

Actuarial Committee Agenda

Thursday, September 23, 2010

William Green Building

Level 2, Room 2

2:30 p.m. to 4:00 p.m.

Call to Order

Chuck Bryan, Committee Chair

Roll Call

Larry Rhodebeck, Scribe

Approve Minutes of August 26, 2010 meeting

Chuck Bryan, Committee Chair

Review and approve Agenda

Chuck Bryan, Committee Chair

New Business/ Action Items

Motions for Board Consideration:

A. For Second Reading

1. Program Compatibility Rule Changes and Rule Clean-up
Tom Prunte, Executive Director of Employer Management Services
Ron Suttles, Supervisor of Employer Programs Unit

B. For First Reading

1. Mortality Study and Annuity Table – Rule 4123-17-60
John Pedrick, Chief Actuarial Officer
Deloitte Consulting LLP
2. Public Employer Taxing Districts Rate Change
John Pedrick, Chief Actuarial Officer
Deloitte Consulting LLP

Discussion Items

1. Legislative discussion and analysis – if necessary
2. CAO report
John Pedrick, Chief Actuarial Officer
3. Committee Calendar
Chuck Bryan, Committee Chair

Executive Session

Litigation update – if necessary

Adjourn

Chuck Bryan, Committee Chair

Next Meeting: Thursday, October 21, 2010

* Not all agenda items have material.

** Agenda Subject to change

OAC Chapter 4123-17 Employer Program Rule Revisions

Rule Number	Title	Recommended Changes
4123-17-41	Retrospective rating definitions applicable to any employer	<ul style="list-style-type: none"> • Add language stating that rules 4123-17-41 to 4123-17-54 apply to individual employer retrospective rating (Introductory sentence).
4123-17-42	Eligibility for retrospective rating	<ul style="list-style-type: none"> • Add language to include eligibility requirements for public employers (Rule 4123-17-42.1 rescinded and combined into 4123-17-42). • Add language requiring that the employer’s policy be in active status as of the application deadline rather than on the first day of the policy year for public and private employers (Par A (4)). • Add language allowing <u>employer to document and maintain a safety program acceptable to BWC’s Safety and Hygiene division</u>BWC to remove the employer from the program if they fail as an alternative option to implementing BWC’s ten step business plan for safety or a safety plan approved by the bureau’s division of safety and hygiene as required for public and private employers (Par E (2)). • Remove current language requiring employers to meet with a bureau representative quarterly for public and private employers (Par E (2)). • <u>Remove added language requiring removal from program if employer failed to implement ten step safety program..</u>
4123-17-42.1	Eligibility for retrospective rating – public employers	<ul style="list-style-type: none"> • Rule rescinded and combined with 4123-17-42.
4123-17-43	Application For Retrospective Rating Plan	<ul style="list-style-type: none"> • Remove language stating, “The application for any retrospective rating plan is optional with the employer, subject to acceptance by the Ohio bureau of workers’ compensation” (Par A). • Add language requiring that all information must be filed by the application deadline (Par C).
4123-17-67	Representation for group experience rating	<ul style="list-style-type: none"> • Change current references in the rule from AC-2 to AC-24 (Par B).
4123-17-71	One claim program for experience rated and base rated employers	<ul style="list-style-type: none"> • Change requirement to attend Workers’ Compensation University to six hours of BWC approved training (Par D (7)). • Change number of lapse days from 59 within an 18 month period to 40 days within a 12 month period (Par C (3)).

Revised by: Sherri Simpson

Revision date: September 13, 2010

OAC Chapter 4123-17 Employer Program Rule Revisions

4123-17-43	Application For Retrospective Rating Plan	<ul style="list-style-type: none"> • Move application deadline (Par C) and place in 4123-17-74.
4123-17-58	Drug-free safety program (DFSP) and comparable program	<ul style="list-style-type: none"> • Move application deadline (Par. B) to 4123-17-74. • Move compatibility information (Par. N) to 4123-17-74.
4123-17-71	One claim program for experience rated and base rated employers	<ul style="list-style-type: none"> • Move application deadline (Par B (1)) to 4123-17-74. • Move compatibility information (Par E (2)) to 4123-17-74.
4123-17-72	Deductible rule	<ul style="list-style-type: none"> • Move application deadline (Par G (1) and (2)) to 4123-17-74 • Move compatibility information (Par M) to 4123-17-74
4123-17-73	Group retrospective rating program	<ul style="list-style-type: none"> • Move application deadline (Par F) to 4123-17-74 • Move compatibility information (Par D (5)) to 4123-17-74
4123-17-74 (NEW RULE)	Deadline dates and compatibility information for employer programs	<ul style="list-style-type: none"> • Employer program deadlines and compatibility information added from 4123-17-43, 4123-17-58, 4123-17-67, 4123-17-71, 4123-17-72, 4123-17-73

Common Sense Business Regulation (BWC Rules)

(Note: The below criteria apply to existing and newly developed rules)
**Rules 4123-17-41, 4123-17-42, 4132-17-42.1, 4123-17-43, 4123-17-58,
4123-17-67, 4123-17-71, 4123-17-72, 4123-17-73, 4123-17-74**

Rule Review

1. The rule is needed to implement an underlying statute.

Citation: R.C. 4123.29

2. The rule achieves an Ohio specific public policy goal.

What goal(s): For simplicity and ease of use, the bureau would like to move compatibility and deadline date information into a single rule. Changes will also be made to clarify existing language.

Also, to update rule 4123-17-67 to accurately reflect the form name that is required to authorize a group representative.

Implementing these changes will further BWC's goal of providing clear and concise rules for employers.

3. Existing federal regulation alone does not adequately regulate the subject matter.
4. The rule is effective, consistent and efficient.
5. The rule is not duplicative of rules already in existence.
6. The rule is consistent with other state regulations, flexible, and reasonably balances the regulatory objectives and burden.
7. The rule has been reviewed for unintended negative consequences.
8. Stakeholders, and those affected by the rule were provided opportunity for input as appropriate.
Explain: The rule change was e-mailed to interested parties on July 12, 2010. Organizations who received notifications of the change included, but were not limited to, TPAs such as CCI, Frank Gates, Sedgwick, Sheakley, etc. Sponsoring organizations such as NFIB, Ohio Chamber, PIA, OMA, etc. were also included in the e-mail. Feedback regarding the rule change was positive and supportive.
9. The rule was reviewed for clarity and for easy comprehension.
10. The rule promotes transparency and predictability of regulatory activity.
11. The rule is based on the best scientific and technical information, and is designed so it can be applied consistently.
12. The rule is not unnecessarily burdensome or costly to those affected by rule.
If so, how does the need for the rule outweigh burden and cost? _____
13. The Chief Legal Officer, or his designee, has reviewed the rule for clarity and compliance with the Governor's Executive Order.

Revised by: Sherri Simpson

Revision date: September 13, 2010

BWC Board of Directors
Executive Summary

Rules 4123-17-41, 4123-17-42, 4123-17-42.1, and 4123-17-43
Employer Programs Rules Clarification
Individual Retrospective Rating Plan Rules Changes

Introduction

Implementing the suggested changes will further the bureau's goal of providing uniform application deadlines for employers. The changes to the rules are summarized below:

- Add language which states that Rules 4123-17-41 to 4123-17-54 applies to individual employer retrospective rating.
- Combining rules 4123-17-41 and 4123-17-42. In its current form these rules outline eligibility requirements for public and private employers. This change will put eligibility requirements for public and private employers in one rule.
- Including language requiring that an employer's policy is in an active status as of the application deadline rather than the first day of the policy year.
- Changing the deadline date from 90 days before the policy year to the last business day in April for private employers and the last business day in October for public employers.
- Clarifying the requirements around associated material that the employer must provide with their application
- Adding language that permits employers to document and maintain a safety program acceptable to approved by the bureau's division of safety and hygiene rather than implement the ten step business plan for safety.
- Remove Adding language allowing BWC to require removal of employer from program for failure to implement ten step safety program to remove the employer from the program for failing to comply with the program's requirements.
- Removing language requiring employers to meet quarterly with a bureau representative.

Background Information

The retrospective rating rules allow an employer to enroll in a paid loss form of retrospective rating. An employer pays a minimum premium during the policy year and agrees to reimburse the bureau annually as claims are paid to injured workers. After ten years, the policy year is closed, and employers are billed for any remaining reserves. The amount an employer must pay for claims may be capped at the claim and aggregate levels.

For simplicity and ease of use, the bureau would like to move compatibility and deadline date information into a single rule. Additionally, the bureau believes that employers would benefit from moving program dates to a uniform application date.

Proposed Changes

Rule 4123-17-41 contains updates to:

- Add language which states that Rules 4123-17-41 to 4123-17-54 applies to individual employer retrospective rating. This change clarifies the current rule.

Rules 4123-17-42 and 4123-17-42.1 contains updates to:

- Add language to place eligibility requirements for public and private employers into one rule.
- Add language requiring an employer's policy to be in an active status as of the application deadline rather than the first day of the policy year. This change will allow BWC staff to more efficiently process the applications.
- Add language that permits employers to document and maintain a safety program approved by the bureau's division of safety and hygiene rather than implement the ten step business plan for safety.
- Add language to conform this program to other program requirements that authorize BWC to remove employers for non-compliance.
- Remove the requirement to meet quarterly with bureau staff. This revision provides BWC more flexibility to establish a relationship that suits the employer. Some accounts, particularly new ones, may require a more active relationship with their local business consultant. Other, more seasoned retro participants may have low claims volume and costs and require less assistance. Eliminating an arbitrary threshold of meetings enables BWC to be more responsive to the differing needs of employers participating in the paid loss retrospective rating program.

Rule 4123-17-43 contains updates to:

- Move compatibility and deadline date information into a single rule. Additionally, the bureau believes that employers would benefit from moving program dates to a uniform application date.
- Remove the application deadline date and replace it with reference to a new consolidated program deadline date rule. The deadline date for the program will be changed from 90 days before the start of the policy year to the last business day of April for PA employers and the last business day of October for PEC employers and included in Rule 4123-17-74.
- Add - the written application "and all other required information" must be filed "by the deadline". This change was made to properly reflect in rule the current BWC policy of requiring financial information at the time of filing the application for retrospective rating.

4123-17-41 Retrospective rating definitions applicable to any employer.

[Rules 4123-17-41 to 4123-17-54 of the Administrative Code apply to individual employer retrospective rating.](#) As used in rules 4123-17-41 to 4123-17-54 of the Administrative Code:

(A) “Minimum premium” means the fixed cost chargeable to an employer, independent of the claims costs of the employer during the year of experience.

(B) “Maximum premium” means the employer’s experience-rated premium multiplied by the maximum premium percentage selected by the employer.

(C) “Per claim limit” means the maximum chargeable costs for each claim incurred during the retrospective-rated period, as selected by the employer.

(D) “Retrospective policy year” or “policy year” means the fiscal year beginning July first for private employers and the calendar year beginning January first for public employer taxing districts.

(E) “Evaluation period” means the ten-year period beginning with the first day of the policy year. Annual evaluations will occur throughout the evaluation period. At the end of the evaluation period, final settlement will be made.

(F) “Final settlement” means the final determination of premium for a policy year including any remaining reserves for claims occurring in the policy year. This determination will occur at the end of the evaluation period and will terminate the plan for that policy year.

(G) “Annual evaluation” means a statement of claim costs and premium. This information will be shown on the “Retrospective Rating Policy Year Statement.”

(H) “Incurred losses” are compensation payments, medical payments, and reserves. Reserves will be assigned at the end of the evaluation period.

(I) “Retrospective premium” means the compilation of minimum premium, all medical costs, indemnity, and any remaining reserves at the end of the ten year liability.

Promulgated Under: 111.15

Statutory Authority: 4121.12, 4121.121

Rule Amplifies: 4123.29, 4123.34

Prior Effective Dates: 7/1/88, 10/2/90, 7/1/94, 7/1/97, 10/5/05

Revised by: Sherri Simpson

Revision date: September 13, 2010

4123-17-42 Eligibility for retrospective rating.

(A) An employer that is ~~not~~ either a private or public employer as defined in division (B)(1) of section 4123.01 of the Revised Code may be eligible for either the Tier I or Tier II retrospective rating plan depending upon satisfying the eligibility requirements for either the Tier I or Tier II retrospective rating plan as described in this rule.

(B) For both the Tier I and Tier II retrospective rating plans, the employer must satisfy the following requirements:

(1) The employer must be current on any and all undisputed premiums, administrative costs, assessments, fines or moneys otherwise due to any fund administered by the Ohio bureau of workers' compensation, including amounts due for retrospective rating.

(2) The employer cannot have any unpaid, undisputed audit findings or other unpaid billings as of the application deadline.

(3) The employer cannot have cumulative lapses in workers' compensation coverage in excess of fifteen days within the last five rating years.

(4) The employer must be in an active status ~~on the first day of the policy year~~ as of the application deadline. The administrator may waive this requirement for a new business ~~entities~~ entity moving into Ohio.

(5) The employer's estimated experience-rated premium for the retrospective rating year must be greater than or equal to the minimum experience-rated premium threshold listed on the "Retrospective Rating Minimum Premium Percentages Table." If estimated premium is less than the minimum experience-rated premium threshold listed on the "Retrospective Rating Minimum Premium Percentages Table," the bureau will reject the application. In the event the estimated experience-rated premium is equal to or greater than the minimum premium threshold but the actual premium is less than the minimum experience-rated premium threshold, the retrospective rating plan remains in effect for that risk and the minimum premium is based on the minimum experience-rated premium threshold multiplied by the appropriate minimum premium percentage for the hazard group and the claim limit/maximum premium percentage selected.

(C) In addition to the requirements of paragraph (B) of this rule, for the Tier I retrospective rating plan, ~~the~~ a private employer must submit audited financial statements prepared in accordance with generally accepted accounting principles (GAAP) to satisfy the following requirements:

(1) The employer must satisfy financial standards demonstrating strength and stability. In reviewing the financial requirements of the employer, the bureau shall consider, but is not limited to, the following criteria, as applicable:

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- (a) The employer's trend of operating profit for a minimum of three years.
 - (b) The employer's trend of net income for a minimum of five years.
 - (c) The employer's consistent return on equity, of ten per cent or better.
 - (d) Significant asset size of the employer in the state of Ohio.
 - (e) A total liabilities/equity ratio of no greater than four to one.
 - (f) The employer's debt structure, including current versus long term debt, recent drastic changes in debt, etc.
 - (g) The employer's retained earnings trend.
 - (h) Whether the employer has significant fluctuations in specific balance sheet numbers from one year to the next.
 - (i) The employer's bond rating.
- (2) The employer shall demonstrate that if it sustains a catastrophic or severe workers' compensation loss, it has the ability to maintain its financial viability and to cover all costs of the retrospective rating plan through closure.
- (3) The employer shall maintain a safety program approved by the bureau's division of safety and hygiene.
- (4) The employer cannot have entered into a part-pay agreement for payment of assessments due the state insurance fund for the past three rating years preceding the beginning date of the retrospective policy year.

(D) In addition to the requirements of paragraph (B) of this rule, for the Tier I retrospective rating plan, a public employer must submit audited or reviewed financial statements prepared in accordance with generally accepted accounting principles (GAAP) to satisfy the following requirements:

(1) The public employer must satisfy financial standards demonstrating strength and stability. In reviewing the financial requirements of the public employer, the bureau shall consider, but is not limited to, the following criteria, as applicable:

(a) Significant asset size of the public employer in the state of Ohio.

(b) The public employer's debt structure, including current versus long term debt, recent drastic changes in debt, etc.

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(c) Whether the public employer has significant fluctuations in amounts reported on the balance sheet and statement of operations from one year to the next.

(d) The public employer's underlying or uninsured bond rating.

(2) The public employer shall demonstrate that if it sustains a catastrophic or severe workers' compensation loss, it has the ability to maintain its financial viability and to cover all costs of the retrospective rating plan through closure.

(3) The public employer shall maintain a safety program approved by the bureau's division of safety and hygiene.

(4) The public employer cannot have entered into a part-pay agreement for payment of assessments due the state insurance fund for the past three rating years preceding the beginning date of the retrospective policy year.

(5) The public employer cannot be under fiscal watch or emergency pursuant to section 118.022, 118.04 or 3316.03 of the Revised Code as of the application deadline for retrospective rating.

~~(D)~~(E) In addition to the requirements of paragraph (B) of this rule, for the Tier II retrospective rating plan, ~~the a private~~ employer must submit audited financial statements prepared in accordance with generally accepted accounting principles (GAAP). A public employer must submit audited or reviewed financial statements prepared in accordance with GAAP or other comprehensive basis of accounting as permitted in Ohio auditor of state bulletin 2005-002. For purposes of this rule, GAAP financial statements are preferred for a public employer. The financial statements must provide information that satisfies ~~to satisfy~~ the following requirements:

(1) For ~~an a private~~ employer that does not demonstrate the ability to satisfy the financial criteria of paragraph (C)(1) of this rule or a public employer that does not demonstrate the ability to satisfy the financial criteria of paragraph (D) of this rule, the employer must demonstrate the ability to sustain losses that are at the maximum claim limit for the retrospective rating plan and still maintain its financial viability.

(2) Within one year of entering a retrospective rating plan, the employer must implement the bureau's ten step business plan for safety as defined in rule 4123-17-70 of the Administrative Code or otherwise document and maintain a safety program acceptable to ~~acceptable to the bureau's division of safety and hygiene. The employer must agree to meet quarterly with a bureau representative to discuss the retrospective rating program and to discuss risk management strategies that other employers are successfully using to control their workers' compensation costs. If the employer fails to comply with this or any program requirement, the bureau will remove the employer from the program for the policy year in which the requirements were not met.~~

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Revision date: September 13, 2010

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Replaces 4123-17-42 and 4123-17-42.1

Promulgated Under: 111.15

Statutory Authority: 4121.12, 4121.121

Rule Amplifies: 4123.29, 4123.34

Prior Effective Dates: 7/1/88, 10/2/90, 7/1/97, 10/10/01, 10/8/09

TO BE RESCINDED

4123-17-42.1 Eligibility for retrospective rating - public employer.

- (A) A public employer as defined in division (B)(1) of section 4123.01 of the Revised Code may be eligible for either the Tier I or Tier II retrospective rating plan depending upon satisfying the eligibility requirements for either the Tier I or Tier II retrospective rating plan as described in this rule.
- (B) For both the Tier I and Tier II retrospective rating plans, the public employer must satisfy the following requirements:
- (1) The public employer must be current on any and all undisputed premiums, administrative costs, assessments, fines or moneys otherwise due to any fund administered by the Ohio bureau of workers' compensation, including amounts due for retrospective rating.
 - (2) The public employer cannot have any unpaid, undisputed audit findings or other unpaid billings as of the application deadline.
 - (3) The public employer cannot have cumulative lapses in workers' compensation coverage in excess of fifteen days within the last five rating years.
 - (4) The public employer must be in an active status on the first day of the policy year.
 - (5) The employer's estimated experience-rated premium for the retrospective rating year must be greater than or equal to the minimum experience-rated premium threshold listed on the "Retrospective Rating Minimum Premium Percentages Table." If estimated premium is less than the minimum experience-rated premium threshold listed on the "Retrospective Rating Minimum Premium Percentages Table," the bureau will reject the application. In the event the estimated experience-rated premium is equal to or greater than the minimum premium threshold but the actual premium is less than the minimum experience-rated premium threshold, the retrospective rating plan remains in effect for that risk and the minimum premium is based on the minimum experience-rated premium threshold multiplied by the appropriate minimum premium percentage for the hazard group and the claim limit/maximum premium percentage selected.

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(C) In addition to the requirements of paragraph (B) of this rule, for the Tier I retrospective rating plan, the public employer must submit audited or reviewed financial statements prepared in accordance with generally accepted accounting principles (GAAP) to satisfy the following requirements:

- (1) The public employer must satisfy financial standards demonstrating strength and stability. In reviewing the financial requirements of the public employer, the bureau shall consider, but is not limited to, the following criteria, as applicable:
 - (a) Significant asset size of the public employer in the state of Ohio.
 - (b) The public employer's debt structure, including current versus long term debt, recent drastic changes in debt, etc.
 - (c) Whether the public employer has significant fluctuations in amounts reported on the balance sheet and statement of operations from one year to the next.
 - (d) The public employer's underlying or uninsured bond rating.
- (2) The public employer shall demonstrate that if it sustains a catastrophic or severe workers' compensation loss, it has the ability to maintain its financial viability and to cover all costs of the retrospective rating plan through closure.
- (3) The public employer shall maintain a safety program approved by the bureau's division of safety and hygiene.
- (4) The public employer cannot have entered into a part-pay agreement for payment of assessments due the state insurance fund for the past three rating years preceding the beginning date of the retrospective policy year.
- (5) The public employer cannot be under fiscal watch or emergency pursuant to section 118.022, 118.04 or 3316.03 of the Revised Code as of the application deadline for retrospective rating.

(D) In addition to the requirements of paragraph (B) of this rule, for the Tier II retrospective rating plan, the public employer must submit audited or reviewed financial statements prepared in accordance with GAAP or other comprehensive basis of accounting as permitted in Ohio auditor of state bulletin 2005-002. For purposes of this rule, GAAP financial statements are preferred. These financial statements must provide information that satisfies the following requirements:

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- (1) For a public employer that does not demonstrate the ability to satisfy the financial criteria of paragraph (C) of this rule, the public employer must demonstrate the ability to sustain losses that are at the maximum claim limit for the retrospective rating plan and still maintain its financial viability.
- (2) Within one year of entering a retrospective rating plan, the public employer must implement the bureau's ten step business plan for safety as defined in rule 4123-17-70 of the Administrative Code. The public employer must agree to meet quarterly with a bureau representative to discuss the retrospective rating program and to discuss risk management strategies that other public employers are successfully using to control their workers' compensation costs.

Effective Date: 10/8/09

4123-17-43 APPLICATION FOR RETROSPECTIVE RATING PLAN

~~(A) The application for any retrospective rating plan is optional with the employer, subject to acceptance by the Ohio bureau of workers' compensation.~~

~~(A)~~ ~~(B)~~ All operations of an employer ~~a risk~~ electing retrospective rating are subject to retrospective rating.

~~(B)~~ ~~(C)~~ The ~~A~~ application must be filed on a bureau ~~application~~ form ~~provided~~ for the ~~application for~~ retrospective rating plan. The application must be completed in its entirety, including but not limited to the selection of a per-claim limit and maximum premium per cent. The absence of pertinent information will result in the application being rejected.

~~(C)~~ ~~(D)~~ The ~~written~~ application ~~and all other required information~~ must be filed ~~by the application deadline in any bureau office, with the Ohio bureau of workers' compensation ninety days preceding the beginning date of the policy year.~~ An application for a retrospective rating plan is applicable to only one policy year. Continuation of a plan for subsequent years is subject to filing of an application on a yearly basis and the meeting of eligibility requirements each year.

~~(E) The application may be filed in any office (central or service) of the Ohio bureau of workers' compensation.~~

~~(D)~~ ~~(F)~~ All changes to the original application must be filed on ~~a new bureau~~ ~~another application~~ form ~~provided for the application~~ for the retrospective rating plan ~~and must be filed~~ prior to the filing deadline. Any ~~reseissions~~ ~~changes~~ made must be completed in writing; ~~and~~ signed by an officer of the company and be filed prior to the application deadline. ~~This filing deadline is the same as the application deadline for a retrospective rating plan.~~ Any changes received by the bureau of workers' compensation after the filing deadline will not be ~~honored~~ ~~accepted~~. The latest application form or rescission received by the bureau prior to the application deadline will be used in determining the premium obligation.

Effective: 7/1/97

Prior Effective Dates: 7/1/88; 10/2/90

Revised by: Sherri Simpson

Revision date: September 13, 2010

BWC Board of Directors
Executive Summary
Rule 4123-17-58
Employer Programs Rules Clarification
Drug Free Safety Program Rules Changes

Introduction

The updates to the Drug Free Safety Program rules provide clarity and accommodate program standardization. The changes to the rules are summarized in the objective below:

- Moving the deadline date and compatibility information to a separate rule where it will be consolidated with other programs.

Background Information

Rule 4123-17-58 authorizes Ohio employers to receive a premium discount for participating in the Drug Free Safety Program.

For simplicity and ease of use, the bureau would like to move compatibility and application deadline date information into a single rule. Additionally, the bureau believes that employers would benefit from moving program dates to a single uniform application date.

Proposed Changes

Compatibility information with other bureau programs will be moved to a single consolidated rule (4123-17-74) that provides application deadlines and compatibility details across all programs.

*****DRAFT NOT FOR FILING*****

4123-17-58 Drug-free safety program (DFSP) and comparable program.

Pursuant to division (E) of section [4123.34](#) of the Revised Code, the administrator may grant a benefit in the form of a discount on premium rates and/or grants to an eligible employer that meets the drug-free safety program (DFSP) requirements under the provisions of this rule.

(A) As used in this rule:

(1) “Program,” “Drug-free safety program” or “DFSP” means the bureau’s loss prevention and safety program which may offer a benefit to eligible employers for implementing a program encompassing elements that promote occupational safety and health for workers by preventing and reducing the risk of workplace accidents and injuries attributed to the use and abuse of alcohol and other drugs, including prescription, over-the-counter, and illegal drugs.

(2) “Comparable program” means a program referred to in Section 153.01 of the Revised Code required for construction contractors and subcontractors with elements that are, generally, similar to those of the bureau’s DFSP and which qualify employers in the construction industry to provide labor services and/or supervision of such labor services on a state of Ohio public improvement projects.

(3) “Safety-sensitive position or function” means any job position or work-related function or job task designated as such by the employer, which through the nature of the activity could be detrimental or dangerous to the physical well-being of the employee, co-workers, customers or the general public through a lapse in attention or judgment. The safety-sensitive position or function may include positions or functions where national security or the security of employees, co-workers, customers, or the general public may be seriously jeopardized or compromised through a lapse in attention or judgment.

(4) “Supervisor” means an employee who supervises others in the performance of their jobs, has the authority and responsibility to initiate reasonable suspicion testing when it is appropriate, and has the authority to recommend or perform hiring or firing procedures.

(5) “Consortium” means a pool of employers and their employees established to provide services to employers to help the employers meet DFSP requirements. A consortium may contract with laboratories certified by the U.S. department of health and human services/substance abuse and mental health services administration and will operate in concert with established standardized protocols and procedures that are consistent with current federal guidelines for testing.

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(B) Application process.

(1) The bureau shall provide application and renewal forms to be completed by employers seeking to participate in the DFSP and shall have final authority to approve a state fund employer's participation in this program. Self-insuring employers and state-fund employers not participating in the DFSP should submit an application for a comparable program if they bid on or provide labor for state of Ohio public improvement/construction projects. An employer's participation and renewal of participation in a DFSP shall be on a policy year basis.

~~(1) A private employer shall apply no later than the last business day of April for the policy year beginning July first of that year except that, for the policy year beginning July 1, 2010, a private employer shall apply no later than the last business day in May.~~

~~(2) A public employer taxing district shall apply no later than the last business day of October prior to the policy year beginning January first of the following year.~~

~~(3)~~ (2) An employer may withdraw its application for application in the DFSP at any time prior to the start of the policy year. When an employer becomes aware that it is unable to meet the requirements of the DFSP level at which the employer is participating, the employer shall notify the bureau and the bureau shall withdraw the employer from the program. The employer shall return any monetary benefits for any policy year for which a program requirement was not fully met.

(C) Eligibility requirements.

Eligibility for program benefits is limited to state-fund employers. Self-insuring employers and state-fund employers desiring a comparable program shall identify this intent on the DFSP application form and shall satisfy all of the eligibility requirements of this rule or of Section 153.01 of the Revised Code. An employer that is found to be ineligible for participation in the DFSP may reapply for a subsequent policy year. An employer may implement a DFSP that exceeds the minimum requirements for the program level (basic or advanced) approved by the bureau.

(1) The employer shall be current at the time of bureau review of application for the DFSP and throughout the policy year. Current means an employer is not more than forty-five days past due on any and all premiums, assessments, penalties or monies otherwise due to any fund administered by the bureau, including amounts due for retrospective rating.

(2) The employer may not have cumulative lapses in workers' compensation coverage in excess of forty days within the twelve months preceding the original application deadline or subsequent anniversary deadline wherein the employer seeks renewal for the DFSP.

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(3) The employer shall be in an active, reinstated, or debtor-in-possession policy status at the time of bureau review of application for the DFSP.

(4) The employer shall continue to meet all eligibility requirements during participation in the program, when applying for renewal, and during each subsequent year of participation in the program.

(D) General program requirements.

The chief executive officer or designated management representative of the employer shall sign and certify the application form that the employer shall meet, at a minimum, the DFSP requirements for which the employer has applied. The signature certifies that the employer shall return any monetary benefits associated with any benefits received, should the employer fail to implement or meet the requirements of the DFSP for which it has applied and been approved.

(E) Program requirements – basic program level.

To receive a benefit as specified in paragraph (J) of this rule for implementing a basic DFSP, an employer shall fully implement, at a minimum, the following program elements by the applicable dates:

(1) Safety – The DFSP requires a participating employer to integrate safety into its DFSP including, but not limited to:

- (a) Completing and submitting the bureau’s online safety assessment within the time-frame specified by the bureau;
- (b) Ensuring each supervisor completes, one time at a minimum, accident-analysis training within the time-frame specified by the bureau; and
- (c) Utilizing online accident-analysis reporting on the bureau’s website within the time-frame specified by the bureau from the date of the accident or the date the employer first becomes aware of the accident.

(2) Policy – Employers are required to put in place a written DFSP policy which shall, at minimum, provide a full and fair disclosure of the reasons for implementing a DFSP, the program provisions and procedures, the responsibilities and rights of all employees subject to the provisions and procedures of the program, the consequences of an employee’s failure to comply with the provisions and procedures of the program, that the DFSP applies to all employees, and that the employer is committed to employee health.

(3) Employee education – The DFSP shall include education for all employees and supervisors to promote awareness and understanding of the content of the employer’s DFSP written policy, and the safety, security and health risks as well as declining productivity associated with the use of alcohol and other drugs in the workplace. The training shall be provided during the initial year of participation and annually thereafter.

Revised by: Sherri Simpson

Revision date: September 13, 2010

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(4) Supervisor skill-building training – The DFSP shall include skill-building training for all supervisors in support of enforcing the employer’s written DFSP policy and procedures during the initial year of participation and annually thereafter.

(5) Drug and alcohol testing – The DFSP program shall include alcohol and other drug testing which conforms to the federal testing model. The employer shall implement and pay for alcohol and other drug testing required by DFSP participation other than for re-testing requested by an employee and follow-up testing. Alcohol and other drug testing shall occur as specified by the bureau and shall be applied to, at minimum, the following categories:

- (a) Pre-employment/new-hire drug testing;
- (b) Post-accident alcohol and other drug testing;
- (c) Reasonable suspicion alcohol and other drug testing; and
- (d) Return-to-duty and follow-up alcohol and other drug testing.

(6) Employee assistance – The DFSP shall include an employee assistance plan. Upon an employee testing positive, in addition to any corrective action deemed appropriate as specified in the employer’s written policy, the employer shall, at minimum, explain to the employee what a substance abuse assessment is and, by way of referral, shall provide a list containing names and addresses of qualified substance abuse assessment resources that can administer a substance assessment.

(F) Program requirements – advanced program level.

To receive a benefit as specified in paragraph (I) of this rule for implementing and operating an advanced DFSP, an employer shall fully implement, at a minimum, the following program elements by the applicable dates:

- (1) The employer shall meet all of the requirements of a basic DFSP as provided in paragraph (E) of this rule.
- (2) The employer shall:
 - (a) Apply for the DFSP advanced level on the initial participation application or request renewal into the advanced level when completing the self-assessment progress report;
 - (b) Ensure that its written DFSP policy clearly reflects how random drug testing will be implemented and how additional employee assistance will be provided;
 - (c) Ensure conducting 25-per cent or higher random drug testing of the employer’s workforce each policy year;

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- (d) Pre-establish a relationship for a substance assessment of an employee who tests positive, comes forward voluntarily to indicate he or she has a substance problem, or is referred by a supervisor, with the employer paying for the cost of the assessment;
- (e) Timely submit a safety action plan based on the results of the completed safety assessment which outlines specific safety process improvements the employer intends to implement during the remainder of the policy year; and
- (f) Commit to not terminate the employment of an employee who tests positive for the first time, who comes forward voluntarily to indicate he or she has a substance problem, or who is referred by a supervisor for an assessment.

(G) Progress reporting and renewal requirements.

(1) The employer shall comply with the following requirements for initial participation and annual renewal of DFSP participation within the time-frames specified by the bureau. In order to qualify for renewal, an employer shall have implemented all requirements of its basic or advanced level DFSP by the implementation date specified by the bureau. Comparable employers shall have in place a compliant written DFSP policy and shall have completed employee education and supervisor training for all employees and supervisors that will work on a State of Ohio public improvement project as specified in Sec. 153.01 of the Revised Code no later than the time the employer provides labor services or on-site supervision of such labor services on such a project.

(2) The employer shall meet reporting requirements which require submission of an annual report on a form provided by the bureau showing that the DFSP requirements were met by the deadline date specified by the bureau for each year of participation in a DFSP. The reporting deadline date for January participants is the last business day in September and, for July participants, is the last business day in March. If the employer is applying for renewal, the employer shall stipulate which DFSP level or comparable program is requested for the following policy year. Reports shall be certified by the chief executive officer or designated management representative of the employer. The employer shall provide information as requested by the bureau regarding each component of its basic or advanced level or comparable program, shall provide any other documentation required by the bureau and shall maintain on-site statistics as required by the bureau. The bureau shall hold the information submitted on or with these annual reports and other information submitted by the employer in meeting DFSP requirements as confidential pursuant to section 149.43 of the Revised Code to avoid revealing an employer's proprietary trade secrets.

- (a) Safety – For the DFSP basic level, the employer shall report its progress to the bureau in terms of the required safety assessment, including what was learned through the safety assessment and submission of online accident-investigation information. For DFSP advanced level, the employer shall also report progress on its safety action plan.

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(b) Policy – The employer shall certify to the bureau that it has developed a written DFSP policy that meets or exceeds the requirements associated with the DFSP level or comparable program for which the employer is participating. The employer shall submit a copy of the written policy as required by the bureau.

(c) Employee education – The employer shall provide information to the bureau regarding how employee education requirements have been met.

(d) Supervisor training – The employer shall provide information to the bureau regarding how supervisor training requirements have been met.

(e) Drug and alcohol testing – The employer shall report statistics regarding alcohol and other drug testing to show how testing requirements were met. The employer shall report information about positive tests including the drugs involved and their measured testing values, and the subject employee gender, age, and location of employment.

(f) Employee assistance – For the DFSP basic level, the employer shall provide information regarding number of employees terminated based on a first positive alcohol or other drug test, number of employees referred for an assessment, and other assistance information required by the bureau. For the DFSP advanced level, the employer shall also provide information related to number of employees who tested positive and were given a second chance, number of employees whose employment was terminated and circumstances associated with termination, and additional information as required by the bureau.

(g) Demographics – An employer implementing a DFSP shall report its average annual number of employees and number of new hires since the start of the current DFSP policy year.

(H) Disqualification from program and reapplication.

The bureau may remove an employer's participation in the DFSP for failure to fully implement a DFSP in compliance with the approved program level requirements. The bureau shall send written notice of cancellation to the employer and shall require the employer to reimburse the bureau for any benefits received to which the employer was not entitled.

(1) If the bureau removes an employer from the DFSP under this rule for failure to meet program requirements, the employer may reapply for the DFSP for the next policy year, unless the employer has received a benefit and has failed to reimburse the bureau for the benefit. The bureau may deny the application based on circumstances of previous participation.

(2) When an employer becomes aware that it is unable to fully implement its DFSP by the required implementation date, the employer shall notify the bureau immediately and shall reimburse the bureau for any benefits received for participating during that policy year.

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(I) Benefit requirements.

An employer participating in the DFSP may be eligible to receive a benefit as provided for in this rule and as specified in Appendix A.

(1) Any benefit in the form of a discount to premiums will be applied to the employer's premium rate, semi-annually or annually depending on the payroll reporting and premium payment cycle of the employer, during the policy year of participation. It will not be applied to disabled workers' relief fund assessments or administrative assessments, nor will the benefit alter the employer's actual experience modifier under rule 4123-17-03 of the Administrative Code.

(2) The application of a DFSP discount shall occur semi-annually or annually in concert with each policy year of DFSP participation.

(J) Application and renewal rejection.

An employer may appeal application rejection or renewal rejection to the bureau through the specified bureau complaint process.

(K) Hold harmless statement.

Nothing in this rule requires an employer to implement any policies or practices in developing a DFSP that conflict or interfere with existing collective bargaining agreements. However, a collective bargaining agreement that prevents an employer from complying with program requirements may prevent an employer from participating in the DFSP. Where there are legal issues related to development and implementation of a DFSP, it is the employer's responsibility to consult with its legal counsel to resolve these issues. An employer shall certify in its application to the bureau that it shall hold the state of Ohio harmless for responsibility or liability under the DFSP.

