

A Fire Danger Assessment for New Zealand

*A report summarising
an assessment of the fuel availability to burn
at fifteen weather sites throughout New Zealand
covering a period of up to 60 years of monthly and
yearly Drought Codes, Build Index's
& Initial Spread Index's*

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The principal objective of this project is to extend and improve the New Zealand fire climatology analysis. From information taken from the New Zealand Fire Danger Rating System (NZFDRS) this study undertook an assessment of Drought Codes (DC), Build Up Index (BUI) and Initial Spread Index (ISI) at fifteen weather sites in New Zealand. This data is summarised and shown as the monthly and yearly long-term averages and extremes of fire weather and fire danger ratings. This study supports previous research undertaken by SCION.

The ISI, BUI and Fire Weather Index (FWI) are each designed to represent some aspect of fire behaviour after ignition has taken place. The Fine Fuel Moisture Code (FFMC), Duff Moisture Code (DMC) and DC, on the other hand, represent fuel moisture and should therefore be related to the ease of ignition. None of the FWI System components says anything about the presence or level of activity of fire-starting agents, in other words, fire risk.

Any comparison between actual fire occurrences and the FWI System combines both flammability (i.e., the relative ease with which a substance ignites and sustains combustion) and risk. The FWI System components can measure flammability but cannot account for fire risk. Since a fire start depends most of all on the flammability of the fine surface fuel, the FFMC is the FWI System component most likely to compare well with vegetation fire occurrence.

The majority of the earlier data for this study is taken from the 2003 SCION Fire Danger Climatology for New Zealand Report. This study involved fire weather information for 90 weather stations from across New Zealand for the years prior to 2000.

This study has analyzed the BUI, DC and ISI outputs from NZFDRS in two configurations from fifteen fire weather stations involving 24 to 59 years of data prior to July 2020. The first part of the study involves defining the highest monthly BUI, DC and ISI for each of fifteen weather stations. The second part involved defining the days each year with BUI greater than 60, DC greater than 300 and ISI greater than 10. The tables commencing at page four of this report show the results for each of the fifteen weather stations.

The results of this study has shown that over the past period of up to 60 years it suggests generally that the fire danger levels have not increased to the levels implied in the October 2020 Mfe/Stats Report. The South Island shows there is overall no-change to a notable decrease in regional daily fire danger levels apart from Queenstown which has shown a nominal increase. For the North Island the regional daily fire danger levels indicate an overall no-change to a nominal increase for Whanganui, Central North Island, Auckland. However Northland, Gisborne, Hawkes Bay, Paraparaumu and Masterton have shown a nominal to notable decrease in regional fire danger levels. Given all of these factors this study has shown the outputs from the NZ Fire Danger Rating System indicates a marginal overall downward variance across New Zealand for the past twenty years when compared with the period prior to the year 2000.

Index

Location	Page
Kaitaia – Northland RAWS.....	4
Auckland Airport RAWS	7
Rotorua Airport RAWS	11
Taupo Airport RAWS	14
Gisborne Airport RAWS	17
Napier RAWS	20
Ngaumu – Masterton RAWS	23
Whanganui RAWS	26
Paraparumu RAWS	29
Nelson RAWS	32
Marlborough RAWS	35
Christchurch Airport RAWS	38
Dunedin RAWS	41
Queenstown RAWS	44
Invercargill RAWS	48

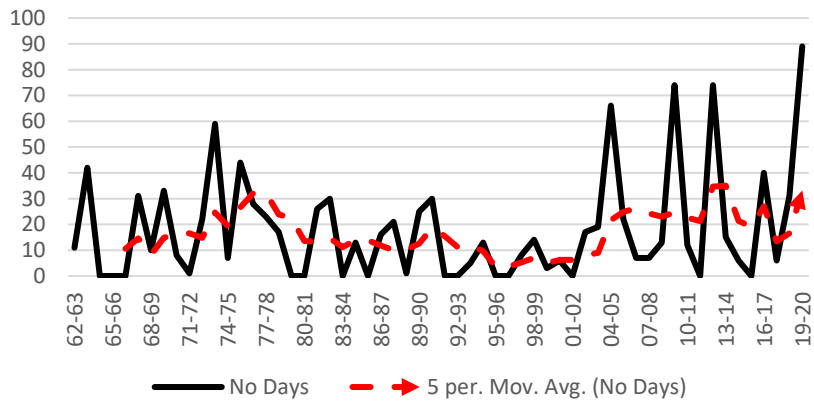
Kaitaia - Northland

Build Up Index

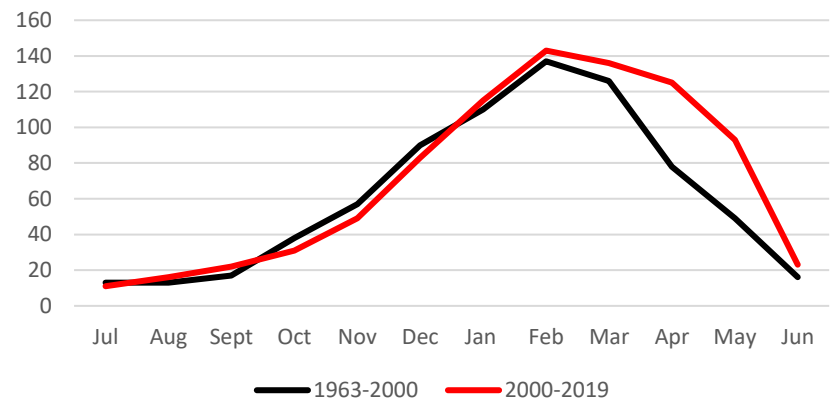
BUI > 60	No Days	87-88	21	13-14	15
62-63	11	88-89	1	14-15	6
63-64	42	89-90	25	15-16	0
64-65	0	90-91	30	16-17	40
65-66	0	91-92	0	17-18	6
66-67	0	92-93	0	18-19	31
67-68	31	93-94	5	19-20	89
68-69	10	94-95	13		
69-70	33	95-96	0		
70-71	8	96-97	0		
71-72	1	97-98	8		
72-73	22	98-99	14		
73-74	59	99-00	3		
74-75	7	00-01	6		
75-76	44	01-02	0		
76-77	28	02-03	17		
77-78	23	03-04	19		
78-79	17	04-05	66		
79-80	0	05-06	22		
80-81	0	06-07	7		
81-82	26	07-08	7		
82-83	30	08-09	13		
83-84	0	09-10	74		
84-85	13	10-11	12		
85-86	0	11-12	0		
86-87	16	12-13	74		

