

# Retirement Income Navigator™

## Managing Money *During Retirement*

### Real Case Analyzed by One of Our Customers:

What I want to illustrate is a client starting out with about \$343,225 in capital and desiring an income stream to supplement his Social Security income.

- Annual Income Desired: \$35,000
- Social Security Income: \$15,972
- Difference: \$19,078

### Step 1: Basic Information

**Beginning Capital:** the client has \$343,225.

**Annual Income Need:** \$19,078

**Payment Period:** client wants to receive monthly income payments.

**Years in Scenario:** the client wants to project a 30-year retirement period.

**Anticipated Inflation:** the estimated average annual inflation rate used is 3.00%.

Beginning Capital:	\$343,225	<input type="button" value="⊞"/>
Annual Income Need:	\$19,078	<input type="button" value="⊞"/>
Payment Period:	Monthly	
Years in Scenario:	30	<input type="button" value="⊞"/>
Anticipated Inflation:	3.00%	

### Step 2: Initial Investment Allocation

- **Total Return** – the estimated average annual total return that can be achieved by holding the investments for the holding period.
- **Dividends** – can be used to support the investment income or can be reinvested.
- **Holding Periods** – the number of years that you can hold stocks without having to sell them. This does not mean that stocks will be held this long. If market conditions are favorable, it may be wise to sell some stocks earlier. The key is to give yourself some time so that you are not forced to sell stocks during a down market.

Initial Investment Allocation				
	Fixed Rate	High Yield	Blue Chip	Growth
Total Return:	3.31% <input type="button" value="⊞"/>	4.00%	7.00%	8.00%
Dividends:		3.00%	2.00%	1.00%
Holding Period:		10	10	10

## Defined Withdrawals

The green box, regardless of its name, is considered to be the liquid account. This is where your pay check comes from.

## Fixed Rate Return

To ensure that investments will not have to be sold sooner than planned we need to make sure that income will be provided from defined withdrawals (fixed rate investments) during the holding periods. In this example, the 3.31% is the overall average rate of return for fixed rate investments with different yield rates and different maturities, such as *U.S. Treasuries, Certificates of Deposit, annuities*, etc. this is a weighted average since the investments that take longer to mature will contribute proportionately more to the overall average rate of return.

## Step 3: Optimize Investment Allocation

Click on



The software will

**Meeting Your Goals**  
In order to create the scenario that best fits your goals, we need to know what they are. Please select one of the following:

- Reallocate for maximum ending capital.**
- Find the highest income available from the investments.
- Find the lowest capital that will support the income needed.

**Investment Strategy**  
Because ending capital is being maximized, there is no need to pick between consuming or preserving capital.

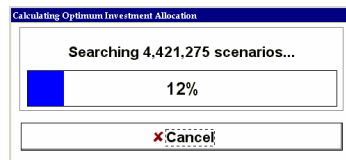
- Preserve Capital
- Consume Capital

**Optimization**  
Searching for the optimum strategy can take a significant amount of time, especially if you are optimizing to maximize income. Select how precise you would like to be. A higher number is less precise, but quicker.

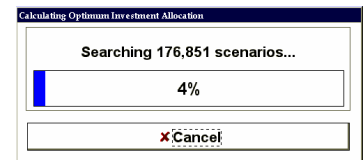
Allocate to Nearest:

A rectangular button with a calculator icon on the left and the text "Calculate Optimum Investment Allocation" in blue font.

For this analysis, the software ran:



and then another:



to find these mathematical results:

**Calculated Optimum Allocation**

Defined Withdrawal: N/A	Blue Investment: N/A
Yellow Investment: N/A	Red Investment: N/A

**Unable to find valid allocation.**

## Results

This result indicates that the investments alone cannot support the amount needed by this client. We need to look at other options.

## Step 4: Check Custom Income Needs; then Edit:

We'll enter the following information:

**Living Expenses:** \$19,078. We'll begin to require this amount from our investments in year 1 and continue through year 30. Also, we'll increase the amount required by 3% annually.

