

YEAR	GRAND RAPIDS PERCENT SUNSHINE												W Avg	AVG	DEP AVG	DEP N	MAX	MIN	YEAR	10 Year	30 Year
	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC									
1900																					
1901																					
1902																					
1903							73%	53%	56%	54%	28%	12%	23.2%	46%	-2%	0%	73%	12%	1903		
1904	16%	38%	22%	47%	43%	55%	57%	62%	40%	39%	39%	27%	40.4%	40%	-8%	-6%	62%	16%	1904		
1905	22%	36%	47%	47%	48%	55%	47%	72%	68%	49%	40%	37%	47.4%	47%	-1%	1%	72%	22%	1905		
1906	33%	51%	44%	56%	60%	63%	65%	68%	69%	44%	27%	26%	50.5%	51%	2%	5%	69%	26%	1906		
1907	20%	43%	46%	40%	63%	63%	68%	77%	45%	54%	31%	17%	47.3%	47%	-1%	1%	77%	17%	1907		
1908	38%	38%	36%	54%	49%	74%	75%	76%	61%	51%	31%	18%	50.1%	50%	2%	4%	76%	18%	1908		
1909	29%	25%	40%	41%	56%	55%	73%	62%	59%	42%	39%	12%	44.5%	44%	-4%	-2%	73%	12%	1909		
1910	17%	38%	64%	53%	56%	65%	70%	51%	47%	71%	26%	32%	49.3%	49%	1%	3%	71%	17%	1910		
1911	37%	45%	64%	63%	66%	66%	81%	72%	57%	34%	31%	27%	53.6%	54%	5%	8%	81%	27%	1911		
1912	17%	28%	46%	53%	56%	64%	54%	46%	39%	62%	41%	21%	44.0%	44%	-4%	-2%	64%	17%	1912	47%	
1913	21%	35%	44%	58%	48%	76%	66%	53%	57%	41%	31%	34%	47.0%	47%	-1%	1%	76%	21%	1913	47%	
1914	9%	43%	49%	51%	68%	65%	75%	69%	65%	44%	36%	9%	48.6%	49%	0%	3%	75%	9%	1914	48%	
1915	19%	32%	46%	50%	44%	45%	44%	62%	51%	39%	31%	20%	40.3%	40%	-8%	-6%	62%	19%	1915	47%	
1916	10%	18%	40%	44%	54%	57%	91%	74%	53%	49%	36%	23%	46.0%	46%	-2%	0%	91%	10%	1916	47%	
1917	38%	48%	57%	50%	55%	48%	65%	68%	66%	20%	52%	29%	49.6%	50%	1%	4%	68%	20%	1917	47%	
1918	39%	48%	76%	43%	65%	75%	75%	75%	54%	37%	29%	23%	53.3%	53%	5%	7%	76%	23%	1918	48%	
1919	36%	31%	61%	50%	63%	71%	70%	65%	58%	40%	23%	22%	49.3%	49%	1%	3%	71%	22%	1919	48%	
1920	45%	33%	50%	50%	72%	59%	65%	62%	63%	54%	18%	18%	49.2%	49%	1%	3%	72%	18%	1920	48%	
1921	48%	38%	48%	60%	79%	78%	72%	53%	67%	51%	18%	12%	52.1%	52%	4%	6%	79%	12%	1921	48%	
1922	33%	27%	44%	53%	65%	70%	65%	62%	60%	49%	14%	19%	46.9%	47%	-1%	1%	70%	14%	1922	48%	
1923	19%	32%	52%	64%	71%	70%	72%	59%	41%	48%	41%	26%	49.7%	50%	1%	4%	72%	19%	1923	48%	
1924	30%	44%	48%	65%	54%	66%	74%	63%	49%	63%	24%	9%	49.1%	49%	1%	3%	74%	9%	1924	48%	
1925	36%	32%	57%	71%	66%	66%	57%	72%	47%	19%	28%	16%	47.3%	47%	-1%	1%	72%	16%	1925	49%	
1926	18%	24%	39%	57%	60%	62%	60%	44%	35%	23%	14%	18%	37.9%	38%	-10%	-8%	62%	14%	1926	48%	
1927	19%	38%	43%	52%	47%	63%	63%	56%	41%	49%	9%	21%	41.8%	42%	-6%	-4%	63%	9%	1927	48%	
