

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Indiana Excess Liability Trust Fund Actuarial and Management Audit

October 2022



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**Commitment Beyond Numbers**



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October 18, 2022

Douglas Louks  
Deputy Assistant Commissioner  
Indiana Department of Environmental Management  
100 North Senate Avenue, Room #1307  
Indianapolis, IN 46204  
SENT VIA E-MAIL

Dear Mr. Louks:

Pinnacle Actuarial Resources, Inc. is pleased to present its report on the actuarial estimate of the Excess Liability Trust Fund's net liability for unpaid claim amounts on releases reported as of December 21, 2021 and the review of the claim processing system.

This report is provided to the State of Indiana, Indiana Department of Environmental Management by Laura A. Maxwell, FCAS, MAAA, CSPA and John E. Wade, ACAS, MAAA, who meet the basic education standards of the Casualty Actuarial Society and the American Academy of Actuaries and the continuing education standards of the American Academy of Actuaries to make this statement of actuarial opinion, and Patrick J. Rounds.

We have enjoyed working with you on this assignment and look forward to discussing any questions you may have with this report.

Best regards,

A handwritten signature in blue ink that reads "Laura A. Maxwell".

Laura A. Maxwell, FCAS, MAAA, CSPA  
Director & Consulting Actuary

A handwritten signature in blue ink that reads "John E. Wade".

John E. Wade, ACAS, MAAA  
Consulting Actuary, independent subcontractor

A handwritten signature in black ink that reads "Patrick J. Rounds".

Patrick J. Rounds  
President, R&A Risk Professionals

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# Indiana Department of Environmental Management

## Excess Liability Trust Fund

### Actuarial and Management Audit

#### EXECUTIVE SUMMARY – ACTUARIAL AUDIT

Pinnacle Actuarial Resources, Inc. (Pinnacle) has been retained by the Indiana Department of Environmental Management (IDEM) to provide a review and opinion on the stability and adequacy of current and future claims of the Excess Liability Trust Fund (ELTF) based on data as of December 21, 2021 and provide ten-years of projections of ELTF's future claim liabilities.

Pinnacle was also asked to provide a performance audit of the ELTF Program to assess whether the program's processes and procedures are meeting the goals and objectives of the program. This audit is contained in the *Management Audit* section of this report and the Appendices.

Pinnacle calculated that the liabilities remaining on current sites is \$477.0 million (current estimated net ultimate unpaid amount through 12/21/2021, Exhibit 3.3). Pinnacle also estimated additional liabilities on future sites (through fiscal year 2031-32) of \$371.7 million (Exhibit 2.1). These results were used to calculate an annual ending cash balance using the following formula:

Beginning cash balance  
Add projected revenue  
Add projected investment income  
(Less) estimated payments for incidents  
(Less) estimated administrative costs  
Estimated ending cash balance

The projected ending cash balance increases throughout the projection period.

However, one must keep in mind that cash flow is only one important metric. A second metric should also be considered, which we define as the "Equity" Balance. The equity balance takes into consideration not only the revenues coming in and expenses going out each year, but it also accounts for any projected outstanding liability based on our actuarial estimates of the ELTF at each fiscal year-end. The equity balance is negative and improves through the projection period but remains negative.

The bottom line is that even on a "Pay-As-You-Go" operation, the ELTF is not going to achieve a positive equity balance and will have to collect throughput fees even after the ELTF program has

ended, if it were ever to end, in order to cover all its liabilities. Our conclusion is that the ELTF program under its current operational constraints is not actuarially sound.

### Methods – Current Incidents

Pinnacle used four methods to calculate the current and future liabilities for the existing active eligible incidents in the ELTF data. The methods are listed below and described in the *Methodology – Actuarial Audit* section.

- Paid Loss Development Technique
- Frequency-Severity Method
- Paid to Requested Ratio Method
- Bornhuetter-Ferguson Method by tank

The four methods are compared and an ultimate amount is selected for each year of release. The total liability is the difference between the ultimate amount and the current paid amounts.

### Methods – Future Incidents

Frequency-Severity methods are used to estimate liabilities from future incidents. Historical frequency (counts / tanks) is reviewed to determine estimated frequency for the 2021-22 fiscal year and future frequency trends. These estimated frequencies are applied to projected counts to determine projected incidents for future years. The dollar amount to attribute to each incident (severity) was calculated using data from the current incident analysis. From this data, severity is selected for the 2021-22 fiscal year as well as the severity trend. Future liability is estimated two ways using the projected incidents, estimated severity and severity trends.

## DISTRIBUTION & USE

This study has been conducted at the request of Indiana Department of Environmental Management officials. The exhibits attached in support of our findings are an integral part of this report. These sections have been prepared so that our actuarial assumptions and judgments are documented. Judgments about the conclusions drawn in this report should be made only after considering the report in its entirety. We remain available to answer any questions that may arise regarding this report. We assume that the user of this report will seek such explanation on any matter in question.

Our conclusions are predicated on a number of assumptions as to future conditions and events. Those assumptions, which are documented in subsequent sections of this report, must be understood in

order to place our conclusions in their appropriate context. In addition, our work is subject to inherent limitations which are also discussed in this report.

## BACKGROUND

The ELTF was established by the Indiana Legislature in 1988 to satisfy corrective action and third party damages caused by leaking underground storage tanks (LUSTs). IDEM is responsible for administering the ELTF. The ELTF is funded by an inspection fee of \$0.01 per gallon of fuel sold or used for motor vehicles in Indiana.

## DATA – ACTUARIAL AUDIT

IDEM provided the following data to Pinnacle:

- List of all confirmed incidents with incident report dates, payment dates, reimbursement request data, and payment data.
- List of all tank information (both active and closed or removed)
- Historical revenue and payment records from the financial records

We also relied on industry data to estimate changing fuel efficiencies.

- Highway Loss Data Institute on vehicle age distributions
- Green Car Congress on actual fuel economy
- Edison Electric Institute on electric vehicle sales
- BBC News on electric vehicle sales
- US Energy Information Administration data on Indiana Total Gasoline All Sales/Deliveries by Prime Supplier (Thousand Gallons per Day)

Please note that for the purposes of this report, the accounting date (the date used to separate the paid versus unpaid claim estimates) and the valuation date (the date through which transactions are included in the data used to estimate the unpaid claim estimates) was December 21, 2021, and the review date (the cutoff date for including information to the actuary) was July 18, 2022.

The actuarial analysis is on a release fiscal year basis. Thus, the data is organized by incident release fiscal year. Incident release year is the year in which the release was initially filed, not necessarily the same as when the release actually occurred. Oftentimes it is not possible nor practical to determine when a release actually occurred. It is a common practice across the industry to record the timing of releases by year reported as opposed to year the release occurred.

The historical information has been summarized by aggregating the amounts paid by the ELTF for a given site by incident release fiscal year. Corrective action at a contaminated site may take a number of years to achieve remediation with payments made by the trust fund over a corresponding period of time. The total number of incidents is the number of incidents with a release occurring in a given fiscal year. The amount requested shows the amount requested for reimbursement. A schedule of reasonable rate guidelines for various services are applied. The amount paid is the payments made by the ELTF for corrective action of leaking underground storage tanks as of December 21, 2021.

## METHODOLOGY – ACTUARIAL AUDIT

The estimated liabilities contained in this report are the product of historical experience, actuarial assumptions, quantitative analysis, and professional judgment. The starting point of the analysis is application for reimbursement data provided by the ELTF as of December 21, 2021 summarized in Exhibit 3.3.

### General Overview of Exhibits

- Exhibit 1 summarizes results from the other exhibits and includes projected cash flow and equity balances based on the current throughput inspection fee of \$0.01 per gallon.
- Exhibit 2 develops liabilities for releases expected to occur in future fiscal years based on projections of historical data.
- Exhibit 3 determines payouts of outstanding liabilities for claims with release dates prior to December 21, 2021.
- Exhibit 4 calculates the ultimate payments for claims with release dates prior to December 21, 2021.
- Exhibit 5 provides summaries of the current data.
- Exhibit 6 provides estimates of future changes in fuel consumption

### Current Liability

We rely upon four methods to determine ultimate liability by fiscal year. From these methods, an ultimate liability by fiscal year is chosen.

**The first method is a traditional paid loss development technique, summarized in Exhibit 4.2.1.** The paid development method is based upon the assumption that the relative change in a given year's paid loss estimates from one evaluation point to the next is similar to the relative change in prior years' paid loss estimates at similar evaluation points. In utilizing this method, actual annual historical paid loss data is evaluated. In order to calculate this method, expenditures are summarized by year (year the



release came into the program and year the expenditure was made). Successive years can be arranged to form a triangle of data.

Loss development factors (LDFs) are calculated to measure the change in cumulative paid costs from one evaluation point to the next. These historical LDFs form the basis for selecting the LDFs used in projecting the current valuation of losses to an ultimate basis. In addition, a tail factor is selected to account for loss development beyond the observed experience. The tail factor is based on trends shown in the data.

This method's implicit assumption is that the rate of payment of claims has been relatively consistent over time.

Exhibit 4.2.1 divides the total paid amount by fiscal year by the indicated percentage of ultimate losses from Exhibit 4.3.

**The second method is the Frequency-Severity Method, culminated in Exhibit 4.2.2.** This method estimates ultimate claim counts and ultimate severity (loss per claim) by fiscal year. Similar to the paid loss development method, ultimate claim counts are calculated as incidents divided by the indicated percentage of ultimate claim counts from Exhibit 4.4. The ultimate severity is calculated as severity as of December 21, 2021 divided by the percentage of ultimate severity from Exhibit 4.5. Exhibit 4.2.2 starts with the indicated ultimate number of incidents and indicated ultimate paid severity and ultimate number of incidents and ultimate paid severity is selected. The selections generally follow the indicated amounts but make adjustments for some unusual values in the more recent fiscal years. The selected ultimate claim counts are multiplied by the selected ultimate severities by fiscal year to determine the ultimate loss.

**The Paid to Requested Ratio Method (Exhibit 4.2.3)** utilizes additional information from tank owners' requests. Ultimate requested amounts are developed by dividing the requested amount by the percentage of ultimate requested from Exhibit 4.6. An ultimate ratio of paid to requested amount is also calculated similarly in Exhibit 4.7. The ultimate requested amount is multiplied by the ultimate ratio of paid to requested amount to determine ultimate paid.

Requested amounts may include duplicate applications due to applications being rejected and reapplying. As long as the number of duplicate applications is consistent, the ratio method provides another useful method for consideration.

**A Bornhuetter-Ferguson (B-F) method is shown in Exhibit 4.2.4.** The B-F method is essentially a blend of two other methods. The first method is the paid development method whereby actual paid amounts are multiplied by an expected paid development factor. The paid development method can lead to

erratic and unreliable projections because a relatively small swing in early payments can result in a large swing in ultimate projections. The second method is the expected payment method whereby the liability estimate equals the difference between a predetermined estimate of expected payments and actual paid losses. This has the advantage of stability, but it does not respond to actual results as they emerge. The B-F method combines these two methods by setting ultimate payments equal to actual paid losses plus expected unpaid amounts. As an experience year matures and expected paid losses become smaller, the initial expected payment assumption becomes gradually less important. This method is often used for long-tail lines and in situations where the paid experience is relatively immature or lacks sufficient credibility for the application of other methods.

**The four methods are summarized on Exhibit 4.1.** From the four methods, ultimate paid amounts are selected. These amounts are gross of deductibles. Ultimate losses are reduced for the deductible in Exhibit 3.3. The estimated total remaining liability for the fiscal year is determined by subtracting the paid amount from the net of deductible ultimate loss. These unpaid liabilities reflect all remaining amounts for incidents with releases prior to December 21, 2021. Note that the unpaid liability for reported release fiscal year 7/1/21 – 22 represents the estimated amount of remaining liability for the first half of that fiscal year, reflecting the report valuation date of December 21, 2021.

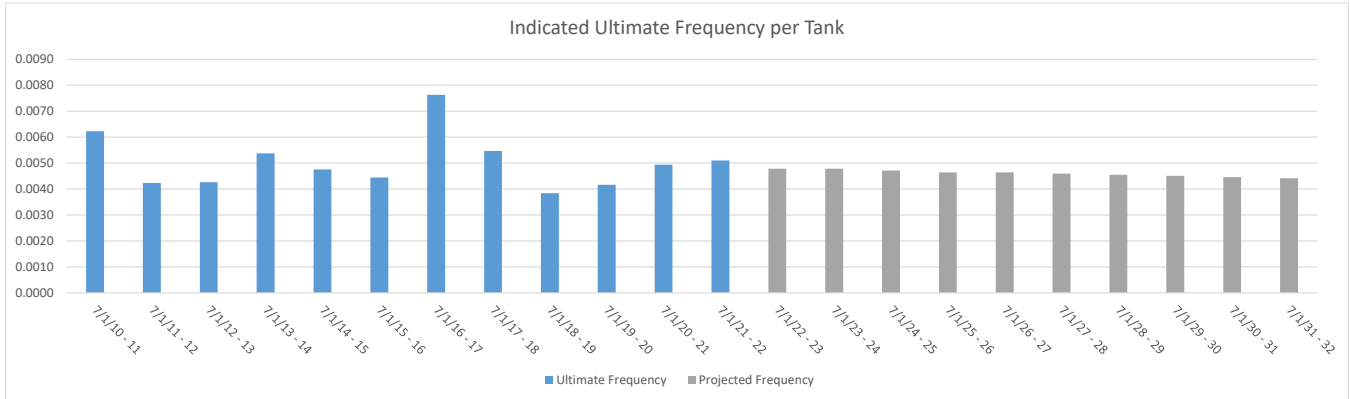
Projected payments on these claims are calculated in Exhibit 3.1 as the total unpaid liability by fiscal year multiplied by the payout patterns on Exhibit 3.2. Note that we have assumed a 35-year average payout pattern per reported release fiscal year.

### Projection of Future Incidents

The projection of future incidents starts with a review of historical frequency and severity as determined in the calculation of current liabilities.

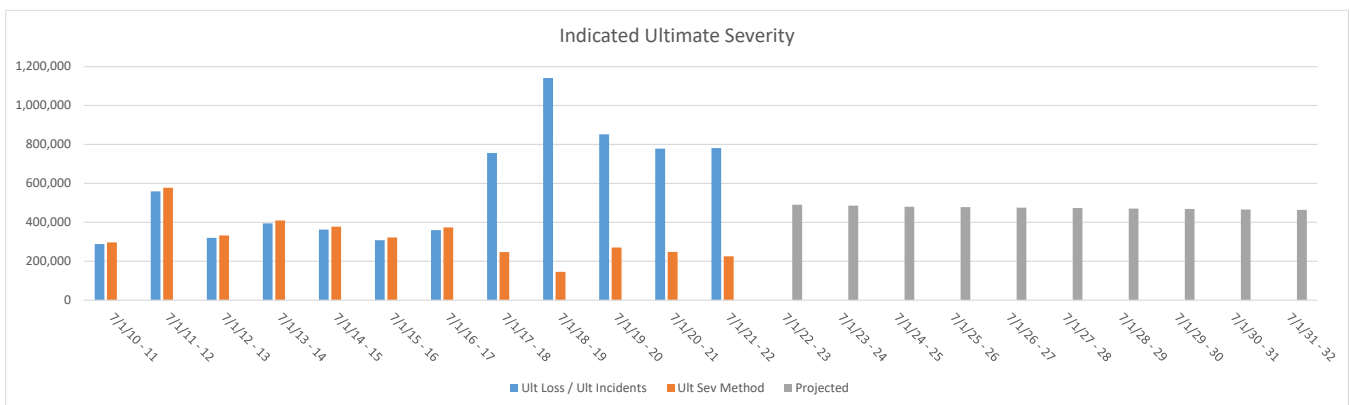
In order to determine the payout of these future claims, Exhibit 2a.4 calculates the percentage open by years since incidence. Exhibit 2a.5 provides these selections in a triangular form.

Historical frequency is used to determine the future frequency per tank in Exhibit 2a.2. Frequency has been volatile as shown on the left portion of the graph below. Projected frequency is shown on the right, where annual volatility has been averaged out.



The selected frequency per tank of 0.0048 (Exhibit 2a.2) is multiplied by the 13,600 projected number of tanks in 2022-23 (Exhibit 2a.3) to determine projected incidents. A trend factor of -1.0% is applied to determine the frequency for fiscal years 2023-24 and subsequent. The projected frequency is multiplied with projected tank counts to determine future incidents in Exhibit 2a.3. A trend factor of 1.5% is applied to determine the projected tank count for fiscal years 2023-24 through 2026-27 and trend for subsequent years is 1.0%. Note again, these projections reflect averaged annual frequencies and therefore appear stable year-by-year in our calculations. Actual results for each year should be expected to include some volatility, as evidenced in the past. The incidents by fiscal year are combined with the projected percent of open incidents (Exhibit 2a.5) to determine the projected number of open incidents displayed in Exhibit 2a.6.

Selected severity per incident is determined in Exhibit 2a.1 based on two methods. The first method divides the selected ultimate amount by the ultimate estimated incidents. The second method is the severity development method adjusted by deductibles. Historical and projected severity is shown in the graph below.



The selected average annual severity of \$52,917 (ultimate severity per claim per year) is adjusted for a -1.0% trend through 2025-26 then decreases from Exhibit 2a.1 to determine the estimated severity by fiscal year and calendar year displayed in Exhibit 2a.7. The triangles in Exhibit 2a.6 and Exhibit 2a.7 are

multiplied together to determine the payments by release year across fiscal years displayed in Exhibit 2a.8. The frequency and severity trends were judgmentally selected after reviewing the exposure and severity information posted to Exhibit 2a.1.

Exhibit 2b provides another method to determine the future incident ultimate loss. Projected incidents are multiplied with projected lifetime severity.

The summary results of the two methods from Exhibit 2a.8 and Exhibit 2b are posted to Exhibit 2.1, where selected ultimate loss by projected reported release fiscal year is then determined based on the results of the two methods.

### Projections by Fiscal Year

Consistent with the purpose of our engagement, the focus of our analysis was on ELTF's overall liabilities. As such, projections shown in this report for each fiscal year should be viewed in the context of the entire portfolio of liabilities, not necessarily as best estimates for individual fiscal years.

## DISCUSSION & ANALYSIS – ACTUARIAL AUDIT

### Liability

The estimated unpaid net liability of \$477.0 million for current incidents is provided by payment year in Exhibit 1.6 and by reported release fiscal year in Exhibit 3.3. Indicated ultimate payments range from \$1,157.6 million to \$1,681.1 million, as shown on Exhibit 4.1. This compares to the selected ultimate payments of \$1,457.7 million. Payments of \$904.9 million are subtracted from this amount to determine a gross liability of \$522.7 million. The gross liability is further reduced by \$45.7 million to reflect deductibles.

Liabilities for future incidents are determined in Exhibit 2.1. The indicated ultimate liabilities range from \$333.0 million to \$400.9 million with selected ultimate liabilities of \$371.7 million. No adjustments are made for deductibles because the selected severities used in the indications already reflect the deductibles.

The total payments on Exhibit 1.6 reflect expected payments for claims that have occurred and are expected to occur through release year 2031-32.

### Cash Flow and Equity Balance

In order to determine the cash flow and equity balances for fiscal years 2021-2022 through 2031-32, payments, administrative costs and revenues must be projected. The payments are discussed in the *Methodology – Actuarial Audit* section.

Historical administrative costs are reviewed in Exhibit 1.5 to determine an average fiscal year administrative cost for 2021-22. In allocating the amounts from 7/1/21-7/1/22 it was assumed the expenses are evenly distributed throughout the year. Future fiscal year administrative costs are calculated by reviewing the historical data and discussion with the ELTF.

- Personal Services: projected using a 2.0% trend as provided by IDEM
- Utilities: projected using a linear trend excluding 2021-22
- Contractual: reduced through 2024-25 then 0 as provided by IDEM
- Supplies: projected using a 3.0% trend
- Administration & Operating: projected using a linear trend excluding 2019-20 to 2021-22
- Agency Wide Services: Selected at \$0
- Statewide Allocation Plan (SWCAP): projected using a linear trend excluding 2019-20 to 2021-22
- Grant Support Services: projected using a 0.5% trend

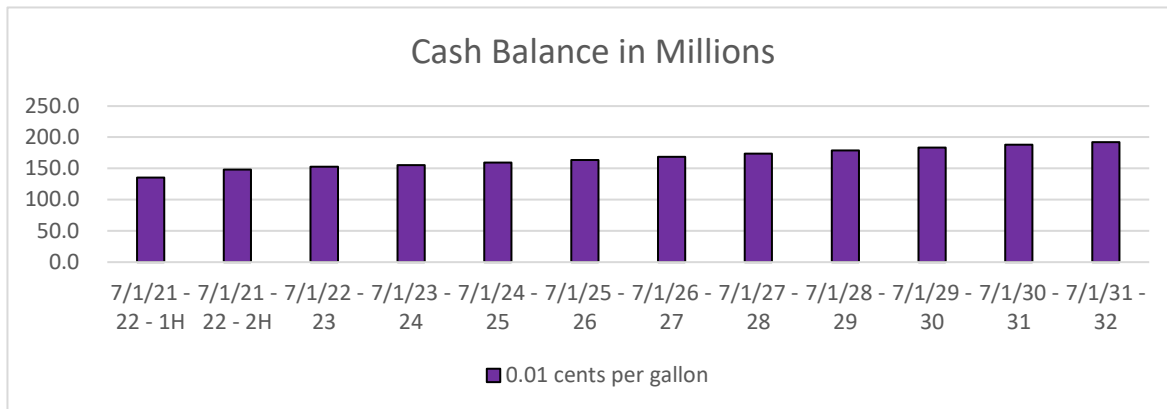
Historical revenue is provided on Exhibit 1.3. Exhibit 1.3 also provides projected investment yields and projected tank fees for 2021-22. Prospective tank fees are calculated in Exhibit 1.4 and reflect expected changes in fuel consumption. Fuel consumption changes are provided in Exhibit 6 and are based on trends on mileage driven, number of vehicles, sales of electric vehicles and increasing miles per gallon. Tank fees and investment income are the only sources of revenue in the projected revenue. No future revenue was projected for Federal Indirect Cost and Miscellaneous Revenue. Interest rates are expected to gradually increase.

The projected cash balances in Exhibit 1.1 are calculated as the prior cash balance less fiscal year payments and administrative costs plus projected revenue and investment income.

The projected equity balances in Exhibit 1.2 are determined as the difference between the projected cash balance and claim liabilities. The projected cash balance is calculated in Exhibit 1.1 and is compared to the current liability adjusted for payments and future liabilities for the fiscal year.

## FINDINGS – ACTUARIAL AUDIT

The results of our analysis are summarized in Exhibits 1.1 and 1.2. Exhibit 1.1, Cash Flow, displays projected cash flows, accounting for estimated ELTF fiscal year remediation payments, administrative costs, and revenues. It can be noted in the exhibit that the starting point is the cash balance of the ELTF as of 12/31/21, which is \$135.4 million. IDEM also provided the cash balance of \$148.1 million as of 6/30/2022. The cash flow balance is projected to increase through 2031-32.



However, one must keep in mind that cash flow is only one important metric. A second metric should also be considered, which we define as the “Equity” Balance as displayed in Exhibit 1.2. The equity balance takes into consideration not only the revenues coming in and expenses going out each year, but it also accounts for any projected outstanding liability based on our actuarial estimates of the ELTF at each fiscal year-end. As noted in column (2) of Exhibit 1.2, we have projected outstanding liabilities for all incidents at \$477.0 million as of 12/31/21. In consideration of the cash balance as of that same time from Exhibit 1.1, that implies a negative equity balance of \$341.6 million, as shown in column (5) of Exhibit 1.2. The negative equity balance generally improves but remains negative through 2031-32.

The bottom line is that even on a “Pay-As-You-Go” operation, the ELTF is not going to achieve a positive equity balance and will have to collect throughput fees even after the ELTF program has ended, if it were ever to end, in order to cover all its liabilities. Our conclusion is that the ELTF program under its current operational constraints is not actuarially sound.

## PROJECT SCOPE - MANAGEMENT AUDIT

R&A Risk Professionals (R&A), partnered with Pinnacle Actuarial Resources, were tasked with performing a managerial audit of the Excess Liability Trust Fund (ELTF) program for the Indiana Department of Environmental Management (IDEM). The ELTF Managerial Audit, Request for Services required the following services to be provided:

- Comprehensive review of IDEM's required actions in response to a confirmed release from an underground storage tank (UST) system;
- Review of ELTF Claims submitted and/or reimbursed over the previous five (5) years with an evaluation of the expenses associated with IDEM and/or regulatory requirements;
- A similar five (5) year review of petroleum and UST projects conducted by the Indiana Finance Authority's ( IFA's) Brownfields programs with an evaluation of expenses associated with IDEM and/or regulatory requirements;
- A similar review of any available privately-funded leaking underground storage tank (LUST) claims in Indiana;
- A similar review of claim reimbursement from state funds in other states, with an emphasis on neighboring states;
- Compare differences between ELTF reimbursement payments with Brownfields claims, privately-funded claims (if available) and similar claims in state reimbursement programs. Examine any differences that may exist and make recommendations that could apply and be implemented into administration of the ELTF.

## REQUIRED ACTIONS IN RESPONSE TO A CONFIRMED RELEASE

The actions which must be taken by an owner/operator in response to a release of petroleum are laid out in 329 IAC (Indiana Administrative Code), Article 9. This administrative code was written to comply with IC 13-23-1-1(Indiana Code), which tasked the Indiana Department of Environmental Management (IDEM) with establishing and operating an underground storage tank release detection, prevention, and correction program. A "release" is considered to have occurred if a release to the environment equals 25 or more gallons of petroleum or if it causes a sheen on nearby surface water. The following sections outline the actions which must be taken by an owner/operator;

- **329 IAC 9-5-2** – Initial Response – reporting requirements, stopping further release of petroleum, mitigating fire, explosion, and vapor hazards, and mitigating to the extent practicable adverse effects to human health and the environment.
- **329 IAC 9-5-3.2** -Initial Abatement Measures and Site Check – Provides further direction on preventing the continued release and spread of petroleum and petroleum vapors in the

environment. Includes the treatment and disposal of contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. Requires that the owner/operator measure for the presence of contamination through sampling as is appropriate for the substance stored, and to investigate to determine the possible presence of free product and to begin free product removal as soon as practicable.

- **329 IAC 9-5-4.2** – Free Product Removal – Requires that owner/operators remove free product to the maximum extent practicable and in a manner that minimizes the spread of the contaminant and properly treats, discharges, or disposes of recovery products and byproducts.
- **329 IAC 9-5-5.1** – Initial Site Characterization – The owner/operator shall assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial response and abatement measures.
- **329 IAC 9-5-6** – Further Site Investigations – If the conditions in 329 IAC 9-5-6(a) exist, the owner/operator shall conduct further site investigations of the release, the release site, and the surrounding area possibly affected by the release in order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product as a contaminant of the groundwater.
- **329 IAC 9-5-7** – Corrective Action Plan – At any point after reviewing the information submitted in compliance with sections 1, 2, 3.2, and 5.1 of this rule, the commissioner may require the owner/operator to develop and submit a corrective action plan for responding to contaminated soils and groundwater.

## PROJECT TASKS – MANAGEMENT AUDIT

**Task A** – R&A Risk Professionals completed an examination of the ELTF program policies, procedures, and processes regarding the receipt, analysis and processing of ELTF claims. We focused on changes made since the 2016 audit and compared those changes to the audit recommendations to determine if any further changes need to be made to policies and procedures to;

- Detect and reduce errors by employees (improve accuracy),
- Increase efficiency of processing claims (timeliness), and
- Identify and prevent fraud by applicants

R&A Risk Professional's review started with an evaluation of the findings from Pinnacle's 2016 review of the ELTF program. The summary of the findings noted the following;

- Time consuming, extensive review process for invoices.
- Minimal oversight of the actual work performed.



- Review emphasis on documentation/unit costs rather than value of services, or the need for those services.
- Review doesn't evaluate cost effectiveness or necessity of the service.
- Prior scope and budget approval would eliminate much of the review process.
- An electronic claim process would streamline the process and eliminate claims adjustments for incorrect rates.
- Eliminating redundant review forms for subsequent claim submittals would increase review efficiency.

**Tasks B** - R&A evaluated the strengths and weaknesses of the current claims system; we evaluated the process/policy changes implemented; we reviewed previous recommendations for improvement of processes, practices, system tracking, and staff utilization implemented by the agency and we considered further recommendations for improvement of processes, practices, system tracking, and staff utilization.