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-00	13	13	17	38	57	90	110	137	126	78	49	16
00-01	11	10	12	24	28	41	49	69	31	32	16	5
01-02	6	5	16	22	17	20	45	57	45	24	16	3
02-03	6	9	12	19	38	50	51	81	36	18	18	10
03-04	7	5	5	22	33	37	83	18	52	72	27	8
04-05	6	4	9	13	35	25	68	72	94	105	93	14
05-06	11	10	22	13	45	46	73	76	85	7	4	5
06-07	6	5	20	24	27	52	50	45	68	23	24	23
07-08	4	6	13	20	29	19	51	76	32	20	12	7
08-09	2	3	9	15	34	22	68	83	48	57	7	8
09-10	3	8	13	9	40	67	74	118	108	102	43	5
10-11	6	6	6	28	49	83	61	52	56	13	3	3
11-12	3	6	5	9	23	27	26	46	17	12	11	2
12-13	2	3	4	5	10	24	73	111	134	125	21	5
13-14	6	6	6	31	49	45	51	61	100	56	15	20
14-15	5	10	7	18	20	40	69	53	61	40	24	10
15-16	6	4	6	28	31	63	48	47	40	29	41	9
16-17	3	16	11	20	26	75	115	86	32	22	16	11
17-18	3	6	4	16	31	66	64	24	29	29	8	6
18-19	6	7	10	30	29	24	77	100	62	37	43	14
19-20	8	6	12	15	35	43	110	143	136	81	34	18
57yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	13	13	17	38	57	90	110	137	126	78	49	16
2000-2019	11	16	22	31	49	83	115	143	136	125	93	23

Number of Days with BUI greater than 60 by year



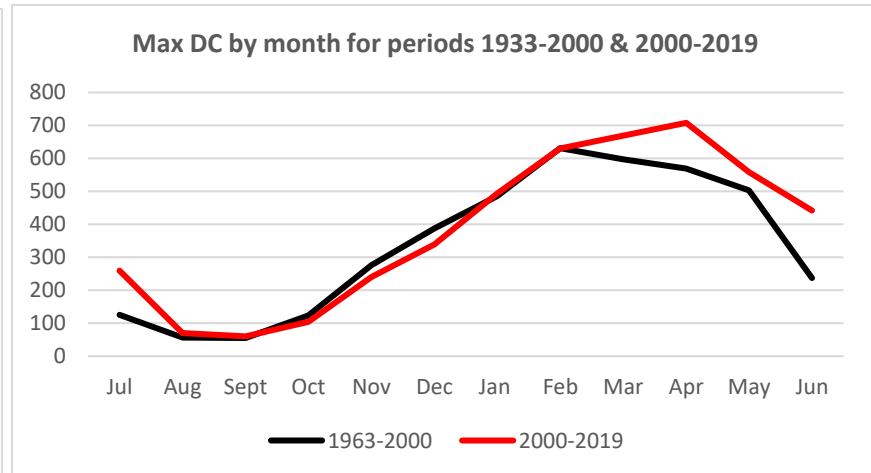
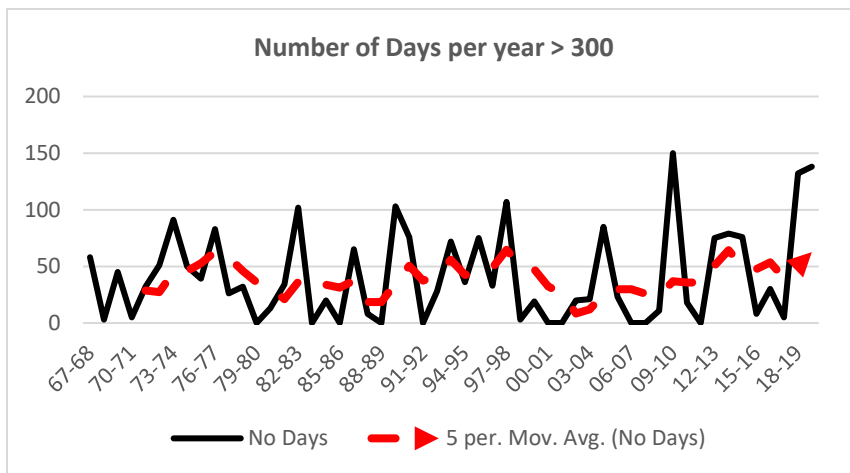
Max BUI by month for periods 1993-2000 & 2000-2019



Drought Code

DC > 300	No Days				
67-68	58	88-89	0	09-10	150
68-69	3	89-90	103	10-11	18
69-70	45	90-91	76	11-12	0
70-71	5	91-92	0	12-13	75
71-72	32	92-93	28	13-14	79
72-73	51	93-94	72	14-15	76
73-74	91	94-95	36	15-16	8
74-75	50	95-96	75	16-17	30
75-76	39	96-97	33	17-18	5
76-77	83	97-98	107	18-19	132
77-78	26	98-99	3	19-20	138
78-79	32	99-00	19		
79-80	0	00-01	0		
80-81	13	01-02	0		
81-82	34	02-03	20		
82-83	102	03-04	21		
83-84	0	04-05	85		
84-85	20	05-06	23		
85-86	0	06-07	0		
86-87	65	07-08	0		
		08-09	11		

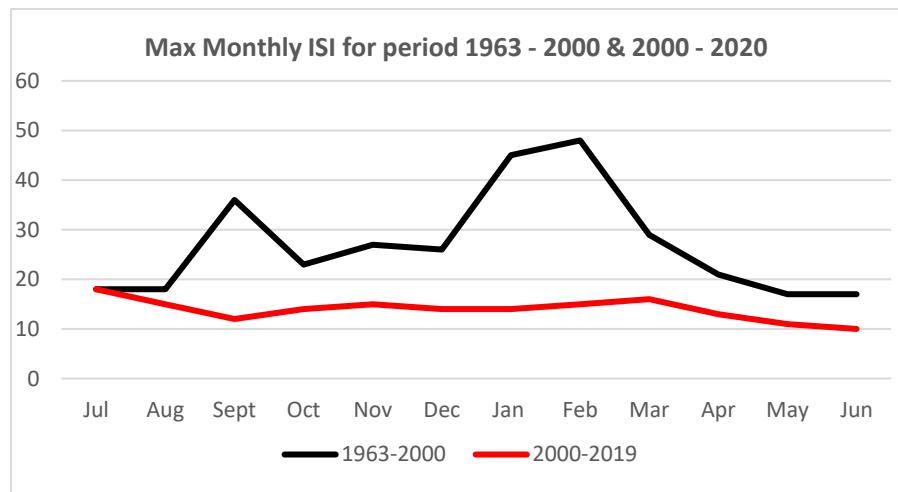
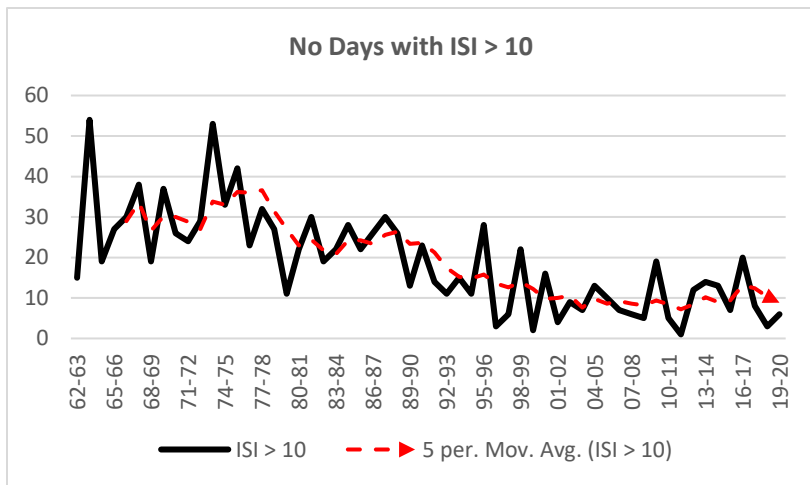
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-00	125	56	55	123	276	388	486	631	597	569	503	237
00-01	42	31	32	75	114	206	202	272	215	219	68	26
01-02	22	15	41	59	58	99	197	270	268	290	234	25
02-03	19	28	33	56	132	224	185	333	344	76	80	36
03-04	21	23	17	62	144	235	401	102	170	285	226	34
04-05	23	18	30	53	125	161	246	297	445	540	552	238
05-06	96	26	60	38	173	221	270	400	434	61	33	19
06-07	27	26	56	93	125	228	268	238	276	140	146	162
07-08	16	21	40	52	88	87	213	282	128	85	38	30
08-09	12	10	27	52	107	105	301	376	173	223	20	25
09-10	9	14	25	33	162	339	493	607	619	623	558	87
10-11	30	21	28	104	240	329	336	206	218	215	40	15
11-12	13	26	37	44	164	184	144	238	260	63	77	15
12-13	17	13	20	36	98	166	276	451	621	635	299	113
13-14	19	21	16	103	191	121	325	477	555	483	145	137
14-15	14	23	20	33	74	144	261	347	415	409	359	69
15-16	30	18	14	81	122	319	300	313	174	120	179	84
16-17	13	35	20	70	101	262	405	365	109	88	66	44
17-18	16	18	14	50	117	310	328	144	135	152	89	26
18-19	33	38	27	96	134	93	290	435	469	511	493	442
19-20	259	70	33	75	131	208	430	630	669	708	340	343
57yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	125	56	55	123	276	388	486	631	597	569	503	237
2000-2019	259	70	60	104	240	339	493	630	669	708	558	442