(L) Drug-free grants.

Pursuant to section [4121.37](#) of the Revised Code, the administrator may establish a program of DFSP safety grants associated with reimbursement at specified levels or rates for specified DFSP start-up costs for eligible employers. These grants may be available to only DFSP employers and not to those with a comparable program.

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(M) Combinations, partial transfers and successors.

Where an employer that is participating in a basic or advanced level DFSP is combined into another policy, has a partial transfer or is a successor, the bureau shall determine how the employer's DFSP participation should transfer with considerations for whether the involved entity also has a DFSP and the level of the employer's DFSP.

~~(N) Compatibility with other bureau rate plans.~~

~~An employer participating in the DFSP shall be entitled to participate in any other bureau rate program concurrent with its participation in the DFSP, except that an employer may not receive the DFSP benefit in addition to the benefit for participating in the following rate programs:~~

- ~~(1) EM cap;~~
- ~~(2) \$15,000 medical only;~~
- ~~(3) Group experience rating in conjunction with DFSP basic level;~~
 - ~~i. Group experience rated employers can participate at the advanced level of the DFSP and receive the incremental difference between the basic and advanced level benefits.~~
- ~~(4) Group retrospective rating;~~
- ~~(5) Individual (paid loss) retrospective rating;~~
- ~~(6) Large deductible; and~~
- ~~(7) One claim.~~

Effective: 07/1/2010

Promulgated Under: 111.15

Statutory Authority: 4121.12, 4121.121

Rule Amplifies: 4123.29, 4123.34

Prior Effective Dates: 4/1/97, 7/1/98, 5/20/99, 7/1/99, 9/7/99, 3/27/00, 1/1/01, 7/1/01, 1/1/02, 12/1/02, 5/15/03, 7/1/04, 05/21/2009

Revised by: Sherri Simpson

Revision date: September 13, 2010

BWC Board of Directors
Executive Summary
Rule 4123-17-67
Employer Programs Rules Clarification
Group Rating Rules Changes

Introduction

The proposed change will update the rule to correct the name of the form that is needed to authorize a group representative. Implementing this change will further the bureau's goal of providing clear rules for employers.

Background Information

Rule 4123-17-67 details the authorizing of representatives for group experience rating. The current version of the rule incorrectly states that an AC-2 form must be submitted to authorize a representative.

Proposed Changes

The rule would be updated to accurately state that an AC-24 form must be submitted to authorize a group representative, not an AC-2 form.

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4123-17-67 Representation for group experience rating.

(A) A group that has been established and has been accepted by the bureau of workers' compensation for the purpose of group experience rate calculation shall have no more than one permanent authorized representative for representation of the group and the individual employers of the group before the bureau and the industrial commission in any and all risk-related matters pertaining to participation in the workers' compensation fund.

(B) The selection of an authorized [group](#) representative must be made by submission of a completed form ~~AC-2~~, [AC-24](#) and any change or termination of the authorized [group](#) representative can be made only by a subsequent submission of form ~~AC-2~~, [AC-24](#). Only an officer of the group may sign an ~~AC-2~~, [AC-24](#).

(C) Notwithstanding the provisions of division (A) of this rule, an individual risk in a group may retain the services of an attorney or other authorized representative for claims-related matters, such as representation at claims hearings before the bureau and the industrial commission, through submission of the appropriate authorization for representation in such individual claim files. The bureau will recognize only one authorized representative for notice and appeal purposes.

Effective: 11/8/99

Prior Effective Dates: 10/2/90; 10/11/94

BWC Board of Directors
Executive Summary
Rule 4123-17-71
Employer Programs Rules Clarification
One Claim Program Rules Changes

Introduction

The updates to the One Claim Program provide clarity and program standardization. The changes to the rules are summarized below:

- Changing the deadline date to align with other employer programs.
- Moving the deadline date and compatibility information to a separate rule (4123-17-74) where it will be consolidated with other programs.
- Updating the program training requirements from Workers' Compensation University (WCU) to 6 hours of BWC approved training
- Aligning the lapse days requirement to match other programs by changing it to 40 days within a 12 month period (effective for the rating year beginning 7/1/2011)

Background Information

Rule 4123-17-71 authorizes the One Claim Program. The program allows employers who experience a single significant loss that prevents them from being renewed for group-rating to receive a discounted EM for the policy year.

For simplicity and ease of use, the bureau would like to move compatibility and deadline date information into a single rule. Additionally, the bureau believes that employers would benefit from moving program dates to a uniform application date.

Proposed Changes

The changes to Section (B) (1) specify that deadline information will now be available in the consolidated rule 4123-17-74. The application deadline date will be moved from March 31st to the last business day in April to align it with other employer programs. Employers will benefit from the consistency of uniform program deadlines.

Section (C) (3) contains updates to standardize the lapsed days eligibility requirement with other bureau programs. The eligibility will be 40 days within the past 12 months; it was previously 59 days within the previous 18 months.

The training rule in Section (D) (7) is updated to allow an employer to participate in 6 hours of any BWC approved training instead of just Workers' Compensation University. This change is necessary since Workers' Compensation University is no longer offered to employers.

Compatibility information with other bureau programs will be moved to a single consolidated rule (4123-17-74) that provides application deadlines and compatibility details across all programs.

Revised by: Sherri Simpson

Revision date: September 13, 2010

4123-17-71 One claim program for experience rated and base rated employers.

Pursuant to division (E) of section 4123.34 of the Revised Code, the administrator may grant a discount on premium rates to an eligible employer that meets the one claim program (OCP) requirements under the provisions of this rule.

(A) As used in this rule:

(1) "One claim program" or "OCP" means the bureau's voluntary rate program which offers a private, state fund employer the opportunity to mitigate the impact of a significant claim that would be coming into the employer's experience for the first time from the green year.

(2) "Significant claim" means a claim whose total value or maximum claim value, whichever is lower, will be greater than the employer's total limited losses (TLL).

(B) Application and withdrawal processes.

An employer's participation in the OCP is voluntary and shall be for a maximum of four policy years in relationship to a specific significant claim. The bureau shall evaluate each application to determine the employer's current eligibility to participate in the OCP at the time of the application and for each year of continuing participation. The bureau shall have the final authority to approve an eligible employer for initial and continued participation in the OCP.

~~(1) A private state fund employer shall submit a completed application by March thirty first for the policy year beginning July first of that year; except that for the 2009 deadline only, the employer shall file the application by April 30, 2009.~~

(1) ~~(2)~~ An employer may withdraw from the OCP under this rule at any time. An employer that withdraws from the OCP after receiving a discount will return to its own individual experience rating for the rest of the policy year.

(2) ~~(3)~~ If the employer withdraws from the OCP and has any remaining years in which the significant claim is still in its experience, the employer may reapply for the OCP and designate the same significant claim as its one claim.

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(C) Eligibility requirements.

At the time of an employer's application for the OCP, the employer shall be currently enrolled in a group rating program and shall meet the following program requirements:

- (1) The employer shall have no more than four claims in the next experience period including the most recent calendar year with the total cost value of the one significant claim or the employer's maximum claim value, whichever is lower, greater than the employer's TLL. The four claims may include up to three medical only claims and one significant claim.
- (2) The employer shall be current at the time of the application underwriting review. "Current" means that the employer is not more than forty-five days past due on any and all premiums, assessments, penalties or monies otherwise due to any fund administered by the bureau, including amounts due for retrospective rating at the time of the application deadline. The employer must continue to be current throughout its participation in OCP.
- (3) The employer cannot have cumulative lapses in workers' compensation coverage in excess of ~~fifty-nine~~ forty days within the ~~eighteen~~ twelve months preceding the ~~March thirty-first~~ application deadline beginning with the July 1, 2011 policy year or any time thereafter while participating in the OCP.
- (4) An employer in the OCP shall continue to meet all eligibility requirements during each year of participation in the program.

(D) General program requirements.

- (1) In signing the application form, the chief executive officer or designated management representative of the employer is certifying to the bureau that the employer will comply with all program requirements.
- (2) An employer may have a maximum of three medical only claims at any time in addition to the one significant claim. As a medical only claim exits the employer's experience period, the employer may include a new medical only claim.
- (3) The total number of medical only claims may not exceed three, and the total combined costs of these claims must be below the employer's TLL.

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(4) An employer may participate in the OCP on no more than one claim every four years from the date of the employer's initial participation in the program. If the combined claim costs for the three medical only claims increase over the TLL, the employer would not be eligible.

(5) Once a claim has been designated as the one significant claim, an employer is not permitted to change the designated claim after the employer's initial application in the program.

(6) Settled and subrogated claims will be included in the employer's total claim count.

(7) The employer shall attend ~~the bureau's "Workers' Compensation University" and one other~~ six hours of BWC-approved training ~~class~~ each participating policy year.

(E) Program benefits.

~~(+)~~ The bureau will credit an employer that meets all the criteria with a forty per cent discount from the employer's base rate.

(1) ~~(a)~~ Any employer that has a lower EM due to the one hundred-per cent year-to-year cap as provided in paragraph (G) or paragraph (H) of rule 4123-17-03 of the Administrative Code than the forty per cent discount offered under this rule would receive the EM based on the one hundred-per cent capped EM.

(2) ~~(b)~~ The employer should still apply for the one claim program as provided in this rule to allow the employer to continue in the one claim program in subsequent policy years.

~~(2) The employer shall be eligible to participate in the bureau's drug free workplace program or drug free EZ program and may add the drug free discount in addition to the OCP discount.~~

(F) Removal from program.

The bureau will remove an employer from participation in the OCP at the beginning of the next policy year and, upon removal, will return the employer to its individual experience modifier, under the following circumstances:

(1) If the employer has more than four claims, lost time or medical only, including the one significant claim;

(2) If the combined claim costs of the three medical only claims increase past the TLL;

(3) If the employer fails to meet any of the eligibility or general requirements of paragraph (C) or paragraph (D) of this rule.

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(G) An employer may appeal the bureau's application rejection or the bureau's participation removal in the OCP to the bureau's adjudicating committee pursuant to section 4123.291 of the Revised Code and rule 4123-14-06 of the Administrative Code.

Effective: 1/1/10

Prior Effective Dates: 1/1/05, 2/12/09

BWC Board of Directors
Executive Summary
Rule 4123-17-72

Employer Programs Rules Clarification
Deductible Rating Program Rules Changes

Introduction

The updates to the Deductible Program rules provide clarity and program standardization. The changes to the rules are summarized below:

- Moving the application deadline date and compatibility information to a separate rule (4123-17-74) where it will be consolidated with other programs.

Background Information

Rule 4123-17-72 was passed by BWC's Board of Directors in February of 2009. This rule authorizes Ohio employers to receive a premium discount for agreeing to pay a per claim deductible.

For simplicity and ease of use, the bureau would like to move compatibility and deadline date information into a single rule. Additionally, the bureau believes that employers would benefit from moving program dates to a uniform application date.

Proposed Changes

Compatibility information with other bureau programs will be moved to a single consolidated rule (4123-17-74) that provides application deadlines and compatibility details across all programs.

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4123-17-72 Deductible rule.

(A) [Definitions](#)

As used in this rule:

- (1) "Coverage period" means the twelve month period beginning July first through June thirtieth for private employers, and January first through December thirty-first for public employers. The deductible selected by the employer will apply only to claims with a date of injury within the coverage period defined in the deductible agreement.
- (2) "Deductible" means the maximum amount an insured participating in the deductible program must reimburse the bureau for each claim that occurs during the policy year.
- (3) "Experience rated premium" means the premium obligations of an employer for the policy year excluding DWRP and administrative cost assessments. This may include any experience premium related to policy combinations.
- (4) "Modified rate" means the rate that employers who are experience rated pay as a percentage of their payroll. This rate is calculated by taking the base rate and multiplying it by the employer's experience modification (EM) factor.
- (5) "NCCI base rate" means the rate that employers who are not experience rated pay as a percentage of their payroll.
- (6) "Policy in good standing" means the employer is current on all payments due to the bureau and is in compliance with bureau laws, rules, and regulations at the time of application or reapplication.
- (7) "Premium" means money paid (due) from an employer for workers' compensation insurance. It does not include money paid as fees, fines, penalties or deposits.
- (8) "Qualified employer" means an employer that has a bureau policy that is in good standing at the time of application or reapplication. Although the employer may be a qualified employer, the bureau may not accept the employer into the deductible program for other reasons set forth in this rule.

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(B) Eligibility requirements.

Each employer seeking to enroll in the bureau deductible program shall have active workers' compensation coverage and shall meet the following standards:

- (1) The employer shall have a bureau policy that is in good standing at the time of application.
- (2) The employer shall be a private state funded employer or public employer taxing district. A self-insuring employer or a state agency public employer shall not be eligible for participation in the deductible program.
- (3) The employer shall be current on all premium payments and deductible billings as of the original application deadline or anniversary date of participation.
- (4) The employer shall have active coverage as of the original application deadline or anniversary date of participation.
- (5) The employer shall demonstrate the ability to make payments under the deductible program based upon a credit score established by the bureau on an annual basis which will be applicable to all applicants for the program year. The bureau shall obtain the credit reports from an established vendor of such information.
- (6) If the employer selects a deductible amount of five hundred dollars, one thousand dollars, two thousand five hundred dollars, five thousand dollars, or ten thousand dollars, the employer may not have cumulative lapses in workers' compensation coverage in excess of forty days within the twelve months preceding the original application deadline or subsequent anniversary deadline wherein the employer seeks renewal in the deductible program. If the employer selects a deductible amount of twenty-five thousand dollars, fifty thousand dollars, one hundred thousand dollars, or two hundred thousand dollars, the employer may not have cumulative lapses in workers' compensation coverage in excess of fifteen days within the five years preceding the original application deadline or subsequent anniversary deadline wherein the employer seeks renewal in the deductible program.

(C) In selecting an employer deductible program under this rule, the employer must select, on an application provided by the bureau, a per claim deductible amount, which shall be applicable for all claims with dates of injury within a one year coverage period. The employer shall choose one deductible level from the following:

- (1) Five hundred dollars;
- (2) One thousand dollars;
- (3) Two thousand five hundred dollars;
- (4) Five thousand dollars;

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- (5) Ten thousand dollars;
- (6) Twenty-five thousand dollars;
- (7) Fifty thousand dollars;
- (8) One hundred thousand dollars;
- (9) Two hundred thousand dollars.

(D) In choosing a deductible amount of five hundred dollars, one thousand dollars, two thousand five hundred dollars, five thousand dollars, or ten thousand dollars, the employer may not choose a deductible amount that exceeds twenty-five per cent of their experience rated premium obligation during the most recent full policy year. For a new employer policy, the deductible amount shall not exceed twenty-five per cent of the employer's expected premium. In choosing a deductible amount of twenty-five thousand dollars, fifty thousand dollars, one hundred thousand dollars, or two hundred thousand dollars, the employer may not choose a deductible amount that exceeds forty per cent of their experience rated premium obligation for the most recent full policy year. For self-insured employers re-entering the state fund system, the bureau will use the paid workers' compensation benefits from the last full policy year in place of experience rated premium.

BWC may estimate a full year's premium should only a partial year be available or if no premium is available in the most recent full policy year.

(E) A deductible level of twenty-five thousand dollars, fifty thousand dollars, one hundred thousand dollars, or two hundred thousand dollars will be considered a large deductible and will undergo additional credit analysis. Employers enrolling in a large deductible program must submit financial information to the bureau during the application period preceding each policy year they elect to participate in the program.

- (1) An employer choosing a deductible level of twenty-five thousand dollars or fifty thousand dollars must submit reviewed or audited financials for at least the three most recent fiscal years. The financials must be prepared in accordance with generally accepted accounting principles.
- (2) An employer choosing a deductible level of one hundred thousand dollars or two hundred thousand dollars must submit audited financials for at least the three most recent fiscal years. The financials must be prepared in accordance with generally accepted accounting principles.
- (3) The bureau may require an employer to adopt additional risk mitigation measures as a prerequisite for participation in the program. These measures may include, but are not limited to: adoption of an alternative payment plan, providing securitization in the form of a letter of credit or surety bond, and selection of an aggregate stop-loss limit.

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(F) An employer may elect an annual aggregate stop-loss limit option in combination with deductible levels of twenty-five thousand dollars, fifty thousand dollars, one hundred thousand dollars, ~~fifty thousand dollars, one hundred thousand dollars~~, or two-hundred thousand dollars. If the employer elects the aggregate stop-loss limit option, the bureau will limit deductible billings for injuries which occur during the associated policy year to three times the deductible level chosen.

(G) The employer shall file the application provided by the bureau and any other ~~paperwork~~ documentation required for application in the deductible program ~~by the bureau~~ by the appropriate application ~~period~~ deadline, ~~as follows:~~

~~(1) For a private employer, between March first and the last business day of April preceding a policy year that begins on July first.~~

~~(2) For a public employer – taxing district, between September first the last business day of October preceding a policy year that begins on January first.~~

(1) Applications and any supporting documentation may be submitted by U.S. postal service, fax, e-mail containing scanned documentation, or online submission, so long as such paperwork is received by the bureau on or before the due date.

(2) ~~(3)~~ The bureau shall not permit an employer to enroll in a deductible program outside of the application deadlines ~~set forth in this rule~~, except that the bureau will consider a new employer, establishing a policy in Ohio for the first time, for participation where the employer submits its deductible program application to the bureau within thirty days of obtaining coverage.

(H) Renewal in the deductible program at the same level for each subsequent year shall be automatic, subject to review by the bureau of the employer's continued eligibility under paragraph (B) of this rule, unless the employer notifies the bureau in writing that the employer does not wish to participate in the program or that the employer wants to change the deductible amount for the next coverage period. The employer shall provide such notice to the bureau within the time and in the manner provided in paragraph (G) of this rule.

(I) An employer shall not be permitted to withdraw from the deductible program during the policy year, and no changes shall be made with respect to any deductible amount selected by the employer within the policy year. However, the bureau shall have the option of removing an employer from the deductible program for any of the reasons described in paragraph (N) of this rule.

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(J) The bureau shall pay the claims costs under a deductible program and the employer shall reimburse to the bureau the costs under the deductible program as follows:

- (1) The bureau shall pay all claims costs in accordance with the laws and rules governing payment of workers' compensation benefits. The bureau shall include the entire cost in the employer's experience for the appropriate policy year.
- (2) The bureau shall bill the employer on a monthly basis for any claims costs paid by the bureau for amounts subject to the deductible as elected by the employer for the policy year. In addition to amounts paid by the bureau for which the bureau is seeking reimbursement from the employer, such monthly billings shall also reflect the payments to date for any claims to which a deductible is applicable.
- (3) The employer shall pay all deductible amounts billed by the bureau within twenty-eight days of the invoice date. The employer will be subject to any interest or penalty provisions to which other monies owed the bureau are subject, including certification to the attorney general's office for collection.
- (4) The employer shall continue to be liable beyond any deductible program period for billings covered under a deductible program for injuries that arose during any period for which a deductible is applicable, regardless of when payment was made by the bureau.

(K) The bureau will apply the premium reduction calculation under the deductible program directly to the NCCI base rate established for the policy year for base-rated employers, or after the modified premium rate is established for experience-rated employers, but prior to any other premium discounts, as well as DWRP and administrative expenses. An individual employer participating in both group rating under rules 4123-17-61 to 4123-17-68 of the Administrative Code and the deductible program under this rule may implement the deductible program and receive the associated premium discounts in addition to the group discount; provided, however, the combined discounts may not exceed the maximum discount allowed under the group rating plan. The maximum discount with group rating will be the maximum credibility of a rating group without the application of the break-even factor. The bureau will calculate the reduction in accordance with the appendices of this rule, which takes into account both the deductible amount chosen by the employer and the applicable hazard group under the most current version of NCCI as established by the primary manual classification of the employer as determined at the end of the application period for that year.

- (1) In determining the primary manual classification and appropriate hazard group, the bureau shall utilize payroll and the associated experience premium for the rating year beginning two years prior to the period in which the employer is seeking to enroll in the deductible program.
- (2) For new employers, the bureau shall base the appropriate primary manual classification and hazard group upon estimated payroll.

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(L) Where there is a combination or experience transfer of an employer within a deductible program policy period, following the application of any other rules applicable to a combination or experience transfer, the employer may be eligible to remain in a deductible program as follows:

(1) Successor: entity not having coverage.

Predecessor: enrolled in deductible program currently or in prior policy years.

Where there is a combination or experience transfer, where the predecessor was a participant in the deductible program and the successor is assigned a new policy with the bureau, the successor shall make application for the deductible program within thirty days of obtaining a bureau policy, as set forth in paragraph (G)(3) of this rule. Notwithstanding this election, the successor shall be responsible for any and all existing or future liabilities stemming from the predecessor's participation in the deductible program prior to the date that the bureau was notified of the transfer as provided under paragraph (C) of rule 4123-17-02 of the Administrative Code.

(2) Successor: enrolled in the deductible program.

Predecessor: not enrolled in the deductible program.

Where there is a combination or experience transfer involving two or more entities, each having Ohio coverage at the time of the combination or experience transfer, and the successor policy is enrolled in the deductible program for the program year, the successor shall automatically remain in the deductible program for the program year and is subject to renewal in accordance with paragraph (H) of this rule.

(3) Successor: not enrolled in deductible program.

Predecessor: enrolled In deductible program.

Where there is a combination or experience transfer involving two or more entities, each having Ohio coverage at the time of the combination or experience transfer, and the successor policy is not enrolled in the deductible program, the predecessor shall not be automatically entitled to continue in the deductible program. The successor may make a formal application should it desire to participate in the deductible program for the next policy year. Whether or not the successor chooses or is otherwise eligible to participate in a deductible program, under paragraph (C) of rule 4123-17-02 of the Administrative Code, the successor remains liable for any existing and future liabilities resulting from a predecessor's participation in the deductible program.

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~~(M) An employer participating in the deductible program shall be entitled to participate in any other bureau rate program, including group rating, concurrent with its participation in the deductible program, except that an employer cannot utilize or participate in, with respect to any injuries which occur during a period for which the employer is enrolled in a deductible program, the following bureau rate programs:~~

~~(1) Retrospective rating, whether group or individual.~~

~~(2) The fifteen thousand medical only program.~~

~~(3) Salary continuation.~~

~~(4) Group rating if a deductible level of twenty five thousand dollars, fifty thousand dollars, one hundred thousand dollars, or two hundred thousand dollars is selected.~~

~~(5) Drug free safety program premium discount if a deductible level of twenty five thousand dollars, fifty thousand dollars, one hundred thousand dollars, or two hundred thousand dollars is selected. An employer may implement or continue to use the drug free safety program, but will not receive the premium discount typically associated with program participation.~~

~~(M)~~ ~~(N)~~ The bureau may remove an employer participating in the deductible program from the program, effective the second half of the program year, with thirty days written notice to the employer based upon any of the following:

(1) Where the employer participates in any plan or program prohibited under ~~paragraph (M) of this~~ rule [4123-17-74 of the Administrative Code](#).

(2) Where the bureau certifies a balance due from the employer to the attorney general during the program year.

(3) Where the employer makes direct payments to any medical provider for services rendered or supplies or to any injured worker for compensation associated with a workers' compensation claim.

(4) Where the employer engages in misrepresentation or fraud in conjunction with the deductible program application process.

Effective: 7/1/10

Prior Effective Dates: 3/9/09, 7/1/09, 3/11/10

BWC Board of Directors
Executive Summary
Rule 4123-17-73
Employer Programs Rules Clarification
Group Retrospective Rating Program Rules Changes

Introduction

The updates to the Group Retrospective Rating Program rules provide clarity and program standardization. The changes to the rules are summarized below:

- Changing the deadline date to align with other employer programs.
- Moving the deadline date and compatibility information to a separate rule where it will be consolidated with other programs.

Background Information

Rule 4123-17-73 authorizes the Group Retrospective Rating Program. Enables certified sponsors to pool individual employers into retrospective rating groups. These groups agree to be evaluated after the policy year end and receive refunds or assessments according the performance of the group.

For simplicity and ease of use, the bureau would like to move compatibility and deadline date information into a single rule. Additionally, the bureau believes that employers would benefit from moving program dates to a uniform application date.

Proposed Changes

Compatibility information with other bureau programs will be moved to a single consolidated rule (4123-17-74) that provides application deadlines and compatibility details across all programs.

The application deadline date will be changed from the last Friday in April to the last business day in April for PA employers and from the last Friday of September to the last business day of October for PEC employers. This change will benefit employers by aligning Group Retro deadlines with the other BWC employer programs.

4123-17-73 Group retrospective rating program.

(A) [Definitions](#)

As used in this rule:

(1) "Group retrospective rating" or "group retro rating" is a voluntary workers' compensation insurance program offered by the bureau of workers' compensation. Group retro rating is designed to provide financial incentive to employer groups participating in the program that, through improvements in workplace safety and injured worker outcomes are able to keep their claim costs below a predefined level.

(2) "Basic premium factor" is a component of the retrospective rating premium formula used to account for insurance charges and costs that are distributed across all employers. The basic premium factor (BPF) is based upon charges for the cost of having retrospective premium limited by the selected maximum premium ratio and the cost of excluding surplus costs from incurred losses.

(3) "Developed losses" or "total incurred losses (developed)" are a component of the retrospective rating premium formula intended to account for the fact that total incurred losses in claims are likely to increase over time. This trend results from a number of factors, including, but not limited to, reactivation of claims and claims that may be incurred but not reported for a substantial period, and result in costs that would otherwise not be captured.

(4) "Evaluation period" means the three-year period beginning immediately after the end of the retro policy year. Annual evaluations will occur three times during the evaluation period at twelve, twenty-four, and thirty-six months after the end of the retro policy year.

(5) "Incurred losses" means compensation payments and medical payments paid to date as well as open case reserves. The total incurred losses will not include surplus costs and will be limited on a per claim basis.

(6) "Loss development factor" means actuarially determined factors that are multiplied by incurred losses of non-PTD/death retro claims to produce developed losses. Loss development factors (LDF) are unique to each retro policy year.

(7) "Maximum premium ratio" means a factor pre-selected by the retro group that is multiplied by the standard premium to determine the maximum retrospective premium for the group.

(8) "Member of a retro group" means the individual employers that participate in a group retro plan of a sponsoring organization.

(9) "Reserve" means the bureau's estimate of the future cost of a claim at a specific point in time.

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Revision date: September 13, 2010

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(10) "Retro policy year" means the policy year in which an employer is enrolled in group retrospective rating. Claim losses which occur during this year will be tracked for all retro group members and refunds or assessments will be distributed based on those losses in the subsequent evaluation period. The retro policy year start and end date will match that of the rating policy year. For public employer taxing districts, the retro policy year shall be January first through December thirty-first of a year. For private employers, the retro policy year shall be July first through June thirtieth of the following year.

(11) "Standard premium" for the purposes of retro evaluation means the total premium paid by an employer for a given policy year, excluding the assessments for the disabled workers' relief fund and the administrative cost fund.

(B) Sponsor eligibility requirements.

Each sponsoring organization seeking to sponsor a retro group must be certified under the bureau's sponsor certification process as specified in rule 4123-17-61.1 of the Administrative Code.

(C) Retro group eligibility requirements.

Each retro group seeking to participate in the bureau group retro program shall meet the following standards:

(1) A retro group must be sponsored by a bureau certified sponsoring organization.

(2) The employers' business in the organization must be substantially similar such that the risks which are grouped are substantially homogeneous. A group shall be considered substantially homogeneous if the main operating manuals of the risks as determined by the premium obligations for the rating year beginning two years prior to the retro policy year are assigned to the same or similar industry groups. Industry groups are determined by appendix B to rule 4123-17-05 of the Administrative Code. Industry groups seven and nine as well as eight and nine are considered similar. The bureau may allow an employer to move to a more homogeneous group when, after December thirty-first for private employer groups and June thirtieth for public employer taxing district groups, but before the application deadline, the employer:

(a) Is a new employer;

(b) Is reclassified as a result of an audit; or

(c) Fully or partially combines with another employer.

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(3) A retro group of employers must have aggregate workers' compensation premiums expected to exceed one million dollars, as determined by the administrator based upon the last full policy year for which premium information is available.

(a) For new employers without a full year of recorded premium, the bureau may use the employer's expected premium.

(b) The bureau shall calculate the premium based upon the experience modified premium of the individual employers excluding group rating discounts.

(4) The retro group must include at least two employers.

(5) The formation and operation of the retro group program by the organization must substantially improve accident prevention and claims handling for the employers in the retro group. The bureau shall require the retro group to document its safety plan or program for these purposes, and, for retro groups reapplying annually for group retro coverage, the results of prior programs. The safety plan must follow the guidelines and criteria set forth under rule 4123-17-68 of the Administrative Code.

(D) Employer eligibility requirements.

Each employer seeking to participate in the bureau group retrospective program shall meet the following standards:

(1) The employer shall be a private state funded employer or public employer taxing district. A self-insuring employer or a state agency public employer shall not be eligible for participation in the group retro program.

(2) Each employer seeking to enroll in a retro group for workers' compensation coverage must have active workers' compensation coverage according to the following standards:

(a) Unless the employer submits prior to the application deadline a dispute of the obligation to the bureau's adjudicating committee by a written letter containing the detailed reasons for the objection and the supporting documentation, the employer must be current (not more than forty-five days past due) on any and all premiums, administrative costs, assessments, fines or monies otherwise due to any fund administered by the Ohio bureau of workers' compensation, including amounts due for group or individual retrospective rating at the time of the application deadline date.

(b) As of the deadline for the application for group retrospective rating, the employer must be current on the payment schedule of any part-pay agreement into which it has entered for payment of premiums or assessment obligations.

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(c) The employer cannot have cumulative lapses in workers' compensation coverage in excess of forty days within the twelve months preceding the application deadline date for group retro rating.

(3) No employer may be a member of more than one retro group or a retro and non-retro group for the purpose of obtaining workers' compensation coverage. Applying for more than one group, whether retro or not, on a valid application, will result in the bureau contacting the associated sponsor or sponsors for all groups for which the employer applied. The employer must notify the bureau of the employer's final group selection. If no notification is received by the start of the policy year, the employer will be rejected from participating in any groups for the year.

(4) An employer must be homogeneous with the industry group of the retro group as defined in paragraph (C)(2) of this rule.

An individual employer member of a continuing retro group who initially satisfied the homogeneous requirement shall not be disqualified from participation in the continuing retro group for failure to continue to satisfy such requirement.

~~(5) An employer participating in the group retrospective program shall be entitled to participate in any other bureau rate program concurrent with its participation in the group retrospective program, except that an employer cannot utilize or participate in, with respect to any injuries which occur during a period for which the employer is enrolled in group retro, the following bureau rate programs:~~

~~(a) Individual retrospective rating;~~

~~(b) The \$15,000 medical only program;~~

~~(c) Deductible program;~~

~~(d) One claim program;~~

~~(e) Group rating;~~

~~(f) Drug free workplace discount program.~~

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(E) A sponsoring organization shall make application for group retro on a form provided by the bureau and shall complete the application in its entirety with all documentation attached as required by the bureau. If the sponsoring organization fails to include all pertinent information, the bureau will reject the application.

(1) The group retro application (U-151) shall be signed each year by an officer of the sponsoring organization.

(2) The sponsoring organization shall identify each individual employer in the retro group on an employer roster for group retro plan (U-152).

~~(F) For public employer taxing districts, applications for group retro coverage shall be filed with the bureau on or before the last Friday of September of the year immediately preceding the rating year; except that for rating year 2010 only, the application for group retro coverage shall be filed on or before December 31, 2009. For private employers, applications for group retro coverage shall be filed with the bureau on or before the last Friday of April of the year of the July first beginning date for the rating year; except that for 2009 only, the application for group retro coverage shall be filed on or before July 31, 2009.~~ A retro group's application for group retrospective rating is applicable to only one policy year. The retro group must reapply each year for group retro coverage. Continuation of a plan for subsequent years is subject to timely filing of an application on a yearly basis and the meeting of eligibility requirements each year.

(G) Upon receipt of an application for retro group, the bureau shall do the following:

(1) Determine the industry classification of the retro group based upon the makeup of retro group employers submitted.

(2) Screen prospective retro group members to ensure that their business operations fit appropriately in the retro group's industry classification.

(3) In reviewing the retro group's application, if the bureau determines that individual employers in the retro group do not meet the eligibility requirements for group retrospective rating, the bureau will notify the individual employers and the retro group of this fact, and the retro group may continue in its application for group retro coverage without the disqualified employers.

(H) The group retro sponsor shall submit to the bureau an employer statement (U-153) each year for each employer that wishes to participate in group retrospective rating with the sponsor. Where an employer files a new employer statement form during an application period, it shall be presumed that the latest filed employer statement form of the employer indicates the employer's intentions for group retro. An employer statement form shall remain effective until the end of the policy year as defined on the employer statement form.

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(I) The bureau may request of individual employers or the retro group sponsor, additional information necessary for the bureau to rule upon the application for group retro coverage. Failure or refusal of the retro group sponsor to provide the requested information on the forms or computer formats provided by the bureau shall be sufficient grounds for the bureau to reject the application and refuse the retro group's participation in group retrospective rating program.

(J) Individual employers who are not included on the final retro group roster or do not have an individual employer application (U-153) for the same retro group or another retro group sponsored by the same sponsoring organization on file by the application deadline, will not be considered for the group retro plan for that policy year; however, the bureau may waive this requirement for good cause shown due to clerical or administrative error, so long as no employer is added to a retro group after the application deadline. The group retro sponsor shall submit all information to the bureau by the application deadline.

(K) A sponsoring organization shall notify an employer that is participating in a retro group of that sponsoring organization if the employer will not be included in a retro group by that sponsoring organization for the next rating year. For private employer retro groups, the sponsoring organization shall notify the employer in writing prior to the first Monday in April of the year of the retro group application deadline. For public employer taxing district retro groups, the sponsoring organization shall notify the employer in writing prior to the second Friday of September of the year of the group retro application deadline. If an employer notifies the bureau that a sponsoring organization has not complied with this rule and the sponsoring organization fails to prove that the notice was provided in a timely manner, the bureau will, without the approval of the sponsoring organization, allow the employer to remain in the retro group for the rating year for which the notice was required. If that retro group no longer exists, the bureau will, without the approval of the sponsoring organization, place the employer in a homogeneous retro group with the same sponsoring organization or take other appropriate action.

(L) Once a retro group has applied for group retrospective rating, the organization may not voluntarily terminate the application. All changes to the original application must be filed on a bureau form provided for the application for the group retrospective rating plan and must be filed prior to the filing deadline. Any rescissions made must be completed in writing, signed by an officer of the sponsoring organization and filed prior to the filing deadline. The retro group may make no changes to the application after the last day for filing the application. Any changes received by the bureau after the filing deadline will not be honored. The latest application form or rescission received by the bureau prior to the filing deadline will be used in determining the premium obligation.

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(M) After the group retro application deadline but before the end of the policy year for the retro group, the sponsoring organization may notify the bureau that it wishes to remove an employer from participation in the retro group. The sponsoring organization may request that the employer be removed from the retro group after the application deadline only for the employer's gross misrepresentation on its application to the retro group.

(1) "Gross misrepresentation" is an act by the employer that would cause financial harm to the other members of the retro group. Gross misrepresentation is limited to any of the following:

(a) Where the sponsoring organization discovers that the employer applicant for group retro rating has recently merged with one or more entities, such that the merger adversely affects the employer's risk of future losses and the employer did not disclose the merger on the employer's application for membership in the retro group.

(b) Where the sponsoring organization discovers that the employer applicant for group retrospective rating has failed to disclose the true nature of the employer's business pursuit on its application for membership in the retro group, and this failure adversely affects the loss potential of the retro group.

(2) Where the sponsoring organization requests that an employer be removed from the retro group, the burden of proof is on the sponsoring organization to provide documentation. The bureau shall review the request to remove the employer from the retro group, and the employer shall be removed from the retro group only upon the bureau's consent.

(N) A retro group formed for the purpose of group retrospective rating may not voluntarily terminate a plan during the policy year. A change in the name of the retro group will not constitute a new retro group. A change of the organization sponsoring a retro group or moving a retro group to a new sponsoring organization shall constitute a new retro group and the members of the new retro group must meet the homogeneity requirement of paragraph (C)(2) of this rule. A retro group shall be considered a continuing retro group if more than fifty per cent of the members of the retro group in the previous rating year are members of the retro group in the current rating year.

(O) Selection of an authorized representative for the retro group shall meet the following requirements:

(1) A retro group that has been established and has been accepted by the bureau of workers' compensation for the purpose of group retrospective rating shall have no more than one permanent authorized representative for representation of the retro group and the individual employers of the retro group before the bureau and the industrial commission in any and all risk-related matters pertaining to participation in the workers' compensation fund.

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(2) The selection of an authorized representative must be made by submission of a completed form U-151, and any change or termination of the authorized representative can be made only by a subsequent submission of form U-151. Only an officer of the sponsoring organization may sign a U-151.