**Annuity:** \$150,000. This is the cost of our 15 year annuity.

**Note:** Entering data on this screen overrides our entry on the main input screen (Step 1 – Annual Income Need.)

**Enter Income Needed From Investments**  
Enter up to five different streams of income to take from the investments. Values in overlapping years are added together. Check "Add Yearly Income Needs" to enter additional income needs on a year-by-year basis.

Description	Income Needed			Annual Increase
	Amount	First Yr	Last Yr	
Living Expenses	\$19,078	1	30	3.00%
Annuity	\$150,000	1	1	0.00%
	\$0	1	1	0.00%
	\$0	1	25	3.00%
	\$0	1	25	3.00%
	\$0	1	25	3.00%

Add Yearly Income Needs

## Step 5: Check Other Sources of Income; then Edit

Enter the information pertaining to our annuity. In our example we are purchasing a \$150,000 annuity, paying \$19,078 annually for 15 years with 0% increase.

Remember to check the "Funds Entered on this Schedule are Used to Meet Income Needs" checkbox.

**Note:** If we "Optimized Investment Allocation" the results would again be "Unable to find valid allocation." The reason is because our annuity

payout ends in 15 years. At that point we need to reallocate to generate the income for the next 15 years.

**Enter Other Sources of Income (or Investment Contributions)**  
 Funds Entered on this Schedule are Used to Meet Income Needs  
Enter up to 10 different sources of income such as Social Security, pensions, annuities, etc. It is assumed these funds are available at the beginning of every month. Values in overlapping years are added together. If funds on this schedule exceed desired income, they are invested as directed.

Description	Annual Contribution	First Yr	Last Yr	Annual Increase	Defined Withdrawal	Yellow Investment	Blue Investment
Annuity	\$19,078	1	15	0.00%	100%	0%	0%
	\$0	1	25	3.00%	100%	0%	0%
	\$0	1	25	3.00%	100%	0%	0%
	\$0	1	25	3.00%	100%	0%	0%
	\$0	1	25	3.00%	100%	0%	0%
	\$0	1	25	3.00%	100%	0%	0%

Add Yearly Amounts

## Step 6: Check Multiple Allocations; then Edit

Because our annuity payment of \$19,068 ends in year 15, we must reallocate in year 15. This results in overriding our original holding periods of 10 years.

Click OK

**Multiple Allocations**

**List of Reallocations**

Year	Defined	Yellow	Blue	Red
0	46%	0%	0%	54%

OK  ?Help

**Enter Reallocation Year**

Enter year for reallocation: 15  
(reallocations performed at end of year)

OK  Cancel

**Selected Reallocation**

	Defined	Yellow	Blue	Red
Total Return:	3.31%	4.00%	7.00%	8.00%
Dividends:		3.00%	2.00%	1.00%
Holding Period:		10	10	10
Percentage:	46%	0%	0%	54%

Fixed Reallocation (not changed when optimizing)

0

## Step 7:

Click the optimize button, and then optimize for ending capital.



By reallocating in year 15, we can meet the income needed by our client.

### Calculated Optimum Allocation

Defined Withdrawal: 46%

Blue Investment: 0%

Yellow Investment: 0%

Red Investment: 54%

## Results:

Ending Capital = \$171,320

This also leaves us with ending capital in actual dollars of \$171,320. By pressing F8, you can view the ending capital in inflation-adjusted dollars of \$70,582.

## Summary:

By purchasing this 15 year annuity, we can meet the client's income requirements. In year 15, we had to reallocate the investments in order to meet the client's income needs for the next 15 year period.

## Reports:

To view the reports for this case, we have posted the following files:

- Annuity Case Report – Actual Dollars.pdf
- Annuity Case Report – Inflation Adjusted Dollars.pdf

at [www.brentmark.com/reports.htm](http://www.brentmark.com/reports.htm) under the Retirement Income Navigator heading.

