Regular FERS Employee Basic Retirement Calculator

Regular FERS Retirement Calculator Instructions

This calculator is designed to provide a very basic estimate of what a person's Regular FERS retirement benefits may be, based upon specific information provided by the user. This calculator is **_NOT_** meant to provide exact benefits for your specific circumstances, and it should **_NOT_** be used to determine your benefits. Additionally, this calculator is **_NOT_** to be considered legal or financial advice. It is intended for entertainment value only and you should seek out this information on your own and verify it is correct. It is merely meant to provide a "ballpark" estimate of your potential benefits. You should contact your personnel office for official agency estimates of your FERS retirement benefits.

I highly recommend everyone interested in incredibly detailed information concerning the FERS Retirement go to Amazon.com and get Dan Jamison's FERSGUIDE Book. Both Dan and the FERSGuide Book were instrumental in the creation of this calculator and I use the info from the book to update the calculator every year. I was a member at Dan's FERSGuide website for many years, and I believe his FERS Retirement info is excellent.

The Federal Employee Retirement System (FERS) replaced the Civil Service Retirement System (CSRS) in 1984 as the Federal Government's defined-benefit retirement system.[1]

FERS utilizes a three-tiered approach to retirement benefits by providing 1) a FERS defined-benefit annuity; 2) Social Security benefits; and 3) employee savings (through the Thrift Savings Plan (TSP)). These benefits are frequently referred to as the "benefit pyramid". Although CSRS allows non-matched TSP contributions, the CSRS defined-benefit annuity provided a very comfortable retirement without having to worry about Social Security's future or investing in the TSP and hoping the market rewarded one's investment decisions. The advent of FERS effectively transferred market risk from the federal government to the federal employee. [2]

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[1] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 13
[2] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 13

A Regular FERS retirement is comprised of four (4) components:

1) **Regular FERS Basic Annuity:**

Calculating your retirement benefit under FERS is pretty simple – it's either a 1% per year benefit credit, or a 1.1% per year benefit credit if you retire at age 62 with at least 20 years of service. Determining when you are eligible to begin receiving the benefit without penalty can be a little tricky.

Under FERS, you will receive a 1% per-year credit for each of your years of service creditable under FERS. For example, if you worked 20 years under FERS, you would receive (20 x 1%) = 20% of your High-3 basic pay. If you retire at age 62 with at least 20 years of creditable service, OPM will increase your per-year credit to 1.1% for each of your years of service, which would yield an additional 2% of your High-3 in the previous example, or 22% instead of 20%.

When you receive your benefits and what benefits you will receive is a little more complicated. OPM determines your retirement eligibility first by determining your Minimum Retirement Age (MRA) based on your year of birth. Anyone born in 1970 or after, MRA is 57.

Here is an overview of when you will receive your benefits and what benefits you will receive based on your age and years of service.

a) MRA & at least five (5) years of FERS Service = You will receive basic benefits at **age 62**. You will **NOT** receive the RAS.
b) MRA & at least ten (10) years of FERS Service = You will receive basic benefits at your **MRA** but the basic benefit will be permanently reduced by 5% for each year that you are under age 62. For example, if you retire at your MRA of 57 and you elect to begin your annuity immediately, you are five (5) years below age 62 and your annuity will be permanently reduced by (5x5%) or 25%. You would only receive 75% of your FERS basic benefit. ****NOTE** If you are in this category and you want to calculate your annuity amount if you defer receiving your annuity until age 60 with 20 years of service or age 62, there is new functionality that will allow you to (See below).**

To use this functionality, you should check the box labeled "Defer Annuity Until Age 60 w/20 years of Service or Age 62" (See below).

Once you check this box, it will calculate your annuity without any penalty for receiving before age 62 (See below).

c) MRA & at least twenty (20) years of FERS Service = You will receive basic benefits at **age 60** with no reduction for being under age 62. You will also receive the FERS RAS from age 60 to age 62.

d) MRA & at least thirty (30) years of FERS Service = You will receive basic benefits at your **MRA** with no reduction for being under age 62. You will also receive the FERS RAS from your MRA to age 62.

For General Schedule employees, your High-3 excludes night differential, allowances, bonuses, awards, and overtime. Wage Grade (WG) employees receive credit for night differential pay. The High-3 includes locality pay for all participants.[3]

The High-3 is a weighted-average calculation. If you were at your highest salary for only 1 month when you retired, that only counts for 1/36th of the High-3. I can't stress this enough. Many folks tell me they are staying on to work one day into the following year, or moving to a higher locality area for one month to increase their High-3 by the scheduled pay adjustment. This will have no effect on the High-3. It will have a small effect on your unused annual leave paid out to you, but that is small compared to the effect of not having your FERS annuity begin until 2/1 in this example. The High-3 does not have to be the last 36 months of service. It is a period of 36 consecutive months of service where your pay was the highest. Your High-3 is computed on the pay that you received where a FERS retirement deduction was taken.[4]

Former honorable military time is creditable under FERS, but a deposit must be made to your agency to "buy" those years of service into FERS. This time counts at the 1% per-year-of-service rate. Making a deposit into FERS for creditable military service can be a complex task and should be done with the assistance of a human-resources specialist at your agency. There are two (2) components to this deposit:

1) A fee based upon the percentage of total military base pay; and
2) An interest charge if the service deposit is made after the two (2) year grace period. The cost of buying back the service is a set percentage (usually 3%) multiplied by your base pay earned from your military service.[5]

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[3] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 14
[4] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 14
[5] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 20

The FERS Basic Annuity has a Spousal Benefit Survivor Annuity (SBSA) Option. The Spousal Benefit Survivor Annuity (SBSA) refers to the reduction in your FERS annuity monthly benefit that provides for the continuation of a portion of your benefits that will be paid to your spouse upon your untimely demise. *Without* a SBSA, when you die, your annuity "dies with you"—there is nothing paid to your surviving spouse. You select a SBSA at the time you retire, on your SF-3107, "Application for Immediate Retirement - FERS." You have 3 options for the SBSA:

1) A 10% reduction in your annuity that provides the surviving spouse with an annuity equal to 50% of the retiree's unreduced annuity, your surviving spouse **WILL** have FEHBP access if you were self-and-family or self-plus-spouse at the time of your death or

2) A 5% reduction in your annuity that provides the surviving spouse an annuity equal to 25% of the retiree's unreduced annuity and your surviving spouse **WILL** have FEHBP access if you were self-and-family or self-plus-spouse at the time of your death, or

3) 0% reduction in your annuity. This option requires the notarized signature of your spouse. Your spouse will **lose access** to FEHBP if you predecease your spouse, unless your spouse is also a federal employee with FEHBP access.