(P) The bureau shall consider an employer individually when assessing the premium payments for the retro policy year. The retro group will be considered a single entity for purposes of calculating group retrospective premium adjustments.

(Q) The group retrospective premium calculation will occur at twelve, twenty-four, and thirty-six months following the end of the group retro policy year.

(1) On the evaluation date, the bureau will evaluate all claims with injury dates that fall within the retro policy year. The incurred losses and reserves that have been established for these claims are "captured" or "frozen." The group's retrospective premium will be calculated based on the developed incurred losses of the group. The group retrospective premium will be compared to the group standard premium (the combined standard premiums of retro group members for the retro policy year) and all subsequent group retro refunds/assessments. The difference will be distributed or billed to employers as a refund or assessment.

(a) These assessments will be limited per a maximum premium ratio selected during the group retro application process.

(b) Any reserving method that suppresses some portion of an employer's costs for the purpose of calculating an experience modification will not apply in the calculation of incurred losses for group retrospective rating.

(c) The bureau may hold a portion of refunds or defer assessments owed in the first and second evaluation periods to minimize the volatility of refunds and assessments. Any net refund or assessment will be fully distributed or billed by the bureau in the third evaluation period.

(2) Incurred losses used in the retrospective premium will be limited to five hundred thousand dollars per claim.

(3) Incurred losses will not include surplus or VSSR costs.

(R) The retrospective premium calculation that will occur at various evaluation points after the retro policy year end will be as follows (please note that standard premium and developed incurred losses are for the total of the entire retro group):

Group retrospective premium = (Basic premium factor x standard premium) + developed incurred losses

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- (1) A group will elect a maximum premium ratio for the group each year as part of the group retro application process. This ratio will determine the maximum amount of total premium a retro group may pay after refunds and assessments.
- (2) Options for the maximum premium ratio will be as follows: 1.05, 1.10, 1.15, 1.20, 1.25, 1.50, 1.75, or 2.00.
- (3) A basic premium factor is applied in the retro premium calculation to account for insurance costs, surplus costs, and a per claim cap. The basic premium factor is determined using the following factors: group size by standard premium and maximum premium ratio.
- (4) Developed incurred losses are created by totaling incurred losses and reserves for the entire retro group and applying an actuarially determined loss development factor.
- (5) Refunds and assessments will be distributed directly to group retro employers. The amount refunded or assessed to an individual employer will be based upon the percentage of the total group standard premium paid by the employer at the time of evaluation. The refund or assessment will be multiplied by this percentage and the resulting amount will be distributed or billed to the employer.
- (6) Within four months of the evaluation date, if entitled, the bureau will send premium refunds.
- (7) If additional premium is owed, it will be included in the employer's next invoice and must be paid by the due date stated on the invoice. The bureau will charge penalties on any additional premium not paid when it is due. If the group retro member is entitled to a refund for one retro policy year and owes any additional monies to the bureau, the bureau will deduct the monies due the bureau from the refund. The bureau will refund the difference to the group retro member. In the event that this adjustment still leaves a premium balance due, the bureau will send a bill for the balance.

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(S) Terminations, transfers, and change of ownership will be handled in regards to group retrospective as follows:

(1) Predecessor: enrolled in group retro program.

Successor: new entity.

Where there is a combination or experience transfer during the current policy year, wherein the predecessor was a participant in the group retro program, and the successor is assigned a new policy with the bureau, the successor may be considered a member of the group retro program if agreed to by both the succeeding employer and the group retro sponsor. Written agreement signed by both the succeeding employer and the group retro sponsor must be received by the bureau within thirty days of the date of succession. If the succeeding employer and the group sponsor agree to successor joining the retro group, the successor's group retro evaluation shall be based on the group's reported payroll and claims incurred. Notwithstanding this election, the successor shall be responsible for any and all existing or future rights and obligations stemming from the predecessor's participation in the group retro program prior to the date that the bureau was notified of the transfer as prescribed under paragraph (C) of rule 4123-17-02 of the Administrative Code.

(2) Predecessor: not enrolled in group retro program.

Successor: enrolled in group retro program.

Where one legal entity that has established coverage and is enrolled in the group retro program, wholly succeeds one or more legal entities having established coverage and the predecessor entities are not enrolled in the group retro program at the date of succession, the payroll reported and claims incurred by the predecessor from the date of succession to the end of the policy year, shall be included in successor's retrospective rating plan. If the predecessor had at any time participated in a group retro program, the successor shall be responsible for any and all existing or future rights and obligations stemming from the predecessor's participation in the group retro program prior to the date that the bureau was notified of the transfer as prescribed under paragraph (C) of rule 4123-17-02 of the Administrative Code.

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(3) Predecessor: enrolled in group retro program.

Successor: not enrolled in group retro program.

Where one legal entity that has established coverage and is not currently enrolled in a group retro plan wholly succeeds one or more entities that are enrolled in a group retro plan, predecessor's plan(s) shall terminate as of the ending date of the evaluation period. Payroll reported and claims incurred on or after the date of succession will be the responsibility of the successor under its current rating plan. The successor shall be responsible for any and all existing or future rights and obligations stemming from the predecessor's participation in the group retro program prior to the date that the bureau was notified of the transfer as prescribed under paragraph (C) of rule 4123-17-02 of the Administrative Code.

(4) Predecessor: enrolled in group retro program.

Successor: enrolled in different group retro program.

Where one legal entity that has established coverage and is enrolled in a group retro plan wholly succeeds one or more entities that are enrolled in a group retro plan, predecessor's plan(s) shall terminate as of the ending date of the evaluation period. Payroll reported and claims incurred on or after the date of succession will be the responsibility of the successor under its group retro plan. The successor shall be responsible for any and all existing or future rights and obligations stemming from the predecessor's participation in the group retro program prior to the date that the bureau was notified of the transfer as prescribed under paragraph (C) of rule 4123-17-02 of the Administrative Code.

(5) Predecessor: enrolled in group retro program.

Successor: enrolled in same group retro program.

Where one legal entity that has established coverage and is enrolled in a group retro plan wholly succeeds one or more entities that are enrolled in the same group retro plan, the successor shall be responsible for any and all existing or future liabilities stemming from the predecessor's participation in the group retro program prior to the date that the bureau was notified of the transfer as prescribed under paragraph (C) of rule 4123-17-02 of the Administrative Code. If the predecessor had at any time participated in a different group retro program, the successor shall be responsible for any and all existing or future rights and obligations stemming from the predecessor's participation in the group retro program prior to the date that the bureau was notified of the transfer as prescribed under paragraph (C) of rule 4123-17-02 of the Administrative Code.

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(6) Successor: cancels coverage and was enrolled in group retro program.

Predecessor: no predecessor.

If the successor cancels coverage and there is no predecessor, the premium and losses of the cancelling employer will remain with the retro group for future retrospective premium calculations. The resulting refund or assessment will be collected from the remaining members of the retro group. Group retro sponsors and authorized representatives have the right to represent the interest of the cancelled employer on behalf of the group with regard to claims which occurred during the year or years the employer was active in a retro group sponsored by the organization.

(7) Successor and/or predecessor: open group retro policy years in the evaluation period.

If the successor and predecessor are not currently enrolled in the group retro program, but either or both have open group retro policy years in the evaluation period, the successor shall be responsible for any and all existing or future rights and obligations stemming from the predecessor's participation in the group retro program prior to the date that the bureau was notified of the transfer as prescribed under paragraph (C) of rule 4123-17-02 of the Administrative Code.

(8) Partial transfer.

If an entity partially succeeds another entity and the predecessor entity has any group retro policy years in the evaluation period, the predecessor entity will retain any rights to assessments or refunds. If the successor is enrolled in the group retro program, payroll reported and claims incurred on or after the date of the partial transfer will be the responsibility of the successor under its group retro plan.

(9) Successor: files a petition for bankruptcy.

Predecessor: no predecessor.

If a current or previously group retro program employer with open retro policy years files a petition for bankruptcy under chapter seven or chapter eleven of the Federal bankruptcy law, that employer shall notify the bureau legal division by certified mail within five working days from the date of the bankruptcy filing. The bureau will petition the bankruptcy court to take appropriate action to protect the state insurance fund and other related funds.

Effective: 9/12/09

Prior Effective Dates: 5/21/09, 7/1/09

Revised by: Sherri Simpson

Revision date: September 13, 2010

BWC Board of Directors
Executive Summary
Rule 4123-17-74

Employer Programs Rules Clarification
Deadline Dates and Compatibility Information for Employer Programs
Rules Changes

Introduction

For simplicity and ease of use, the bureau would like to move compatibility and deadline date information into a single rule. Additionally, the bureau believes that employers would benefit from moving program dates to a uniform application date.

Background Information

Program compatibility and deadline date information is currently included in the administrative rule which governs each individual program. The sections within each rule are not formatted consistently across them and there is not a way to quickly identify where it is located within a rule. This is vital information for employers who wish to apply for programs but is difficult to access.

The deadline dates of employer programs are also spread across five different dates for the seven major programs. This often causes confusion for the employer.

Proposed Changes

Compatibility and deadline date information will be removed from the rules of individual programs and consolidated into the administrative rule 4123-17-74. This change is designed to improve the accessibility of information regarding deadlines and compatibility.

The deadline date will also change for three of the bureau’s programs to make application easier for employers. All major BWC programs other than Group Experience Rating will have a deadline date of the last business day of April for PA employers and the last business day of October for PEC employers.

Deadline Date Changes

Program	PA		PEC	
	Current	Proposed	Current	Proposed
One Claim Program	3/31	Last BD of Apr	N/A	N/A
Individual Retrospective Rating	6/1	Last BD of Apr	12/1	Last BD of Oct
Group Retro Rating	Last Fri of Apr	Last BD of Apr	Last Fri of Sep	Last BD of Oct

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4123-17-74 Deadline Dates and Compatibility Information for Employer Programs

This rule defines employer program deadlines, miscellaneous dates, and compatibility between programs. Specifics may be found in the following appendices.

Appendix A: Private employer program deadlines and miscellaneous dates

Appendix B: Public employer taxing district program deadlines and miscellaneous dates

Appendix C: Employer program compatibility

This rule supersedes other rules referencing program deadlines and compatibility.

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Appendix (A)

Private employer program deadlines and miscellaneous dates

Employer Program	Application Deadline Date	Miscellaneous Program Dates
Deductible Program (as defined in OAC 4123-17-72)	Last business day of April	Application period opens – March 1
Drug-Free Safety Program (as defined in OAC 4123-17-58)	Last business day of April	
Group Experience Rating (as defined in OAC 4123-17-61 to 68)	Last business day of February	Sponsors must notify employers of non-renewal – first Monday in February
Group Retrospective Rating Program (as defined in OAC 4123-17-73)	Last business day of April	Sponsors must notify employers of non-renewal – first Monday in April
One Claim Program (as defined in OAC 4123-17-71)	March 31- for policy years starting July 1, 2010 or earlier Last business day of April – for policy years starting July 1, 2011 or later	
Retrospective Rating (as defined in OAC 4123-17-41 to 54)	90 days before the policy year - for policy years starting July 1, 2010 or earlier Last business day of April – for policy years starting July 1, 2011 or later	

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Appendix (B)

Public employer taxing district program deadlines and miscellaneous dates

Employer Program	Application Deadline Date	Miscellaneous Program Dates
Deductible Program (as defined in OAC 4123-17-72)	Last business day of October	Application period opens – September 1
Drug-Free Safety Program (as defined in OAC 4123-17-58)	Last business day of October	
Group Experience Rating (as defined in OAC 4123-17-61 to 68)	Last business day of August	Sponsors must notify employers of non-renewal – second Friday of August
Group Retrospective Rating Program (as defined in OAC 4123-17-73)	Last business day of October	Sponsors must notify employers of non-renewal – second Friday of September
Retrospective Rating (as defined in OAC 4123-17-41 to 54)	Last business day of October	

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Appendix (C)

Employer program compatibility

Program	Compatible/ Discount stacking permitted	Incompatible/ Discount stacking NOT permitted
Drug-Free Safety Program (as defined in OAC 4123-17-58)	Group Experience Rating ⁱ (advanced level only) Safety Council Salary Continuation ⁱⁱ (dates of injury prior to 1/1/2011) Small Deductible	EM Cap Fifteen Thousand Dollar Medical-Only Program Group Experience Rating Group Retrospective Rating Large Deductible One Claim Retrospective Rating Salary Continuation
EM Cap (as defined in OAC 4123-17-03 (G))	Fifteen Thousand Dollar Medical-Only Program Group Retrospective Rating Large Deductible Safety Council Salary Continuation Small Deductible	Drug-Free Safety Program Group Experience Rating One Claim Paid Loss Retrospective Rating
Fifteen Thousand Dollar Medical-Only Program (as defined in OAC 4123-17-59)	EM Cap Group Experience Rating One Claim Retrospective Rating Safety Council Salary Continuation	Drug-Free Safety Program Group Retrospective Rating Large Deductible Small Deductible
Group Experience Rating (as defined in OAC 4123-17-61 to 68)	Fifteen Thousand Dollar Medical-Only Program Drug-Free Safety Program ⁱ (advanced level only) Salary Continuation Small Deductible	Drug-Free Safety Program EM Cap Group Retrospective Rating Large Deductible One Claim Retrospective Rating Safety Council

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Program	Compatible/ Discount stacking permitted	Incompatible/ Discount stacking NOT permitted
Group Retrospective Rating (as defined in OAC 4123-17-73)	EM Cap Salary Continuation	Drug-Free Safety Program Fifteen Thousand Dollar Medical-Only Program Group Experience Rating Large Deductible One Claim Retrospective Rating Safety Council Small Deductible
Large Deductible (deductible amounts of \$25,000 or greater as defined in OAC 4123-17-72)	EM Cap One Claim Safety Council	Drug-Free Safety Program Fifteen Thousand Dollar Medical-Only Program Group Experience Rating Group Retrospective Rating Retrospective Rating Salary Continuation Small Deductible
One Claim (as defined in OAC 4123-17-71)	Fifteen Thousand Dollar Medical-Only Program Large Deductible Safety Council Salary Continuation Small Deductible	Drug-Free Safety Program EM Cap Group Experience Rating Group Retrospective Rating Retrospective Rating
Retrospective Rating (as defined in OAC 4123-17-41 to 54)	Fifteen Thousand Dollar Medical-Only Program Safety Council Salary Continuation	Drug-Free Safety Program EM Cap Group Experience Rating Group Retrospective Rating Large Deductible One Claim Small Deductible

Program	Compatible/ Discount stacking permitted	Incompatible/ Discount stacking NOT permitted
Safety Council	Drug-Free Safety Program EM Cap Fifteen Thousand Dollar Medical-Only Program Large Deductible One Claim Retrospective Rating Salary Continuation Small Deductible	Group Experience Rating Group Retrospective Rating
Salary Continuation	Drug-Free Safety Program ⁱⁱ (dates of injury prior to 1/1/2011) EM Cap Fifteen Thousand Dollar Medical-Only Program Group Experience Rating Group Retrospective Rating One Claim Retrospective Rating Safety Council	Drug-Free Safety Program Large Deductible Small Deductible
Small Deductible (deductible amounts of \$10,000 or less as defined in OAC 4123-17-72)	Drug-Free Safety Program EM Cap Group Experience Rating One Claim Safety Council	Fifteen Thousand Dollar Medical-Only Program Group Retrospective Rating Large Deductible Retrospective Rating Salary Continuation

ⁱ Group experience rated employers can participate at the advanced level of the DFSP and receive the incremental difference between the basic and advanced level benefits.

ⁱⁱ Claims with dates of injury prior to 1/1/2011 can continue to have salary continuation paid AND be eligible to participate in the new DFSP for the 7/10 policy year and all future policy years.

Stakeholder Feedback – Compatibility Rule

Rule #	Draft Rule Suggestions	Stakeholder Rationale/Suggestions	BWC Response	Resolution
4123-17-41	<ul style="list-style-type: none"> ○ Add language which states that Rules 4123-17-41 to 4123-17-54 of the Administrative Code apply to individual employer retrospective rating. 			
4123-17-42	<ul style="list-style-type: none"> ○ Add language requiring that the employer’s policy be in active status as of the application deadline rather than on the first day of the policy year. ○ Add language allowing employer to document and maintain a safety program acceptable to BWC’s Safety and Hygiene Division as an alternative option to implement BWC’s ten step business plan for safety as required by this rule. ○ Remove current language requiring employers to meet with a bureau representative quarterly. 	<ul style="list-style-type: none"> ● Stakeholders raised concerns regarding the financial impact to public employers when removing a discount retroactively as proposed in section (E)(2). ● Stakeholders noted that due to the unique structure of public employers, it may be difficult implementing the 10-step business plan for safety in every department. 		<ul style="list-style-type: none"> ● Removed proposed verbiage in 4123-17-62 (E)(2) requiring that BWC remove an employer for failure to implement the BWC 10-step business plan for safety. ● Added language providing employers an alternative to implementing the BWC 10 step business plan for safety.

Stakeholder Feedback – Compatibility Rule

Rule #	Draft Rule Suggestions	Stakeholder Rationale/Suggestions	BWC Response	Resolution
4123-17-42.1	<ul style="list-style-type: none"> ○ Add language requiring that the employer’s policy be in active status as of the application deadline rather than on the first day of the policy year. ○ Add language allowing <u>employer to document and maintain a safety program acceptable to BWC’s Safety and Hygiene Division to remove the employer from the program if they fail as an alternative option</u> to implement BWC’s ten step business plan for safety as required by this rule. ○ Remove current language requiring employers to meet with a bureau representative quarterly. ○ <u>Remove added language requiring removal from program if employer fails to implement ten step safety program.</u> ○ Combine with 4123-17-42 	<ul style="list-style-type: none"> • Responses are supportive of the revisions. 	NA	NA

Stakeholder Feedback – Compatibility Rule

Rule #	Draft Rule Suggestions	Stakeholder Rationale/Suggestions	BWC Response	Resolution
4123-17-43	<ul style="list-style-type: none"> ○ Remove language stating, “The application for any retrospective rating plan is optional with the employer, subject to acceptance by the Ohio bureau of workers’ compensation” ○ Removal of application deadline and place in 4123-17-74 ○ Add - the written application “<u>and all other required information</u>” must be filed “<u>by the deadline</u>” 	<ul style="list-style-type: none"> ● Responses are supportive of the revisions. 	NA	NA
4123-17-58	<ul style="list-style-type: none"> ● Removal of application deadline and place in 4123-17-74 ● Removal of compatibility information and place in 4123-17-74 	<ul style="list-style-type: none"> ● Responses are supportive of the revisions.. 	NA	NA
4123-17-67	<ul style="list-style-type: none"> ● Change references from AC-2 to AC-24 	<ul style="list-style-type: none"> ● Responses are supportive of the revisions. 	NA	NA

Stakeholder Feedback – Compatibility Rule

	Draft Rule Suggestions	Stakeholder Rationale/Suggestions	BWC Response	Resolution
4123-17-71	<ul style="list-style-type: none"> • Removal of application deadline and place in 4123-17-74 • Removal of compatibility information • Change from attendance at Workers' Compensation University (WCU) to 6 hours of BWC approved training • Change - Lapse days to 40 day within 12 month period (effective for the rating year beginning 7/1/2011) 	<ul style="list-style-type: none"> • Responses are supportive of the revisions. 	NA	NA
4123-17-72	<ul style="list-style-type: none"> • Removal of application deadline and place in 4123-17-74 • Removal of compatibility information and place in 4123-17-74 • Add new manual classification codes to the appendix for private employers • Update appendix for public employers (verify with actuarial) 	<ul style="list-style-type: none"> • Responses are supportive of the revisions. 	NA	NA
4123-17-73	<ul style="list-style-type: none"> • Removal of application deadline and place in 4123-17-74 • Removal of compatibility information and place in 4123-17-74 	<ul style="list-style-type: none"> • Responses are supportive of the revisions. 	NA	NA

Stakeholder Feedback – Compatibility Rule

	Draft Rule Suggestions	Stakeholder Rationale/Suggestions	BWC Response	Resolution
4123-17-74	<ul style="list-style-type: none"> The new rule will include application deadlines and compatibility information for employer programs. 	<ul style="list-style-type: none"> Stakeholders questioned the effective deadlines for PECs Stakeholders requested that BWC consider the following regarding group deadlines: <ul style="list-style-type: none"> Changing the group deadline to the “last business day of the month” rather than the last Friday in February for PAs and the last Friday in Aug for PECs It was also suggested that renewal dates should be consistent. BWC may want to consider changing the non-renewal deadlines to the 2nd Friday in Feb. and Aug. for group non-renewals. (Currently the non renewal deadlines are 1st Monday in Feb for PAs, and the 2nd Fri in Aug for PECs) 	<ul style="list-style-type: none"> BWC is reviewing the effective dates for PECs. BWC agrees that deadlines for group should be more consistent. 	<ul style="list-style-type: none"> Dates for groups were revised to reflect the stakeholder’s comments.



Ohio Bureau of Workers' Compensation
Documentation of 2010 Mortality Study

Deloitte Consulting LLP
September 10, 2010

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Deloitte Consulting LLP
33rd Fl, City Place Bld I
185 Asylum Street
Hartford, CT 06103
USA

September 10, 2010

Tel: +1 860 725 3165
www.deloitte.com

John Pedrick, FCAS, MAAA
Chief Actuarial Officer
Ohio Bureau of Workers' Compensation
30 W. Spring St.
Columbus, OH 43215-2256

Dear John,

We are pleased to provide this report documenting the 2010 Mortality Study for the Ohio Bureau of Workers' Compensation as of March 15, 2010.

It has been a pleasure to work with the Ohio Bureau of Workers' Compensation on this engagement. Please do not hesitate to contact me at (860) 725-3165 or Russell Menze (860) 725-3303 if you have any questions or comments.

Sincerely,

Darryl Wagner, FSA, MAAA
Deloitte Consulting LLP

Russell B. Menze, FSA, MAAA
Deloitte Consulting LLP

SCOPE

The Ohio Bureau of Workers' Compensation ("BWC") is a state funded workers' compensation system, primarily focused on providing compensation benefits for work-related injuries, diseases and deaths.

Deloitte Consulting LLP ("Deloitte Consulting") is engaged by BWC to develop group specific annuity factors for the following six groups reflecting each group's specific mortality experience:

- Permanent and Total Disability – Public Employers, Regular Accident Type
- Permanent and Total Disability – Private Employers, Regular Accident Type
- Permanent and Total Disability – OD - Lung
- Permanent and Total Disability – OD – Non-Lung
- Death – Public Employers
- Death – Private Employers

In comparison to the BWC mortality study conducted back in 2002 by MMC Enterprise Risk, this study involves comparable analysis procedures and provides a more up-to-date estimate for the group specific annuity factors.

BWC provided mortality experience data for each of the six groups. The time period for the provided mortality data was from March 15, 1916 through March 15, 2010.

In the course of our analysis, we received and relied upon the following information:

- Discussions with Elizabeth Bravender from BWC regarding the characteristics of the claim data and exposures; and
- Spreadsheets containing claimant specific information provided by BWC, including such items as claim identifiers, date of birth, sex, date of injury, date of death if available, etc.

We have relied upon BWC for the data and information received. A specific audit to verify the accuracy and completeness of the data provided to us is beyond the scope of this analysis, however we have reviewed the data supplied for reasonableness and consistency and communicated any concerns with BWC.

METHODOLOGY

Deloitte Consulting created independent models for each of the six data groups using the general methodology discussed below.

We were supplied with group specific data, and the time period for the data was from March 15, 1916 through March 15, 2010. We then cleansed and organized the raw data after we performed necessary data checks for consistency and made assumptions about any missing data elements. For example, we excluded the records where multiple claims are assigned to the same claimant and only kept one record for our study. We excluded records where the birth date was not available and we could not properly allocate exposure for this claimant based on other available information. Other cleansing procedures include checks for negative ages or unreasonably old ages etc.

For each year a claimant was in the study, one year of exposure is counted for the age at the beginning of that year, including the year of death. The only exception to this rule is the initial year entering into the study. For the first year, only a fractional exposure was included in the study representing the portion of the year the claimant was in the study. This is known as the Balducci hypothesis.

- **Permanent and Total Disability**

For the Permanent and Total Disability (“PTD”) data groups, a claimant would start contributing exposures to this study on the date of injury, and stop contributing exposures upon death or end of the study period (which is March 15, 2010) if still alive. The claimant’s age as of injury date is derived based on the provided date of birth and date of injury, and is rounded to nearest two decimal places in order to get a more accurate exposure calculation for the year of entry. For claimants with missing date of birth, BWC provided integer ages as of the date of injury from their system, and we have relied on those. The claimant’s age at death or age as of the end of mortality period is derived following the same logic. Also, if there are multiple claim records attributed to the same claimant, they are counted as one record and would contribute to exposure calculation only once.

Of the four PTD data groups, PTD Private has the most credible experience. In analyzing the experience mortality rates for PTD - Private, we adopted the Annuity 2000 Basic Male Table as the expected table. The experience mortality rate is defined as the ratio of the number of deaths for a certain age over the exposure for that age. For PTD Private, age 45 to 95 appears to be the range with most credible mortality experience, thus we applied the Whittaker-Henderson graduation technique to this range. The smoothing factor (h) was set to the average exposure. The difference polynomial (n) was set to 4, since a cubic curve (which has an order of $n-1$) exhibits the best fit to the experience mortality rates compared to linear and

quadratic in an exposure-weighted least squares fitting (see Appendix A). Rates for the age range 0 through 44 and 95 through 110 were then extrapolated based on ratios implied from the expected mortality curve.

After the entire experience curve is determined, an adjustment factor is applied to the curve such that the number of deaths implied from the experience curve equals the actual number of deaths.

For the other three PTD data groups (PTD Public, PTD OD Lung and Non-Lung), considering that they have less credible mortality experience, and that the shape of the experience mortality rates resemble that of PTD Private, we adopted the final curve derived for PTD Private as the expected curve for the three PTD groups. For each of the three groups, the expected curve is adjusted by applying a factor such that the number of deaths implied from the adjusted curve equals the actual number of deaths for that group.

Annuity factors are then derived based on group specific mortality rates and a selected interest rate.

- **Death**

For the Death claim data, the spouse or children are the claimant instead of the injured worker. The total payment is allocated to spouse and eligible children (younger than 18 year old or 25 if in a post-secondary school) based on BWC's pre-defined schedule. The spouse will receive her portion of claim payments until death or remarriage. Upon the spouse's death or remarriage, her portion will be redistributed to eligible children. At remarriage, the spouse will receive a lump sum of payments for an additional two years.

Exposure starts from the effective date of the injured worker's death, and ends upon the spouse's death or remarriage. Those records with only orphans receiving payments are excluded from our study, as we focus on developing mortality and remarriage assumptions for the spouse. Assumptions about children are made separately in calculating annuity factors.

Due to the low number of exposures from Death Public, we choose to equate the final assumptions for this group with Death Private.

The methodology of deriving the remarriage rates and mortality curve for Death Private is as follows:

1. The expected mortality is set to be 1994 Group Annuity Mortality Female table;
2. Since the data does not have breakouts for decrements due to death or remarriage, we assume the mortality experience for the spouse is consistent with expected for age 17 to 80 (spouse beyond this age band is assumed to have zero remarriage rate), and then derived raw remarriage rates by

subtracting the expected mortality rates from the total decrements. The remarriage rates were then fitted into a logarithmic curve to smooth out the results. The curve fitted to remarriage rates is as follows: $y = -0.003494 \ln(x-22) + 0.015417$. We then subtract the fitted remarriage rates from the total decrements to obtain raw mortality rates.

3. Since the Whittaker-Henderson technique does not seem to produce a mortality curve smooth enough, we applied least squares fitting and derived the following curve for age band 53~95: $y = 0.00000352*(x-52)^3 - 0.00008495*(x-52)^2 + 0.00090757*(x-52) + 0.00214218$. The rest of the curve was then extrapolated based on ratios implied from expected curve.

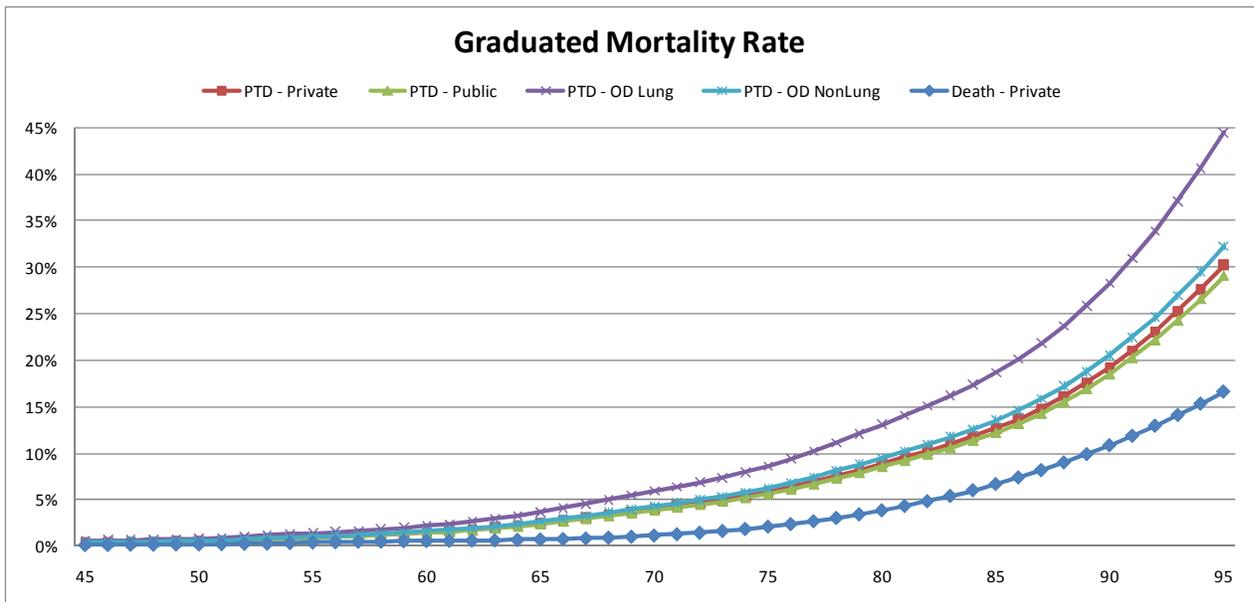
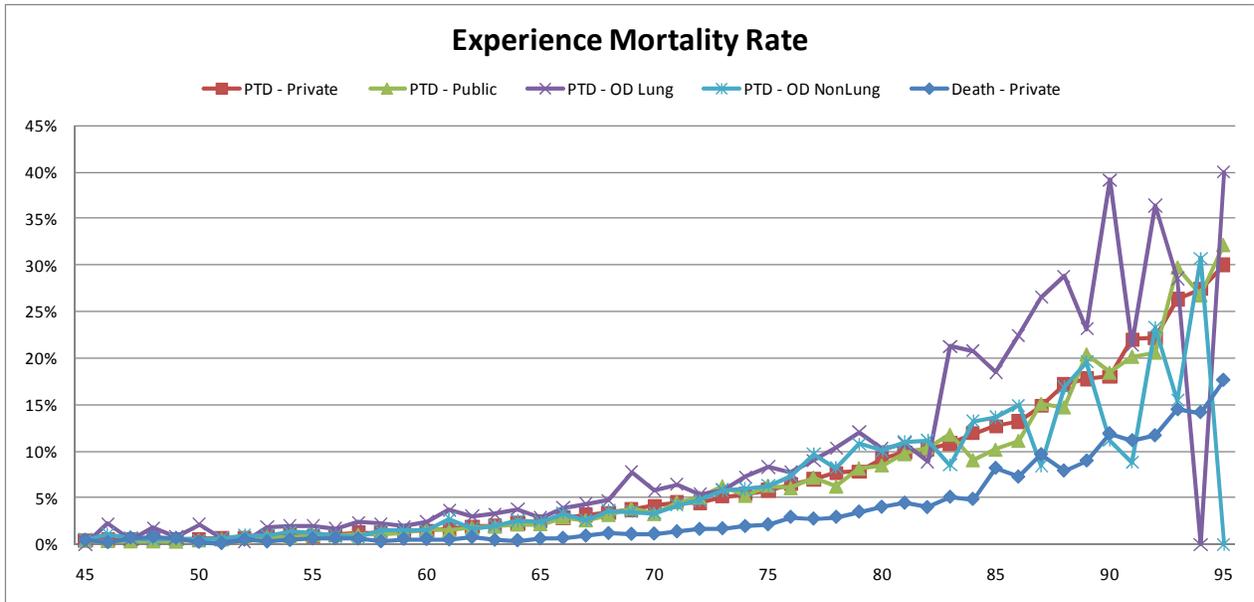
Using the mortality rates and remarriage rates for the spouse, we could derive the component for payments to the spouse. The annuity factors for the Death claims also include a component for payments to the children, since all payments are redistributed to eligible children, if any, upon the spouse's death or remarriage. The probability for each age of child and for no children are derived based on the 2000 US Census that was released on June 29, 2001. A term certain annuity factor was calculated for each age and multiplied by the probability of having children that age. Summing these factors up gives us the total annuity factor for children by age of the householder. The calculation performed based on the US Census data is the same as that of the 2002 BWC mortality study (Appendix C of the 2002 study).

SUMMARY OF RESULTS

The following table summarizes the number of deaths and exposure for each of the six data groups:

Group	Claim Type	Risk Type	Accident Type	Exposures	Deaths
1	PTD	Public	Regular	151,508	4,355
2	PTD	Private	Regular	1,371,161	33,206
3	PTD	Public/Private	OD-Lung	19,278	949
4	PTD	Public/Private	OD-Non Lung	38,652	984
5	Death	Public		15,728	255
6	Death	Private		83,442	1,411

The following two graphs show the comparison of raw experience mortality rates for the five analyzed data groups (Death Public was not analyzed as mentioned in the last section); and the comparison of mortality rates after smoothing. Only ages 45 to 95 are shown as this range has relatively higher credibility compared to younger and older ages.



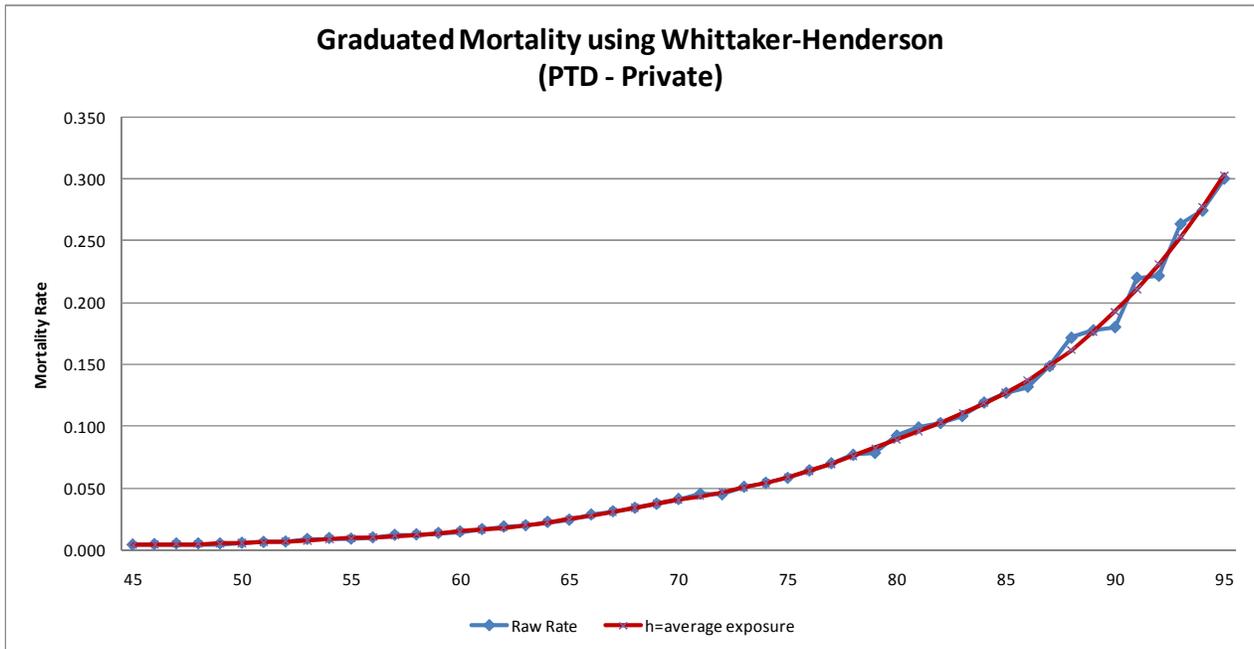
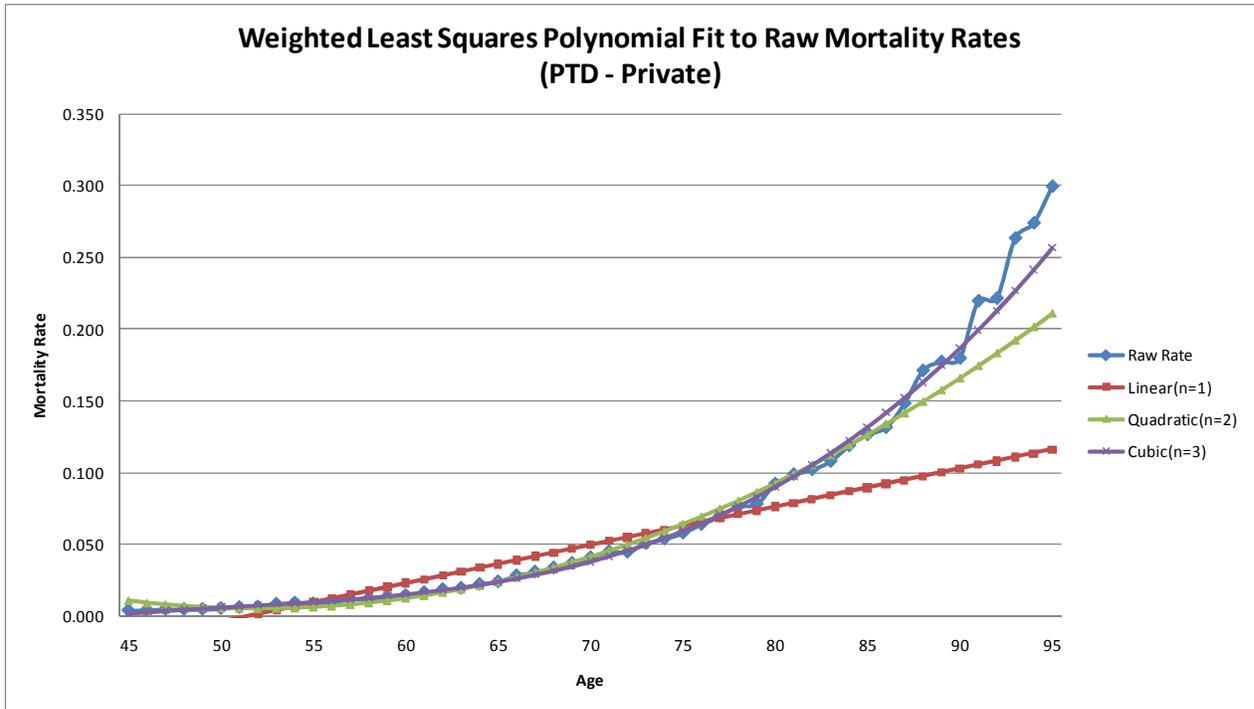
As shown in the experience rates graph, the four PTD groups have very similar curves, except for ages 82 to 95 for PTD OD Lung and Non-Lung where increase volatility is introduced by less credible data. The Death Private group has a mortality curve that has the lowest mortality rates, which appears reasonable since this curve is for the spouse, not the injured worker. Both the experience rates graph and the smoothed rates graph show that PTD OD Lung and Non-Lung have higher mortality rates than PTD Regular (which includes PTD Private and PTD Public).