**Note:** Adobe Acrobat Reader is required to open or view these files.

Tutorials and Frequently Asked Questions are also available on Brentmark's web site:

[www.brentmark.com/reports.htm](http://www.brentmark.com/reports.htm)

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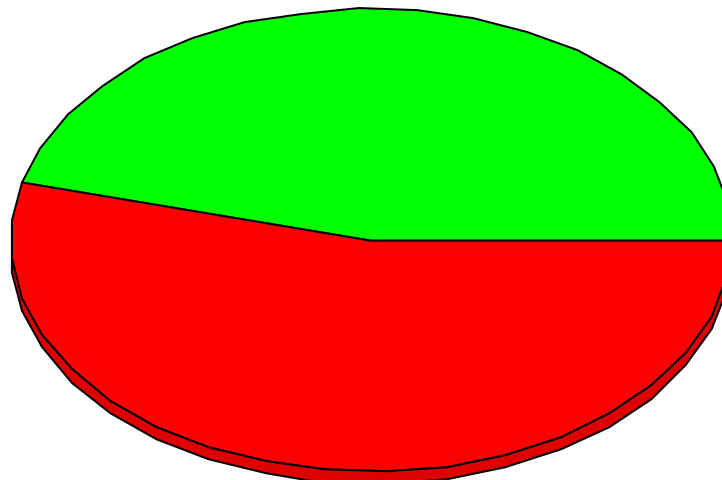
## Investment Information

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Beginning Capital: \$343,225  
 Scenario Years: 30  
 Assumed Inflation Rate: 3.00%  
 Inflate Dividends? No  
 Minimum Defined Withdrawal: 5%  
 Income Taken from Investments: Monthly  
 Income Needed From Investments  
     Living Expenses: \$19,078 From Yr 1 To 30, Growing at 3.00%  
     Annuity: \$150,000 From Yr 1 To 1, Growing at 0.00%  
 Other Income (Contributions at Beginning of Every Month)  
     Annuity: \$19,078 From Yr 1 To 15, Growing at 0.00%  
 Results Presented in Actual Dollars

	<u>Defined Withdrawal</u>	<u>Red Investment</u>
Total Return:	3.31%	8.00%
Dividends per Year:		1.00%
Holding Period:		10
Percentage:	46%	54%
Entered Reallocation at End of Year 15		
Total Return:	3.31%	8.00%
Dividends per Year:		1.00%
Holding Period:		10
Percentage:	83%	17%

### Initial Allocation

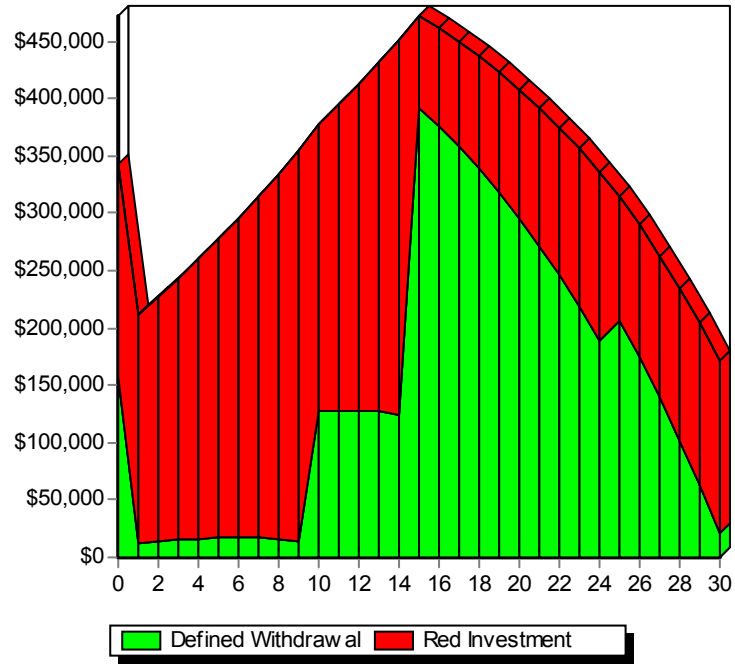


	Defined Withdrawal: \$157,884
	Red Investment: \$185,342

# Investment Information

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Projected Investment Balances



