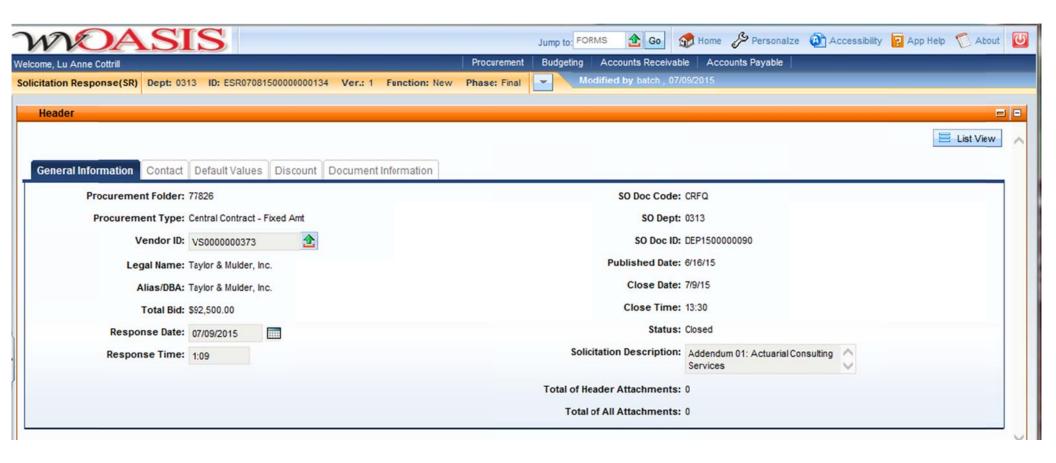


2019 Washington Street, East Charleston, WV 25305 Telephone: 304-558-2306 General Fax: 304-558-6026 Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.





Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

State of West Virginia Solicitation Response

Proc Folder: 77826

Solicitation Description: Addendum 01: Actuarial Consulting Services

Proc Type: Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation No	Version
	2015-07-09 13:30:00	SR 0313 ESR07081500000000134	1

VENDOR

VS000000373

Taylor & Mulder, Inc.

Taylor & Mulder, Inc.

FOR INFORMATION CONTACT THE BUYER

Beth Collins (304) 558-2157 beth.a.collins@wv.gov

Signature X FEIN # DATE

All offers subject to all terms and conditions contained in this solicitation

Page: 1 FORM ID: WV-PRC-SR-001

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount			
1	Actuarial consulting services	1.00000	JOB	\$92,500.00	\$92,500.00			

Comm Code	Manufacturer	Specification	Model #
80101512			

Extended Description :

Actuarial consulting services for the WVDEP Office of Special Reclamation



Taylor & Mulder, Inc. Proposal to Provide Actuarial Services for WVDEP Office of Special Reclamation



10508 Rivers Bend Lane, Potomac, MD 20854

t (301) 365-4800 f (301) 365-4882 e contact@taylorandmulder.com

w taylorandmulder.com

July 9, 2015

Ms. Beth A Collins, Senior Buyer Department of Administration, Purchasing Division 2019 Washington Street, East Charleston, WV 25305

Dear Ms. Collins,

Please find enclosed our proposal to provide actuarial consulting services to the West Virginia Department of Environmental Protection ("WVDEP"). Taylor & Mulder would be pleased to provide the actuarial services outlined in the request for proposal. We are particularly pleased, in fact, for several reasons:

- We are a local firm, with our headquarters outside of Washington, DC,
- We are a 100% Women-owned business, and
- We have extensive experience in catering to the particular needs of government clients (with strong focus on state pollution cleanup funds) over 17 years.
- Because of our small size, we are able to offer personally tailored service, tight turnaround times, and competitive pricing as a result of very low overhead.

Per item 11 in the RFQ document, the following is the contact information for our primary contact who will act as the contract manager for this project:

Name: Daniel W. Lupton, FCAS, MAAA, MBA

Phone: (301) 956-9199 Fax: (301) 365-4882

E-mail: dlupton@taylorandmulder.com

Please note additionally that our Cost Proposal may be found attached to this proposal document as Appendix A, and our resumes as Appendix B.

We would like to thank you for the opportunity to present our qualifications to the WVDEP. Should you wish to discuss any items contained in this response, please do not hesitate to call me at (301) 956-9199.

Sincerely,

Daniel W. Lupton, FCAS, MAAA, MBA

Vice President

Taylor & Mulder, Inc. Proposal to Provide Actuarial Services for WVDEP Office of Special Reclamation

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Executive Summary

Taylor & Mulder, Inc. is a 100% woman-owned property & casualty actuarial consulting firm. We offer complete actuarial solutions, including loss and loss adjustment expense reserve opinions, financial projections, cost and capital allocation, premium adequacy and rate analysis, and excess insurance or reinsurance analysis. We have offices outside of Washington, DC, as well as Salt Lake City, Philadelphia, and New York City.

Four qualified actuaries with over 100 years' combined experience will be assigned to provide actuarial services for the WVDEP.

Taylor & Mulder prides itself on the quality of its work. This commitment to quality informs our process, which has been developed since Taylor & Mulder was incorporated in 1998.

At Taylor & Mulder, each work product is different, and analyses are always undertaken with the utmost consideration of the client's needs and the data available. However, work products are prepared to be consistent with our high standards for:

- 1. Comprehensibility of deliverables
- 2. Accuracy of results
- 3. Appropriateness of findings and recommendations
- 4. Quality and consistency of data
- 5. Peer review

Taylor & Mulder projects have ranged from simple single-line self-insured clients to projects requiring analysis of over 500,000 open claims from the 1950s to the present, including greater than 20 companies' data, and covering greater than 20 lines of business. We provide financial analyses for clients ranging from numerous state and local governments and municipalities to some of the largest insurers in the country.

Our commitment to the some of the most trusted and reliable work in the industry is evidenced by our role in many high-profile legal cases. Taylor & Mulder actuaries have testified in arbitration and legal proceedings wherein we defended our work against adversarial actuaries and lawyers while explaining actuarial analyses to judges and juries in simple and understandable terms. Many of our cases settle after we provide deposition testimony. We have never lost a case in which we have testified as experts.

We specialize in explaining detailed, complex analyses to our clients in ways that everyone can understand. Because of our small size, we are able to provide personalized services to every client while handling complicated assignments under tight timeframes. Each of our principals is actively involved in each project, and each of our projects is peer-reviewed, ensuring the actuarial integrity of our work product and the satisfaction of our clients.