The annuity factors for each group can be found in Appendix B. The factors were determined using a valuation interest rate of 4.0%.

DISTRIBUTION AND USE

This report is prepared solely for the use of Ohio BWC. The general business terms, including authorization and access letter forms, outlined in the engagement letter should be referred to regarding any additional distribution of this report. All parties receiving this report should be advised that Deloitte Consulting personnel are available to discuss this analysis in further detail.

APPENDIX A – Whittaker-Henderson Graduation for PTD Private



APPENDIX B – Annuity Factors by Group, Valuation Interest Rate = 4.0%

PTD Public									
Age	Annuity Factor				Age	Annuity Factor			
	Yearly	Monthly	Biweekly	Weekly		Yearly	Monthly	Biweekly	Weekly
1	22.9	280.6	608.6	1217.7	56	13.1	161.1	349.5	699.6
2	22.9	280.0	607.4	1215.2	57	12.8	157.0	340.8	682.0
3	22.9	279.3	605.7	1212.0	58	12.5	152.9	331.9	664.2
4	22.8	278.5	604.0	1208.5	59	12.1	148.7	322.8	646.2
5	22.7	277.6	602.1	1204.7	60	11.8	144.5	313.8	628.0
6	22.6	276.7	600.1	1200.7	61	11.4	140.3	304.6	609.7
7	22.6	275.7	598.0	1196.4	62	11.1	136.1	295.4	591.3
8	22.5	274.7	595.8	1192.1	63	10.7	131.8	286.2	573.0
9	22.4	273.7	593.6	1187.6	64	10.4	127.6	277.1	554.7
10	22.3	272.6	591.3	1183.1	65	10.0	123.5	268.1	536.7
11	22.2	271.5	588.9	1178.4	66	9.7	119.4	259.3	519.0
12	22.1	270.4	586.5	1173.6	67	9.3	115.4	250.6	501.7
13	22.0	269.3	584.1	1168.6	68	9.0	111.5	242.1	484.7
14	21.9	268.1	581.5	1163.5	69	8.7	107.6	233.8	468.1
15	21.8	266.9	578.8	1158.1	70	8.4	103.8	225.6	451.7
16	21.7	265.6	576.1	1152.6	71	8.0	100.1	217.4	435.3
17	21.6	264.3	573.2	1146.9	72	7.7	96.3	209.3	419.1
18	21.5	262.9	570.3	1141.0	73	7.4	92.6	201.1	402.8
19	21.4	261.5	567.2	1134.9	74	7.1	88.8	193.0	386.6
20	21.3	260.1	564.1	1128.6	75	6.8	85.1	185.0	370.6
21	21.2	258.6	560.8	1122.1	76	6.5	81.5	177.1	354.8
22	21.0	257.0	557.5	1115.4	77	6.2	77.9	169.5	339.4
23	20.9	255.4	554.0	1108.5	78	5.9	74.5	162.0	324.5
24	20.8	253.8	550.4	1101.3	79	5.6	71.2	154.7	310.0
25	20.6	252.1	546.7	1093.9	80	5.3	67.9	147.7	295.9
26	20.5	250.3	542.9	1086.3	81	5.1	64.7	140.8	282.2
27	20.3	248.5	539.0	1078.5	82	4.8	61.6	134.1	268.6
28	20.2	246.6	534.9	1070.3	83	4.6	58.5	127.4	255.2
29	20.0	244.7	530.7	1061.9	84	4.3	55.4	120.7	241.9
30	19.9	242.6	526.3	1053.1	85	4.0	52.4	114.0	228.6
31	19.7	240.5	521.7	1044.0	86	3.8	49.3	107.4	215.4
32	19.5	238.3	517.0	1034.5	87	3.5	46.3	100.9	202.4
33	19.3	236.1	512.1	1024.6	88	3.3	43.4	94.6	189.7
34	19.1	233.7	506.9	1014.3	89	3.1	40.5	88.4	177.3
35	18.9	231.2	501.5	1003.6	90	2.8	37.8	82.5	165.4
36	18.7	228.6	496.0	992.4	91	2.6	35.2	76.8	154.1
37	18.5	226.0	490.2	980.8	92	2.4	32.7	71.4	143.3
38	18.3	223.2	484.2	968.8	93	2.2	30.4	66.4	133.3
39	18.0	220.3	478.0	956.4	94	2.0	28.3	61.8	124.2
40	17.8	217.4	471.6	943.7	95	1.8	26.4	57.8	116.1
41	17.5	214.4	465.1	930.7	96	1.7	24.7	54.1	108.8
42	17.3	211.3	458.4	917.4	97	1.6	23.1	50.6	101.7
43	17.0	208.2	451.7	903.8	98	1.4	21.5	47.1	94.8
44	16.8	205.0	444.8	890.1	99	1.3	19.9	43.7	87.9
45	16.5	201.8	437.8	876.1	100	1.2	18.3	40.3	81.0
46	16.2	198.5	430.7	861.9	101	1.0	16.7	36.8	74.2
47	16.0	195.1	423.4	847.2	102	0.9	15.2	33.4	67.3
48	15.7	191.6	415.8	832.1	103	0.8	13.6	30.0	60.5
49	15.4	188.0	408.0	816.5	104	0.7	12.0	26.6	53.8
50	15.1	184.3	400.0	800.5	105	0.6	10.5	23.3	47.1
51	14.8	180.6	391.8	784.2	106	0.4	9.0	20.0	40.5
52	14.4	176.8	383.6	767.6	107	0.3	7.5	16.8	33.9
53	14.1	172.9	375.2	750.9	108	0.2	6.0	13.5	26.7
54	13.8	169.0	366.8	734.0	109	0.1	4.4	10.1	15.6
55	13.5	165.1	358.2	716.9	110	0.0	0.0	0.0	0.0

Note: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated, at an interest of 4.0%

PTD Private

Age	Annuity Factor				Age	Annuity Factor			
	Yearly	Monthly	Biweekly	Weekly		Yearly	Monthly	Biweekly	Weekly
1	22.9	280.1	607.5	1215.5	56	13.0	159.2	345.6	691.7
2	22.9	279.5	606.3	1213.0	57	12.6	155.2	336.8	674.0
3	22.8	278.8	604.6	1209.8	58	12.3	151.0	327.8	656.1
4	22.7	278.0	602.8	1206.2	59	12.0	146.8	318.7	638.0
5	22.7	277.1	600.9	1202.3	60	11.6	142.6	309.6	619.7
6	22.6	276.1	598.9	1198.2	61	11.3	138.4	300.4	601.4
7	22.5	275.1	596.7	1194.0	62	10.9	134.1	291.2	582.9
8	22.4	274.1	594.5	1189.5	63	10.5	129.9	282.0	564.5
9	22.3	273.1	592.2	1185.0	64	10.2	125.7	272.9	546.2
10	22.3	272.0	589.9	1180.4	65	9.8	121.5	263.9	528.2
11	22.2	270.9	587.6	1175.6	66	9.5	117.4	255.0	510.5
12	22.1	269.8	585.1	1170.8	67	9.2	113.4	246.3	493.2
13	22.0	268.6	582.6	1165.7	68	8.8	109.5	237.9	476.3
14	21.9	267.4	580.0	1160.5	69	8.5	105.7	229.6	459.7
15	21.8	266.2	577.3	1155.1	70	8.2	101.9	221.4	443.3
16	21.7	264.9	574.5	1149.5	71	7.9	98.2	213.3	427.0
17	21.6	263.6	571.6	1143.8	72	7.6	94.4	205.2	410.8
18	21.5	262.2	568.6	1137.8	73	7.3	90.7	197.1	394.7
19	21.3	260.8	565.5	1131.6	74	7.0	87.0	189.0	378.6
20	21.2	259.3	562.4	1125.2	75	6.6	83.3	181.1	362.6
21	21.1	257.8	559.1	1118.6	76	6.3	79.7	173.2	347.0
22	21.0	256.2	555.6	1111.8	77	6.0	76.2	165.6	331.7
23	20.8	254.6	552.1	1104.8	78	5.8	72.8	158.2	316.9
24	20.7	252.9	548.5	1097.5	79	5.5	69.4	151.1	302.6
25	20.5	251.2	544.8	1090.1	80	5.2	66.2	144.1	288.7
26	20.4	249.4	540.9	1082.4	81	4.9	63.1	137.3	275.1
27	20.3	247.6	536.9	1074.4	82	4.7	60.0	130.6	261.8
28	20.1	245.6	532.8	1066.1	83	4.4	57.0	124.0	248.5
29	19.9	243.7	528.5	1057.6	84	4.2	53.9	117.4	235.4
30	19.8	241.6	524.1	1048.7	85	3.9	50.9	110.9	222.3
31	19.6	239.5	519.5	1039.5	86	3.7	47.9	104.4	209.3
32	19.4	237.3	514.7	1029.9	87	3.4	45.0	98.0	196.5
33	19.2	235.0	509.7	1019.9	88	3.2	42.1	91.7	184.0
34	19.0	232.6	504.5	1009.5	89	2.9	39.3	85.7	171.8
35	18.8	230.1	499.1	998.6	90	2.7	36.6	79.8	160.1
36	18.6	227.5	493.4	987.3	91	2.5	34.0	74.2	148.9
37	18.4	224.7	487.5	975.5	92	2.3	31.6	68.9	138.4
38	18.2	221.9	481.4	963.4	93	2.1	29.3	64.0	128.5
39	17.9	219.0	475.2	950.9	94	1.9	27.2	59.5	119.6
40	17.7	216.1	468.7	938.0	95	1.8	25.4	55.6	111.6
41	17.4	213.0	462.1	924.8	96	1.6	23.7	52.0	104.5
42	17.2	209.9	455.4	911.3	97	1.5	22.1	48.6	97.6
43	16.9	206.8	448.6	897.6	98	1.4	20.6	45.2	90.9
44	16.6	203.6	441.6	883.7	99	1.2	19.0	41.8	84.1
45	16.4	200.3	434.6	869.7	100	1.1	17.5	38.5	77.4
46	16.1	197.0	427.4	855.3	101	1.0	15.9	35.1	70.8
47	15.8	193.6	420.0	840.5	102	0.9	14.4	31.8	64.1
48	15.5	190.0	412.4	825.2	103	0.7	12.9	28.5	57.4
49	15.2	186.4	404.5	809.5	104	0.6	11.4	25.2	50.9
50	14.9	182.7	396.4	793.3	105	0.5	9.9	21.9	44.3
51	14.6	178.9	388.2	776.9	106	0.4	8.4	18.7	37.8
52	14.3	175.0	379.9	760.2	107	0.3	6.9	15.4	31.3
53	14.0	171.2	371.4	743.4	108	0.2	5.3	12.0	24.3
54	13.6	167.2	362.9	726.4	109	0.1	3.5	8.1	14.4
55	13.3	163.3	354.3	709.1	110	0.0	0.0	0.0	0.0

Note: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated, at an interest of 4.0%

PTD Occupational Disease - Lung

Age	Annuity Factor				Age	Annuity Factor			
	Yearly	Monthly	Biweekly	Weekly		Yearly	Monthly	Biweekly	Weekly
1	22.5	274.7	595.7	1191.8	56	11.5	141.2	306.6	613.7
2	22.4	274.1	594.4	1189.3	57	11.1	137.0	297.3	595.2
3	22.4	273.2	592.6	1185.6	58	10.8	132.7	288.0	576.6
4	22.3	272.3	590.5	1181.5	59	10.4	128.3	278.7	557.8
5	22.2	271.3	588.3	1177.1	60	10.1	124.0	269.3	539.0
6	22.1	270.2	585.9	1172.4	61	9.7	119.7	259.8	520.2
7	22.0	269.0	583.4	1167.4	62	9.3	115.3	250.4	501.4
8	21.9	267.8	580.9	1162.2	63	9.0	111.0	241.1	482.7
9	21.8	266.6	578.3	1157.0	64	8.6	106.8	231.9	464.3
10	21.7	265.4	575.6	1151.7	65	8.3	102.6	222.9	446.3
11	21.6	264.1	572.9	1146.3	66	7.9	98.6	214.2	428.9
12	21.5	262.9	570.1	1140.7	67	7.6	94.7	205.7	411.9
13	21.4	261.5	567.2	1135.0	68	7.3	90.9	197.6	395.6
14	21.3	260.2	564.3	1129.0	69	7.0	87.2	189.6	379.7
15	21.2	258.8	561.2	1122.9	70	6.7	83.7	181.9	364.3
16	21.0	257.3	558.0	1116.6	71	6.4	80.2	174.2	349.0
17	20.9	255.8	554.8	1110.0	72	6.1	76.7	166.7	333.8
18	20.8	254.2	551.4	1103.2	73	5.8	73.2	159.1	318.8
19	20.7	252.6	547.9	1096.2	74	5.5	69.7	151.7	303.9
20	20.5	250.9	544.2	1089.0	75	5.2	66.4	144.3	289.2
21	20.4	249.2	540.5	1081.5	76	4.9	63.1	137.2	274.9
22	20.2	247.4	536.7	1073.9	77	4.7	59.9	130.3	261.1
23	20.1	245.6	532.7	1066.0	78	4.4	56.8	123.7	247.8
24	19.9	243.7	528.7	1057.8	79	4.2	53.9	117.3	235.1
25	19.8	241.8	524.5	1049.5	80	3.9	51.1	111.2	223.0
26	19.6	239.8	520.2	1040.8	81	3.7	48.4	105.4	211.3
27	19.4	237.8	515.7	1031.9	82	3.5	45.7	99.7	199.8
28	19.3	235.6	511.1	1022.7	83	3.3	43.1	94.0	188.5
29	19.1	233.4	506.3	1013.2	84	3.0	40.5	88.4	177.3
30	18.9	231.1	501.4	1003.3	85	2.8	38.0	82.9	166.2
31	18.7	228.8	496.2	993.0	86	2.6	35.4	77.4	155.2
32	18.5	226.3	490.9	982.3	87	2.4	32.9	72.0	144.4
33	18.3	223.7	485.3	971.1	88	2.2	30.5	66.7	133.9
34	18.1	221.0	479.5	959.4	89	2.0	28.1	61.6	123.6
35	17.8	218.2	473.4	947.3	90	1.8	25.9	56.6	113.8
36	17.6	215.3	467.0	934.6	91	1.6	23.7	52.0	104.4
37	17.4	212.3	460.5	921.4	92	1.5	21.7	47.5	95.6
38	17.1	209.1	453.7	907.8	93	1.3	19.8	43.4	87.3
39	16.8	205.9	446.7	893.8	94	1.2	18.0	39.7	79.8
40	16.6	202.6	439.5	879.5	95	1.0	16.5	36.4	73.3
41	16.3	199.2	432.2	864.8	96	0.9	15.2	33.6	67.7
42	16.0	195.7	424.7	849.9	97	0.8	14.0	30.9	62.3
43	15.7	192.3	417.2	834.8	98	0.7	12.8	28.3	57.1
44	15.4	188.7	409.5	819.6	99	0.6	11.6	25.7	51.8
45	15.1	185.2	401.9	804.2	100	0.5	10.4	23.0	46.5
46	14.8	181.6	394.1	788.7	101	0.4	9.1	20.3	41.2
47	14.5	177.9	386.0	772.6	102	0.3	7.9	17.6	35.7
48	14.2	174.1	377.8	756.0	103	0.3	6.6	14.8	30.0
49	13.9	170.1	369.2	739.0	104	0.2	5.1	11.6	23.8
50	13.6	166.1	360.5	721.5	105	0.1	3.1	7.0	14.4
51	13.2	162.0	351.7	703.9	106	0.0	0.0	0.0	0.0
52	12.9	157.9	342.8	686.0	107	0.0	0.0	0.0	0.0
53	12.5	153.8	333.8	668.1	108	0.0	0.0	0.0	0.0
54	12.2	149.6	324.8	650.1	109	0.0	0.0	0.0	0.0
55	11.8	145.5	315.7	632.0	110	0.0	0.0	0.0	0.0

Note: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated, at an interest of 4.0%

PTD Occupational Disease - Non Lung

Age	Annuity Factor				Age	Annuity Factor			
	Yearly	Monthly	Biweekly	Weekly		Yearly	Monthly	Biweekly	Weekly
1	22.8	279.3	605.7	1211.8	56	12.7	156.2	339.1	678.6
2	22.8	278.7	604.4	1209.3	57	12.4	152.1	330.1	660.8
3	22.7	277.9	602.7	1206.0	58	12.1	147.9	321.1	642.7
4	22.7	277.1	600.9	1202.3	59	11.7	143.7	312.0	624.5
5	22.6	276.2	598.9	1198.4	60	11.3	139.5	302.8	606.1
6	22.5	275.2	596.8	1194.2	61	11.0	135.2	293.6	587.6
7	22.4	274.2	594.6	1189.8	62	10.6	130.9	284.3	569.1
8	22.4	273.1	592.4	1185.2	63	10.3	126.7	275.1	550.6
9	22.3	272.1	590.1	1180.6	64	9.9	122.5	265.9	532.3
10	22.2	271.0	587.7	1175.9	65	9.6	118.3	256.9	514.2
11	22.1	269.9	585.3	1171.0	66	9.2	114.2	248.0	496.5
12	22.0	268.7	582.8	1166.0	67	8.9	110.2	239.4	479.2
13	21.9	267.5	580.2	1160.9	68	8.6	106.3	230.9	462.4
14	21.8	266.3	577.5	1155.5	69	8.2	102.5	222.7	445.9
15	21.7	265.0	574.8	1150.0	70	7.9	98.8	214.6	429.6
16	21.6	263.7	571.9	1144.3	71	7.6	95.0	206.5	413.5
17	21.5	262.3	569.0	1138.4	72	7.3	91.3	198.5	397.4
18	21.3	260.9	565.9	1132.3	73	7.0	87.6	190.5	381.4
19	21.2	259.5	562.7	1126.0	74	6.7	84.0	182.5	365.5
20	21.1	257.9	559.5	1119.4	75	6.4	80.3	174.6	349.7
21	21.0	256.4	556.1	1112.7	76	6.1	76.8	166.9	334.3
22	20.8	254.8	552.6	1105.7	77	5.8	73.3	159.4	319.3
23	20.7	253.1	549.0	1098.6	78	5.5	69.9	152.1	304.7
24	20.6	251.4	545.3	1091.2	79	5.2	66.7	145.1	290.6
25	20.4	249.7	541.5	1083.6	80	5.0	63.5	138.3	277.0
26	20.3	247.9	537.6	1075.7	81	4.7	60.5	131.6	263.7
27	20.1	246.0	533.5	1067.6	82	4.5	57.5	125.1	250.7
28	20.0	244.0	529.3	1059.2	83	4.2	54.5	118.6	237.8
29	19.8	242.0	525.0	1050.4	84	4.0	51.5	112.2	224.9
30	19.6	239.9	520.4	1041.4	85	3.7	48.6	105.8	212.2
31	19.5	237.8	515.7	1032.0	86	3.5	45.7	99.5	199.5
32	19.3	235.5	510.8	1022.2	87	3.2	42.8	93.3	187.0
33	19.1	233.2	505.7	1012.0	88	3.0	40.0	87.2	174.8
34	18.9	230.7	500.4	1001.4	89	2.8	37.2	81.2	163.0
35	18.7	228.1	494.9	990.3	90	2.6	34.6	75.5	151.6
36	18.4	225.5	489.1	978.7	91	2.3	32.1	70.1	140.7
37	18.2	222.7	483.1	966.8	92	2.1	29.7	65.0	130.5
38	18.0	219.9	476.9	954.4	93	2.0	27.5	60.2	120.9
39	17.7	216.9	470.5	941.6	94	1.8	25.5	55.8	112.2
40	17.5	213.9	464.0	928.4	95	1.6	23.7	52.0	104.5
41	17.2	210.8	457.3	915.0	96	1.5	22.2	48.6	97.7
42	17.0	207.6	450.4	901.3	97	1.4	20.6	45.3	91.1
43	16.7	204.4	443.4	887.4	98	1.2	19.1	42.0	84.6
44	16.4	201.1	436.4	873.2	99	1.1	17.7	38.8	78.2
45	16.2	197.8	429.2	858.9	100	1.0	16.2	35.6	71.7
46	15.9	194.5	421.9	844.3	101	0.9	14.7	32.4	65.3
47	15.6	191.0	414.4	829.3	102	0.8	13.2	29.2	58.9
48	15.3	187.4	406.6	813.8	103	0.6	11.7	26.0	52.5
49	15.0	183.7	398.7	797.8	104	0.5	10.3	22.8	46.1
50	14.7	179.9	390.5	781.4	105	0.4	8.8	19.7	39.8
51	14.4	176.1	382.1	764.8	106	0.3	7.3	16.5	33.4
52	14.1	172.2	373.7	747.9	107	0.2	5.8	13.2	26.9
53	13.7	168.3	365.2	730.8	108	0.1	4.2	9.6	19.6
54	13.4	164.3	356.6	713.6	109	0.0	2.3	5.2	11.2
55	13.1	160.3	347.9	696.2	110	0.0	0.0	0.0	0.0

Note: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated, at an interest of 4.0%

Death Public

Age	Annuity Factor				Age	Annuity Factor			
	Yearly	Monthly	Biweekly	Weekly		Yearly	Monthly	Biweekly	Weekly
1	21.7	264.7	574.1	1148.6	56	16.0	196.3	426.0	852.4
2	21.6	263.2	570.8	1142.1	57	15.8	193.4	419.5	839.6
3	21.4	261.6	567.3	1135.1	58	15.5	190.3	412.9	826.3
4	21.3	259.9	563.7	1127.8	59	15.3	187.1	406.0	812.5
5	21.1	258.1	559.9	1120.2	60	15.0	183.8	398.8	798.1
6	21.0	256.3	555.9	1112.3	61	14.7	180.3	391.3	783.1
7	20.8	254.4	551.7	1104.0	62	14.4	176.7	383.5	767.5
8	20.7	252.4	547.4	1095.4	63	14.1	173.0	375.4	751.2
9	20.5	250.3	542.9	1086.4	64	13.8	169.1	366.9	734.3
10	20.3	248.2	538.3	1077.0	65	13.5	165.0	358.1	716.8
11	20.2	245.9	533.4	1067.3	66	13.1	160.8	349.1	698.6
12	20.0	243.6	528.4	1057.2	67	12.8	156.5	339.7	679.9
13	19.8	241.2	523.1	1046.8	68	12.4	152.1	330.0	660.6
14	19.6	238.7	517.7	1035.9	69	12.0	147.5	320.1	640.7
15	19.4	236.1	512.1	1024.7	70	11.6	142.8	310.0	620.4
16	19.1	233.4	506.3	1013.1	71	11.2	138.0	299.6	599.7
17	18.9	235.4	510.6	1021.8	72	10.8	133.1	289.0	578.6
18	19.4	240.3	521.2	1042.9	73	10.4	128.2	278.3	557.1
19	19.7	243.9	529.0	1058.5	74	10.0	123.1	267.4	535.3
20	19.9	246.3	534.3	1069.1	75	9.6	118.0	256.3	513.1
21	20.1	248.1	538.2	1076.9	76	9.2	113.4	246.3	493.1
22	20.3	249.4	540.9	1082.2	77	8.8	108.8	236.4	473.3
23	20.3	250.1	542.4	1085.3	78	8.4	104.3	226.6	453.6
24	20.4	250.4	543.0	1086.5	79	8.1	99.8	216.9	434.3
25	20.4	250.3	542.9	1086.4	80	7.7	95.4	207.3	415.1
26	20.4	250.1	542.4	1085.2	81	7.3	91.0	197.7	395.9
27	20.3	249.6	541.4	1083.3	82	7.0	86.7	188.4	377.3
28	20.3	249.0	540.0	1080.6	83	6.6	82.5	179.3	359.1
29	20.2	248.2	538.4	1077.3	84	6.3	78.4	170.5	341.5
30	20.2	247.3	536.4	1073.3	85	5.9	74.5	161.9	324.4
31	20.1	246.3	534.2	1069.0	86	5.6	70.7	153.7	307.8
32	20.0	245.2	531.9	1064.2	87	5.3	67.0	145.7	291.9
33	19.9	244.0	529.3	1059.1	88	5.0	63.4	138.0	276.5
34	19.8	242.7	526.5	1053.5	89	4.7	60.0	130.7	261.8
35	19.7	241.4	523.5	1047.6	90	4.4	56.8	123.6	247.6
36	19.6	239.9	520.4	1041.3	91	4.2	53.6	116.8	234.0
37	19.5	238.4	517.1	1034.8	92	3.9	50.6	110.3	221.0
38	19.3	236.8	513.7	1027.9	93	3.7	47.8	104.1	208.6
39	19.2	235.2	510.1	1020.8	94	3.4	45.1	98.2	196.8
40	19.1	233.5	506.4	1013.3	95	3.2	42.4	92.6	185.4
41	18.9	231.7	502.6	1005.7	96	3.0	40.0	87.2	174.7
42	18.8	229.9	498.7	997.9	97	2.8	37.6	82.1	164.5
43	18.6	228.0	494.6	989.8	98	2.6	35.4	77.4	154.9
44	18.5	226.1	490.5	981.4	99	2.4	33.4	72.9	145.8
45	18.3	224.1	486.1	972.7	100	2.3	31.4	68.7	137.2
46	18.1	222.0	481.6	963.7	101	2.1	29.6	64.7	129.0
47	18.0	219.8	476.8	954.2	102	2.0	27.8	60.9	121.0
48	17.8	217.5	471.9	944.3	103	1.8	26.2	57.3	113.2
49	17.6	215.2	466.8	934.1	104	1.7	24.6	53.8	105.3
50	17.4	212.7	461.5	923.4	105	1.6	23.0	50.3	96.8
51	17.2	210.2	456.0	912.4	106	1.5	21.2	46.4	86.6
52	17.0	207.5	450.2	901.0	107	1.3	19.1	41.8	73.2
53	16.7	204.8	444.3	889.2	108	1.1	16.2	35.6	53.7
54	16.5	202.0	438.3	877.1	109	0.9	12.0	26.3	22.7
55	16.3	199.2	432.2	864.9	110	0.0	0.0	0.0	0.0

Note: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated, at an interest of 4.0%

Death Private

Age	Annuity Factor				Age	Annuity Factor			
	Yearly	Monthly	Biweekly	Weekly		Yearly	Monthly	Biweekly	Weekly
1	21.7	264.7	574.1	1148.6	56	16.0	196.3	426.0	852.4
2	21.6	263.2	570.8	1142.1	57	15.8	193.4	419.5	839.6
3	21.4	261.6	567.3	1135.1	58	15.5	190.3	412.9	826.3
4	21.3	259.9	563.7	1127.8	59	15.3	187.1	406.0	812.5
5	21.1	258.1	559.9	1120.2	60	15.0	183.8	398.8	798.1
6	21.0	256.3	555.9	1112.3	61	14.7	180.3	391.3	783.1
7	20.8	254.4	551.7	1104.0	62	14.4	176.7	383.5	767.5
8	20.7	252.4	547.4	1095.4	63	14.1	173.0	375.4	751.2
9	20.5	250.3	542.9	1086.4	64	13.8	169.1	366.9	734.3
10	20.3	248.2	538.3	1077.0	65	13.5	165.0	358.1	716.8
11	20.2	245.9	533.4	1067.3	66	13.1	160.8	349.1	698.6
12	20.0	243.6	528.4	1057.2	67	12.8	156.5	339.7	679.9
13	19.8	241.2	523.1	1046.8	68	12.4	152.1	330.0	660.6
14	19.6	238.7	517.7	1035.9	69	12.0	147.5	320.1	640.7
15	19.4	236.1	512.1	1024.7	70	11.6	142.8	310.0	620.4
16	19.1	233.4	506.3	1013.1	71	11.2	138.0	299.6	599.7
17	18.9	235.4	510.6	1021.8	72	10.8	133.1	289.0	578.6
18	19.4	240.3	521.2	1042.9	73	10.4	128.2	278.3	557.1
19	19.7	243.9	529.0	1058.5	74	10.0	123.1	267.4	535.3
20	19.9	246.3	534.3	1069.1	75	9.6	118.0	256.3	513.1
21	20.1	248.1	538.2	1076.9	76	9.2	113.4	246.3	493.1
22	20.3	249.4	540.9	1082.2	77	8.8	108.8	236.4	473.3
23	20.3	250.1	542.4	1085.3	78	8.4	104.3	226.6	453.6
24	20.4	250.4	543.0	1086.5	79	8.1	99.8	216.9	434.3
25	20.4	250.3	542.9	1086.4	80	7.7	95.4	207.3	415.1
26	20.4	250.1	542.4	1085.2	81	7.3	91.0	197.7	395.9
27	20.3	249.6	541.4	1083.3	82	7.0	86.7	188.4	377.3
28	20.3	249.0	540.0	1080.6	83	6.6	82.5	179.3	359.1
29	20.2	248.2	538.4	1077.3	84	6.3	78.4	170.5	341.5
30	20.2	247.3	536.4	1073.3	85	5.9	74.5	161.9	324.4
31	20.1	246.3	534.2	1069.0	86	5.6	70.7	153.7	307.8
32	20.0	245.2	531.9	1064.2	87	5.3	67.0	145.7	291.9
33	19.9	244.0	529.3	1059.1	88	5.0	63.4	138.0	276.5
34	19.8	242.7	526.5	1053.5	89	4.7	60.0	130.7	261.8
35	19.7	241.4	523.5	1047.6	90	4.4	56.8	123.6	247.6
36	19.6	239.9	520.4	1041.3	91	4.2	53.6	116.8	234.0
37	19.5	238.4	517.1	1034.8	92	3.9	50.6	110.3	221.0
38	19.3	236.8	513.7	1027.9	93	3.7	47.8	104.1	208.6
39	19.2	235.2	510.1	1020.8	94	3.4	45.1	98.2	196.8
40	19.1	233.5	506.4	1013.3	95	3.2	42.4	92.6	185.4
41	18.9	231.7	502.6	1005.7	96	3.0	40.0	87.2	174.7
42	18.8	229.9	498.7	997.9	97	2.8	37.6	82.1	164.5
43	18.6	228.0	494.6	989.8	98	2.6	35.4	77.4	154.9
44	18.5	226.1	490.5	981.4	99	2.4	33.4	72.9	145.8
45	18.3	224.1	486.1	972.7	100	2.3	31.4	68.7	137.2
46	18.1	222.0	481.6	963.7	101	2.1	29.6	64.7	129.0
47	18.0	219.8	476.8	954.2	102	2.0	27.8	60.9	121.0
48	17.8	217.5	471.9	944.3	103	1.8	26.2	57.3	113.2
49	17.6	215.2	466.8	934.1	104	1.7	24.6	53.8	105.3
50	17.4	212.7	461.5	923.4	105	1.6	23.0	50.3	96.8
51	17.2	210.2	456.0	912.4	106	1.5	21.2	46.4	86.6
52	17.0	207.5	450.2	901.0	107	1.3	19.1	41.8	73.2
53	16.7	204.8	444.3	889.2	108	1.1	16.2	35.6	53.7
54	16.5	202.0	438.3	877.1	109	0.9	12.0	26.3	22.7
55	16.3	199.2	432.2	864.9	110	0.0	0.0	0.0	0.0

Note: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated, at an interest of 4.0%

Settlement for Medical Benefits

Age	Annuity Factor				Age	Annuity Factor			
	Yearly	Monthly	Biweekly	Weekly		Yearly	Monthly	Biweekly	Weekly
1	23.7	289.9	628.7	1257.9	56	16.2	198.7	431.1	862.6
2	23.7	289.4	627.6	1255.8	57	16.0	195.4	423.9	848.4
3	23.6	288.9	626.4	1253.4	58	15.7	192.0	416.6	833.8
4	23.6	288.3	625.2	1250.9	59	15.4	188.6	409.1	818.7
5	23.5	287.7	623.8	1248.2	60	15.1	185.0	401.4	803.2
6	23.5	287.0	622.4	1245.4	61	14.8	181.3	393.3	787.2
7	23.4	286.3	621.0	1242.5	62	14.5	177.4	385.0	770.6
8	23.4	285.6	619.4	1239.4	63	14.2	173.5	376.5	753.4
9	23.3	284.9	617.8	1236.2	64	13.8	169.4	367.6	735.7
10	23.3	284.1	616.2	1232.9	65	13.5	165.2	358.5	717.4
11	23.2	283.3	614.5	1229.4	66	13.1	160.9	349.1	698.7
12	23.1	282.5	612.7	1225.9	67	12.8	156.4	339.5	679.4
13	23.1	281.7	610.9	1222.2	68	12.4	151.9	329.7	659.8
14	23.0	280.8	609.0	1218.4	69	12.0	147.3	319.6	639.8
15	22.9	279.9	607.0	1214.6	70	11.6	142.6	309.5	619.5
16	22.8	279.0	605.0	1210.6	71	11.2	137.8	299.2	598.9
17	22.8	278.0	603.0	1206.5	72	10.8	133.1	288.9	578.2
18	22.7	277.0	600.9	1202.2	73	10.4	128.3	278.5	557.4
19	22.6	276.0	598.6	1197.8	74	10.0	123.4	268.0	536.6
20	22.5	275.0	596.3	1193.2	75	9.6	118.7	257.7	515.8
21	22.4	273.9	593.9	1188.4	76	9.2	113.9	247.3	495.2
22	22.3	272.7	591.5	1183.4	77	8.8	109.2	237.1	474.7
23	22.2	271.5	588.9	1178.3	78	8.5	104.5	227.0	454.5
24	22.1	270.3	586.2	1172.9	79	8.1	99.9	217.1	434.6
25	22.0	269.0	583.4	1167.3	80	7.7	95.4	207.3	415.1
26	21.9	267.6	580.5	1161.5	81	7.3	91.0	197.7	395.9
27	21.8	266.3	577.5	1155.4	82	7.0	86.7	188.4	377.3
28	21.7	264.8	574.3	1149.2	83	6.6	82.5	179.3	359.1
29	21.6	263.3	571.1	1142.7	84	6.3	78.4	170.5	341.5
30	21.4	261.8	567.8	1136.0	85	5.9	74.5	161.9	324.4
31	21.3	260.2	564.3	1129.1	86	5.6	70.7	153.7	307.8
32	21.2	258.5	560.7	1121.9	87	5.3	67.0	145.7	291.9
33	21.0	256.8	557.0	1114.5	88	5.0	63.4	138.0	276.5
34	20.9	255.0	553.2	1106.8	89	4.7	60.0	130.7	261.8
35	20.7	253.2	549.2	1098.9	90	4.4	56.8	123.6	247.6
36	20.6	251.3	545.1	1090.7	91	4.2	53.6	116.8	234.0
37	20.4	249.4	540.8	1082.2	92	3.9	50.6	110.3	221.0
38	20.2	247.3	536.5	1073.5	93	3.7	47.8	104.1	208.6
39	20.1	245.3	532.0	1064.4	94	3.4	45.1	98.2	196.8
40	19.9	243.1	527.3	1055.2	95	3.2	42.4	92.6	185.4
41	19.7	240.9	522.5	1045.6	96	3.0	40.0	87.2	174.7
42	19.5	238.6	517.6	1035.7	97	2.8	37.6	82.1	164.5
43	19.3	236.3	512.5	1025.5	98	2.6	35.4	77.4	154.9
44	19.1	233.8	507.2	1014.9	99	2.4	33.4	72.9	145.8
45	18.9	231.3	501.7	1004.0	100	2.3	31.4	68.7	137.2
46	18.7	228.7	496.1	992.7	101	2.1	29.6	64.7	129.0
47	18.5	226.0	490.3	981.1	102	2.0	27.8	60.9	121.0
48	18.3	223.3	484.3	969.1	103	1.8	26.2	57.3	113.2
49	18.0	220.4	478.1	956.8	104	1.7	24.6	53.8	105.3
50	17.8	217.5	471.8	944.1	105	1.6	23.0	50.3	96.8
51	17.5	214.5	465.3	931.1	106	1.5	21.2	46.4	86.6
52	17.3	211.4	458.7	917.9	107	1.3	19.1	41.8	73.2
53	17.0	208.3	451.9	904.2	108	1.1	16.2	35.6	53.7
54	16.8	205.1	445.0	890.4	109	0.9	12.0	26.3	22.7
55	16.5	201.9	438.1	876.6	110	0.0	0.0	0.0	0.0

Note: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated, at an interest of 4.0%. These factors were derived based on survival curve from the death claims.