## Investment Scenario (Actual Dollars)

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<u>Year</u>	<u>Defined Withdrawal</u>	<u>Red Investment</u>	<u>Total Capital</u>	<u>Effective Growth</u>	<u>Desired Income</u>
0	\$157,884	\$185,342	\$343,225		
1	\$12,349	\$198,315	\$210,664	-38.62%	\$169,078
2	\$14,166	\$212,197	\$226,363	-18.79%	\$19,650
3	\$15,589	\$227,051	\$242,640	-10.92%	\$20,240
4	\$16,595	\$242,945	\$259,540	-6.75%	\$20,847
5	\$17,164	\$259,951	\$277,115	-4.19%	\$21,472
6	\$17,273	\$278,148	\$295,421	-2.47%	\$22,117
7	\$16,895	\$297,618	\$314,513	-1.24%	\$22,780
8	\$16,007	\$318,451	\$334,458	-0.32%	\$23,464
9	\$14,584	\$340,743	\$355,327	0.39%	\$24,167
10	\$128,113	\$249,083	\$377,196	0.95%	\$24,892
11	\$128,253	\$266,519	\$394,772	1.28%	\$25,639
12	\$127,794	\$285,176	\$412,970	1.55%	\$26,408
13	\$126,703	\$305,138	\$431,841	1.78%	\$27,201
14	\$124,947	\$326,498	\$451,445	1.98%	\$28,017
15	\$391,631	\$80,214	\$471,845	2.14%	\$28,857
16	\$375,344	\$85,829	\$461,173	1.86%	\$29,723
17	\$357,658	\$91,837	\$449,495	1.60%	\$30,615
18	\$338,503	\$98,265	\$436,768	1.35%	\$31,533
19	\$317,807	\$105,144	\$422,951	1.11%	\$32,479
20	\$295,493	\$112,504	\$407,997	0.87%	\$33,453
21	\$271,481	\$120,379	\$391,860	0.63%	\$34,457
22	\$245,690	\$128,806	\$374,496	0.40%	\$35,491
23	\$218,034	\$137,822	\$355,856	0.16%	\$36,555
24	\$188,423	\$147,470	\$335,893	-0.09%	\$37,652
25	\$206,756	\$107,800	\$314,556	-0.35%	\$38,782
26	\$174,127	\$115,346	\$289,473	-0.65%	\$39,945
27	\$139,259	\$123,421	\$262,680	-0.99%	\$41,143
28	\$102,043	\$132,060	\$234,103	-1.36%	\$42,378
29	\$62,370	\$141,304	\$203,674	-1.78%	\$43,649
30	\$20,124	\$151,196	\$171,320	-2.29%	\$44,959
				<u>-2.29%</u>	

## Cash Flow Analysis

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<u>Year</u>	<u>Taken from Defined Withdrawal</u>	<u>Dividend Income</u>	<u>Investment Income</u>	<u>Additional Contributions</u>	<u>Total Income</u>	<u>Amount Reinvested</u>
1	\$148,147	\$1,853	\$150,000	\$19,078	\$169,078	\$0
2	\$0	\$1,983	\$1,983	\$19,078	\$21,061	\$1,411
3	\$0	\$2,122	\$2,122	\$19,078	\$21,200	\$960
4	\$0	\$2,271	\$2,271	\$19,078	\$21,349	\$502
5	\$0	\$2,429	\$2,429	\$19,078	\$21,507	\$35
6	\$439	\$2,600	\$3,039	\$19,078	\$22,117	\$0
7	\$921	\$2,781	\$3,702	\$19,078	\$22,780	\$0
8	\$1,409	\$2,976	\$4,385	\$19,078	\$23,463	\$0
9	\$1,905	\$3,185	\$5,090	\$19,078	\$24,168	\$1
10	\$2,407	\$3,407	\$5,814	\$19,078	\$24,892	\$0
11	\$4,070	\$2,491	\$6,561	\$19,078	\$25,639	\$0
12	\$4,665	\$2,665	\$7,330	\$19,078	\$26,408	\$0
13	\$5,271	\$2,852	\$8,123	\$19,078	\$27,201	\$0
14	\$5,887	\$3,051	\$8,938	\$19,078	\$28,016	\$0
15	\$6,514	\$3,265	\$9,779	\$19,078	\$28,857	\$0
16	\$28,921	\$802	\$29,723	\$0	\$29,723	\$0
17	\$29,756	\$858	\$30,614	\$0	\$30,614	\$0
18	\$30,615	\$918	\$31,533	\$0	\$31,533	\$0
19	\$31,496	\$983	\$32,479	\$0	\$32,479	\$0
20	\$32,402	\$1,051	\$33,453	\$0	\$33,453	\$0
21	\$33,332	\$1,125	\$34,457	\$0	\$34,457	\$0
22	\$34,287	\$1,204	\$35,491	\$0	\$35,491	\$0
23	\$35,267	\$1,288	\$36,555	\$0	\$36,555	\$0
24	\$36,274	\$1,378	\$37,652	\$0	\$37,652	\$0
25	\$37,307	\$1,475	\$38,782	\$0	\$38,782	\$0
26	\$38,867	\$1,078	\$39,945	\$0	\$39,945	\$0
27	\$39,990	\$1,153	\$41,143	\$0	\$41,143	\$0
28	\$41,144	\$1,234	\$42,378	\$0	\$42,378	\$0
29	\$42,328	\$1,321	\$43,649	\$0	\$43,649	\$0
30	\$43,546	\$1,413	\$44,959	\$0	\$44,959	\$0