For more information about our firm's history and services, we invite you to visit us on the web at http://www.taylorandmulder.com.

Our Actuaries

Our Team

Our team of actuarial consultants assigned to this project includes:

Evelyn Toni Mulder, FCAS, MAAA, FCA – Ms. Mulder, the President of Taylor & Mulder, will be responsible for the writing data request letters, asking questions about insurance companies, clarifying the information received, and conducting the analysis. The final responsibility for sign off on the report will rest with Evelyn Toni Mulder. Ms. Mulder will be the project manager on this project.

Jane Taylor, FCAS, MAAA, JD – Ms. Taylor, Vice President of Taylor & Mulder, will peer review the analysis and assist in writing the report. The responsibility for the final thorough peer review will rest with Jane Taylor. Jane Taylor will be the peer reviewer on this report.

Daniel Lupton, FCAS, MAAA, MBA – Mr. Lupton, Vice President of Taylor & Mulder, will be responsible for inputting data, data manipulation, and advanced programming tasks. Mr. Lupton will process information and structure it in a format conducive to analysis. He will program loss development factors and make the initial selection of factors, and program the cash flow analysis and discounting exhibits. Mr. Lupton will be the consultant on this project.

Resumes for our actuaries may be found attached as **Appendix B**.

Qualification 3.1

Note that in satisfaction of **requirement 3.1.1**, all actuaries assigned to this project are Members in good standing with the American Academy of Actuaries and Fellows of the Casualty Actuarial Society. In addition, all personnel assigned to this project have satisfied **requirement 3.1.2** to be current in continuing professional education requirements.

Experience

The actuaries at Taylor & Mulder have provided analyses of many government agencies, insurers, and self-insurers over the course each of their 35 year careers. Some of the entities for which we have provided services include:

- State of West Virginia Insurance Department
- Arizona Department of Environmental Quality
- · Missouri Petroleum Storage Tank Insurance Fund
- Iowa Underground Storage Tank Fund
- United States Army Central Insurance Fund
- · State of Virginia
- · State of Maryland
- · State of South Dakota
- State of Kansas Insurance Department
- State of Hawaii Insurance Department
- State of Arkansas Insurance Department
- State of Pennsylvania Insurance Department
- State of North Carolina Insurance Department
- State of Missouri Insurance Department
- State of Massachusetts Insurance Department
- State of Nevada Insurance Department
- · State of Maryland Office of the Attorney General
- Harford County
- Anne Arundel County
- · Fairfax County
- Baltimore County
- Montgomery County
- City of Portsmouth
- City of Portsmouth School Districts

- · City of Philadelphia
- City of Durham
- · City of Baltimore
- City of Hampton
- · City of Hampton Schools
- Philadelphia Parking Authority
- Amtrak
- Union Pacific Railroad
- Virginia Transit Liability Pool
- Bergeron Land Development
- American National Insurance Company
- The Washington Post Company
- George Washington University Medical Center
- Washington Hospital Center in DC
- Columbia Hospital for Women
- Sibley Hospital
- Children's Hospital in DC
- National Rehabilitation Center
- York Hospital
- Charleston Area Medical Center.
- National Association of Social Workers Insurance Company
- National Association of Social Workers Risk Retention Group

The following represents a sampling of our experience in providing services to both large and small public and corporate entities:

Client: State of West Virginia Insurance Department

Summary: Rate-Filing Review Services

Details: Taylor & Mulder is the sole actuarial firm providing rate filing review services for the State of West Virginia Insurance Department. In this capacity, we have been asked to provide a comprehensive review of forced-placement insurance carrier rates in the state. This ongoing project was conceived of to protect consumers from potentially excessive rates charged by some companies in this sector. The project has included analysis of all aspects

of rates charged by multiple carriers across multiple lines of business.

Client: Arizona Department of Environmental Quality

Summary: Actuarial Reserve Study and Financial Projections

Details: Taylor & Mulder recently completed an actuaria

Taylor & Mulder recently completed an actuarial study for underground storage tanks program of the Arizona Department of Environmental Quality ("the AZDEQ"). This study involved on performing a financial analysis of the department's underground storage tank corrective action program under a variety of proposed scenarios for the future run-off of liabilities or the future operation of the fund should it be restarted. This project included the construction of a model capable of projecting financial outcomes based on a variety of scenarios and inputs, including:

- Cleanup of petroleum spills to a variety of standards, either Tier 1 standards or alternative cleanup standards,
- Cleanup of a variety of sites identified over different timeframes,
- Costs associated with different approaches to baseline assessments, e.g. the cost of ten vertical borings per site versus two angle borings and four vertical borings, etc.,
- Cost of corrective actions associated with releases identified through baseline assessments.
- Cost of removal of USTs and costs associated with releases identified through removal; and,
- Application of deductibles of varying sizes to (a) corrective actions, (b) baseline assessments, and (c) removal of USTs.

This analysis was used to produce financial projections of administrative costs and losses associated with various options for operation of the AZDEQ fund in the future.

Following this project, we assisted the AZDEQ in analyzing the strategic and financial impact of various ways of structuring a future UST program in the state. This project culminated in assisting the AZDEQ in developing draft legislation for the future of the program. We continue to assist the AZDEQ with determining funding requirements for the new program and providing miscellaneous actuarial services as needed.

Client: Summary: Details:

Missouri Petroleum Storage Tank Insurance Fund

Biannual Actuarial Reserve Study and Financial Projections

Taylor & Mulder performs biannual actuarial analyses for the Missouri Petroleum Storage Tank Insurance Fund ("the PSTIF"). This includes an analysis of self-insured liabilities pertaining to underground and aboveground petroleum storage tanks, including analysis of loss and loss adjustment expense reserve adequacy, reserving practices for the fund, underwriting practices, projection of loss and loss adjustment expenses, claim severity, and claim frequency, cash flow analysis, and special analysis of large loss claims.

This project began with a review of claims data from the PSTIF. This involved an analysis of potential errors in loss runs provided by the PSTIF, as well as an on-site visit, review of claims practices, discussions with PSTIF personnel, review of claim files, and general discussion about the management and direction of the fund and the particular needs of the PSTIF. Following this, we performed a detailed analysis, including review of the ultimate cost for both known and unknown claims by type (including UST losses, AST losses, and remedial claims at abandoned tank sites).

The project culminated with financial projections of the solvency position of the fund over the remaining lifetime of the fund, including projections of revenues expenses, based on a variety of scenarios. We analyzed over 10,000 unique scenarios and provided the PSTIF a customized report describing the likelihood of various financial outcomes. Following this, we presented the report to the PSTIF Board of Directors.