**Task C** - R&A utilized the data provided by Pinnacle in the Actuarial Audit for comprehensive review and summary of costs and provided a summary review of specific costs associated with each claim reviewed.

**Task D** - R&A evaluated the frequency and extent of any waste, fraud, and abuse related to the ELTF, including the current processes in place to detect and prevent waste, fraud, and abuse. The evaluation included:

- a. Dollar amount attributed due to waste, fraud, and abuse for reviewed claims submitted from July 1, 2016 to June 30, 2021;
- b. Findings as to what could have led or can lead to waste, fraud, and abuse; and
- c. Recommendations to prevent instances of waste, fraud, and abuse.

**Task E** - The EPIC IS solution is in development and was not available for review.

### ELTF Forms

The primary forms used by the ELTF are listed below;

- **Form 55459** - ELTF Eligibility Application – Very brief and straightforward form requiring basic site, applicant, and release information. This form is unchanged from the 2016 audit.
- **Form 51955** – Scope of Work – Application for pre-approval – This form is used if the consultant or claimant wishes to request a cost effectiveness of corrective action determination pursuant to IC 13-23-9-1.5 (a) and 328 IAC 1-3-1.3 and 328 IAC 1-3-1.6. This form is unchanged from the 2016 audit.

- **Form 47139** – Application for reimbursement – Unchanged from 2016 review, includes;
  - Application
  - Affidavit
  - Invoice Summary
  - Subsequent Pay Requests
  - Resubmittal Pay Request
- **Form 56424** – Application for reimbursement – This form is identical to Form 47139 except that it does not include the Resubmittal Pay Request.

The forms have not changed since the 2016 audit. The information in the reimbursement application (Form 47139 and 56424) must be entered with every payment request. If the ELTF switches to an electronic claim application system, then the site and claimant information may already be provided in their account information and it may no longer be necessary to re-enter this information each time. There are no recommended changes to the forms themselves.

### ELTF Claim Review

The purpose of the ELTF program review is to determine if the program is meeting its statutory requirements and to determine if the ELTF policies and practices need to be modified to detect and reduce errors by employees, to increase the efficiency of processing claims, and to identify and prevent waste, fraud, and abuse by applicants.

Indiana Code (IC) 13-23-7, 8, and 9 establish the Excess Liability Trust Fund. 328 IAC provides the administrative rules for the ELTF program. These statutes and administrative rules were reviewed to assess whether the claim reviewers were following Indiana code. Ten random ELTF claims were chosen for review in six (6) month intervals from July 1, 2016 thru June 30, 2021 using Indiana's Virtual File Cabinet document search tool as well as excel spreadsheets of sites provided by IDEM.

In addition to completing in-depth reviews of individual claims filed with the ELTF, R&A Risk Professionals also reviewed the handling of three randomly selected sites from inception to completion. Our focus for this review was on the handling of the sites to determine if risk based corrective action (RBCA) was being used and if sites were closed using environmental restrictive covenants (ERCs) where possible. We reviewed four recent Brownfields files. We also reviewed 11 claims selected by ELTF for which a scope of work (SOW) and budget approval was required beginning in 2019 although eight of these claims were managed by the Indiana Finance Authority similar to the Brownfields program. We were unable to obtain data on any privately funded LUST claims in Indiana. In total we reviewed 28 petroleum release claims listed in Appendix 1.

### Summary of ELTF Claim Review

The ELTF review process appears to have become more streamlined beginning in late 2016 and early 2017. There were fewer rejections due to minor clerical errors in the submittal application. An overly extensive checklist that the reviewer was previously required to complete was removed, and the review process appears to be more streamlined. There is more focus on the scope of work completed and whether those costs are reasonable and effective as required per IC 13-23-9-1.5. Reasons for disallowed amounts are given on the Cost Review Summary as required per IC 13-23-9-2. The review is still focused on line item detail which appears to be more time consuming and complicated than review of scope and total cost. There is detailed analysis of the rates charged for specific line items according to labor classifications.

We reviewed files selected by the ELTF as examples of sites for which a scope of work (SOW) and prior budget approval was required. Our review found that prior approval began in 2019 and that a review and approval of the proposed SOW was completed. The vendor was required to collect, or at least document attempts to collect, competitive subcontractor bids for corrective action work. Invoicing is still submitted on a time and materials basis. The ELTF reviewer then reviewed the proposed rates against rates allowed under 328 IAC 1-3-5. In cases where the lowest subcontractor bidder was not used, the ELTF only reimbursed costs based upon the lowest subcontractor bidder's proposed costs.

#### **Critical findings from file reviews:**

- The claims staff performs detailed reviews that appear to be accurate. We did not find errors in the reimbursement process. The documentation requirements and approved rates appear to be applied consistently when the line items are listed under 328 IAC 1-3-5 (e) costs.
- Our review did not find any instances of fraud by applicants.
- IDEM has successfully implemented online access to claims and reports through the virtual file cabinet (VFC) site. This helps greatly with access and transparency.
- The resubmittal of claims was common and requires substantial time for the reviewers to process and log, as well as providing the basis for the denial or approval in writing to the applicant. In our review of ELTF claims, 13% of invoices were submitted only once, 36% were submitted twice, 38% were submitted three times, and 13% were submitted more than three times.
- Resubmittals after 2018 appear to be in compliance with the 365 day resubmittal requirement. Prior to 2018 there were instances of approval of costs submitted in excess of 365 days after the previous review.
- Reimbursement allowed for project management and reporting appears to vary between reviewers.
- Claims submitted after 2016 appear to be utilizing RBCA standards allowing for reduced expenses while achieving the goals of protecting human health and the environment.
- Claims submitted after 2018 utilize bidding to manage expenses for subcontracted services.

Corrective action plans submitted after 2018 appear to take into consideration possible ERCs when establishing corrective action goals.

- New claims submitted beginning in 2019 utilize ELTF oversight of the SOW, but only after the site investigation is complete. Invoicing is still on a time and materials basis.
- Assigning benefits to the vendors making corrective action decisions appears to greatly increase the cost of corrective action.

## BROWNFIELDS PROGRAM PETROLEUM ORPHAN SITE INITIATIVE (POSI) REVIEW

A review was completed of the IFA's Brownfields Program for the five-year period from 7/01/2016 thru 6/30/2021. The scope of the review also asked for a comparison between the payments for the ELTF program and the Brownfield claims.

**Background.** The Brownfields program primarily addresses abandoned sites which have been selected for community redevelopment as part of the Petroleum Orphan Sites Initiative (POSI). When an abandoned tank site is put in the POSI program, an RFP is sent out to approximately 15 pre-approved consultants requesting bids. The basic scope of work includes UST removal, the removal of up to 1,500 tons of contaminated soil if needed, the application of 1,000 lbs of Oxygen Release Compound (ORC) into the backfill of the excavation, a post-excavation environmental site assessment (ESA), and monitoring (if needed). Based upon discussions with Andrea Robertson of the Indiana Finance Authority, the Brownfields program is smaller than the ELTF program and appears to be more 'hands-on'. An IFA inspector is normally present during the UST removal and excavation to help determine how much soil needs to be removed based upon field screening. There also may be more direct communication with the consultant during the invoice review process.

The review approach required some modification for the Brownfields sites. Claims were not available on the virtual file cabinet (VFC) site for brownfields sites. When we sought claim information, we were directed to Andrea Robertson of the Indiana Finance Authority. She helped us to access a spreadsheet of Brownfields sites. Since individual claims were not listed, we selected a random list of POSI sites to review. Andrea assisted us to download invoices and reports from those sites into the virtual file cabinet site. As a result, instead of picking random claims we picked random sites and then reviewed invoices from those sites from various periods between 7/01/2016 and 6/30/2021.

The list of Brownfields claims reviewed are provided in Appendix 1.

### Brownfields Summary

The Brownfields Program utilizes active management of both scope and costs by using an RFP process to obtain competitive bids for the scope of work (SOW) which is predetermined by the Program project manager. The Program has established a list of approximately 15 preferred contractors from which to solicit bids. The Program uses a specific SOW which allows an “apples to apples” comparison of bids. The Program provides adequate field oversight to determine that only the necessary SOW is completed. Time and materials type of invoicing is not allowed. The Brownfields Program makes use of environmental restrictive covenants (ERCs) early in the process to move a site to regulatory closure.

### Comparison of the ELTF Program to the Brownfield’s Program

The Brownfields program allows for direct oversight of the project from bidding and cost-preapproval to the actual scope of the corrective action completed. The SOW is managed by the Brownfields project manager, not the chosen vendor. This very critical difference appears to result in significantly lower costs per site, and greatly reduced time frames to achieve regulatory closure under the Brownfield program.

The ELTF focuses on detailed, time consuming review of specific line item costs after the scope is determined and implemented by the vendor, with no exceptions for variances to the price list. The Brownfields program focuses on project management and appears to allow some deviation from prior approved budgets while the overall costs are significantly lower than the ELTF. By evaluating scope, Brownfield’s corrective action plans appear to take into consideration available ERCs before CAPs are approved; conversely, ERCs appear to be considered only after selected corrective action activities fail to achieve more stringent goals under the ELTF program and generally after considerable resources have been incurred.

## COMPARISON TO NEIGHBORING STATE FUNDS

The national average of UST corrective action claims submitted to UST funds in the United States (from the most recent survey in 2020) was \$153,664. Indiana’s average was \$298,292 which is the 4<sup>th</sup> highest after Massachusetts, California and Pennsylvania. We were unable to identify any geologic or other sensitive environmental resources to support higher corrective action costs in Indiana in comparison to neighboring states.

### Summary of Comparisons with Neighboring States

We reviewed reimbursement processes and associated costs from neighboring states including Ohio, Illinois, Kentucky and Michigan. A summary of each neighboring states’ process and average costs are listed in Appendix 2.

Per claim costs are significantly lower in all surrounding states. Key differences between the ELTF and surrounding state funds includes:

- Surrounding states require an ownership interest to qualify for reimbursement eligibility (no assignments to vendors);
- Surrounding states have much lower per occurrence limits. Indiana has twice as many claims that exceed \$1 million than all surrounding states combined.
- Surrounding states rely upon more direct Fund oversight including prior budget approval, competitive bidding, and use of risk-based principles including institutional controls or environmental covenants when determining the appropriate corrective action goals.
- The ELTF reimbursement for site investigation costs alone exceeds the average cost for all corrective action in the surrounding states. In Indiana, site investigation costs are incurred prior to any cost oversight by the ELTF.

## RECOMMENDATIONS – MANAGEMENT AUDIT

The review by R&A Risk Professionals did not uncover any specific instances of fraud. Finding fraud may require a more hands-on approach including such tasks as interviewing the site owner, reviewing time cards of vendor employees, and performing random site visits to confirm that the work was completed as invoiced and staff hours match invoices. Our reviews did indicate that there may be waste or abuse in the form of excessive scopes of work beyond what is necessary to assess risk and protect human health and the environment based upon RBCA principals and the most efficient use of institutional controls (ERCs) to sever risk pathways, before completing corrective action.

### Recommendations for Reducing Waste

1. **Provide cost oversight before expenses are incurred.**
  - a. **Prior budget approval for site investigation and development of CAPs.**

ELTF site investigation costs alone exceed the average corrective action costs in adjacent states. The most significant difference between Indiana and adjacent states is the point at which cost oversight and budget approval is required. Site investigation and CAPs require budget approval in adjacent states. Implementation of cost oversight and budget approval earlier in the process may significantly reduce project scope and costs without increasing environmental risks.

**b. Require competitive bids.**

Require the responsible party to obtain competitive bids before assigning the claim.

Most state funds, including neighboring states, utilize competitive bidding with average corrective action expenses significantly less than the ELTF. The ELTF has begun requesting bids for subcontracted work and limits reimbursement to the lowest bid. However, the original assessments and development of the SOW are not required to be bid. Without bidding, the extent of site investigation and scope of CAPs are determined by the consultant. When the scope of corrective action is driven by the consultant, subsequent bidding for portions of the project may not be practical or effective.

When the consultant establishes the scope, the only remaining cost control tool available to the ELTF is the price list which may not be effective in managing total costs as noted in paragraph c below. If the site investigation process and the CAP were subject to competitive bidding, consultants would have to be more efficient with both scope and costs.

When determining the impact that competitive bidding could have on a mature price list program, we evaluated the implementation of bidding for Medicare services. A competitive bidding program was implemented in various test markets throughout the US for the purchase of medical equipment that was formerly purchased using a customary fee schedule. The average percentage savings compared to the fee schedule was 33% ranging from 27% to 37%. (From Bipartisan Policy Center web site. Article dated Wed July 3, 2013 “Full Steam Ahead! Competitive Bidding Achieves the Best Price for Beneficiaries, Medicare and Taxpayers” Centers for Medicare and Medicaid Services (CMS) Competitive Bidding Update—One Year Implementation Update April 17, 2012, page 3).

Site investigation costs and excessive scopes of work could be reduced with upfront bidding and budget approval. We estimate that the ELTF could benefit by savings of up to 33% with the implementation of competitive bidding required for budget approval prior to assignment of claim benefits.

**c. Require task-based rather than line-item budgets.**

Line item reimbursement pursuant to price lists is overly complex and time consuming for both the consultant and the ELTF. Line item price lists also encourage excess line-item quantities per task by the consultant to justify total costs. Establishing task-based price lists rather than line-item prices will greatly reduce administrative expenses for all parties. Pre-approval of budgets by task requires all line-item quantities to be considered when budgets

are approved. If task costs are too high, competitive bids can be obtained. Reasonable task prices can also be established in a similar manner as the current line item cost list 328 IAC 1-3-5 (e). Utilizing task pricing, change orders would only be allowed if the required scope increased. By approving task-based budgets neither the consultant nor the ELTF reviewer has to evaluate the hourly rate of each individual performing the task. Reasonable rates would be approved for tasks such as soil borings, monitoring wells, samples, report writing, etc. Consultants can determine how to complete the task efficiently, based upon the approved reasonable task price. Labor rates would not be evaluated.

We estimate that implementing task-based (rather than time and materials) prior budget approval could significantly reduce corrective action costs by reducing the “time and materials” justification for excessive “line-items” at approved price list rates. Task-based invoices are easier to submit, and easier to review than more detailed line item-based price lists.

**2. Use site specific target levels based upon property use and zoning and the establishment of institutional controls such as well ordinances and ERCs prior to approving corrective action plans.**

Indiana should ensure that achievable corrective action goals and end points are established prior to the implementation of any corrective action plans. The end points should consider the level of urgency and the maximum concentration of each chemical of concern that may remain in the environment and still present an acceptable level of risk to human health and the environment based upon the toxicity, exposure, and potential fate and transport mechanisms. The target levels should be based upon current property use and zoning. Evaluating the use of institutional controls such as well ordinances and ERCs prior to the implementation of corrective action plans could, by our estimates, reduce individual ELTF claim costs by up to 60%.

We reviewed a few claims where ERCs have been considered early in budget approval oversight beginning in 2019, however, the cost oversight did not begin until site investigation and CAPs were submitted. ERCs should be considered before CAPs are proposed.

**3. Claim assignment limitation.**

Indiana Code 13-23-8-4 (b) allows an eligible party to assign the right to receive payment of an ELTF claim to another person. The ELTF program should evaluate a revision to its administrative rule under 328 IAC 1-3-1(a) limiting assignments only to persons who do not have a conflict of interest with respect to achieving NAR in the most cost-effective manner. ELTF claims should not be assigned to the consultant responsible for determining the scope of corrective action.



Allowing the claim to be assigned to the consultant removes an important check and balance. The owner/operator or responsible party should remain involved in the process to help ensure that the costs submitted are reasonable and legitimate. In our review of selected claims, the claim costs increased by more than 400% when the consultant was the claimant. Consultants with reimbursement assignments have no incentive to reduce scope or select the most cost-effective corrective action plan. If such limits cannot be accomplished in administrative rules, legislation limiting assignments should be considered.

**4. Limit reimbursement to the required financial responsibility limits established in the federal regulations.**

Indiana Code 13-23-8-8(a)(1) limits payment to no more than \$2,500,000 for eligible release and (2) \$10,000,000 reimbursement per fiscal year per owner/operator. Most state funds limit reimbursement to \$1 million per occurrence and \$2 million aggregate per owner per year consistent with the federal financial responsibility requirements. Indiana has the highest per occurrence limit of all state funds at \$2.5 million per occurrence. Indiana has the third most claims that exceed \$1 million with over 200 claims that exceed \$1 million. Only California and Florida have more claims that exceed \$ 1 million. Higher reimbursement limits reduce urgency to achieve closure. If additional funding was not available, consultants may put greater emphasis on achieving closure before funding expires. Limits could be reduced to \$1 million per occurrence and \$2 million aggregate, with defense costs limited to \$250,000 outside of occurrence limits, while still satisfying federal financial responsibility requirements. Limiting benefits to the federally mandated limits would reduce total fund exposure and could reduce future payments by as much as 24%.

Recommendations for Increasing Efficiency of Processing Claims

1. Implement task-based budgets and task-based invoicing.
2. Implement electronic invoicing that will only allow vendors to enter tasks (or line items) with approved rates.

## ACRONYMS

<b>Acronym</b>	<b>Definition</b>
B-F	Bornhuetter-Ferguson Method
CAP	Corrective Action Plan
ELTF	Excess Liability Trust Fund
ERC	Environmental Restrictive Covenant
ESA	Environmental Site Assessment
IAC	Indiana Administrative Code
IC	Indiana Code
IDEM	Indiana Department of Environmental Management
IFA	Indiana Finance Authority
LDF	Loss Development Factor
LUST	Leaking Underground Storage Tank
NAR	No Action Required
ORC	Oxygen Releasing Compound
POSI	Petroleum Orphan Site Initiative
RBCA	Risk Based Corrective Action
SOW	Scope of Work
SWCAP	Statewide Allocation Plan
UST	Underground Storage Tank
VFC	Virtual File Cabinet

## RELIANCES & LIMITATIONS

We have prepared this report in conformity with its intended use by persons technically competent in the areas addressed and for the stated purposes only. Judgments as to conclusions, methods, and data contained in this report should be made only after studying the report in its entirety. Furthermore, we are available to explain any matter presented herein.

Throughout our analysis we have, without audit or verification, relied on historical data and qualitative information provided by IDEM. We reviewed this data for consistency across data elements. We believe the data to be reasonable and accurate. The accuracy of our results is dependent upon the accuracy and completeness of this underlying data. Therefore, any material discrepancies discovered in this data by IDEM or its auditor should be reported to us and this report amended accordingly, if warranted.

There is a limitation upon the accuracy of these estimates and projections in that there is an inherent uncertainty in any estimate of unpaid claims and financial projections. This uncertainty is due to the fact that the ultimate liability for claims is subject to the outcome of events yet to occur, e.g., the likelihood of claimants bringing suit, the size of awards, changes in the standards of liability, and the attitudes of claimants toward settlement of their claims. Also our financial projections are subject to a high degree of uncertainty because they require prediction of future economic, legal, and judicial conditions which are not knowable in advance. In our judgment, we have employed techniques and assumptions that are appropriate, and the conclusions presented herein are reasonable, given the information currently available. Specifically, the variability affecting unpaid claims is chiefly driven by future legislation in Indiana and regulatory standards affecting corrective action costs. The probability that actual future loss and loss expense payments may develop to levels well outside our estimates must be considered material.

A substantial source of uncertainty relates to the emergence of the COVID-19 pandemic and its ongoing impact. This uncertainty could impact the projection of unpaid claim estimates in several different ways including, but not limited to changes in claims handling and fuel consumption.

Further reliances and limitations are contained throughout the text, and in the exhibits accompanying the text. The exhibits should be considered an integral part of this report.

## Index of Exhibits – Actuarial Audit

<b>EXHIBIT</b>	<b>DESCRIPTION</b>
Exhibit 1.1	Cash Flow
Exhibit 1.2	Equity Balance
Exhibit 1.3	Historical Revenue
Exhibit 1.4	Future Revenue Excluding Interest
Exhibit 1.5	Expected Operating Costs
Exhibit 1.6	Expected Remediation Payments
Exhibit 1.7	Projected Paid by Incident Release Year (in 000s) – Future Incidents
Exhibit 2.1	Selected Ultimate – Future Incidents
Exhibit 2a.1	Ultimate Severity From Current Incidents
Exhibit 2a.2	Frequency Of Incidents Per Tank By Fiscal Year
Exhibit 2a.3	Projected Ultimate Incidents By Fiscal Year
Exhibit 2a.4	Selected Percent Of Open Incidents - Method #1
Exhibit 2a.5	Projected Percent Of Open Incidents By Fiscal Year From Future Incidents – Method #1
Exhibit 2a.6	Projected Open Number of Incidents By Fiscal Year From Future Incidents – Method #1
Exhibit 2a.7	Projected Severity By Fiscal Year From Future Incidents - Method #1
Exhibit 2a.8	Projected Paid (in 000s) By Fiscal Year From Future Incidents - Method #1
Exhibit 2b	Projected Ultimate Loss - Method #2
Exhibit 3.1	Projected Paid (in 000s) By Fiscal Year From Current Incidents
Exhibit 3.2	Payout Patterns
Exhibit 3.3	Data Summary
Exhibit 4.1	Selected Gross Ultimate – Current Incidents
Exhibit 4.2	Projected Ultimates - Paid Methods, Counts x Severity Method, Ratio Method, and B-F Method
Exhibit 4.3	Cumulative Gross Paid Amount (in 000s) Triangle
Exhibit 4.4	Cumulative Number of Incidents Triangle
Exhibit 4.5	Cumulative Gross Paid Severity Triangle
Exhibit 4.6	Cumulative Gross Requested Amount (in 000s) Triangle
Exhibit 4.7	Cumulative Gross Paid Amount to Cumulative Gross Requested Amount Ratio Triangle
Exhibit 4.8	Net / Gross Ratio
Exhibit 5.1	Average Severity Based on Open Incidents
Exhibit 5.2	Average Severity Based on All Incidents
Exhibit 5.3	Average Severity Based on Closed Incidents
Exhibit 6	Change in Fuel Consumption

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021  
Current and Future Incidents

Cash Flow

Fiscal Year	Expenses		Projected Revenue	Projected Investment Income	Projected Cash Balance
	Projected Fiscal Year Payment	Projected Administrative Costs			
	(1)	(2)	(3)	(4)	(5)
7/1/21 - 22 - 1H					135,434,324
7/1/21 - 22 - 2H	21,613,359	2,844,000	36,758,567	384,254	148,119,786
7/1/22 - 23	43,134,704	2,844,000	50,000,000	544,371	152,685,453
7/1/23 - 24	43,228,441	5,195,000	50,500,000	662,552	155,424,564
7/1/24 - 25	41,926,530	5,049,000	49,995,000	756,900	159,200,934
7/1/25 - 26	40,916,866	4,969,000	49,495,000	838,485	163,648,553
7/1/26 - 27	39,597,873	5,019,000	48,505,000	910,159	168,446,839
7/1/27 - 28	38,093,920	5,134,000	47,535,000	974,607	173,728,526
7/1/28 - 29	36,897,468	5,251,000	46,109,000	1,032,312	178,721,369
7/1/29 - 30	35,557,554	5,369,000	44,726,000	1,083,161	183,603,977
7/1/30 - 31	34,625,692	5,489,000	43,384,000	1,127,766	188,001,051
7/1/31 - 32	33,567,007	5,611,000	42,082,000	1,166,398	192,071,442

## Notes:

- (1) Exhibit 1.6 Col (3)  
(2) Exhibit 1.5, Column (9) Projected  
(3) Exhibit 1.4 Col (6)  
(4) {Average of Prior Col (5) and [Prior Col (5) - Col (1) - Col (2) + Col (3)]} x Exhibit 1.3 Col (7) Projected  
(5) Year 2022 - 1H = Client data (Financial Assurance Board Meeting)  
Years 2022 - 2H and Subsequent = Prior Col (5) + [Col (3) + Col (4) - {Col (1) + Col (2)}]

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021  
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Equity Balance

Fiscal Year	Projected Cash Balance	Projected Liability for Known & New Incidents	Projected Fiscal Year Payment	Projected Current Fiscal Year Payment	Projected "Equity" Balance
	(1)	(2)	(3)	(4)	(5)
7/1/21 - 22 - 1H	135,434,324	476,984,905			(341,550,581)
7/1/21 - 22 - 2H	148,119,786	19,337,659	21,613,359	1,589,752	(328,179,170)
7/1/22 - 23	152,685,453	35,835,278	43,134,704	2,925,396	(319,925,422)
7/1/23 - 24	155,424,564	35,918,749	43,228,441	2,932,210	(317,182,860)
7/1/24 - 25	159,200,934	35,443,516	41,926,530	2,893,415	(314,194,371)
7/1/25 - 26	163,648,553	35,337,007	40,916,866	2,884,720	(310,641,213)
7/1/26 - 27	168,446,839	35,768,790	39,597,873	2,919,969	(307,628,952)
7/1/27 - 28	173,728,526	35,007,984	38,093,920	2,857,860	(303,028,303)
7/1/28 - 29	178,721,369	34,902,651	36,897,468	2,849,262	(299,117,980)
7/1/29 - 30	183,603,977	34,801,142	35,557,554	2,840,975	(295,465,491)
7/1/30 - 31	188,001,051	34,703,437	34,625,692	2,832,999	(291,894,598)
7/1/31 - 32	192,071,442	34,609,517	33,567,007	2,825,332	(288,781,305)

## Notes:

- (1) Exhibit 1.1 Col (5)  
(2) Year 2022 - 1H = Exhibit 1.6 Col (1)  
Years 2022 - 2H and Subsequent = Exhibit 1.7.1  
(3) Exhibit 1.6 Col (3)  
(4) Exhibit 1.7 (Projected payments in fiscal year Y for releases reported in fiscal year Y.)  
(5) [Col (1) - Col (2)]+ [Col (3) - Col (4)] - Year 2022 - 1H Col (2)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021  
Current and Future Incidents

Historical Revenue

Fiscal Year	Beginning Balance	Interest Earned	Oil Inspection UST Tank Fee	Ded Share Fed Indirect Cost	Misc Revenue Cost	Grand Total	Yield
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
7/1/00 - 01	78,851,383	5,098,170	32,467,520	0	47,269	37,612,959	6.13%
7/1/01 - 02	87,576,026	2,288,894	24,306,586	0	53,839	26,649,319	2.93%
7/1/02 - 03	68,405,976	966,384	35,992,085	0	132,773	37,091,242	1.60%
7/1/03 - 04	52,047,982	556,968	32,065,103	0	92,428	32,714,499	1.41%
7/1/04 - 05	26,964,670	225,221	29,396,467	0	93,960	29,715,648	1.23%
7/1/05 - 06	9,714,291	242,314	50,454,451	0	89,506	50,786,271	2.04%
7/1/06 - 07	14,004,549	223,525	51,212,543	0	147,217	51,583,285	1.10%
7/1/07 - 08	26,506,903	530,807	52,990,697	3,553,972	67,832	57,143,308	1.56%
7/1/08 - 09	41,569,671	541,517	50,882,999	140,234	220,720	51,785,470	1.17%
7/1/09 - 10	51,267,163	89,507	48,091,366	27,602	25,439	48,233,914	0.17%
7/1/10 - 11	56,930,399	73,652	47,450,166	245,201	27,881	47,796,900	0.12%
7/1/11 - 12	64,011,599	56,352	49,237,490	1,459,623	1,362,167	52,115,632	0.08%
7/1/12 - 13	77,838,828	105,787	46,242,130	215,083	(9,160)	46,553,840	0.13%
7/1/13 - 14	81,027,951	90,516	51,203,441	1,175,633	0	52,469,590	0.11%
7/1/14 - 15	88,773,653	172,366	51,025,492	350,712	0	51,548,570	0.18%
7/1/15 - 16	101,616,494	320,293	50,281,583	1,084,924	0	51,686,800	0.30%
7/1/16 - 17	115,510,403	575,466	52,612,135	172,308	(12,807)	53,347,102	0.54%
7/1/17 - 18	95,919,102	965,348	46,147,013	0	0	47,112,361	1.06%
7/1/18 - 19	86,314,267	1,511,773	44,919,616	(14,158)	(3,172,459)	43,244,772	1.85%
7/1/19 - 20	77,124,493	1,538,073	43,321,743	0	0	44,859,816	1.80%
7/1/20 - 21	93,862,160	338,188	43,547,337	0	0	43,885,525	0.31%
7/1/21 - 22	121,594,814	182,137	27,814,071	0	0	27,996,208	0.15%
Total		16,693,258	961,662,034	8,411,134	(833,395)	985,933,031	

