

The Math of Workers' Compensation: Calculating The Average Weekly Wage to Your Client's Advantage: Interest on Indemnity and Medical Compensation: Present-day Values

by,

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“I wish I had known before going to college...

— That psychology was really biology, biology was really chemistry, chemistry was really physics, and physics was really math.”

- Author Unknown

“I wish I had known before entering the legal profession that the practice of workers' compensation law was really math.”

- Will Snyder, ex-physics major

Yes, the practice of workers' compensation law really is math. There is no escaping it! A calculator is often as necessary as the latest version of North Carolina Workers' Compensation Law Annotated in advising injured workers, determining their legal rights, and determining to what they are entitled under the Workers' Compensation Act. While it is highly unlikely that one would ever need to use calculus or trigonometry in the practice of workers' compensation law, an understanding of the basic set of common arithmetic calculations that are used on a daily basis in workers' compensation practice is critical. Advances in technology, like the advent of the personal computer, have made making and managing these calculations much less daunting than in years past. In this paper, I will review and expound upon the basic arithmetic rules regarding calculation of the average weekly wage. Additionally, I will explain the mechanics of determining the amount of interest owed by employers and carriers of awards of the full Commission as

¹I would like to express my gratitude to Victor Farah and Mark Sumwalt for inviting me to speak at today's Workers' Compensation Roundtable, and I would also like to express my eternal gratitude to Kathleen Shannon Glancy for her mentorship for my first six years in the practice of law (and especially her appreciation of my computer skills!), without which I would not be where I am today.

authorized by N.C. Gen. Stat. § 97-86.2, and I will discuss and explain methods for determining present-day values of future payments of compensation.

Calculation of the Average Weekly Wage

Except for cases in which only medical compensation is paid (so-called “medical only” claims), it is necessary to know the average weekly wage in virtually every workers’ compensation case. Even if no total disability compensation is paid, determination of the average weekly wage is necessary to determine the amount of permanent partial disability compensation owed to an injured worker who retains permanent partial impairment as the result of a compensable injury or occupational disease.

The methods for determining the average weekly wage of an injured worker are articulated at N.C. Gen. Stat. § 97-2(5), which provides in relevant part as follows:

"Average weekly wages" shall mean the earnings of the injured employee in the employment in which he was working at the time of the injury during the period of 52 weeks immediately preceding the date of the injury, including the subsistence allowance paid to veteran trainees by the United States government, provided the amount of said allowance shall be reported monthly by said trainee to his employer, divided by 52; but if the injured employee lost more than seven consecutive calendar days at one or more times during such period, although not in the same week, then the earnings for the remainder of such 52 weeks shall be divided by the number of weeks remaining after the time so lost has been deducted. Where the employment prior to the injury extended over a period of fewer than 52 weeks, the method of dividing the earnings during that period by the number of weeks and parts thereof during which the employee earned wages shall be followed; provided, results fair and just to both parties will be thereby obtained. Where, by reason of a shortness of time during which the employee has been in the employment of his employer or the casual nature or terms of his employment, it is impractical to compute the average weekly wages as above defined regard shall be had to the average weekly amount which during the 52 weeks previous to the injury was being earned by a person of the same grade and character employed in the same class of employment in the same locality or community.

But where for exceptional reasons the foregoing would be unfair, either to the employer or employee, such other method of computing average weekly wages may be resorted to as will most nearly approximate the amount which the injured employee would be earning were it not for the injury. Wherever allowances of any character made to an employee in lieu of wages are specified part of the wage contract, they shall be deemed a part of his earnings.

According to relatively recent cases that have interpreted this provision of the Workers’ Compensation Act, this provision articulates five separate methods for determining an injured workers’ average weekly wage. E.g., *McAninch v. Buncombe County Schools*, 122 N.C. App. 679, 681, 471 S.E.2d 441, 443 (1996), overruled on other grounds, 347 N.C. 126, 489 S.E.2d 375

(1997); Bond v. Foster, Masonry Inc., 139 N.C. App. 123, 127, 532 S.E.2d 583, 585-86 (2000); Loch v. Entertainment Partners, 148 N.C. App. 106, 111, 557 S.E.2d 182, 186 (2001). Older cases state that § 97-2(5) articulates four methods. However, close inspection of these cases reveals that these courts treated what are now referred to as the first and second methods together into one method that applies when the injured worker has worked at least 52-weeks for the employer. See e.g., McAnelly v. Wilson Pallet & Crate Co., 120 N.C. App. 127, 133, 460 S.E.2d 894, 897-98 (1995), Holloway v. T.A. Mebane, Inc., 111 N.C. App. 194, 196, 431 S.E.2d 882, 883 (1992), overruled on other grounds, McAninch v. Buncombe County Sch., 347 N.C. 126, 489 S.E.2d 375 (1997); Postell v. B&D Construction Co., 105 N.C. App. 1, 411 S.E.2d 413 (1992).

The five methods may be paraphrased as follows:

- Method #1: If the injured worker HAS been in the employ of the employer for at least 52 weeks prior to the date of the injury AND the injured worker HAS NOT lost more than seven continuous days (in other words, eight or more continuous days) during one or more periods of time, even if those periods of time are not in the same week, then the injured worker's average weekly wage is the quotient of the total wages earned by the injured worker over the 52 weeks PRIOR TO the date of injury when divided by 52.
- Method #2: If the injured worker HAS been in the employ of the employer for at least 52 weeks prior to the date of the injury AND the injured worker HAS lost more than seven continuous days (in other words, eight or more continuous days) during one or more periods of time, even if those periods of time are not in the same week, then the injured worker's average weekly wage is the quotient of the total wages earned by the injured worker over the 52 weeks PRIOR TO the date of injury divided by the number of weeks, including fractional weeks, after deducting the periods of more than seven continuous days.
- Method #3: If the injured worker HAS NOT been in the employ of the employer for at least 52 weeks PRIOR TO the date of the injury, then the injured worker's average weekly wage is the quotient of the total wages earned by the injured worker over the ACTUAL number of weeks, including fractional weeks, over which the injured worker was in the employ of the employer, provided that the results are fair and just to both the injured worker and the employer.
- Method #4: If Methods #1 and #2 do not apply because the injured worker was not in the employ of the employer for at least 52 weeks for the employer PRIOR TO the date of injury AND use of Method #3 is impractical because of the shortness of the period of time that the injured worker was in the employ of the employer OR because of the "casualness" of the employment, then recourse may be made to the wages that were being "earned by a person of the same grade and character employed in the same class of employment in the same locality or community."
- Method #5: If "exceptional circumstances" exist that would make application of Methods #1, #2, #3, or #4 unfair, either to the injured worker or the

employer, then some other method that would as nearly as possible approximate what the injured worker would have been earning but for the injury may be used.

The first three methods focus solely on the actual earnings of the injured worker. In Method #4, the earnings of employees of a similar grade and character in the community may be considered if the first three methods are inapplicable. Method #5, the so-called “catch all” provision, allows for use of any other method that will approximate as closely as possible what the injured worker would have earned but for the injury in the event that there are “exceptional circumstances” that would make use of any of the previous four methods unfair or unjust to either the injured worker or the employer. While at first blush it might appear that Method #5 would allow for consideration of wages earned by the injured worker in employments other than the one in which she was working at the time of her injury, the Supreme Court has made it clear that under no circumstances may wages earned employments other than the one in which the injured worker sustained her injury, even when applying Method #5. McAninch v. Buncombe County Schools, 347 N.C. 126, 489 S.E.2d 375 (1997).

In North Carolina, two sets of raw information are required to calculate the average weekly wage: the dates the injured worker worked for the employer in the 52 weeks prior to the date of the injury, and the amount in gross wages (and other includable compensation) the injured worker earned for the defendant-employer during those 52 weeks. These sets of raw information are to be produced by the defendant-employer on NCIC Form 22. See NCIC Rule 103(1). Includable compensation are payments to the employee that are in lieu of wages as understood and agreed upon by the employer and employee in their contract for employment. So-called “per diem” payments, or fixed amounts of money paid to an employee to cover food, lodging, and other ordinary living expenses usually will count as gross wages. E.g., Shah v. Howard Johnson, 140 N.C. App. 58, 535 S.E.2d 577 (2000).

A valiant attempt to have health insurance premiums paid by an employer included in gross wages was, unfortunately, rebuffed by the Court of Appeals in Kirk v. State, 121 N.C. App. 129, 135-36, 465 S.E.2d 301, 305-06 (1996). Inter alia, the Court of Appeals reasoned that the value of being a beneficiary under the State’s group health insurance could not be quantified, and the injured worker only received those benefits when needed. Id. However, it also appears that the Court of Appeals was much more persuaded by the lack of evidence that the injured worker could decline coverage under the State’s group health insurance plan and receive additional wages instead or that it would be unfair to the injured worker not to include the amount paid for his group health coverage. Id. However, the reasoning of the court in Kirk leaves open the possibility that where group health coverage is elective and an employee could elect to be covered and have a lower take-home pay that it would be unfair not to include the group health coverage premium in gross wages.

It is within the discretion of the Commission to exclude expenses incurred by the injured worker in connection with his work from gross wages if necessary to reach a result that is fair and just to the employer. E.g., Craft v. Bill Clark Construction, 123 N.C. App. 777, 474 S.E.2d 808 (1996). However, a practice tip when approaching the issue of whether expenses should be

included is to see if they are “above the line” deductions from the injured workers’ adjusted gross income or if they are “below the line” Schedule A itemized deductions. If they are the latter, then there is a very good argument that those expenses should not be excluded. See Hobbs v. Industrial Commission of Arizona, 23 Ariz. App. 422, 533 P.2d 1159 (1975); Cornell v. Western & Southern Life Insurance Co., I.C. File No. 841212 (Deputy Commissioner Ford Nov. 29 2001) (applying the reasoning of Hobbs and not excluding the injured worker’s itemized deductions for vehicle expenses).

I have recently seen one employer include a “flex credit” on an employee’s paycheck stub for the full amount of a group health coverage premium followed by a deduction of the same amount for the premium. While this may be a bookkeeping technique that is advantageous for tax purposes, it also open the door for an argument that the amount of the flex credit should be included in gross wages if it would be unfair to the injured worker and not unfair to the employer to include it.

In my practice, it is common for clients to complain that they earned more money on average per week than the average weekly wage on which they are being paid. In the past, I used to routinely request that the carrier or claim administrator obtain a properly-completed Form 22 if a client questioned the accuracy of the average weekly wage on which her compensation rate was based. However, after several incidents of aggressively pursuing carriers for Forms 22 only to have them produced AND show that my clients were being OVERPAID and suffering the concordant wrath of those clients when the amount of their weekly checks was cut, I discontinued that practice. Nowadays, if a client complains about her average weekly wage and a properly-completed Form 22 has not been produced, I first ask that the client send in their paycheck stubs, W-2s, or other documentation of what they were paid, and I use that information to make an estimate of the client’s average weekly wage. If there is a significant disparity in the amount of the average weekly wage on which the client is being paid and the estimated average weekly wage that I have calculated, I will advise my client that it might be worthwhile to request that a properly-completed Form 22 be produced. However, I also send a letter, a copy of which I have included in the Appendix, to my client advising her of the risk that requesting a properly-completed Form 22 may reveal that she is being overpaid and asking her to sign and return the letter indicating whether she wants me to request a Form 22. In the event that the client signs the letter indicating that she wants me to request a Form 22, then my client will have very little to complain about if the Form 22 reveals that the average weekly wage is lower that what she thought it should be.

Once the employer has produced a properly-completed Form 22 documenting the earnings of the injured worker and the dates that the injured worker worked, the next step in the process is to determine which of the methods to apply. The inquiry may be broken down as follows:

- Part I. Was the injured worker was in the employ of the employer for at least 52 weeks prior to the date of the accident?
YES: During the 52-week period prior to the date of the accident whether the injured worker did not earn wages for one or more periods of more than seven continuous days?