Ohio Bureau of Workers' Compensation

2010 Mortality Study

Deloitte Consulting LLP
September 23, 2010

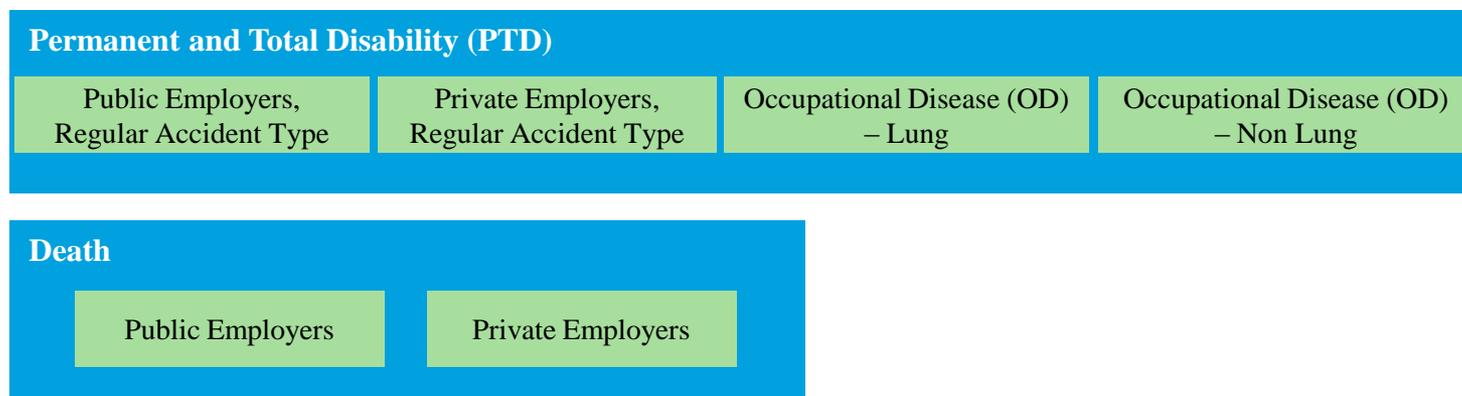
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Scope

Update Annuity Factors Used in MIRA II System to Determine Permanent Total Disability and Death Benefit Case Reserves

Group-specific annuity factors were determined for the following six groups, reflecting each group's specific mortality experience:



- Mortality data period from March 15, 1916 to March 15, 2010.
- Data elements include: date of birth, sex, date of injury, date of death if available, and other additional data.
- Discussions were held with Elizabeth Bravender from The Ohio Bureau of Workers' Compensation ("BWC") regarding the characteristics of the claim data and exposures.

Methodology

We followed the procedures below:

- Data cleansing
- Development of experience mortality rates
- Graduation and extrapolation of mortality rates
- Calibration of graduated mortality curve to actual experience
- Development of group-specific annuity factors

For Death claims, we also conducted the following:

- Separation of remarriage from the total decrement from experience
- Development of final remarriage curve
- Development of annuity factors reflecting remarriage and continued payments to eligible children

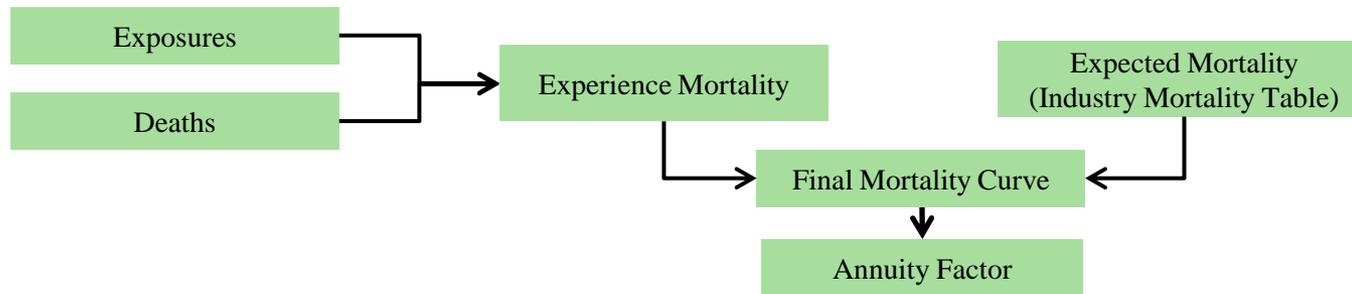
Methodology (cont'd)

Data Organization, Consistency and Cleansing



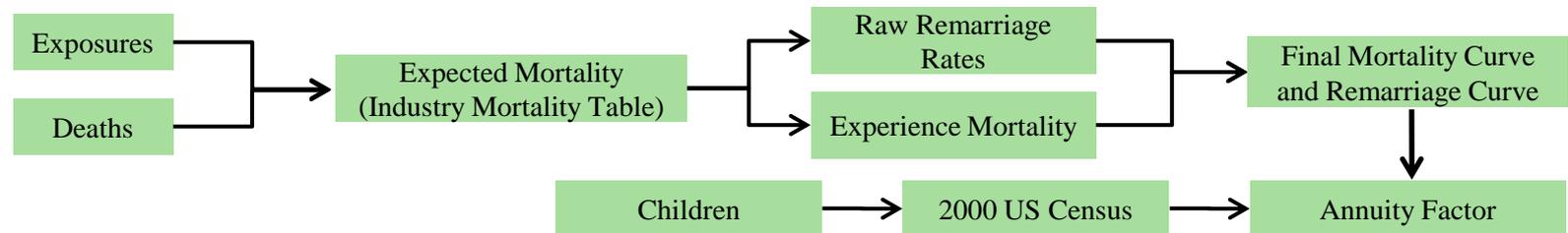
Permanent and Total Disability

Public Employers, Regular Accident Type Private Employers, Regular Accident Type OD - Lung OD - Non-Lung



Death

Public Employers Private Employers

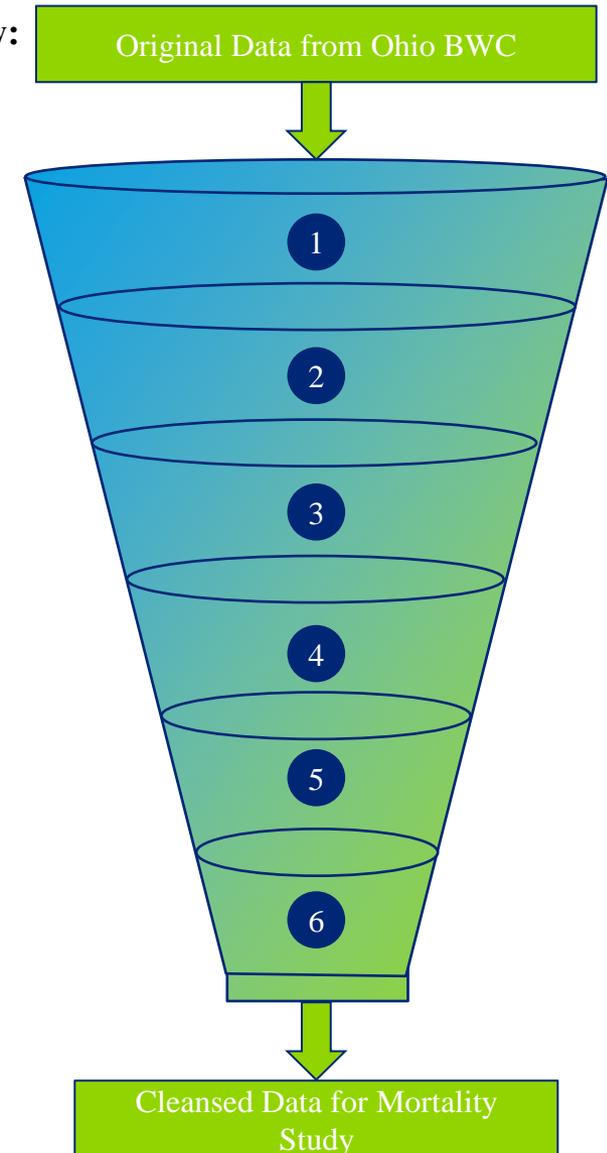


Data Cleansing Process

The steps utilized to “cleanse” data for purposes of the study are detailed below:

- 1 We excluded duplicate claims for which one life owns multiple claims - the “Split Claims” (leaving only one record for that life)

If claimant's birth date is not available to solve for accurate age/exposure, we used Injury Year and Age at Injury (an integer provided by BWC) to solve for birth year, and then derived current age and age at death. Otherwise, the record was excluded. For spouse information in death claims, we excluded records where spouse's birth date was blank.
- 2
- 3 We excluded records where spouse's age is less than 16 for death claims.
- 4 We excluded records where there is only a child (or children) survivors (mentioned in our report) for death claims.
- 5 We excluded claims terminated due to “Vacated or Stopped for Return to Work or Fraud or Incarcerated”, but include in PTD studies claims terminated due to “Settlement” since it appears BWC still tracks deaths of those claimants. It is reasonable that these claimants are included in the mortality study for purpose of developing annuity factors.
- 6 We excluded claims with negative ages at injury date.

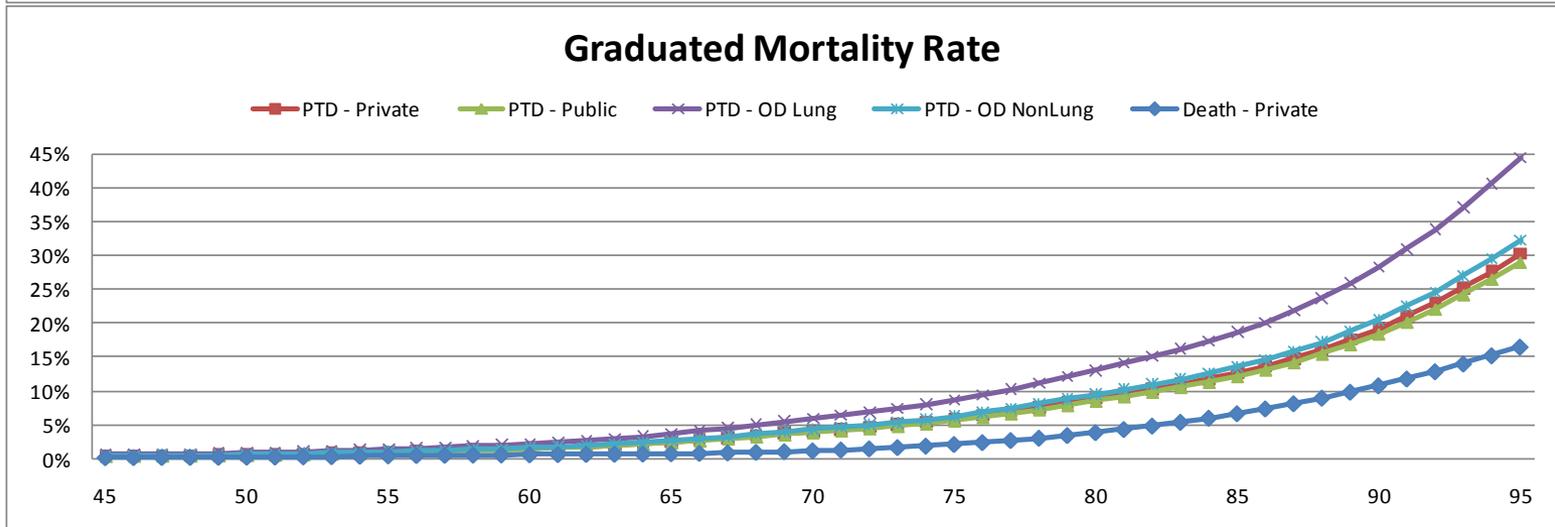
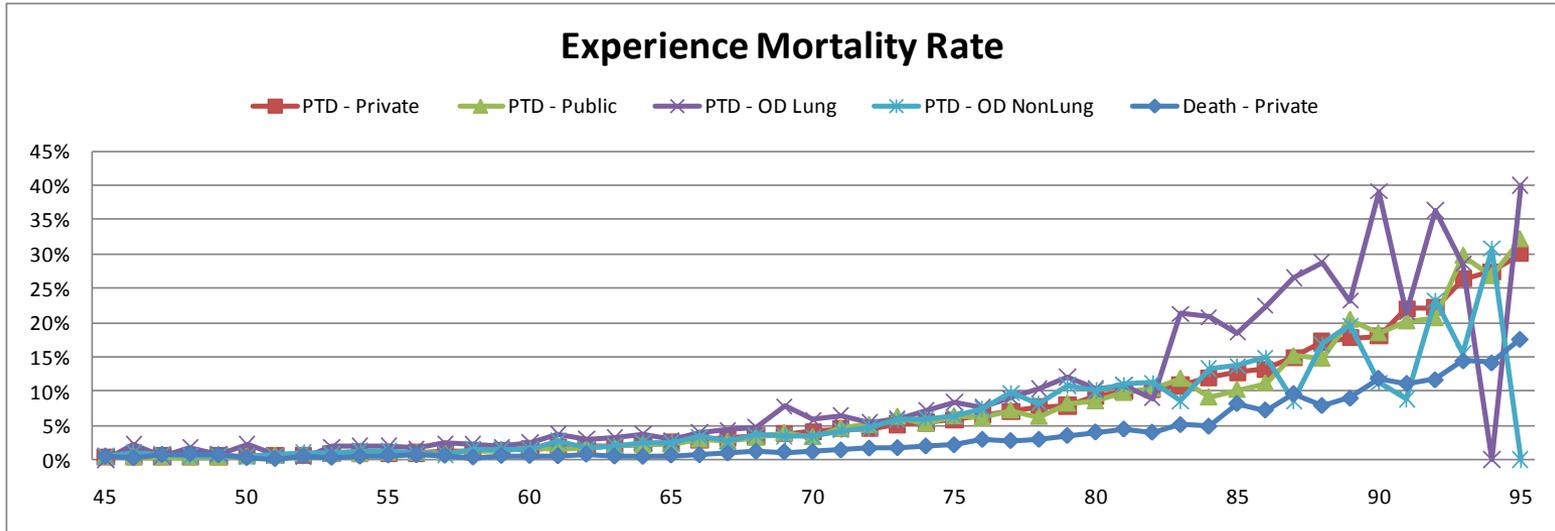


Data - Exposure and Deaths

Claim Type	Risk Type	Accident Type	Number of Lives	Exposures (in years)	Deaths
PTD	Public	Regular	5,227	151,508	4,355
PTD	Private	Regular	54,995	1,371,161	33,206
PTD	Public/Private	OD-Lung	1,064	19,278	949
PTD	Public/Private	OD-Non Lung	1,992	38,652	984
Death	Public		818	15,728	255
Death	Private		4,547	83,442	1,411

Mortality Curves

The two graphs below illustrate the comparison of raw experience mortality rates for the five analyzed data groups* before and after graduation and smoothing. Ages 45~95 are shown as this band has relatively higher credibility compared to younger and older ages.



Difference in Data and Methodology Compared to Prior Study

Data Differences	<ul style="list-style-type: none">• The data for this study includes claims with injury date back to year 1916, and death dated back to 1970s. The 2002 study appears to only include deaths between 1981 and 2000 (disclosed in the 2002 study report). The prior study did not include any death that occurred in 1970s.• The total exposures are roughly 3 times greater than those of the 2002 study; and deaths are roughly twice than that of the 2002 study.
Expected mortality table	<ul style="list-style-type: none">• This Study uses the 1994 Group Annuity Female Table as the base table for spouse in Death claims, compared to the Annuity 2000 Basic Female table used in the prior study. Rates from these two tables are close except for age 90-110.
Graduation & Smoothing Methods	<ul style="list-style-type: none">• Period where the Whittaker-Henderson graduation method applies, which is based on visual inspection and judgment of where credible experience exists.• Data Extrapolation – The 2002 prior study applied A/E ratio to expected rates for younger ages; and derived rates for older ages based on implied ratio from expected table. This study extrapolates rates solely based on implied ratio from expected table for ages where Whittaker-Henderson method could not be applied.• Difference polynomial factor used in Whittaker-Henderson method. The 2002 study used a factor of 2, implying a linear fit for the range where Whittaker-Henderson method applies. This study uses a factor of 4 based on our analysis, implying a cubic fit, which is more intuitively appealing to resemble mortality.
Annuity Factor Calculation	<ul style="list-style-type: none">• The 2002 study used PTD Private mortality rates to develop the same annuity factors for all PTD groups, except for PTD OD Lung, while our study develops group-specific annuity factors.• The 2002 annuity factor for Death claim is sum of the following: <i>Base annuity factor for spouse's decrements (death/remarriage) + children's annuity factor after spouse's remarriage (for family with kids) + lump-sum to spouse if remarried and no kids.</i> It missed these two components: <i>children's annuity factor after spouse's death (for family with kids) + lump-sum to spouse if remarried and with kids (existing payment structure to spouse if with kids: 75% of \$1 to spouse if 1 kid; 66.6% to spouse if 2 kids; 55% or 50% if 3 or 4 kids)</i>

Annuity Factors Compared to the Prior Study

In comparison to the 2002 study, this study has:

- Higher PTD annuity factors
- Lower Death annuity factors

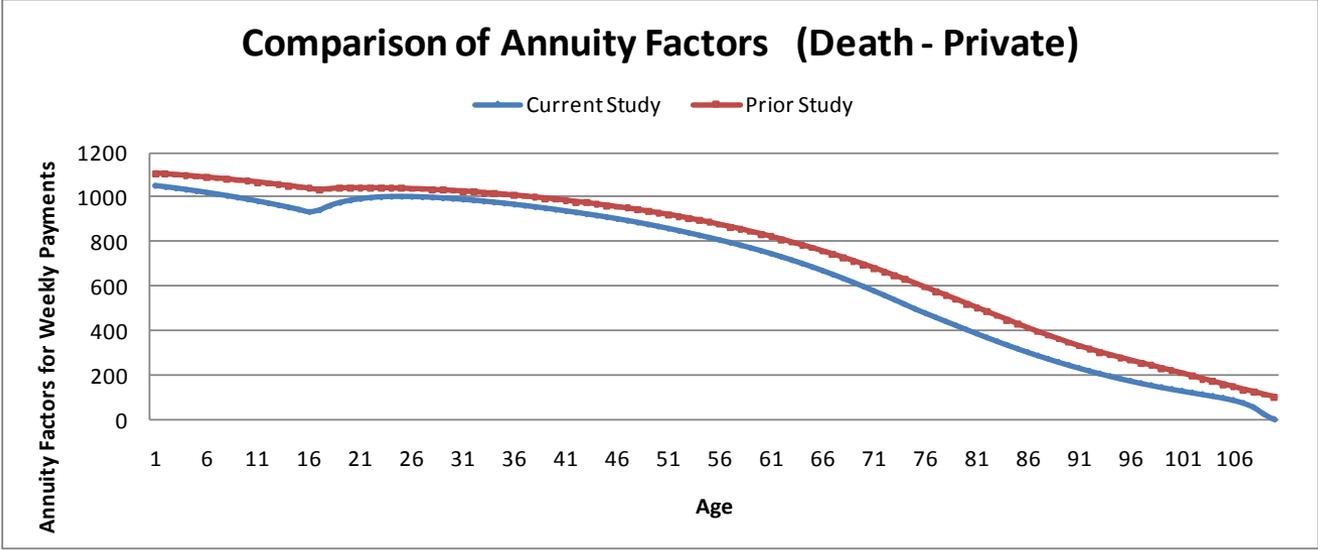
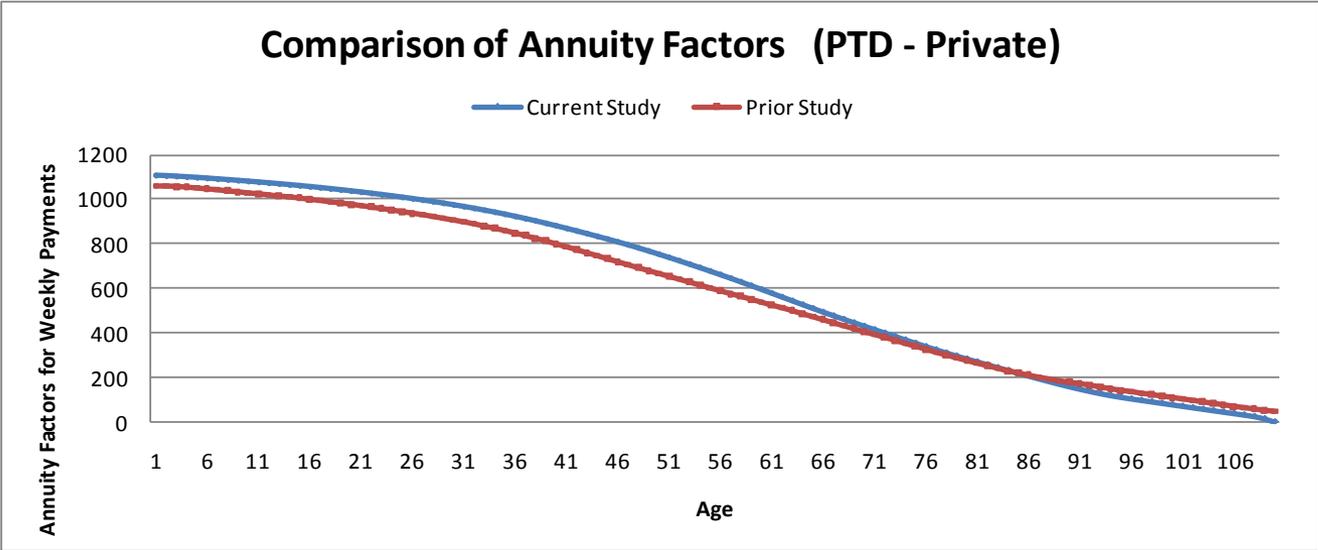
Note that this conclusion is based on weekly benefit with attained age less than 85.

Differences in mortality rates:

For PTD groups, our mortality rates are smaller compared to prior study. Before age 60 for PTD Private, our rates are about one-half of those of the prior study. Given that our data set is considerably larger than what's used in prior study, and that mortality improvement is likely reflected in the most recent 10 years new data, we are comfortable with this difference in mortality rates.

For Death groups, both our remarriage rates and mortality rates are higher than those of the prior study. Although we included the missing components in the annuity factor calculation (for children's annuity component and the lump-sum component as described in the last slide), our final annuity factors are still less than those of the 2002 study.

Annuity Factors Compared to the Prior Study (cont'd)



* Annuity factors are calculated at 4.5% for weekly payments.

Appendix - Definition of Terms

➤ **Exposure**

For each year a claimant was in the study, one year of exposure is counted for the age at the beginning of that year, including the year of death. The only exception to this rule is the initial year entering into the study. For the first year, only a fractional exposure was included in the study representing the portion of the year the claimant was in the study.

➤ **Mortality Curve**

The curve of mortality rate plotted against age.

➤ **Decrement**

A 'decrement' occurs when a life exits from the studied population.

Deloitte.

Common Sense Business Regulation (BWC Rules)

(Note: The below criteria apply to existing and newly developed rules)

Rule 4123-17-60

Annuity Factor Update

Rule Review

1. The rule is needed to implement an underlying statute.

Citation: R.C. 4121.121, 4123.29, and 4123.34

2. The rule achieves an Ohio specific public policy goal.

What goal(s): These rules establish the annuity factors that are used in the calculation of reserves for Permanent Total Disability (PTD) and Death Claims.

3. Existing federal regulation alone does not adequately regulate the subject matter.

4. The rule is effective, consistent and efficient.

5. The rule is not duplicative of rules already in existence.

6. The rule is consistent with other state regulations, flexible, and reasonably balances the regulatory objectives and burden.

7. The rule has been reviewed for unintended negative consequences.

8. Stakeholders, and those affected by the rule were provided opportunity for input as appropriate.

Explain: BWC rate annuity table rules are developed using actuarial and insurance principles, stakeholder input is not appropriate.

9. The rule was reviewed for clarity and for easy comprehension.

10. The rule promotes transparency and predictability of regulatory activity.

11. The rule is based on the best scientific and technical information, and is designed so it can be applied consistently.

12. The rule is not unnecessarily burdensome or costly to those affected by rule.

If so, how does the need for the rule outweigh burden and cost? _____

13. The Chief Legal Officer, or his designee, has reviewed the rule for clarity and compliance with the Governor's Executive Order.

Board of Directors
Executive Summary
Annuity Factors

Introduction

Annuity tables are used in the calculation of reserves for Permanent and Totally Disabled (PTD) and Death claims. These tables are utilized in the MIRA 2 reserving system. Effective December 31, 2010, the MIRA 2 system will be updated with the new factors after the BWC receives the board's approval.

Background Information

The BWC updates the annuity table factors every time the discount factor used in the actuarial reserve estimate is changed. The most recent actuarial reserve estimate as of June 30, 2010 uses a discount rate assumption of 4.00%, down from the 4.50% discount rate assumption in the prior year estimate.

Executive summary

The annuity tables in Rule 4123-17-60 consist of four tables containing life expectancy factors that are used in the calculation of individual claim reserves. The fifth table is a present value interest factor of a closed annuity table used for orphan claimants. The factors are created as a result of a Mortality Study of Ohio claims using the current discount rate of 4.00%. The mortality study was conducted in 2010 by Deloitte Actuarial Consultants, using only Ohio data. The BWC also uses the annuity tables in the calculation of the net present value (NPV) to calculate the lump sum of money that an injured worker may receive when settling their workers' compensation claim. These tables will not impact injured worker's benefit rates.

The five tables include:

1. "Survivor Annuity Factors" are factors used in the calculation of the reserves or NPV for death claims filed by the surviving spouse. The surviving spouse is eligible for benefits on an allowed death claim for the remainder of the spouse's life or until remarriage.
2. "Orphans Annuity Factors" are factors used in the calculation of the reserves or NPV on death claims filed on behalf of minor dependants. The surviving minor dependant is eligible for benefits on an allowed death claim until age 18 or age 25 if pursuing a full-time educational program while enrolled in an accredited educational institution. This also includes children who are physically or mentally incapacitated from having any earnings so long as the physical or mental incapacity continues.
3. "PTD Annuity Factors – Regular Injury" are factors used in the calculation of reserves or NPV on allowed Permanent and Total Disabled (PTD) claims. PTD benefits are paid for the life of the claimant.
4. "PTD Annuity Factors – Occupational Disease - Lung" are factors used in the calculation of reserves or NPV on allowed Permanent and Total Disabled (PTD) claims where the allowed condition is a lung related injury such as pneumoconiosis. PTD benefits are paid for the life of the claimant.
5. "PTD Annuity Factors – Occupational Disease – Non-Lung" are factors used in the calculation of reserves or NPV on allowed Permanent and Total Disabled (PTD) claims where the allowed condition is an occupational condition other than a lung disease such as carpal tunnel syndrome. PTD benefits are paid for the life of the claimant

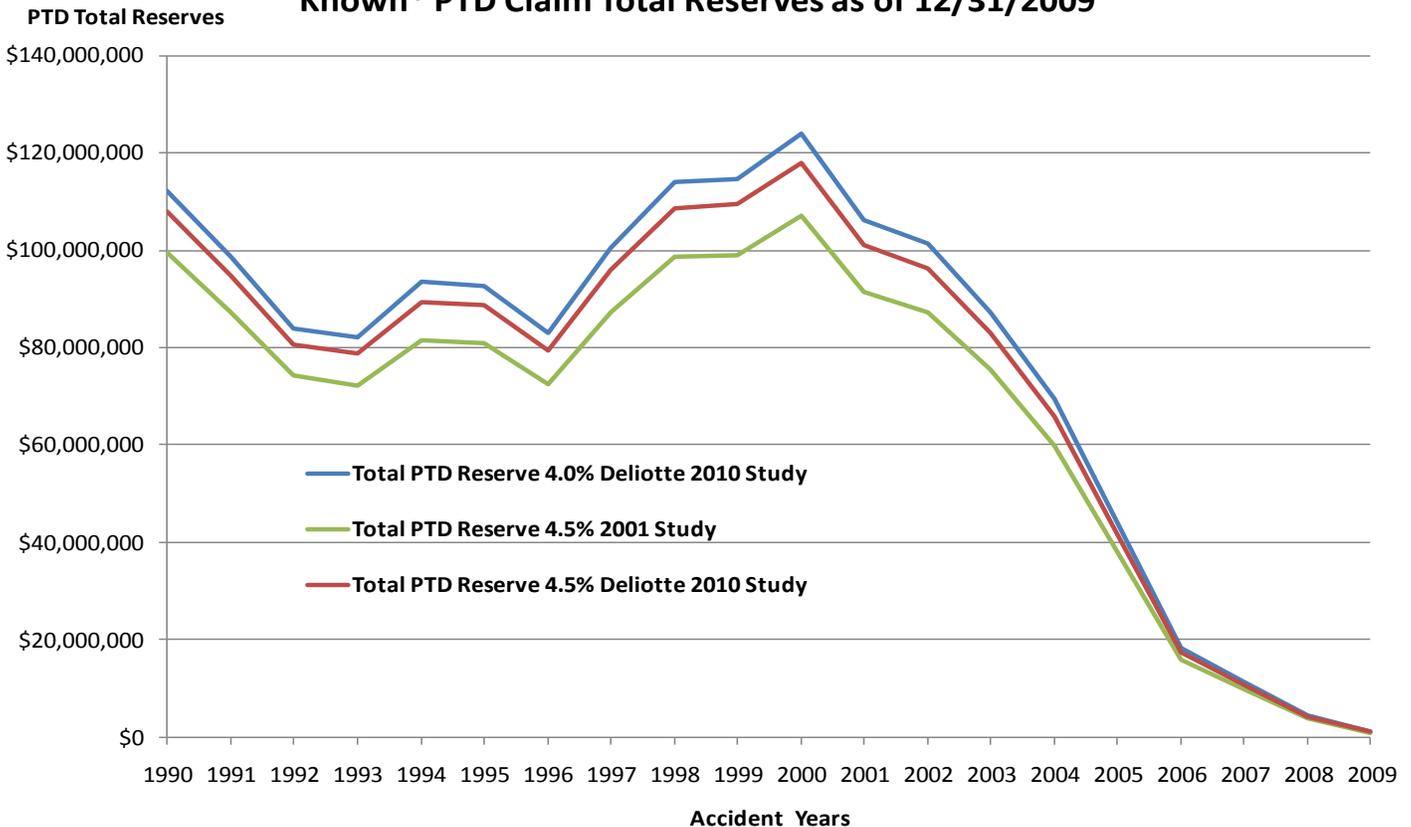
For PTD for most ages, the improvement in life expectancy from the 2001 mortality study to the 2010 mortality study leads to a lengthening of time in the benefits provided to both the PTD. For certain older ages (above age 85 for PTD-Regular, above age 90 for PTD-OD Lung, and above age 80 for PTD-OD Non Lung), there was a decrease in life expectancy, leading to a shortening of time in the benefits provided to the PTD claimants. This led to an increase in the annuity factors at most ages, and a decrease in annuity factors for the older ages discussed above.

For Survivor for all ages, the decrease in life expectancy from the 2001 mortality study to the 2010 mortality study leads to a shortening of time in the benefits provided to survivors. In most instances, the annuity factors in the proposed rule are less than the factors in the prior rule due to decreased life expectancy at most ages. However, for certain of the younger ages (ages 18 through 48), the new annuity factor is greater than the factors in the prior rule due to the effect decrease in the discount factor (which has the effect of increasing the annuity factor) exceeding the effect of the decrease in the mortality from the new study.

Orphan annuity factors will increase modestly due to the discount factor change from 4.5% to 4%. The life expectancy study does not have an impact on these factors as they are for a closed period of time up until age 25.

The table below shows the change in total known PTD claims under the current rule using the 2001 mortality study at 4.5% discount factor (green line), the proposed rule using the 2010 mortality study at a 4.0% discount factor (blue line) and the 2010 mortality study at a discount rate of 4.5% (red line).

2010 Deloitte Mortality Study vs. 2001 Mortality Study Known* PTD Claim Total Reserves as of 12/31/2009



*This excludes incurred but not yet reported PTD claims

The table below lists the dollar change in total PTD reserves from the current rule to the proposed rule.

Accident Year	Total change in reserve 2001 study at 4.5% to 2010 study at 4%
1990	\$12,835,270
1991	\$11,472,161
1992	\$9,785,241
1993	\$9,900,398
1994	\$11,833,888
1995	\$11,771,901
1996	\$10,452,341
1997	\$13,310,790
1998	\$15,463,846
1999	\$15,693,853
2000	\$16,961,914
2001	\$14,628,794
2002	\$13,944,445
2003	\$11,895,986
2004	\$9,446,925
2005	\$6,054,001
2006	\$2,597,645
2007	\$1,534,647
2008	\$622,063
2009	\$151,990
20 year total	\$200,358,099

Example calculation:

In a death claim the amount of compensation will be based upon the widows age multiplied by the annuity factor. The table to be used is based upon the type of compensation to be paid. In this case Appendix A – Survivor Annuity Factor table is used. If the widow was 25 and the compensation rate was \$420 the calculation would be the factor of 1086 X \$420 = \$456,120. This calculation is performed by the MIRA 2 system.

4123-17-23 Annuity Factors

The administrator of workers' compensation, with the advice and consent of the workers' compensation board of directors, has authority to approve contributions made to the state insurance fund by employers pursuant to sections 4121.121, 4123.29, and 4123.34 of the Revised Code. The administrator hereby establishes annuity factors for use in establishing claims reserves and premium rates as indicated in the attached Appendixes A, B, C, D, and E. The basis and interest factor of each annuity factor table is indicated in the appendix.

Appendix A
4123-17-60

SURVIVOR ANNUITY FACTORS					
AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	1032	48	942	79	539
18	1036	49	935	80	520
19	1039	50	927	81	502
20	1040	51	920	82	483
21	1040	52	912	83	465
22	1040	53	903	84	447
23	1040	54	894	85	428
24	1039	55	885	86	410
25	1038	56	875	87	393
26	1036	57	865	88	376
27	1035	58	855	89	360
28	1032	59	844	90	344
29	1030	60	833	91	329
30	1028	61	821	92	315
31	1025	62	809	93	302
32	1022	63	796	94	289
33	1018	64	783	95	277
34	1015	65	770	96	265
35	1011	66	756	97	253
36	1007	67	742	98	242
37	1003	68	727	99	230
38	998	69	712	100	218
39	994	70	696	101	207
40	989	71	680	102	194
41	984	72	663	103	182
42	978	73	646	104	170
43	973	74	629	105	158
44	967	75	611	106	146
45	961	76	593	107	134
46	955	77	575	108	123
47	949	78	557	109	111
				110	101

NOTE: Factors are annuities per dollar of weekly compensation benefit from the attained age indicated.

SOURCE: 2000 a Basic Female Mortality Table, modified remarriage factors, 4.50% interest.