Initial Spread Index

Days of	ISI > 10				
62-63	15	83-84	22	05-06	10
63-64	54	84-85	28	06-07	7
64-65	19	85-86	22	07-08	6
65-66	27	86-87	26	08-09	5
66-67	30	87-88	30	09-10	19
67-68	38	88-89	26	10-11	5
68-69	19	89-90	13	11-12	1
69-70	37	90-91	23	12-13	12
70-71	26	91-92	14	13-14	14
71-72	24	92-93	11	14-15	13
72-73	29	93-94	15	15-16	7
73-74	53	94-95	11	16-17	20
74-75	33	95-96	28	17-18	8
75-76	42	96-97	3	18-19	3
76-77	23	97-98	6	19-20	6
77-78	32	98-99	22		
78-79	27	99-00	2		
79-80	11	00-01	16		
80-81	22	01-02	4		
81-82	30	02-03	9		
82-83	19	03-04	7		
		04-05	13		

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-00	18	18	36	23	27	26	45	48	29	21	17	17
00-01	18	10	11	8	15	13	10	11	12	7	5	4
01-02	7	5	8	8	6	6	11	14	9	6	5	4
02-03	5	5	8	10	14	8	10	13	9	12	7	10
03-04	7	5	8	10	12	9	12	8	10	12	4	4
04-05	5	4	12	12	7	13	13	7	15	13	6	8
05-06	8	6	10	10	10	13	14	11	6	4	4	6
06-07	6	4	6	8	12	11	8	10	12	5	8	7
07-08	4	6	8	11	7	7	17	12	6	11	6	5
08-09	4	3	6	9	10	6	10	9	10	7	8	4
09-10	5	11	8	5	11	10	9	14	16	10	9	4
10-11	5	4	11	10	8	12	9	10	7	6	3	7
11-12	9	4	4	4	6	6	8	6	10	5	3	3
12-13	3	4	4	5	4	9	13	11	11	7	4	3
13-14	6	5	6	14	11	8	11	15	14	7	11	9
14-15	5	14	6	11	14	11	14	7	10	10	6	4
15-16	6	5	5	13	10	14	9	11	10	8	9	8
16-17	4	15	7	7	13	14	13	12	9	6	5	9
17-18	2	6	10	8	9	11	12	10	6	10	4	6
18-19	4	5	7	7	9	7	11	12	10	9	6	4
19-20	5	5	6	6	9	9	11	12	9	12	8	2
57yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	18	18	36	23	27	26	45	48	29	21	17	17
2000-2019	18	15	12	14	15	14	14	15	16	13	11	10



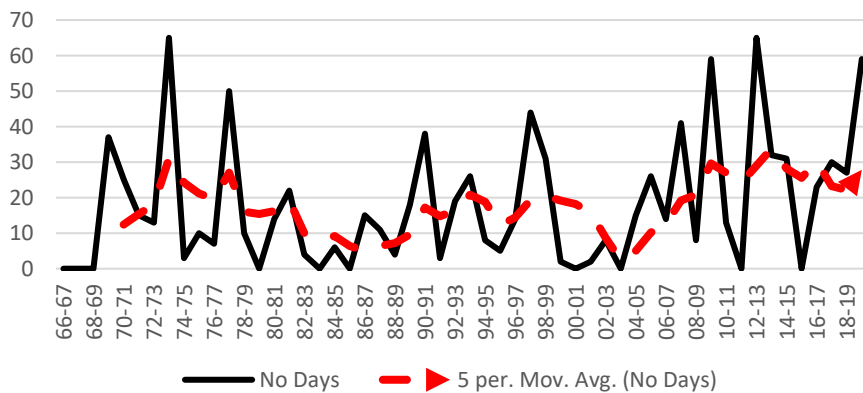
Auckland

Build Up Index

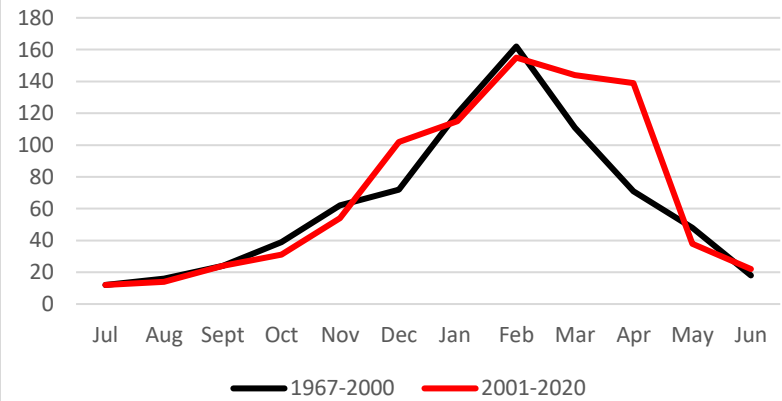
BUI > 60	No Days		
66-67	0	96-97	14
67-68	0	97-98	44
68-69	0	98-99	31
69-70	37	99-00	2
70-71	25	00-01	0
71-72	15	01-02	2
72-73	13	02-03	8
73-74	65	03-04	0
74-75	3	04-05	15
75-76	10	05-06	26
76-77	7	06-07	14
77-78	50	07-08	41
78-79	10	08-09	8
79-80	0	09-10	59
80-81	14	10-11	13
81-82	22	11-12	0
82-83	4	12-13	65
83-84	0	13-14	32
84-85	6	14-15	31
85-86	0	15-16	0
86-87	15	16-17	23
87-88	11	17-18	30
88-89	4	18-19	27
89-90	18	19-20	59
90-91	38		
91-92	3		
92-93	19		
93-94	26		
94-95	8		
95-96	5		