Averages Excluding Current Year

Last 10 Years	567,416	47,853,798	444,413	(183,226)	48,682,401	0.64%
Last 5 Years	985,770	46,109,569	31,630	(637,053)	46,489,915	1.11%

Projected

7/1/21 - 22 - 1H	23,276,650	0	0	0.15%
7/1/21 - 22 - 2H	36,758,567	0	0	0.27%
7/1/22 - 23	0	0	0.36%	
7/1/23 - 24	0	0	0.43%	
7/1/24 - 25	0	0	0.48%	
7/1/25 - 26	0	0	0.52%	
7/1/26 - 27	0	0	0.55%	
7/1/27 - 28	0	0	0.57%	
7/1/28 - 29	0	0	0.59%	
7/1/29 - 30	0	0	0.60%	
7/1/30 - 31	0	0	0.61%	
7/1/31 - 32	0	0	0.62%	

Notes:

- (1) - (5) Client Data
  - (6) Sum of Col (2) through (5)
  - (7) Col (-2) / Average Col (-1)
- Projected based on historical data

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021  
Current and Future Incidents

Future Revenue Excluding Interest

Fiscal Year	Estimated Gallons (in Thousands)	Change in Fuel Consumption	Inspection Fee Per Gallon	Indicated Inspection Fee Revenue	Other Revenue	Total Revenue
	(1)	(2)	(3)	(4)	(5)	(6)
7/1/21 - 22 - 2H	3,675,857		0.010	36,758,567	0	36,758,567
7/1/22 - 23	5,000,000	1.0%	0.010	50,000,000	0	50,000,000
7/1/23 - 24	5,050,000	-1.0%	0.010	50,500,000	0	50,500,000
7/1/24 - 25	4,999,500	-1.0%	0.010	49,995,000	0	49,995,000
7/1/25 - 26	4,949,505	-2.0%	0.010	49,495,050	0	49,495,050
7/1/26 - 27	4,850,515	-2.0%	0.010	48,505,149	0	48,505,000
7/1/27 - 28	4,753,505	-3.0%	0.010	47,535,046	0	47,535,000
7/1/28 - 29	4,610,899	-3.0%	0.010	46,108,995	0	46,109,000
7/1/29 - 30	4,472,572	-3.0%	0.010	44,725,725	0	44,726,000
7/1/30 - 31	4,338,395	-3.0%	0.010	43,383,953	0	43,384,000
7/1/31 - 32	4,208,243	-3.0%	0.010	42,082,434	0	42,082,000

Note:

- (1) FY 7/1/21 - 22 - 2H = Exhibit 1.3 Col (3) Projected / Current Gallon Fee of 0.010 per gallon / 1,000  
7/1/22 - 23 based on pre-COVID historical averages  
Subsequent = Prior Col (1) x [1 + Prior Col (2)]; 7/1/22 - 23 adjusted to full year
- (2) Exhibit 6, Page 5
- (3) Client Data
- (4) Col (1) x Col (3) x 1,000
- (5) Exhibit 1.3 Col (4) + Exhibit 1.3 Col (5)
- (6) Col (4) rounded + Col (5)



Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Current and Future Incidents

Expected Operating Costs

Fiscal Year	Personal Services	Utilities	Contractual	Supplies	Admin & Operating	Agency Wide Services	SWCAP	Federal Grant Support Services	Net Administrative Costs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7/1/00 - 01									3,973,854
7/1/01 - 02									9,504,210
7/1/02 - 03									10,243,766
7/1/03 - 04									6,168,963
7/1/04 - 05									5,583,506
7/1/05 - 06									6,076,372
7/1/06 - 07									6,426,701
7/1/07 - 08									6,083,817
7/1/08 - 09									5,382,869
7/1/09 - 10									5,267,438
7/1/10 - 11	1,511,475	28,469	181,206	6,389	10,680	2,943,404	51,832	0	4,733,455
7/1/11 - 12	2,054,455	27,606	175,185	3,633	9,225	2,632,654	63,243	0	4,966,001
7/1/12 - 13	2,103,012	25,551	0	11,667	57,766	2,544,183	76,492	0	4,818,671
7/1/13 - 14	2,419,934	36,867	0	6,108	1,281	2,882,453	101,034	0	5,447,677
7/1/14 - 15	2,634,650	34,132	2,499	6,121	4,311	83,394	0	0	2,765,107
7/1/15 - 16	2,531,533	40,876	700	12,096	14,737	0	94,396	516,470	3,210,808
7/1/16 - 17	2,949,208	47,310	39,152	6,121	134,243	0	119,978	516,470	3,812,482
7/1/17 - 18	3,701,408	50,461	11,471	5,765	179,063	0	156,642	339,532	4,444,342
7/1/18 - 19	3,793,356	53,518	1,277,823	1,592	134,336	0	115,099	339,532	5,715,256
7/1/19 - 20	3,076,165	60,242	109,281	672	202,672	0	177,025	338,813	3,964,870
7/1/20 - 21	2,810,046	62,385	498,832	3,443	205,021	0	176,943	333,923	4,090,593
7/1/21 - 22	2,350,519	55,319	884,579	5,666	54,667	0	0	332,932	3,683,682
Total	31,935,761	522,736	3,180,728	69,273	1,008,002	11,086,088	1,132,684	2,717,672	116,364,440
Averages Excluding Current Year									
Last 10 Years	2,807,377	43,895	211,494	5,722	94,266	814,268	108,085	238,474	4,323,581
Last 5 Years	3,266,037	54,783	387,312	3,519	171,067	0	149,137	373,654	4,405,509
Projected									
7/1/21 - 22 - 1H	1,814,958	42,715	683,029	4,375	42,211	0	0	257,074	2,844,000
7/1/21 - 22 - 2H	1,814,958	42,715	683,029	4,375	42,211	0	0	257,074	2,844,000
7/1/22 - 23	3,702,514	69,499	512,272	9,013	216,700	0	168,337	516,719	5,195,000
7/1/23 - 24	3,776,564	73,357	256,136	9,283	236,209	0	178,564	519,302	5,049,000
7/1/24 - 25	3,852,095	77,215	64,034	9,561	255,718	0	188,791	521,899	4,969,000
7/1/25 - 26	3,929,137	81,073	0	9,848	275,227	0	199,017	524,508	5,019,000
7/1/26 - 27	4,007,720	84,932	0	10,144	294,736	0	209,244	527,131	5,134,000
7/1/27 - 28	4,087,874	88,790	0	10,448	314,246	0	219,470	529,767	5,251,000
7/1/28 - 29	4,169,632	92,648	0	10,761	333,755	0	229,697	532,416	5,369,000
7/1/29 - 30	4,253,024	96,506	0	11,084	353,264	0	239,924	535,078	5,489,000
7/1/30 - 31	4,338,085	100,364	0	11,417	372,773	0	250,150	537,753	5,611,000
7/1/31 - 32	4,424,847	104,222	0	11,759	392,282	0	260,377	540,442	5,734,000

Notes:  
 (1) - (8) Client Data  
 (9) Sum of Col (1) through (8)  
 Projected based on historical data

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021  
Current and Future Incidents

Expected Remediation Payments

Payment Fiscal Year	Current Incidents	Future Incidents	Total Incidents
	(1)	(2)	(3)
7/1/21 - 22 - 2H	20,023,607	1,589,752	21,613,359
7/1/22 - 23	39,509,817	3,624,887	43,134,704
7/1/23 - 24	38,316,560	4,911,881	43,228,441
7/1/24 - 25	35,773,171	6,153,359	41,926,530
7/1/25 - 26	33,515,398	7,401,468	40,916,866
7/1/26 - 27	30,914,464	8,683,409	39,597,873
7/1/27 - 28	28,216,650	9,877,270	38,093,920
7/1/28 - 29	25,806,435	11,091,033	36,897,468
7/1/29 - 30	23,262,342	12,295,212	35,557,554
7/1/30 - 31	21,135,698	13,489,994	34,625,692
7/1/31 - 32	18,891,445	14,675,562	33,567,007
Subsequent	161,619,318	277,871,903	439,491,221
Total	476,984,905	371,665,729	848,650,634

Notes:

- (1) Exhibit 3.1
- (2) Exhibit 1.7
- (3) Col (1) + Col (2)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Selected  
 Projected Paid by Incident Release Year (in 000s)

Reported Release Fiscal Year	Unpaid Liability (in 000s)	Fiscal Year																
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2022	19,338	1,590	699	692	689	686	682	679	675	672	669	665	664	662	660	659	657	493
2023	35,835		2,925	1,287	1,281	1,274	1,268	1,262	1,255	1,249	1,243	1,237	1,233	1,230	1,227	1,224	1,221	1,221
2024	35,919			2,932	1,290	1,284	1,277	1,271	1,265	1,258	1,252	1,246	1,239	1,236	1,233	1,230	1,227	1,224
2025	35,444				2,893	1,273	1,267	1,260	1,254	1,248	1,242	1,235	1,229	1,223	1,220	1,217	1,214	1,211
2026	35,337					2,885	1,269	1,263	1,257	1,250	1,244	1,238	1,232	1,226	1,219	1,216	1,213	1,210
2027	35,769						2,920	1,285	1,278	1,272	1,266	1,259	1,253	1,247	1,240	1,234	1,231	1,228
2028	35,008							2,858	1,257	1,251	1,245	1,239	1,232	1,226	1,220	1,214	1,208	1,205
2029	34,903								2,849	1,254	1,247	1,241	1,235	1,229	1,223	1,217	1,210	1,204
2030	34,801									2,841	1,250	1,244	1,238	1,231	1,225	1,219	1,213	1,207
2031	34,703										2,833	1,247	1,240	1,234	1,228	1,222	1,216	1,210
2032	34,610											2,825	1,243	1,237	1,231	1,225	1,218	1,212
Total	371,666	1,590	3,625	4,912	6,153	7,401	8,683	9,877	11,091	12,295	13,490	14,676	13,039	12,982	12,927	12,877	12,829	12,626

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021  
Future Incidents

Selected Ultimate

Reported Release Fiscal Year	Indicated Ultimate		Weights		Selected Ultimate
	Method #1	Method #2	Method #1	Method #2	
	(1)	(2)	(3)	(4)	(5)
7/1/21 - 22 - 2H	20,067,850	17,147,086	75%	25%	19,337,659
7/1/22 - 23	37,541,862	31,853,250	70%	30%	35,835,278
7/1/23 - 24	38,018,130	32,019,900	65%	35%	35,918,749
7/1/24 - 25	37,939,392	31,699,701	60%	40%	35,443,516
7/1/25 - 26	37,867,543	31,541,202	60%	40%	35,337,007
7/1/26 - 27	38,375,314	31,859,004	60%	40%	35,768,790
7/1/27 - 28	38,316,258	31,699,709	50%	50%	35,007,984
7/1/28 - 29	38,264,091	31,541,210	50%	50%	34,902,651
7/1/29 - 30	38,218,779	31,383,504	50%	50%	34,801,142
7/1/30 - 31	38,180,286	31,226,587	50%	50%	34,703,437
7/1/31 - 32	38,148,580	31,070,454	50%	50%	34,609,517
Total	400,938,086	333,041,608			371,665,729

## Notes:

- (1) Exhibit 2a.8
- (2) Exhibit 2b
- (3) Judgment
- (4) 1 - Col (3)
- (5) Col (1) x Col (3) + Col (2) x Col (4)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents

Ultimate Severity From Current Incidents

Reported Release Fiscal Year	Method 1 - Selected Ultimate			Method 2 Paid Severity Development Method	Severity Trend Factor	Method 1 Trended Ult Loss Per Incident	Method 2 Trended Sev Dev Method
	Net Ultimate Amount	Ultimate Number of Incidents	Ultimate Paid Loss Per Incident				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
7/1/88 - 89	10,433,218	35	298,092	299,568	2.2589	673,345	676,679
7/1/89 - 90	43,878,668	147	298,494	300,870	2.2038	657,809	663,045
7/1/90 - 91	53,127,689	205	259,159	260,531	2.1500	557,195	560,143
7/1/91 - 92	44,443,860	183	242,863	244,796	2.0976	509,421	513,475
7/1/92 - 93	32,011,905	133	240,691	243,319	2.0464	492,552	497,929
7/1/93 - 94	46,165,624	157	294,049	296,142	1.9965	587,066	591,247
7/1/94 - 95	39,117,327	171	228,443	229,149	1.9478	444,960	446,337
7/1/95 - 96	27,055,198	118	228,333	231,314	1.9003	433,899	439,565
7/1/96 - 97	55,862,137	148	376,539	381,162	1.8539	698,082	706,653
7/1/97 - 98	66,430,491	168	395,745	400,840	1.8087	715,795	725,009
7/1/98 - 99	66,991,033	203	330,657	333,200	1.7646	583,480	587,968
7/1/99 - 00	46,201,719	120	385,308	388,196	1.7216	663,334	668,307
7/1/00 - 01	41,865,271	110	380,677	383,439	1.6796	639,379	644,018
7/1/01 - 02	45,803,477	108	422,252	425,511	1.6386	691,908	697,250
7/1/02 - 03	44,562,491	94	476,096	480,019	1.5987	761,112	767,383
7/1/03 - 04	29,316,891	88	333,964	336,875	1.5597	520,869	525,409
7/1/04 - 05	40,015,090	96	418,049	421,845	1.5216	636,111	641,886
7/1/05 - 06	38,515,861	129	298,099	301,466	1.4845	442,530	447,528
7/1/06 - 07	36,155,915	114	316,862	321,237	1.4483	458,911	465,246
7/1/07 - 08	33,886,380	108	312,434	317,711	1.4130	441,462	448,917
7/1/08 - 09	29,952,868	95	315,556	322,007	1.3785	434,997	443,890
7/1/09 - 10	24,909,758	90	276,345	282,974	1.3449	371,653	380,569
7/1/10 - 11	20,961,237	73	288,447	296,423	1.3121	378,467	388,933
7/1/11 - 12	28,139,001	50	559,180	577,351	1.2801	715,798	739,058
7/1/12 - 13	16,491,574	51	320,445	331,898	1.2489	400,192	414,496
7/1/13 - 14	26,084,232	66	394,333	409,231	1.2184	480,457	498,608
7/1/14 - 15	21,552,191	59	362,634	377,794	1.1887	431,058	449,078
7/1/15 - 16	17,404,474	56	308,120	321,841	1.1597	357,324	373,236
7/1/16 - 17	35,543,101	99	359,512	374,133	1.1314	406,755	423,297
7/1/17 - 18	54,810,938	72	756,067	246,726	1.1038	834,556	272,340
7/1/18 - 19	58,900,108	52	1,141,384	145,484	1.0769	1,229,146	156,670
7/1/19 - 20	47,965,780	56	852,067	270,000	1.0506	895,203	283,669
7/1/20 - 21	52,266,498	67	778,370	247,500	1.0250	797,829	253,688
7/1/21 - 22	54,111,770	69	781,046	225,000	1.0000	781,046	225,000
Total	1,330,933,774	3,593					
Averages Excluding Current Year							
Last 20 years	35,161,893		464,511	340,401		584,317	453,558
Last 10 years	35,915,790		583,211	330,196		654,832	386,414
Last 5 years	49,897,285		777,480	256,769		832,698	277,933
Exponential Trend Excluding Current Year							
Last 20 years			4.0%	-2.5%			
Last 10 years			11.2%	-8.9%			
Last 5 years			18.1%	-7.1%			

(8) Selected Lifetime Severity per Incident	495,000
(9) Average Lifetime of Payout	9.35
(10) Average Annual Severity per Incident	52,917
(11) Selected Average Annual Trend in Severity	Historical: 2.50%
	Prospective -1.00%
	25-26 & subsequent -0.50%

Notes:

- (1) Exhibit 3.3 Col (8)
- (2) Exhibit 4.2.2 Col (12)
- (3) Col (1) / Col (2)
- (4) Exhibit 4.2.2 Col (15) x Exhibit 4.8 , Col (4)
- (5) Row (11)
- (6) Col (3) x Col (5)
- (7) Col (4) x Col (5)
- (8) Selection based on averages in Col (3) and Col (4)
- (9) [Sum of the product of the time in years and payment totals in Exhibit 3.1] / Total payments in Exhibit 3.1
- (10) Row (8) / Row (9)
- (11) Selection based on trends in Col (3) and Col (4)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents

Frequency Of Incidents Per Site

Reported Release Fiscal Year	Ultimate Number of Incidents	Total Number of Active Tanks	Frequency Per Tank
	(1)	(2)	(3)
7/1/88 - 89	35	3,804	0.0092
7/1/89 - 90	147	4,420	0.0333
7/1/90 - 91	205	5,011	0.0409
7/1/91 - 92	183	5,492	0.0333
7/1/92 - 93	133	5,848	0.0227
7/1/93 - 94	157	6,213	0.0253
7/1/94 - 95	171	6,732	0.0254
7/1/95 - 96	118	7,186	0.0165
7/1/96 - 97	148	7,656	0.0194
7/1/97 - 98	168	8,149	0.0206
7/1/98 - 99	203	8,836	0.0229
7/1/99 - 00	120	9,199	0.0130
7/1/00 - 01	110	9,600	0.0115
7/1/01 - 02	108	9,910	0.0109
7/1/02 - 03	94	10,119	0.0092
7/1/03 - 04	88	10,291	0.0085
7/1/04 - 05	96	10,529	0.0091
7/1/05 - 06	129	10,803	0.0120
7/1/06 - 07	114	11,012	0.0104
7/1/07 - 08	108	11,163	0.0097
7/1/08 - 09	95	11,372	0.0083
7/1/09 - 10	90	11,504	0.0078
7/1/10 - 11	73	11,675	0.0062
7/1/11 - 12	50	11,886	0.0042
7/1/12 - 13	51	12,087	0.0043
7/1/13 - 14	66	12,310	0.0054
7/1/14 - 15	59	12,498	0.0048
7/1/15 - 16	56	12,711	0.0044
7/1/16 - 17	99	12,959	0.0076
7/1/17 - 18	72	13,261	0.0055
7/1/18 - 19	52	13,440	0.0038
7/1/19 - 20	56	13,524	0.0042
7/1/20 - 21	67	13,592	0.0049
7/1/21 - 22	69	13,593	0.0051
Total (2008 - 2022)	1,066	187,575	0.0057

Averages Excluding Current Year

Last 20 years	81	11,832	0.0069
Last 10 years	63	12,827	0.0049
Last 5 years	69	13,355	0.0052

Exponential Trend Excluding Current Year

Last 20 years	1.7%	-5.1%
Last 10 years	1.6%	0.3%
Last 5 years	1.2%	-10.8%

Projected Future Parameters

(4) Selected Number of Incidents	65
(5) Selected Number of Tanks	13,600
(6) Average Annual Frequency	0.0048
(7) Selected Average Annual Trend in Tanks	1.5%
(8) Selected Average Annual Trend in Frequency Per Tank	-1.0%

Notes:

(1)	Exhibit 2a.1 Col (2)	(5)	Selection based on Col (2)
(2)	Client Data	(6)	Row (4) / Row (5)
(3)	Col (1) / Col (2)	(7)	Selection based on trends in Col (2)
(4)	Selection based on Col (1)	(8)	Selection based on trends in Col (3)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021  
Future Incidents

Projected Ultimate Incidents

Reported Release Fiscal Year	Selected Frequency	Selected Frequency Trend	Projected Tanks	Selected Tanks Trend	Indicated Projected Incidents	Selected Projected Incidents
	(1)	(2)	(3)	(4)	(5)	(6)
7/1/21 - 22 - 2H						35
7/1/22 - 23	0.0048	-1.0%	13,600	1.5%	65	65
7/1/23 - 24	0.0048	-1.0%	13,804	1.5%	66	66
7/1/24 - 25	0.0047	-1.0%	14,011	1.5%	66	66
7/1/25 - 26	0.0047	-1.0%	14,221	1.5%	66	66
7/1/26 - 27	0.0046	-1.0%	14,435	1.0%	67	67
7/1/27 - 28	0.0046	-1.0%	14,579	1.0%	67	67
7/1/28 - 29	0.0045	-1.0%	14,725	1.0%	67	67
7/1/29 - 30	0.0045	-1.0%	14,872	1.0%	67	67
7/1/30 - 31	0.0044	-1.0%	15,021	1.0%	67	67
7/1/31 - 32	0.0044	-1.0%	15,171	1.0%	67	67

Notes:

- (1) Exhibit 2a.2 Row (6) for initial value. Subsequent values = Prior Col (1) x [1 + Prior Col (2)]
- (2) Exhibit 2a.2 Row (8) for initial value. Subsequent values = Selected
- (3) Exhibit 2a.2 Row (5) for initial value. Subsequent values = Prior Col (3) x Prior Col (4)
- (4) Exhibit 2a.2 Row (7) for initial value. Subsequent values = Selected
- (5) Col (1) x Col (3)
- (6) Exhibit 2a.2 Col (1) for initial value. Subsequent values = Based on Col (5)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Selected Percent Of Open Incidents

Reported Release Fiscal Year	Number of Incidents			Percent of Incidents Open	Number of Tanks			Percent of Tanks Active	Selected % Open
	Open	Closed	Total		Active	Closed	Total		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7/1/88 - 89	9	26	35	25.71%	3,804	38,963	42,767	8.89%	25.00%
7/1/89 - 90	41	106	147	27.89%	4,420	35,141	39,561	11.17%	25.00%
7/1/90 - 91	50	155	205	24.39%	5,011	31,610	36,621	13.68%	25.00%
7/1/91 - 92	40	143	183	21.86%	5,492	28,095	33,587	16.35%	25.00%
7/1/92 - 93	18	115	133	13.53%	5,848	25,265	31,113	18.80%	25.00%
7/1/93 - 94	28	129	157	17.83%	6,213	23,057	29,270	21.23%	25.00%
7/1/94 - 95	46	125	171	26.90%	6,732	21,204	27,936	24.10%	25.00%
7/1/95 - 96	35	83	118	29.66%	7,186	19,482	26,668	26.95%	25.00%
7/1/96 - 97	28	119	147	19.05%	7,656	18,003	25,659	29.84%	25.00%
7/1/97 - 98	37	129	166	22.29%	8,149	16,778	24,927	32.69%	25.00%
7/1/98 - 99	53	147	200	26.50%	8,836	14,970	23,806	37.12%	25.00%
7/1/99 - 00	30	88	118	25.42%	9,199	11,769	20,968	43.87%	25.00%
7/1/00 - 01	28	80	108	25.93%	9,600	10,897	20,497	46.84%	25.00%
7/1/01 - 02	28	78	106	26.42%	9,910	10,373	20,283	48.86%	25.00%
7/1/02 - 03	24	67	91	26.37%	10,119	9,958	20,077	50.40%	25.00%
7/1/03 - 04	27	58	85	31.76%	10,291	9,547	19,838	51.88%	30.00%
7/1/04 - 05	30	62	92	32.61%	10,529	9,095	19,624	53.65%	30.00%
7/1/05 - 06	25	98	123	20.33%	10,803	8,641	19,444	55.56%	30.00%
7/1/06 - 07	45	63	108	41.67%	11,012	8,268	19,280	57.12%	40.00%
7/1/07 - 08	41	61	102	40.20%	11,163	7,872	19,035	58.64%	40.00%
7/1/08 - 09	35	53	88	39.77%	11,372	7,516	18,888	60.21%	40.00%
7/1/09 - 10	41	41	82	50.00%	11,504	7,182	18,686	61.56%	40.00%
7/1/10 - 11	37	28	65	56.92%	11,675	6,862	18,537	62.98%	40.00%
7/1/11 - 12	14	30	44	31.82%	11,886	6,531	18,417	64.54%	40.00%
7/1/12 - 13	9	35	44	20.45%	12,087	6,259	18,346	65.88%	40.00%
7/1/13 - 14	15	40	55	27.27%	12,310	6,029	18,339	67.12%	40.00%
7/1/14 - 15	13	35	48	27.08%	12,498	5,786	18,284	68.35%	40.00%
7/1/15 - 16	15	29	44	34.09%	12,711	5,542	18,253	69.64%	40.00%
7/1/16 - 17	12	62	74	16.22%	12,959	5,264	18,223	71.11%	40.00%
7/1/17 - 18	20	32	52	38.46%	13,261	5,054	18,315	72.41%	40.00%
7/1/18 - 19	13	22	35	37.14%	13,440	4,846	18,286	73.50%	40.00%
7/1/19 - 20	13	22	35	37.14%	13,524	4,645	18,169	74.43%	40.00%
7/1/20 - 21	18	26	44	40.91%	13,592	4,593	18,185	74.74%	40.00%
7/1/21 - 22	9	1	10	90.00%	13,593	4,593	18,186	74.74%	90.00%
Total	927	2,388	3,315	27.96%	338,385	439,690	778,075	43.49%	

Notes:

- (1) Client Data
- (2) Client Data
- (3) Col (1) + Col (2)
- (4) Col (1) / Col (3)
- (5) Client Data
- (6) Client Data
- (7) Col (5) + Col (6)
- (8) Col (5) / Col (7)
- (9) Selection based on Col (4) and Col (8)



Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Percent Of Open Incidents

Reported Release Fiscal Year	Fiscal Year															
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2022	90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2023		90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2024			90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2025				90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2026					90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2027						90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2028							90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2029								90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2030									90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2031										90.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
2032											90.00%	40.00%	40.00%	40.00%	40.00%	40.00%

Source: Exhibit 2a.4 Col (9)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Percent Of Open Incidents

Reported Release Fiscal Year	Fiscal Year															
	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2022	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2023	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2024	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2025	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2026	40.00%	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2027	40.00%	40.00%	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2028	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2029	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2030	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%	25.00%
2031	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%	25.00%
2032	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	30.00%	30.00%	30.00%	25.00%	25.00%	25.00%

Source: Exhibit 2a.4 Col (9)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Percent Of Open Incidents

Reported Release Fiscal Year	Fiscal Year															
	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069
2022	25.00%	25.00%														
2023	25.00%	25.00%	25.00%													
2024	25.00%	25.00%	25.00%	25.00%												
2025	25.00%	25.00%	25.00%	25.00%	25.00%											
2026	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%										
2027	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%									
2028	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%								
2029	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%							
2030	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%						
2031	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%					
2032	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%				

Source: Exhibit 2a.4 Col (9)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Number of Open Incidents

Reported Release Fiscal Year	Fiscal Year															
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2022	31	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
2023		59	26	26	26	26	26	26	26	26	26	26	26	26	26	26
2024			59	26	26	26	26	26	26	26	26	26	26	26	26	26
2025				59	26	26	26	26	26	26	26	26	26	26	26	26
2026					59	26	26	26	26	26	26	26	26	26	26	26
2027						60	27	27	27	27	27	27	27	27	27	27
2028							60	27	27	27	27	27	27	27	27	27
2029								60	27	27	27	27	27	27	27	27
2030									60	27	27	27	27	27	27	27
2031										60	27	27	27	27	27	27
2032											60	27	27	27	27	27

Source: Exhibit 2a.5 x Exhibit 2a.3 Col (6)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Number of Open Incidents

Reported Release Fiscal Year	Fiscal Year															
	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2022	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9
2023	26	20	20	20	16	16	16	16	16	16	16	16	16	16	16	16
2024	26	26	20	20	20	17	17	17	17	17	17	17	17	17	17	17
2025	26	26	26	20	20	20	17	17	17	17	17	17	17	17	17	17
2026	26	26	26	26	20	20	20	17	17	17	17	17	17	17	17	17
2027	27	27	27	27	27	20	20	20	17	17	17	17	17	17	17	17
2028	27	27	27	27	27	27	20	20	20	17	17	17	17	17	17	17
2029	27	27	27	27	27	27	27	20	20	20	17	17	17	17	17	17
2030	27	27	27	27	27	27	27	27	20	20	20	17	17	17	17	17
2031	27	27	27	27	27	27	27	27	27	20	20	20	17	17	17	17
2032	27	27	27	27	27	27	27	27	27	27	20	20	20	17	17	17

Source: Exhibit 2a.5 x Exhibit 2a.3 Col (6)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Number of Open Incidents

Reported Release Fiscal Year	Fiscal Year															
	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069
2022	9	9														
2023	16	16	16													
2024	17	17	17	17												
2025	17	17	17	17	17											
2026	17	17	17	17	17	17										
2027	17	17	17	17	17	17	17									
2028	17	17	17	17	17	17	17	17								
2029	17	17	17	17	17	17	17	17	17							
2030	17	17	17	17	17	17	17	17	17	17						
2031	17	17	17	17	17	17	17	17	17	17	17					
2032	17	17	17	17	17	17	17	17	17	17	17	17				