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Appendix B

4123-17-60

~~PTD ANNUITY FACTORS — REGULAR INJURY~~

AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	995	48	693	79	288
18	989	49	680	80	276
19	984	50	667	81	264
20	978	51	654	82	253
21	972	52	641	83	241
22	965	53	628	84	230
23	959	54	615	85	220
24	952	55	602	86	210
25	945	56	589	87	201
26	938	57	576	88	193
27	931	58	564	89	185
28	923	59	551	90	178
29	915	60	538	91	172
30	907	61	525	92	165
31	899	62	513	93	157
32	890	63	500	94	149
33	880	64	486	95	142
34	870	65	473	96	136
35	860	66	459	97	129
36	849	67	446	98	123
37	837	68	432	99	116
38	825	69	419	100	110
39	813	70	405	101	103
40	800	71	393	102	97
41	787	72	380	103	90
42	774	73	367	104	83
43	760	74	353	105	77
44	747	75	340	106	70
45	733	76	327	107	64
46	720	77	313	108	58
47	706	78	301	109	52
				110	47

~~NOTE: Factors are annuities per dollar of weekly compensation benefit from the attained age indicated.~~

~~SOURCE: 2001 Mortality Study of Ohio permanent total disability claims, 4.50% interest.~~

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~~Appendix C~~

~~4123-17-60~~

~~PTD ANNUITY FACTORS Occupational Disease – Lung~~

AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	938	48	591	79	205
18	932	49	577	80	195
19	925	50	563	81	185
20	918	51	549	82	175
21	911	52	535	83	166
22	903	53	522	84	156
23	896	54	509	85	148
24	888	55	496	86	139
25	880	56	483	87	132
26	872	57	470	88	126
27	864	58	458	89	120
28	855	59	445	90	115
29	846	60	433	91	110
30	837	61	420	92	105
31	827	62	408	93	99
32	817	63	396	94	93
33	806	64	384	95	88
34	794	65	371	96	83
35	782	66	358	97	79
36	769	67	345	98	74
37	756	68	332	99	70
38	742	69	320	100	65
39	727	70	308	101	61
40	712	71	297	102	56
41	697	72	286	103	51
42	682	73	274	104	47
43	666	74	262	105	42
44	651	75	251	106	38
45	636	76	239	107	33
46	621	77	227	108	29
47	606	78	216	109	26
				110	26

~~NOTE: Factors are annuities per dollar of weekly compensation benefit from the attained age indicated.~~

~~SOURCE: 2001 Mortality Study of Ohio permanent total disability claims, 4.50% interest.~~

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**Appendix D
4123-17-60**

~~PTD ANNUITY FACTORS — OCCUPATIONAL DISEASE — NON LUNG~~

AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	995	48	693	79	288
18	989	49	680	80	276
19	984	50	667	81	264
20	978	51	654	82	253
21	972	52	641	83	241
22	965	53	628	84	230
23	959	54	615	85	220
24	952	55	602	86	210
25	945	56	589	87	201
26	938	57	576	88	193
27	931	58	564	89	185
28	923	59	551	90	178
29	915	60	538	91	172
30	907	61	525	92	165
31	899	62	513	93	157
32	890	63	500	94	149
33	880	64	486	95	142
34	870	65	473	96	136
35	860	66	459	97	129
36	849	67	446	98	123
37	837	68	432	99	116
38	825	69	419	100	110
39	813	70	405	101	103
40	800	71	393	102	97
41	787	72	380	103	90
42	774	73	367	104	83
43	760	74	353	105	77
44	747	75	340	106	70
45	733	76	327	107	64
46	720	77	313	108	58
47	706	78	301	109	52
				110	47

~~NOTE: Factors are annuities per dollar of weekly compensation benefit from the attained age indicated.~~

~~SOURCE: 2001 Mortality Study of Ohio permanent total disability claims, 4.50% interest.~~

Appendix E
4123-17-60

Orphans Annuity Factors

Year	Factor	Year	Factor	Year	Factor
1	24	11	418	21	671
2	71	12	448	22	691
3	117	13	478	23	710
4	161	14	506	24	728
5	202	15	532	25	745
6	242	16	558	26	762
7	280	17	583	27	777
8	317	18	606	28	793
9	352	19	629	29	807
10	385	20	650	30	821

NOTE: Factors are annuities per dollar of weekly compensation benefit for the number of years indicated, 4.50% interest.

SOURCE: Handbook of Mathematical Tables and Formulas, 4th Ed. Richard Stevens Burington, PH.D., McGraw Hill

Appendix A
4123-17-60

SURVIVOR ANNUITY FACTORS					
AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	1022	48	944	79	434
18	1043	49	934	80	415
19	1059	50	923	81	396
20	1069	51	912	82	377
21	1077	52	901	83	359
22	1082	53	889	84	342
23	1085	54	877	85	324
24	1087	55	865	86	308
25	1086	56	852	87	292
26	1085	57	840	88	277
27	1083	58	826	89	262
28	1081	59	813	90	248
29	1077	60	798	91	234
30	1073	61	783	92	221
31	1069	62	768	93	209
32	1064	63	751	94	197
33	1059	64	734	95	185
34	1054	65	717	96	175
35	1048	66	699	97	165
36	1041	67	680	98	155
37	1035	68	661	99	146
38	1028	69	641	100	137
39	1021	70	620	101	129
40	1013	71	600	102	121
41	1006	72	579	103	113
42	998	73	557	104	105
43	990	74	535	105	97
44	981	75	513	106	87
45	973	76	493	107	73
46	964	77	473	108	54
47	954	78	454	109	23
				110	0

NOTE: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated.

SOURCE: 2010 Deloitte Consulting, LLP Mortality Study, 4.00% interest.

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Appendix B

4123-17-60

PTD ANNUITY FACTORS REGULAR INJURY

AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	1144	48	825	79	303
18	1138	49	810	80	289
19	1132	50	793	81	275
20	1125	51	777	82	262
21	1119	52	760	83	249
22	1112	53	743	84	235
23	1105	54	726	85	222
24	1098	55	709	86	209
25	1090	56	692	87	197
26	1082	57	674	88	184
27	1074	58	656	89	172
28	1066	59	638	90	160
29	1058	60	620	91	149
30	1049	61	601	92	138
31	1040	62	583	93	129
32	1030	63	565	94	120
33	1020	64	546	95	112
34	1010	65	528	96	105
35	999	66	511	97	98
36	987	67	493	98	91
37	976	68	476	99	84
38	963	69	460	100	77
39	951	70	443	101	71
40	938	71	427	102	64
41	925	72	411	103	57
42	911	73	395	104	51
43	898	74	379	105	44
44	884	75	363	106	38
45	870	76	347	107	31
46	855	77	332	108	24
47	841	78	317	109	14
				110	0

NOTE: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated.

SOURCE: 2010 Deloitte Consulting, LLP Mortality Study, 4.00% interest.

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Appendix C

4123-17-60

PTD ANNUITY FACTORS Occupational Disease - Lung

AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	1110	48	756	79	235
18	1103	49	739	80	223
19	1096	50	722	81	211
20	1089	51	704	82	200
21	1082	52	686	83	189
22	1074	53	668	84	177
23	1066	54	650	85	166
24	1058	55	632	86	155
25	1050	56	614	87	144
26	1041	57	595	88	134
27	1032	58	577	89	124
28	1023	59	558	90	114
29	1013	60	539	91	104
30	1003	61	520	92	96
31	993	62	501	93	87
32	982	63	483	94	80
33	971	64	464	95	73
34	959	65	446	96	68
35	947	66	429	97	62
36	935	67	412	98	57
37	921	68	396	99	52
38	908	69	380	100	47
39	894	70	364	101	41
40	880	71	349	102	36
41	865	72	334	103	30
42	850	73	319	104	24
43	835	74	304	105	14
44	820	75	289	106	0
45	804	76	275	107	0
46	789	77	261	108	0
47	773	78	248	109	0
				110	0

NOTE: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated.

SOURCE: 2010 Deloitte Consulting, LLP Mortality Study, 4.00% interest.

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Appendix D

4123-17-60

PTD ANNUITY FACTORS

OCCUPATIONAL DISEASE – NON LUNG

AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	1138	48	814	79	291
18	1132	49	798	80	277
19	1126	50	781	81	264
20	1119	51	765	82	251
21	1113	52	748	83	238
22	1106	53	731	84	225
23	1099	54	714	85	212
24	1091	55	696	86	200
25	1084	56	679	87	187
26	1076	57	661	88	175
27	1068	58	643	89	163
28	1059	59	625	90	152
29	1050	60	606	91	141
30	1041	61	588	92	131
31	1032	62	569	93	121
32	1022	63	551	94	112
33	1012	64	532	95	105
34	1001	65	514	96	98
35	990	66	497	97	91
36	979	67	479	98	85
37	967	68	462	99	78
38	954	69	446	100	72
39	942	70	430	101	65
40	928	71	414	102	59
41	915	72	397	103	53
42	901	73	381	104	46
43	887	74	366	105	40
44	873	75	350	106	33
45	859	76	334	107	27
46	844	77	319	108	20
47	829	78	305	109	11
				110	0

NOTE: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the attained age indicated.

SOURCE: 2010 Deloitte Consulting, LLP Mortality Study, 4.00% interest.

Appendix E
4123-17-60

Orphans Annuity Factors

Year	Factor	Year	Factor	Year	Factor
1	24	11	430	21	704
2	72	12	462	22	726
3	118	13	493	23	747
4	163	14	523	24	767
5	206	15	552	25	786
6	247	16	580	26	805
7	286	17	607	27	823
8	324	18	632	28	841
9	361	19	657	29	857
10	396	20	681	30	873

NOTE: Factors are annuities with one dollar of compensation benefit for each payment at specified frequency from the number of years indicated at an interest rate of 4.00% interest.

SOURCE: Deloitte Consulting, LLP - 2010



Bureau of Workers' Compensation

30 W. Spring St.
Columbus, OH 43215-2256

Governor **Ted Strickland**
Administrator **Marsha P. Ryan**

ohiobwc.com
1-800-OHIOBWC

To: Marsha P. Ryan, Administrator
From: John R. Pedrick, FCAS, MAAA, Chief Actuarial Officer
Date: September 22, 2010
Subject: Public Employer – Taxing Districts (PEC) Rate Change Effective 1/1/2011

I have reviewed the calculations and results in the document “Public Employer Taxing Districts 1-1-11 Rate Recommendations” submitted by our actuarial consultant, Deloitte Consulting LLP, and recommend the BWC implement an overall rate decrease of 5.5% for PECs for the policy year starting January 1, 2011. I believe this change will result in an actuarially sound rate level and will meet the requirement to set the lowest possible rates of premium consistent with the maintenance of a solvent state insurance fund.

Deloitte’s rate level recommendations are summarized in the following table.

Discount Rate	Baseline	Reasonable Expectation - Optimistic	Reasonable Expectation – Conservative
4.5%	-8.3%	-13.1%	-2.8%
4.0%	-5.5%	-10.3%	0.6%

The recommendation to decrease rates by 5.5% is based on my concurrence with Deloitte’s selected frequency, severity and payroll trends and the resulting calculations using a 4.0% discount rate.

When this overall rate change is combined with the rate structure the Board approved in June 2010, the following average changes result.

Segment	Average Rate Level Change
Non-Group	-7.1%
Group	-2.2%
Retrospectively Rated Non-Group	-5.4%
Overall	-5.5%



September 22, 2010

Rate Recommendations for
Public Employer Taxing Districts
State of Ohio Bureau of Workers'
Compensation

Deloitte Consulting LLP

Audit • Tax • Consulting • Financial Advisory •



Deloitte Consulting LLP
 1700 Market Street
 Philadelphia, PA 19103-3984
 USA

Tel: (215) 299-4655
 Fax: (215) 405-3027
www.deloitte.com

September 22, 2010

Mr. John Pedrick, FCAS, MAAA
 Chief Actuarial Officer
 Ohio Bureau of Workers' Compensation
 30 West Spring Street
 Columbus, OH 43266-0581

Subject:

Public Employer Taxing Districts 1-1-11 Rate Recommendations

Dear Mr. Pedrick:

We are pleased to provide this Final Report, which provides our rate recommendations for the State of Ohio Bureau of Workers' Compensation ("BWC") public employer taxing districts ("PEC") rates to be effective January 1, 2011.

We have provided a baseline rate level recommendation, as well as a reasonable range around that recommendation, as shown below. The baseline indicated rate change is based primarily on average historical loss costs over the past five accident years at current cost levels. The range around the baseline rate change is based primarily on the range of historical loss costs at current cost levels observed over the last several accident years. The following table illustrates the indicated rate changes at a 4.0% and 4.5% discount rate as recommended by BWC:

Scenarios	Baseline	Reasonable Expectation Optimistic	Reasonable Expectation Conservative
4.5% Discount Rate	-8.3%	-13.1%	-2.8%
4.0% Discount Rate	-5.5%	-10.3%	0.6%

The loss costs used to determine the rate change recommendations are derived from Deloitte Consulting's June 20, 2010 Loss & LAE reserve analysis for PEC.

At a discount rate of 4.5%, it is our opinion that a rate change of -13.1% to -2.8% is appropriate for the policy year beginning January 1, 2011. At a discount rate of 4.0%, it is our opinion that a rate change of -10.3% to 0.6% is appropriate for the policy year beginning January 1, 2011. Base rates for the individual manual classes should be adjusted according to their experience so as to achieve the applicable overall rate level change. "Off-balance" factors resulting from experience rating should also

be considered in the base rates, as these factors are not contemplated in the overall rate indications presented herein.

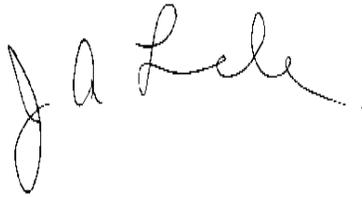
Please note that our recommendations are subject to the Conditions and Limitations described in the attached report which are inherent in estimating workers' compensation loss costs.

It has been our pleasure to be of service to you in this regard.

Yours very truly,

Jan A. Lommele, FCAS, MAAA

Principal



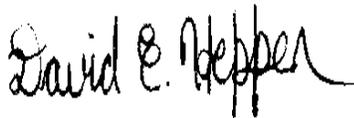
Robert S. Miccolis, FCAS, MAAA

Director



David E. Heppen, FCAS, MAAA

Director



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Table of Exhibits 10

Background

Rates for taxing districts are set annually to be applied to payrolls from January 1 to December 31 of the following year. Billings for the 2011 policy year will be due May 15, 2012 (45%) and September 1, 2012 (55%). Rates are applicable to \$100 of payroll.

The overall rate level recommended in this study is intended to provide for the following costs associated with the January 1, 2011 to December 31, 2011 policy year:

- Indemnity losses
- Medical losses
- Health Partnership Programs (“HPP”)
- Non-claim payments costs
- Safety and Hygiene (“S&H”)

Rate Level Recommendations

Our rate projections are based on our analysis of historical loss cost trends for Indemnity and Medical losses separately. We have selected a Baseline, Reasonable Expectation - Optimistic, and Reasonable Expectation - Conservative Loss Costs for Indemnity and Medical losses that can be seen in Exhibits 6 and 7. These Loss Costs are also displayed in Exhibit 1A and Exhibit 1B, where we determine the range of rate level indications at a discount rate of 4.5% and 4.0% respectively.

The main assumptions and observations underlying our rate level indications are as follows:

- Loss costs from accident year 1999 to 2009 are considered in the analysis. The results for the most recent five years are given the majority of the weight in the baseline rate indication.
- Loss costs are brought on-level in order to determine the rate level indication. On-leveling is a ratemaking procedure that allows past years to be evaluated at current cost levels, thus providing a relevant basis for the selection of current year rates. On-leveling includes the impact of changes in the frequency of claims, the severity of claims, and the change in wage levels over time.
- Loss costs are discounted at a rate of 4.5% and 4.0%. Discounting loss costs adds variability to estimates of appropriate rate levels, as discount is influenced by the timing of loss payments and the actual rate of return achieved by BWC on invested assets. If the timing of the payments or the expected investment returns are not achieved, the results could vary significantly. Our discount factors for Indemnity and Medical are derived from our June 30, 2010 PEC reserve

study. Support for our discount factors can be seen on Exhibits 15A (4.5%) and 15B (4.0%).

- The frequency trend (Ultimate Lost Time Claims/On-Level Payroll), as shown in Exhibit 10, has been exhibiting decreases in all but three years of the 1999-2009 experience period. Our selected frequency trend considers the long-term trend in BWC's PEC data as well as countrywide trends. Our selection for frequency trend is -2.0% for 1999-2008 and 0.0% for 2009 and 2010.
- Indemnity and Medical severity trends (Ultimate losses/Ultimate Lost Time Claims) have varied significantly over the 1999-2009 accident years. Due to this variability we have relied on BWC indications and NCCI benchmark indications in determining our selected severity assumptions. We have selected an Indemnity severity trend of 5.0% for accident years 1999 and subsequent and Medical severity trend of 6.0% for accident years 2001 and subsequent, as shown in Exhibits 11 and 12, respectively.
- HPP costs are projected to be 10.7% of the discounted total pure premium. The percentage was determined from our June 30, 2010 PEC reserve study by relating HPP payments in recent fiscal years to the fiscal year Loss & ALAE payments. HPP costs are related to claim determinations and allowances, paying lost time compensation, second level of dispute resolution, and educating injured workers, employers and providers about HPP. Please see Exhibit 14 for the development of the HPP load.
- A loading of \$.01 per \$100 of payroll is included for the non-claim payment costs for all scenarios. Non-claim payments includes actuarial fees, reinsurance costs, and miscellaneous expenses.
- A loading of 0.5% is included for Safety and Hygiene.
- A Premium Lag Adjustment is included to recognize the fact that there is a lag between the inception of the coverage period and the time the premium is collected from the insureds (45% collected May 15, 2012, 55% collected September 1, 2012, for the 2011 policy year).
- Rate change indications are based on a current collectible rate of \$1.46.
- No margin has been included for contingencies.

Change from the 1/1/2010 Rate Indication at 4.5% Discount

1) Prior Actuary's Baseline Indicated Rate Change at 1/1/10 (at 4.5% discount)	-19.8%
2) Actual Rate Change (Approved by BWC)	-17.0%
3) Prior Actuary's Loss Cost Trend (from 1/1/10 Baseline rate indication at 4.5% discount)	+1.4%
4) Expected Baseline Change at 1/1/2011 $\left[\frac{1+(1)}{1+(2)} * \{1+(3)\} \right] - 1$	-2.0%
5) Deloitte Indicated Baseline Change @ 4.5%	-8.3%
6) Improvement/Deterioration [(5) – (4)] (Improvement is indicated by a negative number; deterioration by a positive number)	-6.3%

As can be seen in the table above, there has been significant improvement in the indicated rate level for PEC. This improvement can mainly be attributed to changes in estimated loss costs based on the June 30, 2010 Deloitte Consulting analysis in comparison to the June 30, 2009 analysis from the prior actuary. A comparison of the indicated loss costs in the current analysis and the prior year analysis, using discount rates of 4.5% and 4.0%, can be found in Exhibits 5A and 5B, respectively. This comparison isolates the indicated rate change to the loss component only; the comparison excludes other expenses.

Terrorism Risk Insurance Act (TRIA)

Due to the passage of the Terrorism Risk Insurance Act and its subsequent renewal through December 31, 2014, the Ohio BWC is subject to assessment for terrorist related losses in other locations and lines of business, provided certain thresholds are met. The assessment is limited to a maximum of 3% of annual premium per year. We have not included a provision for TRIA in the rates.

Deloitte Rate Development Procedure

In developing the rate recommendations, we consider medical and indemnity loss experience separately, and then combine the two to develop the Total Loss and Expense rate. The rate is developed from the

indicated loss costs, or losses per \$100 of payroll. All losses and payroll data are trended to the rate effective period of January 1, 2011 to December 31, 2011.

Severity trends for Indemnity and Medical are based on ultimate loss projections and ultimate lost time claim projections from our June 30, 2010 PEC reserve study. The severity trend for Indemnity and Medical can be found in Exhibits 11 and 12 respectively.

The frequency trend is based on BWC's payroll and our ultimate lost time claim projections. The payroll is adjusted for future development and average weekly wage trend to bring it on-level for the rate effective period. Our analysis and selection of the frequency trend is on Exhibit 10.

The frequency and severity trends are then multiplied together to form a loss trend. The loss trends are calculated on Exhibit 13, in columns 1 through 6.

On-level loss costs are developed for Indemnity and Medical separately. Our ultimate loss projections are trended to the rate effective period. Dividing the on-level ultimate losses by on-level payroll yields the on-level loss costs. From the accident year on-level loss cost indications we select a Baseline, Optimistic, and Conservative loss cost. The loss cost projections for Indemnity and Medical are shown in Exhibits 6 and 7, respectively. These loss costs are undiscounted.

The undiscounted loss costs for Indemnity and Medical are multiplied by their respective discount factors and then added to develop the Total Loss Cost. This can be seen in Exhibits 1A and 1B. The discount factors for Indemnity and Medical were derived from our June 30, 2010 PEC reserve study and were calculated at discount rates of 4.5% and 4.0%. The Total Loss Cost is adjusted for Health Partnership Program (HPP) costs. These have been estimated to be 10.7% of discounted losses. Support for the 10.7% selection can be found on Exhibit 14. The Total Loss Cost is also adjusted for loads related to non-claim payment costs and Safety and Hygiene ("S&H") program. The loading for non-claim payment cost is \$.01 per \$100 of payroll and the S&H load is 0.5%. The non-claim payment loading is consistent with prior rate recommendations. Based on information provided by BWC and discussions with BWC Management, we believe this provision to be a reasonable for the 2011 year. The S&H load in past rate reviews was 1.0%. The current 0.5% loading is based on information provided by BWC Management.

The indicated rate is adjusted for the lag in premium collections. The derivation of this adjustment can be found in Exhibits 4A and 4B, respectively. After adjusting for the loads and the impact of the lag in premium collection, the result is the Total Discounted Loss & Expense Rate indication effective January 1, 2011 as seen on Exhibit 1A at a 4.5% discount rate and Exhibit 1B at a 4.0% discount rate. Exhibit 2 shows the Undiscounted Total Loss & Expense Rate. Exhibits 3A (4.5% discount) and 3B (4.0% discount) quantify the dollar impact of discounting the rates.

Conditions and Limitations

In estimating future loss and loss adjustment expense, it is necessary to project future indemnity, medical and loss adjustment expenses. It is certain that actual indemnity, medical and loss adjustment expenses will not develop exactly as indicated and may, in fact, vary significantly from our estimates.

No warranty is expressed or implied that such variance will not occur. Furthermore, our estimates make no provision for the broadening of coverage by legislative action or judicial interpretation or for extraordinary future emergence of new classes of losses or types of losses not sufficiently represented in the BWC's historical database or which are not yet quantifiable, and which might affect the claim experience. We believe, however, that the actuarial techniques and assumptions used in our analysis are reasonable.

Loss Cost Trends and Projections

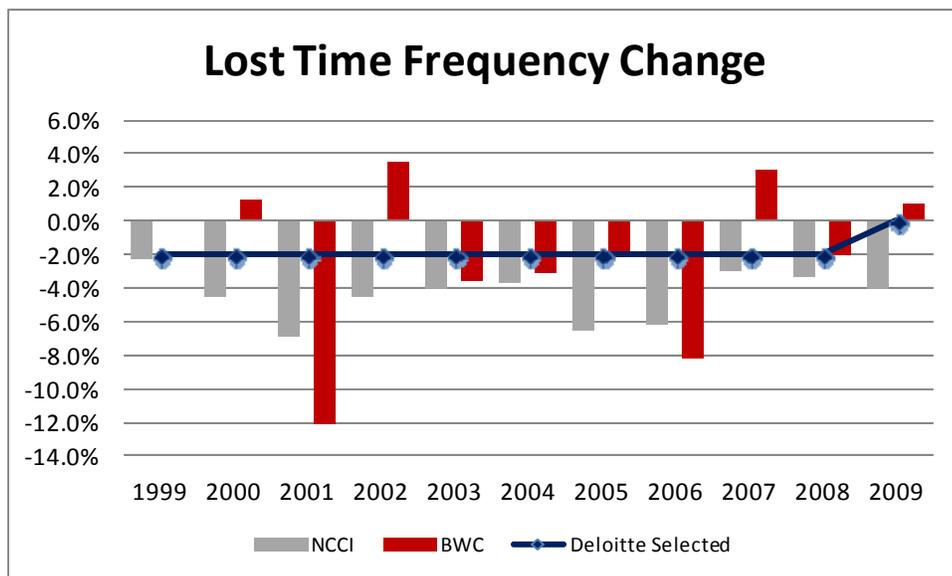
Medical and Indemnity loss cost calculations are developed separately. On-level factors are needed to adjust the losses from each accident year to the level anticipated for the rate period effective January 1, 2011. We have used data from our PEC reserve study as of June 30, 2010 to calculate the historical trends in Medical and Indemnity loss costs. The data we used to select our frequency, Indemnity severity, and Medical severity can be seen on Exhibits 10, 11, and 12 respectively.

The data tables below show the indicated annual trend based on an exponential curve fit of the data for the years indicated. Our selected frequency trend (ultimate claims/on-level payroll) for 2010 to 2011 is 0.0%. The selected Indemnity severity trend for 2010 to 2011 is 5.0%, while the selected Medical severity trend for 2010 to 2011 is 6.0%. Multiplying the frequency and severity trends yields the overall loss trends. Loss costs trends are then calculated by dividing by the payroll trend. Our selected payroll trend for 2010 to 2011 is 2.5%.

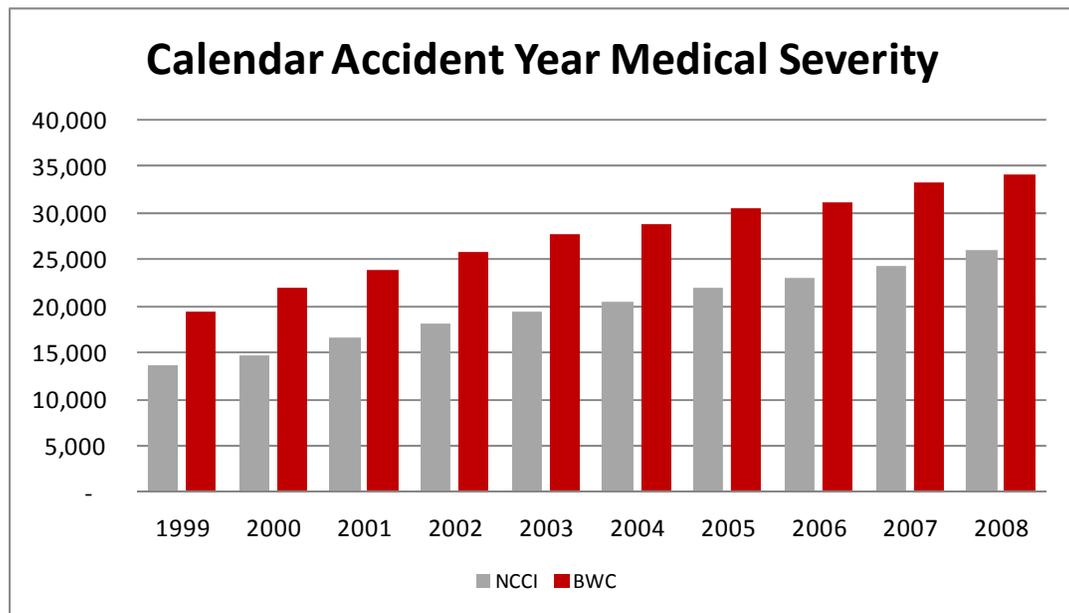
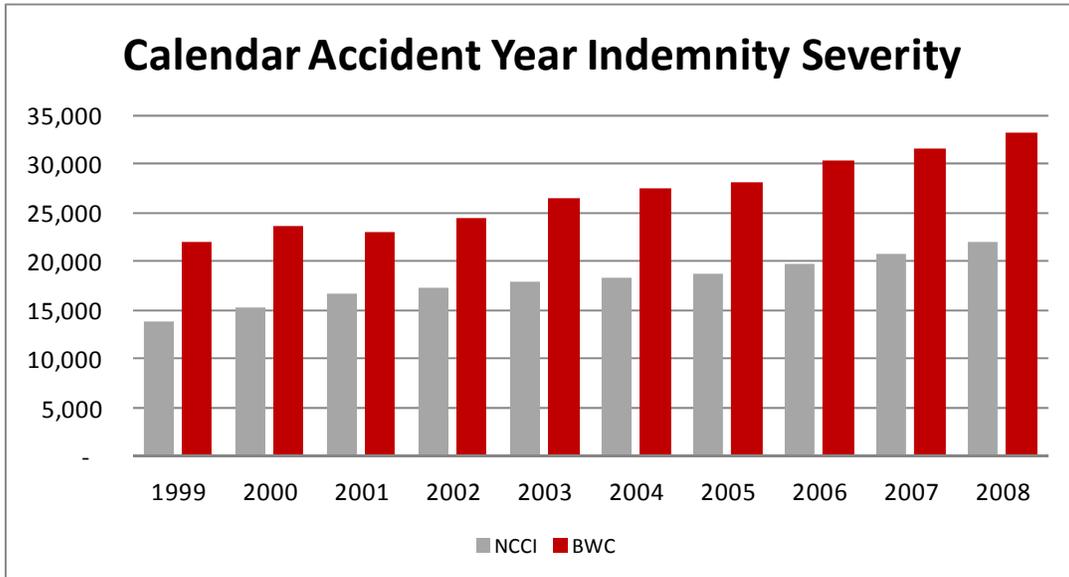
Medical Severity Trend			Indemnity Severity Trend			Payroll Trend	
Years	BWC	NCCI State of Line	Years	BWC	NCCI State of Line	Years	BWC
1999-2008	6.2%	7.3%	1999-2008	4.7%	4.6%	1999-2009	2.6%
2000-2008	5.5%	7.0%	2000-2008	4.8%	4.1%	2000-2009	2.3%
2001-2008	5.1%	6.5%	2001-2008	5.2%	3.8%	2001-2009	2.0%
2002-2008	4.7%	6.2%	2002-2008	5.0%	4.0%	2002-2009	1.7%
2003-2008	4.4%	6.0%	2003-2008	4.7%	4.2%	2003-2009	1.6%
2004-2008	4.5%	6.0%	2004-2008	5.1%	4.8%	2004-2009	1.6%
2005-2008	4.3%	5.7%	2005-2008	5.6%	5.3%	2005-2009	1.7%
2006-2008	5.0%	6.1%	2006-2008	4.7%	5.4%	2006-2009	1.5%
2007-2008	2.8%	6.6%	2007-2008	5.4%	5.8%	2007-2009	0.9%
						2008-2009	-0.3%

Calendar Year	Ultimate Payroll
1999	15,088,873
2000	15,809,043
2001	16,717,138
2002	17,601,171
2003	18,004,352
2004	18,523,800
2005	18,568,714
2006	18,918,245
2007	19,392,260
2008	19,814,092
2009	19,750,465

The graph below shows actual BWC and National Council on Compensation Insurance (“NCCI”) frequency for lost time claims for each accident year experience period. The NCCI values come from the presentation “State of the Workers Compensation Line” by Dennis C. Mealy, FCAS, MAAA, Chief Actuary, National Council on Compensation Insurance, Inc. The 2009 NCCI values are preliminary based on data valued as 12/31/09. NCCI values for Accident Years 2008 and prior are based on data valued as of 12/31/08, developed to ultimate. The definition of the 1999 change is the change of frequency from 1998 to 1999 and so on for subsequent years.



The graphs below show actual BWC and National Council on Compensation Insurance (“NCCI”) Indemnity severity and Medical severity for each accident year experience period. The NCCI values come from the presentation “State of the Workers Compensation Line” by Dennis C. Mealy, FCAS, MAAA, Chief Actuary, National Council on Compensation Insurance, Inc. . The 2009 NCCI values are preliminary based on data valued as 12/31/09. NCCI values for Accident Years 2008 and prior are based on data valued as of 12/31/08, developed to ultimate.



The graphs below show actual observed BWC and NCCI Indemnity severity and Medical severity trends for each accident year experience period based on the severities on the previous page. The Deloitte selected annual trend for each accident period is also shown in comparison. The definition of the 1999 trend is the change of severity from 1998 to 1999 and so on for subsequent years.

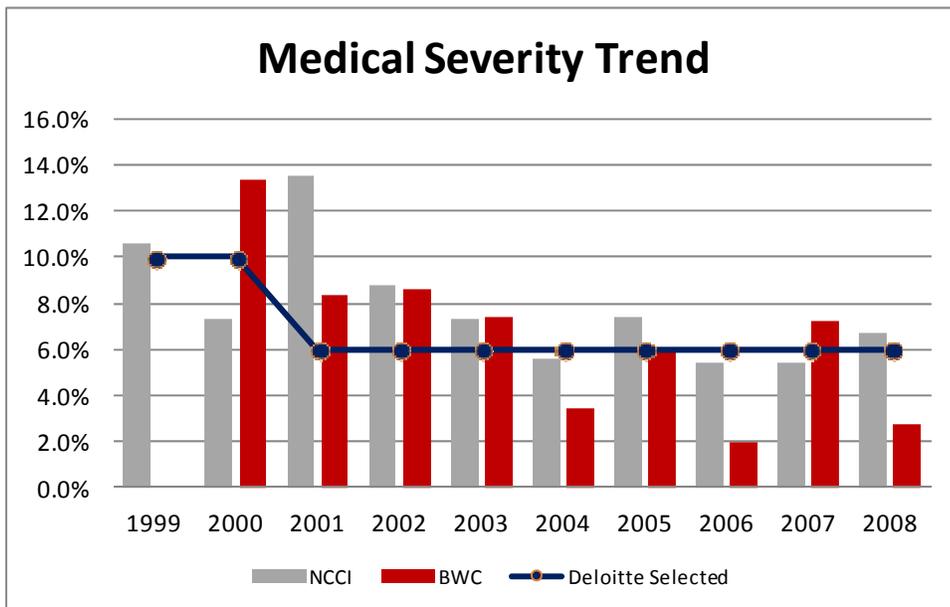
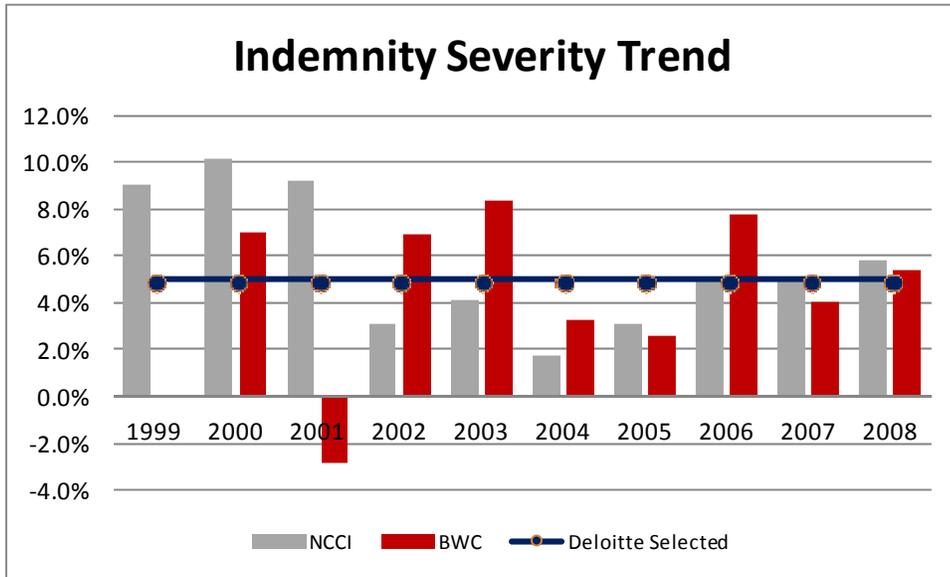


Table of Exhibits

Section 1, Exhibit 1A: Determination of Overall Rate Change (Discounted at 4.5%)

This exhibit displays the indicated overall rate level discounted at 4.5% as well as the indicated rate change for the Baseline, Reasonable Expectation – Optimistic, and Reasonable Expectation – Conservative scenarios.

Section 1, Exhibit 1B: Determination of Overall Rate Change (Discounted at 4.0%)

This exhibit displays the indicated overall rate level discounted at 4.0% as well as the indicated rate change for the Baseline, Reasonable Expectation – Optimistic, and Reasonable Expectation – Conservative scenarios.

Section 1, Exhibit 2: Determination of Overall Rate Level (Undiscounted)

This exhibit displays the indicated overall rate level on an undiscounted basis for the Baseline, Reasonable Expectation – Optimistic, and Reasonable Expectation – Conservative scenarios.

Section 1, Exhibit 3A: Determination of Overall Rate Level – Impact of Discount on Rates at a Discount Rate of 4.5%

This exhibit displays the impact of discounting rates at 4.5% for the Baseline, Reasonable Expectation – Optimistic, and Reasonable Expectation – Conservative scenarios.