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1967-2000	12	16	24	39	62	72	120	162	111	71	48	18
00-01	12	6	11	26	32	44	41	52	58	39	34	3
01-02	9	8	24	31	19	14	37	60	61	33	26	4
02-03	6	8	12	17	24	39	51	78	29	21	23	8
03-04	5	7	5	19	41	33	44	16	46	51	15	5
04-05	3	8	14	11	30	28	73	80	68	49	35	8
05-06	6	11	20	16	40	61	58	85	100	14	4	3
06-07	6	4	19	21	22	25	51	64	73	31	25	22
07-08	4	7	10	13	27	34	77	91	77	62	13	9
08-09	1	4	14	15	37	39	53	80	46	60	14	8
09-10	4	11	19	8	31	43	51	94	144	139	30	3
10-11	5	3	7	27	54	84	65	37	35	20	6	5
11-12	4	9	15	14	33	40	37	54	20	34	28	10
12-13	6	8	11	13	42	49	115	124	125	48	10	2
13-14	6	14	5	29	47	48	57	87	100	71	11	13
14-15	3	8	6	16	18	37	101	68	70	31	13	8
15-16	9	6	8	23	32	51	43	38	37	37	35	7
16-17	4	14	8	18	22	45	82	85	55	13	10	7
17-18	3	6	6	13	49	102	102	41	45	35	11	2
18-19	4	6	13	29	23	27	47	98	80	23	19	5
19-20	7	4	13	13	34	59	96	155	104	55	38	5
53 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1967-2000	12	16	24	39	62	72	120	162	111	71	48	18
2001-2020	12	14	24	31	54	102	115	155	144	139	38	22

Number of Days with BUI greater than 60 by year



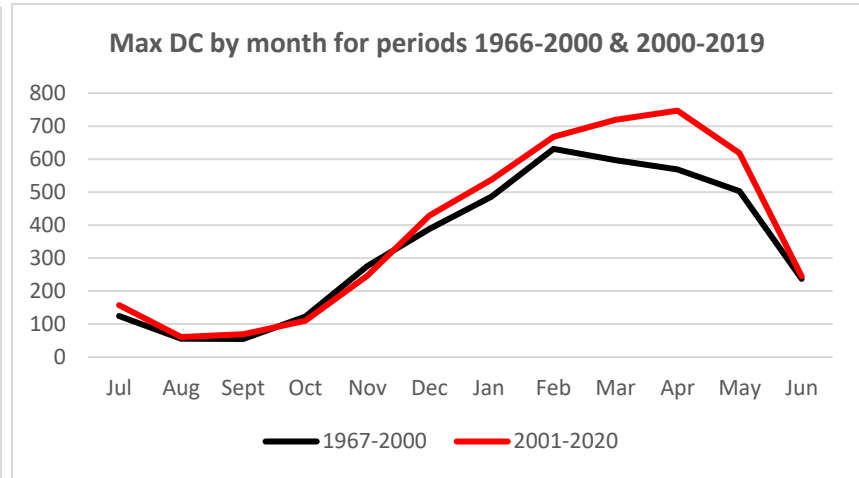
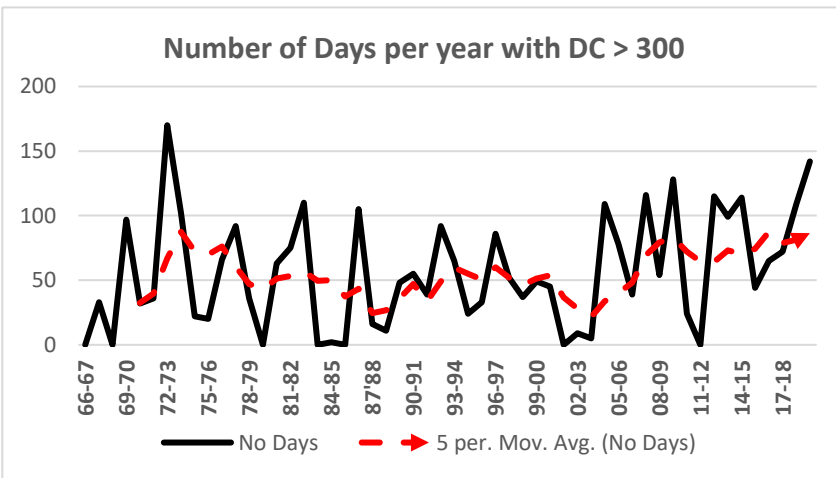
Max BUI by month for periods 1967-2000 & 2000-2019



Drought Code

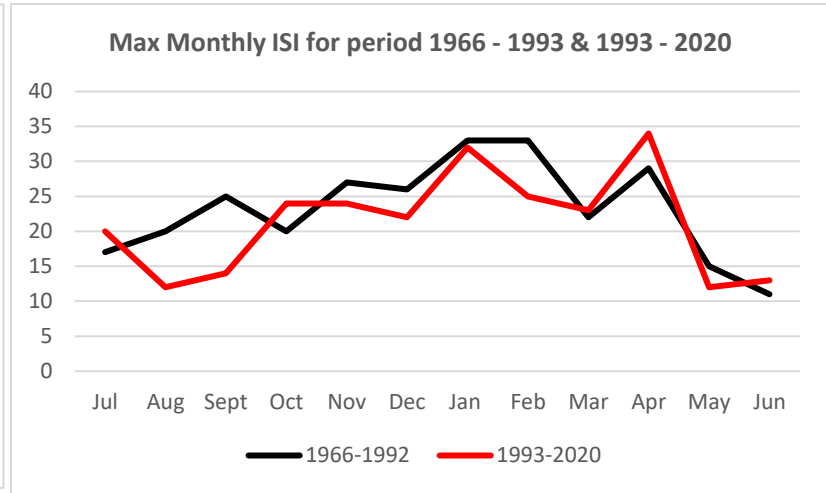
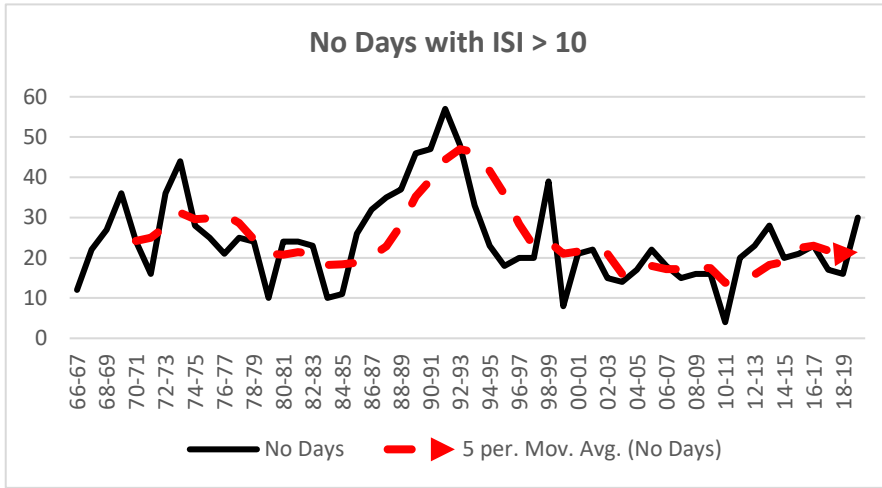
DC > 100	No Days		
66-67	0	96-97	86
67-68	33	97-98	52
68-69	0	98-99	37
69-70	97	99-00	49
70-71	32	00-01	45
71-72	36	01-02	0
72-73	170	02-03	9
73-74	102	03-04	5
74-75	22	04-05	109
75-76	20	05-06	78
76-77	66	06-07	39
77-78	92	07-08	116
78-79	36	08-09	54
79-80	0	09-10	128
80-81	63	10-11	24
81-82	75	11-12	0
82-83	110	12-13	115
83-84	0	13-14	99
84-85	2	14-15	114
85-86	0	15-16	44
86-87	105	16-17	65
87-88	16	17-18	72
88-89	11	18-19	109
89-90	48	19-20	142
90-91	55		
91-92	39		
92-93	92		
93-94	65		
94-95	24		
95-96	33		