Source: Exhibit 2a.5 x Exhibit 2a.3 Col (6)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Severity

Reported Release Fiscal Year	Fiscal Year															
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2022	52,917	52,388	51,864	51,605	51,347	51,090	50,835	50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2023		52,388	51,864	51,605	51,347	51,090	50,835	50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2024			51,864	51,605	51,347	51,090	50,835	50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2025				51,605	51,347	51,090	50,835	50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2026					51,347	51,090	50,835	50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2027						51,090	50,835	50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2028							50,835	50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2029								50,581	50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2030									50,328	50,076	49,826	49,701	49,577	49,453	49,329	49,206
2031										50,076	49,826	49,701	49,577	49,453	49,329	49,206
2032											49,826	49,701	49,577	49,453	49,329	49,206

Source: From Exhibit 2a.1 Row (10) and reflects annual trend selection from Exhibit 2a.1 Row (11) through 2024

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Severity

Reported Release Fiscal Year	Fiscal Year															
	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2022	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2023	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2024	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2025	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2026	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2027	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2028	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2029	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2030	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2031	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206
2032	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206

Source: From Exhibit 2a.1 Row (10) and reflects annual trend selection from Exhibit 2a.1 Row (11) through 2024



Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Severity

Reported Release Fiscal Year	Fiscal Year															
	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069
2022	49,206	49,206														
2023	49,206	49,206	49,206													
2024	49,206	49,206	49,206	49,206												
2025	49,206	49,206	49,206	49,206	49,206											
2026	49,206	49,206	49,206	49,206	49,206	49,206										
2027	49,206	49,206	49,206	49,206	49,206	49,206	49,206									
2028	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206								
2029	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206							
2030	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206						
2031	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206					
2032	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206	49,206				

Source: From Exhibit 2a.1 Row (10) and reflects annual trend selection from Exhibit 2a.1 Row (11) through 2024

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Paid (in 000s)

Reported Release Fiscal Year	Liability at 12/21/2021 (in 000s)	Fiscal Year															
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2022	20,068	1,650	726	719	715	711	708	704	701	697	694	690	689	687	685	684	682
2023	37,542		3,065	1,348	1,342	1,335	1,328	1,322	1,315	1,309	1,302	1,295	1,292	1,289	1,286	1,283	1,279
2024	38,018			3,081	1,362	1,356	1,349	1,342	1,335	1,329	1,322	1,315	1,312	1,309	1,306	1,302	1,299
2025	37,939				3,065	1,356	1,349	1,342	1,335	1,329	1,322	1,315	1,312	1,309	1,306	1,302	1,299
2026	37,868					3,050	1,349	1,342	1,335	1,329	1,322	1,315	1,312	1,309	1,306	1,302	1,299
2027	38,375						3,081	1,362	1,356	1,349	1,342	1,335	1,332	1,329	1,325	1,322	1,319
2028	38,316							3,065	1,356	1,349	1,342	1,335	1,332	1,329	1,325	1,322	1,319
2029	38,264								3,050	1,349	1,342	1,335	1,332	1,329	1,325	1,322	1,319
2030	38,219									3,035	1,342	1,335	1,332	1,329	1,325	1,322	1,319
2031	38,180										3,020	1,335	1,332	1,329	1,325	1,322	1,319
2032	38,149											3,004	1,332	1,329	1,325	1,322	1,319
<b>Total</b>	<b>400,938</b>	<b>1,650</b>	<b>3,791</b>	<b>5,148</b>	<b>6,484</b>	<b>7,808</b>	<b>9,163</b>	<b>10,480</b>	<b>11,783</b>	<b>13,073</b>	<b>14,350</b>	<b>15,613</b>	<b>13,909</b>	<b>13,874</b>	<b>13,840</b>	<b>13,805</b>	<b>13,771</b>

Source: [Exhibit 2a.6 x Exhibit 2a.7] / 1,000

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Paid (in 000s)

Reported Release Fiscal Year	Fiscal Year															
	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2022	511	511	511	426	426	426	426	426	426	426	426	426	426	426	426	426
2023	1,279	960	960	960	800	800	800	800	800	800	800	800	800	800	800	800
2024	1,299	1,299	974	974	974	812	812	812	812	812	812	812	812	812	812	812
2025	1,299	1,299	1,299	974	974	974	812	812	812	812	812	812	812	812	812	812
2026	1,299	1,299	1,299	1,299	974	974	974	812	812	812	812	812	812	812	812	812
2027	1,319	1,319	1,319	1,319	1,319	989	989	989	824	824	824	824	824	824	824	824
2028	1,319	1,319	1,319	1,319	1,319	1,319	989	989	824	824	824	824	824	824	824	824
2029	1,319	1,319	1,319	1,319	1,319	1,319	1,319	989	989	989	824	824	824	824	824	824
2030	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319	989	989	989	824	824	824	824	824
2031	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319	989	989	989	824	824	824	824
2032	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319	1,319	989	989	989	824	824	824
Total	13,600	13,280	12,956	12,546	12,061	11,569	11,077	10,585	10,090	9,596	9,101	8,936	8,771	8,607	8,607	8,607

Source: [Exhibit 2a.6 x Exhibit 2a.7] / 1,000

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #1  
 Projected Paid (in 000s)

Reported Release Fiscal Year	Fiscal Year															
	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069
2022	426	426														
2023	800	800	800													
2024	812	812	812	812												
2025	812	812	812	812	812											
2026	812	812	812	812	812	812										
2027	824	824	824	824	824	824	824									
2028	824	824	824	824	824	824	824	824								
2029	824	824	824	824	824	824	824	824	824							
2030	824	824	824	824	824	824	824	824	824	824						
2031	824	824	824	824	824	824	824	824	824	824	824					
2032	824	824	824	824	824	824	824	824	824	824	824	824				
Total	8,607	8,607	8,181	7,381	6,569	5,757	4,945	4,121	3,297	2,473	1,648	824	0	0	0	0

Source: [Exhibit 2a.6 x Exhibit 2a.7] / 1,000

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021  
 Future Incidents  
 Method #2  
 Projected Ultimate Loss

Reported Release Fiscal Year	Trended Projected Severity	Trended Projected Incidents	Trended Ultimate Loss
	(1)	(2)	(3)
7/1/21 - 22 - 2H	495,000	35	17,147,086
7/1/22 - 23	490,050	65	31,853,250
7/1/23 - 24	485,150	66	32,019,900
7/1/24 - 25	480,299	66	31,699,701
7/1/25 - 26	477,897	66	31,541,202
7/1/26 - 27	475,508	67	31,859,004
7/1/27 - 28	473,130	67	31,699,709
7/1/28 - 29	470,764	67	31,541,210
7/1/29 - 30	468,411	67	31,383,504
7/1/30 - 31	466,068	67	31,226,587
7/1/31 - 32	463,738	67	31,070,454
Total		700	333,041,608

## Notes:

- (1) Exhibit 2a.1 Row (8) and reflects a -1.00% annual trend selected in Exhibit 2a.1 Row (11) through 7/1/24 - 25 then an annual trend of -0.50%
- (2) Exhibit 2a.3, Col (6)
- (3) Col (1) x Col (2)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Projected Paid (in 000s)

Reported Release Fiscal Year	Liability From Exhibit 3.3 Col (9) (in 000s)	Fiscal Year															
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1989	101	0	101														
1990	740	62	62	617													
1991	545	80	112	32	321												
1992	976	110	221	155	44	446											
1993	1,055	98	195	194	136	39	392										
1994	1,308	217	299	162	161	113	32	324									
1995	2,379	319	608	398	215	214	150	43	432								
1996	1,762	129	330	384	251	136	135	95	27	273							
1997	4,434	412	677	677	787	515	279	277	195	56	559						
1998	6,231	564	1,039	779	779	906	593	321	319	224	64	644					
1999	8,706	791	1,436	1,188	891	891	1,036	678	367	365	256	73	736				
2000	6,543	578	1,067	889	735	551	551	641	419	227	226	159	45	455			
2001	7,388	542	1,098	1,028	856	708	531	531	617	404	219	217	153	44	439		
2002	8,970	606	1,175	1,153	1,079	899	744	558	558	648	424	230	228	160	46	461	
2003	9,598	518	1,097	1,121	1,101	1,030	858	710	532	532	619	405	219	218	153	44	440
2004	7,754	418	791	790	808	794	743	619	512	384	384	446	292	158	157	110	32
2005	10,734	445	975	1,005	1,004	1,026	1,007	943	785	650	487	487	566	371	201	199	140
2006	12,530	547	1,020	1,039	1,070	1,069	1,093	1,073	1,005	837	692	519	519	603	395	214	212
2007	12,173	429	922	921	938	967	966	987	969	907	756	625	469	469	545	357	193
2008	12,125	463	858	849	848	863	889	888	908	892	835	695	575	431	431	501	328
2009	11,638	418	831	764	756	755	769	792	791	809	794	744	619	512	384	384	447
2010	10,578	463	809	689	634	627	626	638	657	656	671	659	617	514	425	319	319
2011	9,588	395	780	673	573	527	522	521	530	546	546	558	548	513	427	353	265
2012	13,967	596	1,122	1,040	897	763	702	695	694	707	728	727	744	730	683	569	471
2013	9,173	398	755	673	624	538	458	421	417	416	424	437	436	446	438	410	341
2014	15,365	648	1,258	1,158	1,032	956	825	702	646	639	639	650	670	669	684	672	629
2015	14,184	619	1,165	1,060	976	870	806	695	592	545	539	538	548	564	564	577	566
2016	12,530	508	1,010	946	860	792	706	654	564	480	442	437	437	445	458	458	468
2017	26,776	1,072	2,070	1,986	1,859	1,691	1,557	1,388	1,286	1,110	944	869	860	859	874	901	900
2018	51,827	1,949	3,867	3,705	3,555	3,327	3,028	2,787	2,485	2,302	1,986	1,690	1,555	1,539	1,537	1,565	1,612
2019	58,202	2,230	4,251	4,010	3,842	3,686	3,450	3,140	2,890	2,577	2,387	2,060	1,753	1,613	1,596	1,594	1,623
2020	47,784	1,562	3,273	3,262	3,077	2,948	2,829	2,647	2,409	2,218	1,977	1,832	1,580	1,345	1,238	1,224	1,223
2021	52,266	1,556	3,163	3,367	3,356	3,165	3,033	2,910	2,723	2,478	2,281	2,034	1,884	1,626	1,384	1,273	1,260
2022	27,056	284	1,073	1,603	1,706	1,701	1,604	1,537	1,475	1,380	1,256	1,156	1,031	955	824	701	645
Total	476,985	20,024	39,510	38,317	35,773	33,515	30,914	28,217	25,806	23,262	21,136	18,891	17,085	15,239	13,883	12,886	12,113

Source: Exhibit 3.3 Col (9) x Exhibit 3.2

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Projected Paid (in 000s)

Reported Release Fiscal Year	Fiscal Year															
	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
1989																
1990																
1991																
1992																
1993																
1994																
1995																
1996																
1997																
1998																
1999																
2000																
2001																
2002																
2003																
2004	317															
2005	40	403														
2006	149	43	429													
2007	192	135	39	387												
2008	178	176	124	36	356											
2009	292	158	157	110	32	317										
2010	370	242	131	130	92	26	263									
2011	265	308	202	109	108	76	22	219								
2012	353	353	411	269	145	145	102	29	292							
2013	282	212	212	246	161	87	87	61	17	175						
2014	524	433	325	325	378	247	134	133	93	27	268					
2015	530	441	365	274	274	318	208	113	112	79	23	226				
2016	459	430	358	296	222	222	258	169	91	91	64	18	184			
2017	920	903	845	704	583	437	437	508	332	180	179	126	36	361		
2018	1,611	1,647	1,617	1,513	1,260	1,043	782	782	909	595	322	320	225	64	646	
2019	1,672	1,670	1,708	1,677	1,569	1,307	1,081	811	811	943	617	334	332	233	67	670
2020	1,245	1,283	1,282	1,311	1,287	1,204	1,003	830	622	622	723	473	256	255	179	51
2021	1,258	1,281	1,320	1,318	1,348	1,323	1,239	1,032	854	640	640	744	487	263	262	184
2022	638	638	649	669	668	683	671	628	523	433	324	324	377	247	134	133
Total	11,297	10,757	10,173	9,374	8,483	7,437	6,286	5,313	4,657	3,783	3,160	2,565	1,896	1,423	1,287	1,038

Source: Exhibit 3.3 Col (9) x Exhibit 3.2

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021

Projected Paid (in 000s)

Reported Release Fiscal Year	Fiscal Year		
	2054	2055	2056
1989			
1990			
1991			
1992			
1993			
1994			
1995			
1996			
1997			
1998			
1999			
2000			
2001			
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020	514		
2021	53	529	
2022	93	27	268
Total	660	556	268

Source: Exhibit 3.3 Col (9) x Exhibit 3.2



Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021

Payout Patterns

Reported Release Fiscal Year	Fiscal Year															
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1989	0.00%	100.00%														
1990	8.32%	8.32%	83.36%													
1991	14.64%	20.52%	5.88%	58.96%												
1992	11.28%	22.61%	15.89%	4.56%	45.66%											
1993	9.33%	18.50%	18.39%	12.93%	3.71%	37.14%										
1994	16.61%	22.84%	12.36%	12.29%	8.63%	2.48%	24.81%									
1995	13.39%	25.55%	16.72%	9.05%	8.99%	6.32%	1.81%	18.16%								
1996	7.33%	18.76%	21.81%	14.27%	7.72%	7.68%	5.39%	1.55%	15.50%							
1997	9.30%	15.27%	15.27%	17.75%	11.61%	6.29%	6.25%	4.39%	1.26%	12.62%						
1998	9.06%	16.67%	12.50%	12.50%	14.53%	9.51%	5.15%	5.12%	3.60%	1.03%	10.33%					
1999	9.08%	16.49%	13.65%	10.23%	10.23%	11.89%	7.78%	4.21%	4.19%	2.94%	0.84%	8.45%				
2000	8.83%	16.31%	13.58%	11.24%	8.42%	8.42%	9.79%	6.41%	3.47%	3.45%	2.42%	0.69%	6.96%			
2001	7.33%	14.87%	13.92%	11.59%	9.59%	7.19%	7.19%	8.36%	5.47%	2.96%	2.94%	2.07%	0.59%	5.94%		
2002	6.76%	13.10%	12.86%	12.03%	10.02%	8.29%	6.22%	6.22%	7.23%	4.73%	2.56%	2.54%	1.79%	0.51%	5.14%	
2003	5.40%	11.43%	11.68%	11.47%	10.74%	8.94%	7.40%	5.55%	5.55%	6.45%	4.22%	2.28%	2.27%	1.60%	0.46%	4.58%
2004	5.39%	10.21%	10.19%	10.43%	10.23%	9.58%	7.98%	6.60%	4.95%	4.95%	5.75%	3.76%	2.04%	2.03%	1.42%	0.41%
2005	4.14%	9.09%	9.36%	9.35%	9.56%	9.39%	8.78%	7.32%	6.05%	4.54%	4.54%	5.28%	3.45%	1.87%	1.86%	1.31%
2006	4.36%	8.14%	8.29%	8.54%	8.53%	8.73%	8.57%	8.02%	6.68%	5.53%	4.14%	4.14%	4.82%	3.15%	1.71%	1.70%
2007	3.52%	7.58%	7.57%	7.71%	7.94%	7.93%	8.11%	7.96%	7.45%	6.21%	5.14%	3.85%	3.85%	4.48%	2.93%	1.59%
2008	3.82%	7.08%	7.00%	6.99%	7.12%	7.33%	7.33%	7.49%	7.35%	6.88%	5.73%	4.74%	3.56%	3.56%	4.13%	2.71%
2009	3.59%	7.14%	6.57%	6.50%	6.49%	6.61%	6.81%	6.80%	6.95%	6.83%	6.39%	5.32%	4.40%	3.30%	3.30%	3.84%
2010	4.37%	7.65%	6.51%	5.99%	5.93%	5.92%	6.03%	6.21%	6.20%	6.35%	6.23%	5.83%	4.86%	4.02%	3.01%	3.01%
2011	4.12%	8.14%	7.02%	5.98%	5.50%	5.44%	5.43%	5.53%	5.70%	5.69%	5.82%	5.72%	5.35%	4.46%	3.69%	2.76%
2012	4.26%	8.04%	7.44%	6.42%	5.47%	5.03%	4.98%	4.97%	5.06%	5.21%	5.21%	5.33%	5.23%	4.89%	4.08%	3.37%
2013	4.34%	8.23%	7.34%	6.80%	5.87%	4.99%	4.59%	4.54%	4.54%	4.62%	4.76%	4.76%	4.86%	4.77%	4.47%	3.72%
2014	4.22%	8.19%	7.54%	6.72%	6.22%	5.37%	4.57%	4.21%	4.16%	4.16%	4.23%	4.36%	4.35%	4.45%	4.37%	4.09%
2015	4.36%	8.21%	7.47%	6.88%	6.13%	5.68%	4.90%	4.17%	3.84%	3.80%	3.79%	3.86%	3.98%	3.97%	4.07%	3.99%
2016	4.05%	8.06%	7.55%	6.87%	6.32%	5.64%	5.22%	4.50%	3.83%	3.53%	3.49%	3.49%	3.55%	3.66%	3.65%	3.74%
2017	4.00%	7.73%	7.42%	6.94%	6.32%	5.82%	5.18%	4.80%	4.14%	3.53%	3.25%	3.21%	3.21%	3.27%	3.36%	3.36%
2018	3.76%	7.46%	7.15%	6.86%	6.42%	5.84%	5.38%	4.79%	4.44%	3.83%	3.26%	3.00%	2.97%	2.97%	3.02%	3.11%
2019	3.83%	7.30%	6.89%	6.60%	6.33%	5.93%	5.39%	4.97%	4.43%	4.10%	3.54%	3.01%	2.77%	2.74%	2.74%	2.79%
2020	3.27%	6.85%	6.83%	6.44%	6.17%	5.92%	5.54%	5.04%	4.64%	4.14%	3.83%	3.31%	2.81%	2.59%	2.56%	2.56%
2021	2.98%	6.05%	6.44%	6.42%	6.06%	5.80%	5.57%	5.21%	4.74%	4.36%	3.89%	3.60%	3.11%	2.65%	2.44%	2.41%
2022	1.05%	3.97%	5.92%	6.31%	6.29%	5.93%	5.68%	5.45%	5.10%	4.64%	4.27%	3.81%	3.53%	3.05%	2.59%	2.38%

Source: Exhibit 4.2.1 Col (2)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Payout Patterns

Reported Release Fiscal Year	Fiscal Year															
	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
1989																
1990																
1991																
1992																
1993																
1994																
1995																
1996																
1997																
1998																
1999																
2000																
2001																
2002																
2003																
2004	4.09%															
2005	0.37%	3.75%														
2006	1.19%	0.34%	3.42%													
2007	1.58%	1.11%	0.32%	3.18%												
2008	1.46%	1.46%	1.02%	0.29%	2.94%											
2009	2.51%	1.36%	1.35%	0.95%	0.27%	2.73%										
2010	3.50%	2.29%	1.24%	1.23%	0.87%	0.25%	2.49%									
2011	2.76%	3.21%	2.10%	1.14%	1.13%	0.79%	0.23%	2.28%								
2012	2.53%	2.53%	2.94%	1.92%	1.04%	1.03%	0.73%	0.21%	2.09%							
2013	3.08%	2.31%	2.31%	2.68%	1.76%	0.95%	0.94%	0.66%	0.19%	1.91%						
2014	3.41%	2.82%	2.11%	2.11%	2.46%	1.61%	0.87%	0.87%	0.61%	0.17%	1.75%					
2015	3.73%	3.11%	2.57%	1.93%	1.93%	2.24%	1.47%	0.79%	0.79%	0.55%	0.16%	1.59%				
2016	3.67%	3.43%	2.86%	2.37%	1.77%	1.77%	2.06%	1.35%	0.73%	0.73%	0.51%	0.15%	1.47%			
2017	3.44%	3.37%	3.16%	2.63%	2.18%	1.63%	1.63%	1.90%	1.24%	0.67%	0.67%	0.47%	0.13%	1.35%		
2018	3.11%	3.18%	3.12%	2.92%	2.43%	2.01%	1.51%	1.51%	1.75%	1.15%	0.62%	0.62%	0.43%	0.12%	1.25%	
2019	2.87%	2.87%	2.93%	2.88%	2.70%	2.25%	1.86%	1.39%	1.39%	1.62%	1.06%	0.57%	0.57%	0.40%	0.11%	1.15%
2020	2.61%	2.69%	2.68%	2.74%	2.69%	2.52%	2.10%	1.74%	1.30%	1.30%	1.51%	0.99%	0.54%	0.53%	0.37%	0.11%
2021	2.41%	2.45%	2.53%	2.52%	2.58%	2.53%	2.37%	1.97%	1.63%	1.22%	1.22%	1.42%	0.93%	0.50%	0.50%	0.35%
2022	2.36%	2.36%	2.40%	2.47%	2.47%	2.53%	2.48%	2.32%	1.93%	1.60%	1.20%	1.20%	1.39%	0.91%	0.49%	0.49%

Source: Exhibit 4.2.1 Col (2)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
 Analysis as of 12/21/2021

Payout Patterns

Reported Release Fiscal Year	2054	2055	2056
1989			
1990			
1991			
1992			
1993			
1994			
1995			
1996			
1997			
1998			
1999			
2000			
2001			
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020	1.08%		
2021	0.10%	1.01%	
2022	0.34%	0.10%	0.99%

Source: Exhibit 4.2.1 Col (2)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Data Summary

Reported Release Fiscal Year	Total Gross Amounts					Total Net Amounts			
	Requested	Paid	Requested - Paid	Unpaid Liability	Unpaid Liability Ratio	Paid	Selected Deductible Factor	Selected Ultimate	Unpaid Liability
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7/1/88 - 89	16,973,379	11,167,480	5,805,899	111,675	0.0	10,332,480	0.925	10,433,218	100,738
7/1/89 - 90	79,126,163	46,872,985	32,253,179	563,413	0.0	43,138,718	0.925	43,878,668	739,950
7/1/90 - 91	92,745,417	57,885,869	34,859,548	1,144,897	0.0	52,582,581	0.900	53,127,689	545,109
7/1/91 - 92	77,671,448	48,311,224	29,360,223	1,070,842	0.0	43,467,980	0.900	44,443,860	975,880
7/1/92 - 93	55,458,660	34,620,570	20,838,089	948,213	0.0	30,957,255	0.900	32,011,905	1,054,649
7/1/93 - 94	76,043,324	49,247,694	26,795,631	2,047,444	0.1	44,857,694	0.900	46,165,624	1,307,930
7/1/94 - 95	67,107,157	41,094,082	26,013,075	2,369,614	0.1	36,738,596	0.900	39,117,327	2,378,731
7/1/95 - 96	42,219,744	28,140,995	14,078,748	1,920,336	0.1	25,293,663	0.900	27,055,198	1,761,535
7/1/96 - 97	80,030,543	55,651,819	24,378,724	4,739,680	0.2	51,427,949	0.925	55,862,137	4,434,188
7/1/97 - 98	88,313,673	64,933,528	23,380,145	6,883,219	0.3	60,199,200	0.925	66,430,491	6,231,291
7/1/98 - 99	90,624,541	63,513,213	27,111,328	8,909,526	0.3	58,285,078	0.925	66,991,033	8,705,955
7/1/99 - 00	58,844,879	42,556,002	16,288,878	7,391,803	0.5	39,658,981	0.925	46,201,719	6,542,738
7/1/00 - 01	50,657,194	37,442,402	13,214,792	7,817,350	0.6	34,477,565	0.925	41,865,271	7,387,706
7/1/01 - 02	56,298,611	39,653,298	16,645,313	9,863,974	0.6	36,833,763	0.925	45,803,477	8,969,714
7/1/02 - 03	48,611,044	37,442,717	11,168,326	10,732,949	1.0	34,964,467	0.925	44,562,491	9,598,024
7/1/03 - 04	34,940,352	23,783,954	11,156,399	7,909,983	0.7	21,562,430	0.925	29,316,891	7,754,461
7/1/04 - 05	42,220,777	31,482,927	10,737,849	11,776,630	1.1	29,280,860	0.925	40,015,090	10,734,230
7/1/05 - 06	38,207,080	29,111,550	9,095,529	12,527,218	1.4	25,986,110	0.925	38,515,861	12,529,751
7/1/06 - 07	39,280,090	26,281,998	12,998,091	12,805,477	1.0	23,983,355	0.925	36,155,915	12,172,559
7/1/07 - 08	30,565,303	23,520,556	7,044,747	13,113,368	1.9	21,761,498	0.925	33,886,380	12,124,881
7/1/08 - 09	27,917,380	19,779,208	8,138,172	12,602,271	1.5	18,314,368	0.925	29,952,868	11,638,500
7/1/09 - 10	20,611,877	15,511,531	5,100,346	11,417,937	2.2	14,331,913	0.925	24,909,758	10,577,845
7/1/10 - 11	15,869,051	12,260,469	3,608,582	10,400,327	2.9	11,373,552	0.925	20,961,237	9,587,685
7/1/11 - 12	18,782,771	15,227,003	3,555,768	15,193,538	4.3	14,172,003	0.925	28,139,001	13,966,998
7/1/12 - 13	11,478,312	8,358,259	3,120,054	9,965,712	3.2	7,318,825	0.900	16,491,574	9,172,748
7/1/13 - 14	15,718,223	11,853,171	3,865,053	17,129,310	4.4	10,718,779	0.900	26,084,232	15,365,453
7/1/14 - 15	10,731,470	8,493,035	2,238,435	15,453,844	6.9	7,368,035	0.900	21,552,191	14,184,156
7/1/15 - 16	7,600,755	5,842,757	1,757,998	13,495,547	7.7	4,874,153	0.900	17,404,474	12,530,321
7/1/16 - 17	11,985,916	9,752,766	2,233,150	29,739,569	13.3	8,767,553	0.900	35,543,101	26,775,548
7/1/17 - 18	5,852,306	3,648,110	2,204,196	57,252,932	26.0	2,983,748	0.900	54,810,938	51,827,190
7/1/18 - 19	2,738,389	1,032,154	1,706,234	64,412,410	37.8	698,132	0.900	58,900,108	58,201,976
7/1/19 - 20	988,802	417,637	571,165	52,877,674	92.6	181,699	0.900	47,965,780	47,784,080
7/1/20 - 21	553,772	16,602	537,169	58,057,285	108.1	0	0.900	52,266,498	52,266,498
7/1/21 - 22	167,436	0	167,436	30,062,094	179.5	0	0.900	54,111,770	27,055,885
Total	1,316,935,838	904,907,566	412,028,272	522,708,061	1.3	826,892,984		1,330,933,774	476,984,905

Notes:

- (1) Exhibit 4.2.3 Col (17)
- (2) Exhibit 4.2.1 Col (1)
- (3) Col (1) - Col (2)
- (4) Exhibit 4.1 Col (9)
- (5) Col (4) / Col (3)
- (6) Exhibit 4.8 Col (2)
- (7) Exhibit 4.8 Col (4)
- (8) Exhibit 4.1 Col (7) x Col (7)
- (9) Col (8) - Col (6). Current Fiscal Year = [Col (8) / 2] - Col (6) to reflect mid year evaluation date.