YES: Apply Method #2 to the injured worker's wage information.

NO: Apply Method #1 to the injured worker's wage information.

NO: Was the injured worker's employment brief or casual enough to make it impractical to calculate the injured worker's average weekly wage using the injured worker's actual earnings?

YES: Apply Method #4, which is equivalent to applying Method #1 to the wages earned by a "person of the same grade and character employed in the same class of employment in the same locality or community" over the 52 weeks prior to the injured worker's injury.

NO: Apply Method #3 to the injured worker's wage information.

Part II. Are there exceptional reasons that would make application of the resulting method as determined from Part I of the inquiry unjust or unfair to either the injured worker or the employer?

YES: Apply Method #5.

NO: Apply the method yielded from Part I of the inquiry above.

Now for the math! Once you have gone through Part I and determined which of the four methods to apply to the wage information produced by the employer on Form 22, it is necessary to apply the determined method. Before doing so, it may be helpful to remind oneself of some basic definitions:

1. 1 week = 7 days.
2. 1 day = 1/7 week (= 0.14285714 week). See NCIC Rule 402.
3. 1 day = 24 hours
4. 52 weeks = 364 days (52 weeks X 7 days/week).
5. The day begins at 00:00 and ends at 24:00 (24-hour time)
6. For purposes of the calculation of compensation, an injury is deemed to have occurred at 00:00 on the date of injury, regardless of what hour the injury occurred. See NCIC Rule 401(a).

Additionally, it is necessary to understand the difference between "to" a particular date and "through" a particular date. "To" a particular date refers to the very first moment of the particular date, or 00:00 hours in 24-hour time, and it does not include or refer to the 24 hours covered by the date in question. "Through" a particular date refers to the very last moment of the particular date, or 24:00 hours in 24-hour time, and it does include the 24 hours covered by the date in question. Although 00:00 and 24:00 refer to the same relative moment in time on the clock, by convention, 00:00 indicates the day just beginning, and 24:00 indicates the day just ending.

With regard to Methods #1, #2, #3, and #4, the earnings of the injured worker on the date of the injury itself do NOT count in the calculation of the average weekly wage since, by definition, the average weekly wage when calculated under these methods is based on the earnings

of the injured worker BEFORE the date of injury.² Thus, it is necessary to remember that only the earnings accrued up TO the date of injury are to be included in the calculation. However, at the same time, it is also necessary to understand that the END of the time period for calculation of the average weekly wage is the date immediately before the date of injury at 24:00. which happens to be the same as the date of injury at 00:00. Thus, the time period runs FROM a particular date THROUGH the date before the injury at 24:00, or TO the date of injury at 00:00. To avoid confusion, when referring to a particular date, it should be understood that the reference is to that date at 00:00, and accordingly, time periods will run FROM at particular date TO (but NOT THROUGH) the date of injury.³

A common mistake made by those who complete Forms 22 is to include the earnings of the injured worker on the date of the injury when stating the amount of the earnings of the injured worker for the month in which the injury occurred. Unfortunately, without recourse to the actual underlying wage documentation, it is often difficult to determine on the face of a Form 22 whether this mistake has been made.

A related mistake when calculating the average weekly wage from a Form 22 is to count the date of the injury as the beginning of the relevant time period (essentially, confusing THROUGH the date of injury and TO the date of injury). However, it is usually fairly easy to spot when this mistake has been made from the face of the Form 22. It is all too common to see both mistakes made when determining the average weekly wage, and if the mistakes are not caught by anyone, then the parties may go through the course of the claim using an incorrect average weekly wage. If the injured worker's earnings on the date of injury are included in the statement of earnings (not correct) but the date of injury is not counted (correct), then the resulting average weekly wage will be slightly higher than it ought to be due to the inclusion of the additional earnings. On the other hand, if under the same circumstances the date of injury is counted (not correct), then the average weekly wage could be slightly higher or lower depending on the injured worker's earnings in the days before the accident.

²With regard to Methods #1 and #2, the key language in § 97-2(5) establishing this is “the period of 52 weeks immediately preceding the date of the injury” for Method #1 and “such period” for Method #2. With regard to Method #3, the key language is “the employment prior to the injury extended over a period of fewer than 52 weeks” and “dividing the earnings during that period.” Finally, with regard to Method #4, the operative language is “during the 52 weeks previous to the injury.”

³An appropriate question at this juncture might be “Are the earnings of the injured worker on the date of injury itself ever relevant for any purpose?” The answer to this question is “Yes.” Those earnings are relevant for determining the date that the seven-day waiting period under N.C. Gen. Stat. § 97-26 and/or the date that right to total disability compensation accrues.” Under NCIC Rule 401(a), if the injured worker is not paid a full day's worth of wages on the date of injury, the seven-day waiting period begins on the date of injury regardless of the hour of the injury. Under Rule 401(b), if the injured worker is paid a full day's worth of wages on the date of injury AND does not return to work the next day due to the injury (even if the next day is not a scheduled workday), then the seven-day waiting period begins on the day following the date of injury. Lastly, if the injured worker is paid less than a full-day's worth of wages on any day following the date of injury, then, under Rule 401(c), that day counts as part of the waiting period as well.

If you determine from review of a Form 22 that the carrier or claim administrator has counted the date of injury as the beginning of the relevant time period, call it to the attention of the carrier or claim administrator, point out the fact that the date of injury should not have been counted and provide the correct calculation. The onus will then be on the adjuster or claim administrator to ascertain if the earnings of the injured worker on the date of injury were incorrectly included on the Form 22. If the adjuster or claim administrator is unable or unwilling to investigate that issue, then that choice of the adjuster or claim administrator is likely to accrue to the benefit of your client.

Applying Methods #1 & #2:

Under Methods #1 and #2, which are used when the injured worker has been in the employ of the employer for at least 52 weeks, the time period for relevant wages begins at 00:00 on the date 52 weeks, or 364 days, PRIOR TO the date of injury. Because 364 is evenly divisible by 7, the day of the week on which the time period begins will always be the same as the day of the week of the injury. Applying Method #1 or Method #2 requires information regarding the wages paid to the injured worker during the designated time 52-week time period.

An easy way to identify the date of the beginning of the 52-week period, is to ADD one day to the date of injury and SUBTRACT one year; however, if the 52-week period includes a February 29 because of a leap year, then ADD two days to the date of injury and SUBTRACT one year.

EXAMPLE 1: For an injured worker who is hurt today, Friday, March 7, 2003, and who has been in the employ of the employer for at least 52 weeks, the time period of relevant wages begins 52 weeks, or 364 days, PRIOR TO March 7, 2003 at 00:00 (which refers to the same moment in time as Thursday, March 6, 2003 at 24:00). In this example, the time period begins on Friday, March 8, 2002 at 00:00.

EXAMPLE 2: For an injured worker who is hurt on Friday, March 5, 2004 (2004 is a leap year), the 52-week time period starts on Friday, March 7, 2003 (today).

Next, it is necessary to determine if the injured worker was out of work, for ANY reason, for any periods of time of EIGHT OR MORE CONTINUOUS DAYS (the same as MORE THAN SEVEN CONTINUOUS DAYS). To do this, scan the Form 22 starting at the beginning of the 52-week period and look for blocks of boxes that are unmarked or otherwise marked as indicating that the injured worker was out of work, e.g. sick days, holidays, vacation days, etc.

If you find no such blocks of continuous days, then Method #1 is to be used to calculate the average weekly wage. To apply Method #1, add up all of the wages earned by the injured worker from the date of the beginning of the time period at 00:00 and ending on the date of the injury at 00:00 and divide the result by 52. The quotient is the injured worker's average weekly wage as determined by Method #1.

Since Mr. Worker's injury occurred on February 28, 2002 and since he has worked for the employer for at least 52 weeks, the relevant period in which his earnings must be considered begins on March 1, 2001 at 00:00 and ends at February 28, 2002 at 00:00 (which is also February 27, 2002 at 24:00). Mr. Worker's earnings during the 364-day period prior to the date of his injury period total \$15,851.67.

Next, it is necessary to determine whether there are any periods of 8 or more continuous days that Mr. Worker was not at work that must be excluded. Inspection of the Form 22 reveals that there are four separate periods of time that must be excluded:

1. March 9, 2001 00:00 through April 5, 2001 24:00 (28 days)
2. May 11, 2001 00:00 through May 27, 2001 24:00 (17 days)
3. July 12, 2001 00:00 through August 5, 2001 24:00 (26 days)
4. February 3, 2002 00:00 through February 10, 2002 24:00 (8 days)

So, a total of 78 days must be excluded from the 364-day period of relevant earnings, which means that there are a total of 286 countable days.

Since there are one or more excludable periods of 8 or more days during the 364-day relevant period, Method #1 cannot be used. Assuming for the sake of argument that there were no excludable periods of 8 or more days, then Method #1 would dictate that the total earnings of \$15,851.67 by divided by 52 weeks for an average weekly wage of \$304.84.

However, Method #2 is the applicable method on these facts because of the presence of excludable periods. To apply Method #2, divide Mr. Worker's total earnings of \$15,851.67 by 286 countable days. The result is an average daily wage of \$55.425. Multiply this amount by 7 to convert the amount into a weekly amount, and the result is an average weekly wage of \$387.98.⁴

In Bond v. Foster Masonry, 139 N.C. 123, 130, 532 S.E.2d 583, 587 (2000), the Court of Appeals appears to have disapproved of the practice of counting days instead of weeks when calculating the average weekly wage. The reference of the Court of Appeals is to the following findings of fact:

13. During the fifty-two (52) week period prior to plaintiffs 9 August 1996 injury by accident, he missed seven (7) or more consecutive days [should be "more than seven consecutive days"] on more than one occasion. Therefore, the second method under G.S. 97-2(5) of calculating his average weekly wage should be used.

⁴In reality, this particular Form 22 was not properly completed. From the adjuster's raw notations on the Form 22, the adjuster counted the date of injury as a countable day, and injured worker's earnings on the date of injury appear to have been included in the Form 22. The adjuster also appears to have incorrectly excluded the seven days April 24, 2001 00:00 through April 30, 2001 24:00. Thus, the adjuster came up with 279 countable days, which yielded an average daily wage of \$56.816 and a resulting average weekly wage of \$397.71. On balance, the adjuster's mistakes accrued to the benefit of Mr. Worker.

14. Plaintiff earned \$12,262.50 during the fifty-two (52) weeks preceding his injury. Over this period, plaintiff worked two-hundred and thirteen (213) days [= 30.43 weeks], yielding a daily wage rate of \$57.57. When multiplied by seven (7), this daily rate yields an average weekly wage for plaintiff of \$402.99 as of 9 August 1996, which yields a compensation rate of \$268.67.

Bond v. Foster Masonry, I.C. File No. 661698 (Full Commission Feb. 5, 1999). However, in light of the comment of the court that “no evidence indicates that plaintiff worked seven days a week, which would substantiate multiplying plaintiff’s alleged “daily wage rate” by seven” was present in the finding of the Commission the disapproval appears to be based on a lack of understanding of the Court of Appeals about an excludable day/week. Instead of trying to handle these calculations in terms of weeks and fractional weeks, it is often easier to handle the calculations by starting with 364 days (52 weeks X 7 days per week), tallying up the number of days in the ranges of eight or more days that must be excluded from the calculation, subtracting that number of days from 364 days to yield the number of countable days, and then multiplying by 7 days to convert the countable days figure into a countable weeks figure. A day can still be countable even if the injured worker did not work on that particular day. Thus, performing the calculation using days is not an indication that the injured worker actually worked 7 days per week. The full Commission subtly bore this out in its decision it filed after the remand when it entered the following finding of fact:

13. During the fifty-two (52) week period prior to plaintiffs 9 August 1996 injury by accident, he missed seven (7) or more consecutive days [should be “more than seven consecutive days”] on one or more occasion. Therefore, the second method under G.S. 97-2(5) of calculating his average weekly wage should be used.
14. Plaintiff earned \$12,262.50 during the fifty-two (52) weeks preceding his injury. Over this period, based on the evidence of record, plaintiff did not work 21.43 weeks, **meaning he did work 30.57 [should be “30.43” (213 days / 7 days per week). 30.57 weeks would be 214 days, which indicates most-likely that the day of injury was counted – the full Commission had it right the first time] weeks.** When his yearly earnings of \$12,262.50 are divided by the number of weeks in which he worked (30.43), plaintiff’s average weekly wage on 9 August 1996 is determined to be \$401.13 [should be “\$402.99”]. This average weekly wage yields a compensation rate of \$267.55 [should be “\$268.66”].