In order to skip the SBSA option under FERS, or to select the reduced-benefit 5%/25% option, you must obtain the notarized consent of your spouse on your retirement application for such an election. Also remember that **you must select the SBSA 5% or 10% option for your spouse to keep FEHBA (health) insurance if you die before your spouse**.[6]

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2) **FERS Retiree Annuity Supplement (RAS):**

The FERS Retiree Annuity Supplement (RAS) is unique to FERS. It is a payment from OPM ***in addition to*** the FERS basic-annuity payment. It is intended as a substitute for the Social Security portion of your total FERS benefits package, from 1) the date of retirement until you reach the age of 62 or 2) the age you become eligible for your full Social Security benefit.

The RAS stops as age 62 even if you elect to delay the receipt of Social Security benefits until a later age. Receiving this benefit is ***not*** an election – if you are eligible to receive it, it will be paid to you by OPM. This benefit is combined with the basic FERS annuity benefit and deposited into your bank account as a single monthly benefit payment.[7]

Like Social Security benefits, the RAS is subject to an earnings test, which means that the RAS is reduced if your earned (non-passive) income from wages or self-employment is higher than the allowable amount.[8] You will lose $1 of the RAS annual benefit for every $2 you receive in earned income (non-passive income) over $**22,320** per year (the amount for 2024 earnings; this amount is inflation adjusted each year).[9]

For 2024, the allowable amount is $**22,3230**. The earnings test does not kick in until your Minimum Retirement Age (MRA); typically, 56 or 57. For example, if you retire at 50, you will collect the RAS *without* an earnings test until your MRA. Retire at 57, and the SRS is earnings-tested right away.

Should you phase out of the RAS, but later stop working before age 62, you will be eligible to restart the RAS after you notify OPM. To apply for a reinstatement of your RAS benefits, you will need to send OPM copies of your most recent tax return and all related W-2s and Form 1099s, which are part of the return.[10]

In the same way that OPM lags in ending or reducing the RAS, there is also a lag in restarting it. You need a year of earnings below the income test level, currently $**22,320** (for 2024), for the RAS to be restarted because the previous year's earnings determine the amount of the RAS that can be paid. Restarting the RAS can be a very

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[7] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 27

[8] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 28

[9] The FERS Guide: Retirement Benefits Guide for SCE FERS by Dan Jamison (www.fersguide.com) – 2024 Update – Page 30

[10] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 30

time-consuming process that can take 8+ months with plenty of telephone calls and follow-up emails. Be very patient.[11]

There are no COLA adjustments applied to the FERS RAS[12].

Example of RAS Phase-out with a $12,000 Annual Payment[13]

Earned Income	Overage	RAS Lost in %	Annual RAS Lost	Monthly RAS Lost	Monthly RAS Paid	Annual RAS Paid
$22,320	$0	0.00%	$0	$0	$1,000	$12,000
$25,000	$2,680	11.17%	$1,340	$112	$888	$10,660
$30,000	$7,680	32.00%	$3,840	$320	$680	$8,160
$35,000	$12,680	52.83%	$6,340	$528	$472	$5,660
$40,000	$17,680	73.67%	$88,401	$737	$263	$3,160
$46,320	$24,000	100.00%	$12,000	$1,000	$0	$0

If you do separate prior to becoming eligible for full retirement benefits, you **will not** receive the Retiree Annuity Supplement (RAS). It will display zero (0) in **cell K28** and **cell AD28** will display that you are not eligible for the RAS.

[11] The FERS Guide: Retirement Benefits Guide for SCE by Dan Jamison (www.fersguide.com) – 2024 Update – Page 32

[12] The FERS Guide: Retirement Benefits Guide for Regular FERS by Dan Jamison (www.fersguide.com) – 2023 Update – Page 31

[13] The FERS Guide: Retirement Benefits Guide for SCE FERS by Dan Jamison (www.fersguide.com) – 2024 Update – Page 31

3) **Social Security:**

At age 62, you will lose your RAS payment, but you become eligible to receive your full Social Security benefits. You should review your annual Social Security Summary Statement for specific Social Security benefits.

4) **The Thrift Savings Plan (TSP):**

The TSP is a 401k plan that allows for employee contributions as well as agency matching funds. There are several withdrawal options upon separation from Government service. For a list of all TSP withdrawal options, please see the TSP Web Site Publication <u>Withdrawing Your TSP Account After Leaving Federal Service</u> at https://www.tsp.gov/PDF/formspubs/tspbk02.pdf

This calculator will use the **Equal Withdrawals over Time** option with the possibility of utilizing a one-time partial withdrawal.

Regular FERS Retirement Calculator Data Entry

*** IMPORTANT NOTE** - The Basic Calculator was designed to have all data entered from the top to the bottom. All cells requiring input are highlighted in ==YELLOW==. When data is entered into a yellow highlighted cell, the yellow highlight will go away. Several cells that have auto-calculating formulas will not calculate until data input cells above it have a value entered. If the data requested in any cell does not apply to you, please enter a zero (0). An entered zero (0) is different than a blank cell.*

1) Estimated Regular FERS Basic Annuity Percentage Computation

This section will provide an estimate of your annual FERS Basic Annuity *percentage*. The percentage of your high 3-year average salary you may receive is based on your years of service, military time bought back, and total accumulated sick hours. Starting in 2014, you can redeem unused sick hours at retirement for additional years-of-service credit.

   a. **Enter your FERS EOD Date and your Expected Retirement Date: (Cell J5 & K5)**

   Enter your **FERS** EOD date and your expected retirement date. By entering these two dates, the calculator will determine how many complete years and complete months of service you will have completed between you two dates.

   Your annuity percentage calculation is made by determining how many full years and full months of service you have since your **FERS EOD/SCD** date. Any extra days that do not make up a full month will be truncated. You get credit for complete months as well as complete years.

   As an example, if you will have 27 years, 9 months, and 17 days between your FERS EOD date and your entered retirement date, and you are under age 62, your percentage would be:

   27 x 1% = 27% + .75% for your 9 months, or

   27 +.75 = 27.75%

   b. **Enter any Military Buy Back Years and Months of Service: (Cell J6 & K6)**

   Enter any full years and full months of active-duty military time that you have "bought back" from the OPM. This "buy back" time is credited at the 1% per-year- of-service rate.

   c. **Enter you EXPECTED age at Retirement: (Cell J7)**

   Enter your expected age at the retirement date you entered in Cell K5.

d. **Enter you CURRENT Number of Sick Leave Hours: (Cell J11)**

Using your most recent pay statement from your NFC EPP Page, (https://www.nfc.usda.gov/epps/eplogin.aspx) enter your current number of sick leave hours. This will calculate how many hours of sick leave you will have on the date of your retirement that you entered above **assuming you don't use any sick leave prior to your retirement**.