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1967-2000	125	56	55	123	276	388	486	631	597	569	503	237
00-01	38	17	32	97	154	303	360	408	386	385	236	17
01-02	33	36	62	85	89	51	140	277	260	234	221	83
02-03	21	27	39	53	136	189	229	342	241	142	149	98
03-04	25	30	16	70	180	190	324	251	168	257	243	22
04-05	12	28	43	61	155	197	319	391	476	474	414	151
05-06	41	42	69	42	163	263	379	460	498	406	130	20
06-07	32	16	55	59	102	220	347	382	442	243	240	245
07-08	158	24	32	51	164	255	478	557	563	594	298	143
08-09	14	15	58	74	152	259	335	402	300	356	339	109
09-10	23	35	56	29	178	243	382	551	719	747	557	86
10-11	21	19	24	108	247	341	364	186	202	123	27	23
11-12	15	28	47	51	151	201	177	254	152	140	156	91
12-13	36	27	35	87	214	307	538	613	692	624	291	18
13-14	35	61	16	103	199	204	338	481	570	583	307	205
14-15	14	21	18	63	102	204	438	500	577	424	320	125
15-16	65	19	19	82	143	275	290	273	290	340	376	128
16-17	15	40	25	67	124	285	427	521	433	58	42	49
17-18	51	19	21	62	214	429	454	455	331	328	109	22
18-19	16	30	46	110	110	126	232	394	429	366	340	237
19-20	150	18	34	55	168	287	514	668	659	680	618	109
53 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1967-2000	125	56	55	123	276	388	486	631	597	569	503	237
2001-2020	158	61	69	110	247	429	538	668	719	747	618	245



Initial Spread Index

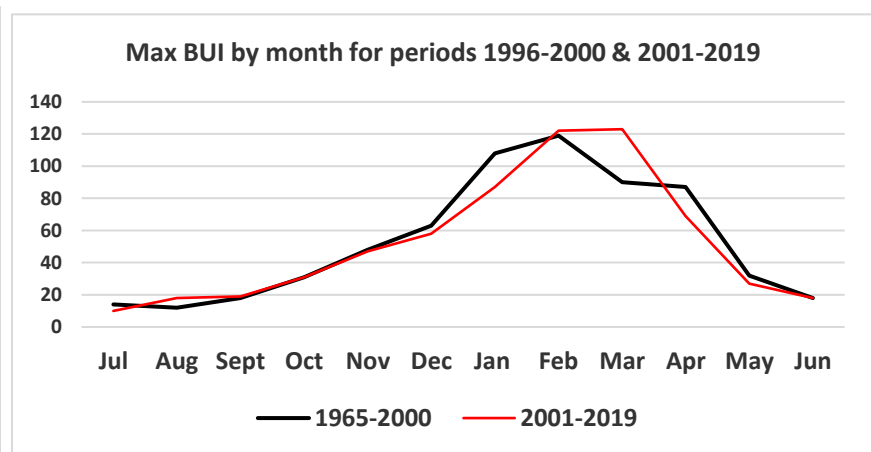
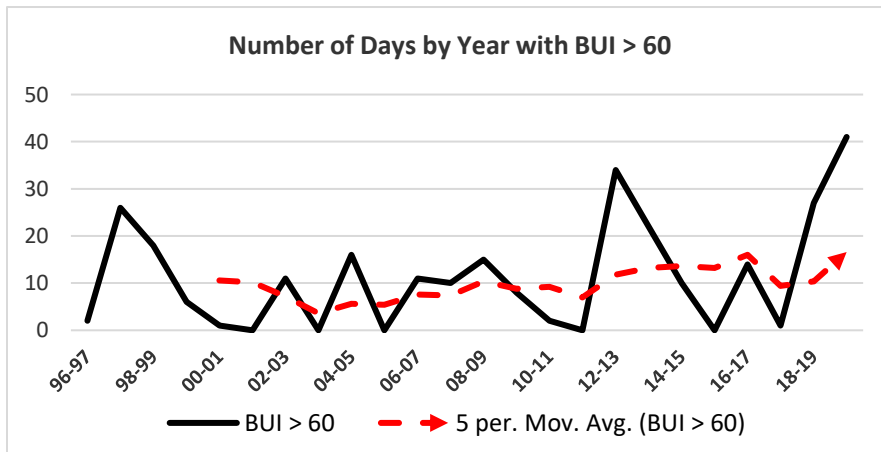
ISI > 10	No Days		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
66-67	12	66-67							18	14	19	8	5	5
67-68	22	67-68	10	9	7	8	23	21	20	16	22	11	9	4
68-69	27	68-69	11	10	10	11	11	18	18	19	14	11	7	5
69-70	36	69-70	10	5	16	10	12	26	17	15	20	15	8	4
70-71	24	70-71	15	15	9	13	9	16	17	10	13	10	10	6
71-72	16	71-72	8	5	8	14	11	16	18	15	8	11	12	5
72-73	36	72-73	3	7	17	16	21	19	9	14	16	11	15	5
73-74	44	73-74	12	8	5	10	12	14	23	33	13	24	12	11
74-75	28	74-75	7	5	4	12	20	20	11	16	12	22	8	3
75-76	25	75-76	5	12	11	8	15	19	20	13	22	29	5	10
76-77	21	76-77	3	12	8	14	14	8	14	21	11	19	9	9
77-78	25	77-78	17	7	10	16	12	16	12	15	13	17	11	9
78-79	24	78-79	7	24	13	17	12	13	16	13	9	6	10	8
79-80	10	79-80	4	4	11	14	5	11	9	12	9	11	7	7
80-81	24	80-81	5	15	8	15	14	21	23	13	12	11	13	5
81-82	24	81-82	5	5	6	14	17	12	23	16	10	13	7	6
82-83	23	82-83	13	6	7	7	14	16	21	16	10	11	11	7
83-84	10	83-84	13	13	15	15	8	13	7	10	11	5	7	3
84-85	11	84-85	6	11	7	9	8	7	10	13	22	13	6	4
85-86	26	85-86	6	20	25	10	16	15	20	10	11	9	7	10
86-87	32	86-87	9	14	15	11	12	16	21	12	11	16	6	8
87-88	35	87-88	6	6	10	18	15	14	13	18	13	15	11	10
88-89	37	88-89	10	17	13	10	27	24	16	23	15	12	13	8
89-90	46	89-90	7	13	15	20	16	13	18	11	16	10	13	3
90-91	47	90-91	3	7	9	17	19	16	33	14	21	12	14	9
91-92	57	91-92	6	7	17	19	22	18	24	31	21	19	10	5
92-93	48	92-93	8	6	6	18	20	22	26	14	21	10	9	6
93-94	33	93-94	9	12	7	24	15	17	13	18	17	13	10	8
94-95	23	94-95	5	5	10	10	11	22	20	13	11	12	12	4
95-96	18	95-96	2	9	9	7	10	18	13	13	23	14	8	10
96-97	20	96-97	6	6	10	8	24	9	20	11	16	11	8	4
97-98	20	97-98	3	10	13	14	14	17	32	11	13	10	8	5
98-99	39	98-99	3	12	8	20	14	14	17	12	13	13	11	1
99-00	8	99-00	4	9	12	9	9	9	13	19	8	8	7	7
00-01	21	00-01	20	8	8	18	22	14	10	17	8	9	4	3
01-02	22	01-02	6	10	11	12	10	11	13	19	23	13	10	8
02-03	15	02-03	16	7	7	10	13	12	12	16	10	11	9	12
03-04	14	03-04	4	7	9	8	15	11	17	21	14	9	5	7
04-05	17	04-05	9	7	12	17	12	15	13	11	10	12	4	6
05-06	22	05-06	6	8	8	7	11	16	22	19	20	9	3	4
06-07	18	06-07	4	6	8	8	14	19	15	19	14	9	9	10
07-08	15	07-08	3	9	9	11	10	9	19	25	14	6	5	4
08-09	16	08-09	3	5	11	8	22	11	11	14	22	12	4	6
09-10	16	09-10	4	17	6	5	8	10	15	16	18	11	9	5
10-11	4	10-11	4	5	9	9	8	18	13	8	7	7	10	7
11-12	20	11-12	10	6	12	13	17	16	7	10	10	22	11	6
12-13	23	12-13	6	6	13	7	12	10	15	14	12	8	4	4
13-14	28	13-14	4	8	13	17	21	13	14	16	9	9	7	11
14-15	20	14-15	11	11	4	9	11	12	12	12	12	13	8	10
15-16	21	15-16	7	5	7	13	7	12	15	10	14	12	6	13
16-17	23	16-17	6	7	6	7	10	17	16	12	10	8	10	13
17-18	17	17-18	5	11	14	9	16	17	23	7	11	34	4	6
18-19	16	18-19	6	6	10	12	8	11	13	19	14	6	9	7
19-20	30	19-20	7	4	11	12	13	19	13	13	13	9	12	2
		54 yrs												
		1966-1992	17	20	25	20	27	26	33	33	22	29	15	11
		1993-2020	20	12	14	24	24	22	32	25	23	34	12	13