Client: Summary: Details:

Iowa Comprehensive Petroleum Underground Storage Tank Fund

Actuarial Reserve Study and Financial Projections

The Iowa Comprehensive Petroleum Underground Storage Tank Fund ("the Fund") was established in Iowa to assist owners and operators of petroleum storage tanks in complying with federal EPA technical and financial responsibility regulations. Taylor & Mulder

recently completed a project providing actuarial reserve estimates and financial projections to the Fund in anticipation of potential sunset of the Fund. This analysis included a review and opinion on the adequacy of current case reserves as well as current reserving practices. We were also asked to provide recommendations for improvements.

In addition, we were asked to project future claim liabilities, including providing an opinion on frequency and severity of a variety of claim types. We also provided an analysis of large losses, including the history of large losses (losses in excess of \$250,000) in the state and the anticipated impact of large losses on the fund's future finances.

Centrally, this project required projections of the Fund's financial position in each of the next five fiscal years. This financial projection is used to assist the Fund's Board of Directors in making sound decisions regarding the potential sunset of the fund and future operations of the fund.

Client: Summary:

United States Army Central Insurance Fund

Annual Loss Reserve and Funding Analysis and Rate Study

Details:

The United States Army self-insures buildings, contents, vehicles, fidelity bonding, money and securities, aircraft, cargo, workers' compensation, and tort coverages for approximately 29,000 employees across multiple continents. Taylor & Mulder performs annual evaluations for the Fund including recommended reserve levels, fund balances, and rates to be charged internally for each of the coverages.

Client: Summary: Details:

Fairfax County, Virginia

Annual Loss Reserve Projection and Financial Projections

Fairfax County, Virginia is the most populous jurisdiction in the Commonwealth of Virginia, with a population of more than 1.1 million residents. The County self-insures its workers' compensation, automobile liability, general liability, public officials' liability, and police professional liability exposures. Taylor & Mulder provides the County with an annual analysis of these lines of business that includes: (a) the development of financial requirements related to the maintenance of a stable reserve fund, (b) the estimation of unpaid loss and loss adjustment expenses, (c) estimation of such reserves on a nominal and discount basis, both at an expected value and at various confidence levels, (d) projection of prospective year losses and ALAE, and (e) an evaluation of the total funding requirements.

Client: Summary: Details:

City of Hampton, Virginia, and Hampton City Schools

Annual Loss Reserve Projection and Financial Projections

The City of Hampton, Virginia has a population of approximately 137,000 residents, and is the home of the first free public school in America. Taylor & Mulder performs annual valuations of the City and School District's self-insurance program, which covers exposures for workers' compensation, general liability, automobile liability, public officials' liability and law enforcement liability. This ongoing study includes: (a) evaluation of loss experience, (b) projection of required reserve levels, including reserve estimates at 70%, 80%, and 90% confidence levels, (c) projection of claims cash flow for the next five fiscal years, (d) recommended funding guidelines for the next five years, and (e) recommendations concerning cost allocations and reserve funding contributions. All of these analyses are summarized in a detailed report that includes specific recommendations for the City and Schools separately.

Client: Philadelphia Parking Authority

Summary: Details:

Annual Loss Reserve Projection and Financial Projections

The Philadelphia Parking Authority provides parking management and related services to the fifth largest city in the United States. The Authority self-insures its automobile liability, workers' compensation, and general liability exposures. Taylor & Mulder provides the Authority with annual evaluations that include: (a) analysis of loss and ALAE reserves net and gross of self-insured retentions, (b) confidence levels and actuarial high and low estimates of ultimate losses, and (c) discounting based on expected investment income.

Client:

Virginia Transit Liability Pool

Summary: Details:

Annual Loss Reserve Projection and Rate Studies

The Virginia Transit Liability Pool is a risk pool for publicly owned transit systems across the state of Virginia. Taylor & Mulder performs two annual studies for the Pool, including setting rates for individual pool members based on needed funding levels and member experience, and projected needed reserves, including at various statistical confidence

levels.

Client:

National Railroad Passenger Corporation (Amtrak)

Summary:

Retained Loss Analysis and Financial Projections

Details:

Ms. Mulder was involved in budget modeling of workers' compensation costs and passenger liabilities as part of an evaluation of Amtrak's retained liabilities that fall below the attachment point of its excess insurance program. Taylor & Mulder was also requested to determine the ultimate projected losses for the future fiscal years for Amtrak. The analysis was performed separately for liabilities incurred due to (A) the Federal Employees Liability Act (FELA), (B) passenger injury, and (C) miscellaneous injuries (i.e. grade crossings, business invitee, trespasser, etc.). Ms. Mulder was also involved in estimating the effects of asbestos exposure on workers' compensation costs.

Client: **Summary:** City of Durham, North Carolina

Annual Loss Reserve Projection and Cost Allocation Study

Details:

The City of Durham, North Carolina has a population of approximately 250,000 residents. The City self-insures workers' compensation, general liability, and automobile liability coverages. Annually, Taylor & Mulder performs two studies for the City of Durham. These studies include an evaluation of reserve adequacy, projection of annual costs in future periods, and allocation of costs to departments or funds for budgeting purposes.

Client: Summary: **North Carolina Insurance Department**

Risk-Focused Financial Examinations and Other Projects

Details:

Taylor & Mulder is contracted by the State of North Carolina Insurance Department to perform a variety of services, including risk-focused financial examinations and other miscellaneous projects as needed. The following is a sampling of some of the projects we have performed for the Department:

Taylor & Mulder recently completed an evaluation of a privately held workers' compensation carrier on behalf of the Department in anticipation of a potential novation transaction. The analysis included comprehensive review of reserve practices, assumptions, and methodologies, as well as provision of reasonable estimates for reserves net and gross of reinsurance.

We conducted a study on behalf of the Department to evaluate a filing made on behalf of a multi-billion dollar mortgage guaranty insurer for waiver of the minimum policyholders' position. This project culminated in a 500 page report that was sent to 15 insurance

departments around the country, as well as several thousand pages of modeling results. The scope of this project included an opinion on reserve adequacy, the analysis of the premium deficiency reserve, underwriting guideline analysis, compliance with the applicable state statutes regulating Mortgage Guaranty Insurers, capital adequacy studies, and stress testing under extreme economic conditions.

We evaluated the submission for the licensing of a new mortgage guaranty insurer for the Department. We based our analysis of liabilities, projections of financial ratios, market share, loan portfolio characteristics, underwriting manuals, and other operational data. This project included funding analysis, as well as projections of balance sheet items for a period of ten years.