Since January 1, 2014, FERS annuitants have received a 100% service credit for their unused sick leave. There are 2,087 hours in OPM's work year. That means if you retire with 2,087 hours of unused sick leave, you will receive an additional year of service credit. . **You must retire on an immediate annuity (one payable within 30 days of your last day at work) for unused sick leave to be counted for retirement credit.** All unused sick leave accumulates at the 1% per-year rate.[14]

OPM only gives service credit for sick leave hours in complete years and months. Any leftover sick leave days that are less than 30, will be dropped (lost). If you have 1 year, 1 month and 25 days of sick leave, you will only get credit for the 1 year and 1 month. The 25 days would be lost. The # of any expected sick days lost is now displayed on the <u>Basic Calculator</u> TAB in **cell AD12**. This is the number of SL days you can take prior to retirement without reducing your additional service credit percentage.

(Example: 3,048 hours of sick leave at retirement would calculate as 1 year; 5 months; and 16 CALENDAR days. Then you must convert the CALENDAR days to WORK days by multiplying the 16 CALENDAR days by .725 to calculate the number of WORK days (16 x .725 = 11). You could use the 11 days of sick leave, prior to retirement, and not reduce your additional service credit. If you don't use the extra days, you will lose them upon retirement).

Yrs of Service % ---->	47.42%		Total Annuity Credit (Service Time + Military Time + Sick Leave):
Hours	**Annuity %**		
2,644			
3,048	1.42%	<---** 11 Days of Available SL to use w/o Reducing Additional Service Credit **	

New functionality has been added to show the calculation of all annuity time credit (service time, military buy back time, and unused sick leave). Additionally, these calculations will also show the number of sick leave days that can be used, prior to retirement, without any loss of service credit. These calculations can be found in cells AE3 thru AO9.

Regular FERS Basic Retirement Calculator v2019.2

Estimated Regular FERS Basic Annuity Percentage Computation			
Category	EOD/SCD Date	Retirement Date	
Enter your **FERS EOD Date** or **FERS Service Computation Date (SCD), if you have Military Buy Back Time,** from your NFC FERS Personal Benefits Statement and your **Expected** Retirement Date:	07/31/89	12/31/22	
Estimated Total **Years and Months of Service** at Retirement (For Annuity Computation)	33	5	
	Yrs of Service % ---->	33.42%	
	Hours	Annuity %	
Enter your **CURRENT** Number of Sick Leave Hours (From Pay Statement):	2,644		
Estimated Total **Hours** of Sick Leave Redeeming for Time (**No Use of SL Prior to Retire**	2,992	1.42%	<---** 5 Days of Available SL to use w/o Reducing Additional Service Credit **
Total Estimated Annual Annuity %: ---------------->		34.83%	<--- ** Received at Your Minimum Retirement Age (MRA) with NO Reduction if Under Age 62 **

Calculation for Annuity Time Credit and Unused Sick Leave at Retirement	Years	Months	Calendar Days
Total Service Time (Between SCD Date and Retire Date):	33	5	1
OPM Calendar Days of SL Credit (2992 Hours of SL Divided by 5.8):			515.86
Total Sick Leave Annuity Credit:	1	5	7
Total Annuity Credit (Service Time + Military Time + Sick Leave):	34	10	8

e. **Total Estimated Annual Annuity %: (Cell K13)**

This is a self-calculating field that will estimate your annual annuity % based upon your years of service and hours of sick time you enter above.

IMPORTANT NOTE - *If this % appears to calculate incorrectly, you must enter your age at retirement in **cell J25**. This will allow the calculator to determine if you have reached retirement eligibility.*

2) Estimated Regular FERS Basic Annuity Amount Computation

This section will provide an estimate of your annual Regular FERS Basic Annuity **amount**. It will utilize the total estimated annual annuity % calculated above and multiply your estimated high 3-year average salary by that percentage.

a. Estimated High 3-Year Average Salary: (Cell J17)

Enter the estimated amount of your high 3-year average salary at the time of retirement.

I have added **additional functionality** that will help you estimate what your high 3-year salary may be, based on a user entered average annual cost-of-living raise. This new functionality is located on the Basic Calculator TAB to the right of the cell where you enter your Estimated High 3-year Average Salary (line #17; Column AD on the calculator). To use this new functionality, the following cells will need your input (highlighted in yellow):

1. Expected COLA Area: Choose the COLA area you expect to retire in from the drop-down menu (**cell AE17**).
2. Expected Grade: Enter the GS Grade you expect to be **when you retire** (**cell AE18**).
3. Expected Step: Enter the GS Step you expect to be **when you retire** (**cell AE19**).
4. Average Annual Base Pay Raise: Enter the average annual pay raise you want to use for the calculation. For 2022, POTUS and the US Congress approved a 2.7% raise. I usually use 2.0% in this field as I believe this is an average annual raise percentage. You can use whatever percentage you want (**cell AE26**).

Once you have entered values in all the above cells, the calculator will auto-calculate the following cells:

1. Current Base Pay: This is the current base salary for the COLA area you entered and the expected GS Grade/Step (cell **AE21**).
2. Current Base Pay Hourly Rate: This is the current base salary hourly rate for the COLA area you entered and the expected GS Grade/Step (cell **AE22**).
3. Current Base Pay SOT Rate: This is the current base salary SOT rate for the COLA area you entered and the expected GS Grade/Step (cell **AE23**).
4. Estimated Base Salary in XX Years: This is the amount your Base salary could be if the average annual raise received is the amount you entered in **cell AE27** described above. The XX is based on the number of YEARS between now and the date you enter in the calculator as your expected retirement date (**cell K5**). **This is the amount you can use as your high 3-year average salary in the calculator (cell J17) if you want to estimate the annual raises until you retire.**

b. **Calculate for Spousal Benefit Survivor Annuity (SBSA): (Cell J18)**

Enter the percentage you wish to calculate your Spousal Benefit Survivor Annuity on. Your options are 0%, 5% or 10%. This will reduce your monthly & annual FERS Basic Annuity amount by the percentage you select.