Rotorua Aero

	BUI > 60
96-97	2
97-98	26
98-99	18
99-00	6
00-01	1
01-02	0
02-03	11
03-04	0
04-05	16
05-06	0
06-07	11
07-08	10
08-09	15
09-10	8
10-11	2
11-12	0
12-13	34
13-14	22
14-15	10
15-16	0
16-17	14
17-18	1
18-19	27
19-20	41

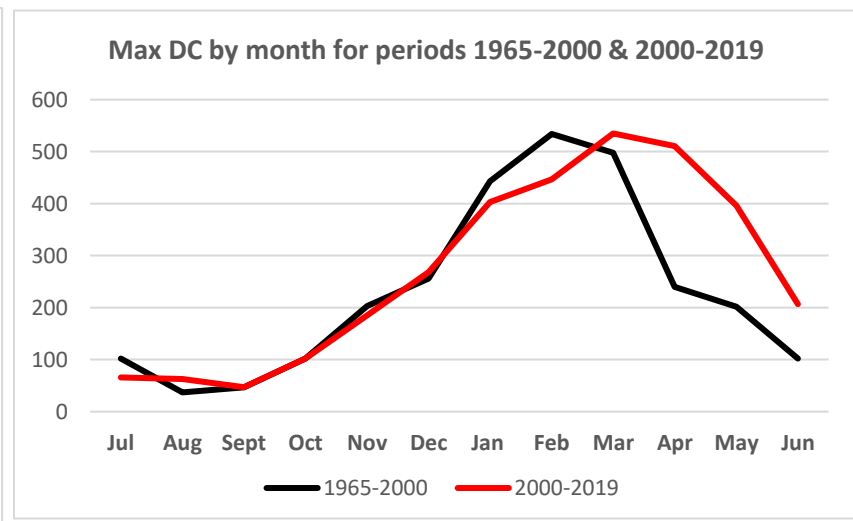
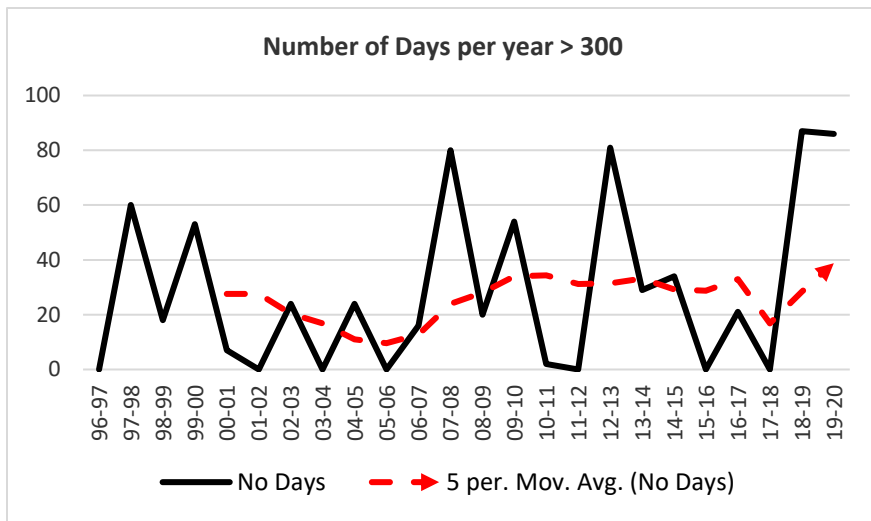
Build Up Index													
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1965-2000	14	12	18	31	48	63	108	119	90	87	32	18	
01-02	10	7	15	18	15	8	25	33	28	32	19	8	
02-03	6	7	13	18	18	32	39	85	21	17	10	7	
03-04	6	8	8	21	30	22	43	13	39	58	5	4	
04-05	3	10	10	11	16	20	58	60	89	33	11	8	
05-06	3	6	12	13	32	26	58	35	45	8	5	4	
06-07	5	7	19	22	18	42	22	64	66	25	16	8	
07-08	3	6	6	16	47	58	87	55	50	43	14	18	
08-09	2	3	11	13	31	37	67	89	28	38	10	8	
09-10	2	4	11	9	35	44	70	25	65	47	27	3	
10-11	7	2	5	14	41	40	66	44	21	11	4	4	
11-12	3	10	9	13	38	41	30	52	18	27	13	13	
12-13	9	4	7	18	43	49	72	87	123	53	12	5	
13-14	9	18	7	17	25	27	33	56	85	69	7	5	
14-15	7	8	12	16	26	37	78	53	28	18	11	6	
15-16	8	6	6	31	30	40	40	36	31	14	17	6	
16-17	6	8	10	13	15	34	63	71	19	14	8	5	
17-18	5	5	4	15	33	60	18	18	24	20	8	4	
18-19	3	3	12	27	27	14	46	100	76	28	16	6	
19-20	3	3	10	12	32	23	73	122	108	28	30	8	
55 yrs													
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1965-2000	14	12	18	31	48	63	108	119	90	87	32	18	
2001-2019	10	18	19	31	47	58	87	122	123	69	27	18	