Client: Summary: Details:

State of Kansas Insurance Department

Risk-Focused Financial Examinations and Rate-Filing Reviews

Taylor & Mulder performs a number of services for the State of Kansas Insurance Department, including rate-filing reviews, risk-focused financial examination services, and other services as needed. The following is a brief summary of some of the recent projects we have completed for the State:

We recently completed a project providing actuarial services in support of a multi-state risk-focused financial examination of a multi-national insurer with over \$2.5 billion in written premiums. This project involved testing of reserves, reviewing rate adequacy, as well as looking at controls and risks including a complete review of reserving and ratemaking methodologies. This also included interviews with company personnel and extensive interviews with the company's chief actuary to discuss issues we observed in our analysis.

In addition, we have performed rate filing reviews for the State, including multiple reviews of rates submitted by some of the largest rating organizations in the US. Our reviews of rate filings in the state have also included review of appropriate catastrophic loss provisions in rates.

An ongoing rate filing review in the state involves a filing that appears to use price optimization techniques that was previously approved by regulators. Subsequent review of the rate filing has revealed potential use of price optimization strategies that may be harmful to consumers. This ongoing review will include a complete review of the modeling assumptions and methodologies used in the filing, the business case argued in the filing, a full review of the potential effects of the filing on consumers, as well as a review of pertinent laws, statutes, and standards of practice that govern the use of such methods.

The State of Kansas Insurance Department also requested our actuaries to provide training services for rate filing review personnel, with special focus on issues surrounding development and trend, credibility issues, and a discussion of challenges with identifying and responding to price optimization strategies.

The State of Kansas Insurance Department Financial Surveillance Division requested that Taylor & Mulder provide a review of RBC calculations in connection with an insurance company that had an apparently excessive RBC level as a result of a recent reinsurance transaction. Our extensive investigation revealed that the transaction had not been accounted for properly, leading to an incorrect RBC value.

Client: State of Hawaii Insurance Department

Summary: Rate-Filing Review Services

Details: Taylor & Mulder provides rate filing review services to the State of Hawaii. This has included reviews of rates from a large statistical reporting firm, as well as rates involving controversial modeled catastrophe provisions. As part of these rate filing reviews, we were also asked to provide detailed notes regarding our considerations in coming to our conclusions. These notes were to be provided to rate analysts in the state for training

purposes.

Details:

Client: Commonwealth of Pennsylvania Insurance Department

Summary: Risk-Focused Financial Examinations, Liquidations, and Other Projects

Taylor & Mulder is contracted by the Commonwealth of Pennsylvania Insurance Department to perform a variety of services, including risk-focused financial examinations, evaluation of liquidations and rehabilitations, and other miscellaneous projects as needed. Within the Department, we have provided services for the Office of Corporate and Financial Regulation Bureau of Financial Examinations and the Office of Liquidations and Rehabilitations. The following is a sampling of some of the projects we have performed for the Department:

We recently completed a project to evaluate the health of Laundry Owners' Mutual Liability Association, a workers' compensation insurer in the state. Our analysis included a review of reserve adequacy, premium deficiency reserve calculations, rate adequacy, and reinsurance retentions and cessions.

Taylor & Mulder provided actuarial services in connection with the financial examination of three medical professional liability insurers in the state: Millennium Insurance Company, Pennsylvania Medical Reinsurance Company and Professional Casualty Association. Our analyses included reviews of loss and loss adjustment expense reserves, reviews of the work of the company's independent actuary, tests of unearned premium reserves, reviews of the reinsurance programs, comments on long-term rate adequacy, and reviews the risk concentration by medical specialty.

Taylor & Mulder actuaries also worked on the liquidation of Physicians Insurance Company Office of Liquidations and Rehabilitations. We were involved in creating the transactions for a major offshore loss commutation for which records had been destroyed by Company management. This was done by performing extensive analysis on all of the individual claims in the Company's database. Taylor & Mulder provided a forensic evaluation of the medical malpractice carrier, calculating the reserves that should have been recognized for every prior year-end in order to enable the Department to allocate damages to the management team and services providers for each year. Our actuaries also assisted the Department by providing a reconstruction of needed reserves at historical points in time prior to the insolvency and by providing assistance in analyzing other aspects of the insurer's operations.

Taylor & Mulder has been pre-qualified by the Pennsylvania Insurance Department to perform actuarial analyses related to Mutual to Stock Conversions.

Ms. Mulder has also provided rate filing review services to the Pennsylvania Insurance Department.

Client: The Hartford Insurance Company

Summary:

Special Technical and Actuarial Support

Details:

Taylor & Mulder provided technical and actuarial strategy support to The Hartford Insurance Company in connection with World Trade Center claims for fatal and non-fatal lifetime workers' compensation benefits. In addition, we provided supporting analysis for reinsurance issues arising from these claims. These services were provided as a subcontractor to Strategic Actuarial & Risk Consultants.

Client:

Arkansas Insurance Department Financial Examinations Division

Summary:

Risk-Focused Financial Examinations

Details:

On behalf of the Arkansas Insurance Department, we have performed analyses of one Aviation Title insurance company, seven property insurance carriers and one substandard automobile insurer. Taylor & Mulder conducted an actuarial review of loss and loss adjustment reserves in connection with the Financial Examinations of Aviation Title Insurance Company, Farmers Mutual Insurance Company of Rogers, Farmers Mutual Insurance Company of Gentry, and Washington County Farmers Mutual Fire Insurance Company, as well as examinations of Farmers Mutual Insurance Company of Little Rock, Direct National Insurance Company, Farmers Fire Insurance Company, Farmers Mutual Fire Insurance Company, and Farmers Union Mutual Insurance Company, Our reviews in the these risk-focused examinations included actuarial analyses of loss and loss adjustment expense reserves, tests of unearned premium reserves, and reviews of reinsurance programs for the entities under review.

Client: Summary: Mutual Insurance Company Ltd.
Annual Loss Reserve Projection

Details:

Ms. Mulder provided annual actuarial studies for Mutual Insurance Company for libel and slander insurance claims. As part of this project, Ms. Mulder developed a model for projecting future lawsuits for libel claims against newspapers and related web-related

businesses.