Bond v. Foster Masonry, I.C. File No. 661698 (Full Commission Sept. 21 2000) (emphasis added). At the very least, the Commission now recognizes a sensitivity at the Court of Appeals of wanting to see the findings of fact regarding the calculation of average weekly wages in terms of weeks and not days.

Nancy Mahmoud, CLA, developed a WordPerfect document “program” and Quattro Pro and Excel spreadsheet documents that are helpful in determining the average weekly wage when applying Method #1 or Method #2, particularly Method #2. They may be downloaded from <http://www.jwsnyder.com/f22calculators.zip>. Furthermore, on the secure section of my website (access to which is by invitation only to interested NCATL members -

<http://www.jwsnyder.com/attyprograms.shtml>), I have a program that calculates the number of weeks from one date TO another date, which is handy when applying Method #3.

Applying Method #3:

Method #3 is applicable when the injured worker has been in the employ of the employer for less than 52 weeks prior to the date of injury but for long enough that it is practical as well as fair and just to the injured worker and to the employer to use the injured worker's actual earnings to produce an average weekly wage that is. The determination about whether applying Method #3 is fair and just to all parties is a finding of fact to be made by the Commission, and it will be upheld on appeal if there is any competent evidence to support it. E.g., *Prevette v. Clark Equipment Company*, 62 N.C. App. 272, 302 S.E.2d 639 (1983). Findings of fact by the Commission that employment of less than 52 weeks was "seasonal," was too brief prior to the date of injury, was too casual in nature, or was too intermittent are the "kiss of death" to application of Method #3. E.g. *Barber v. Going West Transp.*, 134 N.C. App. 428, 517 S.E.2d 914 (1999) ("seasonal" employment) N.C. Gen. Stat. § 97-2(5) ("by reason of a shortness of time during which the employee has been in the employment of his employer or the casual nature or terms of his employment, it is impractical to compute the average weekly wages as above"); *Joyner v. A.J. Carey Oil Co.*, 266 N.C. 519, 146 S.E.2d 447 (1966) ("seasonal" and intermittent); *Loch v. Entertainment Partners*, 148 N.C. App. 106, 111, 557 S.E.2d 182, 186 (2001) (intermittent and casual employment).

The tendency of the Commission and the courts when applying Method #3 is to divide the total earnings of the injured worker by the number of weeks that the injured worker was in the employ of the employer prior to the date of injury. E.g., *Wallace v. Music Shop, II*, 11 N.C. App. 328, 181 S.E.2d 237 (1971) (\$450.00 during 4.5 weeks of employment = average weekly wage of \$100.00); *Kennedy v. Workforce Temps*, I.C. File No. 940502 (Full Commission Jan. 25, 2002) (\$4,148.59 during "approximately" 19 weeks of employment = average weekly wage of \$218.35); *Lenkewicz v. Blue Cross and Blue Shield*, I.C. File No. 682627 (Full Commission, Feb. 16, 2001) (\$16,487.63 during 47.2857 weeks (331 days) of work prior to injury = average weekly wage of \$348.67); *Craft v. Bill Clark Construction*, I.C. File No. 424188 (June 19, 1995) (\$3,232.00 during 11.4 weeks during which injured worker worked = average weekly wage of \$283.51)

However, under Method #3, the injured worker's earnings during the period of employ are to be divided by the "number of weeks and parts thereof during which the [injured worker] earned wages." Unfortunately, the precise meaning of "number of weeks and parts thereof during which the [injured worker] earned wages" is not clear. Numbers of whole weeks obviously count, and fractional weeks during which an injured worker earned wages also appear to count.

I have not been able to locate any case law defining this phrase or indicating if any weeks in which the injured worker did not work and earned no wages must be excluded when applying Method #3. However, by applying the maxim "expressio unis est exclusio alterius," it is at least arguable that the phrase requires that weeks in which the injured worker did not earn wages not be included in the calculation of the average weekly wage.

Following our steps of analysis from above, since Mr. Employee did not work for at least 52 weeks for the employer prior to the date of his injury, Methods #1 & #2 cannot be used. However, Method #3 may be used so long as the result is fair and just to Mr. Employee and the employer. According to this Form 22, there are several periods of time during which Mr. Employee did not work and was not paid wages. Accordingly, they should be excluded from the calculation in some way. If we seek to exclude periods of 8 or more days during which Mr. Employee did not work and was not paid wages, then the following time periods must be excluded:

November 22, 2000 00:00 through December 3, 2000 24:00 (12 days)

December 19, 2000 00:00 through January 1, 2001 24:00 (14 days)

January 10, 2001 00:00 through January 17, 2001 24:00 (8 days)

Total excludable days = 34 days, or 4.86 weeks

Of the 115 days, or 16.43 weeks from October 26, 2000 00:00 through February 17, 2001 24:00, only 81 days, or 11.57 weeks, are countable. Mr. Employee's earnings over this time period were \$7,706.27. By dividing 11.57 weeks into \$7,706.27, the resulting average weekly wage is \$666.07.

Applying Method #4

Under Method #4, if the injured worker's employment for the employer before the injury was too short or too casual to apply Method #3 and derive results that are fair and just to both the injured worker and the employer, then recourse may be had to the earnings of an employee of the same character and grade in the same area as the injured worker in the 52 weeks prior to the date of the injured worker's injury. Once produced, Method #1 or Method #2 can be applied to the earnings of that similar employee over the 52 weeks prior to the date of the injured worker's injury to yield the average weekly wage.

When this method is invoked, the earnings of a similar employee with the injured worker's employer is usually produced. However, by the very language that defines this method, recourse to the earnings of a similar employee with the injured worker's employer is not absolutely required. If the employer does not have any similar employees, such recourse may not be possible in any event.

The earnings of a similar employee in the surrounding area or labor market may be considered. As a practical matter, obtaining the earnings of a similar employee with another employer may be difficult obtaining such information requires securing the cooperation of another employer, and selection of that other employer is open to manipulation by either the injured worker or the employer.

Fortunately, the NC Employment Security Commission (ESC) keeps and publishes on its website wage information regarding the hourly and annual rate of pay being paid to employees in many and various occupations broken as down by SOC codes. The statistics are available on a statewide basis, and they are also available on a county-by-county basis. The statistics may be access at the ESC's website at <http://eslmi12.esc.state.nc.us/oeswage/>. If the earnings for a

similar employee with the employer in question are not available, it may be possible to use the ESC's information, possibly coupled with the testimony of a vocational expert, to establish what a similar employee in the surrounding area or labor market would have been paid in the 52 weeks prior to the date of the injured worker's injury.

The threshold determination regarding whether the injured worker's employment was too short or casual so as to make use of Method #4 appropriate is to be made by the Commission as a finding of fact that will not be disturbed by the appellate courts so long as it is supported by any competent evidence. Also, like Methods #1, #2, and #3, use of Method #4 is subject to the proviso that the resulting average weekly wage be fair and just to the injured worker and the employer. However, as a practical matter, if use of Method #4 would not be fair either to the injured worker or the employer, then it may not be used.

Applying Method #5

Method #5 is the so-called "catch-all" provision of § 97-2(5) allows for use of any other method that as nearly as possible estimates what the injured worker would have been earning on average per week had the injury not occurred so long as the result is . Method #5 may be applied when there are "exceptional reasons" that would make applying Method #1, #2, #3, or #4 unjust or unfair to the injured worker.

Method #5 allows for consideration of evidence that cannot be considered when applying Methods #1 through #4. For example, the injured worker's earnings in the employment after the date of injury may be considered as well as earnings prior to 52 weeks prior to the date of injury. E.g., Postell v. B&D Construction, 105 N.C. App. 1, 7, 411 S.E.2d 413, 416-17 (1992). Promotions, advancements and pay increases that occur shortly before the date of injury may also be considered if necessary to be fair to all of the parties, in which case the injured worker's higher and more recent earnings may be used to determine the average weekly wage. E.g., Mion v. Atlantic Marble & Tile, 217 N.C. 743, 9 S.E.2d 501 (1940); Early v. Basnight & Co., 214 N.C. 103, 198 S.E. 577 (1938); Hendricks v. Hill Realty Group, 131 N.C. App. 859, 509 S.E.2d 801 (1998). The fact that the injured worker is injured in a non-mainstream employment, like professional sports, and the fact that the injury occurred before a formal contract for employment could be concluded, such as when a professional sports player is injured in training and dismissed from the team for that reason, may also justify direct recourse to the earnings the injured worker would have made but for the injury. E.g., Larramore v. Richardson Sports Limited Partners, 141 N.C. App. 250, 540 S.E.2d 768 (2000).

One thought to keep in mind when application of Method #5 comes into consideration is that the Commission WILL be sensitive to the amount of the insured wage. One of the variables in the setting of premiums for workers' compensation benefits is the wage paid to an injured worker. Accordingly, the Commission does not consider it to be inequitable for a carrier to have to pay compensation based on a wage for which the employer has paid the appropriate workers' compensation insurance premium. Likewise, the Commission considers it inequitable, other things being equal, for a carrier to have to pay benefits based on a wage for which the proper premium was not paid. E.g., Wallace v. The Music Shop, II, 11 N.C. App. 328 181 S.E.2d 237 (1971);

Barnhardt v. Yellow Cab, 266 N.C. 419, 423, 146 S.E.2d 479, 482 (1966). But see Mabry v. Bowers Implement Co., 48 N.C. App. 139, 269 S.E.2d 165 (1980) (holding that the insured wage is not determinative of the issue of whether application of a particular method of calculating the average weekly wage is fair and just to all parties). Evidence of what the employer listed on its workers' compensation policy as the amount of the insured wage and also the information about what wage was listed with the Employment Security Commission for assessment of unemployment taxes can easily be obtained through discovery. This information can be extremely useful in making an argument that exceptional circumstances exist that would justify recourse to Method #5, and this information can be used to support or detract from a proposed Method #5 approach to calculation of the average weekly wage.

The possibilities with application of Method #5 are so varied that a full exploration of them is outside the scope of this paper. Creativity that produces equitable results is the principle that should guide application of Method #5.

Interest on Indemnity and Medical Compensation

N.C. Gen. Stat. § 97-86.2 requires that employers and their carriers pay interest on awards of compensation by full Commission. Section 97-86.2 provides as follows:

In any workers' compensation case in which an order is issued either granting or denying an award to the employee and where there is an appeal resulting in an ultimate award to the employee, the insurance carrier or employer shall pay interest on the final award or unpaid portion thereof from the date of the initial hearing on the claim, until paid at the legal rate of interest provided in G.S. 24-1. If interest is paid it shall not be a part of, or in any way increase attorneys' fees, but shall be paid in full to the claimant.

It is helpful to break down this section in determining when interest is due. First, there has to be an order granting or denying compensation entered in the case. Second, there has to be an "appeal" from that order. Third, that appeal has to result in the ultimate award of compensation to the injured worker. Once those three conditions are satisfied, particularly the third one, then interest on the award from the date of the initial hearing must be paid. This section has been interpreted to apply when the initial order that is entered is the opinion of a Deputy Commissioner, appeal is made to the full Commission, and the full Commission awards compensation to the injured worker.