Drought Code

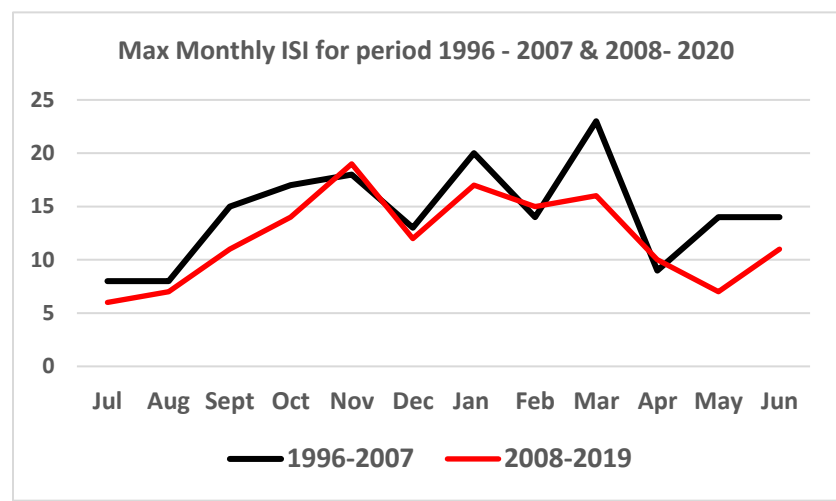
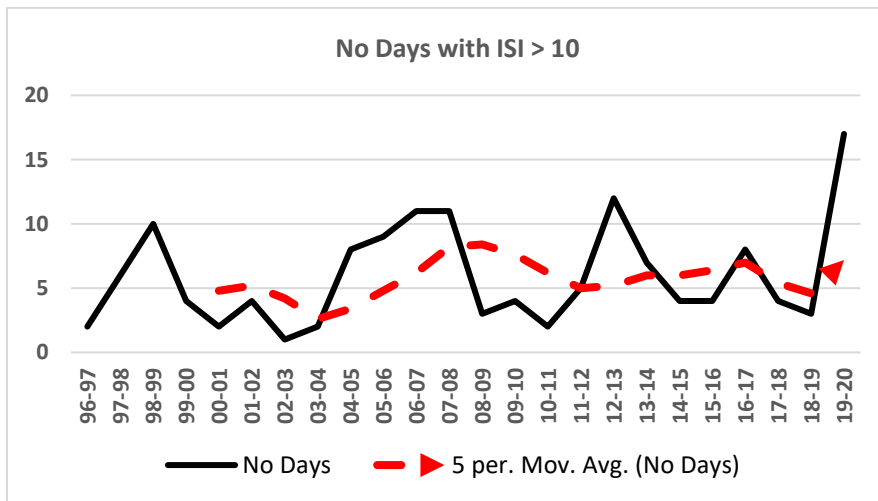
DC > 300	No Days
96-97	0
97-98	60
98-99	18
99-00	53
00-01	7
01-02	0
02-03	24
03-04	0
04-05	24
05-06	0
06-07	16
07-08	80
08-09	20
09-10	54
10-11	2
11-12	0
12-13	81
13-14	29
14-15	34
15-16	0
16-17	21
17-18	0
18-19	87
19-20	86

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1965-2000	102	37	47	102	203	256	443	534	498	240	202	102
00-01	32	12	31	64	127	150	289	321	129	136	28	17
01-02	39	25	35	47	53	52	117	180	204	255	70	45
02-03	23	15	40	65	128	185	237	386	339	132	90	31
03-04	28	39	27	60	151	143	183	77	148	241	101	15
04-05	12	33	34	47	79	69	210	340	431	219	225	28
05-06	18	19	40	39	130	144	223	212	210	28	20	16
06-07	20	22	47	71	107	205	182	298	353	130	82	60
07-08	14	18	19	48	180	239	403	404	358	379	44	62
08-09	9	10	32	48	132	202	307	371	233	286	136	88
09-10	10	17	39	28	168	268	358	221	334	331	327	11
10-11	23	7	18	61	160	232	308	180	97	63	18	16
11-12	13	29	24	47	162	144	129	204	106	95	45	52
12-13	66	16	25	62	185	242	367	447	535	511	81	14
13-14	31	63	15	62	103	116	159	305	383	349	36	19
14-15	26	30	31	60	129	186	342	374	343	281	128	25
15-16	24	21	23	102	130	262	269	225	157	62	104	48
16-17	20	25	33	39	71	187	323	408	94	48	22	18
17-18	23	18	10	44	148	258	239	145	120	148	31	17
18-19	16	19	47	95	117	67	197	332	437	398	338	170
19-20	77	8	27	34	112	126	245	433	455	405	396	207
54 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1965-2000	102	37	47	102	203	256	443	534	498	240	202	102
2000-2019	66	63	47	102	185	268	403	447	535	511	396	207



Initial Spread Index

ISI > 10	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	2	8	6	7	6	15	9	18	8	5	8	5	4
97-98	6	4	5	7	9	10	7	19	9	8	8	6	2
98-99	10	2	5	8	9	16	11	11	8	8	6	14	6
99-00	4	6	6	9	8	8	13	7	11	11	4	4	4
00-01	2	6	4	5	9	8	7	13	8	8	6	7	3
01-02	4	5	5	7	11	8	6	8	11	8	5	10	9
02-03	1	5	8	9	9	6	8	7	14	4	6	4	7
03-04	2	4	5	15	6	10	9	8	7	8	8	4	3
04-05	8	4	6	14	9	17	13	11	11	10	9	6	14
05-06	9	4	2	6	5	9	12	20	7	18	5	6	6
06-07	11	5	4	12	17	15	13	7	11	9	4	9	6
07-08	11	2	8	5	11	18	9	16	10	23	8	8	9
08-09	3	2	4	6	7	13	8	8	13	10	7	8	8
09-10	4	2	4	9	6	16	11	8	4	12	7	7	2
10-11	2	5	3	4	7	10	8	11	7	16	5	7	3
11-12	5	3	7	7	5	19	4	7	8	16	9	5	8
12-13	12	3	3	6	6	11	11	12	12	11	5	5	5
13-14	7	5	5	5	8	10	7	14	10	13	7	4	2
14-15	4	5	7	8	10	9	8	9	15	6	6	4	11
15-16	4	6	4	6	14	7	11	7	8	7	6	3	4
16-17	8	5	6	11	6	8	10	15	7	8	4	4	5
17-18	4	4	3	4	10	11	12	5	7	4	6	4	2
18-19	3	3	2	5	8	9	7	11	10	9	4	3	4
19-20	17	2	4	8	8	11	6	17	13	12	7	7	3
24 yrs													
1996-2007		8	8	15	17	18	13	20	14	23	9	14	14
2008-2019		6	7	11	14	19	12	17	15	16	10	7	11