## Transaction Detail (Actual Dollars)

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Initially allocated funds totaling \$343,225 to

Defined Withdrawal: \$157,884

Red Investment: \$185,342

End of year 10: \$115,511 of Red Investment converted to Defined Withdrawal.

Reallocated funds totaling \$471,845 at the end of year 15 to

Defined Withdrawal: \$391,631

Red Investment: \$80,214

End of year 25: \$49,992 of Red Investment converted to Defined Withdrawal.

## Calculation of Defined Withdrawal Total Return

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<u>Years to Maturity</u>	<u>Percent Yield</u>
1	1.24%
2	1.71%
3	2.24%
4	2.74%
5	3.24%
6	3.55%
7	3.86%
8	4.02%

Estimated Average Yield to Maturity: 3.31%

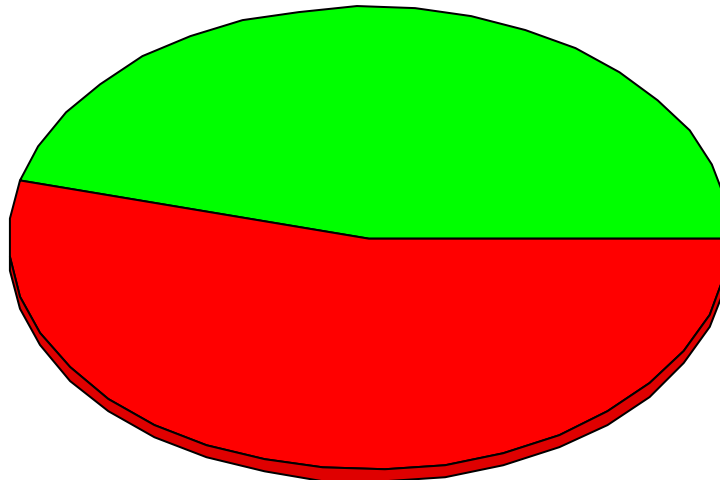
## Investment Information

---

Beginning Capital: \$343,225  
 Scenario Years: 30  
 Assumed Inflation Rate: 3.00%  
 Inflate Dividends? No  
 Minimum Defined Withdrawal: 5%  
 Income Taken from Investments: Monthly  
 Income Needed From Investments  
     Living Expenses: \$19,078 From Yr 1 To 30, Growing at 3.00%  
     Annuity: \$150,000 From Yr 1 To 1, Growing at 0.00%  
 Other Income (Contributions at Beginning of Every Month)  
     Annuity: \$19,078 From Yr 1 To 15, Growing at 0.00%  
 Results Presented in Inflation-Adjusted Dollars

	<u>Defined Withdrawal</u>	<u>Red Investment</u>
Total Return:	3.31%	8.00%
Dividends per Year:		1.00%
Holding Period:		10
Percentage:	46%	54%
Entered Reallocation at End of Year 15		
Total Return:	3.31%	8.00%
Dividends per Year:		1.00%
Holding Period:		10
Percentage:	83%	17%

