



City of Ocala Firefighters' Retirement System



Deferred Retirement Option Plans (DROPs)

Subject: Interest calculation example:

- The A-Plan annual DROP interest rate earned is 1% less than the valuation assumption rate, and if the assumption rate is 7%, the DROP makes 6% annually. The interest rate is subject to change when the valuation interest rate changes.
- The B-Plan annual DROP interest rate earned is 1-3%. If the plan makes 7%, the DROP makes 3% annually.
- The actuary shall automatically adjust the accumulated interest rate based on the earned rate used during the fiscal year valuation.
- DROP benefit projection issued by the pension administration is an estimate only.

Interest calculation uses the following algebra equation:

When the DROP participant makes 6% annually, it is equivalent to a monthly rate of 0.4868%.

To get that, $1.06^{(1/12)} - 1 = 0.4868$

*The first month of interest is $\$7,476.32 * 0.4868\% = \36.39 .*

At the end of the first month, April 2022, the balance is the sum of the benefit amount and the interest: $\$7,476.32 + \$36.39 = \$7,512.71$.

*The interest earned during the second month, May 2022, is calculated the same way, but now we take interest on the balance at the end of April plus the benefit payment for May: $\$7,512.71 * 0.4868\% + \$7,476.32 * 0.4868\% = \$72.97$*

The balance at the end of the second month is the sum of the balance at the end of April plus the May benefit payment plus the interest earned during May on both amounts: $\$7,512.71 + \$7,476.32 + \$72.97 = \$15,061.99$

Then repeat for the next 58 months.

If you have any questions, contact the Pension office at 352-629-8372 or retireescorner@ocalafl.org.

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Example

Note: This is for Component A DROP Retirees only. Component B uses different interest policy.

		Component A DROP		Benefit Paid	Beginning of		End of Month
	Date	Interest Rate	Beginning of Month	Beginning of Month	Month Balance	Interest	Balance
1	7/1/2019	6.50%		3,613.52	3,613.52	19.01	3,632.53
1	8/1/2019	6.50%		3,613.52	7,246.05	38.13	7,284.18
1	9/1/2019	6.50%		3,613.52	10,897.70	57.34	10,955.04
1 Total				10,840.56		114.48	
2	10/1/2019	6.50%		3,613.52	14,568.56	76.66	14,645.22
2	11/1/2019	6.50%		3,613.52	18,258.74	96.07	18,354.81
2	12/1/2019	6.50%		3,613.52	21,968.33	115.59	22,083.92
2	1/1/2020	6.50%		3,613.52	25,697.44	135.21	25,832.65
2	2/1/2020	6.50%		3,613.52	29,446.17	154.94	29,601.11
2	3/1/2020	6.50%		3,613.52	33,214.63	174.77	33,389.40
2	4/1/2020	6.50%		3,613.52	37,002.92	194.70	37,197.62
2	5/1/2020	6.50%		3,613.52	40,811.14	214.74	41,025.88
2	6/1/2020	6.50%		3,613.52	44,639.40	234.88	44,874.28
2	7/1/2020	6.50%		3,613.52	48,487.80	255.13	48,742.93
2	8/1/2020	6.50%		3,613.52	52,356.45	275.48	52,631.93
2	9/1/2020	6.50%		3,613.52	56,245.45	295.95	56,541.40
2 Total				43,362.24		2,224.12	
3	10/1/2020	6.50%		3,613.52	60,154.92	316.52	60,471.44
3	11/1/2020	6.50%		3,613.52	64,084.96	337.20	64,422.16
3	12/1/2020	6.50%		3,613.52	68,035.68	357.98	68,393.66
3	1/1/2021	6.50%		3,613.52	72,007.18	378.88	72,386.06
3	2/1/2021	6.50%		3,613.52	75,999.58	399.89	76,399.47
3	3/1/2021	6.50%		3,613.52	80,012.99	421.00	80,433.99
3	4/1/2021	6.50%		3,613.52	84,047.51	442.23	84,489.74
3	5/1/2021	6.50%		3,613.52	88,103.26	463.57	88,566.83
3	6/1/2021	6.50%		3,613.52	92,180.35	485.02	92,665.37
3	7/1/2021	6.50%		3,613.52	96,278.89	506.59	96,785.48
3	8/1/2021	6.50%		3,613.52	100,399.00	528.27	100,927.27
3	9/1/2021	6.50%		3,613.52	104,540.79	550.06	105,090.85
3 Total				43,362.24		5,187.21	
4	10/1/2021	6.00%		3,613.52	108,704.37	529.12	109,233.49
4	11/1/2021	6.00%		3,613.52	112,847.01	549.29	113,396.30
4	12/1/2021	6.00%		3,613.52	117,009.82	569.55	117,579.37
4	1/1/2022	6.00%		3,613.52	121,192.89	589.91	121,782.80
4	2/1/2022	6.00%		3,613.52	125,396.32	610.37	126,006.69
4	3/1/2022	6.00%		3,613.52	129,620.21	630.93	130,251.14
4	4/1/2022	6.00%		3,613.52	133,864.66	651.59	134,516.25
4	5/1/2022	6.00%		3,613.52	138,129.77	672.35	138,802.12
4	6/1/2022	6.00%		3,613.52	142,415.64	693.22	143,108.86
4	7/1/2022	6.00%		3,613.52	146,722.38	714.18	147,436.56
4	8/1/2022	6.00%		3,613.52	151,050.08	735.24	151,785.32
4	9/1/2022	6.00%		3,613.52	155,398.84	756.41	156,155.25
4 Total				43,362.24		7,702.16	