c. **Total Estimated Annual Defined-Benefit Annuity Amount: (Cell K19)**

This is a self-calculated field that will estimate your annual FERS Basic Annuity amount. This is based on the amount you enter as your average high-3 salary and the percentage calculated above.
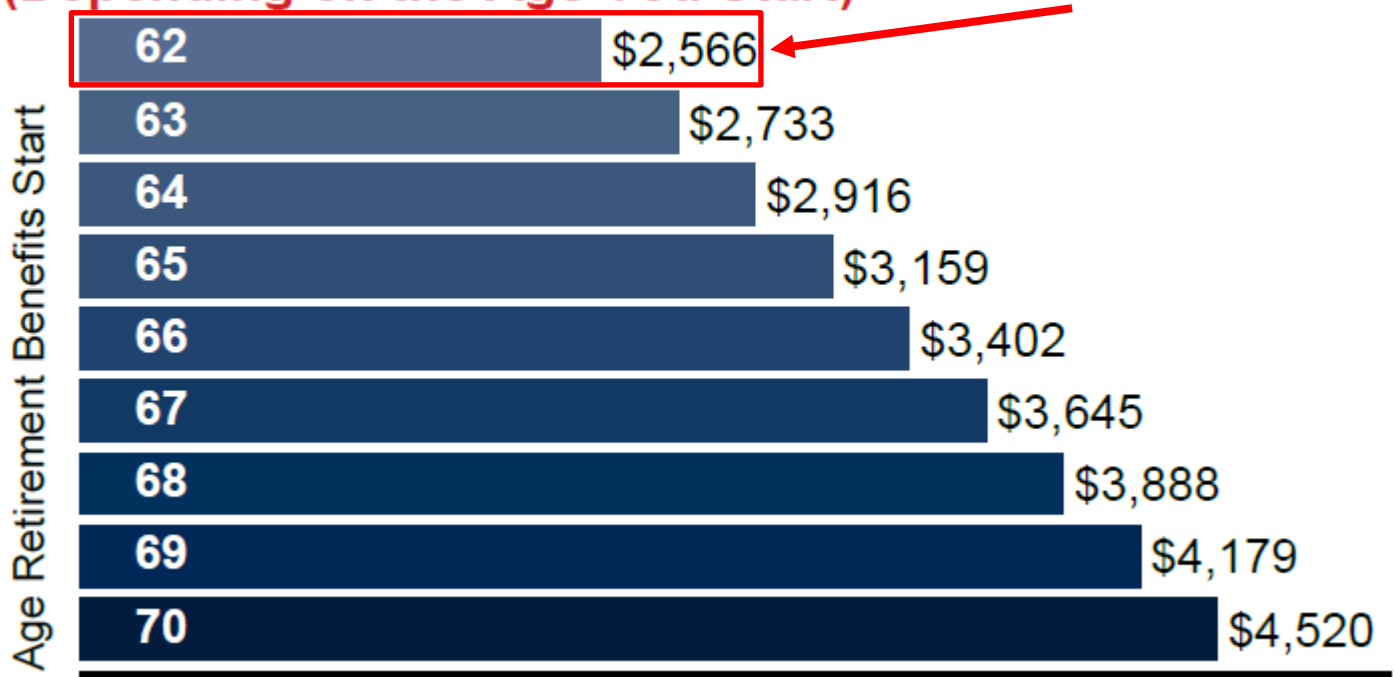
3) <u>Estimated Retiree Annuity Supplement (RAS)</u> – Until Age 62

This section will provide an estimate of your annual and monthly RAS benefit. It will utilize your estimated Social Security benefit at age 62 as well as any deductions for earning tests if your situation applies.

   a. **<u>Monthly Social Security Benefit at Age 62 (From SSA Statement): (Cell J23)</u>**

   Utilizing your annual Social Security Summary Report (www.socialsecurity.gov), look under the "***Your Estimated Benefits***" section on page 1 and enter the amount shown on the line for starting benefits at "***age 62***". This amount will be used to calculate your SRS monthly payment.

Personalized Monthly Retirement Benefit Estimates (Depending on the Age You Start)

Age Retirement Benefits Start	Monthly Benefit Amount
62	$2,566
63	$2,733
64	$2,916
65	$3,159
66	$3,402
67	$3,645
68	$3,888
69	$4,179
70	$4,520

   b. **<u>RAS Percentage Calculation: (Cell J24)</u>**

   This is a self-calculated field that will estimate the % of your "age 62 Social Security payment" based on your years of service at retirement.

   To calculate your RAS %, you should take your years of service divided by 40. *(Example: 30 years of service would calculate to (30/40 = 75%).*

c. **Age at Retirement: (Cell J25)**

Enter your age on the date of your retirement. This will be used to determine if your RAS benefit is subject to an earnings test, and it is used to determine if you have reached the age requirement to be retirement eligible.

At your MRA, you will lose $1 of RAS benefit for every $2 you earn in wages over **$22,320** (for 2024; this amount is inflation-adjusted each year).[15]

d. **Estimated Income from After-Retirement Employment (Annual): (Cell J26)**

If you have known employment after you retire, enter the amount of salary (annual) you will receive from this employment. This amount will be used to determine your RAS benefit if you are over age 57 at which time your RAS benefit becomes subject to the earnings test.

If you don't have new employment or don't know the salary amount, **enter zero ($0).**

e. **Earnings Test Reduction: (Cell K26)**

This is a self-calculating field that will show the annual reduction to your RAS benefit if you are at/over your MRA, and your after-retirement earnings exceed the earnings test limit. For 2024, the annual earnings limit is **$22,320**.[16]

f. **Approximate Monthly Retiree Annuity Supplement: (Cell J27)**

This is a self-calculating field that will show the estimated amount of your *monthly* RAS benefit based on your years of service and any earnings test deductions if they apply.

g. **Total Estimated Annual RAS Amount: (Cell K28)**

This is a self-calculating field that will show the estimated amount of your *annual* RAS benefit based on your years of service and any earnings test deductions if they apply.

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[15] The FERS Guide: Retirement Benefits Guide for Regular SCE by Dan Jamison (www.fersguide.com) – 2024 Update – Page 31
[16] The FERS Guide: Retirement Benefits Guide for Regular SCE by Dan Jamison (www.fersguide.com) – 2024 Update – Page 31

4) TSP Future Value Calculator

This section will assist you in calculating the potential future value of your TSP account. It uses a monthly compounding interest formula with a fixed monthly contribution. ****NOTE**** These calculations assume the monthly contributions remain constant for the time period you enter. This is unlikely due to grade/step increases, potential COLA increases, and potential locality pay adjustments, so the estimated future value is conservatively low. By entering the required data, you will be able to conduct "what-if" scenarios with different interest rates of return and different time spans.