### Initial Allocation

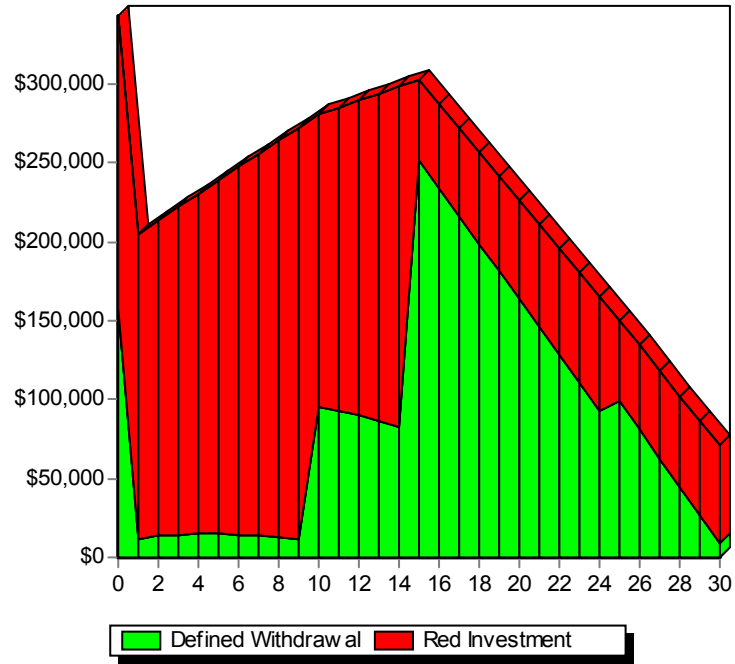


	Defined Withdrawal: \$157,884
	Red Investment: \$185,342

# Investment Information

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Projected Investment Balances



## Investment Scenario (Inflation Adjusted Dollars)

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<u>Year</u>	<u>Defined Withdrawal</u>	<u>Red Investment</u>	<u>Total Capital</u>	<u>Effective Growth</u>	<u>Desired Income</u>
0	\$157,884	\$185,342	\$343,225		
1	\$11,989	\$192,539	\$204,528	-40.41%	\$169,078
2	\$13,353	\$200,016	\$213,369	-21.15%	\$19,078
3	\$14,266	\$207,784	\$222,050	-13.51%	\$19,078
4	\$14,744	\$215,853	\$230,598	-9.46%	\$19,078
5	\$14,806	\$224,236	\$239,042	-6.98%	\$19,078
6	\$14,466	\$232,945	\$247,410	-5.31%	\$19,078
7	\$13,737	\$241,991	\$255,728	-4.12%	\$19,078
8	\$12,636	\$251,388	\$264,024	-3.23%	\$19,078
9	\$11,177	\$261,151	\$272,329	-2.54%	\$19,078
10	\$95,328	\$185,341	\$280,669	-1.99%	\$19,078
11	\$92,653	\$192,539	\$285,192	-1.67%	\$19,078
12	\$89,632	\$200,017	\$289,649	-1.40%	\$19,078
13	\$86,279	\$207,784	\$294,063	-1.18%	\$19,078
14	\$82,605	\$215,854	\$298,458	-0.99%	\$19,078
15	\$251,373	\$51,486	\$302,859	-0.83%	\$19,078
16	\$233,902	\$53,486	\$287,388	-1.10%	\$19,078
17	\$216,389	\$55,563	\$271,952	-1.36%	\$19,078
18	\$198,835	\$57,720	\$256,555	-1.60%	\$19,078
19	\$181,241	\$59,962	\$241,203	-1.84%	\$19,078
20	\$163,607	\$62,291	\$225,898	-2.07%	\$19,078
21	\$145,934	\$64,710	\$210,644	-2.30%	\$19,078
22	\$128,224	\$67,223	\$195,447	-2.53%	\$19,078
23	\$110,476	\$69,833	\$180,309	-2.76%	\$19,078
24	\$92,692	\$72,545	\$165,237	-3.00%	\$19,078
25	\$98,748	\$51,486	\$150,234	-3.25%	\$19,078
26	\$80,742	\$53,485	\$134,227	-3.55%	\$19,078
27	\$62,693	\$55,563	\$118,256	-3.87%	\$19,078
28	\$44,601	\$57,720	\$102,321	-4.23%	\$19,078
29	\$26,466	\$59,962	\$86,428	-4.64%	\$19,078
30	\$8,291	\$62,291	\$70,582	-5.14%	\$19,078