Client:

Tennessee Insurance Department

Summary:

Actuarial Support for Risk Retention Group Insolvencies

Details:

Ms. Taylor provided Actuarial support for risk retention group insolvencies involving medical and legal malpractice, workers' compensation, directors' and officers' liability, and other miscellaneous lines of business for the Tennessee Insurance Department. Three such insolvencies were caused in part by the insolvency of Reciprocal of America (formerly The Virginia Insurance Reciprocal). Ms. Taylor assisted the Department's law firms in deciphering insurance insolvency rules, regulations, and statutes. She also estimated reserve liabilities at various points in time within the insolvency period.

Miscellaneous Clients

Details:

Taylor & Mulder has been pre-qualified to perform risk-focused financial examinations for the Commonwealth of Massachusetts Department of Insurance.

Ms. Mulder created a model to project losses from Hurricanes hitting the Texas coast on behalf of the **Texas Catastrophe Property Insurance Association**. The test of her model on retroactive damage estimates of prior hurricanes was extremely accurate.

Ms. Taylor has also provided Actuarial support for a Special Actuarial Audit requested by the **Texas Insurance Department** of an insurance company offering non-traditional coverages such as low income housing bonds, financial guaranty insurance, and unique residual value insurance.

For the **Michigan Insurance Department**, Ms. Taylor provided actuarial support for several Triennial Audits of small insurance companies offering automobile, general liability, and workers' compensation insurance.

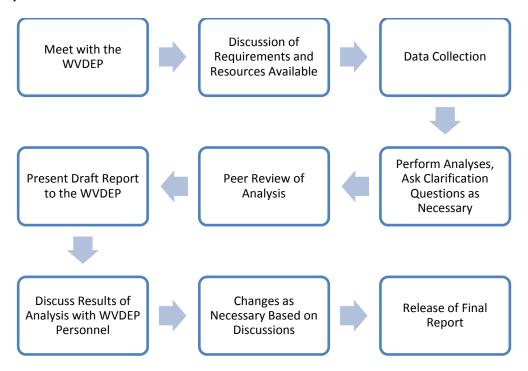
Jane Taylor has provided support to a captive in Montana whose coverage is integrated with coverage provided by the **Montana Petroleum Tank Release Compensation Board**. The Montana program is similar to the Missouri program in that it reimburses approved environmental clean-up costs and site monitoring expenses for petroleum releases. However, the Montana program does differentiate between single-walled tanks, which require a deductible to be paid by the owner operator, and double-walled tanks, for which first dollar coverage is available. Both single-walled and double-walled tank coverage is limited to a total of \$1 million in Montana.

While at Mercer as the manager of the Washington D.C. office, Ms. Mulder worked on the evaluation of the **Pennsylvania Underground Storage Tank Indemnification Fund** analysis.

Work Plan

Approach and Scope of Work

Taylor & Mulder has significant experience providing actuarial consulting services to government clients. By way of describing how we will deliver our service, we outline the usual process by which we have conducted similar assignments in the past. The following flowchart diagrams the process used to perform the required work:



All work begins with discussions with the WVDEP. During this phase, we will collect basic information about the project, clarify the WVDEP's requirements, and determine the most effective way to contact individuals with the WVDEP to obtain data and information relevant to the study. Communication with the WVDEP is central to our work plan and will continue throughout the analysis process. As part of our commitment to quality of work product and excellent service, we provide unlimited telephone conversations with our consultants at no cost to our clients. We want our clients to feel comfortable discussing their needs with us and understanding every step of the project that we are doing for them.

After this initial phase, we will perform the analysis according to the following six general steps:

- 1. Data collection and vetting, including the analysis, including identification of unique conditions and trends influencing patterns in the data and discussion of these observations with the WVDEP.
- 2. Reserve opinion and projection of losses through applying various actuarial methodologies. This analysis will include, but not necessarily be limited to:
 - a. Projection of incurred loss and ALAE to expected ultimate values, net and gross of self-insured retentions (if applicable),
 - b. Detailed financial projection of present assets and liabilities for a period of at least 20 years,
 - c. Detailed financial projection of future assets and liabilities for a period of at least 20 years,
 - d. Preparation of a table describing findings from steps 2.b and 2.c,
 - e. Analysis of long term and/or perpetual liabilities,

- f. Analysis of anticipated and unanticipated contingencies, and
- g. Information and analysis required for compliance with applicable laws and accounting standards, including GASB 10 and GASB 30.
- 3. Reasonability checks and peer review by senior FCAS staff,
- 4. Development of draft reports and exhibits detailing our findings within the first 30 days of receipt of data.
- 5. Discussion and revision of drafts to produce a final report;
- 6. Release of final draft report, presentation of findings, and discussion with the WVDEP.

Each of these steps will be conducted in an environment of intense scrutiny and constant review for reasonability and accuracy. While step 3 formalizes the process of peer review, the same review will take place implicitly between each step of the work plan.

STEP 1: Data Collection and Vetting

Within the first three days of assignment issuance, we will convene with the risk management staff of the WVDEP and work with them to understand significant exposures or unique risks and issues that will affect loss trends in our analysis. This will include changes in underlying risks, shifts in exposure or changing trends, operational changes affecting claims handling, or legal issues that are expected to have an impact on future claims development. At this time we will provide the WVDEP with a data request letter outlining our specific data requirements, and we will work with the WVDEP to ensure data received is what we need to conduct the WVDEP's study.

Once we have thorough understanding of the data, we will begin analyzing and vetting the data to ensure its integrity and reasonability. Here we will address any unexpected patterns through further dialogue with the WVDEP or through research as needed.

When we are satisfied with the completeness of the data, we will organize it into the most usable form if it is not already in a readily usable form. Depending on the data available to us, we will then make a determination as to which actuarial methods we will employ in the ensuing analyses.

STEP 2: Reserve Analysis and Loss Projections

During this phase, we will employ several methods in order to best obtain projections of losses in the coming years. This will typically include the use of the paid and incurred loss development methods (also known as "chain-ladder" methods), paid and incurred frequency / severity methods, and the paid and incurred Bornhuetter-Ferguson methods. Depending on the nature and availability of the data, we may choose to model certain risks or losses and loss adjustment expenses separately to obtain a more accurate projection of losses. In addition to the methods listed, we may employ other methods as necessary. We will separately analyze assets and liabilities for underground versus surface mine permits, large versus small permits based on bond amounts or acreage, and permits for tipples, preparation plants, and impoundments. We will additionally illustrate land and water liabilities separately.

The result of these analyses will be a series of estimates of expected ultimate losses. Having calculated these, we will then develop indications for required loss and ALAE reserves, including reserves for known claims (case reserves for specific claims, provisions for future development on known claims, or reopened claims) and unknown claims (IBNR). We will compare the results of the various projection methods and select or combine methods where appropriate to obtain the best projections of required reserves.