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Selected Gross Ultimate

Reported Release Fiscal Year	Ultimate Paid Methods		Ultimate Ratio Method	Ultimate BF Method	Ultimate Amounts		Ultimate Amount Selection	Total Paid Amount	Total Gross Liability
	Loss Development	Counts x Severity			Minimum	Maximum			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7/1/88 - 89	11,279,155	11,334,992	11,279,155	11,279,155	11,279,155	11,334,992	11,279,155	11,167,480	111,675
7/1/89 - 90	47,436,398	47,813,960	47,483,740	47,436,398	47,436,398	47,813,960	47,436,398	46,872,985	563,413
7/1/90 - 91	58,874,565	59,343,167	58,816,042	58,874,565	58,816,042	59,343,167	59,030,766	57,885,869	1,144,897
7/1/91 - 92	49,382,067	49,775,115	49,332,980	49,382,067	49,332,980	49,775,115	49,382,067	48,311,224	1,070,842
7/1/92 - 93	35,568,783	35,957,082	35,554,032	35,568,783	35,554,032	35,957,082	35,568,783	34,620,570	948,213
7/1/93 - 94	51,295,138	51,660,368	51,113,619	51,295,138	51,113,619	51,660,368	51,295,138	49,247,694	2,047,444
7/1/94 - 95	43,463,697	43,598,185	43,321,977	43,463,697	43,321,977	43,598,185	43,463,697	41,094,082	2,369,614
7/1/95 - 96	30,061,331	30,453,917	30,217,483	30,061,331	30,061,331	30,453,917	30,061,331	28,140,995	1,920,336
7/1/96 - 97	60,391,499	61,132,981	60,718,070	60,391,499	60,391,499	61,132,981	60,391,499	55,651,819	4,739,680
7/1/97 - 98	71,816,747	72,741,187	72,254,156	71,816,747	71,816,747	72,741,187	71,816,747	64,933,528	6,883,219
7/1/98 - 99	71,938,173	72,979,766	72,350,278	67,031,785	67,031,785	72,979,766	72,422,739	63,513,213	8,909,526
7/1/99 - 00	49,612,325	50,322,248	49,908,840	47,115,906	47,115,906	50,322,248	49,947,804	42,556,002	7,391,803
7/1/00 - 01	44,931,211	45,588,132	45,259,914	43,158,320	43,158,320	45,588,132	45,259,752	37,442,402	7,817,350
7/1/01 - 02	49,119,319	49,899,567	49,532,930	46,646,285	46,646,285	49,899,567	49,517,272	39,653,298	9,863,974
7/1/02 - 03	47,760,894	48,572,601	48,193,502	45,647,478	45,647,478	48,572,601	48,175,666	37,442,717	10,732,949
7/1/03 - 04	31,382,917	31,970,190	31,728,702	33,370,017	31,382,917	33,370,017	31,693,936	23,783,954	7,909,983
7/1/04 - 05	42,776,556	43,652,349	43,349,767	42,444,184	42,444,184	43,652,349	43,259,557	31,482,927	11,776,630
7/1/05 - 06	40,958,704	42,109,037	41,848,564	41,740,918	40,958,704	42,109,037	41,638,768	29,111,550	12,527,218
7/1/06 - 07	38,155,066	39,627,106	39,480,253	40,478,137	38,155,066	40,478,137	39,087,475	26,281,998	12,805,477
7/1/07 - 08	35,471,742	37,252,634	37,177,396	39,491,351	35,471,742	39,491,351	36,633,924	23,520,556	13,113,368
7/1/08 - 09	31,050,188	33,043,453	33,050,794	37,746,197	31,050,188	37,746,197	32,381,478	19,779,208	12,602,271
7/1/09 - 10	25,758,079	27,575,446	27,454,880	35,927,868	25,758,079	35,927,868	26,929,468	15,511,531	11,417,937
7/1/10 - 11	21,644,214	23,287,414	23,050,762	35,406,684	21,644,214	35,406,684	22,660,797	12,260,469	10,400,327
7/1/11 - 12	28,946,814	31,409,035	30,905,775	41,632,581	28,946,814	41,632,581	30,420,541	15,227,003	15,193,538
7/1/12 - 13	17,375,973	18,978,892	18,617,047	38,495,419	17,375,973	38,495,419	18,323,971	8,358,259	9,965,712
7/1/13 - 14	27,359,971	30,077,422	29,510,047	46,210,939	27,359,971	46,210,939	28,982,480	11,853,171	17,129,310
7/1/14 - 15	22,406,456	24,947,977	24,486,204	47,665,911	22,406,456	47,665,911	23,946,879	8,493,035	15,453,844
7/1/15 - 16	18,018,351	20,199,466	19,797,096	50,281,614	18,018,351	50,281,614	19,338,305	5,842,757	13,495,547
7/1/16 - 17	36,736,969	41,098,440	40,641,596	60,231,643	36,736,969	60,231,643	39,492,335	9,752,766	29,739,569
7/1/17 - 18	17,732,122	19,873,775	19,692,852	60,901,043	17,732,122	60,901,043	60,901,043	3,648,110	57,252,932
7/1/18 - 19	7,382,157	8,341,733	8,319,221	65,444,565	7,382,157	65,444,565	65,444,565	1,032,154	64,412,410
7/1/19 - 20	5,242,531	16,888,022	5,986,524	71,498,955	5,242,531	71,498,955	53,295,311	417,637	52,877,674
7/1/20 - 21	776,263	18,465,878	11,185,012	77,877,892	776,263	77,877,892	58,073,887	16,602	58,057,285
7/1/21 - 22	0	17,320,289	10,932,600	81,526,139	0	81,526,139	60,124,189	0	30,062,094
Total	1,172,106,373	1,257,291,827	1,222,551,811	1,657,541,209	1,157,566,253	1,681,121,609	1,457,677,722	904,907,566	522,708,061

## Notes:

- (1) Exhibit 4.2.1 Col (3)
- (2) Exhibit 4.2.2, Col (16)
- (3) Exhibit 4.2.3 Col (23)
- (4) Exhibit 4.2.4 Col (31)
- (5) Minimum of Col (1) through Col (4)
- (6) Maximum of Col (1) through Col (4)
- (7) Selection based on Col (1) through Col (6)
- (8) Exhibit 4.2.1 Col (1)
- (9) Col (7) - Col (8). Current Fiscal Year = [Col (7) / 2] - Col (8) to reflect mid year evaluation date.

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Projected Ultimates - Gross Paid Method, Incidents and Gross Paid Severity

Reported Release Fiscal Year	Gross Paid Method			Incidents for Counts x Severity Method			Severity for Counts x Severity Method		
	Total Paid Amount	Percent of Ultimate	Estimated Ult Paid Amount	Number of Incidents	Percent of Ultimate	Estimated Ult # of Incidents	Total Paid Severity	Percent of Ultimate	Estimated Ult Paid Severity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7/1/88 - 89	11,167,480	99.01%	11,279,155	35	100.00%	35	319,071	98.52%	323,857
7/1/89 - 90	46,872,985	98.81%	47,436,398	147	100.00%	147	318,864	98.03%	325,265
7/1/90 - 91	57,885,869	98.32%	58,874,565	205	100.00%	205	282,370	97.54%	289,479
7/1/91 - 92	48,311,224	97.83%	49,382,067	183	100.00%	183	263,996	97.06%	271,995
7/1/92 - 93	34,620,570	97.33%	35,568,783	133	100.00%	133	260,305	96.28%	270,354
7/1/93 - 94	49,247,694	96.01%	51,295,138	157	100.00%	157	313,680	95.33%	329,047
7/1/94 - 95	41,094,082	94.55%	43,463,697	171	99.86%	171	240,316	94.39%	254,610
7/1/95 - 96	28,140,995	93.61%	30,061,331	118	99.59%	118	238,483	92.79%	257,016
7/1/96 - 97	55,651,819	92.15%	60,391,499	147	99.09%	148	378,584	91.87%	412,067
7/1/97 - 98	64,933,528	90.42%	71,816,747	166	98.89%	168	391,166	90.27%	433,340
7/1/98 - 99	63,513,213	88.29%	71,938,173	200	98.72%	203	317,566	88.16%	360,216
7/1/99 - 00	42,556,002	85.78%	49,612,325	118	98.41%	120	360,644	85.93%	419,671
7/1/00 - 01	37,442,402	83.33%	44,931,211	108	98.20%	110	346,689	83.63%	414,529
7/1/01 - 02	39,653,298	80.73%	49,119,319	106	97.72%	108	374,088	81.32%	460,012
7/1/02 - 03	37,442,717	78.40%	47,760,894	91	97.22%	94	411,458	79.29%	518,940
7/1/03 - 04	23,783,954	75.79%	31,382,917	85	96.83%	88	279,811	76.83%	364,189
7/1/04 - 05	31,482,927	73.60%	42,776,556	92	96.11%	96	342,206	75.04%	456,048
7/1/05 - 06	29,111,550	71.08%	40,958,704	123	95.20%	129	236,679	72.62%	325,909
7/1/06 - 07	26,281,998	68.88%	38,155,066	108	94.65%	114	243,352	70.07%	347,283
7/1/07 - 08	23,520,556	66.31%	35,471,742	102	94.04%	108	230,594	67.14%	343,471
7/1/08 - 09	19,779,208	63.70%	31,050,188	88	92.71%	95	224,764	64.57%	348,115
7/1/09 - 10	15,511,531	60.22%	25,758,079	82	90.97%	90	189,165	61.84%	305,918
7/1/10 - 11	12,260,469	56.65%	21,644,214	65	89.45%	73	188,623	58.86%	320,457
7/1/11 - 12	15,227,003	52.60%	28,946,814	44	87.44%	50	346,068	55.45%	624,163
7/1/12 - 13	8,358,259	48.10%	17,375,973	44	85.50%	51	189,960	51.51%	368,776
7/1/13 - 14	11,853,171	43.32%	27,359,971	55	83.15%	66	215,512	47.40%	454,701
7/1/14 - 15	8,493,035	37.90%	22,406,456	48	80.76%	59	176,938	42.15%	419,771
7/1/15 - 16	5,842,757	32.43%	18,018,351	44	77.90%	56	132,790	37.13%	357,601
7/1/16 - 17	9,752,766	26.55%	36,736,969	74	74.85%	99	131,794	31.70%	415,704
7/1/17 - 18	3,648,110	20.57%	17,732,122	52	71.73%	72	70,156	25.59%	274,141
7/1/18 - 19	1,032,154	13.98%	7,382,157	35	67.82%	52	29,490	18.24%	161,649
7/1/19 - 20	417,637	7.97%	5,242,531	35	62.17%	56	11,932	10.91%	109,342
7/1/20 - 21	16,602	2.14%	776,263	44	50.88%	86	377	4.61%	8,178
7/1/21 - 22	0	0.04%	0	10	11.43%	87	0	0.37%	0
Total	904,907,566		1,172,106,373	3,315		3,631			

Notes:

- (1) Exhibit 4.3
- (2) Exhibit 4.3
- (3) Col (1) / Col (2)
- (4) Exhibit 4.4
- (5) Exhibit 4.4
- (6) Col (4) / Col (5)
- (7) Col (1) / Col (4)
- (8) Exhibit 4.5
- (9) Col (7) / Col (8)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Projected Ultimates - Counts x Severity Method

Reported Release Fiscal Year	Number of Incidents (10)	Estimated Ult # of Incidents (11)	Selected Ult # of Incidents (12)	Total Paid Severity (13)	Indicated Ult Paid Severity (14)	Selected Ult Paid Severity (15)	Estimated Ult Paid Amount (16)
7/1/88 - 89	35	35	35	319,071	323,857	323,857	11,334,992
7/1/89 - 90	147	147	147	318,864	325,265	325,265	47,813,960
7/1/90 - 91	205	205	205	282,370	289,479	289,479	59,343,167
7/1/91 - 92	183	183	183	263,996	271,995	271,995	49,775,115
7/1/92 - 93	133	133	133	260,305	270,354	270,354	35,957,082
7/1/93 - 94	157	157	157	313,680	329,047	329,047	51,660,368
7/1/94 - 95	171	171	171	240,316	254,610	254,610	43,598,185
7/1/95 - 96	118	118	118	238,483	257,016	257,016	30,453,917
7/1/96 - 97	147	148	148	378,584	412,067	412,067	61,132,981
7/1/97 - 98	166	168	168	391,166	433,340	433,340	72,741,187
7/1/98 - 99	200	203	203	317,566	360,216	360,216	72,979,766
7/1/99 - 00	118	120	120	360,644	419,671	419,671	50,322,248
7/1/00 - 01	108	110	110	346,689	414,529	414,529	45,588,132
7/1/01 - 02	106	108	108	374,088	460,012	460,012	49,899,567
7/1/02 - 03	91	94	94	411,458	518,940	518,940	48,572,601
7/1/03 - 04	85	88	88	279,811	364,189	364,189	31,970,190
7/1/04 - 05	92	96	96	342,206	456,048	456,048	43,652,349
7/1/05 - 06	123	129	129	236,679	325,909	325,909	42,109,037
7/1/06 - 07	108	114	114	243,352	347,283	347,283	39,627,106
7/1/07 - 08	102	108	108	230,594	343,471	343,471	37,252,634
7/1/08 - 09	88	95	95	224,764	348,115	348,115	33,043,453
7/1/09 - 10	82	90	90	189,165	305,918	305,918	27,575,446
7/1/10 - 11	65	73	73	188,623	320,457	320,457	23,287,414
7/1/11 - 12	44	50	50	346,068	624,163	624,163	31,409,035
7/1/12 - 13	44	51	51	189,960	368,776	368,776	18,978,892
7/1/13 - 14	55	66	66	215,512	454,701	454,701	30,077,422
7/1/14 - 15	48	59	59	176,938	419,771	419,771	24,947,977
7/1/15 - 16	44	56	56	132,790	357,601	357,601	20,199,466
7/1/16 - 17	74	99	99	131,794	415,704	415,704	41,098,440
7/1/17 - 18	52	72	72	70,156	274,141	274,141	19,873,775
7/1/18 - 19	35	52	52	29,490	161,649	161,649	8,341,733
7/1/19 - 20	35	56	56	11,932	109,342	300,000	16,888,022
7/1/20 - 21	44	86	67	377	8,178	275,000	18,465,878
7/1/21 - 22	10	87	69	0	0	250,000	17,320,289
Total	3,315	3,631	3,593				1,257,291,827

Notes:

- (10) Exhibit 4.4
- (11) Exhibit 4.2.1 Col (6)
- (12) Based on Col (11)
- (13) Exhibit 4.2.1 Col (7)
- (14) Exhibit 4.2.1 Col (9)
- (15) Based on Col (14)
- (16) Col (12) x Col (15)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Projected Ultimates - Ratio Method

Reported Release Fiscal Year	Total Requested Amount	Percent of Ultimate	Estimated Ult Req Amount	Ratio of Paid / Req Amount	Percent of Ultimate	Ultimate Paid / Req Ratio	Ultimate Paid Amount
	(17)	(18)	(19)	(20)	(21)	(22)	(23)
7/1/88 - 89	16,973,379	99.01%	17,143,113	0.658	100.00%	0.658	11,279,155
7/1/89 - 90	79,126,163	98.71%	80,157,177	0.592	100.00%	0.592	47,483,740
7/1/90 - 91	92,745,417	98.42%	94,235,751	0.624	100.00%	0.624	58,816,042
7/1/91 - 92	77,671,448	97.93%	79,314,155	0.622	100.00%	0.622	49,332,980
7/1/92 - 93	55,458,660	97.37%	56,953,972	0.624	100.00%	0.624	35,554,032
7/1/93 - 94	76,043,324	96.35%	78,924,498	0.648	100.00%	0.648	51,113,619
7/1/94 - 95	67,107,157	94.86%	70,745,338	0.612	100.00%	0.612	43,321,977
7/1/95 - 96	42,219,744	93.43%	45,188,027	0.667	99.68%	0.669	30,217,483
7/1/96 - 97	80,030,543	92.15%	86,843,642	0.695	99.46%	0.699	60,718,070
7/1/97 - 98	88,313,673	90.61%	97,468,435	0.735	99.18%	0.741	72,254,156
7/1/98 - 99	90,624,541	88.78%	102,077,369	0.701	98.88%	0.709	72,350,278
7/1/99 - 00	58,844,879	86.59%	67,959,287	0.723	98.47%	0.734	49,908,840
7/1/00 - 01	50,657,194	84.43%	59,998,356	0.739	97.98%	0.754	45,259,914
7/1/01 - 02	56,298,611	81.94%	68,709,584	0.704	97.70%	0.721	49,532,930
7/1/02 - 03	48,611,044	79.88%	60,852,925	0.770	97.26%	0.792	48,193,502
7/1/03 - 04	34,940,352	77.34%	45,176,006	0.681	96.92%	0.702	31,728,702
7/1/04 - 05	42,220,777	74.99%	56,303,194	0.746	96.85%	0.770	43,349,767
7/1/05 - 06	38,207,080	72.19%	52,922,935	0.762	96.36%	0.791	41,848,564
7/1/06 - 07	39,280,090	69.15%	56,802,772	0.669	96.27%	0.695	39,480,253
7/1/07 - 08	30,565,303	66.11%	46,233,945	0.770	95.70%	0.804	37,177,396
7/1/08 - 09	27,917,380	62.78%	44,469,520	0.708	95.33%	0.743	33,050,794
7/1/09 - 10	20,611,877	59.61%	34,579,230	0.753	94.78%	0.794	27,454,880
7/1/10 - 11	15,869,051	56.52%	28,077,068	0.773	94.11%	0.821	23,050,762
7/1/11 - 12	18,782,771	52.88%	35,521,075	0.811	93.18%	0.870	30,905,775
7/1/12 - 13	11,478,312	48.85%	23,495,676	0.728	91.90%	0.792	18,617,047
7/1/13 - 14	15,718,223	44.43%	35,378,800	0.754	90.41%	0.834	29,510,047
7/1/14 - 15	10,731,470	39.40%	27,237,850	0.791	88.03%	0.899	24,486,204
7/1/15 - 16	7,600,755	34.10%	22,286,815	0.769	86.54%	0.888	19,797,096
7/1/16 - 17	11,985,916	28.25%	42,430,646	0.814	84.95%	0.958	40,641,596
7/1/17 - 18	5,852,306	22.20%	26,357,461	0.623	83.43%	0.747	19,692,852
7/1/18 - 19	2,738,389	15.69%	17,451,907	0.377	79.07%	0.477	8,319,221
7/1/19 - 20	988,802	9.48%	10,434,824	0.422	73.62%	0.574	5,986,524
7/1/20 - 21	553,772	2.97%	18,641,686	0.030	64.47%	0.600	11,185,012
7/1/21 - 22	167,436	0.11%	18,221,000	0.000	21.78%	0.600	10,932,600
Total	1,316,935,838		1,708,594,040				1,222,551,811

## Notes:

- (17) Exhibit 4.6  
(18) Exhibit 4.6  
(19) Col (17) / Col (18); most recent year is selected based on historical averages  
(20) Exhibit 4.2.1 Col (1) / Col (17)  
(21) Exhibit 4.7  
(22) Col (20) / Col (21); most recent years are selected based on historical averages  
(23) Col (19) x Col (22)



Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Projected Ultimates - Bornhuetter Ferguson Method

Reported Release Fiscal Year	Total Number of Active Tanks	Ultimate Paid Amount Per Tank	Severity Trend Factor	Trended Ult Paid Amount Per Tank	Sel Ult Paid Amount Per Tank	Percent of Ultimate Unpaid	Total Unpaid Amount	Ultimate Paid Amount
	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
7/1/88 - 89	3,804	2,965	2.2589	6,698	2,965	0.99%	111,675	11,279,155
7/1/89 - 90	4,420	10,732	2.2038	23,651	10,732	1.19%	563,413	47,436,398
7/1/90 - 91	5,011	11,749	2.1500	25,261	11,749	1.68%	988,696	58,874,565
7/1/91 - 92	5,492	8,992	2.0976	18,861	8,992	2.17%	1,070,842	49,382,067
7/1/92 - 93	5,848	6,082	2.0464	12,447	6,082	2.67%	948,213	35,568,783
7/1/93 - 94	6,213	8,256	1.9965	16,483	8,256	3.99%	2,047,444	51,295,138
7/1/94 - 95	6,732	6,456	1.9478	12,576	6,456	5.45%	2,369,614	43,463,697
7/1/95 - 96	7,186	4,183	1.9003	7,950	4,183	6.39%	1,920,336	30,061,331
7/1/96 - 97	7,656	7,888	1.8539	14,624	7,888	7.85%	4,739,680	60,391,499
7/1/97 - 98	8,149	8,813	1.8087	15,940	8,813	9.58%	6,883,219	71,816,747
7/1/98 - 99	8,836	8,141	1.7646	14,367	3,400	11.71%	3,518,572	67,031,785
7/1/99 - 00	9,199	5,393	1.7216	9,285	3,485	14.22%	4,559,904	47,115,906
7/1/00 - 01	9,600	4,680	1.6796	7,861	3,572	16.67%	5,715,917	43,158,320
7/1/01 - 02	9,910	4,957	1.6386	8,122	3,662	19.27%	6,992,987	46,646,285
7/1/02 - 03	10,119	4,720	1.5987	7,546	3,753	21.60%	8,204,761	45,647,478
7/1/03 - 04	10,291	3,050	1.5597	4,756	3,847	24.21%	9,586,063	33,370,017
7/1/04 - 05	10,529	4,063	1.5216	6,182	3,943	26.40%	10,961,257	42,444,184
7/1/05 - 06	10,803	3,791	1.4845	5,628	4,042	28.92%	12,629,367	41,740,918
7/1/06 - 07	11,012	3,465	1.4483	5,018	4,143	31.12%	14,196,138	40,478,137
7/1/07 - 08	11,163	3,178	1.4130	4,490	4,246	33.69%	15,970,795	39,491,351
7/1/08 - 09	11,372	2,730	1.3785	3,764	4,353	36.30%	17,966,989	37,746,197
7/1/09 - 10	11,504	2,239	1.3449	3,011	4,461	39.78%	20,416,337	35,927,868
7/1/10 - 11	11,675	1,854	1.3121	2,432	4,573	43.35%	23,146,215	35,406,684
7/1/11 - 12	11,886	2,435	1.2801	3,117	4,687	47.40%	26,405,578	41,632,581
7/1/12 - 13	12,087	1,438	1.2489	1,795	4,804	51.90%	30,137,160	38,495,419
7/1/13 - 14	12,310	2,223	1.2184	2,708	4,924	56.68%	34,357,768	46,210,939
7/1/14 - 15	12,498	1,793	1.1887	2,131	5,048	62.10%	39,172,876	47,665,911
7/1/15 - 16	12,711	1,418	1.1597	1,644	5,174	67.57%	44,438,857	50,281,614
7/1/16 - 17	12,959	2,835	1.1314	3,207	5,303	73.45%	50,478,878	60,231,643
7/1/17 - 18	13,261	1,337	1.1038	1,476	5,436	79.43%	57,252,932	60,901,043
7/1/18 - 19	13,440	549	1.0769	592	5,572	86.02%	64,412,410	65,444,565
7/1/19 - 20	13,524	388	1.0506	407	5,711	92.03%	71,081,318	71,498,955
7/1/20 - 21	13,592	57	1.0250	59	5,854	97.86%	77,861,290	77,877,892
7/1/21 - 22	13,593	0	1.0000	0	6,000	99.96%	81,526,139	81,526,139
Total	338,385	3,464		5,806	5,200		752,633,643	1,657,541,209
			Selection	6,000				

## Notes:

- (24) Exhibit 2a.2 Col (2)
- (25) Exhibit 4.2.1 Col (3) / Col (24)
- (26) Exhibit 2a.1 Col (5)
- (27) Col (25) x Col (26)
- (28) Col (27) Selected / Col (26); Col (25) for oldest 10 years
- (29) 1 - Exhibit 4.2.1 Col (2)
- (30) Col (24) x Col (28) x Col (29)
- (31) Exhibit 4.2.1 Col (1) + Col (30)

Cumulative Gross Paid Amount (in 000s)

Reported Release Fiscal Year	Months of Maturity																
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1989	0	0	0	0	622	626	706	842	2,257	2,375	2,489	3,344	3,498	4,099	4,768	5,415	5,992
1990	0	0	0	1,062	2,288	2,604	3,200	4,640	5,525	7,529	9,152	11,165	13,618	15,459	18,837	22,521	26,336
1991	0	0	145	590	1,810	2,106	4,217	5,403	6,738	9,518	12,132	15,881	19,454	24,206	28,969	32,890	35,396
1992	0	282	282	947	994	1,977	3,033	3,977	6,099	8,909	11,502	15,670	20,594	23,456	26,585	28,977	30,741
1993	52	218	884	1,166	1,970	2,829	3,782	5,990	7,762	9,734	12,263	15,229	17,192	18,641	20,102	21,660	23,438
1994	0	34	286	1,253	2,213	3,626	5,958	8,396	11,995	14,430	17,030	20,727	23,055	24,847	27,390	30,340	33,197
1995	49	95	800	1,302	2,183	4,119	5,066	6,990	9,891	13,855	16,481	18,803	20,503	22,385	24,288	26,610	27,901
1996	0	1,506	2,221	2,922	4,178	5,096	6,501	9,077	12,156	14,395	16,152	17,085	18,529	19,574	20,682	21,503	22,229
1997	0	1,315	2,650	4,976	7,386	10,517	14,054	20,102	23,938	27,009	29,911	33,581	36,484	38,816	41,957	44,046	45,888
1998	172	1,284	3,978	9,019	15,078	21,196	28,661	33,884	38,490	41,538	44,901	47,640	49,758	52,913	54,366	56,686	58,213
1999	362	2,465	8,074	16,471	23,692	30,822	35,254	38,725	41,350	43,364	45,586	47,475	49,846	51,476	53,247	55,099	56,697
2000	300	2,674	7,702	12,402	15,921	18,052	20,230	21,620	23,255	25,191	27,108	28,877	30,300	32,387	34,386	36,295	38,379
2001	161	1,740	6,034	10,994	14,525	17,569	19,760	22,247	24,714	26,689	28,824	30,209	31,472	32,787	34,100	35,166	35,719
2002	133	4,357	10,752	14,983	19,007	21,753	23,993	26,539	28,324	31,075	32,384	33,939	35,413	36,975	37,481	38,502	39,171
2003	386	1,711	4,966	9,928	14,077	17,144	19,885	22,933	24,700	26,185	28,367	30,137	31,324	32,169	34,041	35,195	36,327
2004	499	1,698	3,249	4,755	6,085	7,457	9,404	11,209	12,853	14,400	16,478	17,882	19,189	20,876	21,869	22,934	23,358
2005	0	810	2,683	5,052	7,768	10,744	13,901	16,001	19,204	21,535	23,354	25,028	27,473	29,202	30,468	31,247	31,371
2006	91	1,553	4,978	7,897	10,497	13,429	17,115	19,535	21,991	23,881	25,421	26,842	27,620	28,639	28,908	29,038	29,112
2007	27	641	2,440	4,980	8,238	11,088	14,291	16,394	18,859	20,505	22,551	23,999	25,268	25,788	26,245	26,282	
2008	239	806	2,273	4,100	6,347	9,253	11,375	13,329	15,760	18,542	21,153	22,688	23,207	23,418	23,521		
2009	696	2,099	3,418	5,427	8,553	10,472	12,357	13,509	15,419	17,318	18,822	19,395	19,646	19,779			
2010	0	504	1,700	3,539	5,705	7,668	8,968	11,321	13,062	14,238	14,928	15,346	15,512				
2011	0	273	1,306	2,380	4,568	6,044	8,488	9,875	11,540	11,956	12,170	12,260					
2012	0	615	2,075	4,350	7,011	10,053	11,911	14,222	14,894	15,113	15,227						
2013	0	566	2,029	3,118	4,848	6,367	7,186	7,876	8,133	8,358							
2014	47	1,069	3,034	6,031	8,072	10,125	10,978	11,599	11,853								
2015	0	348	3,338	5,713	7,581	8,204	8,426	8,493									
2016	0	783	1,750	4,539	5,282	5,725	5,843										
2017	28	2,358	6,680	8,854	9,287	9,753											
2018	67	721	2,158	3,082	3,648												
2019	23	181	818	1,032													
2020	0	112	418														
2021	0	17															
2022	0																

Cumulative Gross Paid Amount (in 000s)

Reported Release Fiscal Year	Months of Maturity																
	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408
1989	6,525	6,923	7,161	7,742	7,936	8,272	8,446	8,753	8,993	9,155	9,389	9,933	10,092	10,274	10,626	11,148	11,167
1990	29,022	32,026	34,433	36,001	37,940	38,915	40,258	41,563	42,459	43,479	44,728	45,512	46,387	46,660	46,761	46,873	
1991	37,941	41,072	44,158	45,935	47,563	49,386	50,657	51,701	53,032	54,592	55,552	56,980	57,498	57,747	57,886		
1992	32,873	35,132	37,629	38,510	40,329	42,537	44,180	44,978	45,934	46,445	47,403	47,880	48,198	48,311			
1993	25,763	27,219	29,096	30,731	31,435	32,270	33,058	33,828	34,144	34,250	34,529	34,596	34,621				
1994	35,637	37,303	38,870	40,318	41,896	43,770	45,573	47,665	48,773	49,112	49,214	49,248					
1995	29,705	31,326	33,145	34,883	36,448	38,341	39,868	40,395	40,709	41,033	41,094						
1996	23,349	23,931	24,841	25,448	26,961	27,416	27,900	28,045	28,091	28,141							
1997	48,147	49,674	50,577	52,621	54,046	54,561	55,348	55,531	55,652								
1998	59,628	60,976	61,865	62,777	64,167	64,655	64,836	64,934									
1999	58,156	60,439	62,158	63,017	63,334	63,476	63,513										
2000	40,219	40,933	42,058	42,348	42,477	42,556											
2001	36,315	36,706	37,301	37,354	37,442												
2002	39,376	39,566	39,607	39,653													
2003	37,168	37,352	37,443														
2004	23,605	23,784															
2005	31,483																
2006																	
2007																	
2008																	
2009																	
2010																	
2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
2022																	