## Cash Flow Analysis

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<u>Year</u>	<u>Taken from Defined Withdrawal</u>	<u>Dividend Income</u>	<u>Investment Income</u>	<u>Additional Contributions</u>	<u>Total Income</u>	<u>Amount Reinvested</u>
1	\$148,201	\$1,799	\$150,000	\$19,078	\$169,078	\$0
2	\$0	\$1,869	\$1,869	\$18,522	\$20,391	\$1,313
3	\$0	\$1,942	\$1,942	\$17,983	\$19,925	\$847
4	\$0	\$2,017	\$2,017	\$17,459	\$19,476	\$398
5	\$31	\$2,096	\$2,127	\$16,951	\$19,078	\$0
6	\$444	\$2,177	\$2,621	\$16,457	\$19,078	\$0
7	\$838	\$2,262	\$3,100	\$15,978	\$19,078	\$0
8	\$1,217	\$2,349	\$3,566	\$15,512	\$19,078	\$0
9	\$1,577	\$2,441	\$4,018	\$15,060	\$19,078	\$0
10	\$1,921	\$2,535	\$4,456	\$14,622	\$19,078	\$0
11	\$3,083	\$1,799	\$4,882	\$14,196	\$19,078	\$0
12	\$3,427	\$1,869	\$5,296	\$13,782	\$19,078	\$0
13	\$3,755	\$1,942	\$5,697	\$13,381	\$19,078	\$0
14	\$4,070	\$2,017	\$6,087	\$12,991	\$19,078	\$0
15	\$4,369	\$2,096	\$6,465	\$12,613	\$19,078	\$0
16	\$18,578	\$500	\$19,078	\$0	\$19,078	\$0
17	\$18,559	\$519	\$19,078	\$0	\$19,078	\$0
18	\$18,539	\$539	\$19,078	\$0	\$19,078	\$0
19	\$18,518	\$560	\$19,078	\$0	\$19,078	\$0
20	\$18,496	\$582	\$19,078	\$0	\$19,078	\$0
21	\$18,473	\$605	\$19,078	\$0	\$19,078	\$0
22	\$18,450	\$628	\$19,078	\$0	\$19,078	\$0
23	\$18,425	\$653	\$19,078	\$0	\$19,078	\$0
24	\$18,400	\$678	\$19,078	\$0	\$19,078	\$0
25	\$18,374	\$704	\$19,078	\$0	\$19,078	\$0
26	\$18,578	\$500	\$19,078	\$0	\$19,078	\$0
27	\$18,559	\$519	\$19,078	\$0	\$19,078	\$0
28	\$18,539	\$539	\$19,078	\$0	\$19,078	\$0
29	\$18,518	\$560	\$19,078	\$0	\$19,078	\$0
30	\$18,496	\$582	\$19,078	\$0	\$19,078	\$0

## **Transaction Detail (Inflation Adjusted Dollars)**

---

Initially allocated funds totaling \$343,225 to

Defined Withdrawal: \$157,884

Red Investment: \$185,342

End of year 10: \$85,951 of Red Investment converted to Defined Withdrawal.

Reallocated funds totaling \$302,859 at the end of year 15 to

Defined Withdrawal: \$251,373

Red Investment: \$51,486

End of year 25: \$23,876 of Red Investment converted to Defined Withdrawal.

## Calculation of Defined Withdrawal Total Return

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<u>Years to Maturity</u>	<u>Percent Yield</u>
1	1.24%
2	1.71%
3	2.24%
4	2.74%
5	3.24%
6	3.55%
7	3.86%
8	4.02%

Estimated Average Yield to Maturity: 3.31%