Example

Note: This is for Component A DROP Retirees only. Component B uses different interest policy.

		Component A DROP		Benefit Paid	Beginning of		End of Month
	Date	Interest Rate	Beginning of Month	Beginning of Month	Month Balance	Interest	Balance
5	10/1/2022	6.00%		3,613.52	159,768.77	777.68	160,546.45
5	11/1/2022	6.00%		3,613.52	164,159.97	799.06	164,959.03
5	12/1/2022	6.00%		3,613.52	168,572.55	820.54	169,393.09
5	1/1/2023	6.00%		3,613.52	173,006.61	842.12	173,848.73
5	2/1/2023	6.00%		3,613.52	177,462.25	863.81	178,326.06
5	3/1/2023	6.00%		3,613.52	181,939.58	885.60	182,825.18
5	4/1/2023	6.00%		3,613.52	186,438.70	907.50	187,346.20
5	5/1/2023	6.00%		3,613.52	190,959.72	929.51	191,889.23
5	6/1/2023	6.00%		3,613.52	195,502.75	951.62	196,454.37
5	7/1/2023	6.00%		3,613.52	200,067.89	973.84	201,041.73
5	8/1/2023	6.00%		3,613.52	204,655.25	996.17	205,651.42
5	9/1/2023	6.00%		3,613.52	209,264.94	1,018.61	210,283.55
5 Total				43,362.24		10,766.06	
6	10/1/2023	6.00%		3,613.52	213,897.07	1,041.15	214,938.22
6	11/1/2023	6.00%		3,613.52	218,551.74	1,063.81	219,615.55
6	12/1/2023	6.00%		3,613.52	223,229.07	1,086.58	224,315.65
6	1/1/2024	6.00%		3,613.52	227,929.17	1,109.46	229,038.63
6	2/1/2024	6.00%		3,613.52	232,652.15	1,132.45	233,784.60
6	3/1/2024	6.00%		3,613.52	237,398.12	1,155.55	238,553.67
6	4/1/2024	6.00%		3,613.52	242,167.19	1,178.76	243,345.95
6	5/1/2024	6.00%		3,613.52	246,959.47	1,202.09	248,161.56
6	6/1/2024	6.00%		3,613.52	251,775.08	1,225.53	253,000.61
6 Total				32,521.68		10,195.38	

Assumed Interest Rate History

10/1/1900	8.00%
10/1/2003	7.75%
10/1/2004	8.00%
10/1/2010	7.75%
10/1/2016	7.50%
10/1/2019	7.00%

Excel Interest Formula '=ROUND(H3((1+F3)^(1/I2)-1),2)*