Section 1, Exhibit 3B: Determination of Overall Rate Level – Impact of Discount on Rates at a Discount Rate of 4.0%

This exhibit displays the impact of discounting rates at 4.0% for the Baseline, Reasonable Expectation – Optimistic, and Reasonable Expectation – Conservative scenarios.

Section 1, Exhibit 4A: Impact of Premium Payment Lag (4.5%)

This exhibit displays the impact of collecting premium on May 15 (45%) and September 1 (55%), using a 4.5% discount rate.

Section 1, Exhibit 4B: Impact of Premium Payment Lag (4.0%)

This exhibit displays the impact of collecting premium on May 15 (45%) and September 1 (55%), using a 4.0% discount rate.

Section 1, Exhibit 5A: Comparison of Discounted Loss Costs excluding Expenses (4.5%)

This exhibit compares the current year discounted loss cost to the prior year. Expenses are not included in this comparison. This is based on a discount rate of 4.5%

Section 1, Exhibit 5B: Comparison of Discounted Loss Costs excluding Expenses (4.0%)

This exhibit compares the current year discounted loss cost to the prior year. Expenses are not included in this comparison. This is based on a discount rate of 4.0%.

Section 1, Exhibit 6: Calculation of Loss Cost – Indemnity

This exhibit displays the selection of the undiscounted loss cost for Indemnity for the Baseline, Reasonable Expectation – Optimistic, and Reasonable Expectation – Conservative scenarios.

Section 1, Exhibit 7: Calculation of Loss Cost – Medical

This exhibit displays the selection of the undiscounted loss cost for Medical for the Baseline, Reasonable Expectation – Optimistic, and Reasonable Expectation – Conservative scenarios.

Section 1, Exhibit 8: Exposure Year Payroll Development

This exhibit displays the historical development of payroll and the resulting payroll development factors selected by Deloitte Consulting.

Section 1, Exhibit 9: Payroll Trend

This exhibit shows the historical change in Ohio average weekly wages and the resulting payroll trend assumptions selected by Deloitte Consulting.

Section 1, Exhibit 10: Frequency Trend

This exhibit shows the historical change in frequency of lost time claims relative to developed and on-level payroll, and the resulting frequency trend assumptions selected by Deloitte Consulting.

Section 1, Exhibit 11: Severity Trend – Indemnity

This exhibit shows the historical change in ultimate Indemnity losses per lost time claims, and the resulting severity trend assumptions selected by Deloitte Consulting.

Section 1, Exhibit 12: Severity Trend – Medical

This exhibit shows the historical change in ultimate Medical losses per lost time claims, and the resulting severity trend assumptions selected by Deloitte Consulting.

Section 1, Exhibit 13: Trend Summary

This exhibit shows the combined impact of the payroll, frequency, and severity trend assumptions selected by Deloitte Consulting in Exhibits 9 through 12 for Indemnity and Medical.

Section 1, Exhibit 14: Calculation of HPP Expense Factor

This exhibit shows the historical Claims Adjusting Expense Ratios and the selected ratio by Deloitte Consulting

Section 1, Exhibit 15A: Derivation of Discount factors at a 4.5% discount rate

This exhibit shows the support for the indemnity and medical discount factors at a 4.5% discount rate as displayed on Exhibit 1A

Section 1, Exhibit 15B: Derivation of Discount factors at a 4.0% discount rate

This exhibit shows the support for the indemnity and medical discount factors at a 4.0% discount rate as displayed on Exhibit 1B

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change (Discounted at 4.5%)
Public Employers - Taxing Districts

Section 1
Exhibit 1A

Discounted
Effective January 1, 2011

		Reasonable Expectation <u>Optimistic</u>	<u>Baseline</u>	Reasonable Expectation <u>Conservative</u>
(1)	Selected Indemnity Undiscounted Loss Cost:	\$0.79	\$0.825	\$0.87
(2)	Selected Indemnity Discount Factor:	0.605	0.605	0.605
(3)	Selected Medical Loss Cost:	\$0.85	\$0.905	\$0.97
(4)	Selected Medical Discount Factor:	0.680	0.680	0.680
(5)	Selected Total Loss Cost:	\$1.06	\$1.11	\$1.19
(6)	HPP Expense Load; 10.7% of Losses	1.107	1.107	1.107
(7)	Non-Claim Payment Costs	\$0.01	\$0.01	\$0.01
(8)	S&H Load (0.5%):	0.5%	0.5%	0.5%
(9)	Contingency Load (0.0%):	0.0%	0.0%	0.0%
(10)	Premium Lag Adjustment	0.935	0.935	0.935
(11)	Calculated Total Loss & Expense Rate:	\$1.27	\$1.34	\$1.42
(12)	Current Loss & Expense Rate (1/1/10 - 12/31/10)	\$1.46	\$1.46	\$1.46
(13)	Indicated Base Rate Level Change:	-13.1%	-8.3%	-2.8%

-
- (1) From Section 1, Exhibit 6, Col. (11, 12, 13)
(2) From Section 1, Exhibit 15A, Col. (3)
(3) From Section 1, Exhibit 7, Col. (11, 12, 13)
(4) From Section 1, Exhibit 15A, Col. (3)
(5) = (1) * (2) + (3) * (4)
(6) From Section 1, Exhibit 14, Col.6
(7) Selected by Deloitte
(8) Selected by Deloitte
(9) Selected by Deloitte
(10) = $1 / (1.045^{(16.5/12)} * 0.45 + 1.045^{(20/12)} * 0.55)$; Assumes 45% of the premium paid by 5/15/11 and 55% by 9/1/11
(11) = $\{(5) \times (6) / [1 - (8) - (9)] + (7)\} / (10)$
(12) Actual Current Loss & Expense Rate
(13) = (10) / (11) - 1.0

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change (Discounted at 4.0%)
Public Employers - Taxing Districts

Section 1
Exhibit 1B

Discounted
Effective January 1, 2011

	<u>Reasonable Expectation Optimistic</u>	<u>Baseline</u>	<u>Reasonable Expectation Conservative</u>
(1) Selected Indemnity Undiscounted Loss Cost:	\$0.79	\$0.83	\$0.87
(2) Selected Indemnity Discount Factor:	0.633	0.633	0.633
(3) Selected Medical Loss Cost:	\$0.85	\$0.91	\$0.97
(4) Selected Medical Discount Factor:	0.702	0.702	0.702
(5) Selected Total Loss Cost:	\$1.10	\$1.16	\$1.23
(6) HPP Expense Load; 10.7% of Losses	1.107	1.107	1.107
(7) Non-Claim Payment Costs	\$0.01	\$0.01	\$0.01
(8) S&H Load (0.5%):	0.5%	0.5%	0.5%
(9) Contingency Load (0.0%):	0.0%	0.0%	0.0%
(10) Premium Lag Adjustment	0.942	0.942	0.942
(11) Calculated Total Loss & Expense Rate:	\$1.31	\$1.38	\$1.47
(12) Current Loss & Expense Rate (1/1/10 - 12/31/10)	\$1.46	\$1.46	\$1.46
(13) Indicated Base Rate Level Change:	-10.3%	-5.5%	0.6%

-
- (1) From Section 1, Exhibit 6, Col. (11, 12, 13)
 - (2) From Section 1, Exhibit 15B, Col. (3)
 - (3) From Section 1, Exhibit 7, Col. (11, 12, 13)
 - (4) From Section 1, Exhibit 15B, Col. (3)
 - (5) = (1) * (2) + (3) * (4)
 - (6) From Section 1, Exhibit 14, Col.6
 - (7) Selected by Deloitte
 - (8) Selected by Deloitte
 - (9) Selected by Deloitte
 - (10) = $1 / (1.04^{16.5/12} * 0.45 + 1.04^{20/12} * 0.55)$; Assumes 45% of the premium paid by 5/15/11 and 55% by 9/1/11
 - (11) = $\{(5) \times (6) / [1 - (8) - (9)] + (7)\} / (10)$
 - (12) Actual Current Loss & Expense Rate
 - (13) = $(10) / (11) - 1.0$

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Level (Undiscounted)
Public Employers - Taxing Districts

Section 1
Exhibit 2

Undiscounted
Effective January 1, 2011

	Reasonable Expectation <u>Optimistic</u>	<u>Baseline</u>	Reasonable Expectation <u>Conservative</u>
(1) Selected Indemnity Loss Cost:	\$0.79	\$0.83	\$0.87
(2) Selected Medical Loss Cost:	\$0.85	\$0.91	\$0.97
(3) Selected Total Loss Cost:	\$1.64	\$1.73	\$1.84
(4) HPP Expense Load; 10.7% of Losses	1.107	1.107	1.107
(5) Non-Claim Payment Costs	\$0.01	\$0.01	\$0.01
(6) S&H Load (0.3%):	0.3%	0.3%	0.3%
(7) Contingency Load (0.0%):	0.0%	0.0%	0.0%
(8) Calculated Total Loss & Expense Rate:	\$1.83	\$1.93	\$2.05

-
- (1) From Section 1, Exhibit 6, Col. (11, 12, 13)
 - (2) From Section 1, Exhibit 7, Col. (11, 12, 13)
 - (3) = (1) + (2)
 - (4) From Section 1, Exhibit 14, Col.6
 - (5) Selected by Deloitte. Factors on an undiscounted basis estimated by Deloitte.
 - (6) Selected by Deloitte. Factors on an undiscounted basis estimated by Deloitte.
 - (7) Selected by Deloitte
 - (8) = (3) x (4) / [1 - (5) - (6)] + (7)

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Level - Impact of Discount on Rates (4.5% Discount)
Public Employers - Taxing Districts

Section 1
Exhibit 3A

Impact of Discount on Rates
Effective January 1, 2011

	Reasonable Expectation Optimistic	Baseline	Reasonable Expectation Conservative
(1) Estimated Payroll for the Period 1/1/11-12/31/11 (100s)	\$204,205,908	\$204,205,908	\$204,205,908
(2) Selected Total Undiscounted Loss Cost (prior to expense loading):	\$1.64	\$1.73	\$1.84
(3) Selected Total Discounted Loss Cost (prior to expense loading):	\$1.06	\$1.11	\$1.19
(4) Estimated Credit for Discounting Losses	\$119,384,044	\$125,724,730	\$133,574,763
(5) Selected Total Undiscounted HPP Rate:	\$0.18	\$0.19	\$0.20
(6) Selected Total Discounted HPP Rate	\$0.11	\$0.12	\$0.13
(7) Estimated Credit for Discounting HPP	\$12,809,685	\$13,490,029	\$14,332,323
(8) Estimated Credit for Discounting Total Loss & Expense	\$132,193,729	\$139,214,759	\$147,907,086

-
- (1) Selected by Deloitte
 - (2) From Section 1, Exhibit 2, Line (3)
 - (3) From Section 1, Exhibit 1A, Line (5)
 - (4) (1) * [(2) - (3)]
 - (5) From Section 1, Exhibit 2, Line (4) - 1* Line (2)
 - (6) From Section 1, Exhibit 2, Line (4) - 1* Line (3)
 - (7) (1) * [(5) - (6)]
 - (8) (4) + (7)

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Level - Impact of Discount on Rates (4.0% Discount)
Public Employers - Taxing Districts

Section 1
Exhibit 3B

Impact of Discount on Rates
Effective January 1, 2011

	Reasonable Expectation <u>Optimistic</u>	<u>Baseline</u>	Reasonable Expectation <u>Conservative</u>
(1) Estimated Payroll for the Period 1/1/11-12/31/11 (100s)	\$204,205,908	\$204,205,908	\$204,205,908
(2) Selected Total Undiscounted Loss Cost (prior to expense loading):	\$1.64	\$1.73	\$1.84
(3) Selected Total Discounted Loss Cost (prior to expense loading):	\$1.10	\$1.16	\$1.23
(4) Estimated Credit for Discounting Losses	\$111,099,641	\$117,000,629	\$124,306,233
(5) Selected Total Undiscounted HPP Rate:	\$0.18	\$0.19	\$0.20
(6) Selected Total Discounted HPP Rate	\$0.12	\$0.12	\$0.13
(7) Estimated Credit for Discounting HPP	\$11,920,784	\$12,553,949	\$13,337,827
(8) Estimated Credit for Discounting Total Loss & Expense	\$123,020,425	\$129,554,578	\$137,644,059

-
- (1) Selected by Deloitte
(2) From Section 1, Exhibit 2, Line (3)
(3) From Section 1, Exhibit 1B, Line (5)
(4) (1) * [(2) - (3)]
(5) From Section 1, Exhibit 2, Line (4) - 1* Line (2)
(6) From Section 1, Exhibit 2, Line (4) - 1* Line (3)
(7) (1) * [(5) - (6)]
(8) (4) + (7)

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change (Discounted at 4.5%)
Public Employers - Taxing Districts

Section 1
Exhibit 4A

Impact of Premium Payment Lag
Effective January 1, 2011

	<u>Reasonable Expectation Optimistic</u>	<u>Baseline</u>	<u>Reasonable Expectation Conservative</u>
(1) Estimated Payroll for the Period 1/1/11-12/31/11 (100s)	\$204,205,908	\$204,205,908	\$204,205,908
(2) Discounted Loss Cost at Time 0	\$1.06	\$1.11	\$1.19
(3) Discounted Losses at Time 0	\$ 215,845,005	\$ 227,636,667	\$ 242,164,107
(4) Expenses	\$ 26,402,854	\$ 27,733,690	\$ 29,373,292
(5) Total Loss & Expenses	\$242,247,859.06	\$255,370,357.30	\$271,537,399.07
(6) Premium Discount Factor	0.935	0.935	0.935
(7) Final Premium	\$258,083,623.63	\$272,063,940.77	\$289,287,823.53
(8) Premium Discount Charge	\$15,835,764.57	\$16,693,583.47	\$17,750,424.46

-
- (1) Selected by Deloitte
(2) From Section 1, Exhibit 1A, Row (5)
(3) = (1) * (2)
(4) Calculated using expense assumptions from Section 1, Exhibit 1A
(5) = (3) + (4)
(6) = $1/(1.045^{(16.5/12)*0.45+1.045^{(20/12)*0.55})$; Assumed 45% of the premium paid by 5/15/12 and 55% by 9/1/12
(7) = (5) * [1 - (6)] + (5)
(8) = (7) - (5)

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change (Discounted at 4.0%)
Public Employers - Taxing Districts

Section 1
Exhibit 4B

Impact of Premium Payment Lag
Effective January 1, 2011

	<u>Reasonable Expectation Optimistic</u>	<u>Baseline</u>	<u>Reasonable Expectation Conservative</u>
(1) Estimated Payroll for the Period 1/1/11-12/31/11 (100s)	\$204,205,908	\$204,205,908	\$204,205,908
(2) Discounted Loss Cost at Time 0	\$1.10	\$1.16	\$1.23
(3) Discounted Losses at Time 0	\$ 224,129,408	\$ 236,360,768	\$ 251,432,637
(4) Expenses	\$ 27,337,852	\$ 28,718,313	\$ 30,419,361
(5) Total Loss & Expenses	\$251,467,260.21	\$265,079,081.77	\$281,851,998.78
(6) Premium Discount Factor	0.942	0.942	0.942
(7) Final Premium	\$266,167,533.78	\$280,575,075.23	\$298,328,503.46
(8) Premium Discount Charge	\$14,700,273.57	\$15,495,993.47	\$16,476,504.68

-
- (1) Selected by Deloitte
(2) From Section 1, Exhibit 1B, Row (5)
(3) = (1) * (2)
(4) Calculated using expense assumptions from Section 1, Exhibit 1B
(5) = (3) + (4)
(6) = $1/(1.04^{16.5/12})^{0.45} + 1.04^{20/12}^{0.55}$; Assumed 45% of the premium paid by 5/15/12 and 55% by 9/1/12
(7) = (5) * [1 - (6)] + (5)
(8) = (7) - (5)

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change (Discounted at 4.5%)
Public Employers - Taxing Districts

Section 1
Exhibit 5A

Comparison of Discounted Loss Costs excluding Expenses
Effective January 1, 2011

	Reasonable Expectation <u>Optimistic</u>	<u>Baseline</u>	Reasonable Expectation <u>Conservative</u>
(1) Oliver Wyman "Selected Discounted Pure Premium"	\$1.18	\$1.24	\$1.31
(2) Interest Adjustment for Oliver Wyman discounting losses to Time 1 instead of Time 0	1.045	1.045	1.045
(3) Oliver Wyman Adjusted "Selected Discounted Pure Premium"	\$1.13	\$1.19	\$1.25
(4) Deloitte Selected Discounted Loss Costs	\$1.06	\$1.11	\$1.19
(5) Indicated Loss Cost Change:	-6.4%	-6.1%	-5.4%

-
- (1) From the Oliver Wyman "1/1/2010 Rate Indications for Public Employer -- Taxing Districts" report, dated August 25, 2009; Exhibit 1 - 4.50%
(2) 4.5% interest adjustment for a consistent comparison
(3) = (1) / (2)
(4) From Section 1, Exhibit 1A, Row (5)
(5) = (4) / (3) - 1

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change (Discounted at 4.0%)
Public Employers - Taxing Districts

Section 1
Exhibit 5B

Comparison of Discounted Loss Costs
Effective January 1, 2011

	Reasonable Expectation <u>Optimistic</u>	<u>Baseline</u>	Reasonable Expectation <u>Conservative</u>
(1) Olive Wyman "Selected Discounted Pure Premium"	\$1.23	\$1.30	\$1.37
(2) Interest Adjustment for Oliver Wyman discounting losses to Time 1 instead of Time 0	1.04	1.04	1.04
(3) Oliver Wyman Adjusted "Selected Discounted Pure Premium"	\$1.18	\$1.25	\$1.32
(4) Deloitte Selected Discounted Loss Costs	\$1.10	\$1.16	\$1.23
(5) Indicated Loss Cost Change:	-7.2%	-7.4%	-6.5%

-
- (1) From the Oliver Wyman "1/1/2010 Rate Indications for Public Employer -- Taxing Districts" report, dated August 25, 2009; Exhibit 1 - 4.00%
(2) 4% interest adjustment for a consistent comparison
(3) = (1) / (2)
(4) From Section 1, Exhibit 1B, Row (5)
(5) = (4) / (3) - 1

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Calculation of Loss Cost - Indemnity

Section 1
Exhibit 6

Effective January 1, 2011
(000's)

Calendar Accident Year	Payroll	Payroll Trend To Period Eff 01/01/11	Payroll Development Factor	Developed & Trended Payroll	Ultimate Loss Projection	Loss Trend To Period Eff 01/01/11	Adjusted & Trended Ultimate	Average Loss Cost Unadjusted	Loss Cost On-Level
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1999	15,088,873	1.419	1.000	21,412,212	133,107	1.467	195,314	0.88	0.91
2000	15,809,043	1.351	1.000	21,355,259	143,851	1.426	205,130	0.91	0.96
2001	16,717,138	1.308	1.000	21,873,842	125,768	1.386	174,289	0.75	0.80
2002	17,601,171	1.268	1.000	22,321,938	142,149	1.347	191,438	0.81	0.86
2003	18,004,352	1.230	1.000	22,151,666	147,420	1.309	192,942	0.82	0.87
2004	18,523,800	1.190	1.000	22,034,365	146,674	1.272	186,555	0.79	0.85
2005	18,568,714	1.168	1.000	21,681,075	144,821	1.236	179,007	0.78	0.83
2006	18,918,245	1.137	1.000	21,510,304	142,261	1.201	170,887	0.75	0.79
2007	19,392,260	1.104	1.000	21,399,889	151,728	1.167	177,123	0.78	0.83
2008	19,814,092	1.066	1.000	21,129,946	154,693	1.134	175,494	0.78	0.83
2009	19,750,465	1.046	1.000	20,649,111	158,772	1.103	175,046	0.80	0.85
Total	198,188,152			237,519,608	1,591,242		2,023,228	0.80	0.85
							All Year Weighted Average:		0.85
							2000-07 Weighted Avg:		0.85
							2000-04 Weighted Avg:		0.87
							2004-08 Weighted Avg:		0.83
							2006-08 Weighted Avg:		0.82
				(11)			Selected Reasonable Expectation - Optimistic		0.79
				(12)			Selected Baseline		0.83
				(13)			Selected Reasonable Expectation - Conservative		0.87

(1) Calendar Accident Year Beginning January 1, XXXX
(2) From Deloitte 6/30/10 PEC Reserve Study
(3) From Section 1, Exhibit 9, Col. (5)
(4) From Section 1, Exhibit 8.
(5) = (2) x (3) x (4)
(6) Based on Deloitte PEC Reserve Study as of 6/30/10
(7) From Section 1, Exhibit 13, Col. (4)

(8) = (6) x (7)
(9) = (6) / [(2) x (4)] * 100
(10) = (8) / (5) x 100
(11) Selected by Deloitte
(12) Selected by Deloitte
(13) Selected by Deloitte

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Calculation of Loss Cost - Medical

Section 1
Exhibit 7

Effective January 1, 2011
(000's)

Calendar Accident Year	Payroll	Payroll Trend to 2011 \$'s	Payroll Development Factor	Developed & Trended Payroll	Ultimate Loss Projection	Loss Trend to 2011 \$'s	Adjusted & Trended Ultimate	Average Loss Cost Unadjusted	Loss Cost On-Level
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1999	15,088,873	1.419	1.000	21,412,212	116,913	1.771	206,999	0.77	0.97
2000	15,809,043	1.351	1.000	21,355,259	133,785	1.642	219,732	0.85	1.03
2001	16,717,138	1.308	1.000	21,873,842	130,393	1.524	198,666	0.78	0.91
2002	17,601,171	1.268	1.000	22,321,938	149,679	1.467	219,532	0.85	0.98
2003	18,004,352	1.230	1.000	22,151,666	153,905	1.412	217,298	0.85	0.98
2004	18,523,800	1.190	1.000	22,034,365	153,304	1.359	208,364	0.83	0.95
2005	18,568,714	1.168	1.000	21,681,075	156,458	1.308	204,709	0.84	0.94
2006	18,918,245	1.137	1.000	21,510,304	145,441	1.260	183,187	0.77	0.85
2007	19,392,260	1.104	1.000	21,399,889	159,825	1.212	193,785	0.82	0.91
2008	19,814,092	1.066	1.000	21,129,946	158,935	1.167	185,508	0.80	0.88
2009	19,750,465	1.046	1.000	20,649,111	162,495	1.124	182,579	0.82	0.88
Total	198,188,152			237,519,608	1,621,132		2,220,358	0.82	0.93
							All Year Weighted Av		0.93
							2000-07 Weighted Avg:		0.94
							2000-04 Weighted Avg:		0.97
							2004-08 Weighted Avg:		0.91
							2006-08 Weighted Avg:		0.88
				(11)		Selected Reasonable Expectation - Optimistic			0.85
				(12)		Selected Baseline			0.91
				(13)		Selected Reasonable Expectation - Conservative			0.97

(1)	Calendar Accident Year Beginning January 1, XXXX	(8)	= (6) x (7)
(2)	From Deloitte 6/30/10 PEC Reserve Study	(9)	= (6) / [(2) x (4)] * 100
(3)	From Section 1, Exhibit 9, Col. (5)	(10)	= (8) / (5) x 100
(4)	From Section 1, Exhibit 8.	(11)	Selected by Deloitte
(5)	= (2) x (3) x (4)	(12)	Selected by Deloitte
(6)	Based on Deloitte PEC Reserve Study as of 6/30/10	(13)	Selected by Deloitte
(7)	From Section 1, Exhibit 13, Col. (6)		

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Exposure Year Payroll Development
(000's)

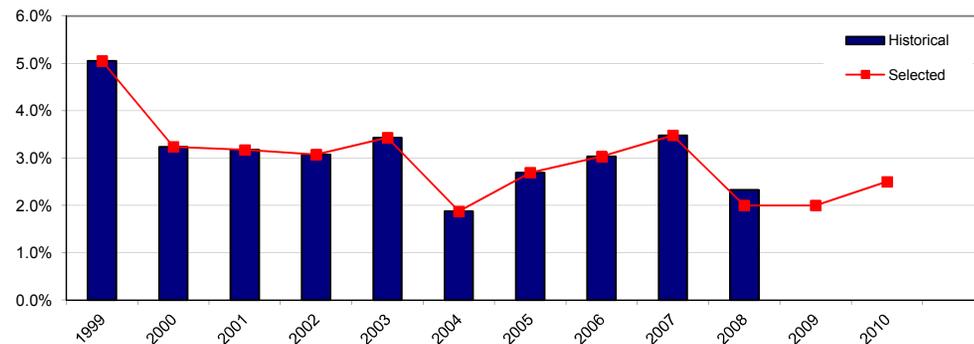
Section 1
Exhibit 8

Calendar Accident Year	6	18	30	42	54	66	78	90	102	114	126	138
1999												15,088,873
2000								15,809,043	15,809,043	15,809,043	15,809,043	
2001							16,717,138	16,717,138	16,717,138	16,717,138		
2002						17,601,171	17,601,171	17,601,171	17,601,171			
2003					18,004,352	18,004,352	18,004,352	18,004,352				
2004				18,523,800	18,523,800	18,523,800	18,523,800					
2005			18,584,736	18,568,714	18,568,714	18,566,524						
2006		18,740,062	18,923,870	18,913,468	18,918,245							
2007		19,418,112	19,402,936	19,392,260								
2008		19,805,264	19,814,092									
2009		19,750,465										
2010	19,750,465											
Exposure Year	6-18	18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126	126-138	138- ULT
1999												
2000								1.0000	1.0000	1.0000		
2001							1.0000	1.0000	1.0000			
2002						1.0000	1.0000	1.0000				
2003					1.0000	1.0000	1.0000					
2004				1.0000	1.0000	1.0000						
2005			0.9991	1.0000	0.9999							
2006		1.0098	0.9995	1.0003								
2007		0.9992	0.9994									
2008		1.0004										
2009												
Age to Age Factors ("ATA")												
3yr Wtd Avg		1.003	0.999	1.000	1.000	1.000	1.000	1.000	1.000			
PA Payroll Development ATA	2.003	1.004	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Sel. ATA	1.250	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Sel. ATU	1.250	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Payroll Trend

Section 1
Exhibit 9

Calendar Year (1)	Ohio Average Weekly Wage (2)	Annual Percent Change (3)	Selected Payroll Trend (4)	Cumulative Payroll Trend Policy Period Effective To	
				01/01/11 (5)	Cal Yr 2010 (6)
1993	476	2.9%			
1994	490	3.5%			
1995	507	3.5%			
1996	525	3.8%			
1997	544	2.7%			
1998	559	3.9%			
1999	581	5.1%	5.1%	1.419	1.384
2000	610	3.2%	3.2%	1.351	1.318
2001	630	3.2%	3.2%	1.308	1.277
2002	650	3.1%	3.1%	1.268	1.237
2003	670	3.4%	3.4%	1.230	1.200
2004	693	1.9%	1.9%	1.190	1.161
2005	706	2.7%	2.7%	1.168	1.139
2006	725	3.0%	3.0%	1.137	1.109
2007	747	3.5%	3.5%	1.104	1.077
2008	773	2.3%	2.0%	1.066	1.040
2009	791		2.0%	1.046	1.020
2010			2.5%	1.025	1.000

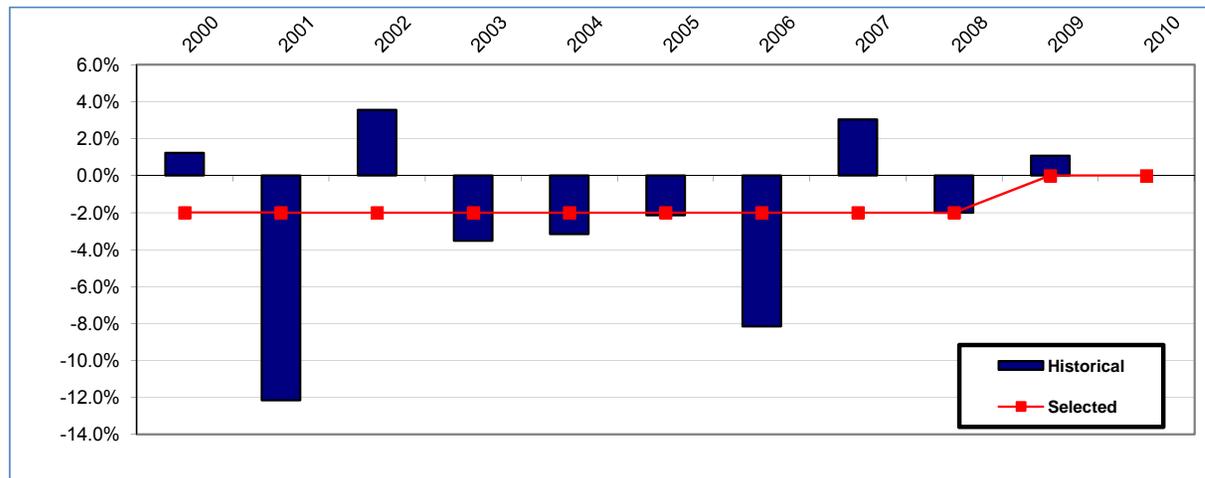


- (1) Calendar Year Beginning January 1, XXXX
- (2) Based on Bureau of Labor Statistics Ohio Average Weekly Wages, Local Government - All Industries
- (3) $= [(2)\{CAY X+1\} / (2)] - 1.0$
- (4) Selected by Deloitte
- (5) $= [1.0 + (4)] \times (5)\{CAY X+1\}$
- (6) $= (5) / (5)\{CY 2010\}$

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Frequency Trend
(000's)

Section 1
Exhibit 10

Calendar Accident Year	Ultimate # of Claims	Payroll	Payroll Development Factor	Payroll On-Level Factor	Developed Payroll On-Level	Claim Frequency Per \$100	Change in Frequency	Selected Frequency Trend	Cumulative Frequency Trend
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1999	6,042	15,088,873	1.000	1.419	21,412,212	0.028		-2.0%	0.817
2000	6,100	15,809,043	1.000	1.351	21,355,259	0.029	1.2%	-2.0%	0.834
2001	5,489	16,717,138	1.000	1.308	21,873,842	0.025	-12.1%	-2.0%	0.851
2002	5,801	17,601,171	1.000	1.268	22,321,938	0.026	3.6%	-2.0%	0.868
2003	5,554	18,004,352	1.000	1.230	22,151,666	0.025	-3.5%	-2.0%	0.886
2004	5,350	18,523,800	1.000	1.190	22,034,365	0.024	-3.2%	-2.0%	0.904
2005	5,151	18,568,714	1.000	1.168	21,681,075	0.024	-2.1%	-2.0%	0.922
2006	4,694	18,918,245	1.000	1.137	21,510,304	0.022	-8.2%	-2.0%	0.941
2007	4,812	19,392,260	1.000	1.104	21,399,889	0.022	3.0%	-2.0%	0.960
2008	4,656	19,814,092	1.000	1.066	21,129,946	0.022	-2.0%	-2.0%	0.980
2009	4,599	19,750,465	1.000	1.046	20,649,111	0.022	1.1%	0.0%	1.000
2010								0.0%	1.000



-2.9% All year trend*
-2.9% 7 yr trend*
-2.5% 5 yr trend*
0.5% 3 yr trend*

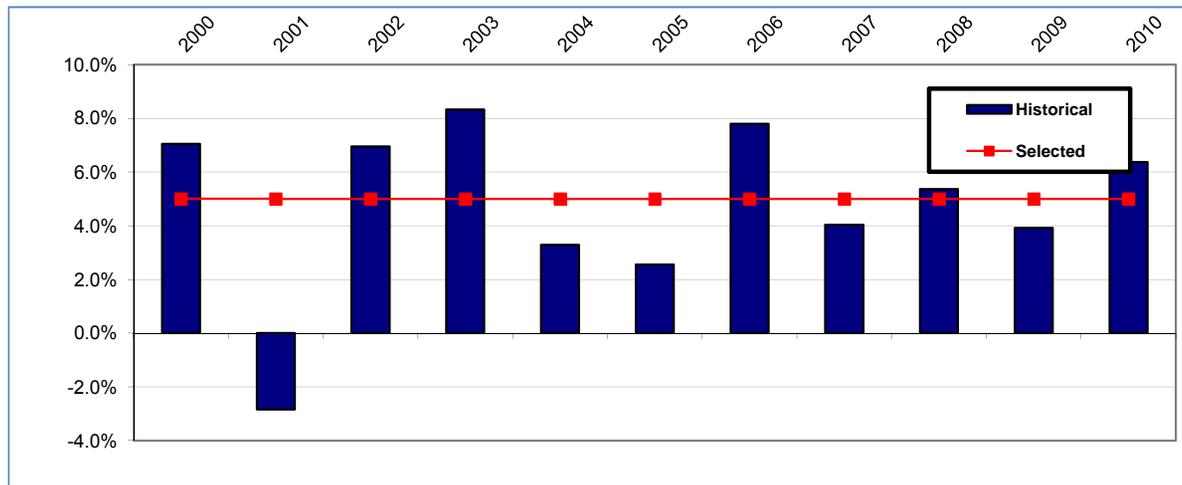
* Excludes 2009 and 2010

- | | | | |
|-----|--|------|---------------------------------|
| (1) | Calendar Accident Year Beginning January 1, XXXX | (7) | = (2) / (6) x 100 |
| (2) | Based on Deloitte PEC Reserve Study as of 6/30/10, Lost Time Counts Only | (8) | = [(7) / (7) {CAY X-1}] - 1.0 |
| (3) | From Deloitte 6/30/10 PEC Reserve Study | (9) | Selected by Deloitte |
| (4) | From Section 1, Exhibit 8 | (10) | = [1.0 + (9)] x (10){CAY X+1} |
| (5) | From Section 1, Exhibit 9, Col. (6) | | |
| (6) | =(3) x (4) x (5) | | |

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Severity Trend - Indemnity
(000's)

Section 1
Exhibit 11

Calendar Accident Year	Other Than Medical Ultimate Loss	Ultimate # of Claims	Severity Loss / Claims	Change in Severity	NCCI State of Line	Selected Severity Trend	Cumulative Severity Trend
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1999	133,107	6,042	22,030		10.1%	5.0%	1.796
2000	143,851	6,100	23,582	7.0%	10.1%	5.0%	1.710
2001	125,768	5,489	22,912	-2.8%	9.2%	5.0%	1.629
2002	142,149	5,801	24,504	7.0%	3.1%	5.0%	1.551
2003	147,420	5,554	26,545	8.3%	4.1%	5.0%	1.477
2004	146,674	5,350	27,417	3.3%	1.7%	5.0%	1.407
2005	144,821	5,151	28,116	2.5%	3.1%	5.0%	1.340
2006	142,261	4,694	30,308	7.8%	5.0%	5.0%	1.276
2007	151,728	4,812	31,532	4.0%	5.0%	5.0%	1.216
2008	154,693	4,656	33,225	5.4%	5.8%	5.0%	1.158
2009	158,772	4,599	34,525	3.9%	4.5%	5.0%	1.103
2010	162,840	4,434	36,725	6.4%		5.0%	1.050



BWC
 4.7% All year trend*
 2.0% 1999-2001 trend
 5.0% 2002-2008 trend
 5.1% 2004-2008 trend

NCCI
 4.6% All year trend*
 9.8% 1999-2001 trend
 4.0% 2002-2008 trend
 4.8% 2004-2008 trend

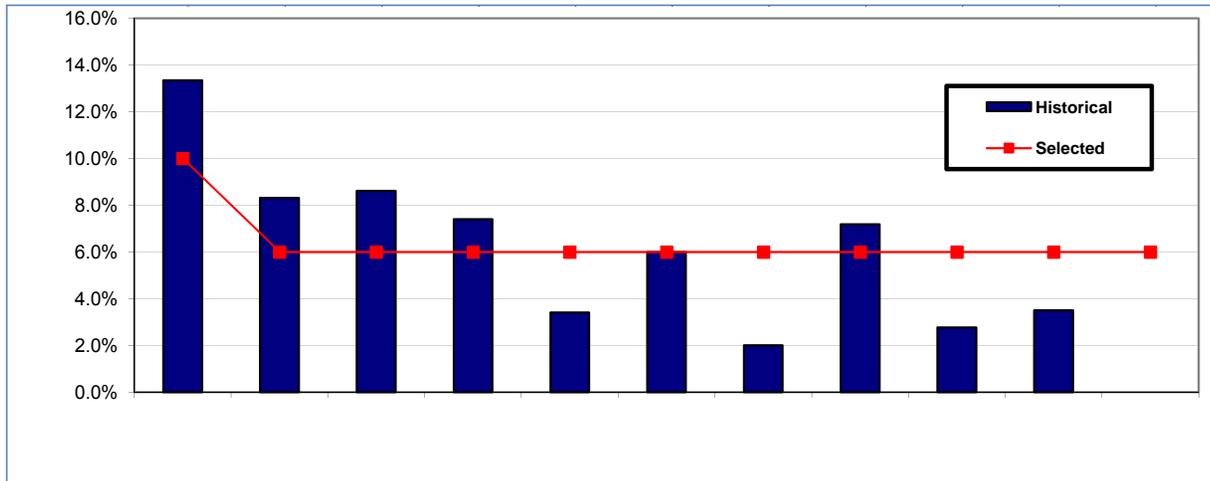
* Excludes 2009 and 2010

(1)	Calendar Accident Year Beginning January 1, XXXX	(7)	Selected by Deloitte
(2)	Based on Deloitte PEC Reserve Study as of 6/30/10	(8)	= [1.0 + (7)] x (8){CAY X+1}
(3)	Based on Deloitte PEC Reserve Study as of 6/30/10, Lost Time Counts Only		
(4)	= (2) / (3) x 1000		
(5)	= [(4) / (4) {CAY X-1}] - 1.0		
(6)	From NCCI State Of Line Presentation May 6, 2010		