The total estimated TSP balance from this section will automatically be used in the next section *"Estimated TSP Income & Years TSP Funds Will Last"* as described below. It simply provides the user with a way to estimate the future value of their TSP at the time of retirement.

a. **Current TSP Balance: (Cell J32)**

   Enter your current TSP value. You can find this amount from your TSP statements or from the www.tsp.gov web site.

b. **TSP Contributions per Pay Period: (Cell J33)**

   Enter the contributions made to your TSP account each **pay period**. This should include the employee contribution (regular and catch-up), the automatic agency 1% (TSP BASIC), and any agency matching funds (TSP MATCHING). You can find this information from your current pay statement found at https://www.nfc.usda.gov/epps/eplogin.aspx. Your employee contribution is near the top of your pay statement on the line listed as Code 75 TSP-FERS. You can find the automatic 1% and the agency matching amounts at the bottom of the web page view of your pay statement on the lines labeled as TSP Basic and TSP Matching.

c. **TSP Contributions per Month: (Cell J34)**

   This is a self-calculating field. It will calculate the monthly contributions to your TSP account using the formula: PP contributions x 26 pay periods /12 months. As an example, if your pay period contributions equal $500 then your monthly contributions would be: $500 x 26=$13,000 / 12 = $1,083.33.

d. **TSP Contributions per Year: (Cell J35)**

This is a self-calculating field. It will calculate the annual contributions to your TSP account using the formula: PP contributions x 26 pay. As an example, if your pay period contributions equal $500 then your annual contributions would be: $500 x 26=$13,000.

e. **Estimated Interest Rate of Return: (Cell J36)**

Enter the **ANNUAL** interest rate you want to use to calculate your future TSP balance. The interest rate should be entered as a decimal number. As an example, to use 10% it should be entered at 10.00. For an example of the 10-year average annual returns for the individual funds, see the chart below.

The below chart provides the average monthly interest rates of return from 2014 to 2023 (10-yr performance) for the Individual Funds:[17]

Average Annual Rates of Return

Annual Returns					
Year	C Fund	S Fund	F Fund	I Fund	G Fund
2014	13.78%	7.80%	**6.73%**	-5.27%	2.31%
2015	1.46%	-2.92%	0.91%	-0.51%	2.04%
2016	12.01%	**16.35%**	2.91%	**2.10%**	1.82%
2017	21.82%	18.22%	3.82%	25.42%	2.33%
2018	-4.41%	-9.26%	0.15%	-13.43%	2.91%
2019	**31.45%**	**29.97%**	8.68%	**22.47%**	2.24%
2020	18.31%	31.85%	7.50%	8.17%	0.97%
2021	28.68%	12.45%	-1.46%	11.45%	1.38%
2022	**-18.13%**	**-26.26%**	**-12.83%**	**-13.94%**	2.98%
2023	26.25%	25.30%	5.58%	18.38%	4.22%
10-Yr Ave	13.12%	10.35%	2.20%	5.48%	2.32%

f. Years Until Retirement: (Cell J37)

This is a self-calculating field that will determine the number of years until you plan to retire (contributions end) based on today's date and the expected retirement date entered above (**Cell K5**). This number will be used to calculate the monthly compounded interest added to your account based upon your current balance and the estimated interest rate of return number you entered above.

g. Change in TSP Value: (Cell J38)

This is a self-calculating field. It will calculate the difference in your current TSP value and the future TSP value based upon the variables you entered above.

h. Estimated TSP Future Value: (Cell K39)

This is a self-calculated field. It will calculate the future value of your TSP account based upon all the variables you entered above. It uses the following formula:

$$FV = [\,(\,(1+i)n\,)*PV] + [PMT*(\,(\,(1+i)n-1)/i\,)]$$

FV = Future Value

i = Interest Rate per period

n = number of periods

PV = Present Value

PMT = Monthly Contributions

5) <u>Estimated TSP Income After Retirement & Years TSP Will Last</u>

This section will provide an estimated annual TSP benefit based upon the entered TSP balance at retirement and the number of years that your TSP funds will last. This section has been established to allow you to do multiple "what-if" scenarios changing any of the variables except your TSP balance at retirement to determine what affect your entered variables will have on future balances. Although there are several different withdrawal options that are available for your TSP funds, this calculator will only use the equal payments over a fixed time in its calculations. Additionally, you will be able to utilize the one-time partial withdrawal option available from the TSP.

When making calculations for future TSP balances, the following financial formulas were utilized:

a. **Compounded Interest without an Annual Withdrawal**

$$A = P\left(1 + \frac{i}{n}\right)^{nt}$$

P = principal amount (the initial amount you deposit)
i = annual rate of interest (as a decimal)
t = number of years the amount is deposited for.
A = amount of money accumulated after t years, including interest.
n = number of times the interest is compounded per year

This option will be used if you do not elect to begin to make annual withdrawals at the time of your retirement (i.e., Retire at age 55 and begin TSP withdrawals at age 62). This formula would be used for the years from 55 to 62.

b. **Compounded Interest with a fixed annual withdrawal**

$$P \times (1+i)^n - (w \times ((1+i)^{n-1})/i)$$

P = principal amount (the initial amount you borrow or deposit)
i = annual rate of interest (as a decimal)
w = fixed annual withdrawal.
n = number of times the interest is compounded per year

This option will be used once you to begin to make annual withdrawals from your TSP Account.