While the statute is clear about the circumstances under which interest is to be paid, the statute is not clear on how to calculate the interest that is due. The section requires that interest be paid at the "legal rate of interest provided in G.S. 24-1." N.C. Gen. Stat. § 24-1 prescribed that the legal rate of interest is "eight (8%) per annum." Unfortunately, neither § 97-86.2 or § 24-1 specify the type of interest that is to be paid, whether it be simple interest or continuously compounded interest (which is when interest is paid on principal plus interest accrued at each moment over the course of the period). Furthermore, the statute is unclear about what benefits on which interest is to be calculated other than to say that "interest on the final award" must be paid.

Lastly, the statute requires that interest be paid “from the date of the initial hearing,” but the statute on its face does not appear to make any distinction between compensation that is due before the hearing and compensation that is due after the hearing. Accordingly, it has been necessary for these gaps to be filled by judicial interpretation.

With regard to the types of interest that could be paid, the types that immediately come to mind are simple interest, which is calculated through the mathematical formula:

$$I = P * R * T \text{ (“*” means “multiply”)}$$

Where:

I = Interest (in dollars)

P = Principal (in dollars)

R = Interest rate (percent expressed in decimal form per year)

T = Time (years)

and continuously compounded interest, which is calculated by the formula:

$$I = P * e^{(R)*(T)} - P$$

Where:

I = Interest (in dollars)

P = Principal (in dollars)

e = The exponential number (a.k.a. Euler’s number), which is approximately 2.71666

R = Interest rate (percent expressed in decimal form per year)

T = Time (years)

With simple interest, interest only on the initial principal amount over the period of the calculation is determined; no “interest upon interest” is paid. On the other hand, with continuously compounded interest, interest is calculated upon the interest that accrues at each moment in time during the period of the calculation, thus allowing for payment of “interest upon interest.” To illustrate, let’s figure out the amount of interest due on a principal of \$10,000.00 over one year at an interest rate of 8% per year under each method:

$$\text{Simple Interest: } I = (\text{\$10,000.00}) * (0.08 \text{ per year}) * (1 \text{ year})$$

Principal Rate Time

$$I = \text{\$800.00}$$

Continuously Compounded

$$\text{Interest: } I = (\text{\$10,000.00} * (2.71666)^{(0.08 \text{ per year})(1 \text{ year})}) - \text{\$10,000.00}$$

$$I = (\text{\$10,000.00} * 1.08329) - \text{\$10,000.00}$$

$$I = \text{\$832.87}$$

As one can see, with continuously compounded interest, an additional \$32.87 of interest accrues due to the compounding of interest over the course of the interest time period. However, calculating continuously compounded interest is significantly more complicated and cumbersome than the calculation of simple interest. Unless one has a scientific calculator that has the exponential function, one would need to have logarithm tables handy to raise the exponential number by a non-integer power, and so many people, particularly the clerks of court in North Carolina's 100 counties would prefer to avoid having to figure up continuously compounded interest.

The issue regarding what type of interest must be paid under N.C. Gen. Stat. § 97-86.2 was answered by the Industrial Commission in Moore v. Standard Mineral Company, I.C. File No. 177919 (Full Commission March 19, 1998). In Moore, the Commission adopted the rule applied by the Supreme Court in Lee Company v. N.C. Board of Transportation, 317 N.C. 254, 345 S.E.2d 355 (1986), a land condemnation action, and held that simple interest was to be paid by the defendants unless the injured worker could prove by preponderance of the evidence that he could have obtained interest at a higher rate, such as continuously compounded interest. As a practical matter, it will be the exceptional case where an injured worker is able to prove to the satisfaction of the Commission that continuously compounded interest should be paid.

Additionally, § 97-86.2 is not clear on exactly how to calculate the interest that is due other than to say that "interest on the final award or unpaid portion thereof **from the date of the hearing**" is to be paid. In Strickland v. Carolina Classics Catfish, 127 N.C. App. 615, 492 S.E.2d 362 (1997), disc. rev. denied, 347 N.C. 585, 502 S.E.2d 617 (1998), the Court of Appeals did make it clear that interest on the entire amount of an un-commuted award of compensation in a death benefits case may not be recovered since allowing recovery of such interest would effect a double recovery. Since workers' compensation benefits are designed to be paid periodically instead of in one lump sum and since interest is to be paid from the date of the hearing, it stands to reason that interest on benefits that were due as of the date of the hearing should be calculated differently than interest due on benefits that are due after the hearing.

In Moore v. Foam Ex, I.C. File No. 241740 (Full Commission April 1, 1999), Commissioner Bolch, speaking for the full Commission, made this distinction and articulated a method of calculating the interest due on indemnity compensation that takes into account the distinction between pre-hearing compensation and post-hearing compensation:

1. With regard to indemnity compensation due TO the date of the hearing, the interest is to be calculated based on the amount of indemnity compensation due TO the hearing date.
2. With regard to indemnity compensation due from the date of the hearing forward, each weekly installment must be “weighted” when calculating the interest due on it. In other words, interest only starts accruing on an installment of compensation only when it becomes due and payable.

As an exercise, lets use the facts from the Foam Ex and calculate the interest due on the indemnity compensation awarded in that case:

1.
 - A. The first day of total disability was October 15, 1991, and the date of the hearing was September 13, 1994. The number of weeks from October 15, 1991 TO September 13, 1994 is 152.00 weeks, which means that at the compensation rate of \$314.07 in that case, \$47,738.64.
 - B. The number of weeks from the date of the hearing to the date compensation was paid on October 29, 1997 was 163.14 weeks. So, the amount of the interest due is calculated as follows:

$$I = (\$47,738.64) * (0.08 \text{ rate per year} / 52 \text{ weeks per year}) * (163.14 \text{ weeks})$$

$$I = (\$47,738.64) * (0.001538462 \text{ rate per week}) * (163.14 \text{ weeks})$$

$$I = \$ 11,981.87$$
2. Since each installment of compensation that was due after the hearing must be weighted, it is necessary to calculate the interest due on each installment of compensation in the following tedious manner (if trying to do it by hand):
 09/13/1994 TO 09/20/1994: $I = (\$314.07) * (0.001538462 \text{ rate per week}) * (163.14 \text{ weeks}) = \78.83
 09/20/1994 TO 09/27/1994: $I = (\$314.07) * (0.001538462 \text{ rate per week}) * (162.14 \text{ weeks}) = \78.34
 09/27/1994 TO 10/03/1994: $I = (\$314.07) * (0.001538462 \text{ rate per week}) * (161.14 \text{ weeks}) = \77.86
 etc., etc. etc.
 When one calculates and adds up the amount of interest due on each week of compensation (including the .14 fractional week), the total interest due on the post-hearing compensation is \$6,469.51.

So, the total interest due on this award of compensation as of the date of payment on October 29, 1997 was \$18,451.39. The resulting figures stated in the findings of fact in the Foam Ex case differ slightly because Commissioner Bolch used 163.00 weeks instead of the actual 163.14 weeks between the hearing date and the date of payment.

I have developed a web-based program for calculating the interest due on full Commission awards using a method based on the method used in the Foam Ex case. I have made the program available to all to use on my website at <http://www.jwsnyder.com/attyprograms.shtml>, and I have

released it under the terms of the GNU GPL. A copy of the Perl script that is the program is included in the appendix to this manuscript.

Unfortunately, the Foam Ex method as applied by Commissioner Bolch does not reflect the fact that workers' compensation benefits are paid in arrears and that an installment of 7 days of compensation is not due until the last day of the 7-day period for which it covers. See N.C. Gen. Stat. §§ 97-18 (b) & (g) and 97-28. The installment of compensation allocable to the seven-day period from September 13, 1994 through September 19, 1994 would have become due on September 19, 1994, and interest would have started to accrue on that date at 00:00. Thus, instead of starting with the calculation of interest at Week #163, he should have started with Week #162. My program tracks Commissioner Bolch's approach, but it can easily be modified to use my suggested alternative approach depending on the wishes of those who use it or subsequent developments in the law.

However, one issue that the Foam Ex case did not expressly address is whether the payment made on October 29, 1997 should have been credited first to the compensation due or the interest that was due as of that date. Without averring to the issue, the full Commission appears to assume that the payment made on that date was credited to the compensation due as of that date. However, by not paying the compensation due and the interest due on that compensation on the same day, the defendants in that case got to hold onto \$18,451.39 that rightfully belonged to the injured worker for approximately another year and half. Since there were no adverse consequences against the defendants for the delay in the payment of interest, the defendants received, as a practical matter, an interest-free loan of \$18,451.39. Is there a remedy to this problem?

Although the issue has apparently not yet arisen in the workers' compensation arena, the Court of Appeals has held that payments towards civil judgments are credited first to interest that is due and any remaining amount of payment is credited to the outstanding principal. Morley v. Morley, 102 N.C. App. 713, 403 S.E.2d 574 (1991)⁵. The Court of Appeals adopted this as the rule to encourage prompt payment by judgment debtors. Id. Given the underlying purpose of allowing interest on judgments and awards of workers' compensation benefits in the first place is to compensate the judgment creditor (or injured worker as the case may be) for the loss of use of the money awarded to him and to deny to the judgment debtor or employer/carrier the benefit of an interest-free loan during the pendency of a civil action or an appeal of a deputy commissioner's opinion and award, there would appear to be no reason why the Commission or the appellate courts would not apply the same rule in workers' compensation cases.

Lastly, the Court of Appeals held in Childress v. Trion, 125 N.C. App. 588, 481 S.E.2d 697, disc. rev. denied, 346 N.C. 276, 487 S.E.2d 541 (1997), that the term "award" in N.C. Gen. Stat. § 97-86.2 includes medical compensation in addition to indemnity compensation. Unfortunately, the Court of Appeals did not discuss how to go about calculating the interest due on medical compensation, nor did the full Commission hear the case again after the Supreme Court

⁵Many thanks to Rob Gage of Cox, Gage, and Sasser for identifying this issue and locating this case.

denied the defendants' petition for discretionary review. Reportedly, the defendants agreed to rely on the plaintiff's calculations of the interest that was due on the medical compensation awarded by the Commission, but unfortunately, those raw calculations have been lost to the sands of time.⁶ While the Commission has frequently entered order for defendants to pay interest on medical compensation, I have not been able to locate any orders directly how the interest is to be calculated.

Fortunately, the Foam Ex case and a little practical world knowledge can be combined to yield a proposed method for calculating the interest due on medical compensation. One principle the Foam Ex case makes clear is that the interest due on indemnity compensation accrued to the date of the hearing must be calculated differently from the interest due on indemnity compensation due after the hearing. Logically, the same principle would apply to medical compensation awarded for time periods from the date of the hearing forward. Next, given the frequency of the signs in physicians offices that read something to the effect of "Payment for services is expected the day that services are rendered," it stands to reason that each individual Date of Service for each particular item of medical treatment rendered should be regarded as the due date for each such item. Accordingly, each item of medical treatment can be sorted into one of two categories:

Category #1: Items where the date of service is prior to the date of the hearing.

Category #2: Items where the date of service is on the date of hearing or thereafter sorted by Date of Service.

Using the Foam Ex methodology, the steps would be as follows: First, add up all of the charges for each item in Category #1 and then calculate the 8% per year simple interest due on the total amount of the charges in Category #1 from the date of the hearing to the date of payment. Second, calculate the 8% per year simple interest due all of the charges for each Date of Service for all items of medical treatment Category #2 from each respective Date of Service to the date of payment. Third, add up the interest yielded on Category #1 items with the interest yielded on Category #2 items, and either present your bill to the defendants or seek to have the full Commission issue an order approving of your calculations and directing the defendants to pay the interest accordingly.

Another unanswered question is whether the interest should be calculated on the amounts the providers actually charged or only the Commission-approved amounts of those charges. However, given the underlying purpose of § 97-86.2 and given the fact that, absent an award from the Commission, the injured worker is responsible for the full amounts charged by his medical providers, equity would mitigate in favor of using the provider's actual charges.