Cumulative Gross Paid Amount (in 000s)

Reported Release Fiscal Year	Age - To - Age Factors																
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
1989					1.007	1.127	1.192	2.682	1.052	1.048	1.344	1.046	1.172	1.163	1.136	1.107	1.089
1990				2.153	1.138	1.229	1.450	1.191	1.363	1.216	1.220	1.220	1.135	1.219	1.196	1.169	1.102
1991			4.079	3.067	1.164	2.002	1.281	1.247	1.413	1.275	1.309	1.225	1.244	1.197	1.135	1.076	1.072
1992		1.000	3.356	1.049	1.989	1.534	1.311	1.533	1.461	1.291	1.362	1.314	1.139	1.133	1.090	1.061	1.069
1993	4.183	4.055	1.319	1.690	1.436	1.337	1.584	1.296	1.254	1.260	1.242	1.129	1.084	1.078	1.077	1.082	1.099
1994		8.308	4.376	1.766	1.638	1.643	1.409	1.429	1.203	1.180	1.217	1.112	1.078	1.102	1.108	1.094	1.073
1995	1.957	8.422	1.627	1.676	1.887	1.230	1.380	1.415	1.401	1.190	1.141	1.090	1.092	1.085	1.096	1.049	1.065
1996		1.475	1.315	1.430	1.220	1.276	1.396	1.339	1.184	1.122	1.058	1.084	1.056	1.057	1.040	1.034	1.050
1997		2.015	1.877	1.484	1.424	1.336	1.430	1.191	1.128	1.107	1.123	1.086	1.064	1.081	1.050	1.042	1.049
1998	7.485	3.097	2.267	1.672	1.406	1.352	1.182	1.136	1.079	1.081	1.061	1.044	1.063	1.027	1.043	1.027	1.024
1999	6.807	3.275	2.040	1.438	1.301	1.144	1.098	1.068	1.049	1.051	1.041	1.050	1.033	1.034	1.035	1.029	1.026
2000	8.925	2.881	1.610	1.284	1.134	1.121	1.069	1.076	1.083	1.076	1.065	1.049	1.069	1.062	1.056	1.057	1.048
2001	10.788	3.468	1.822	1.321	1.210	1.125	1.126	1.111	1.080	1.080	1.048	1.042	1.042	1.040	1.031	1.016	1.017
2002	32.641	2.468	1.394	1.269	1.144	1.103	1.106	1.067	1.097	1.042	1.048	1.043	1.044	1.014	1.027	1.017	1.005
2003	4.432	2.902	1.999	1.418	1.218	1.160	1.153	1.077	1.060	1.083	1.062	1.039	1.027	1.058	1.034	1.032	1.023
2004	3.402	1.913	1.464	1.280	1.225	1.261	1.192	1.147	1.120	1.144	1.085	1.073	1.088	1.048	1.049	1.019	1.011
2005		3.312	1.883	1.538	1.383	1.294	1.151	1.200	1.121	1.084	1.072	1.098	1.063	1.043	1.026	1.004	1.004
2006	17.123	3.205	1.586	1.329	1.279	1.274	1.141	1.126	1.086	1.064	1.056	1.029	1.037	1.009	1.005	1.003	
2007	23.662	3.807	2.041	1.654	1.346	1.289	1.147	1.150	1.087	1.100	1.064	1.053	1.021	1.018	1.001		
2008	3.378	2.819	1.804	1.548	1.458	1.229	1.172	1.182	1.177	1.141	1.073	1.023	1.009	1.004			
2009	3.015	1.628	1.588	1.576	1.224	1.180	1.093	1.141	1.123	1.087	1.030	1.013	1.007				
2010		3.370	2.082	1.612	1.344	1.170	1.262	1.154	1.090	1.048	1.028	1.011					
2011		4.794	1.822	1.919	1.323	1.404	1.163	1.169	1.036	1.018	1.007						
2012		3.375	2.096	1.612	1.434	1.185	1.194	1.047	1.015	1.008							
2013		3.585	1.537	1.555	1.313	1.129	1.096	1.033	1.028								
2014	22.739	2.839	1.988	1.338	1.254	1.084	1.057	1.022									
2015		9.596	1.712	1.327	1.082	1.027	1.008										
2016		2.236	2.594	1.164	1.084	1.021											
2017	84.550	2.833	1.325	1.049	1.050												
2018	10.759	2.992	1.428	1.184													
2019	7.834	4.511	1.262														
2020		3.745															
2021																	
Averages Excluding Current Two Years																	
5 Year	34.381	4.099	1.831	1.399	1.281	1.194	1.162	1.139	1.103	1.088	1.059	1.055	1.047	1.034	1.033	1.028	1.024
10 Year	31.471	3.725	1.855	1.531	1.306	1.224	1.161	1.139	1.100	1.087	1.060	1.050	1.049	1.042	1.039	1.032	1.038
All Year	14.922	3.543	2.022	1.562	1.333	1.278	1.231	1.257	1.163	1.126	1.130	1.093	1.082	1.081	1.072	1.057	1.054
5 Yr Wgt	37.184	3.213	1.679	1.381	1.272	1.181	1.161	1.135	1.106	1.089	1.060	1.054	1.044	1.033	1.032	1.029	1.024
10 Yr Wgt	44.931	2.945	1.741	1.499	1.298	1.224	1.159	1.135	1.099	1.084	1.059	1.049	1.047	1.041	1.039	1.032	1.036
All Yr Wgt	9.816	2.825	1.769	1.444	1.283	1.219	1.179	1.151	1.122	1.104	1.094	1.077	1.068	1.066	1.061	1.049	1.047
Selection	27.373	3.725	1.755	1.471	1.290	1.221	1.169	1.143	1.110	1.094	1.077	1.063	1.058	1.041	1.039	1.032	1.036
Age to Ult	1,279.9	46.757	12.553	7.152	4.861	3.767	3.084	2.638	2.308	2.079	1.901	1.765	1.661	1.570	1.508	1.452	1.407
% of Ult	0.08%	2.14%	7.97%	13.98%	20.57%	26.55%	32.43%	37.90%	43.32%	48.10%	52.60%	56.65%	60.22%	63.70%	66.31%	68.88%	71.08%

Cumulative Gross Paid Amount (in 000s)

Reported Release Fiscal Year	Age - To - Age Factors																
	216 - 228	228 - 240	240 - 252	252 - 264	264 - 276	276 - 288	288 - 300	300 - 312	312 - 324	324 - 336	336 - 348	348 - 360	360 - 372	372 - 384	384 - 396	396 - 408	408 - Ult
1989	1.061	1.034	1.081	1.025	1.042	1.021	1.036	1.027	1.018	1.026	1.058	1.016	1.018	1.034	1.049	1.002	
1990	1.104	1.075	1.046	1.054	1.026	1.035	1.032	1.022	1.024	1.029	1.018	1.019	1.006	1.002	1.002		
1991	1.083	1.075	1.040	1.035	1.038	1.026	1.021	1.026	1.029	1.018	1.026	1.009	1.004	1.002			
1992	1.069	1.071	1.023	1.047	1.055	1.039	1.018	1.021	1.011	1.021	1.010	1.007	1.002				
1993	1.057	1.069	1.056	1.023	1.027	1.024	1.023	1.009	1.003	1.008	1.002	1.001					
1994	1.047	1.042	1.037	1.039	1.045	1.041	1.046	1.023	1.007	1.002	1.001						
1995	1.055	1.058	1.052	1.045	1.052	1.040	1.013	1.008	1.008	1.001							
1996	1.025	1.038	1.024	1.059	1.017	1.018	1.005	1.002	1.002								
1997	1.032	1.018	1.040	1.027	1.010	1.014	1.003	1.002									
1998	1.023	1.015	1.015	1.022	1.008	1.003	1.002										
1999	1.039	1.028	1.014	1.005	1.002	1.001											
2000	1.018	1.027	1.007	1.003	1.002												
2001	1.011	1.016	1.001	1.002													
2002	1.005	1.001	1.001														
2003	1.005	1.002															
2004	1.008																
2005																	
2006																	
2007																	
2008																	
2009																	
2010																	
2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
Averages Exclu																	
5 Year	1.019	1.021	1.020	1.032	1.026	1.028	1.021	1.017	1.015	1.020							
10 Year	1.031	1.038	1.031	1.036	1.032												
All Year	1.045	1.044	1.036	1.035	1.032	1.029	1.024	1.019	1.015	1.020	1.028	1.015	1.012	1.034			
5 Yr Wgt	1.021	1.021	1.020	1.026	1.023	1.027	1.023	1.018	1.016	1.020							
10 Yr Wgt	1.030	1.034	1.029	1.032	1.029												
All Yr Wgt	1.041	1.041	1.031	1.032	1.029	1.029	1.024	1.019	1.016	1.020	1.021	1.014	1.008	1.034			
Selection	1.030	1.034	1.030	1.032	1.029	1.029	1.024	1.019	1.016	1.010	1.015	1.014	1.005	1.005	1.005	1.002	1.010
Age to Ult	1.359	1.319	1.276	1.239	1.200	1.166	1.133	1.106	1.085	1.068	1.058	1.042	1.027	1.022	1.017	1.012	1.010
% of Ult	73.60%	75.79%	78.40%	80.73%	83.33%	85.78%	88.29%	90.42%	92.15%	93.61%	94.55%	96.01%	97.33%	97.83%	98.32%	98.81%	99.01%

Cumulative Number of Incidents

Reported Release Fiscal Year	Months of Maturity																
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1989	0	0	0	0	7	7	9	15	17	18	18	21	22	23	26	28	28
1990	0	0	0	13	23	33	44	51	60	65	84	91	99	111	118	120	124
1991	0	0	18	32	41	52	62	68	80	98	106	128	142	170	177	178	181
1992	0	6	22	36	43	53	68	78	101	109	118	139	155	156	161	163	168
1993	4	17	34	39	43	50	59	70	77	91	97	106	109	112	116	119	123
1994	2	21	35	46	56	66	78	86	98	113	129	131	136	145	149	152	152
1995	13	29	44	58	66	79	86	99	112	127	137	142	149	153	155	161	163
1996	7	18	32	38	51	58	67	78	86	94	98	105	108	110	116	116	116
1997	5	24	44	72	89	100	116	124	125	127	130	134	137	142	143	145	145
1998	2	43	65	93	106	127	136	139	142	149	155	156	158	161	162	162	163
1999	15	62	95	111	134	147	151	158	165	170	178	191	194	196	197	198	198
2000	11	47	62	75	85	92	95	101	107	109	112	114	115	115	117	117	117
2001	14	44	72	91	93	95	98	100	101	105	106	107	107	108	108	108	108
2002	30	68	88	95	97	100	100	102	103	105	105	105	105	105	106	106	106
2003	10	59	69	79	83	84	84	86	88	88	89	89	89	90	91	91	91
2004	27	50	62	68	72	75	80	83	84	84	85	85	85	85	85	85	85
2005	12	50	67	77	82	85	90	92	92	92	92	92	92	92	92	92	92
2006	29	86	99	105	115	117	118	120	120	121	121	121	121	121	123	123	123
2007	23	75	93	100	101	103	103	105	107	108	108	108	108	108	108	108	
2008	37	77	93	97	98	98	100	100	101	101	101	101	102	102	102		
2009	46	72	83	83	83	87	87	87	87	88	88	88	88	88			
2010	32	67	77	77	80	80	80	82	82	82	82	82	82	82			
2011	20	52	57	59	60	60	63	64	64	65	65	65					
2012	14	35	43	43	43	43	44	44	44	44	44						
2013	15	36	37	41	42	42	42	44	44	44							
2014	25	43	47	50	52	53	54	55	55								
2015	14	35	45	45	47	47	48	48									
2016	22	36	40	42	43	43	44										
2017	48	66	71	73	74	74											
2018	27	42	51	52	52												
2019	10	29	33	35													
2020	17	34	35														
2021	20	44															
2022	10																

Cumulative Number of Incidents

Reported Release Fiscal Year	Months of Maturity																
	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408
1989	28	33	34	35	35	35	35	35	35	35	35	35	35	35	35	35	35
1990	131	134	136	138	141	142	142	142	143	144	146	146	146	147	147	147	
1991	190	193	196	197	199	199	202	204	204	205	205	205	205	205	205		
1992	170	178	178	178	178	179	180	180	181	182	182	183	183	183			
1993	126	128	128	129	131	131	131	131	131	131	131	132	133				
1994	153	153	154	155	155	155	155	155	155	157	157	157					
1995	165	166	166	168	169	170	170	170	170	171	171						
1996	117	117	117	118	118	118	118	118	118	118							
1997	146	146	147	147	147	147	147	147	147								
1998	163	164	165	166	166	166	166	166									
1999	199	199	200	200	200	200	200										
2000	118	118	118	118	118	118											
2001	108	108	108	108	108												
2002	106	106	106	106													
2003	91	91	91														
2004	85	85															
2005	92																
2006																	
2007																	
2008																	
2009																	
2010																	
2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
2022																	

Cumulative Number of Incidents

Reported Release Fiscal Year	Age - To - Age Factors																
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
1989					1.000	1.286	1.667	1.133	1.059	1.000	1.167	1.048	1.045	1.130	1.077	1.000	1.000
1990				1.769	1.435	1.333	1.159	1.176	1.083	1.292	1.083	1.088	1.121	1.063	1.017	1.033	1.056
1991			1.778	1.281	1.268	1.192	1.097	1.176	1.225	1.082	1.208	1.109	1.197	1.041	1.006	1.017	1.050
1992		3.667	1.636	1.194	1.233	1.283	1.147	1.295	1.079	1.083	1.178	1.115	1.006	1.032	1.012	1.031	1.012
1993	4.250	2.000	1.147	1.103	1.163	1.180	1.186	1.100	1.182	1.066	1.093	1.028	1.028	1.036	1.026	1.034	1.024
1994	10.500	1.667	1.314	1.217	1.179	1.182	1.103	1.140	1.153	1.142	1.016	1.038	1.066	1.028	1.020	1.000	1.007
1995	2.231	1.517	1.318	1.138	1.197	1.089	1.151	1.131	1.134	1.079	1.036	1.049	1.027	1.013	1.039	1.012	1.012
1996	2.571	1.778	1.188	1.342	1.137	1.155	1.164	1.103	1.093	1.043	1.071	1.029	1.019	1.055	1.000	1.000	1.009
1997	4.800	1.833	1.636	1.236	1.124	1.160	1.069	1.008	1.016	1.024	1.031	1.022	1.036	1.007	1.014	1.000	1.007
1998	21.500	1.512	1.431	1.140	1.198	1.071	1.022	1.022	1.049	1.040	1.006	1.013	1.019	1.006	1.000	1.006	1.000
1999	4.133	1.532	1.168	1.207	1.097	1.027	1.046	1.044	1.030	1.047	1.073	1.016	1.010	1.005	1.005	1.000	1.005
2000	4.273	1.319	1.210	1.133	1.082	1.033	1.063	1.059	1.019	1.028	1.018	1.009	1.000	1.017	1.000	1.000	1.009
2001	3.143	1.636	1.264	1.022	1.022	1.032	1.020	1.010	1.040	1.010	1.009	1.000	1.009	1.000	1.000	1.000	1.000
2002	2.267	1.294	1.080	1.021	1.031	1.000	1.020	1.010	1.019	1.000	1.000	1.000	1.000	1.010	1.000	1.000	1.000
2003	5.900	1.169	1.145	1.051	1.012	1.000	1.024	1.023	1.000	1.011	1.000	1.000	1.011	1.011	1.000	1.000	1.000
2004	1.852	1.240	1.097	1.059	1.042	1.067	1.038	1.012	1.000	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	4.167	1.340	1.149	1.065	1.037	1.059	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2006	2.966	1.151	1.061	1.095	1.017	1.009	1.017	1.000	1.008	1.000	1.000	1.000	1.000	1.017	1.000	1.000	
2007	3.261	1.240	1.075	1.010	1.020	1.000	1.019	1.019	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
2008	2.081	1.208	1.043	1.010	1.000	1.020	1.000	1.010	1.000	1.000	1.000	1.010	1.000	1.000			
2009	1.565	1.153	1.000	1.000	1.048	1.000	1.000	1.000	1.011	1.000	1.000	1.000	1.000				
2010	2.094	1.149	1.000	1.039	1.000	1.000	1.025	1.000	1.000	1.000	1.000	1.000					
2011	2.600	1.096	1.035	1.017	1.000	1.050	1.016	1.000	1.016	1.000	1.000						
2012	2.500	1.229	1.000	1.000	1.000	1.023	1.000	1.000	1.000	1.000							
2013	2.400	1.028	1.108	1.024	1.000	1.000	1.048	1.000	1.000								
2014	1.720	1.093	1.064	1.040	1.019	1.019	1.019	1.000									
2015	2.500	1.286	1.000	1.044	1.000	1.021	1.000										
2016	1.636	1.111	1.050	1.024	1.000	1.023											
2017	1.375	1.076	1.028	1.014	1.000												
2018	1.556	1.214	1.020	1.000													
2019	2.900	1.138	1.061														
2020	2.000	1.029															
2021	2.200																
Averages Excluding Current Two Years																	
5 Year	1.993	1.156	1.050	1.027	1.004	1.018	1.018	1.002	1.007	1.000	1.000	1.002	1.002	1.007	1.000	1.000	1.003
10 Year	2.128	1.143	1.033	1.021	1.010	1.018	1.018	1.006	1.006	1.003	1.003	1.003	1.005	1.007	1.002	1.002	1.005
All Year	3.805	1.427	1.186	1.122	1.087	1.087	1.085	1.061	1.053	1.043	1.047	1.029	1.031	1.026	1.013	1.008	1.013
5 Yr Wgt	1.719	1.144	1.046	1.027	1.004	1.018	1.016	1.003	1.007	1.000	1.000	1.002	1.002	1.008	1.000	1.000	1.003
10 Yr Wgt	1.943	1.138	1.029	1.019	1.012	1.017	1.017	1.007	1.006	1.003	1.003	1.004	1.006	1.007	1.002	1.002	1.005
All Yr Wgt	2.508	1.306	1.153	1.096	1.075	1.064	1.056	1.052	1.050	1.042	1.043	1.030	1.032	1.021	1.010	1.009	1.014
Selection	2.225	1.222	1.091	1.058	1.044	1.041	1.037	1.030	1.028	1.023	1.023	1.017	1.019	1.014	1.006	1.006	1.010
Age to Ult	4.374	1.965	1.608	1.474	1.394	1.336	1.284	1.238	1.203	1.170	1.144	1.118	1.099	1.079	1.063	1.057	1.050
% of Ult	22.86%	50.88%	62.17%	67.82%	71.73%	74.85%	77.90%	80.76%	83.15%	85.50%	87.44%	89.45%	90.97%	92.71%	94.04%	94.65%	95.20%



Cumulative Number of Incidents

Reported Release Fiscal Year	Age - To - Age Factors																
	216 - 228	228 - 240	240 - 252	252 - 264	264 - 276	276 - 288	288 - 300	300 - 312	312 - 324	324 - 336	336 - 348	348 - 360	360 - 372	372 - 384	384 - 396	396 - 408	408 - Ult
1989	1.179	1.030	1.029	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.023	1.015	1.015	1.022	1.007	1.000	1.000	1.007	1.007	1.014	1.000	1.000	1.007	1.000	1.000		
1991	1.016	1.016	1.005	1.010	1.000	1.015	1.010	1.000	1.005	1.000	1.000	1.000	1.000	1.000			
1992	1.047	1.000	1.000	1.000	1.006	1.006	1.000	1.006	1.006	1.000	1.005	1.000	1.000				
1993	1.016	1.000	1.008	1.016	1.000	1.000	1.000	1.000	1.000	1.000	1.008	1.008					
1994	1.000	1.007	1.006	1.000	1.000	1.000	1.000	1.000	1.013	1.000	1.000						
1995	1.006	1.000	1.012	1.006	1.006	1.000	1.000	1.000	1.006	1.000							
1996	1.000	1.000	1.009	1.000	1.000	1.000	1.000	1.000	1.000								
1997	1.000	1.007	1.000	1.000	1.000	1.000	1.000	1.000									
1998	1.006	1.006	1.006	1.000	1.000	1.000	1.000										
1999	1.000	1.005	1.000	1.000	1.000	1.000											
2000	1.000	1.000	1.000	1.000	1.000												
2001	1.000	1.000	1.000	1.000													
2002	1.000	1.000	1.000														
2003	1.000	1.000															
2004	1.000																
2005																	
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2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
Averages Exclu																	
5 Year	1.001	1.004	1.003	1.001	1.001	1.000	1.000	1.001	1.006	1.003							
10 Year	1.003	1.002	1.005	1.005	1.002												
All Year	1.021	1.007	1.008	1.005	1.002	1.002	1.001	1.002	1.005	1.003	1.001	1.000	1.003	1.000			
5 Yr Wgt	1.001	1.004	1.003	1.001	1.001	1.000	1.000	1.001	1.006	1.003							
10 Yr Wgt	1.003	1.003	1.004	1.005	1.002												
All Yr Wgt	1.012	1.005	1.006	1.005	1.002	1.003	1.002	1.002	1.006	1.003	1.002	1.000	1.006	1.000			
Selection	1.007	1.004	1.005	1.005	1.002	1.003	1.002	1.002	1.005	1.003	1.001	1.000	1.000	1.000	1.000	1.000	1.000
Age to Ult	1.040	1.033	1.029	1.023	1.018	1.016	1.013	1.011	1.009	1.004	1.001	1.000	1.000	1.000	1.000	1.000	1.000
% of Ult	96.11%	96.83%	97.22%	97.72%	98.20%	98.41%	98.72%	98.89%	99.09%	99.59%	99.86%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Cumulative Gross Paid Severity

Reported Release Fiscal Year	Months of Maturity																
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1989					88,794	89,455	78,414	56,104	132,763	131,940	138,254	159,237	159,009	178,225	183,397	193,382	213,989
1990				81,729	99,473	78,922	72,729	90,985	92,077	115,827	108,948	122,689	137,554	139,266	159,636	187,674	212,387
1991			8,040	18,445	44,155	40,508	68,014	79,457	84,223	97,118	114,452	124,072	137,001	142,390	163,665	184,775	195,557
1992		47,047	12,831	26,313	23,111	37,299	44,606	50,990	60,385	81,736	97,472	112,737	132,862	150,358	165,121	177,775	182,983
1993	13,027	12,822	25,998	29,886	45,806	56,572	64,099	85,572	100,811	106,964	126,427	143,673	157,727	166,435	173,297	182,014	190,549
1994	0	1,641	8,181	27,243	39,526	54,934	76,378	97,631	122,393	127,702	132,016	158,221	169,523	171,361	183,823	199,603	218,402
1995	3,736	3,277	18,190	22,456	33,074	52,135	58,913	70,601	88,309	109,092	120,298	132,414	137,601	146,306	156,696	165,277	171,174
1996	0	83,689	69,416	76,892	81,916	87,868	97,030	116,372	141,346	153,134	164,818	162,716	171,563	177,947	178,293	185,374	191,633
1997	0	54,796	60,236	69,111	82,992	105,170	121,152	162,110	191,507	212,673	230,084	250,603	266,309	273,355	293,405	303,762	316,470
1998	85,805	29,872	61,201	96,976	142,245	166,896	210,740	243,769	271,053	278,775	289,682	305,385	314,922	328,655	335,595	349,913	357,135
1999	24,144	39,763	84,988	148,390	176,806	209,671	233,471	245,098	250,606	255,080	256,101	248,558	256,938	262,635	270,288	278,278	286,347
2000	27,235	56,892	124,231	165,363	187,308	196,221	212,951	214,059	217,334	231,108	242,040	253,311	263,482	281,630	293,901	310,218	328,024
2001	11,519	39,540	83,799	120,817	156,184	184,939	201,630	222,471	244,698	254,184	271,923	282,326	294,134	303,584	315,739	325,615	330,734
2002	4,449	64,072	122,181	157,719	195,953	217,528	239,930	260,187	274,995	295,956	308,419	323,233	337,263	352,145	353,592	363,224	369,535
2003	38,613	29,004	71,976	125,672	169,596	204,101	236,722	266,668	280,681	297,558	318,727	338,622	351,952	357,435	374,081	386,764	399,201
2004	18,494	33,970	52,397	69,921	84,518	99,425	117,550	135,047	153,012	171,433	193,860	210,379	225,753	245,606	257,277	269,812	274,804
2005	0	16,202	40,045	65,613	94,734	126,396	154,459	173,929	208,741	234,077	253,848	272,039	298,621	317,416	331,177	339,640	340,989
2006	3,128	18,060	50,286	75,214	91,281	114,779	145,044	162,788	183,255	197,367	210,092	221,839	228,263	236,684	235,021	236,080	236,679
2007	1,178	8,546	26,240	49,796	81,563	107,647	138,744	156,133	176,256	189,863	208,804	222,217	233,965	238,782	243,005	243,352	
2008	6,451	10,472	24,443	42,268	64,767	94,422	113,748	133,289	156,036	183,583	209,440	224,636	227,520	229,589	230,594		
2009	15,136	29,153	41,175	65,390	103,048	120,363	142,036	155,280	177,226	196,799	213,891	220,402	223,251	224,764			
2010	0	7,529	22,073	45,966	71,314	95,852	112,105	138,062	159,291	173,640	182,043	187,145	189,165				
2011	0	5,240	22,919	40,338	76,136	100,732	134,728	154,299	180,308	183,943	187,238	188,623					
2012	0	17,563	48,253	101,160	163,044	233,789	270,699	323,233	338,499	343,483	346,068						
2013	0	15,719	54,825	76,056	115,430	151,601	171,093	178,992	184,830	189,960							
2014	1,880	24,851	64,548	120,617	155,224	191,047	203,303	210,897	215,512								
2015	0	9,938	74,171	126,957	161,295	174,553	175,542	176,938									
2016	0	21,738	43,748	108,074	122,829	133,146	132,790										
2017	581	35,720	94,079	121,284	125,500	131,794											
2018	2,483	17,174	42,313	59,277	70,156												
2019	2,315	6,254	24,793	29,490													
2020	0	3,280	11,932														
2021	0	377															
2022	0																

Cumulative Gross Paid Severity

Reported Release Fiscal Year	Months of Maturity																
	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408
1989	233,052	209,785	210,615	221,199	226,737	236,348	241,322	250,090	256,942	261,569	268,243	283,813	288,352	293,540	303,608	318,510	319,071
1990	221,542	238,999	253,182	260,877	269,076	274,049	283,511	292,695	296,919	301,934	306,358	311,725	317,722	317,418	318,102	318,864	
1991	199,687	212,808	225,296	233,170	239,012	248,168	250,777	253,436	259,962	266,303	270,987	277,952	280,478	281,693	282,370		
1992	193,372	197,368	211,397	216,349	226,566	237,639	245,446	249,875	253,781	255,194	260,455	261,642	263,379	263,996			
1993	204,465	212,650	227,312	238,222	239,963	246,332	252,353	258,225	260,641	261,451	263,578	262,094	260,305				
1994	232,918	243,813	252,405	260,116	270,295	282,390	294,023	307,514	314,662	312,815	313,464	313,680					
1995	180,030	188,712	199,668	207,636	215,671	225,534	234,519	237,620	239,467	239,957	240,316						
1996	199,563	204,539	212,317	215,661	228,482	232,338	236,445	237,674	238,058	238,483							
1997	329,774	340,234	344,061	357,965	367,661	371,165	376,518	377,760	378,584								
1998	365,816	371,802	374,937	378,177	386,549	389,490	390,579	391,166									
1999	292,243	303,711	310,788	315,086	316,671	317,378	317,566										
2000	340,841	346,890	356,426	358,883	359,975	360,644											
2001	336,247	339,875	345,379	345,867	346,689												
2002	371,468	373,264	373,650	374,088													
2003	408,436	410,463	411,458														
2004	277,704	279,811															
2005	342,206																
2006																	
2007																	
2008																	
2009																	
2010																	
2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
2022																	