1928	37%	35%	45%	50%	70%	55%	76%	76%	61%	34%	23%	13%	48.0%	48%	0%	2%	76%	13%	1928	47%	
1929	16%	38%	50%	55%	60%	61%	69%	53%	41%	44%	77%	42%	50.5%	51%	2%	5%	77%	16%	1929	47%	
1930	41%	50%	62%	59%	64%	73%	77%	70%	60%	28%	22%	18%	52.0%	52%	4%	6%	77%	18%	1930	47%	
1931	21%	41%	25%	66%	57%	71%	80%	78%	64%	49%	27%	23%	50.2%	50%	2%	4%	80%	21%	1931	47%	
1932	14%	43%	42%	62%	56%	76%	77%	76%	67%	31%	36%	25%	50.4%	50%	2%	4%	77%	14%	1932	48%	48%
1933	31%	50%	27%	48%	55%	77%	78%	77%	60%	58%	22%	20%	50.2%	50%	2%	4%	78%	20%	1933	48%	48%
1934	34%	62%	44%	49%	83%	77%	77%	68%	44%	63%	22%	22%	53.7%	54%	6%	8%	83%	22%	1934	48%	48%
1935	23%	28%	52%	56%	59%	55%	70%	66%	67%	51%	22%	20%	47.5%	47%	-1%	1%	70%	20%	1935	48%	48%
1936	19%	38%	50%	44%	80%	75%	86%	67%	63%	49%	44%	41%	54.8%	55%	6%	9%	86%	19%	1936	50%	48%
1937	32%	41%	60%	50%	72%	67%	79%	80%	70%	44%	45%	24%	55.4%	55%	7%	9%	80%	24%	1937	51%	49%
1938	22%	28%	59%	53%	55%	69%	72%	74%	57%	80%	53%	18%	53.5%	53%	5%	7%	80%	18%	1938	52%	49%
1939	22%	44%	53%	58%	80%	72%	82%	72%	72%	54%	57%	27%	57.8%	58%	10%	12%	82%	22%	1939	53%	49%
1940	12%	28%	45%	55%	50%	69%	85%	60%	63%	64%	33%	17%	48.5%	48%	0%	2%	85%	12%	1940	52%	49%
1941	16%	37%	52%	68%	70%	66%	75%	79%	66%	41%	42%	19%	52.6%	53%	4%	7%	79%	16%	1941	52%	49%
1942	23%	37%	43%	78%	57%	69%	83%	74%	51%	53%	36%	22%	52.2%	52%	4%	6%	83%	22%	1942	53%	49%
1943	26%	53%	60%	66%	42%	67%	79%	64%	64%	56%	30%	32%	53.2%	53%	5%	7%	79%	26%	1943	53%	50%
1944	32%	36%	40%	46%	55%	69%	81%	79%	73%	69%	23%	13%	51.4%	51%	3%	5%	81%	13%	1944	53%	50%
1945	19%	37%	69%	54%	44%	54%	72%	70%	49%	58%	27%	28%	48.5%	48%	0%	2%	72%	19%	1945	53%	50%
1946	20%	46%	62%	70%	64%	64%	84%	68%	76%	62%	40%	36%	57.7%	58%	9%	12%	84%	20%	1946	53%	50%
1947	21%	40%	48%	44%	49%	66%	76%	85%	67%	74%	15%	19%	50.4%	50%	2%	4%	85%	15%	1947	53%	50%
1948	35%	42%	47%	52%	64%	59%	78%	78%	64%	48%	22%	40%	52.5%	52%	4%	6%	78%	22%	1948	52%	50%
1949	21%	28%	48%	74%	62%	63%	61%	76%	59%	67%	32%	29%	51.8%	52%	3%	6%	76%	21%	1949	52%	51%
1950	24%	34%	48%	33%	74%	72%	74%	65%	49%	52%	23%	14%	47.0%	47%	-1%	1%	74%	14%	1950	52%	50%

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	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC										
1951	30%	39%	38%	47%	66%	57%	68%	71%	62%	48%	35%	20%	48.5%	48%	0%	2%	71%	20%	1951	51%	50%	
1952	21%	27%	41%	56%	54%	66%	72%	71%	65%	79%	32%	23%	50.7%	51%	2%	5%	79%	21%	1952	51%	50%	
1953	18%	29%	31%	44%	57%	76%	77%	75%	72%	73%	37%	19%	50.8%	51%	2%	5%	77%	18%	1953	51%	50%	