The practitioner may ask at this point about why she would want to go through the trouble of calculating the interest due on full Commission awards and the hassle of collecting the interest, particularly since she is not permitted to collect an attorney fee on any part of the interest. There are at least two answers to this legitimate inquiry: 1. You DO want to get every dime you can out

⁶Many thanks to Jim Lore, counsel for the plaintiff in Childress, for the inside scoop.

of that mean-ole employer and insurance company that has put your poor, financially-strapped client through the wringer during the pendency of the claim, particularly if you can efficiently determine the amount of the interest due, don't you?! 2. By asserting claims for interest and forcing employers and carriers to pay up, and particularly by seeking IC orders, published appellate court decisions, and advocating for IC rules on how to do all of this, employers and their carriers will have to pay attention to and acknowledge exposure for interest on full Commission appeals, which eventually creates leverage to get higher settlements for your clients from which you WILL get attorney fees.

Present-day values

When evaluating workers' compensation cases for settlement purposes, it is necessary for the practitioner to understand and for the practitioner to help her clients understand the concept of present-day value of future compensation and the time-value of money. In a nutshell, future payments of indemnity or medical compensation at the time they are paid in the future are not worth their full amounts in today's dollars since employers and carriers theoretically can invest the money that is allocated towards future installments of compensation such that they accrue enough interest that at the time the installment of compensation is due, the principal and amount of accrued interest will equal the amount of the installment. One way to explain this to clients is to analogize to depositing an amount of money in the bank and allowing it to draw interest over time. Another way is to analogize to those jackpot lottery drawings and the option given to the winners to take the big jackpot in annual installments over a period on the order of 20 years or electing to accept a lump-sum payment of the amount of money the lottery sponsors would have otherwise had to salt away in investments to draw enough of a return to pay each annual instalment of lottery winnings.

When formulating and making settlement demands to employers and their carriers, it is often necessary to estimate what their exposure is for future compensation in today's dollars. One way to do this is to regard future installments of compensation be installments from an annuity that has a present-day value and to use a formula for calculating the present-day value of an annuity. The formula for that purpose is as follows:

$$PDV = \frac{(1 - (1 + I)^{-N}) * P}{I}$$

Where:

N = Number of years of the duration of the annuity

I = Interest rate of the annuity

P = Periodic annual amount of payment from the annuity

PDV = Present Day Value of the annuity over N years

The number of years of the duration of the annuity for our purposes is the number of years that an employer or carrier can be expected to continue to have to pay compensation. While it is possible to use the rated life expectancy of a particular injured worker when it is predicted that

compensation will have to be paid for the balance of the injured worker's life (however long that may be), the best results are yielded by recourse to a mortality table that predicts the injured worker's life expectancy assuming certain specific information about the injured worker. I typically use the mortality table enacted into law by the General Assembly at N.C. Gen. Stat. § 8-46 for use in civil actions when a jury needs a mortality table. It is fairly conservative, and since it has the stamp of approval of the General Assembly, it is less likely that an employer or carrier will accuse me of choosing an excessively rosy mortality table when predicting my client's life expectancy. Of course, if the prediction is that compensation will likely only be payable for a specific amount of time, say for example, temporary partial disability compensation starting today until 300 weeks from the date of the injured worker's injury, then that shorter time period is used.

The interest rate is another variable that must be considered. 8% per year is commonly used when making this calculation, and since 8% per annum is the legal rate of interest under N.C. Gen. Stat. § 24-1, using 8% per year establishes some credibility to your calculation. However, given the fact that interest rates are so low due to the state of the economy, it would not be unreasonable to use 7% per year, or even 6% per year, arguing to an insurance company about its exposure for future compensation is.

As we know, the amount of an injured workers' weekly indemnity benefit is based on the injured worker's average weekly wage, which is fixed as of the date of the injury. So, at no time in the future can the injured worker expect any increase in the amount of his weekly indemnity benefit, regardless of the level of inflation in the future. However, with regard to future medical compensation, the situation is somewhat different. The cost of medical care can be expected to rise in the future at a rate steeper than the general rate of inflation. According to the U.S. Bureau of Labor Statistics's website (<http://www.bls.gov/>) as of the last time I checked it, the Consumer Price Index for medical goods and services was running around 4.2% per year (the statistic is updated monthly), which was almost double the Consumer Price Index for all goods and services. This information can be helpful in persuading an employer or carrier that a lower interest rate than the one used to determine the present day value of future indemnity compensation must be used when determining the present day value of future medical compensation. An easier way to make the same argument (and an easier way to do the calculation) is to assert that given current trends in the costs of medical care that those costs are likely to rise at such a rate that any benefit that could be obtained from investing the money allocated to future medical care is likely to be wiped out due to those ever rising costs.

EXAMPLE: Louis Lifer was rendered permanently and totally disabled as a result of an on-the-job accident. Mr. Lifer was 48 at the time of his injury, and he has been receiving total disability compensation at the rate of \$300.00 per week since the three years since his on-the-job accident (he is now 51 years old). He has reached maximum medical improvement, but his treating physician has opined that he will never be able to work again. Fortunately, Mr. Lifer's condition is not life-threatening and that he is otherwise healthy. Additionally, the physician has opined that Mr. Lifer will require medical treatment for his on-the-job injury that will cost approximately \$2,000.00 per year. The carrier is interested in clinching the case and has asked you, Mr. Lifer's attorney, to present a settlement demand.

Before deciding what would be an appropriate settlement demand, it is necessary to estimate what the present day value of the carrier's exposure for future indemnity and medical compensation. \$300.00 per week over 52 weeks (1 year) = \$15,600.00 in indemnity compensation per year. We also know that Mr. Lifer's medical expenses will be approximately \$2,000.00 per year. Since he is 51 years old, according to N.C. Gen. Stat. § 8-46, Mr. Lifer has a statutory life expectancy of another 28.5 years. With the continued downward pressure on the returns of investments of insurance companies, you decide to use 6% per year as the base interest rate, and you also want to use a lower rate when determining the present day value of future medical treatment, and you settle on 6% minus 4.2%, the current Consumer Price Index for medical goods and services. So, here we go:

$$\text{PDV Indemnity} = \frac{(1 - (1 + 0.06 \text{ rate per year})^{-28.5 \text{ years}}) * (15,600.00)}{0.06 \text{ rate per year}}$$

$$= \frac{(1 - (0.19001)) * (15,600.00)}{0.06}$$

$$= \frac{(0.80999) * (15,600.00)}{0.06}$$

$$\sim = (13.500) * (15,600.00)$$

$$= \$210,587.39$$

$$\text{PDV Medical} = \frac{(1 - (1 + (0.06 \text{ rate/yr} - 0.042 \text{ rate/yr}))^{-28.5}) * (2,000.00)}{(0.06 \text{ rate/yr} - 0.042 \text{ rate/yr})}$$

$$= \frac{(1 - (1.018)^{-28.5}) * (2,000.00)}{0.018}$$

$$\sim = (22.143) * (2,000.00)$$

$$= \$66,826.00$$

PDV Indemnity + PDV Medical = \$277,413.39. If this were a case I was handling, I'd probably recommend that we make an initial demand of \$270,000.00 based on this estimate of the carrier's future exposure.

One might quite understandably be daunted by the prospect of having to do this cumbersome calculation by hand every time, particularly that nasty maneuver of having to take a number to a negative power. Fortunately, there are tools out there that make performing this

calculation much easier. For example, Lawyers and Judges Publishing Co. (<http://www.lawyersandjudges.com/>) sells a Future Damage and Present Value Calculator slide card that has on one side a table of present value multipliers for integer numbers of years at interest rates ranging from 1% per year to 14% per year. The reverse side has life expectancy and work life expectancy tables broken down by gender and ethnicity. The calculator is updated every year with the latest life expectancy tables. However, there is no need to update the present day value table because those figures do not change from year to year. I “inherited” one of these calculator slide card from 1996, but since I do not use the life expectancy tables on the calculator slide card, there is no need for me to buy a new one every year since the present day value table does not change.

Using the calculator is simple: determine the yearly amount of compensation to be paid, determine how many years it is expected that the yearly amount will have to be paid and slide the inner card to that number of years, decide on the interest rate you want to use, and look at the column under the interest rate. The figure you see is the amount by which you will multiply the yearly amount of compensation to be paid to yield the present day value of that yearly amount for the number of years that it will be paid. Take a look at the intermediate steps above marked with “~”s. The calculator card allows you to skip to that step when performing this calculation.

Alternatively, you can write and/or use a computer program or write a spreadsheet that performs this calculation based on inputted figures. Most any modern spreadsheet program will allow one to code in the formula for this calculation and yield a result based on figures supplied by the user. On the secure portion of my website, I have several web-based programs that perform this calculation for different purposes. (<http://www.jwsnyder.com/attyprograms.shtml>) When I wrote the program that estimates a carrier’s exposure for lifetime total disability and medical compensation, I “hardcoded” into it the mortality table at N.C. Gen. Stat. § 8-46 to make the program easier and quicker to use as well as to reduce the likelihood of misreading the mortality table when locating the life expectancy for someone of a particular age.

Conclusion

As you can see, escaping having to do math when representing clients on workers’ compensation cases is all but impossible. It is critical to have an understanding of the basic calculations used in the practice of workers’ compensation law, and it’s always helpful to have a calculator in arms reach at all times. The ubiquity of computers and tools used on them definitely make performing these calculations much less of a chore than it was in years past. Also, support staff can be trained to perform many of these tedious calculations to free up the attorney from having to make the calculations, and computer science student can be hired relatively cheaply to develop in-house tools for performing these calculations. It is hoped that this paper makes the prospect of performing many of these sometimes complex calculations somewhat less daunting than previously. I am available by email at jwsnyder@nc1Law.com (office) and jwsnyder@jwsnyder.com (home) to answer questions anyone might have.

APPENDIX

1. Sample Form 22 CYA letter to client
2. Will Snyder's Attorney Helper Programs page
(<http://www.jwsnyder.com/attyprograms.shtml>)
3. Moore v. Standard Mineral Co., I.C. File No. 177919 (Full Commission March 19, 1998)
4. Moore v. Foam Ex, I.C. File No. 241740 (Full Commission April 1, 1999)
5. NCIC full Commission award interest calculation program: data entry form (figures from the Foam Ex case)
6. NCIC full Commission award interest calculation program: results page (calculation based on figures in the Foam Ex case)
7. wcinterest.pl - The Perl script (source code) for the full Commission award interest calculation program

March 6, 2003

Mr. Phlat Baroque
123 Main Street
Dobson, NC 27017

Dear Mr. Baroque:

You have indicated recently that you do not agree with the statement of your average weekly wage and the amount of your workers' compensation weekly benefit. There is a way to determine the correct amount of benefits that you should be receiving. However, I need to advise you of the risk that would be involved in obtaining this determination.

An injured employee's Workers' Compensation benefits are based on the worker's average weekly wage, which is ordinarily defined as the amount of money the injured employee made in the 52 weeks prior to her injury. The injured worker's Workers' Compensation rate is $\frac{2}{3}$ of the average weekly wage.

In this state, the procedure for determining an injured worker's average weekly wage is for the employer to complete NCIC Form 22. On this form, the employer indicates each day the injured employee worked during the previous twelve months and the amount of money the worker made during each of those months. The total wages from all of the months are added and divided by 52, and the result is the average weekly wage.

It is possible that the Form 22 will show that the Workers' Compensation rate at which you are currently being paid is lower than the Workers' Compensation rate at which you are entitled to be paid. This would mean that the insurance company would owe you a lump sum check for the amount of the arrearage in your Workers' Compensation benefits. However, it is also possible that the Form 22 will show that you have been paid Workers' Compensation benefits at a rate higher than what you are legally entitled to receive. The insurance company would most likely demand immediate repayment in full of the overpayment, and it may demand that it be entitled to withhold your entire Workers' Compensation checks until the arrearage is paid in full.

