## Rates of Return Overview

The NOVA Chemicals Corporation Registered Pension Plan

Registered Pension Plan

The investments available through your group program appear here. The investment returns shown below are gross returns for the investment and do not take into account any investment management fees (IMFs), taxes or other expenses the funds incur, which will impact the returns.

You can find more details at www.manulife.ca/findmyfunds. Use the fund code to look up each fund.

Your employer pays a portion of the IMF charge on the fund(s) listed below with an ^. This forms part of your employee benefits. Only the portion of the fee you pay appears here.

You can find more details at www.manulife.ca/findmyfunds. Use the fund code to look up each fund.

Benchmark returns are also provided to help you compare fund performance. These returns, marked in *italics*, are for comparison purposes only and are not available for investment.

		Rates of return on November 30, 2018*													
			Annualized Returns(%) <sup>1</sup>							Annual returns(%) <sup>2</sup>					
tfolio	IMF%³	YTD ⁴	1 Year	2 Year	3 Year	4 Year	5 Year	10 Year	2018	2017	2016	2015	2014		
ESTMENT PORTFOLIOS NOVA Chemicals Portfolio Suite															
Beyond 2028 Portfolio	0.161	0.0	0.0	0.1	0.1	0.1	N/A	N/A	0.0	0.2	0.1	0.1	N/A		
2027-2027 Portfolio	0.159	0.0	0.0	0.1	0.1	0.1	N/A	N/A	0.0	0.2	0.1	0.1	N/A		
2026-2026 Portfolio	0.156	0.0	0.0	0.1	0.1	0.1	N/A	N/A	0.0	0.2	0.1	0.1	N/A		
2025-2025 Portfolio	0.150	0.0	0.0	0.1	0.1	0.1	N/A	N/A	0.0	0.2	0.0	0.1	N/A		
2024-2024 Portfolio	0.135	0.0	0.0	0.1	0.1	0.1	N/A	N/A	0.0	0.1	0.0	0.1	N/A		
2023-2023 Portfolio	0.121	0.0	0.0	0.1	0.0	0.1	N/A	N/A	0.0	0.1	0.0	0.1	N/A		
2022-2022 Portfolio	0.109	0.0	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.1	0.0	0.0	N/A		
2021-2021 Portfolio	0.105	0.0	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.1	0.0	0.0	N/A		
2020-2020 Portfolio	0.101	0.0	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	N/A		
2019-2019 Portfolio	0.097	0.0	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	N/A		
2018-2018 Portfolio	0.097	0.0	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	N/A		
Retirement Port.	0.097	0.0	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	N/A		

			Rates of return on October 31, 2018												
				Annualized Returns(%) <sup>1</sup>						Annual returns(%) <sup>2</sup>					
Fund Code	Fund Name	IMF% <sup>3</sup>	YTD⁴	1 Year	2 Year	3 Year	4 Year	5 Year	10 Year	2018	2017	2016	2015	2014	
CANADIAN MONEY MARKET															
3132	ML Cdn Money Market (MAM)	0.090^	1.4	1.6	1.3	1.2	1.1	1.2	1.2	1.6	1.0	0.9	1.1	1.3	
FIXED	FIXED INCOME														
4191	ML MAM Cdn Bond Index	0.095^	-1.0	-0.6	-0.5	1.5	2.2	2.9	4.5	-0.6	-0.4	5.7	4.4	5.9	
CANA	DIAN LARGE CAP EQTY														
7132	ML MAM Cd Equity Index	0.080^	-4.9	-3.3	3.8	6.7	3.8	5.5	7.6	-3.3	11.5	12.8	-4.5	12.8	
GLOB	GLOBAL EQUITY														
8324	ML BR ACWI ex-Can Index	0.170^	0.9	1.5	9.9	8.1	10.3	11.6	10.8	1.5	19.0	4.7	16.9	17.0	

## Notes:

<sup>1</sup>An annualized return is an average return that has been expressed as an annual (yearly) rate.

<sup>2</sup>An annual return is the return of an investment over a 12 month period. As an example: a one year annual return as at June 30, 2012 would be from July 1, 2011 to June 30, 2012.

<sup>3</sup>The Investment Management Fees (IMFs) shown incorporate costs related to investment management services, record-keeping, administration and segregated fund operating expenses, and may include underlying fund operating expenses. Applicable taxes are not included in the IMFs.

<sup>4</sup>Year to date (YTD) rates of return are not annualized.

\*Data for the Portfolio returns may display different effective dates than other investment return dates.



## Manulife Return

These numbers represent the gross rate of return of the Manulife fund.

## Additional Historical Information

In order to provide further historical information, we have included the returns of the underlying funds.