Cumulative Gross Paid Severity

Reported Release Fiscal Year	Age - To - Age Factors																
	216 - 228	228 - 240	240 - 252	252 - 264	264 - 276	276 - 288	288 - 300	300 - 312	312 - 324	324 - 336	336 - 348	348 - 360	360 - 372	372 - 384	384 - 396	396 - 408	408 - Ult
1989	0.900	1.004	1.050	1.025	1.042	1.021	1.036	1.027	1.018	1.026	1.058	1.016	1.018	1.034	1.049	1.002	
1990	1.079	1.059	1.030	1.031	1.018	1.035	1.032	1.014	1.017	1.015	1.018	1.019	0.999	1.002	1.002		
1991	1.066	1.059	1.035	1.025	1.038	1.011	1.011	1.026	1.024	1.018	1.026	1.009	1.004	1.002			
1992	1.021	1.071	1.023	1.047	1.049	1.033	1.018	1.016	1.006	1.021	1.005	1.007	1.002				
1993	1.040	1.069	1.048	1.007	1.027	1.024	1.023	1.009	1.003	1.008	0.994	0.993					
1994	1.047	1.035	1.031	1.039	1.045	1.041	1.046	1.023	0.994	1.002	1.001						
1995	1.048	1.058	1.040	1.039	1.046	1.040	1.013	1.008	1.002	1.001							
1996	1.025	1.038	1.016	1.059	1.017	1.018	1.005	1.002	1.002								
1997	1.032	1.011	1.040	1.027	1.010	1.014	1.003	1.002									
1998	1.016	1.008	1.009	1.022	1.008	1.003	1.002										
1999	1.039	1.023	1.014	1.005	1.002	1.001											
2000	1.018	1.027	1.007	1.003	1.002												
2001	1.011	1.016	1.001	1.002													
2002	1.005	1.001	1.001														
2003	1.005	1.002															
2004	1.008																
2005																	
2006																	
2007																	
2008																	
2009																	
2010																	
2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
Averages Exclu																	
5 Year	1.018	1.017	1.017	1.030	1.025	1.028	1.021	1.016	1.009	1.017							
10 Year	1.028	1.036	1.026	1.030	1.030												
All Year	1.025	1.037	1.029	1.030	1.030	1.026	1.023	1.018	1.010	1.017	1.026	1.015	1.009	1.034			
5 Yr Wgt	1.017	1.017	1.017	1.027	1.022	1.027	1.022	1.017	1.008	1.017							
10 Yr Wgt	1.025	1.031	1.025	1.029	1.028												
All Yr Wgt	1.023	1.033	1.027	1.028	1.028	1.026	1.024	1.018	1.010	1.017	1.026	1.015	1.008	1.034			
Selection	1.024	1.032	1.026	1.028	1.028	1.026	1.024	1.018	1.010	1.017	1.010	1.010	1.008	1.005	1.005	1.005	1.015
Age to Ult	1.333	1.302	1.261	1.230	1.196	1.164	1.134	1.108	1.088	1.078	1.059	1.049	1.039	1.030	1.025	1.020	1.015
% of Ult	75.04%	76.83%	79.29%	81.32%	83.63%	85.93%	88.16%	90.27%	91.87%	92.79%	94.39%	95.33%	96.28%	97.06%	97.54%	98.03%	98.52%

Cumulative Gross Requested Amount (in 000s)

Reported Release Fiscal Year	Months of Maturity																
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1989	0	0	0	0	2,136	2,159	2,404	3,558	5,516	5,704	6,162	7,213	7,420	8,151	8,942	9,851	10,553
1990	0	0	0	3,213	6,133	8,130	10,325	13,396	15,492	18,631	22,309	25,184	28,725	32,141	37,412	42,817	48,929
1991	0	0	2,615	6,072	9,243	11,312	15,672	17,747	20,367	24,716	28,487	33,885	38,659	44,870	51,461	56,969	60,702
1992	0	832	2,647	4,489	5,622	8,152	11,466	14,268	18,714	22,317	25,960	32,100	38,151	42,374	47,309	50,771	53,416
1993	592	2,783	4,750	5,977	7,395	9,443	11,574	14,849	17,339	20,224	23,974	27,968	30,661	32,618	34,563	36,442	39,950
1994	124	1,884	4,167	6,853	10,066	13,555	16,658	20,658	25,521	29,088	32,602	37,697	40,789	43,699	46,963	50,680	54,220
1995	563	2,299	5,572	8,087	10,751	13,773	15,026	18,206	23,012	28,302	31,824	34,801	37,509	40,015	42,431	45,325	46,869
1996	456	3,246	5,746	7,134	9,417	10,751	13,015	16,891	20,422	23,118	25,307	26,503	28,233	29,506	30,861	32,043	33,051
1997	189	2,809	6,246	10,742	14,094	18,404	24,166	31,695	37,121	40,988	45,604	50,179	54,084	57,165	61,156	63,996	66,211
1998	226	3,810	8,521	15,328	23,120	31,072	40,345	47,525	53,058	57,203	61,004	65,198	68,067	71,905	74,581	77,362	79,658
1999	1,838	7,218	14,729	24,808	34,218	43,239	48,833	53,923	57,168	59,839	62,758	65,896	68,718	71,565	74,374	76,897	79,480
2000	448	3,833	9,728	15,841	20,239	23,143	25,683	27,336	29,565	31,973	34,435	36,446	38,322	40,996	44,484	47,460	53,425
2001	556	3,124	8,599	15,109	19,952	23,803	26,692	29,637	33,122	35,923	38,361	40,856	42,339	44,144	46,354	47,817	48,614
2002	289	8,693	18,066	23,876	29,291	32,775	35,421	38,851	41,509	45,169	47,030	49,111	51,072	52,920	53,618	54,764	55,456
2003	1,085	4,399	8,546	14,737	19,993	23,887	27,888	31,444	33,394	35,194	37,582	39,459	40,734	42,052	44,385	45,718	47,119
2004	1,271	3,698	6,478	8,755	11,299	13,288	15,840	18,582	20,821	22,878	25,501	27,178	29,140	31,060	32,113	33,358	34,156
2005	107	1,757	4,320	7,436	11,245	15,504	19,486	22,407	26,690	29,942	32,055	34,388	37,127	39,077	40,533	41,668	41,875
2006	92	2,179	6,271	10,040	13,517	17,880	23,132	26,060	29,341	31,636	33,692	35,283	36,184	37,362	37,845	38,015	38,207
2007	28	1,442	4,762	8,870	13,339	17,539	22,375	25,879	29,295	32,229	34,803	36,379	37,743	38,492	39,106	39,280	
2008	368	1,242	3,381	5,898	8,925	12,646	15,883	18,280	21,592	24,898	27,811	29,491	30,140	30,402	30,565		
2009	1,483	3,685	5,781	8,755	12,815	15,747	18,264	19,755	21,911	24,065	26,118	27,031	27,460	27,917			
2010	18	915	2,568	5,120	7,857	10,487	12,254	14,951	16,785	18,401	19,479	20,133	20,612				
2011	43	447	1,800	3,401	6,105	8,099	10,777	12,766	14,669	15,287	15,561	15,869					
2012	0	797	2,814	5,646	9,302	12,988	14,948	17,450	18,244	18,539	18,783						
2013	0	1,057	2,891	4,750	6,971	8,645	9,721	10,723	11,032	11,478							
2014	331	1,667	4,581	8,271	10,507	12,964	14,412	15,349	15,718								
2015	17	669	4,450	7,032	9,171	10,184	10,528	10,731									
2016	0	1,440	2,740	5,804	6,746	7,339	7,601										
2017	28	2,557	7,930	10,625	11,226	11,986											
2018	69	1,108	3,126	4,582	5,852												
2019	25	266	1,989	2,738													
2020	0	284	989														
2021	0	554															
2022	167																

Cumulative Gross Requested Amount (in 000s)

Reported Release Fiscal Year	Months of Maturity																
	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408
1989	11,209	11,691	11,984	12,674	12,926	13,335	13,606	14,050	14,342	14,531	14,917	15,478	15,638	15,821	16,221	16,920	16,973
1990	53,572	57,498	61,722	63,916	66,324	67,567	70,001	71,897	73,380	74,930	76,452	77,370	78,417	78,769	78,916	79,126	
1991	64,214	68,622	73,236	75,648	78,175	80,586	82,643	84,155	86,649	88,570	89,632	91,288	92,040	92,437	92,745		
1992	56,903	60,257	63,519	64,905	66,897	69,911	71,848	72,870	73,936	74,708	76,084	76,993	77,477	77,671			
1993	42,903	45,155	47,499	49,367	50,709	52,029	53,071	54,213	54,586	54,876	55,227	55,396	55,459				
1994	57,530	59,953	61,846	64,051	66,054	68,892	71,153	73,668	74,978	75,490	75,715	76,043					
1995	49,071	51,261	55,053	57,956	60,930	63,454	65,233	66,029	66,473	66,888	67,107						
1996	34,487	36,456	37,713	38,700	40,647	41,160	41,688	42,017	42,097	42,220							
1997	69,187	71,042	72,795	75,180	77,698	78,304	79,545	79,826	80,031								
1998	81,422	83,419	84,450	85,394	87,214	87,860	88,127	88,314									
1999	82,255	86,012	88,407	89,379	90,208	90,481	90,625										
2000	55,802	56,725	58,010	58,470	58,630	58,845											
2001	49,265	49,681	50,374	50,437	50,657												
2002	55,791	56,148	56,209	56,299													
2003	48,192	48,414	48,611														
2004	34,547	34,940															
2005	42,221																
2006																	
2007																	
2008																	
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2020																	
2021																	
2022																	





Cumulative Gross Requested Amount (in 000s)

Reported Release Fiscal Year	Age - To - Age Factors																
	216 - 228	228 - 240	240 - 252	252 - 264	264 - 276	276 - 288	288 - 300	300 - 312	312 - 324	324 - 336	336 - 348	348 - 360	360 - 372	372 - 384	384 - 396	396 - 408	408 - Ult
1989	1.043	1.025	1.058	1.020	1.032	1.020	1.033	1.021	1.013	1.027	1.038	1.010	1.012	1.025	1.043	1.003	
1990	1.073	1.073	1.036	1.038	1.019	1.036	1.027	1.021	1.021	1.020	1.012	1.014	1.004	1.002	1.003		
1991	1.069	1.067	1.033	1.033	1.031	1.026	1.018	1.030	1.022	1.012	1.018	1.008	1.004	1.003			
1992	1.059	1.054	1.022	1.031	1.045	1.028	1.014	1.015	1.010	1.018	1.012	1.006	1.003				
1993	1.052	1.052	1.039	1.027	1.026	1.020	1.022	1.007	1.005	1.006	1.003	1.001					
1994	1.042	1.032	1.036	1.031	1.043	1.033	1.035	1.018	1.007	1.003	1.004						
1995	1.045	1.074	1.053	1.051	1.041	1.028	1.012	1.007	1.006	1.003							
1996	1.057	1.034	1.026	1.050	1.013	1.013	1.008	1.002	1.003								
1997	1.027	1.025	1.033	1.033	1.008	1.016	1.004	1.003									
1998	1.025	1.012	1.011	1.021	1.007	1.003	1.002										
1999	1.046	1.028	1.011	1.009	1.003	1.002											
2000	1.017	1.023	1.008	1.003	1.004												
2001	1.008	1.014	1.001	1.004													
2002	1.006	1.001	1.002														
2003	1.005	1.004															
2004	1.011																
2005																	
2006																	
2007																	
2008																	
2009																	
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2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
Averages Exclu																	
5 Year	1.020	1.020	1.018	1.033	1.022	1.022	1.018	1.015	1.013	1.017							
10 Year	1.032	1.035	1.027	1.033	1.026												
All Year	1.041	1.039	1.030	1.031	1.026	1.024	1.021	1.017	1.013	1.017	1.020	1.011	1.008	1.025			
5 Yr Wgt	1.023	1.021	1.017	1.029	1.021	1.023	1.019	1.016	1.014	1.015							
10 Yr Wgt	1.031	1.033	1.026	1.031	1.026												
All Yr Wgt	1.040	1.039	1.027	1.030	1.026	1.025	1.021	1.017	1.014	1.015	1.016	1.011	1.006	1.025			
Selection	1.031	1.033	1.026	1.030	1.026	1.025	1.021	1.017	1.014	1.015	1.016	1.011	1.006	1.005	1.003	1.003	1.010
Age to Ult	1.334	1.293	1.252	1.220	1.184	1.155	1.126	1.104	1.085	1.070	1.054	1.038	1.027	1.021	1.016	1.013	1.010
% of Ult	74.99%	77.34%	79.88%	81.94%	84.43%	86.59%	88.78%	90.61%	92.15%	93.43%	94.86%	96.35%	97.37%	97.93%	98.42%	98.71%	99.01%

Cumulative Gross Paid Amount to Cumulative Gross Requested Amount Ratio

Reported Release Fiscal Year	Months of Maturity																
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
1989					0.291	0.290	0.294	0.237	0.409	0.416	0.404	0.464	0.471	0.503	0.533	0.550	0.568
1990				0.331	0.373	0.320	0.310	0.346	0.357	0.404	0.410	0.443	0.474	0.481	0.503	0.526	0.538
1991			0.055	0.097	0.196	0.186	0.269	0.304	0.331	0.385	0.426	0.469	0.503	0.539	0.563	0.577	0.583
1992		0.339	0.107	0.211	0.177	0.242	0.265	0.279	0.326	0.399	0.443	0.488	0.540	0.554	0.562	0.571	0.576
1993	0.088	0.078	0.186	0.195	0.266	0.300	0.327	0.403	0.448	0.481	0.512	0.545	0.561	0.571	0.582	0.594	0.587
1994	0.000	0.018	0.069	0.183	0.220	0.267	0.358	0.406	0.470	0.496	0.522	0.550	0.565	0.569	0.583	0.599	0.612
1995	0.086	0.041	0.144	0.161	0.203	0.299	0.337	0.384	0.430	0.490	0.518	0.540	0.547	0.559	0.572	0.587	0.595
1996	0.000	0.464	0.387	0.410	0.444	0.474	0.500	0.537	0.595	0.623	0.638	0.645	0.656	0.663	0.670	0.671	0.673
1997	0.000	0.468	0.424	0.463	0.524	0.571	0.582	0.634	0.645	0.659	0.656	0.669	0.675	0.679	0.686	0.688	0.693
1998	0.758	0.337	0.467	0.588	0.652	0.682	0.710	0.713	0.725	0.726	0.736	0.731	0.731	0.736	0.729	0.733	0.731
1999	0.197	0.342	0.548	0.664	0.692	0.713	0.722	0.718	0.723	0.725	0.726	0.720	0.725	0.719	0.716	0.717	0.713
2000	0.669	0.698	0.792	0.783	0.787	0.780	0.788	0.791	0.787	0.788	0.787	0.792	0.791	0.790	0.773	0.765	0.718
2001	0.290	0.557	0.702	0.728	0.728	0.738	0.740	0.751	0.746	0.743	0.751	0.739	0.743	0.743	0.736	0.735	0.735
2002	0.462	0.501	0.595	0.628	0.649	0.664	0.677	0.683	0.682	0.688	0.689	0.691	0.693	0.699	0.699	0.703	0.706
2003	0.356	0.389	0.581	0.674	0.704	0.718	0.713	0.729	0.740	0.744	0.755	0.764	0.769	0.765	0.767	0.770	0.771
2004	0.393	0.459	0.502	0.543	0.539	0.561	0.594	0.603	0.617	0.629	0.646	0.658	0.659	0.672	0.681	0.688	0.684
2005	0.000	0.461	0.621	0.679	0.691	0.693	0.713	0.714	0.720	0.719	0.729	0.728	0.740	0.747	0.752	0.750	0.749
2006	0.987	0.713	0.794	0.787	0.777	0.751	0.740	0.750	0.749	0.755	0.755	0.761	0.763	0.767	0.764	0.764	0.762
2007	0.975	0.444	0.512	0.561	0.618	0.632	0.639	0.633	0.644	0.636	0.648	0.660	0.669	0.670	0.671	0.669	
2008	0.649	0.649	0.672	0.695	0.711	0.732	0.716	0.729	0.730	0.745	0.761	0.769	0.770	0.770	0.770		
2009	0.470	0.570	0.591	0.620	0.667	0.665	0.677	0.684	0.704	0.720	0.721	0.718	0.715	0.708			
2010	0.000	0.551	0.662	0.691	0.726	0.731	0.732	0.757	0.778	0.774	0.766	0.762	0.753				
2011	0.000	0.610	0.726	0.700	0.748	0.746	0.788	0.774	0.787	0.782	0.782	0.773					
2012		0.771	0.737	0.770	0.754	0.774	0.797	0.815	0.816	0.815	0.811						
2013		0.535	0.702	0.656	0.695	0.736	0.739	0.734	0.737	0.728							
2014	0.142	0.641	0.662	0.729	0.768	0.781	0.762	0.756	0.754								
2015	0.000	0.520	0.750	0.812	0.827	0.806	0.800	0.791									
2016		0.544	0.639	0.782	0.783	0.780	0.769										
2017	0.992	0.922	0.842	0.833	0.827	0.814											
2018	0.977	0.651	0.690	0.673	0.623												
2019	0.937	0.681	0.411	0.377													
2020		0.393	0.422														
2021		0.030															
2022	0.000																

Cumulative Gross Paid Amount to Cumulative Gross Requested Amount Ratio

Reported Release Fiscal Year	Months of Maturity																
	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408
1989	0.582	0.592	0.598	0.611	0.614	0.620	0.621	0.623	0.627	0.630	0.629	0.642	0.645	0.649	0.655	0.659	0.658
1990	0.542	0.557	0.558	0.563	0.572	0.576	0.575	0.578	0.579	0.580	0.585	0.588	0.592	0.592	0.593	0.592	
1991	0.591	0.599	0.603	0.607	0.608	0.613	0.613	0.614	0.612	0.616	0.620	0.624	0.625	0.625	0.624		
1992	0.578	0.583	0.592	0.593	0.603	0.608	0.615	0.617	0.621	0.622	0.623	0.622	0.622	0.622			
1993	0.600	0.603	0.613	0.622	0.620	0.620	0.623	0.624	0.626	0.624	0.625	0.625	0.624				
1994	0.619	0.622	0.629	0.629	0.634	0.635	0.640	0.647	0.650	0.651	0.650	0.648					
1995	0.605	0.611	0.602	0.602	0.598	0.604	0.611	0.612	0.612	0.613	0.612						
1996	0.677	0.656	0.659	0.658	0.663	0.666	0.669	0.667	0.667	0.667							
1997	0.696	0.699	0.695	0.700	0.696	0.697	0.696	0.696	0.695								
1998	0.732	0.731	0.733	0.735	0.736	0.736	0.736	0.735									
1999	0.707	0.703	0.703	0.705	0.702	0.702	0.701										
2000	0.721	0.722	0.725	0.724	0.724	0.723											
2001	0.737	0.739	0.740	0.741	0.739												
2002	0.706	0.705	0.705	0.704													
2003	0.771	0.772	0.770														
2004	0.683	0.681															
2005	0.746																
2006																	
2007																	
2008																	
2009																	
2010																	
2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
2022																	



Cumulative Gross Paid Amount to Cumulative Gross Requested Amount Ratio

Reported Release Fiscal Year	Age - To - Age Factors																
	216 - 228	228 - 240	240 - 252	252 - 264	264 - 276	276 - 288	288 - 300	300 - 312	312 - 324	324 - 336	336 - 348	348 - 360	360 - 372	372 - 384	384 - 396	396 - 408	408 - Ult
1989	1.017	1.009	1.022	1.005	1.010	1.001	1.004	1.006	1.005	0.999	1.020	1.006	1.006	1.009	1.006	0.999	
1990	1.028	1.002	1.010	1.016	1.007	0.999	1.005	1.001	1.003	1.008	1.005	1.006	1.001	1.000	1.000		
1991	1.013	1.007	1.007	1.002	1.007	1.000	1.002	0.996	1.007	1.006	1.007	1.001	1.000	0.999			
1992	1.009	1.016	1.002	1.016	1.009	1.011	1.004	1.007	1.001	1.002	0.998	1.000	1.000				
1993	1.004	1.016	1.016	0.996	1.000	1.004	1.002	1.002	0.998	1.002	0.999	1.000					
1994	1.004	1.010	1.002	1.008	1.002	1.008	1.010	1.005	1.000	0.999	0.996						
1995	1.010	0.985	1.000	0.994	1.010	1.011	1.001	1.001	1.002	0.998							
1996	0.970	1.003	0.998	1.009	1.004	1.005	0.997	1.000	0.999								
1997	1.005	0.994	1.007	0.994	1.002	0.999	1.000	1.000									
1998	0.998	1.002	1.004	1.001	1.000	1.000	0.999										
1999	0.994	1.001	1.003	0.996	0.999	0.999											
2000	1.001	1.005	0.999	1.000	0.998												
2001	1.002	1.002	1.000	0.998													
2002	0.998	1.000	1.000														
2003	1.000	0.998															
2004	0.996																
2005																	
2006																	
2007																	
2008																	
2009																	
2010																	
2011																	
2012																	
2013																	
2014																	
2015																	
2016																	
2017																	
2018																	
2019																	
2020																	
2021																	
Averages Exclu																	
5 Year	0.999	1.001	1.002	0.999	1.004	1.005	1.003	1.002	1.002	1.003							
10 Year	0.999	1.003	1.004	1.003	1.005												
All Year	1.004	1.004	1.006	1.003	1.005	1.004	1.003	1.003	1.002	1.003	1.008	1.004	1.004	1.009			
5 Yr Wgt	0.999	1.001	1.002	0.999	1.003	1.005	1.003	1.002	1.002	1.003							
10 Yr Wgt	0.998	1.003	1.004	1.003	1.005												
All Yr Wgt	1.003	1.004	1.006	1.003	1.005	1.004	1.003	1.003	1.002	1.003	1.008	1.004	1.004	1.009			
Selection	1.001	1.003	1.005	1.003	1.005	1.004	1.003	1.003	1.002	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Age to Ult	1.033	1.032	1.028	1.024	1.021	1.015	1.011	1.008	1.005	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000
% of Ult	96.85%	96.92%	97.26%	97.70%	97.98%	98.47%	98.88%	99.18%	99.46%	99.68%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

## Net / Gross Ratio

Reported Release Fiscal Year	Total			
	Gross Paid Amount	Net Paid Amount	Net / Gross Ratio	Selected Net / Gross Ratio
	(1)	(2)	(3)	(4)
7/1/88 - 89	11,167,480	10,332,480	92.52%	92.50%
7/1/89 - 90	46,872,985	43,138,718	92.03%	92.50%
7/1/90 - 91	57,885,869	52,582,581	90.84%	90.00%
7/1/91 - 92	48,311,224	43,467,980	89.97%	90.00%
7/1/92 - 93	34,620,570	30,957,255	89.42%	90.00%
7/1/93 - 94	49,247,694	44,857,694	91.09%	90.00%
7/1/94 - 95	41,094,082	36,738,596	89.40%	90.00%
7/1/95 - 96	28,140,995	25,293,663	89.88%	90.00%
7/1/96 - 97	55,651,819	51,427,949	92.41%	92.50%
7/1/97 - 98	64,933,528	60,199,200	92.71%	92.50%
7/1/98 - 99	63,513,213	58,285,078	91.77%	92.50%
7/1/99 - 00	42,556,002	39,658,981	93.19%	92.50%
7/1/00 - 01	37,442,402	34,477,565	92.08%	92.50%
7/1/01 - 02	39,653,298	36,833,763	92.89%	92.50%
7/1/02 - 03	37,442,717	34,964,467	93.38%	92.50%
7/1/03 - 04	23,783,954	21,562,430	90.66%	92.50%
7/1/04 - 05	31,482,927	29,280,860	93.01%	92.50%
7/1/05 - 06	29,111,550	25,986,110	89.26%	92.50%
7/1/06 - 07	26,281,998	23,983,355	91.25%	92.50%
7/1/07 - 08	23,520,556	21,761,498	92.52%	92.50%
7/1/08 - 09	19,779,208	18,314,368	92.59%	92.50%
7/1/09 - 10	15,511,531	14,331,913	92.40%	92.50%
7/1/10 - 11	12,260,469	11,373,552	92.77%	92.50%
7/1/11 - 12	15,227,003	14,172,003	93.07%	92.50%
7/1/12 - 13	8,358,259	7,318,825	87.56%	90.00%
7/1/13 - 14	11,853,171	10,718,779	90.43%	90.00%
7/1/14 - 15	8,493,035	7,368,035	86.75%	90.00%
7/1/15 - 16	5,842,757	4,874,153	83.42%	90.00%
7/1/16 - 17	9,752,766	8,767,553	89.90%	90.00%
7/1/17 - 18	3,648,110	2,983,748	81.79%	90.00%
7/1/18 - 19	1,032,154	698,132	67.64%	90.00%
7/1/19 - 20	417,637	181,699	43.51%	90.00%
7/1/20 - 21	16,602	0	0.00%	90.00%
7/1/21 - 22	0	0	0.00%	90.00%
Total	904,907,566	826,892,984	91.38%	
			Weighted Average	91.38%
			Straight Average	85.82%
Notes:			Last 10 Years ex current	88.31%
(1)	Client Data		Last 5 Years ex current	84.96%
(2)	Client Data			
(3)	Col (2) / Col (1)			
(4)	Selected Net/Gross Ratio based on Col (3)			

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Average Severity Based On Open Incidents

Reported Release Fiscal Year	Open Incidents					
	Open Number of Incidents	Open Requested Amount	Open Net Requested	Open Paid Amount	Open Requested Net Severity	Open Paid Severity
	(1)	(2)	(3)	(4)	(5)	(6)
7/1/88 - 89	9	2,144,280	1,983,459	1,712,910	220,384	190,323
7/1/89 - 90	41	9,918,029	9,174,177	6,378,538	223,760	155,574
7/1/90 - 91	50	5,434,299	4,890,869	3,003,281	97,817	60,066
7/1/91 - 92	40	6,580,132	5,922,118	4,064,841	148,053	101,621
7/1/92 - 93	18	6,891,887	6,202,698	3,932,550	344,594	218,475
7/1/93 - 94	28	11,070,870	9,963,783	7,752,522	355,849	276,876
7/1/94 - 95	46	10,848,428	9,763,585	5,223,155	212,252	113,547
7/1/95 - 96	35	5,464,599	4,918,139	2,558,588	140,518	73,103
7/1/96 - 97	28	12,364,603	11,437,258	8,359,589	408,473	298,557
7/1/97 - 98	37	10,733,637	9,928,615	7,179,904	268,341	194,051
7/1/98 - 99	53	6,884,883	6,368,517	5,031,240	120,161	94,929
7/1/99 - 00	30	5,035,229	4,657,587	3,321,947	155,253	110,732
7/1/00 - 01	28	6,924,659	6,405,309	5,134,675	228,761	183,381
7/1/01 - 02	28	8,364,321	7,736,997	6,670,444	276,321	238,230
7/1/02 - 03	24	3,403,062	3,147,832	2,660,665	131,160	110,861
7/1/03 - 04	27	11,486,892	10,625,375	7,819,311	393,532	289,604
7/1/04 - 05	30	10,035,181	9,282,543	7,720,097	309,418	257,337
7/1/05 - 06	25	7,622,700	7,050,997	5,546,023	282,040	221,841
7/1/06 - 07	45	10,320,953	9,546,882	6,310,351	212,153	140,230
7/1/07 - 08	41	6,192,825	5,728,363	4,928,682	139,716	120,212
7/1/08 - 09	35	4,808,068	4,447,463	2,788,464	127,070	79,670
7/1/09 - 10	41	6,460,903	5,976,336	4,759,775	145,764	116,092
7/1/10 - 11	37	6,266,041	5,796,088	4,696,738	156,651	126,939
7/1/11 - 12	14	4,037,370	3,734,567	3,383,084	266,755	241,649
7/1/12 - 13	9	743,034	668,731	470,053	74,303	52,228
7/1/13 - 14	15	2,055,100	1,849,590	1,586,395	123,306	105,760
7/1/14 - 15	13	2,319,723	2,087,750	1,887,662	160,596	145,205
7/1/15 - 16	15	2,096,019	1,886,417	1,671,425	125,761	111,428
7/1/16 - 17	12	488,944	440,049	262,232	36,671	21,853
7/1/17 - 18	20	2,466,247	2,219,622	1,615,757	110,981	80,788
7/1/18 - 19	13	997,941	898,147	345,705	69,088	26,593
7/1/19 - 20	13	591,430	532,287	247,310	40,945	19,024
7/1/20 - 21	18	490,232	441,209	16,602	24,512	922
7/1/21 - 22	9	167,436	150,693	0	16,744	0
Total	927	191,709,959	175,864,054	129,040,514	189,713	139,202