If you would like us to request that your employer provide us with a Form 22, you should be prepared for the possibility that the insurance company will assess an overpayment against you if it finds that you have been paid Workers' Compensation benefits at a rate greater than what the Form 22 says you should have been receiving. With this in mind, please indicate in the space below

Mr. Phlat Baroque
March 6, 2003
Page 2

whether you wish us to request a Form 22 and return this letter to me in the enclosed self-addressed stamped envelope.

If you have any questions, please feel free to give me a call.

Sincerely,
CRUMLEY & ASSOCIATES, P.C.

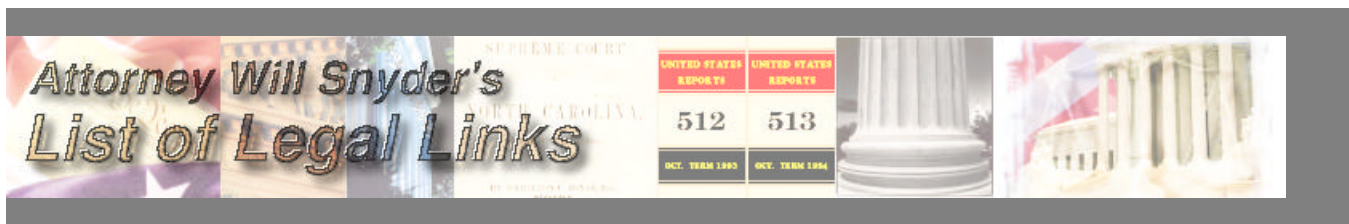
J. William Snyder, Jr.
Attorney At Law
Board Certified Workers' Compensation Specialist

Enclosure

_____ I would like you to request a Form 22 to document my average weekly wage, and I understand the insurance company may assess me with an overpayment if the Form 22 documents that I have received Workers' Compensation benefits at a rate higher than which I was entitled to be paid.

_____ No, I do not wish for you to request a Form 22 to document my average weekly wage.

Mr. Phlat Baroque

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- [America Online](#)
- [justice.com](#)
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- [Crumley & Associates, P.C. \(off-site\)](#)
- [Crumley & Associates, P.C. \(on-site\)](#)



- [Intranet](#) (Only works on the Crumley network)
- [Main Website](#)

Will Snyder's Attorney Helper Programs

This page contains a link to a secure web server on which are hosted a suite of web-based programs that perform calculations that may be useful to the plaintiffs' attorneys who handle workers' compensation, social security, and personal injury cases. Currently, the suite features programs that perform the following calculations:

- SSDI Workers' Compensation Offset Calculation
- Lifetime clincher lump sum proration
- Permanent Total Disability case value estimate
- Temporary Partial Disability case value estimate
- Number of weeks between two dates
- Present Day Value of a yearly lump sum of money over a specified number of years at a specified interest rate
- [Calculate interest on NCIC full Commission awards of total disability compensation](#)

By popular demand, I am making the NCIC full Commission award interest calculation program available for use by everyone. Click on the description above to access the program. I am also releasing this program under the terms of the [GNU GPL](#). The program is written in Perl, and it is designed to run on a web server. Click [here](#) to view the program.

Access to the other programs is by invitation only. If you are interested in accessing these programs, please send email to Will at jwsnyder@jwsnyder.com to be considered for an invitation. Only verified members of the NC Academy of Trial Lawyers are eligible to be invited to use the suite of programs. If you already have an account to access the programs, please click on the link below:

[Will Snyder's Attorney Helper Programs](#)



CODE: 223
I.C. NO. 177919PAGE

I.C. NO. 177919. TRACY W. MOORE, Employee, Plaintiff v. STANDARD MINERAL COMPANY, Employer, CNA INSURANCE COMPANY, Carrier, Defendants. OPINION AND AWARD Written for the Full Commission by LAURA KRANIFELD MAVRETIC, Commissioner. Filed 19 March 1998.

NORTH CAROLINA INDUSTRIAL COMMISSION

I.C. NO. 177919

TRACY W. MOORE,

)

Employee,)

Plaintiff;)OPINION AND AWARD

)FOR THE FULL COMMISSION

v.

)

)B Y

STANDARD MINERAL COMPANY,

)

Employer;)LAURA KRANIFELD MAVRETIC

)COMMISSIONER

CNA INSURANCE COMPANY,

)

Carrier;)

Defendants.)

FILED: 19 March 1998

The award of Deputy Commissioner Douglas E. Berger, filed August 6, 1997, is being reviewed by the Full Commission, pursuant to N.C.G.S. 97-85, upon application of Plaintiff. The case came on for review before the Full Commission on January 12, 1997.

This case was initially heard before the Deputy Commissioner in Carthage on March 13, 1997.

APPEARANCES

Plaintiff:Lore & McClearan; Raleigh, North Carolina; R. James Lore, appearing.

Defendants:Young, Moore & Henderson; Raleigh, North Carolina; Joseph Williford, appearing.

*** * * * ***

The undersigned have reviewed the prior Opinion and Award based upon the record of the proceedings before the Deputy Commissioner and the briefs and oral arguments before the Full Commission.

The appealing party has shown good grounds to reconsider the evidence. However, upon reconsideration of the evidence, the undersigned reach the same facts and conclusions as those reached by the Deputy Commissioner with some minor technical modifications. Neither party here requested the Full Commission to receive further evidence or to rehear the parties or their representatives. The Full Commission, in their discretion, have determined that there are no good grounds in this case to receive further evidence or to rehear the parties or their representatives, as sufficient convincing evidence exists in the record to support their findings of fact, conclusions of law, and ultimate order.

Accordingly, the Full Commission finds as fact and concludes as matters of law the following, which were entered into by the parties as

STIPULATIONS

- 1.The Pre-Trial Agreement with ten attachments was marked as stipulated exhibit 1 and received into evidence.**
- 2.A set of stipulations including an eleventh attachment to the Pre-Trial Agreement was marked as stipulated exhibit 2 and received into evidence.**
- 3.Defendants supplemental answers to plaintiffs interrogatories have been marked as stipulated exhibit 3 and received into evidence.**
- 4.The chart prepared by counsel for the plaintiff is based upon compiling stipulated facts by both parties and admissions by the defendants. The Deputy Commissioner has marked this chart as courts exhibit 1, and received it into evidence.**

*** * * * ***

The Full Commission adopts the findings of fact found by the Deputy Commissioner as follows:

FINDINGS OF FACT

- 1. There is insufficient evidence of record from which to prove by its greater weight that plaintiff could have earned compound interest weekly at a rate of 8% per annum during the time period beginning August 18, 1992 to June 4, 1996.**
- 2. There is insufficient evidence of record from which to prove by its greater weight that plaintiff could have earned compound interest either daily, weekly or yearly at an interest rate that would have yielded a greater amount than an investment of the compensation owed to her earning simple interest at a rate of 8% per annum during the time period beginning August 18, 1992 to June 4, 1996.**
- 3. The defendant-carrier did not pay the properly submitted bills identified in courts exhibit 1 within sixty days of the day that the defendant-carrier received each of these bills. These bills were for services rendered by plaintiffs healthcare providers. The Commission takes judicial notice that the defendant-carrier was responsible for making direct reimbursement to the providers for these bills. The healthcare provider or the defendant-carrier had to submit these bills to the Industrial Commission for approval.**
- 4. The defendant-carrier did not pay for medical treatment provided from June 7 through June 11, 1996 by Pinehurst Medical Clinic, Moore Regional Hospital, and Dr. Wolf because the defendant-carrier believed that the chest pains that plaintiff was experiencing were unrelated to her compensable occupational disease. The defendant-carrier did not consult any medical experts that supported its position to deny payment of these bills during the sixty days following proper submission of these bills to the defendant-carrier.**
- 5. On December 19, 1996, the defendant-carrier received a letter from Dr. John Krahnert with the Pinehurst Surgical Clinic that explained that the treatment received by plaintiff from June 7 through June 11, 1996 was provided in an effort to rule out the possibility that plaintiffs chest pain at that time might have been a result of cardiac ischemia as opposed to his compensable occupational disease. Dr. Krahnert opined that the chest pains that plaintiff was experiencing during this time period were not a result of cardiac ischemia, but were instead a symptom of the intercostal neuritis that plaintiff has continued to experience as a result of the thoracotomy surgery he received for his compensable occupational silicosis. Dr. Krahnert reported that on July 18, 1996 the plaintiff received an intercostal nerve block injection for his chest pain. The defendant-carrier decided to pay the bills for the time period from June 7 through June 11, 1996 after receiving this written opinion by Dr. Krahnert. The bills submitted by Dr. Wolf were paid on January 31, 1997. The bills submitted by Moore Regional Hospital and Pinehurst Medical Clinic for treatment provided during this time period were paid on February 17, 1997.**
- 6. No justification was provided by the defendant-carrier as to why properly submitted bills for services rendered at the Pinehurst Surgical Clinic on June 6, 1996 and July 18, 1996 were not paid for until after the scheduled hearing date of March 13, 1997. The failure to pay these two bills until after the hearing date of March 13, 1997 is the result of stubborn, unfounded litigiousness. A reasonable attorneys fee to be assessed against the defendant-carrier for plaintiffs counsels efforts to obtain payment of these bills is \$1,000.00.**
- 7. The bills set forth in courts exhibit 1 were for treatment rendered after the Court of Appeals rendered its decision in this matter on May 7, 1996.**

* * * * *

Based upon the findings of fact, the Full Commission concludes as follows:

CONCLUSIONS OF LAW

1. Plaintiff is entitled to payment of interest on the final award in this matter pursuant to N.C. Gen. Stat. 97-86.2. One of the goals in providing interest as part of an award is to prevent unjust enrichment to defendants for the use value of money owed to the plaintiff. If the defendants receive a greater return on a prudent investment of plaintiff's money that is greater than what the defendants would owe in interest to the plaintiff based upon the statutory interest rate, then the defendants would be unjustly enriched by delaying payment of an award to a plaintiff. The Supreme Court in *Childress v. Trion*, 125 N.C. App. 588, 481 S. E. 2d 697 (1997) has established that there is a rebuttable presumption that an award of simple interest based upon the statutory rate of 8% per annum is reasonable in the context of condemnation proceedings. The Supreme Court has set forth a prudent investor standard whereby a property owner who has had his property taken by state action can rebut this presumption by showing that prevailing market conditions would have allowed the property owner to obtain compound interest in the marketplace. The property owner must also show that the compound interest would be based upon an interest rate available in the marketplace. In order to prevent unjust enrichment to the defendants in a workers compensation award, plaintiffs should have the opportunity to show that they could have earned compound interest at a rate that would have yielded a greater return than an award of simple interest based upon the statutory amount of 8% per annum. However, in the case *sub judice*, plaintiff has failed to show by the greater weight of the evidence that she could have obtained compound interest at a rate in the marketplace that would have yielded a larger amount than the simple interest based upon the statutory amount of 8% per annum that she has already received from the defendants. N.C. Gen. Stat. 97-86.2; N.C. Gen. Stat. 24.1; *Childress v. Trion*, 125 N.C. App. 588, 481 S. E. 2d 697 (1997); *Lea Company v. N.C. Board of Transportation*, 317 N.C. 254, 345 S.E. 2d 355 (1986).

2. A ten percent penalty shall be added to bills for medical services properly submitted to the defendant-carrier that have not been paid within sixty days of receipt by an insurer responsible for direct reimbursement unless this penalty is excused by the Industrial Commission. This penalty shall be paid to the healthcare provider that provided the unpaid services rendered. N.C. Gen. Stat. 97-18; Industrial Commission Rule 407.

3. The hearing in this matter was brought in part because of the defendants failure to pay the medical bills for services rendered by the Pinehurst Surgical Clinic on June 6, 1996 and July 18, 1996. The defense of the failure to pay these bills in a timely manner was based upon stubborn, unfounded litigiousness. N.C. Gen. Stat. 97-88.1; *Sparks v. Mountain Breeze Restaurant*, 55 N.C. App. 663, 286 S.E. 2d 575 (1982).