1954	21%	28%	44%	38%	54%	60%	65%	63%	46%	43%	40%	25%	44.0%	44%	-4%	-2%	65%	21%	1954	50%	50%	
1955	28%	45%	57%	66%	65%	67%	73%	67%	66%	48%	16%	31%	52.5%	52%	4%	6%	73%	16%	1955	50%	50%	
1956	13%	50%	52%	55%	58%	73%	59%	51%	65%	67%	31%	23%	49.7%	50%	2%	4%	73%	13%	1956	50%	51%	
1957	45%	43%	56%	37%	47%	61%	77%	72%	64%	47%	23%	26%	49.9%	50%	2%	4%	77%	23%	1957	50%	51%	
1958	38%	53%	46%	66%	85%	66%	62%	77%	56%	62%	29%	18%	54.9%	55%	7%	9%	85%	18%	1958	50%	51%	
1959	23%	37%	45%	43%	57%	72%	70%	63%	58%	19%	20%	21%	44.0%	44%	-4%	-2%	72%	19%	1959	49%	51%	
1960	19%	41%	66%	48%	52%	60%	81%	63%	52%	44%	30%	37%	49.5%	49%	1%	3%	81%	19%	1960	49%	51%	
1961	38%	40%	41%	41%	67%	74%	68%	63%	58%	50%	28%	14%	48.6%	49%	0%	3%	74%	14%	1961	49%	51%	
1962	22%	26%	45%	60%	60%	67%	50%	73%	53%	36%	31%	37%	46.8%	47%	-2%	1%	73%	22%	1962	49%	51%	
1963	23%	32%	52%	69%	64%	85%	81%	65%	66%	65%	30%	33%	55.5%	55%	7%	9%	85%	23%	1963	49%	51%	
1964	42%	50%	37%	58%	71%	70%	67%	63%	53%	57%	39%	24%	52.6%	53%	4%	7%	71%	24%	1964	50%	51%	
1965	30%	35%	26%	47%	61%	70%	66%	48%	43%	51%	36%	30%	45.3%	45%	-3%	-1%	70%	26%	1965	50%	51%	
1966	47%	40%	50%	45%	68%	72%	67%	63%	62%	61%	17%	26%	51.6%	52%	3%	6%	72%	17%	1966	50%	51%	
1967	29%	38%	45%	43%	53%	59%	56%	66%	68%	37%	14%	31%	45.0%	45%	-3%	-1%	68%	14%	1967	49%	50%	
1968	35%	51%	59%	54%	52%	54%	72%	69%	50%	52%	34%	29%	50.9%	51%	3%	5%	72%	29%	1968	49%	50%	
1969	28%	45%	68%	49%	53%	44%	60%	77%	53%	35%	30%	28%	47.6%	48%	-1%	2%	77%	28%	1969	49%	50%	
1970	36%	50%	58%	61%	57%	70%	62%	76%	46%	38%	19%	26%	49.9%	50%	2%	4%	76%	19%	1970	49%	50%	
1971	33%	27%	42%	61%	69%	73%	71%	76%	48%	46%	30%	15%	49.4%	49%	1%	3%	76%	15%	1971	49%	50%	
1972	31%	38%	44%	62%	65%	59%	65%	50%	48%	35%	14%	9%	43.4%	43%	-5%	-3%	65%	9%	1972	49%	50%	
1973	44%	36%	42%	49%	28%	53%	54%	65%	65%	45%	29%	36%	45.5%	46%	-3%	0%	65%	28%	1973	48%	49%	
1974	30%	51%	47%	46%	44%	55%	71%	63%	62%	53%	23%	16%	46.7%	47%	-1%	1%	71%	16%	1974	47%	49%	
1975	25%	32%	44%	50%	55%	56%	65%	49%	47%	64%	33%	18%	44.9%	45%	-3%	-1%	65%	18%	1975	47%	49%	
1976	21%	50%	36%	72%	54%	68%	69%	72%	72%	45%	40%	29%	52.2%	52%	4%	6%	72%	21%	1976	48%	49%	
1977	33%	36%	47%	61%	76%	61%	74%	54%	40%	41%	19%	19%	46.9%	47%	-1%	1%	76%	19%	1977	48%	49%	
1978	28%	62%	52%	53%	51%	62%	55%	69%	70%	43%	32%	26%	50.1%	50%	2%	4%	70%	26%	1978	48%	49%	
1979	21%	42%	32%	43%	39%	64%	60%	44%	70%	22%	26%	30%	41.0%	41%	-7%	-5%	70%	21%	1979	47%	48%	