Our analysis will also involve a projection of future assets and liabilities for the aforementioned categories. Typically this will involve projecting certain exposure bases as a way of determining anticipated relative risk exposure in the future. These projected exposure bases provide a method of estimating future assets and liabilities which will be placed in an appropriate timeline based on anticipated payment or accrual patterns derived from historical data. It should be noted, however, that the particular projection methods employed will depend on the data available and the features of each risk under analysis.

Through our analysis we will have developed information required for compliance with Government Accounting Standards Board standards, GASB #10 and GASB #30, relating to requirements for public entity risk pools and entities other than pools. We will work with the WVDEP to ensure that compliance with these standards is met.

STEP 3: Reasonability Checks / Peer Review

The report will undergo (1) our stringent peer review process and (2) reasonability checks to ensure logical consistency and accuracy. We will take this opportunity to revise any estimates if necessary. As stated previously, while this step will certainly be taken after ultimate losses and loss reserves have been estimated and risk margins determined, it will be taken at several intermediate steps along the way to ensure smooth progress and accurate analysis.

Reasonability checks will take the form of an analysis of the underlying data, assumptions underlying each intermediary step and method, and all conclusions regarding ultimate losses, indicated loss reserves, and risk margins. These checks may also include comparisons of ratios (such as loss ratios) to other book years and to industry data, taking into account rate increases, inflation, and market conditions. We will investigate the source of any ensuing discrepancies to ensure sound analysis.

STEP 4: Development of Draft Reports

We will write a narrative report and prepare exhibits for the report on behalf of the WVDEP within 3 weeks of receipt of data. We will submit a draft report to the WVDEP. Our report will include:

- A summary of findings, which would include a comparison of our calculations with those values carried in the WVDEP's reserves for loss and loss adjustment expense reserves, on a net and gross basis if applicable.
- Our range of reasonable estimates of loss and loss adjustment expense reserves on a net of excess insurance and a gross of excess insurance basis.
- Exhibits, including and loss triangles, which support our estimate of loss and loss adjustment expense reserves.
- An explanation of all methodologies we employ in evaluating and estimating ultimate values for losses and loss adjustment expense reserves.
- Physical an electronic copies of work papers, tables, and models employed.

STEP 5: Discussion and Revision

Following the draft report, we will receive comments from the WVDEP regarding our analysis. We will discuss those comments with the WVDEP and make changes to our analysis as needed. Following this process, we will prepare a final report to send to the WVDEP.

STEP 6: Final Report

Within three days of being notified by the Contract Administrator that the draft report and any revisions can be finalized, we will submit our final report to the WVDEP.

Following these steps, we will meet with the WVDEP staff and/or elected officials to present our findings.

Timetable for Completion

The following chart outlines a rough timeline for work to be performed. Taylor & Mulder prides itself on completing work on time and on a schedule convenient to our clients without compromising on quality.

	Day													
Activity	1	3	5	7	9	11	13	15	17	19	21	23	25	27
Meet with WVDEP Personnel														
Collect Data														
Perform Analysis														
Peer Review														
Develop Draft Report														
Discuss Findings with the														
WVDEP														
Revise Draft as Needed														
Release Final Report														

Typically, our projects are able to move faster than the schedule outlined above if data is available and the client is available for some straightforward communication early in the process. We prefer to provide the client with as much time as possible to ask any questions they may have about our work and to ensure satisfaction with our deliverables.

INVOICE TO		SHIP TO			
ENVIRONMENTAL PROTECTION		ENVIRONMENTAL PROTECTION			
OFFICE OF SPECIAL RECLAMATION		OFFICE OF SPECIAL RECLAMATION			
47 SCHOOL ST, STE 301		47 SCHOOL ST, STE 301			
PHILIPPI	WV26416	PHILIPPI	WV 26416-9998		
US		US			

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Actuarial consulting services	1.00000	JOB	\$92,500	\$92,500

Comm Code	Manufacturer	Specification	Model #	
80101512				

Extended Description:

Actuarial consulting services for the WVDEP Office of Special Reclamation

Appendix B – Resumes

The following nine pages contain the resumes for our actuaries in the following order:

- 1. E. Toni Mulder, FCAS, MAAA, FCA
- 2. Jane C. Taylor, FCAS, MAAA, JD
- 3. Daniel Lupton, FCAS, MAAA, MBA

RESUME EVELYN TONI MULDER, FCAS, MAAA, FCA

PROFESSIONAL DESIGNATIONS:

- Fellow of the Casualty Actuarial Society (FCAS)
- Fellow of the Conference of Consulting Actuaries (FCA)
- Member of the American Academy of Actuaries (MAAA)

EXPERIENCE:

Ms. Mulder has over 35 years' experience in the actuarial field, including 28 years as a consultant. As a consultant, Ms. Mulder has served over 75 insurance companies, 40 self-insured hospitals, federal, state, county, and local governmental agencies, and Fortune 500 companies. Services include reserving, pricing, funding studies, financial examination services for insurance departments, actuarial analysis for insurance department liquidations, managing captives, reinsurance, fronting arrangements, statutory and GAAP accounting, computer simulation modeling, forensics, claims analysis and marketing. She provides loss reserve opinions and rate filings for insurance companies and funding, reserving, GASB10 review, premium and rate determination and cost allocation studies for self-insurers. Her experience includes expert witness testimony for litigation and arbitration proceedings. Ms. Mulder specializes in long tail lines of business including workers' compensation, taxi cab liability, medical malpractice for hospital and physicians' and surgeons', governmental liability, general liability, products liability, commercial automobile liability, railroad liability and reinsurance.

EMPLOYMENT HISTORY:

Taylor & Mulder, Inc., Principal and Consulting Actuary, 1998 to present. Consulting to insurance companies in the U.S. and captive insurers in Bermuda. Services included reserving, pricing, funding studies, financial examination services for insurance departments, actuarial analysis for insurance department liquidations, managing captives, reinsurance, fronting arrangements, statutory and GAAP accounting, computer simulation modeling, forensics, claims analysis, operations of two Bermuda domiciled insurance companies, reserving, premium and rate determination and cost allocation studies for self-insurers. Her experience includes expert witness testimony for litigation and arbitration proceedings.

Ms. Mulder has testified as an expert and provided expert reports in disputes involving arbitration and litigation between insurance companies, reinsurers, claims adjusting firms and service providers. Ms. Mulder has testified on behalf of insurance companies and service providers. She specializes in forensics, calculating the effects of prior decision making and policies, and retrospective reserving issues.