4. Plaintiff is not entitled to receive interest on the medical expenses as listed in courts exhibit 1. N.C. Gen. Stat. 97-86.2.

* * * * *

Based on the foregoing findings of fact and conclusions of law, the Full Commission affirms the holding of the Deputy Commissioner and enters the following:

A W A R D

1. Defendants shall pay a ten percent penalty in the amount of \$71.60 to Pinehurst Surgical Clinic for the services rendered on June 6, 1996, June 20, 1996 and July 18, 1996.
 2. Defendants shall pay a ten percent penalty in the amount of \$104.50 to Moore Regional Hospital for the services rendered on June 10, 1996.
 3. Defendants shall pay a ten percent penalty in the amount of \$15.40 to Dr. Wolf for the services rendered on July 18, 1996.
 4. Defendants shall pay an attorneys fee in the amount of \$1000.00 to counsel for the plaintiff.
 5. Plaintiffs claim for interest compounded weekly on all past due indemnity paid by the defendants, and medical bills paid late is **HEREBY DENIED**.
 6. Plaintiffs claim for interest on the bills as listed in courts exhibit 1 is **HEREBY DENIED**.
 7. Each side shall pay its own costs of this appeal.
- This is the ____ day of January, 1998.

S/

LAURA KRANIFELD MAVRETIC

COMMISSIONER

CONCURRING:

S/
J. HOWARD BUNN, JR.
CHAIRMAN

S/
RENEE C. RIGGSBEE
COMMISSIONER



Code: 223
I.C. No. 241740Page

I.C. NO. 241740. ROBERT MOORE, Employee, Plaintiff v. FOAM EX, Employer, SELF-INSURED (AMERICAN INTERNATIONAL ADJUSTING COMPANY, Servicing Agent), Defendant. N.C. Industrial Commission OPINION AND ORDER Written for the Full Commission by THOMAS J. BOLCH, Commissioner. Filed 1 April 1999.

This matter was reviewed by the Full Commission on 12 March 1999 upon the appeal of plaintiff from an Opinion and Award by Deputy Commissioner Lorrie L. Dollar, filed 29 September 1998. The sole issue was the correct calculation of interest owed on the final award.

APPEARANCES

Plaintiff: Pressly, Thomas & Conley, Attorneys, Statesville, North Carolina; Gary W. Thomas, counsel of record.

Defendant: Hedrick, Eatman, Gardner & Kincheloe, Attorneys, Charlotte, North Carolina; Hatcher B. Kincheloe, counsel of record.

The Full Commission has reviewed the prior Opinion and Award based upon the record of the proceedings before Deputy Commissioner Lorrie Dollar and the briefs before the Full Commission. The appealing party has shown good ground to reconsider the evidence in this matter. Having reconsidered the evidence of record, the Full Commission modifies and affirms the decision of Deputy Commissioner Dollar, as follows.

The Full Commission finds as fact and concludes as matters of law the following, which were entered into by the parties as:

STIPULATIONS

1. This case was heard initially before Deputy Commissioner William Haigh on September 13, 1994.
2. Judicial Notice is taken of the Opinion and Award, which was filed on February 1, 1997 by Deputy Commissioner Haigh.
3. Judicial Notice is taken of the Opinion and Award filed on September 10, 1997 by the Full Commission.
4. The parties stipulate that the date of payment is October 29, 1997.
5. The defendant has paid the principal amount of compensation owed pursuant to the Opinion and Award filed by the Full Commission on September 10, 1997 in the amount of \$97,611.01.

* * * * *

FINDINGS OF FACT

1. Subsequent to the entry of the Full Commissions Award affirming benefits for Employee-Plaintiff, the adjusting company for EmployerDefendant forwarded to Plaintiffs counsel a sum representing what it calculated as compensation owed and interest owed. The amounts payable for compensation were distributed to EmployeePlaintiff. EmployeePlaintiffs counsel represented to Defendant and to defense counsel that the remaining sum, payable as interest, remains in Plaintiffs Counsels Trust Account pending a decision by the Industrial Commission as to the proper calculation and payment of interest due.
2. Prior to hearing, counsel for the parties conferred with Deputy Commissioner Dollar advising that there was no evidence to submit other than some brief stipulations which were entered into by the parties and are set forth above as STIPULATIONS.
3. Thereafter, Deputy Commissioner Dollar entered a Decision September 29, 1998 awarding the interest for payments as they became due after the September 13, 1994, hearing before Deputy Commissioner Haigh in the amount of \$6,458.04. Deputy Commissioner Dollar did not enter an Order for interest on the compensation which had accrued as of the date of hearing before Deputy Commissioner Haigh, in the amount of \$11,971.38.
4. To calculate the amount of compensation due from the date compensation begins (10/15/91) to the date of hearing (9/13/94) count the number of weeks from the date compensation begins to the date of hearing (152) and multiply by the compensation rate (\$314.07). This calculation yields \$47, 738.64 of compensation due. Interest on that amount is calculated by multiplying the weekly interest rate (.08 divided by 52, or 0.001538462) times the number of weeks from the date of hearing to the date paid (163) times the compensation due (\$47,738.64). This calculation yields interest of \$11,971.38.
5. To calculate the amount of compensation due from the date of hearing (9/13/94) to the date compensation was paid (10/29/97), count the number of weeks (163) and multiply by the compensation rate(\$314.07). This calculation yields \$51,193.41 of compensation due. Since each separate weekly payment has a different time period for calculating interest, calculating interest on the compensation due after the hearing date is slightly more complicated than calculating it on payments that accrued before the hearing date. Interest is calculated on each separate week and the weekly interest is summed. This amount is \$6,458.25, which is very close to the \$6,458.04 calculated and awarded by Deputy Commissioner Dollar. Her error was in not awarding any interest for compensation due for the period from the date compensation was to begin to the date of the hearing before Deputy Commissioner Haigh, which interest amounts to \$11,971.38.
6. Neither plaintiff nor defendant is entitled to attorneys fees pursuant to . N.C. GEN. STAT. 97-88.1. While defendants position on the interest was very close to what is decided in this Opinion and Award, plaintiffs position had some logical relation to N.C. GEN. STAT. 97-86.2.

* * * * *

Based upon the foregoing Stipulations and Findings of Fact, the Full Commission reaches the following:

CONCLUSIONS OF LAW

1. In *Strickland v. Carolina Classic Catfish, Inc.*, 127 N.C. App. 615, 492 S.E.2d 362 (1997), *disc. review denied*, 347 N.C. 584 (1998), the North Carolina Court of Appeals held that "[I]n any workers compensation case in which an Order issued either granting or denying an award to the employee and where there is an appeal resulting in an ultimate award to the employee, the insurance carrier or employer shall pay interest on the final award or unpaid portion thereof from the date of the initial hearing or the claim, until paid at the legal rate of interest provided in [N.C. GEN. STAT.] 24-1.

2. The plaintiff is entitled to payment of interest at the rate of eight (8%) percent on the final award or unpaid portion thereof from the date of the initial hearing of the claim. N.C. GEN. STAT. 97-86.2.

3. Under . N.C. GEN. STAT. 97-86.2 and the cases interpreting it, there are two separate periods and methods that apply.

The first period is the period from the date compensation was to begin to the date of the initial hearing before the Deputy Commissioner. For that period, the method is to multiply the number of weeks times the compensation rate to derive the total compensation due. Then count the number of weeks from the date of the initial hearing to the date compensation was paid. Multiply the number of weeks thus derived by the weekly interest rate times the total compensation due for that period. The resulting amount is the interest due for that period of time.

The second period is the date of the initial hearing before the Deputy Commissioner to the date the compensation and interest is paid. For that period, each weekly compensation payment due is time weighted and multiplied by the weekly interest rate. The interest thus calculated on each weekly compensation payment is then summed and the resulting amount is the interest due for that period of time.

4. Defendant is not entitled to have its attorneys fee paid by Plaintiff pursuant to N.C. GEN. STAT. 97-88.1.

* * * * *

Based upon the foregoing Stipulations, Findings of Fact and Conclusions of Law, the Full Commission enters the following:

ORDER

1. The defendant shall pay simple interest to the plaintiff at the rate of eight (8%) percent on the compensation due from the date compensation began to the date of the initial hearing before Deputy Commissioner Haigh in the total amount of \$11,971.38 (with the interest calculated from the date of hearing until paid) and shall pay simple interest to the plaintiff at the rate of eight (8%) percent on the compensation due from the date of the initial hearing before Deputy Commissioner Haigh until the date the compensation and interest was paid in the amount of \$6,458.25. This second interest is

calculated from the date each compensation payment was due (after the initial hearing) to the date paid. To the extent that Defendant has overpaid such interest, plaintiffs counsel shall refund the overpayment to Defendant from his trust account. To the extent that Defendant has underpaid such interest, Defendant shall immediately pay the difference.

2.No additional costs are assessed.

This 29th day of March 1999.

S/

THOMAS J. BOLCH

COMMISSIONER

CONCURRING:

S/

BERNADINE S. BALLANCE

COMMISSIONER

S/

LAURA KRANIFELD MAVRETIC

COMMISSIONER

[[Go to the previous document.](#)]

NCIC full Commission award interest calculation program: data entry form

This program calculates the interest due on total disability compensation due on awards of the NCIC full Commission pursuant to [N.C. Gen. Stat. Sec. 97-86.2](#), which mandates that an employer that is ordered to pay compensation pursuant to an award of the full Commission pay interest on the award at the legal rate prescribed by N.C. Gen. Stat. Sec. 24-1. The rate prescribed by [N.C. Gen. Stat. Sec. 24-1](#) is "eight (8%) per annum". Although the statutes are silent about whether simple or compound interest is to be paid, the Commission in [Tracy W. Moore v. Standard Mineral Company](#), I.C. File No. 177919 (March 19, 1998) held that 8% simple interest (Math formula: Interest = Principal X Rate X Time) is to be paid unless the plaintiff can prove that s/he could have obtained a greater return than 8% simple interest on the compensation awarded. The method used by this program is modeled after the method used by Commissioner Thomas Bolch to calculate the interest on compensation due in [Robert Moore v. Foam Ex](#), I.C. File No. 241740 (April 1, 1999) except that interest on fractional weeks of compensation is also calculated. **This program assumes a continuous period of total disability between the initial date of disability and the date of payment.**

First date of disability (start of award) (MM/DD/YYYY):	10/15/1991
Date of initial hearing (MM/DD/YYYY):	9/13/1994
Date of payment (MM/DD/YYYY):	10/29/1997
Weekly compensation rate:	314.07

Run interest calculation	Clear Form
--------------------------	------------

NCIC full Commission award interest calculation program

This program calculates the interest due on total disability compensation due on awards of the NCIC full Commission pursuant to [N.C. Gen. Stat. Sec. 97-86.2](#), which mandates that an employer that is ordered to pay compensation pursuant to an award of the full Commission pay interest on the award at the legal rate prescribed by N.C. Gen. Stat. Sec. 24-1. The rate prescribed by [N.C. Gen. Stat. Sec. 24-1](#) is "eight (8%) per annum". Although the statutes are silent about whether simple or compound interest is to be paid, the Commission in [Tracy W. Moore v. Standard Mineral Company](#), I.C. File No. 177919 (March 19, 1998) held that 8% simple interest (Math formula: Interest = Principal X Rate X Time) is to be paid unless the plaintiff can prove that s/he could have obtained a greater return than 8% simple interest on the compensation awarded. The method used by this program is modeled after the method used by Commissioner Thomas Bolch to calculate the interest on compensation due in [Robert Moore v. Foam Ex](#), I.C. File No. 241740 (April 1, 1999) except that interest on fractional weeks of compensation is also calculated. **This program assumes a continuous period of total disability between the initial date of disability and the date of payment.**