1980	20%	23%	30%	30%	49%	64%	60%	52%	56%	40%	31%	15%	39.2%	39%	-9%	-7%	64%	15%	1980	46%	48%	
1981	37%	33%	45%	42%	60%	60%	52%	44%	42%	41%	48%	21%	43.8%	44%	-4%	-2%	60%	21%	1981	45%	48%	
1982	27%	31%	34%	44%	47%	36%	62%	60%	45%	44%	22%	17%	39.2%	39%	-9%	-7%	62%	17%	1982	45%	48%	
1983	29%	38%	40%	41%	48%	70%	71%	61%	63%	41%	28%	13%	45.3%	45%	-3%	-1%	71%	13%	1983	45%	47%	
1984	31%	41%	44%	50%	55%	61%	64%	61%	55%	44%	28%	23%	46.4%	46%	-2%	0%	64%	23%	1984	45%	48%	
1985	30%	40%	44%	51%	55%	61%	64%	61%	54%	44%	28%	22%	46.2%	46%	-2%	0%	64%	22%	1985	45%	47%	
1986	30%	39%	44%	51%	54%	61%	64%	61%	54%	43%	28%	21%	45.9%	46%	-2%	0%	64%	21%	1986	44%	47%	
1987	26%	46%	54%	60%	62%	68%	76%	56%	55%	41%	29%	8%	48.4%	48%	0%	2%	76%	8%	1987	45%	47%	
1988	30%	41%	53%	61%	71%	80%	65%	61%	58%	40%	16%	35%	51.0%	51%	3%	5%	80%	16%	1988	45%	47%	
1989	35%	38%	46%	50%	54%	48%	55%	59%	63%	55%	29%	25%	46.5%	46%	-2%	0%	63%	25%	1989	45%	47%	
1990	33%	47%	50%	55%	57%	61%	57%	56%	62%	50%	38%	27%	49.4%	49%	1%	3%	62%	27%	1990	46%	47%	
1991	31%	43%	47%	44%	54%	72%	66%	68%	49%	38%	26%	23%	46.8%	47%	-1%	1%	72%	23%	1991	46%	47%	
1992	16%	32%	47%	33%	65%	61%	45%	57%	57%	49%	5%	12%	40.0%	40%	-8%	-6%	65%	5%	1992	47%	47%	
1993	24%	40%	39%	44%	61%	58%	70%	62%	43%	50%	27%	22%	45.1%	45%	-3%	-1%	70%	22%	1993	47%	47%	
1994	19%	47%	58%	60%	76%	70%	64%	51%	62%	47%	32%	29%	51.3%	51%	3%	5%	76%	19%	1994	47%	46%	
1995	22%	32%	50%	40%	51%	60%	69%	32%	58%	21%	24%	25%	40.3%	40%	-8%	-6%	69%	21%	1995	46%	46%	
1996	29%	34%	58%	61%	58%	53%	76%	77%	56%	48%	23%	13%	48.9%	49%	1%	3%	77%	13%	1996	47%	46%	
1997	31%	29%	45%	44%	45%	74%	77%	58%	55%	46%	17%	14%	44.7%	45%	-4%	-1%	77%	14%	1997	46%	46%	
1998	6%	23%	34%	51%	61%	71%	71%	57%	71%	42%	23%	51%	46.9%	47%	-1%	1%	71%	6%	1998	46%	46%	
1999	51%	38%	36%	59%	51%	64%	55%	56%	74%	48%	48%	21%	50.1%	50%	2%	4%	74%	21%	1999	46%	46%	
2000	22%	12%	66%	45%	43%	50%	49%	53%	53%	40%	17%	14%	38.8%	39%	-10%	-7%	66%	12%	2000	45%	46%	
2001	13%	24%	32%	52%	45%	48%	59%	58%	50%	34%	36%	25%	39.7%	40%	-9%	-6%	59%	13%	2001	44%	45%	

YEAR	GRAND RAPIDS PERCENT SUNSHINE													AVG	DEP AVG	DEP N	MAX	MIN	YEAR	10 Year	30 Year
	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	W Avg								
2002	31%	42%	29%	53%	54%	63%	77%	73%	71%	41%	26%	8%	47.3%	47%	-1%	1%	77%	8%	2002	45%	46%
2003	8%	46%	55%	61%	32%	53%	58%	58%	53%	49%	28%	20%	43.3%	43%	-5%	-3%	61%	8%	2003	45%	46%
2004	8%	7%	30%	59%	46%	58%	59%	52%	81%	37%	32%	22%	41.0%	41%	-7%	-5%	81%	7%	2004	44%	45%