## Notes:

- (1), (2), (4) Client Data  
(3) Col (2) x Exhibit 4.8 Col (4)  
(5) Col (3) / Col (1)  
(6) Col (4) / Col (1)

Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Average Severity Based On All Incidents

Reported Release Fiscal Year	Total					
	Total Number of Incidents	Total Requested Amount	Total Net Requested	Total Paid Amount	Total Requested Net Severity	Total Paid Severity
	(1)	(2)	(3)	(4)	(5)	(6)
7/1/88 - 89	35	16,973,379	15,700,375	11,167,480	448,582	319,071
7/1/89 - 90	147	79,126,163	73,191,701	46,872,985	497,903	318,864
7/1/90 - 91	205	92,745,417	83,470,875	57,885,869	407,175	282,370
7/1/91 - 92	183	77,671,448	69,904,303	48,311,224	381,991	263,996
7/1/92 - 93	133	55,458,660	49,912,794	34,620,570	375,284	260,305
7/1/93 - 94	157	76,043,324	68,438,992	49,247,694	435,917	313,680
7/1/94 - 95	171	67,107,157	60,396,442	41,094,082	353,196	240,316
7/1/95 - 96	118	42,219,744	37,997,769	28,140,995	322,015	238,483
7/1/96 - 97	147	80,030,543	74,028,252	55,651,819	503,594	378,584
7/1/97 - 98	166	88,313,673	81,690,148	64,933,528	492,109	391,166
7/1/98 - 99	200	90,624,541	83,827,700	63,513,213	419,139	317,566
7/1/99 - 00	118	58,844,879	54,431,513	42,556,002	461,284	360,644
7/1/00 - 01	108	50,657,194	46,857,905	37,442,402	433,869	346,689
7/1/01 - 02	106	56,298,611	52,076,215	39,653,298	491,285	374,088
7/1/02 - 03	91	48,611,044	44,965,215	37,442,717	494,123	411,458
7/1/03 - 04	85	34,940,352	32,319,826	23,783,954	380,233	279,811
7/1/04 - 05	92	42,220,777	39,054,219	31,482,927	424,502	342,206
7/1/05 - 06	123	38,207,080	35,341,549	29,111,550	287,330	236,679
7/1/06 - 07	108	39,280,090	36,334,083	26,281,998	336,427	243,352
7/1/07 - 08	102	30,565,303	28,272,905	23,520,556	277,185	230,594
7/1/08 - 09	88	27,917,380	25,823,577	19,779,208	293,450	224,764
7/1/09 - 10	82	20,611,877	19,065,986	15,511,531	232,512	189,165
7/1/10 - 11	65	15,869,051	14,678,872	12,260,469	225,829	188,623
7/1/11 - 12	44	18,782,771	17,374,063	15,227,003	394,865	346,068
7/1/12 - 13	44	11,478,312	10,330,481	8,358,259	234,784	189,960
7/1/13 - 14	55	15,718,223	14,146,401	11,853,171	257,207	215,512
7/1/14 - 15	48	10,731,470	9,658,323	8,493,035	201,215	176,938
7/1/15 - 16	44	7,600,755	6,840,680	5,842,757	155,470	132,790
7/1/16 - 17	74	11,985,916	10,787,324	9,752,766	145,775	131,794
7/1/17 - 18	52	5,852,306	5,267,075	3,648,110	101,290	70,156
7/1/18 - 19	35	2,738,389	2,464,550	1,032,154	70,416	29,490
7/1/19 - 20	35	988,802	889,922	417,637	25,426	11,932
7/1/20 - 21	44	553,772	498,394	16,602	11,327	377
7/1/21 - 22	10	167,436	150,693	0	15,069	0
Total	3,315	1,316,935,838	1,206,189,122	904,907,566	363,858	272,974

## Notes:

- (1), (2), (4) Client Data  
(3) Col (2) x Exhibit 4.8 Col (4)  
(5) Col (3) / Col (1)  
(6) Col (4) / Col (1)



Indiana Department of Environmental Management - Excess Liability Trust Fund  
Analysis as of 12/21/2021

Average Severity Based On Closed Incidents

Reported Release Fiscal Year	Closed Incidents					
	Closed Number of Incidents	Closed Requested Amount	Closed Net Requested	Closed Paid Amount	Closed Requested Net Severity	Closed Paid Severity
	(1)	(2)	(3)	(4)	(5)	(6)
7/1/88 - 89	26	14,829,099	13,716,916	9,454,570	527,574	363,637
7/1/89 - 90	106	69,208,134	64,017,524	40,494,447	603,939	382,023
7/1/90 - 91	155	87,311,118	78,580,006	54,882,588	506,968	354,081
7/1/91 - 92	143	71,091,316	63,982,185	44,246,384	447,428	309,415
7/1/92 - 93	115	48,566,773	43,710,095	30,688,020	380,088	266,852
7/1/93 - 94	129	64,972,454	58,475,208	41,495,172	453,296	321,668
7/1/94 - 95	125	56,258,729	50,632,857	35,870,927	405,063	286,967
7/1/95 - 96	83	36,755,145	33,079,631	25,582,407	398,550	308,222
7/1/96 - 97	119	67,665,940	62,590,994	47,292,230	525,975	397,414
7/1/97 - 98	129	77,580,036	71,761,533	57,753,624	556,291	447,703
7/1/98 - 99	147	83,739,658	77,459,184	58,481,972	526,933	397,837
7/1/99 - 00	88	53,809,650	49,773,927	39,234,055	565,613	445,842
7/1/00 - 01	80	43,732,536	40,452,596	32,307,727	505,657	403,847
7/1/01 - 02	78	47,934,290	44,339,218	32,982,855	568,452	422,857
7/1/02 - 03	67	45,207,982	41,817,383	34,782,053	624,140	519,135
7/1/03 - 04	58	23,453,460	21,694,451	15,964,643	374,042	275,252
7/1/04 - 05	62	32,185,596	29,771,676	23,762,831	480,188	383,271
7/1/05 - 06	98	30,584,380	28,290,552	23,565,527	288,679	240,465
7/1/06 - 07	63	28,959,136	26,787,201	19,971,648	425,194	317,010
7/1/07 - 08	61	24,372,477	22,544,541	18,591,874	369,583	304,785
7/1/08 - 09	53	23,109,312	21,376,113	16,990,744	403,323	320,580
7/1/09 - 10	41	14,150,973	13,089,650	10,751,756	319,260	262,238
7/1/10 - 11	28	9,603,010	8,882,784	7,563,731	317,242	270,133
7/1/11 - 12	30	14,745,401	13,639,496	11,843,919	454,650	394,797
7/1/12 - 13	35	10,735,278	9,661,750	7,888,205	276,050	225,377
7/1/13 - 14	40	13,663,123	12,296,810	10,266,776	307,420	256,669
7/1/14 - 15	35	8,411,747	7,570,572	6,605,374	216,302	188,725
7/1/15 - 16	29	5,504,736	4,954,262	4,171,333	170,837	143,839
7/1/16 - 17	62	11,496,972	10,347,275	9,490,534	166,892	153,073
7/1/17 - 18	32	3,386,059	3,047,453	2,032,353	95,233	63,511
7/1/18 - 19	22	1,740,448	1,566,403	686,449	71,200	31,202
7/1/19 - 20	22	397,372	357,635	170,327	16,256	7,742
7/1/20 - 21	26	63,539	57,185	0	2,199	0
7/1/21 - 22	1	0	0	0	0	0
Total	2,388	1,125,225,879	1,030,325,068	775,867,053	431,459	324,902

## Notes:

- (1), (2), (4) Client Data  
(3) Col (2) x Exhibit 4.8 Col (4)  
(5) Col (3) / Col (1)  
(6) Col (4) / Col (1)



Calendar <u>Year</u> (1)	% Veh Current <u>MY</u> (2)	% EV <u>Sales</u> (3)
2016	2.0%	0.5%
2017	1.7%	1.0%
2018	1.7%	1.6%
2019	1.6%	1.8%
2020	1.6%	2.0%
2021	1.6%	5.6%
2022	1.6%	9.2%
2023	1.6%	12.8%
2024	1.6%	16.4%
2025	1.6%	20.0%
2026	1.6%	28.0%
2027	1.6%	36.0%
2028	1.6%	44.0%
2029	1.6%	52.0%
2030	1.6%	60.0%
2031	1.6%	64.0%

Column

(2) From Exhibit 6, Page 1

(3) Various sources including

"The electric-vehicle revolution", The Week, February 25, 2022

Rowlatt, Justin, "Why electric cars will take over sooner than you think", June 20, 2021





Changes in Fuel Consumption  
Annual Miles Driven (Millions)

Calendar Year	Millions Miles per Year	% of Registered Vehicles		Gas Vehicles MPG	Miles Driven		Fuel		Change in Fuel Consumption		
		Gas	Electric		Gas Vehicles	Electric Vehicles	Gas Vehicles	Electric Vehicles	Indicated	IN Actual	Selected
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2012	2,960,456										
2013	2,988,281									2.2%	
2014	3,025,656									0.5%	
2015	3,095,372									8.2%	
2016	3,165,734									3.5%	
2017	3,212,346									-1.1%	
2018	3,240,325									-3.2%	
2019	3,261,771									-2.7%	
2020	2,895,688	99.5%	0.5%	22.3	2,879,939	15,748	129,371	0		-8.0%	
2021	3,224,553	99.1%	0.9%	22.6	3,194,825	29,728	141,101	0	9.1%	9.8%	9%
2022	3,327,562	98.5%	1.5%	23.1	3,277,026	50,536	141,801	0	0.5%		1%
2023	3,396,577	97.7%	2.3%	23.7	3,316,824	79,753	140,206	0	-1.1%		-1%
2024	3,464,509	96.6%	3.4%	24.3	3,346,506	118,003	137,735	0	-1.8%		-1%
2025	3,533,799	95.2%	4.8%	25.0	3,365,733	168,066	134,690	0	-2.2%		-2%
2026	3,604,475	93.4%	6.6%	25.7	3,368,149	236,326	131,242	0	-2.6%		-2%
2027	3,676,564	91.2%	8.8%	26.3	3,352,136	324,428	127,472	0	-2.9%		-3%
2028	3,750,095	88.4%	11.6%	26.8	3,316,184	433,912	123,827	0	-2.9%		-3%
2029	3,825,097	85.2%	14.8%	27.1	3,259,660	565,437	120,373	0	-2.8%		-3%
2030	3,901,599	81.6%	18.4%	27.1	3,184,999	716,600	117,606	0	-2.3%		-3%
2031	3,979,631	77.8%	22.2%	26.8	3,097,738	881,893	115,384	0	-1.9%		-3%

Column

- (2) 2012-2023 from U.S. Energy Information Administration; subsequent trended 2.0%
- (3) From Exhibit 6
- (4) 100% - Col (3)
- (5) Exhibit 6, Pages 3-4, Average MPG
- (6) Col (2) x Col (3)
- (7) Col (2) x Col (4)
- (8) Col (6) / Col (5)
- (10) Col (8) / Prior Col (8) - 1
- (11) <https://www.eia.gov/opendata/qb.php?category=1039999&sdid=STEO.MVVMPUS.A>
- (12) Based on Col (10)

## List of Reviewed Claims:

**Eckrich Meats/John Morrell & Company, Ft. Wayne**

**Facility I.D. #2594**

**IDEM Incident #199305530,**

**Document #80445938,**

**AI ID #1383.**

**Date of release: May 17, 1993**

**Applicant was the responsible party/property owner.**

**Status: NFA with conditional closure.**

**Total reimbursed: \$573,480**

**Clark Store #1690, Indianapolis**

**Facility I.D. #2934**

**IDEM Incident #199505526**

**Document #80542472**

**AI ID #16951**

**Date of Release: May 1995**

**Applicant was the vendor/consultant.**

**Status: NFA with conditional closure**

**Total reimbursed: \$1,411,725**

**Shell Facility #137254, Gary**

**Facility I.D. #589**

**IDEM Incident #199902515**

**Document #80573960**

**AI ID #17047**

**Date of Release: January 12, 1999**

**Applicant is the responsible party.**

**Status: NFA pending the receipt of ERC documentation.**

**Total reimbursed: \$340,787**

**Former Gas America 11, Muncie**

**Facility I.D. #10523**

**IDEM Incident #200502501**

**Document #82814265**

**AI ID #4536**

**Date of Release: February 19, 2005**

**Applicant is the vendor/consultant.**

**Status: NFA pending the receipt of ERC documentation.**

**Total reimbursed: \$1,749,263**

**Speedway #8087, New Castle**

**Facility I.D. #2512**

**IDEM Incident #200707503**

**Document #82791091**

**AI ID #46111**

**Date of Release: July 11, 2007**

**Applicant was the owner/operator**

**Status: NFA with conditional closure**

**Total reimbursed: \$186,148**

**Yoder Mart #2, Elkhart**

**Facility I.D. #15256**

**IDEM Incident #201205505**

**Document #82822363**

**AI ID #30344**

**Date of Release: May 21, 2012**

**Applicant is the vendor/consultant.**

**Status: Very high dissolved phase contamination and free product remain, reactivation of the remediation system is recommended by the consultant.**

**Total reimbursed: \$987,314**

**Former Clark #736, Ft. Wayne**

**Facility I.D. #2900**

**IDEM Incident #199802517**

**Document #82869285**

**AI ID #153**

**Date of Release: February 1998**

**Applicant is the vendor/consultant.**

**Status: Remediation (SVE/AS) continues.**

**Total Reimbursed: \$1,793,613**

**Former Tobacco Road, Muncie**

**Facility I.D. #5588**

**IDEM Incident #200107511**

**Document #83147549**

**AI ID #2001**

**Date of Release: June 4, 1999**

**Applicant was the vendor/consultant**



**Status: NFA with conditional closure**

**Total Reimbursed: \$222,582**

**Former Phillips 66, Indianapolis**

**Facility I.D. #12211**

**IDEM Incident #199609531**

**Document #83177691**

**AI ID #17270**

**Date of Release: September 1996**

**Applicant was the vendor/consultant**

**Status: NFA with conditional closure**

**Total Reimbursed: \$604,093**

**Former Clark 1795, Indianapolis**

**Facility I.D. #2941**

**IDEM Incident #199703516**

**Document #83226440**

**AI ID #17591**

**Date of Release: May 1997**

**Applicant was the vendor/consultant**

**Status: NFA with conditional closure**

**Total Reimbursed: \$1,083,859**

**Speedway #7373, Crown Point**

**Facility I.D. #11201**

**IDEM Incident #201506518**

**AI ID #17179**

**Date of Release: June 19, 2015**

**Applicant was the owner/responsible party**

**Status: NFA with conditional closure**

**Total Reimbursed: \$81,096**

**Ossian Deli, Ossian**

**Facility I.D. #6142**

**IDEM Incident #200609213**

**AI ID #57145**

**Date of Release: September 28, 2006**

**Applicant was the owner/responsible party**

**Status: NFA with unconditional closure**

**Total Reimbursed: \$312,467**

**Blue & White Truck Stop, Pittsboro**

**Facility I.D. #2679**

**IDEM Incident #199809510**

**AI ID #44813**

**Date of Release: September 1998**

**Applicant was the vendor/consultant**

**Status: NFA with conditional closure**

**Total Reimbursed: \$1,828,963**

## Brownfields claims:

**Waco Service/Rick's Muffler & Brakes, Anderson**

**Facility I.D. #22628**

**BFD #4150711**

**IDEM Incident #201602504**

**AI ID #43928**

**Date of Release: February 2016**

**Budget preapproval required; invoices submitted directly for Brownfields/IFA review**

**Status: NFA-conditional closure**

**Total Reimbursed: \$279,009**

**Prewitt Theater, Plainfield**

**Facility I.D. #NA**

**BFD #4180911**

**IDEM Incident #: NA**

**AI ID #122532**

**Date of Release: NA**

**Budget preapproval required; invoices submitted directly for Brownfields/IFA review**

**Status: Closed – release not verified**

**Total Reimbursed: \$6,828**

**FI Mitchell Construction Corp., Veedersburg**

**Facility I.D. #5847**

**BFD #4150212**

**IDEM Incident #: 201601504**

**AI ID #33731**

**Date of Release: January 2016**

**Budget preapproval required; invoices submitted directly for Brownfields/IFA review**

**Status: NFA with conditional closure**

**Total Reimbursed: \$276,312**

**Tobacco Road 77, North Vernon**

**Facility I.D. #2958**

**BFD #4171003**

**IDEM Incident #: 201801519**

**AI ID #17607**

**Date of Release: January 2018**

**Budget preapproval required; invoices submitted directly for Brownfields/IFA review**

**Status: NFA with unconditional closure**

**Total Reimbursed: \$105,854**

## Recent SOW Approved Claims:

**Dekalb Bus Barn, Waterloo**

**Facility I.D. #9127**

**IDEM Incident #199410545**

**AI ID #2662**

**Date of Release: October 29, 1992**

**Applicant is the Dekalb County Central United School District**

**Status: Vapor sampling is being completed prior to potential site closure.**

**Total Reimbursed: \$532,224**

**T-Mart Marathon Station, Wheatfield**

**Facility I.D. #16011**

**IDEM Incident #201209500**

**AI ID #39734**

**Date of Release: June 18, 2012**

**Applicant was the vendor/consultant**

**Status: NAR with unconditional closure**

**Total Reimbursed: \$2,235,419**

**S&S Petroleum/Hebron Marathon, Hebron**

**Facility I.D. #7339**

**IDEM Incident #201711501**

**AI ID #50117**

**Date of Release: November 2, 2017**

**Applicant is the vendor/consultant**

**Status: NAR with conditions is pending IDEM review**

**Total Reimbursed: \$334,745**

**Morgantown Service (MOCO), Morgantown**

**Facility I.D. #11732**

**IDEM Incident #200809514**

**AI ID #41407**

**Date of Release: September 28, 2008**

**Applicant is the vendor/consultant**

**Status: Site appears to be nearing regulatory closure**

**Total Reimbursed: \$303,716**

**Rob's Auto Repair/Mullis Petroleum, Springville**

**Facility I.D. #11938**

**IDEM Incident #201611509**

**AI ID #31068**

**Date of Release: November 11, 2016**

**Applicant is the vendor/consultant**

**Status: Site appears to be nearing regulatory closure**

**Total Reimbursed: \$92,092**

**Milltown Mini Mart/Mullis Petroleum, Milltown**

**Facility I.D. #18127**

**IDEM Incident #201610510**

**AI ID #5325**

**Date of Release: October 13, 2016**

**Applicant is the vendor/consultant**

**Status: Quarterly monitoring**

**Total Reimbursed: \$145,516**

**Aubrey's Import Auto/Mullis Petroleum, Bedford**

**Facility I.D. #11931**

**IDEM Incident #201610513**

**AI ID #33468**

**Date of Release: October 19, 2016**

**Applicant is the vendor/consultant**

**Status: NAR with conditional closure pending IDEM review**

**Total Reimbursed: \$310,761**

**Medora Kwik Stop/Mullis Petroleum, Medora**

**Facility I.D. #22074**

**IDEM Incident #201609508**

**AI ID #32360**

**Date of Release: November 11, 2016**

**Applicant is the vendor/consultant**

**Status: A Further Site Investigation (FSI) was requested on June 10, 2022**  
**Total Reimbursed: \$173,537**

**Campbellsburg Supply Facility/Mullis Petroleum, Campbellsburg**  
**Facility I.D. #11932**  
**IDEM Incident #201610520**  
**AI ID #60129**  
**Date of Release: October 26, 2016**  
**Applicant is the vendor/consultant**  
**Status: Quarterly monitoring**  
**Total Reimbursed: \$107,198**

**4 Points 76 Service Station/Mullis Petroleum, Mitchell**  
**Facility I.D. #8384**  
**IDEM Incident #200305511**  
**AI ID #33398**  
**Date of Release: May 22, 2003**  
**Applicant was the vendor/consultant**  
**Status: NFA with unconditional closure**  
**Total Reimbursed: \$160,599**

**English Mini Mart/Mullis Petroleum, English**  
**Facility I.D. #18161**  
**IDEM Incident #201610521**  
**AI ID #2562**  
**Date of Release: October 28, 2016**  
**Applicant is the vendor/consultant**  
**Status: NAR with unconditional closure pending IDEM review**  
**Total Reimbursed: \$132,595**

## **OHIO**

Reimbursement is based upon site-specific risk-based end points.

Fund limits are \$ 1million per occurrence.

Estimated Ultimate Average Loss per claim as of 06/30/2021 was \$55,650 (plus \$10,000 deductible) based upon most recent actuarial analysis.

Ownership interest of the site is necessary for reimbursement.

Ohio requires pre-approval for:

- Interim Response Actions requiring BUSTR approval
- Remedial Action Plans (RAPs)
- When the estimated costs exceed \$6,000 for:
  - Tier 3 Evaluation Plans
  - Plans to calibrate or disprove the fate and transport model
  - Monitoring Plans associated with tier evaluation reports
- Free Product (FP) Monitoring Plans in conjunction with a Tier 2 Evaluation report
- Free product recovery (FPR) evaluations if recovery continues beyond one year

After initial pre-approval of the estimated costs is granted, responsible persons must annually submit pre-approval applications to the Board's Director for costs associated with RAP, FP monitoring and FPR activities, unless allowed otherwise by the Director.

In addition, a revised estimated cost and completion schedule is required to be submitted if during implementation of the corrective action activities for which cost pre-approval:

- has been granted, the actual costs are anticipated to exceed the lesser of \$6,000 or 20% of the pre-approved amount; or
- was not sought because the estimated costs did not exceed \$6,000, but the actual costs will exceed \$6,000.

Pursuant to rule 3737-1-09(A)(13), failure to seek cost pre-approval when required will limit reimbursement to 50% of the usual, customary and reasonable costs of the least expensive alternative for similar corrective action activities as determined from the Fund's experience.

An owner/operator also may submit costs for voluntary pre-approval before beginning any other work on the site, such as immediate corrective action, site assessment, pilot testing, etc. The owner/operator will be notified in writing of the costs that are pre-approved for the scope of work proposed.

Upon the proper submission of a claim application in accordance with O.A.C. 3737-1-12, actual corrective action costs which are typical based on the Fund's experience for similar work, and are documented and eligible for reimbursement in accordance with the Board's rules will be reimbursed.

Ohio does not pay for:

- Administrative costs, such as bookkeeping or form preparation (eligibility, claim, invoices, proposals)
- Any undocumented costs that cannot be audited.

The maximum allowable markup of a subcontractor's actual cost is 10%. No markup will be paid on any of the following:

- costs of soil removal, including soil excavation, stockpiling, loading and hauling;
- costs of soil disposal facilities, including landfill facilities;
- costs of soil treatment facilities, including thermal treatment and bioremediation facilities;
- costs of liquid removal and disposal;
- markup charged by the subcontractor(s);
- primary contractor or primary consultant internal expenses including labor, supplies, per diem travel expenses, and intra-company billings; and charges on supplies, materials and equipment; and
- markups on the costs of a tank owner's own employees for remediation activities. Only actual wages and fringes may be reimbursed from the Fund.

If a responsible person fails to submit cost estimates for pending corrective actions to the Board when pre-approval is required, reimbursement will be limited to no more than 50% of the usual, customary, and reasonable costs of the least expensive remedial alternative as determined from the Fund's experience.

### Illinois

Illinois uses Tiered Approach to Corrective Action Objectives (TACO) to determine corrective action goals. Illinois EPA-approved groundwater ordinances must be used as an institutional control when determining required corrective action objectives.

Average paid per claim is \$84,703 reported 2020 compared to \$298,292 reported in Indiana.

Illinois has a \$1.5 million per occurrence limit.

Eligibility for reimbursement requires an ownership interest in the subject site.

Illinois has maximum amounts allowed for specific tasks listed in administrative code. For example:

**a)** Payment for costs associated with each round of drilling must not exceed the following amounts. Such costs must include, but are not limited to, those associated with mobilization, drilling labor, decontamination, and drilling for the purposes of soil sampling or well installation.

Type of Drilling	Maximum Total Amount
Hollow-stem auger	greater of \$23 per foot or \$1,500
Direct-push platform	
- for sampling or other non-injection purposes	greater of \$18 per foot or \$1,200
- for injection purposes	greater of \$15 per foot or \$1,200

**b)** Payment for costs associated with the installation of monitoring wells, excluding drilling, must not exceed the following amounts. Such costs must include, but are not limited to, those associated with well construction and development.

Type of Borehole	Maximum Total Amount
------------------	----------------------

Hollow-stem auger	\$16.50 /foot (well length)
Direct-push platform	\$12.50 /foot (well length)

c) Payment for costs associated with the installation of recovery wells, excluding drilling, must not exceed the following amounts. Such costs must include, but are not limited to, those associated with well construction and development.

Well Diameter	Maximum Total Amount
4 or 6 inches	\$25.00 /foot (well length)
8 inches or greater	\$41.00 /foot (well length)

d) Payment for costs associated with the abandonment of monitoring wells must not exceed \$10 per foot of well length.

*Ill. Admin. Code tit. 35, § 734.820*

All costs must be included in the unit rates.

Owners may choose to obtain competitive bids for specific projects. A minimum of three bids is required and the requested scope of services must be included when requesting approval from the Fund.

Most reimbursable expenses must be pre-approved (does not apply to “early action activities”).

### **Kentucky**

Average paid per claim is \$78,313 (2020) compared to \$298,292 in Indiana.

Kentucky has a \$1 million per occurrence limit.

Pre-approval of costs and competitive bidding are utilized along with an approved fee schedule.

Eligibility requires ownership interest in subject site.

### **Michigan**

Average paid per claim is \$39,277 (2020) compared to \$298,292 in Indiana. (However, Michigan reported claims and reported total incurred indicate much greater claim average...).

Michigan has a \$ 1 million per occurrence limit.

Eligibility requires ownership interest in subject site.

Michigan utilizes a 17-page cost schedule similar to Indiana. Some tasks require competitive bidding. Work that requires competitive bidding and is found by the MUSTA Administrator to be improperly bid/not bid will be reimbursed at 50% of the maximum allowed by the Schedule of Costs as long as all other eligibility requirements are met.

Administrative costs, such as bookkeeping or form preparation, including but not limited to, eligibility, claim, invoices, and proposals, contractor costs or subcontractor costs not directly related to corrective action activities, such as the following:

- Budgeting
- Changing contractors are not eligible for reimbursement.

Tasks performed (rather than the employee’s title or usual wage rate) will be used to determine the rates at which consultant labor charges will be reimbursed. Typical tasks for each personnel title can be



found in MUSTA's Professional and Technical Position Classifications for the Underground Storage Tank Cleanup Fund.

The following services are not included in the cost schedule and must be competitively bid by the consultants in accordance with the procedure listed below (with at least 3 competitive bids).

- Excavation, transportation, and disposal of contaminated soil that is not performed as an initial response action and the removal of which is necessary to achieve restricted closure
- Bids must specify units in tons for soil removal/disposal and backfill. If a landfill does not weigh incoming soil, then a variance request must be submitted for approval prior to completion of work.
- Removal and disposal of contaminated liquid (not tank contents) that is not performed as an initial response action
- Purchase, construction, and installation of treatment systems
- Purchase, construction, and installation of vapor mitigation systems (Passive and/or Active)
- Decommissioning of treatment systems
- Abandonment/replacement of water supply wells
- Drilling services for wells exceeding two inches in diameter
- Drilling in bedrock or in unconsolidated soils greater than 60 feet below ground surface
- Sonic Drilling
- Ultra-Violet Optical Screening Tool, Laser-Induced Fluorescence, or Membrane Interface Probe
- Mobile laboratory services
- Replacement and repair of blacktop or concrete surface cover that was removed or damaged in association with eligible and necessary corrective actions
- Professional surveying services greater than \$2,000 per event

Written pre-approval is required for:

- Goods and services provided by the owner/operator.
- Charges related to additional "initial response" soil or liquid removal as described in the Schedule of Costs Note 4.
- Charges related to the excavation and disposal of more than 1,500 tons of eligible soil.
- Eligible labor of a Professional 4 (MUSTA Schedule of Costs rate Code# 1-1) that exceeds 4 hours per calendar month.
- Required competitive bids where less than 3 bids were obtained.
- Required competitive bids where the lowest bidder was not accepted.
- Invoices submitted for less than the minimum requirement of \$5,000 unless it is the final invoice to be submitted.