First date of disability (start date of award):	Tuesday, October 15, 1991
Date of initial hearing:	Tuesday, September 13, 1994
Date of payment:	Wednesday, October 29, 1997
Number of weeks from date of disability to date of initial hearing:	152.00
Number of weeks from date of initial hearing to date of payment:	163.14
Worker's Workers' compensation rate:	\$314.07
Interest due on pre-hearing compensation (8% simple interest):	\$11981.88
Interest due on post-hearing compensation (8% simple interest with each week's compensation amount weighted for the number of weeks between the week it is due and the payment date):	\$6469.51
Total interest due as of date of payment:	\$18451.39

*Results generated by wcinterest.pl, written by J. William Snyder, Jr. (jwsnyder@jwsnyder.com)
November 2001.*

Date this calculation was generated: Wednesday, March 05, 2003. The calculations produced by this program are render "AS IS" with no warranty of any kind whatsoever, even if the calculation turns out to be inaccurate. The user of this program assumes all responsibility and risk for the use of the figures generated by this program.

wcinterest

```
#!/usr/bin/perl

# script: wcinterest.pl
# Copyright (C) 2002 J. William Snyder, Jr.
# This program is free software; you can redistribute it and/or modify
# it under the terms of the GNU General Public License as published by
# the Free Software Foundation; either version 2 of the License, or
# (at your option) any later version.
# This program is distributed in the hope that it will be useful,
# but WITHOUT ANY WARRANTY; without even the implied warranty of
# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
# GNU General Public License for more details.
# You should have received a copy of the GNU General Public License
# along with this program; if not, write to the Free Software
# Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

use strict;
use CGI qw/:standard/;
use POSIX;

my $stdstartmon;
my $stdstartday;
my $stdstartyear;
my $stdstartraw;

my $doihmon;
my $doihday;
my $doihyear;
my $doihraw;

my $dopmon;
my $dopday;
my $dopyear;
my $dopraw;

my $stdthruh;
my $stdthruhgi nt;
my $stdthruhpl usi nt;

my $stdfromhg;
my $stdfromhgi nt;
my $stdfromhgpl usi nt;

my $stdthruhnumsecs;
my $stdthruhnumweeks;

my $stdfromhgnumsecs;
my $stdfromhgnumweeks;

my $comprate;

my $interest = 0;
my $intratewly = 0.001538462; # 8% per annum reduced to a weekly rate
my $n;
my $i;

sub legal background
{
    print hr;
    print "<font size=-1>";
    print "This program calculates the interest due on total disability
```

wcinterest

```
compensation due on awards ";
    print "of the NCIC full Commission pursuant to <a
href=http://www.ncleg.net/Statutes/GeneralStatutes/HTML/BySection/Chapter_97/GS_97-8
6.2.html>N. C. Gen. Stat. Sec. 97-86.2</a>,
which mandates ";
    print "that an employer that is ordered to pay compensation pursuant to an
award of the ";
    print "full Commission pay interest on the award at the legal rate
prescribed by N. C. Gen. Stat. Sec. ";
    print "24-1. The rate prescribed by <a
href=http://www.ncleg.net/Statutes/GeneralStatutes/HTML/BySection/Chapter_24/GS_24-1
.html>N. C. Gen. Stat. Sec. 24-1</a>
is \"eight \%(8%%) per annum\". Although the statutes ";
    print "are silent about whether simple or compound interest is to be paid,
the Commission ";
    print "in <a
href=http://149.168.62.11/otcgi/11scgi60.exe?DB=0&ACTION=View&QUERY=%31%37%37%39%31%
39&OP=and&SUBSET=SUBSET&FROM=1&SIZE=10&ITEM=1>Tracy
W. Moore v. Standard Mineral Company</a>, I. C. File No. 177919 (March ";
    print "19, 1998) held that 8% simple interest (Math formula: Interest =
Principal X Rate X Time) ";
    print "is to be paid unless the plaintiff can prove that s/he could have
obtained a greater ";
    print "return than 8% simple interest on the compensation awarded. ";
    print "The method used by this program is modeled after the method used by
Commissioner Thomas ";
    print "Bolch to calculate the interest on compensation due in <a
href=http://149.168.62.11/otcgi/11scgi60.exe?DB=0&ACTION=View&QUERY=%32%34%31%37%34%
30&OP=and&SUBSET=SUBSET&FROM=1&SIZE=10&ITEM=2>Robert
Moore v. Foam Ex</a>, ";
    print "I. C. File No. 241740 (April 1, 1999) except that interest on
fractional ";
    print "weeks of compensation is also calculated. <b>This program assumes a
continuous period of ";
    print "total disability between the initial date of disability and the date
of payment.</b> ";
    print "<font size=+0>";
    print hr;
}

if (!param()) {
    print header;
    print "<body bgcolor=#FFFFFF>\n";
    print "<center>";
    print "<h1>NCIC full Commission award interest calculation program: data
entry form</h1>";
    print "</center>";
    &legal background;
    print startform("GET", "", "application/x-www-form-urlencoded");
    print "<TABLE BORDER=0 WIDTH=800 ALIGN=CENTER BGCOLOR=#COFFFF>";
    print "<tr>";
    print "<td width=600>";
    print "First date of disability (start of award) (MM/DD/YYYY): ";
    print "</td>";
    print "<td width=200>";
    print textfield('ttdstartmon', '', 2, 2), "/",
textfield('ttdstartday', '', 2, 2), "/", textfield('ttdstartyear', '', 4, 4);
    print "</td>";
    print "</tr>";
    print "<tr>";
    print "<td width=600>";
    print "Date of initial hearing (MM/DD/YYYY): ";
    print "</td>";
```

```

                                wciinterest
    print "<td width=200>";
    print textfield('doi hmon', '', 2, 2), "/", textfield('doi hday', '', 2, 2), "/",
textfield('doi hyear', '', 4, 4);
    print "</td>";
    print "</tr>";
    print "<tr>";
    print "<td width=600>";
    print "Date of payment (MM/DD/YYYY): ";
    print "</td>";
    print "<td width=200>";
    print textfield('dopmon', '', 2, 2), "/", textfield('dopday', '', 2, 2), "/",
textfield('dopyear', '', 4, 4);
    print "</td>";
    print "</tr>";
    print "<tr>";
    print "<td width=600>";
    print "Weekly compensation rate: ";
    print "</td>";
    print "<td width=200>";
    print textfield('comprate', '', 9, 9);
    print "</td>";
    print "</tr>";
    print "</table>";
    print br;
    print submit("Run interest calculation");
    print " ";
    print reset("Clear Form");
    print end_form;
    print hr;

```

```

}
if (param()) {
    $comprate = param('comprate');

    $ttdstartmon = param('ttdstartmon') - 1;
    $ttdstartday = param('ttdstartday');
    $ttdstartyear = param('ttdstartyear') - 1900;
    $ttdstartraw = POSIX::mktime(0, 0, 0, $ttdstartday, $ttdstartmon,
$ttdstartyear);

    $doi hmon = param('doi hmon') - 1;
    $doi hday = param('doi hday');
    $doi hyear = param('doi hyear') - 1900;
    $doi hraw = POSIX::mktime(0, 0, 0, $doi hday, $doi hmon, $doi hyear);

    $dopmon = param('dopmon') - 1;
    $dopday = param('dopday');
    $dopyear = param('dopyear') - 1900;
    $dopraw = POSIX::mktime(0, 0, 0, $dopday, $dopmon, $dopyear);

    $ttdthruhghnumsecs = POSIX::difftime($doi hraw, $ttdstartraw);
    $ttdthruhghnumweeks = $ttdthruhghnumsecs / (60 * 60 * 24 * 7);
    $ttdthruhgh = $comprate * $ttdthruhghnumweeks;

    $ttdfromhghnumsecs = POSIX::difftime($dopraw, $doi hraw);
    $ttdfromhghnumweeks = $ttdfromhghnumsecs / (60 * 60 * 24 * 7);

    $ttdthruhghint = $ttdthruhgh * $inratewkly * $ttdfromhghnumweeks;

    $n = $ttdfromhghnumweeks;
    for ( $n; $n>0.86; $n--)
    {
        $ttdfromhghint = $ttdfromhghint + ($comprate * $inratewkly * $n);
    }
}

```

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}

```
Sttdfromhgint = Sttdfromhgint + ($comprate * (Sttdfromhgnumweeks -  
POSIX:: floor(Sttdfromhgnumweeks))) * $intratewkly * (Sttdfromhgnumweeks -  
POSIX:: floor(Sttdfromhgnumweeks));
```

```
$interest = Sttdthruhgent + Sttdfromhgint;
```

```
print header;  
print "<body bgcolor=#FFFFFF>\n";  
print "<center>";  
print "<h1>NCIC full Commission award interest calculation program</h1>";  
print "</center>";  
&legal background;  
print "<center>";  
print "<TABLE BORDER=10 WIDTH=800>";  
print "<tr>";  
print "<td width=400>";  
print "First date of disability \ (start date of award)\: ";  
print "</td>";  
print "<td width=400 align=center>";  
print strftime "%A, %B %d, %Y", localtime($stdstartraw);  
print "</td>";  
print "</tr>";  
print "<tr>";  
print "<td width=400>";  
print "Date of initial hearing: ";  
print "</td>";  
print "<td width=400 align=center>";  
print strftime "%A, %B %d, %Y", localtime($doihraw);  
print "</td>";  
print "</tr>";  
print "<tr>";  
print "<td width=400>";  
print "Date of payment: ";  
print "</td>";  
print "<td width=400 align=center>";  
print strftime "%A, %B %d, %Y", localtime($dopraw);  
print "</td>";  
print "</tr>";  
print "<tr>";  
print "<td width=400>";  
print "Number of weeks from date of disability to date of initial hearing:  
";  
print "</td>";  
print "<td width=400 align=center>";  
printf "%.2f", $stdthruhgent;  
print "</td>";  
print "</tr>";  
print "<tr>";  
print "<td width=400>";  
print "Number of weeks from date of initial hearing to date of payment: ";  
print "</td>";  
print "<td width=400 align=center>";  
printf "%.2f", $stdfromhgnumweeks;  
print "</td>";  
print "</tr>";  
print "<tr>";  
print "<td width=400>";  
print "Worker\'s Workers\' compensation rate: ";  
print "</td>";  
print "<td width=400 align=center>";
```

```

                                wciinterest
printf "\$%. 2f", $comprate;
print "</td>";
print "</tr>";
print "<tr>";
print "<td width=400>";
print "Interest due on pre-hearing compensation \ (8\% simple interest\): ";
print "</td>";
print "<td width=400 align=center>";
printf "\$%. 2f", $stdthruhgingt;
print "</td>";
print "</tr>";
print "<tr>";
print "<td width=400>";
print "Interest due on post-hearing compensation \ (8% simple interest with
each week\'s
compensation amount weighted for the number of weeks between the week it is due and
the payment date\):
";
    print "</td>";
    print "<td width=400 align=center>";
    printf "\$%. 2f", $stdfromhgingt;
    print "</td>";
    print "</tr>";
    print "<tr>";
    print "<td width=400>";
    print "Total interest due as of date of payment: ";
    print "</td>";
    print "<td width=400 align=center>";
    printf "\$%. 2f", $interest;
    print "</td>";
    print "</tr>";

    print "</table>";
    print "<hr>";
    print "<i>";
    print "Results generated by wciinterest.pl, written by J. William Snyder, Jr.
(<a
href=mailto:jwsnyder\@jwsnyder.com>jwsnyder\@jwsnyder.com</a>) November
2001. <br>";
    print "Date this calculation was generated: ";
    print strftime "%A, %B %d, %Y", localtime(time);
    print ". ";
    print "The calculations produced by this program are rendered \ "AS
IS\" with no warranty of any kind whatsoever, even if the calculation
turns out to be inaccurate. The user of this program assumes all responsibility and
risk for the use of the figures generated by this program ";
    print "</i>";

    print "</center>";
    print "</body>";
    print "</html>";
}

```