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Severity Trend - Medical
(000's)

Section 1
Exhibit 12

Calendar Accident Year	Medical Ultimate Loss	Ultimate # of Claims	Severity Loss / Claims	Change in Severity	NCCI State of Line	Selected Severity Trend	Cumulative Severity Trend
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1999	116,913	6,042	19,350		10.6%	10.0%	2.167
2000	133,785	6,100	21,932	13.3%	7.3%	10.0%	1.970
2001	130,393	5,489	23,755	8.3%	13.5%	6.0%	1.791
2002	149,679	5,801	25,803	8.6%	8.8%	6.0%	1.689
2003	153,905	5,554	27,713	7.4%	7.3%	6.0%	1.594
2004	153,304	5,350	28,657	3.4%	5.6%	6.0%	1.504
2005	156,458	5,151	30,375	6.0%	7.4%	6.0%	1.419
2006	145,441	4,694	30,986	2.0%	5.4%	6.0%	1.338
2007	159,825	4,812	33,214	7.2%	5.4%	6.0%	1.262
2008	158,935	4,656	34,136	2.8%	6.7%	6.0%	1.191
2009	162,495	4,599	35,334	3.5%	5.0%	6.0%	1.124
2010	173,690	4,434	39,172			6.0%	1.060



BWC

6.2% All year trend*
 10.8% 1999-2001 trend
 4.7% 2002-2008 trend
 4.5% 2004-2008 trend

NCCI

7.3% All year trend*
 10.5% 1999-2001 trend
 6.2% 2002-2008 trend
 6.0% 2004-2008 trend

* Excludes 2009 and 2010

(1) Calendar Accident Year Beginning January 1, XXXX	(7) Selected by Deloitte
(2) Based on Deloitte PEC Reserve Study as of 6/30/10	(8) = [1.0 + (7)] x (8){CAY X+1}
(3) Based on Deloitte PEC Reserve Study as of 6/30/10, Lost Time Counts Only	
(4) = (2) / (3) x 1000	
(5) = [(4) / (4) {CAY X-1}] - 1.0	
(6) From NCCI State Of Line Presentation May 6, 2010	

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Trend Summary

Section 1
Exhibit 13

Calendar Accident Year	Cumulative Frequency Trend	Indemnity Cumulative Severity Trend	Indemnity Cumulative Loss Trend	Medical Cumulative Severity Trend	Medical Cumulative Loss Trend	Selected Payroll Trend	Selected Frequency Trend	Indemnity Selected Severity Trend	Indemnity Selected Loss Cost Trend	Medical Selected Severity Trend	Medical Selected Loss Cost Trend
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1999	0.817	1.796	1.467	2.167	1.771	5.1%	-2.0%	5.0%	-2.0%	10.0%	2.6%
2000	0.834	1.710	1.426	1.970	1.642	3.2%	-2.0%	5.0%	-0.3%	10.0%	4.4%
2001	0.851	1.629	1.386	1.791	1.524	3.2%	-2.0%	5.0%	-0.3%	6.0%	0.7%
2002	0.868	1.551	1.347	1.689	1.467	3.1%	-2.0%	5.0%	-0.2%	6.0%	0.8%
2003	0.886	1.477	1.309	1.594	1.412	3.4%	-2.0%	5.0%	-0.5%	6.0%	0.4%
2004	0.904	1.407	1.272	1.504	1.359	1.9%	-2.0%	5.0%	1.0%	6.0%	2.0%
2005	0.922	1.340	1.236	1.419	1.308	2.7%	-2.0%	5.0%	0.2%	6.0%	1.2%
2006	0.941	1.276	1.201	1.338	1.260	3.0%	-2.0%	5.0%	-0.1%	6.0%	0.8%
2007	0.960	1.216	1.167	1.262	1.212	3.5%	-2.0%	5.0%	-0.6%	6.0%	0.4%
2008	0.980	1.158	1.134	1.191	1.167	2.0%	-2.0%	5.0%	0.9%	6.0%	1.8%
2009	1.000	1.103	1.103	1.124	1.124	2.0%	0.0%	5.0%	2.9%	6.0%	3.9%
2010	1.000	1.050	1.050	1.060	1.060	2.5%	0.0%	5.0%	2.4%	6.0%	3.4%

(1) Calendar Accident Year Beginning January 1, XXXX
(2) From Section 1, Exhibit 10, Col. (10)
(3) From Section 1, Exhibit 11, Col. (8)
(4) = (2) x (3)
(5) From Section 1, Exhibit 12, Col. (8)
(6) = (2) x (5)

(7) From Section 1, Exhibit 9, Col. (4)
(8) From Section 1, Exhibit 10, Col. (9)
(9) From Section 1, Exhibit 11, Col. (7)
(10) = [1.0 + (8)] x [1.0 + (9)] / [1.0 + (7)]-1
(11) From Section 1, Exhibit 12, Col. (7)
(12) = [1.0 + (8)] x [1.0 + (11)] / [1.0 + (7)]-1

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Overall Rate Change for Public Employers - Taxing Districts
Calculation of HPP Expense Factor
(000's)

Section 1
Exhibit 14

Fiscal Year	Paid HPP Expense	Paid Loss	Claim Adjusting Expense Ratio
(1)	(2)	(3)	(4)
2003	21,500	211,537	10.2%
2004	22,900	222,311	10.3%
2005	23,449	218,170	10.7%
2006	23,900	216,075	11.1%
2007	23,900	233,961	10.2%
2008	23,800	234,436	10.2%
2009	25,884	224,435	11.5%
		3 Year:	10.6%
		5 Year:	10.7%
		All Years:	10.6%
	(5)	Prior Selected:	9.0%
	(6)	Selected:	10.7%

-
- (1) Fiscal Year Beginning 7/1/XXXX
 - (2) Provided by BWC
 - (3) Provided by BWC
 - (4) = (2) / (3)
 - (5) Selected by Prior Actuary in PEC Rate Analysis, August, 2010
 - (6) Selected by Deloitte

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Discount Factor (4.5%)
Public Employers - Taxing Districts

Section 1
Exhibit 15A

	<u>Discount Factor</u> <u>at Time 0</u> (1)	Calendar Accident Year 2010 <u>Undiscounted Ultimate (000s)</u> <u>@6/30/2010</u> (2)	<u>Wtd Avg</u> <u>Discount Factor</u> (3)
Medical			
Medical Only	0.947	12,046	
Medical Lost Time	0.637	74,800	
Total Medical			0.680
Compensation			
Permanent Total Disability	0.412	23,843	
Death	0.436	6,921	
TT, WL, LMWL, LM, TP, CO	0.813	20,003	
% Permanent Partial & Permanent Partial	0.817	12,780	
Lump Sum Settlement	0.540	16,294	
Lump Sum Advancements	0.583	1,481	
Additional Awards	0.556	99	
Total Compensation			0.605

(1) Based on the Deloitte PEC Reserve Study as of 6/30/10

(2) From Deloitte PEC Reserve Study as of 6/30/10, Section 2, Exhibit 1 - 9, Sheet 3, Column (12)

(3) Weighted Average of Column (1) & Column (2)

OHIO BUREAU OF WORKERS' COMPENSATION
Determination of Discount Factor (4.0%)
Public Employers - Taxing Districts

Section 1
Exhibit 15B

	<u>Discount Factor</u> <u>at Time 0</u> (1)	Calendar Accident Year 2010 <u>Undiscounted Ultimate (000s)</u> <u>@6/30/2010</u> (2)	<u>Wtd Avg</u> <u>Discount Factor</u> (3)
Medical			
Medical Only	0.952	12,046	
Medical Lost Time	0.662	74,800	
Total Medical			0.702
Compensation			
Permanent Total Disability	0.449	23,843	
Death	0.470	6,921	
TT, WL, LMWL, LM, TP, CO	0.831	20,003	
% Permanent Partial & Permanent Partial	0.834	12,780	
Lump Sum Settlement	0.571	16,294	
Lump Sum Advancements	0.615	1,481	
Additional Awards	0.586	99	
Total Compensation			0.633

(1) From Deloitte PEC Reserve Study as of 6/30/10, Section 2, Exhibit 1 - 9, Sheet 18, Column (6)

(2) From Deloitte PEC Reserve Study as of 6/30/10, Section 2, Exhibit 1 - 9, Sheet 3, Column (12)

(3) Weighted Average of Column (1) & Column (2)

Ohio Bureau of Workers' Compensation Actuarial Committee

Public Employer Taxing District (PEC) Rate Recommendations to be Effective January 1, 2011

Dave Heppen, FCAS, MAAA

Bill Van Dyke, ACAS, MAAA

Deloitte Consulting LLP

September 23, 2010

PEC Rate Recommendations

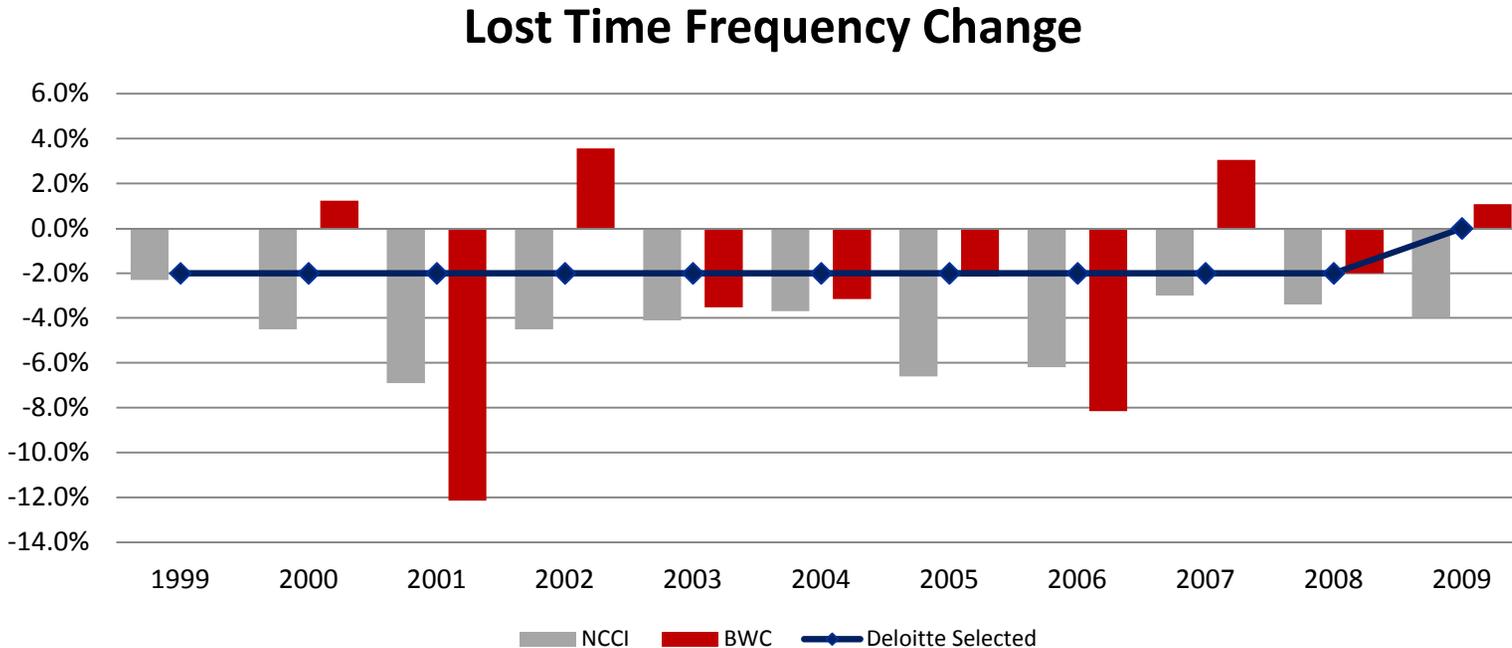
PEC Rate Change Recommendations:

<u>Scenarios</u>	Baseline	Reasonable Expectation Optimistic	Reasonable Expectation Conservative
At 4.5% Discount	-8.3%	-13.1%	-2.8%
At 4.0% Discount	-5.5%	-10.3%	0.6%

Note:

1. Rates changes are for the policy period starting 1/1/2011.
2. The loss costs used to determine the rate change recommendations are derived from Deloitte Consulting's June 30, 2010 PEC Reserve Analysis.
3. Rate projections are based on Deloitte Consulting's analysis of historical loss cost trends for Indemnity and Medical losses separately.

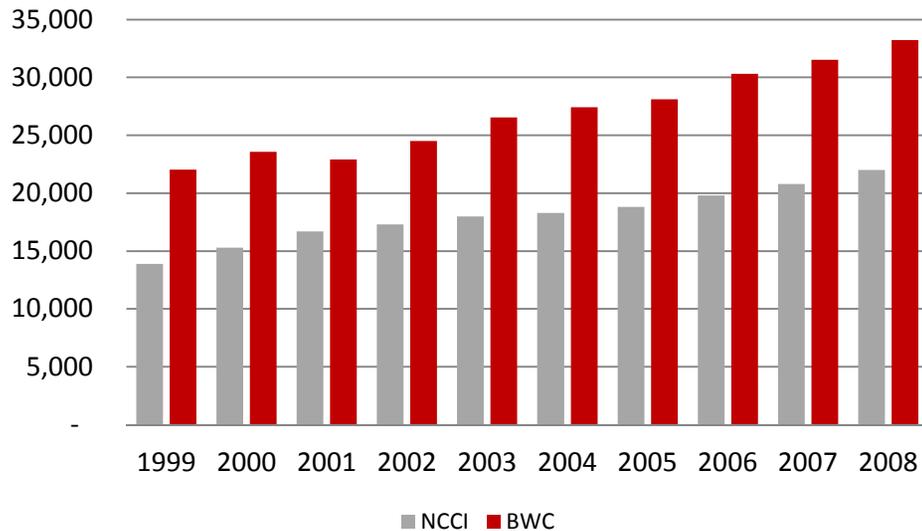
Frequency (Lost Time Claims) Observations:



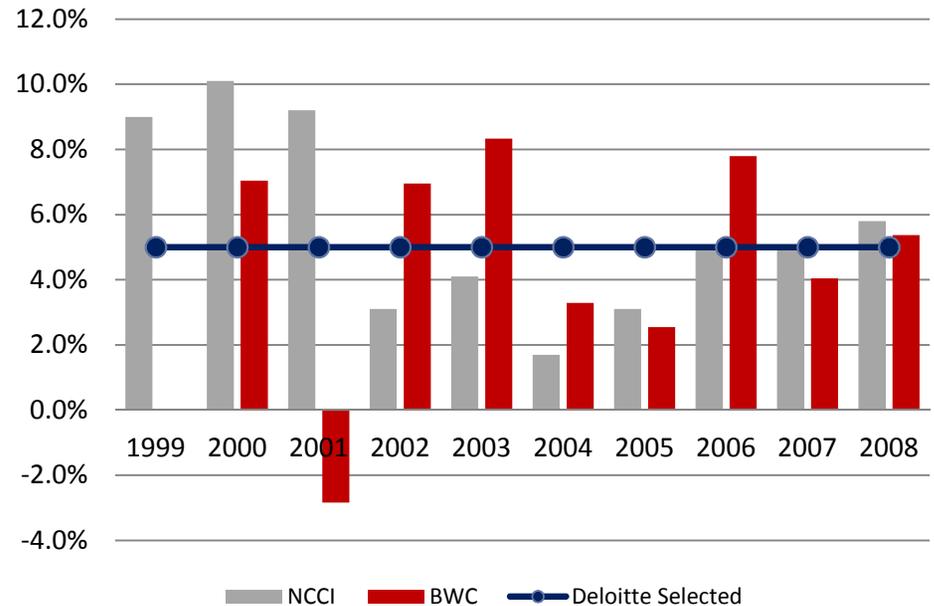
- Workplace safety in all employment classes has driven frequency down across the country for all injury types.
- Rate of frequency decrease has slowed in recent years, both for BWC and countrywide.
- Deloitte projects 0% change in frequency for 2010 to 2011.

Indemnity Severity Observations:

Calendar Accident Year Indemnity Severity



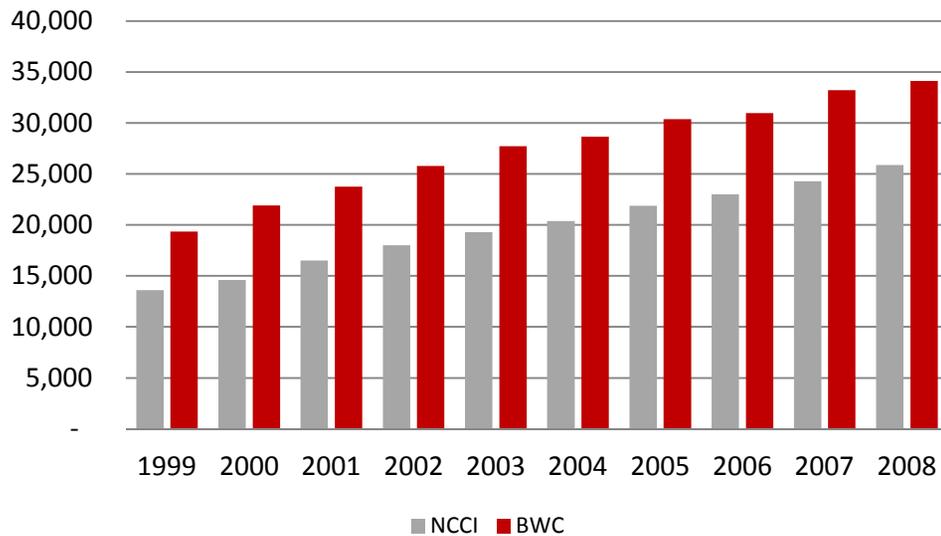
Indemnity Severity Trend



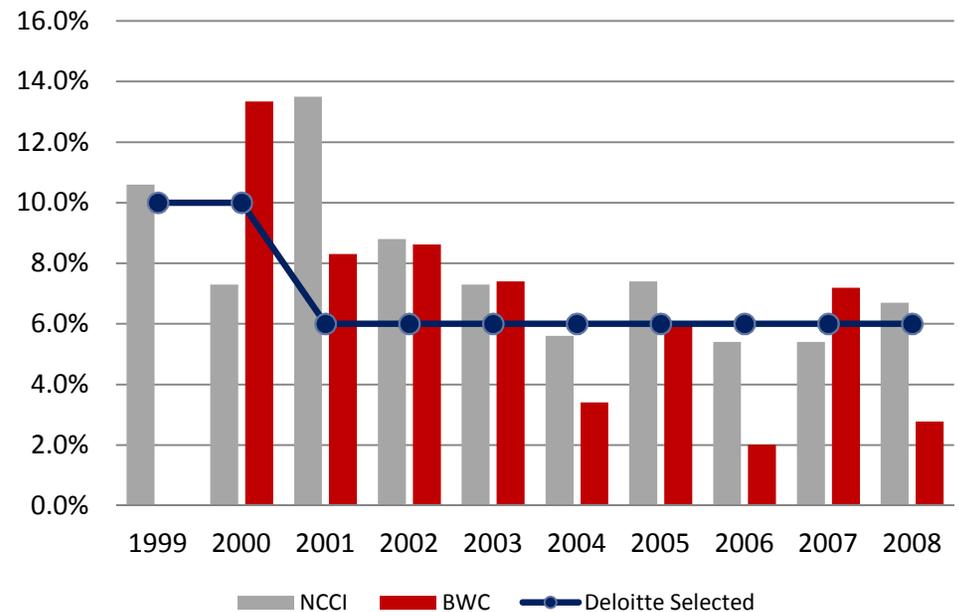
- BWC's indemnity severity trend is similar to the NCCI countrywide trend in recent years.
- Deloitte is selecting an indemnity trend of 5.0% for 2010 to 2011.

Medical Severity Observations:

Calendar Accident Year Medical Severity



Medical Severity Trend



- BWC's medical severity trend has been slightly lower than NCCI countrywide trend in recent years.
- Deloitte is selecting a medical trend of 6.0% for 2010 to 2011.

Deloitte Overall Observations:

- The overall loss experience (combining frequency and severity trends) in Ohio has improved relative to evaluations in prior years.
- BWC's frequency and severity trends in PEC are consistent with those seen in countrywide data.
- Discounting PEC rates results in premiums that are approximately \$130-\$140M lower than undiscounted premium levels.

Rate Reform for Public Employer – Taxing Districts

Thursday, September 23, 2010

Desired outcomes

- Reduce base rates to appropriate levels
- Achieve rate equity for all non-group, retro and group PEC entities
- Improve PEC group-experience rating performance

Rate level indication

- Deloitte's analysis of claim costs and trends produced a range of claim cost projections and associated rate level changes.
- Projected claim costs for policy year 2011 indicate that a significant decrease will produce actuarially sound rates.

	4.0% Discount Rate
Optimistic (low end of range)	-10.3%
Baseline	-5.5%
Conservative (high end of range)	+0.6%

Rate level recommendation

- The Administrator and staff recommend an overall average rate decrease of 5.5 percent.
- The structure approved in June resulting from the change to the 65% credibility table and the revised, graduated break even factors will remain unchanged.
- We will maintain the target relative levels of 1.10 for non-group and 0.70 for group.

Rate change details

	Group	Non-group	Retro	Total
Structural Changes in June				
Adopt 65% Credibility Table	8.8%	1.3%		
Capping Impact	0.0%	-1.1%		
Off-balance Change	-3.2%	-3.2%		
Change to BEF Table	-2.9%	0.0%		
Effect as of June	2.3%	-3.1%	0.0%	0.0%
New Group Rosters and Base Rate Change				
Impact of Group Rosters	1.2%	1.5%	0.4%	
Base Rate (w/ Off-balance)	-5.9%	-5.9%	-5.9%	
Overall change	-2.2%	-7.1%	-5.4%	-5.5%

Timeframe for completion

September: Provide first reading of overall rate level recommendation.

October: Second reading for overall level, first reading for final class rates.

November: Second reading for final class rates.

Current Meeting Topics

Ohio Administrative Code Chapter 4123-17 Rules: The Employer Services Division will present proposed changes to many of the rules governing BWC programs, including Individual Retrospective Rating, Group Retrospective Rating, One Claim, Drug Free Safety, and Deductibles. The changes are meant to clarify and simplify our rules. In general, we are moving the provisions that address compatibility between programs and various deadlines to a single, new rule, 4123-17-74. In addition, several rules will be amended to reflect current practice and to clarify intentions.

Mortality study and Annuity Table rule 4123-17-60: Deloitte will present their analysis and findings on their recently completed mortality study on Ohio only permanent & totally disabled (PTD) and death claims. This study provides us with updated annuity factors used in setting PTD and death claim reserves adopted in the annuity table rule 4123-17-60.

Projects and Other Actuarial Activity

The tables and discussion below provide details on the various projects underway.

Communications/Group Structure and Governance Team

Jeremy Jackson		
Task/Function	Timeline	Status
Communications, Outreach	8/1/2008 start	Continuing
Split Experience Plan Discussions	Summer 2010	Continuing
Targeted Employer Communications	8/1/2008 start	Continuing

- Internal split experience plan methodology training is in development.
- A meeting was held on September 16, 2020 with employer representatives to discuss the experience plan programming requirements to assist them in building their systems.

Split Experience Plan Team

Terry Potts and Jon Turnes		
Task/Function	Timeline	Status
Capping strategy for PA employers effective	July 1, 2009	Completed
Capping strategy and Group BEF for PEC employers effective	January 1, 2010	Completed
Rating strategies for PA employers effective July, 2010	October, 2009	Completed
Split experience plan parameters	January 2010- June 2011	In-Progress
Split experience plan development	September, 2009 to December, 2010	In-Progress
Split experience plan implementation (Beta Version)	July 2011	
Split experience plan in production for rates	July 1, 2012	

- The split experience plan development ending month has moved up from May 2011 to December 2010.
- The split experience plan IT programming development continues. The single and multi split calculations modeling and programming in the BWC rating system continues to undergo testing by actuarial staff. The final split experience plan parameters are still being developed by the BWC along with Deloitte.
- Split experience plan internal training is schedule begin in late October 2010.

New Products

Joy Bush		
Task/Function	Timeline	Status
One Claim program review	September 2010 to December 2010	Beginning
Group Rating plan	July 2010 to June 2011	In progress

7/1/2010 Private Employer (PA) Rates - Completed

7/1/2011 Public Employer State Agency (PES) Rates - Completed

Base Rate Analysis Project

Liz Bravender		
Task/Function	Timeline	Status
Develop project plan with Deloitte Consulting, LLP	July to August 2010	In-Process
Evaluate the current rating process	August 2010 to November 2010	In-Process
Present findings to actuarial committee	January 2011	
Implement findings from evaluation and determine next steps		

- The first is the review of our base rate methodology and all the underlying factors. We will pull apart all of the elements, identify opportunities to improve our methods and increase stability, and create a plan to address recommended changes. Some changes may be possible with little change to the underlying computer code and could be implemented in time for the July 1, 2011 policy year. Other changes may take longer and could require statutory change. The plan we create will identify phases we can implement in the short, medium, and long term.
- The actuarial division and Deloitte have held initial planning meetings in August on the Base Rate Analysis Project. During this meeting actuarial staff went over the base rate methodology with Deloitte. The mission is to identify appropriate measures to bring greater stability and actuarial soundness to base rate changes.

January 1, 2011 Public Employer Taxing District (PEC) rates

Terry Potts		
Task/Function	Timeline	Status
Public Employer Taxing District Rate Calculation	July to December 2010	In-Process
Summary Payroll	July to August 2010	Completed
Summary Losses	July to August 2010	Completed
Rate Calculations	August to September 2010	In-Process
Rate recommendation received from Deloitte	September 2010	In- Process
Rate decision from WCB – Preliminary Base rates to WCB	October 2010	
Final Rates to WCB	November 2010	
Employer Rating Information available on ohiobwc.com	January 2011	

Deloitte Consulting

- Deloitte completed the work on the mortality study and will be presenting the findings to the actuarial committee at the September meeting.
- Deloitte and BWC staff continue working together on developing the requirements for building an actuarial database.
- Deloitte provided the final copies of the 6/30/2010 actuarial audit.

Actuarial Division

- Liz Bravender provided ethics training to the actuarial division in September.

12 - Month Actuarial Committee Calendar - 2010/2011

Date	September 2010
9/23/2010	1. Program compatibility rule changes and rule clean-up - 2 nd reading
	2. Mortality Study and Annuity table rule 4123-17-60 - 1 st reading
	3. Public employer taxing districts rate change - 1 st reading
Date	October 2010
10/21/2010	1. Mortality Study and Annuity table rule 4123-17-60 - 2 nd reading
	2. Public employer taxing districts rate change - 2 nd reading
	3. Public Employer Taxing District Base and Expected Loss Rates rules 4123-17-33 and 4123-17-34 - 1 st reading
	4. Committee Charter - 1 st reading
Date	November 2010
11/18/2010	1. Public Employer Taxing District Base and Expected Loss Rates rules 4123-17-33 and 4123-17-34 - 2 nd reading
	2. Committee Charter - 2 nd reading
	3. Market results for the new deductible plan
	4. Quarterly Reserve Update
Date	December 2010
12/15/2010	1. 2011 NCCI Classification Code Changes - 1 st reading
	2. Experience Rating Education
Date	January 2011
1/20/2011	1. 2011 NCCI Classification Code Changes - 2 nd reading
	2. One Claim Program - rule 4123-17--71 - 1 st reading
	3. Split Experience Rating Plan rules - 1 st reading
	4. Base rate stability analysis
Date	February 2011
2/23/2011	1. One Claim Program - rule 4123-17--71 - 2 nd reading
	2. Split Experience Rating Plan rules - 2 nd reading
	3. State of the Line report
	4. Black Lung Fund report
	5. Quarterly reserve update as of 12/31/10
	6. Funding ratio analysis update by Deloitte
	7. Public Employer State Agency rate calculation analysis - tentative
Date	March 2011
3/24/2011	1. Private employer rate change recommendation - 1 st reading
	2. Public Employer State Agency rate change recommendation- rule 4123-17-35 - 1 st reading
	3. Quarterly reserve analysis for financial reporting for fiscal year ending June 30, 2011 based on data as of December 31, 2010

12 - Month Actuarial Committee Calendar - 2010/2011

April 2011	
4/28/2011	1. Private employer rate change recommendation - 2 nd reading
	2. Public Employer State Agency rate change recommendation- rule 4123-17-35 - 2 nd reading
	3. Private employer base rates and expected loss rates - rules 4123-17-05 and 4123-17-06 - 1 st reading
	4. Marine Industry Fund - rule 4123-17-19 - 1 st reading
	5. Coal-Workers' Pneumoconiosis Fund - rule 4123-17-20 - 1 st reading
	6. Disabled Workers' Relief Fund and Additional Disabled Workers' Relief Fund rule 4123-17-29 - 1 st reading
Date	May 2011
5/26/2011	1. Private employer base rates and expected loss rates - rules 4123-17-05 and 4123-17-06 - 2 nd reading
	2. Marine Industry Fund - rule 4123-17-19 - 2 nd reading
	3. Coal-Workers' Pneumoconiosis Fund - rule 4123-17-20 - 2 nd reading
	4. Disabled Workers' Relief Fund and Additional Disabled Workers' Relief Fund rule 4123-17-29 - 2 nd reading
	5. Self-Insured assessments - rule 4123-17-32 - 1 st reading
	6. Administrative Cost Fund - rule 4123-17-36 - 1 st reading
	7. Safety & Hygiene assessment- 1 st reading
	8. Reserve update for financial reporting for fiscal year ending June 30, 2011 and projection for June 30, 2012 based on data as of March 31, 2011
	9. Group Rating program changes - 1 st reading
NOTE - CAN BE DONE IN AN	10. Public employer taxing districts credibility table effective 1-1-2012- rule 4123-17-33.1 - 1st reading
EARLIER MEETING	11. Public employer taxing districts group break even factor rule 4123-17-64.2 - 1st reading
Date	June 2011
6/15/2011	1. Administrative Cost Fund - rule 4123-17-36 - 2 nd reading
	2. Self-Insured Assessments - rule 4123-17-32 - 2 nd reading
	3. Safety & Hygiene assessment - 2 nd reading
	4. Group Rating program changes - 2 nd reading
NOTE - CAN BE DONE IN AN	5. Public employer taxing districts credibility table effective1-1-2012- rule 4123-17-33.1 - 2nd reading
EARLIER MEETING	6. Public employer taxing districts group break even factor rule 4123-17-64.2 - 2nd reading
	7. State-by-State Rate Comparison
Date	July 2011
7/28/2011	1. Reserve adjustments as of June 30, 2011 - discussion if necessary
	2. Reserve Audit as of 6-30-2011
	3. Group rating rule changes - 1 st reading
Date	August 2011
8/25/2011	1. Final Reserve Audit as of June 30, 2011 and quarterly reserve true up for financial reporting for fiscal year ending June 30, 2011 and updated estimate for fiscal year ending June 30, 2012 based on data as of June 30, 2011
	2. Group rating rule changes - 2 nd reading
Date	September 2011
9/29/2011	1. Safety & Hygiene is found in rule 4123-17-37 - 1 st reading
	2. Annuity table rule 4123-17-60 - 1 st reading
	3. Public employer taxing districts rate change - 1 st reading

12 - Month Actuarial Committee Calendar - 2010/2011

Date	October 2011
10/27/2011	1. PEC Base Rate and Expected Loss rates rule 4123-17-33 and 4123-17-34 - 1 st reading
	2. PEC group Break even factor rule 4123-17-64.2 - 1 st reading
	3. Safety & Hygiene assessment rate - rule 4123-17-37 - 2 nd reading
November 2011	
11/17/2011	1. Quarterly reserve update
	2.
December 2011	
12/14/2011	1.

Ohio Bureau of Workers' Compensation

Exhibit 1

Total PA, PEC and PES

Nominal Unpaid Loss Re-estimates as of June 30, 2010 (\$ Millions)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discounted	13,136	14,077	14,360	14,868	14,632	14,487	14,838	14,584	14,767
Amount of Discount	13,589	13,995	14,517	14,212	14,000	13,197	12,024	10,121	8,562
Nominal	26,725	28,072	28,877	29,080	28,632	27,684	26,862	24,706	23,330
Payments during 1st Year	1,635	1,725	1,736	1,794	1,752	1,763	1,881	1,785	1,711
<u>Incremental Payments as of:</u>									
One year later	1,453	1,476	1,539	1,513	1,540	1,656	1,574	1,523	
Two years later	1,193	1,258	1,243	1,291	1,404	1,333	1,306		
Three years later	1,073	1,068	1,122	1,234	1,174	1,151			
Four years later	932	991	1,103	1,051	1,036				
Five years later	880	991	948	938					
Six years later	888	854	845						
Seven years later	767	762							
Eight years later	649								
<u>Cumulative Payments as of:</u>									
One year later	3,088	3,201	3,275	3,307	3,292	3,419	3,456	3,307	
Two years later	4,281	4,459	4,519	4,598	4,697	4,752	4,761		
Three years later	5,354	5,528	5,641	5,832	5,871	5,903			
Four years later	6,286	6,518	6,743	6,883	6,907				
Five years later	7,166	7,510	7,691	7,821					
Six years later	8,053	8,364	8,535						
Seven years later	8,820	9,125							
Eight years later	9,469								
<u>Re-estimated Nominal Liability as of:</u>									
One year later	25,878	27,094	27,453	27,087	26,223	25,739	23,935	22,921	
Two years later	25,084	25,811	25,600	24,999	24,644	23,243	22,576		
Three years later	23,865	24,091	23,794	23,560	22,499	22,263			
Four years later	22,619	22,459	22,474	21,743	21,843				
Five years later	21,124	21,376	20,940	21,392					
Six years later	20,315	20,066	20,909						
Seven years later	19,184	20,299							
Eight years later	19,627								
Cumulative Change	(7,098)	(7,774)	(7,969)	(7,688)	(6,789)	(5,421)	(4,286)	(1,785)	

Ohio Bureau of Workers' Compensation

Exhibit 2

Total PA, PEC and PES

Discounted Unpaid Loss Re-estimates as of June 30, 2010 (\$ Millions)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discounted	13,136	14,077	14,360	14,868	14,632	14,487	14,838	14,584	14,767
Amount of Discount	13,589	13,995	14,517	14,212	14,000	13,197	12,024	10,121	8,562
Nominal	26,725	28,072	28,877	29,080	28,632	27,684	26,862	24,706	23,330
Payments during 1st Year	1,635	1,725	1,736	1,794	1,752	1,763	1,881	1,785	1,711
Discount Rate	5.80%	5.50%	5.50%	5.25%	5.25%	5.00%	5.00%	4.50%	4.00%
<u>Incremental Payments as of:</u>									
One year later	1,453	1,476	1,539	1,513	1,540	1,656	1,574	1,523	
Two years later	1,193	1,258	1,243	1,291	1,404	1,333	1,306		
Three years later	1,073	1,068	1,122	1,234	1,174	1,151			
Four years later	932	991	1,103	1,051	1,036				
Five years later	880	991	948	938					
Six years later	888	854	845						
Seven years later	767	762							
Eight years later	649								
<u>Cumulative Payments as of:</u>									
One year later	3,088	3,201	3,275	3,307	3,292	3,419	3,456	3,307	
Two years later	4,281	4,459	4,519	4,598	4,697	4,752	4,761		
Three years later	5,354	5,528	5,641	5,832	5,871	5,903			
Four years later	6,286	6,518	6,743	6,883	6,907				
Five years later	7,166	7,510	7,691	7,821					
Six years later	8,053	8,364	8,535						
Seven years later	8,820	9,125							
Eight years later	9,469								
<u>Re-estimated Discounted Liability as of:</u>									
One year later	12,743	13,630	13,660	13,847	13,481	13,583	13,306	13,827	
Two years later	12,405	12,797	12,730	12,855	12,791	12,331	12,719		
Three years later	11,817	12,130	11,902	12,226	11,748	11,981			
Four years later	11,226	11,380	11,336	11,339	11,589				
Five years later	10,552	10,910	10,607	11,321					
Six years later	10,211	10,277	10,738						
Seven years later	9,669	10,526							
Eight years later	10,012								
Cumulative Change	(3,124)	(3,551)	(3,622)	(3,547)	(3,043)	(2,505)	(2,119)	(757)	