of all or

part of the petroleum tank release cleanup fee will be necessary until other financial mechanisms are put in place. The Fund is focused on paying for cleanup activities that address the most hazardous problems to protect human health and the environment.

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Definitions

Consumer Price Index - An index prepared and published by the Bureau of Labor Statistics of the 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.

Least-squares - The method of least-squares 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), …..(x_n,u_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.