Each field in this section is described as follows:

a. <u>Estimated TSP Balance at Retirement: (Cell J43)</u>

This amount will be auto populated from the TSP Future Value Calculator section described above. This amount will be used to estimate your future TSP balances.

b. <u>One-Time Withdrawal at Retirement: (Cell J44)</u>

If you choose to take a one-time partial withdrawal from your TSP funds at the time of your retirement, enter the amount of the one-time withdrawal. By entering a number in this cell, it will deduct your one-time withdrawal from your TSP Balance, at the age you specify, and use this "new" balance to calculate future balances.

c. <u>Age You Will Take a One-Time Withdrawal: (Cell J45)</u>

Enter the age you will be when/if you choose to take a one-time withdrawal at retirement.

d. <u>Amount You Want to Withdrawal Each Year (Equal Amounts): (Cell J46)</u>

Enter the amount you want to receive from your TSP funds each year. By changing this number, it will allow you to do "what-If" scenarios with different annual withdrawal amounts and see what affect the different withdrawal amounts will have on future balances and the number of years your TSP funds will last before being exhausted.

e. <u>Age You Will Start Annual Withdrawals: (Cell J47)</u>

Enter the age you plan to begin your annual withdrawals from your TSP account. For example, if you retire at age 55 and you plan to start your annual withdrawals at age 62, then for the first 7 years, your balance will only be affected (increased) by the interest rate percentage that you enter as described below. After the first 7 years, your balance will be affected by the interest rate you entered and by the annual withdrawal amount you entered as described above which may increase or decrease you balance.

f. <u>Estimated Interest Rate of Return (Annual) where TSP Funds are Invested After Retirement: (Cell J48)</u>

This is a user entered amount. Enter the interest % you want to use to calculate your future TSP value. It doesn't matter whether you leave your TSP funds in the TSP or if you move them to another investment vehicle.

g. **Your Age when ALL TSP Funds are Withdrawn - Balance of zero (0): (Cell J49)**

This is a self-calculating field. It will calculate how many years your TSP funds will last according to the variables you entered as described above. This field may provide an answer of "NEVER". If you see "NEVER" in this field, it means that your TSP funds will not be exhausted for at least 100 years.

h. **Balance at Age 85: (Cell K49)**

This is a self-calculating field. It estimates what your TSP balance may be at age 85 based upon the variables you entered above including balance, one-time withdrawal, annual withdrawals, age you begin annual withdrawals, and annual interest rates. Additionally, it uses the "Age at Retirement" field you entered as described in the "Estimated Social Security Special Supplement (SRS)" section above.

6) Estimated Annual Income Summary

This section will provide a summary of your estimated annual retirement income based upon all the user input described above.

    a. Estimated FERS Basic Annuity Income: (Cell D52)

        This is a self-calculating field that displays your estimated annual FERS Basic Annuity amount. It uses the data input above in the "*Estimated Annuity Percentage and Amount Computation*" sections to determine your estimated annual FERS Basic Annuity.

    b. Estimated FERS RAS: (Cell D53)

        This is a self-calculating field that displays your estimated annual FERS Retiree Annuity Supplement (RAS) benefit. It accounts for your estimated Social Security benefit at age 62 and any benefit reductions from the age 57 earnings test.

    c. Estimated TSP Income: (Cell D54)

        This is a self-calculating field that displays your estimated annual TSP income based on your estimated TSP balance at retirement and the number of years you want to receive equal benefits.

    d. Estimated After-Retirement Income: (Cell D55)

        This is a self-calculating field that displays your estimated annual income from employment after you retire.

    e. Total Estimated Annual Income (Pre-Tax): (Cell D56)

        This is a self-calculating field that displays your estimated annual income from your combined total FERS retirement benefits and any estimated after retirement income.

7) **Federal Tax Filing**

This section will ask you to select your Federal Tax filing status to determine what Federal Tax Bracket you will be in based upon the Total Estimated Annual income (Pre-Tax) amount as described above. This will automatically change based upon the "what-if" scenarios you use by changing the numerous variables so you can determine if your scenario causes additional tax burdens. The current Inflation-Adjusted Federal Tax Brackets for 2024 are described in the table below[18]:

Single (Unmarried Individuals Other Than Heads of Households and Surviving Spouses)

Taxable Income Range			Tax Due Equals				
Not Over		$11,600	$0.00	Plus	10%	of the excess over	
$11,601	to	$47,150	$1,100.00	Plus	12%	of the excess over	$11,600
$47,151	to	$100,525	$5,147.00	Plus	22%	of the excess over	$47,150
$100,526	to	$191,950	$16,290.00	Plus	24%	of the excess over	$100,525
$191,951	to	$243,725	$371,047.00	Plus	32%	of the excess over	$191,950
$243,726	to	$609,350	$52,832.00	Plus	35%	of the excess over	$243,725
Over		$609,350	$174,238.25	Plus	37%	of the excess over	$609,350

Married Filing Joint Return

Taxable Income Range			Tax Due Equals				
Not Over		$23,200	$0.00	Plus	10%	of the excess over	
$23,201	to	$94,300	$2,200.00	Plus	12%	of the excess over	$23,200
$94,301	to	$201,050	$10,394.00	Plus	22%	of the excess over	$94,300
$201,051	to	$383,900	$32,580.00	Plus	24%	of the excess over	$201,050
$383,901	to	$487,450	$74,208.00	Plus	32%	of the excess over	$383,900
$487,451	to	$731,200	$105,664.00	Plus	35%	of the excess over	$487,450
Over		$731,200	$186,601.50	Plus	37%	of the excess over	$731,200

Heads of Household

Taxable Income Range			Tax Due Equals				
Not Over		$16,550	$0.00	Plus	10%	of the excess over	
$16,551	to	$63,100	$1,570.00	Plus	12%	of the excess over	$16,550
$63,101	to	$100,500	$6,868.00	Plus	22%	of the excess over	$63,100
$100,501	to	$191,950	$14,678.00	Plus	24%	of the excess over	$100,500
$191,951	to	$243,700	$35,498.00	Plus	32%	of the excess over	$191,950
$243,701	to	$609,350	$51,226.00	Plus	35%	of the excess over	$243,700
Over		$609,350	$172,623.50	Plus	37%	of the excess over	$609,350

The standard deductions for 2024 are[19]:

Filing Status	Standard Deduction
Married Filing Joint Return and Surviving Spouses	$29,200
Head of Households	$21,900
Single Filers	$14,600
Married Filing Separate	$14,600

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[18] The FERS Guide: Retirement Benefits Guide for SCE FERS by Dan Jamison (www.fersguide.com) – 2024 Update – Page 12
[19] The FERS Guide: Retirement Benefits Guide for SCE FERS by Dan Jamison (www.fersguide.com) – 2024 Update – Page 10

8) Estimated Monthly Income Summary

This section will provide a summary of your estimated monthly retirement income based upon all the user input described above

   a. **Estimated FERS Basic Annuity Income: (Cell K52)**

   This is a self-calculating field that displays your estimated monthly Regular FERS Basic Annuity amount. It uses the data input above in the "*Estimated Annuity Percentage and Amount Computation*" sections to determine your estimated annual defined-benefit annuity.

   b. **Estimated FERS RAS: (Cell K53)**

   This is a self-calculating field that displays your estimated monthly FERS Retiree Annuity Supplement (RAS) benefit. It accounts for your estimated Social Security benefit at age 62 and any benefit reductions from the age 57 earnings test.

   c. **Estimated TSP Income: (Cell K54)**

   This is a self-calculating field that displays your estimated monthly income from employment after you retire.

   d. **Estimated After-Retirement Income: (Cell K55)**

   This is a self-calculating field that displays your estimated monthly income from employment after you retire.

   e. **Total Estimated Monthly Income: (Cell K56)**

   This is a self-calculating field that displays your estimated monthly income from your combined total Regular FERS retirement benefits and any estimated after retirement income.