William M. Mercer, Incorporated, Principal and Coordinating Partner, (Washington, DC) 1992 to 1997. Office head for the Washington DC office of the Risk, Finance and Insurance group. This group provided actuarial analyses for insurance companies, insurance Departments, self-insured corporations, Federal, State and County governmental agencies, railroads and hospitals. Services include pricing, reserving, funding studies, cost allocation, feasibility studies, GASB10, reinsurance evaluations, large risk analysis, captive feasibility studies, insurance company modeling, catastrophe modeling, litigation support and expert witness testimony, and mergers and acquisitions. She was project manager for a client where the firm designed, programmed and tested a hurricane model that she presented at a rate hearing before the Texas State Board of Insurance. Ms. Mulder also managed the project to calculate the property and liability costs for the Federal Government for the RTC for \$18 billion in properties in numerous classification codes for properties located around the country. For one of her railroad clients, she estimated the cost of future railroad collisions.

Tillinghast/Towers Perrin, Vice President, (Vienna, Virginia) 1987 to 1988. Consulting actuary to insurers and self-insurers in the areas of pricing and reserving. Clients included insurance companies, self-insurers, Bermuda captives, hospitals, governments, and railroads.

Deloitte Haskins & Sells, Senior Manager (Washington, DC) 1982 to 1986. Provided consulting services to clients and audit support for 66 casualty insurance companies countrywide each year. Audit clients included Munich Reinsurance, Safeco, Gerling Global, Metropolitan Reinsurance, Metropolitan Property and Casualty, Motors Insurance Company and Armco. On a significant number of audit clients, she also provided loss reserve opinions. Self-Insured clients included governments and hospitals.

Edward H. Friend & Company, Chief Casualty Actuary and Assistant Vice President (Washington, DC) 1979 to 1982. Responsibilities included managing the casualty actuarial practice for a pension and employee benefits consulting firm. Clients included over 80% of the hospitals in DC and a number in West Virginia. Ms. Mulder prepared the actuarial reports for the hospitals for their risks of hospital and physicians' and surgeons' professional liability, and workers' compensation.

Chubb & Son Insurance Group, Assistant Actuary and Corporate Officer (Short Hills, New Jersey) 1976 to 1979. She was responsible for the commercial automobile and general liability divisions of the actuarial departments. This included working closely with the underwriters. Ms. Mulder was the liaison between the actuarial department, the underwriting department and the ISO committees for these lines of business.

Continental Insurance Company, Actuarial Assistant (New York, New York) 1971 to 1975. Ms. Mulder was responsible for preparing the rate filings for private passenger automobile and homeowners for approximately half of the state insurance departments in the country.

PROFESSIONAL ACTIVITIES:

- Casualty Actuarial Society Task Force on Reserving Principles Assigned the task of Revising the 1988 Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves – 2001 to 2008
- Casualty Actuarial Society Committee on Reserves 1997 to 2003
- Casualty Actuarial Society Committee on Online Services 1997 to 2002
- Liaison to the Casualty Actuarial Society Committee on Online Services on behalf of the Casualty Actuarial Society Committee on Reserves 1997 to 2002
- Liaison to the Casualty Actuarial Society Committee on Health and Managed Care Issues on behalf of the Casualty Actuarial Society Committee on Online Services 2001 to 2002
- Liaison to the Casualty Actuarial Society Education Policy Committee on behalf of the Conference of Consulting Actuaries 1999 to 2001
- Casualty Actuarial Society Committee on Valuation, Finance and Investments 1997 to 2000
- American Academy of Actuaries Issues Committee Chair of Self-Insurance Issues 1997 to 1999
- Joint Program Committee for the Casualty Loss Reserve Seminar 1993 to 1998
- American Academy of Actuaries Chairperson, Committee on Publications 1993 to 1997
- Contingencies Magazine The Journal of the American Academy of Actuaries Chairperson,
 Editorial Advisory Board –1993 to 1997
- Contingencies Magazine The Journal of the American Academy of Actuaries Member, Editorial Advisory Board –1988 to 1993

- Casualty Actuarial Society Advisory Committee to Forecast 2000 Representing the Casualty Actuarial Society – 1988 to 1993
- The Actuarial Update (The American Academy of Actuary's Newsletter) Editor 1989-93
- The Actuarial Review (The Casualty Actuarial Society's Newsletter) News Editor 1988-92
- Casualty Actuarial Society External Communications Committee Chairman 1987 to 1989
- Casualty Actuarial Society External Communications Committee Vice-Chairman 1986-87
- Casualty Actuarial Society External Communications Committee 1983-1986
- Casualty Actuarial Society Committee on Career Enhancements 1982-1983

EDUCATION:

• BA in Mathematics from the State University of New York at Plattsburgh, 1971

RESUME JANE TAYLOR, FCAS, MAAA, JD

Ms. Taylor is Consulting Actuary in the consulting practice of Taylor & Mulder, Inc. Prior to that, she was Senior Manager in the Insurance Consulting Practice of KPMG Peat Marwick in the Radnor, Pennsylvania office. Her training in both actuarial science and the law brings a broad and unique perspective to insurance.

REPRESENTATIVE ACCOMPLISHMENTS:

Ms. Taylor has experience in handling a wide variety of insurance related issues including:

- Analyzing loss and loss expense reserves of multi-line property and casualty companies as part of reserve certifications and as part of reinsurance security analyses and analyzing loss reserves for self-insurers.
- Funding, reserving, GASB10 review, premium and rate determination and cost allocation studies for self-insurers
- Providing actuarial analysis of loss reserves for financial examinations of property and casualty insurance companies on behalf of Insurance Departments
- Analyzing loss reserves for a liquidated medical malpractice insurer on behalf of the Liquidations Department of a State Insurance Department
- Pricing and reserving of specialty line insurance coverages including medical malpractice, legal malpractice, general liability and mortgage guaranty insurance.
- Supporting merger and acquisition activities for a variety of insurance entities including clients writing medical malpractice, workers' compensation, general liability, automobile liability, reinsurance, excess and surplus lines, and primary coverage.
- Providing litigation support for disputes involving insurance company litigants.
- Assisting risk retention groups, captives, self-insurers, trust funds, and specialty insurers in startup operations including ratemaking, funding, policy design, rating protocol, reserves, and reinsurance needs.
- Establishing asbestos and environmental reserves for a major multi-line insurance company and reviewing various environmental models.
- Pricing, monitoring, and reserving treaty and facultative reinsurance on both assumed and ceded business, including portfolio transfers, commutations, and evaluating loss sensitive contracts.
- Performing claims audit work for self-insurers and other non-insurance clients and establishing claims administration procedures for specialty companies and self-insurers.