2005	24%	28%	52%	60%	69%	78%	80%	75%	75%	59%	29%	9%	53.3%	53%	5%	7%	80%	9%	2005	45%	46%
2006	28%	41%	51%	70%	66%	80%	79%	76%	51%	45%	28%	29%	53.7%	54%	5%	8%	80%	28%	2006	46%	46%
2007	30%	41%	62%	48%	76%	78%	79%	64%	73%	56%	23%	14%	53.7%	54%	5%	8%	79%	14%	2007	47%	46%
2008	17%	17%	49%	67%	65%	63%	58%	70%	59%	47%	29%	7%	45.9%	46%	-2%	0%	70%	7%	2008	47%	46%
2009	26%	33%	72%	49%	65%	64%	64%	61%	64%	22%	37%	13%	47.6%	47.5%	-0.7%	1.5%	72%	13%	2009	46%	46%
2010	27%	18%	65%	58%	34%	60%	73%	78%	55%	67%	40%	18%	49.7%	49.5%	1.3%	3.5%	78%	18%	2010	47%	46%
2011	16%	40%	53%	38%	54%	63%	78%	72%	58%	57%	36%	25%	49.4%	49.3%	1.1%	3.3%	78%	16%	2011	48%	46%
2012	31%	38%																			
2013																					
2014																					
2015																					
2016																					
2017																					
2018																					
2019																					
AVG	27%	37%	48%	53%	58%	64%	69%	65%	58%	48%	30%	22%	48%	48.2%	0.50	0.51	73%	18%	AVG	48%	49%
NORMAL 81-10	26%	34%	48%	52%	56%	63%	65%	61%	59%	44%	28%	20%	46%	46.3%	-0.02	0.00	71%	16%	NORMAL 81-10	46%	46%
MAX	51%	62%	76%	78%	85%	85%	91%	85%	81%	80%	77%	51%	58%	52.23	52.23	52.23	91%	29%	MAX	53%	51%
MIN	6%	7%	22%	30%	28%	36%	44%	32%	35%	19%	5%	7%	23%	44.61	44.61	44.61	59%	5%	MIN	44%	45%
STD	10%	10%	11%	11%	12%	11%	11%	12%	11%	13%	11%	8%	0.07	1.54	1.54	1.54	15%	6%	STD	10%	11%
YEAR	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Year	AVG	YEAR				YEAR		
# YEARS	110	109	109	109	109	109	110	110	110	110	110	110	110	103.00	# YEARS				# OF Years		
1951 to 1980	29.1%	39.9%	45.8%	51.8%	57.7%	64.6%	66.6%	64.3%	57.9%	48.2%	28.3%	24.5%	48.3%	48.2%	1951 to 1980						
1961 to 1990	27.5%	38.7%	47.4%	53.1%	58.9%	64.6%	69.0%	65.2%	57.3%	48.2%	30.1%	23.1%	48.4%	48.6%	1961 to 1990						
1971 to 2000	28.2%	37.4%	45.0%	50.4%	55.3%	61.8%	63.8%	58.2%	56.9%	43.5%	27.1%	21.6%	45.8%	45.8%	1971 to 2000						
1981 to 2010	25.7%	34.0%	47.7%	52.1%	56.0%	62.7%	65.2%	60.5%	58.7%	44.3%	28.1%	20.0%	46.3%	46.3%	1981 to 2010						
Highest 1/3	30.0%	40.0%	51.5%	58.4%	61.0%	66.0%	70.4%	61.0%	62.0%	47.4%	28.8%	22.5%	48.0%	48.0%							
Middle	26.6%	34.0%	47.0%	51.0%	54.0%	61.0%	64.0%	60.0%	56.0%	44.0%	28.0%	20.0%	46.4%	46.4%							
Lowest 1/3	23.0%	30.0%	44.0%	48.6%	51.2%	59.8%	60.5%	57.5%	54.5%	41.0%	25.0%	13.9%	45.2%	45.1%							
H-L	7.0%	10.0%	7.5%	9.8%	9.8%	6.1%	9.9%	3.5%	7.5%	6.4%	3.8%	8.6%	2.8%	2.8%							

THRESHOLD