9) Income Comparison Tab

This is a new tab at the bottom of the sheet that will provide the user with the ability to compare their current working gross/net income and their estimated retirement gross/net income.

The left side is for your current working income/deductions and the right side is for estimating your post-retirement income/deductions.

Any cells that require input are highlighted in YELLOW. Using a recent base pay stub (no SOT), please enter your gross pay for the pay period then enter all your deductions for the pay period. I have included some of the most common deductions including:

    a) Retirement Deduction
    b) TSP Regular Deduction
    c) TSP Catch-Up Deduction
    d) Social Security Tax Deduction
    e) Federal Tax Deduction
    f) State Tax Deduction
    g) Life Insurance Deduction
    h) Health Insurance Deduction
    i) Dental Insurance Deduction
    j) FSA – Health Care Deduction
    k) Medicare Tax Deduction

In the event you have additional deductions not covered above, there are six (6) lines that say "OTHER DEDUCTIONS". Please replace the "OTHER DEDUCTION" cell with a new deduction description and enter the pay period deduction amount. The sheet will automatically calculate the monthly deduction amount.

> ***When calculating the monthly deduction on your current working income side, the sheet uses the pay period deduction the user enters, multiplies that by 26 pay periods, and divides that amount my 12 months.***

Once you enter all your current working gross pay and deductions, you will have an idea of the differences in your current working gross/net income and the estimated retirement gross/net income. Now you can go back to the **BASIC CALCULATOR** tab and change the retirement job income and any TSP income (lines 26 & 46) on the **BASIC CALCULATOR** tab as described above to see what it will take to make up any difference in your current working gross/net income and your estimated retirement gross/net income.

Annual amount totals columns have been added to both the pre and post Retirement income sections to provide better understanding of the annual amount totals for all lines.
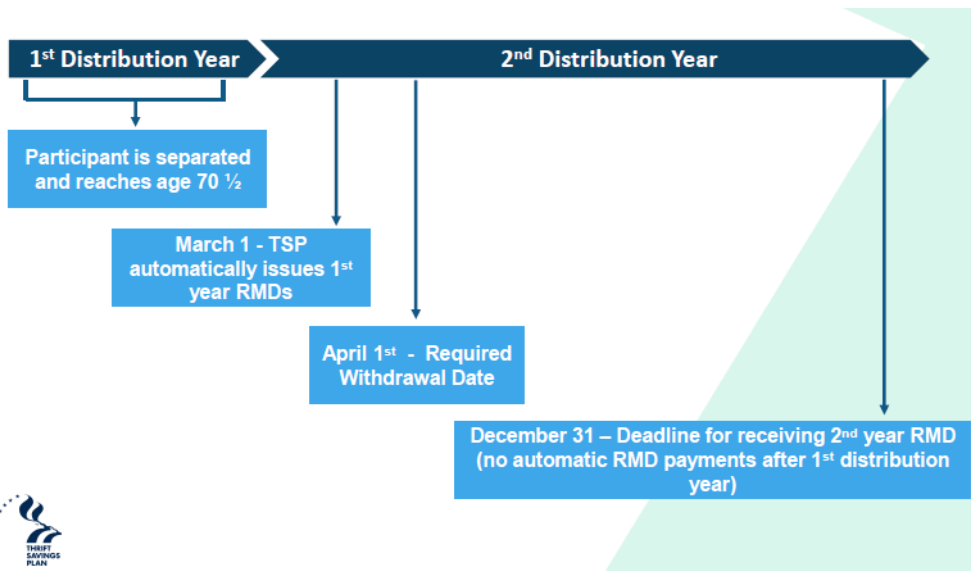
10)   TSP Balance After Retirement Tab

This is a new tab at the bottom of the sheet that will provide the user with the estimated balance of their TSP funds after retirement whether the funds are left in the TSP or moved to another investment vehicle. These balances will take the following elements into account when determining the year-ending TSP balance:

   i. Estimated TSP balance at retirement.

   ii. Age at retirement.

   iii. Amount (if any) of a one-time partial withdrawal from your TSP funds.

   iv. Age to take the one-time partial withdrawal.

   v. Amount to take in annual voluntary withdrawals from your TSP funds. ***__IMPORTANT NOTE__** - Additional functionality has been added to allow users to indicate if they want to increase their voluntary TSP withdrawal each year based on inflation. Starting with **Cell A15**, each year has a check box added. Check the box if you want to increase this particular by a %. Once you check the box, add the % increase in the cells in **Column B** for that year.*

   vi. Age to begin to take annual withdrawals from your TSP funds.

   vii. Estimated annual interest rate of return on funds left after any one-time partial withdrawal from your TSP funds.

   viii. Required Minimum Disbursements (RMD's) that begin at age 72.

When estimating the annual balances of your TSP funds, the following assumptions are used in the calculations and formulas.

i.   The interest on your funds is compounded annually (once a year) on your total balance. This is different than most compounding interest accounts that may compound quarterly or bi-annually. I would rather be more conservative in my calculations.

ii. The One-Time partial withdrawal is made at the beginning of the year that you elect to make this withdrawal. That means that when calculating the interest earned on the remaining balance for the year the one-time partial withdrawal is made, the withdrawal is made first then the interest calculation is made on the remaining balance. As an example, if you have $1,000,000 in your account and you do a one-time partial withdrawal of $200,000, then the interest calculation made for that year will be on a balance of $800,000.

iii. Your voluntary annual withdrawal is made at the end of the year. This means that your starting balance at the beginning of the year has the interest added to your account before taking out the annual withdrawal amount. I would rather take the annual withdrawal out first, but this is how the formula is written. As an example, if you have a beginning balance of $1,000,000 at the beginning of the year, and you are using 5% as your estimated rate of return, then your beginning balance of $1,000,000 will be used to calculate your annual interest for that year which would add $50,000 to your balance. If you have elected to take an annual withdrawal in this year of $50,000, then your ending balance would still be $1,000,000 ($1,000,000 x 5% = $1,050,000 - $50,000 annual withdrawal = $1,000,000)

iv. Required Minimum Disbursements (RMD's) are calculated by dividing your previous year TSP balance by the below listed distribution period (see chart below). The RMD for your 72nd birth year must be taken by December 31 of the year. As an example, if your TSP balance on Dec 31st of your 71st birth year is $1,000,000 then by December 31st of your 72nd birth year you would have to withdrawal $39,062.50 ($1,000,000 divided by 25.6). Your RMD for each year starting in your 72nd birth year is estimated in the REQUIRED MINIMUM DISBURSEMENT column on the <u>TSP Annual Balance After Retire</u> tab.