PROFESSIONAL AFFILIATIONS AND ACCOMPLISHMENTS:

Ms. Taylor is member of several professional organizations serving the actuarial and legal communities. The following is a list of current affiliations:

- Fellow of the Casualty Actuarial Society
- Member of the American Academy of Actuaries
- Member of the American Bar Association

As an actuary and a lawyer, she has served terms on various committees designed to further the respective professions. These include:

Member, Casualty Actuarial Society Ratemaking Committee

- Member, Syllabus Committee of the Casualty Actuarial Society
- Director, Board of Directors of the Actuarial Education and Research Fund
- Member, Casualty Loss Reserve Seminar Committee
- Member, American Bar Association Standing Committee on Legal Liability
- Chair, American Academy of Actuaries Working Group on Risk Transfer Issues

BACKGROUND

Ms. Taylor enjoyed a wide variety of assignments in corporate and consulting. Beginning at the most recent assignment and moving backward in time, the brief descriptions below outline her experience.

1995 – 1997 Senior Manager KPMG Peat Marwick, LLP, Radnor, Pennsylvania

Major Responsibilities:

- Provide Audit Support for Clients in the Accounting Insurance Practice and for Insurance Operations of Self-Insurers and other Non-Insurance Clients
- Review Environmental Liability Models of Insurance Clients
- Prepare and Submit Actuarial Statements of Opinion for Standard, Specialty, and Excess and Surplus Insurers
- Manage of the Casualty Actuarial US GAAP Conversion of a German Reinsurance Company
- Perform FAS 113 Analysis of Reinsurance Contracts for Compliance with Accounting and Actuarial Standards for Ceding Companies
- Represent the American Academy of Actuaries to the Relations with Accountants Committee and the Financial Reporting Committee
- Design Pooling Agreements for Insurance Group Members to Provide a Superior Spread of Risk Among the Members
- Evaluate Mortgage Guaranty Programs for the Federal Government (FHA/HUD), Insurers, and Reinsurers
- Prepare a Study of Insurer Insolvency for Blue Cross, Incorporated

1991 – 1995 Corporate Senior Vice President of Actuarial Standards and Data Quality Reliance Insurance Group, Philadelphia, PA

Major Responsibilities:

- Direct the Actuarial Student Program
- Manage the Statistical Reporting and Data Quality Department
- Conduct Environmental Liability Quarterly Reserving for Reliance Insurance Company including Subsidiaries
- Coordinate the Workers' Compensation Assigned Risk Program and Conduct Quarterly Reserve Reviews
- Critique and Recommend Catastrophe Model
- Provide Reinsurance Security Committee Actuarial Support

1985 – 1991 Senior Vice President and Actuary Reliance Reinsurance Corp., Philadelphia, PA

Major Responsibilities:

- Direct the Actuarial Pricing Activity for Treaty Reinsurance
- Conduct Environmental Liability Quarterly Reserving for Reliance Reinsurance Company
- Coordinate the Workers' Compensation Assigned Risk Program and Conduct Quarterly Reserve Reviews
- Critique and Recommend Catastrophe Model
- Provide Reinsurance Security Committee Actuarial Support
- 1982 1985 Vice President and Consulting Actuary
 Huggins Financial Services, Inc., Philadelphia, PA
 (now part of Ernst & Young)
- 1980 1982 Consulting Actuary
 Independent Actuarial Services, Inc., South Windsor, CT
- 1971 1980 Various Titles from Actuarial Student to Assistant Actuary
 The Travelers Insurance Company, Hartford, CT

Ms. Taylor includes primary companies, reinsurance companies, and previous consulting tenures in her twenty plus years of insurance experience. Her actuarial assignments have ranged from the purely theoretical to the highly practical. Managerial experience includes managing both data quality and statistical reporting operations and an actuarial student program.

EDUCATION

- BS in Statistics from Virginia Polytechnic Institute and State University with Honors, 1969
- MS in Statistics from Virginia Polytechnic Institute and State University, 1973
- JD from University of Connecticut School of Law, 1981

RESUME Daniel W. Lupton, FCAS, MAAA, MBA

Daniel Lupton is Vice President and Consulting Actuary at Taylor & Mulder, Inc. having attained the rank of Fellow of the Casualty Actuarial Society.

EXPERIENCE

At Taylor & Mulder Inc., Mr. Lupton has been involved in projects including stress testing for mortgage guaranty insurance, analyzing lifetime neurological birth injury claims, supporting expert witness testimony, performing data analysis for risk-focused financial examinations of insurance companies, analyzing liabilities of self-insured governments and municipalities. Mr. Lupton has particular experience with workers' compensation, automobile liability, and general liability lines of business, and has performed work in a wide range of lines including even more obscure lines such as aviation title insurance and libel and slander insurance.

This work has included reserve studies and cost allocation studies, development of confidence intervals through stochastic loss modeling, reviewing rate filings, generating pro-forma financials, assisting with GASB 10 and GASB 30 compliance, and forming opinions regarding risk transfer for excess insurance contracts.

Prior to working at Taylor & Mulder, Mr. Lupton worked for a Milliman, Inc., a major consulting firm, where he helped to perform analyses in such lines as workers' compensation, general liability, commercial auto liability, mortgage guaranty, medical professional liability, environmental liability, crop insurance, surety, and fiduciary insurance, among others. In this capacity he was responsible for aiding in data entry and analysis tasks, manipulation of large databases, creation of custom software to solve analysis tasks, and creation of client-oriented reports.

RELEVANT SKILLS

- Programming: C/C++, C#, Octave, PHP, Java, VB
- Other: Completed coursework in Neural Networks for Machine Learning through University of Toronto and Machine Learning Algorithms through Stanford University.
- Completed NAIC course, "Risk-Focused Examinations: The Role of an Examining Actuary."

EDUCATION

- Fellow of the Casualty Actuarial Society, 2014
- Associate of the Casualty Actuarial Society, 2013
- Member of the American Academy of Actuaries, 2013
- MBA, University of Maryland Robert H. Smith School of Business, 2011
- BA with Comprehensive Honors, Mathematics and English, 2008

PROFESSIONAL ACTIVITIES

- Member, Membership Advisory Panel of the Casualty Actuarial Society, 2013 Present
- Editorial Review Staff, Variance Actuarial Journal, 2014 Present