1st Distribution Year	2nd Distribution Year

Participant is separated and reaches age 70 ½

March 1 - TSP automatically issues 1st year RMDs

April 1st - Required Withdrawal Date

December 31 – Deadline for receiving 2nd year RMD (no automatic RMD payments after 1st distribution year)

Uniform Lifetime Table for Calculating Minimum Distributions*

Age	Distribution Period	Age	Distribution Period	Age	Distribution Period
70	27.4	90	11.4	110	3.1
71	26.5	91	10.8	111	2.9
72	25.6	92	10.2	112	2.6
73	24.7	93	9.6	113	2.4
74	23.8	94	9.1	114	2.1
75	22.9	95	8.6	115+	1.9
76	22.0	96	8.1		
77	21.2	97	7.6		
78	20.3	98	7.1		
79	19.5	99	6.7		
80	18.7	100	6.3		
81	17.9	101	5.9		
82	17.1	102	5.5		
83	16.3	103	5.2		
84	15.5	104	4.9		
85	14.8	105	4.5		
86	14.1	106	4.2		
87	13.4	107	3.9		
88	12.7	108	3.7		
89	12.0	109	3.4		

Required Minimum Distributions

11)   TSP Historical Rates of Return Tab

This is a new tab at the bottom of the sheet that will provide the user with the historical average monthly and annual rates of return for all of the existing TSP funds. For the G, F, and C funds, the data goes back to 1998 which is as far back as the TSP web site goes. The S and I fund data begin in 2001, the year that these funds entered into existence. The L Income, L 2020, L 2030 and L 2040 funds began in 2006 and the L 2050 began in 2001.

Also shown on this page is the TSP Milestone Average Rates of Return. This will show the 1-yr, 3-yr, 5-yr, 10-yr, 15-yr, 20-yr, 25-yr, 30-yr, 35-yr and 40-yr average monthly and annual rates of returns for all the existing TSP funds (if applicable).

12)   Min Withdrawal Factors

This tab displays the Uniform Lifetime Table for Calculating Minimum Distributions. This information is used to calculate your Required Minimum Disbursements (RMD's) as described above in Section 10 iv.

Uniform Lifetime Table for Calculating Minimum Distributions*

Age	Distribution Period	Age	Distribution Period	Age	Distribution Period
70	27.4	90	11.4	110	3.1
71	26.5	91	10.8	111	2.9
72	25.6	92	10.2	112	2.6
73	24.7	93	9.6	113	2.4
74	23.8	94	9.1	114	2.1
75	22.9	95	8.6	115+	1.9
76	22.0	96	8.1		
77	21.2	97	7.6		
78	20.3	98	7.1		
79	19.5	99	6.7		
80	18.7	100	6.3		
81	17.9	101	5.9		
82	17.1	102	5.5		
83	16.3	103	5.2		
84	15.5	104	4.9		
85	14.8	105	4.5		
86	14.1	106	4.2		
87	13.4	107	3.9		
88	12.7	108	3.7		
89	12.0	109	3.4		

THRIFT SAVINGS PLAN

Required Minimum Distributions

13)   SL Conversion Chart

This is a new tab that is used to calculate how many hours of sick leave you can use, prior to your retirement day, without losing any service credit. These hours would be lost at retirement if not used.

For example: 441 hours equals 2 months and 16 days. Find the # of hours (441) in the row where 441 is between the HOURS START and HOURS END columns. The column where the hours falls is highlighted in column F as displayed below. The MONTHS and DAYS columns will show how many months and days that number of hours translates to.

SL Converstion Chart

Match	Hours Start	Hours End	Months	Days	Hours Match
1	436	441	2	16	<---MATCH

There is no limit to the amount of sick leave that can be added to the earned service of an eligible employee. If the sick leave balance is greater than 2,087, subtract 2,087 from your balance and calculate the amount of time in addition to the one year of credit you will receive. (See additional explanation below). **NOTE**: For retirement credit purposes, sick leave days are generally six hours long. By law there are 2,087 hours in a work year. Since OPM calculates annuities on a 360-day (12 equal months of 30 days in length), 360 divided into 2,087 equals roughly six hours.

FERS employees receive 50% of their sick leave balance credited towards retirement if retiring prior to 1-1-2014. From 1-1-2014 forward, FERS employees receive full credit for their sick leave balance.
The days of unused sick leave that are added are used only in counting your number of years and months of service for annuity computation purposes. The sick leave cannot be used in computing your "high-3" average salary or for meeting the minimum length of service for retirement eligibility[20].

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[20] https://www.usgs.gov/media/files/sick-leave-converstion-chart

14) **<u>Hours per Week Chart Tab</u>**

This is a new tab at the bottom of the sheet that will provide the user with a visual representation of annual income for an hourly wage retirement job.

This tab is designed for those of you who will be looking for a retirement job, but don't want to lose any of your SRS benefits that become means tested once you reach age 57. This tab will allow you to look at the number of hours you want to work per week in retirement and what hourly wage you can make before you hit the IRS limit (**$22,320** for 2024) and you begin losing SRS benefits.

For example, if you want to work 20 per week in a retirement, hourly wage job, you can make up to $19.25 per hours without hitting the limit and losing SRS benefits.

15) **<u>GS Pay Scale</u>**

This tab displays the current GS Pay Scale for all grades (1-15) and steps (1-10) to include the Annual, Hourly, and SOT pay amounts for each grade/step.

16) **<u>Websites</u>**

This tab lists several web sites that have very valuable information concerning retirement related issues.

17) **<u>New Year Data</u>**

This information on this tab is hidden from the user and is used by the Basic Calculator tab for various calculations.

18) **<u>SL Calculations</u>**

This information on this tab is hidden from the user and is used by the Basic Calculator tab to calculate the user's estimated sick leave hours at their estimated retirement date.