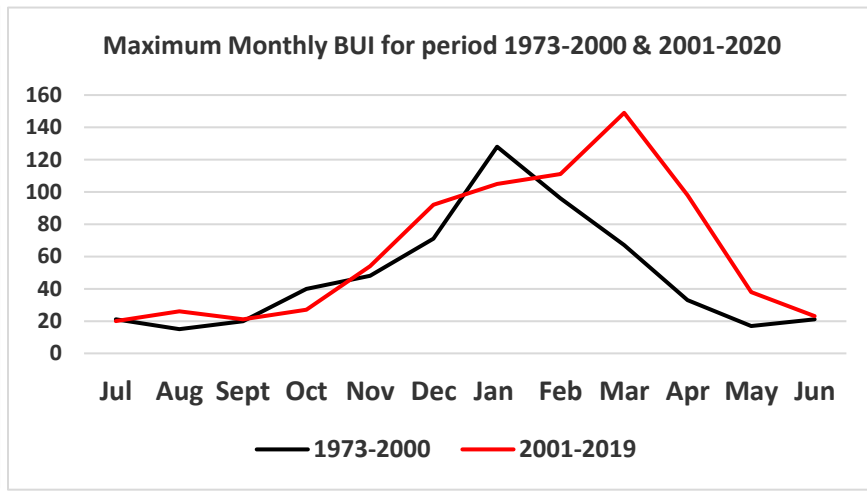
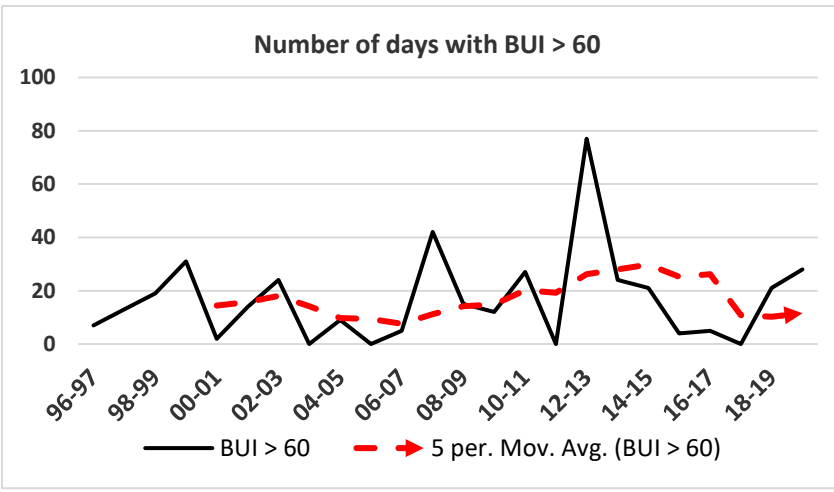


Taupo Aero

Build Up Index

	BUI > 60
96-97	7
97-98	13
98-99	19
99-00	31
00-01	2
01-02	14
02-03	24
03-04	0
04-05	9
05-06	0
06-07	5
07-08	42
08-09	15
09-10	12
10-11	27
11-12	0
12-13	77
13-14	24
14-15	21
15-16	4
16-17	5
17-18	0
18-19	21
19-20	28

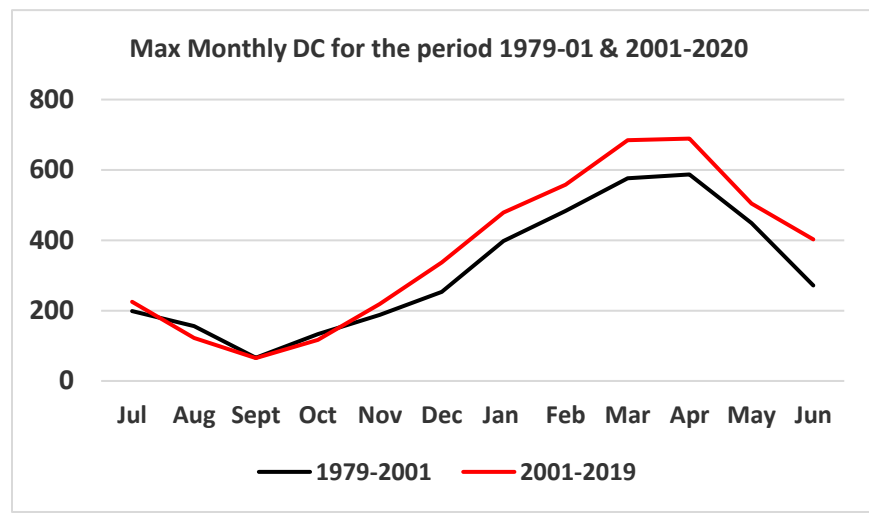
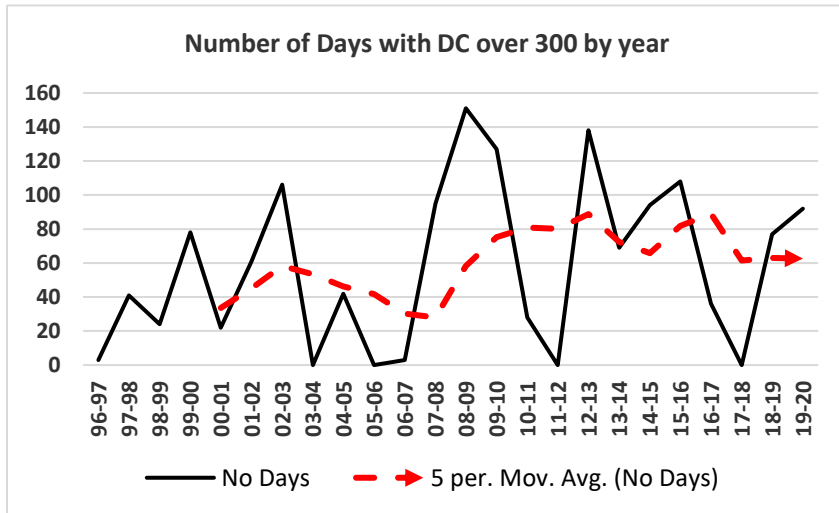
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1973-2000	21	15	20	40	48	71	128	96	67	33	17	21
01-02	8	6	21	27	23	20	23	66	67	65	25	8
02-03	4	7	10	14	28	31	50	106	70	34	34	10
03-04	7	14	6	15	25	18	51	11	36	37	13	6
04-05	3	9	11	6	19	24	68	72	67	24	25	9
05-06	7	5	12	14	37	45	42	36	50	13	5	3
06-07	4	4	17	20	17	31	25	56	67	23	22	12
07-08	6	6	11	19	54	66	75	88	82	57	13	15
08-09	2	4	10	14	29	37	76	81	49	59	38	8
09-10	4	7	15	6	33	58	71	40	62	43	26	3
10-11	7	2	6	21	54	92	81	61	67	15	5	5
11-12	4	10	17	13	35	40	33	59	20	26	18	7
12-13	4	5	10	15	41	50	84	111	149	98	16	23
13-14	20	26	10	12	21	37	46	64	93	70	12	12
14-15	12	12	15	16	27	45	105	71	54	31	11	6
15-16	8	3	8	32	36	63	68	55	51	32	37	9
16-17	5	5	8	17	24	41	66	61	24	10	6	6
17-18	3	3	4	18	27	36	35	34	21	18	9	4
18-19	2	3	15	25	30	19	45	98	70	21	9	4
19-20	4	3	9	9	32	19	63	99	72	24	20	4
47 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1973-2000	21	15	20	40	48	71	128	96	67	33	17	21
2001-2019	20	26	21	27	54	92	105	111	149	98	38	23



Drought Code

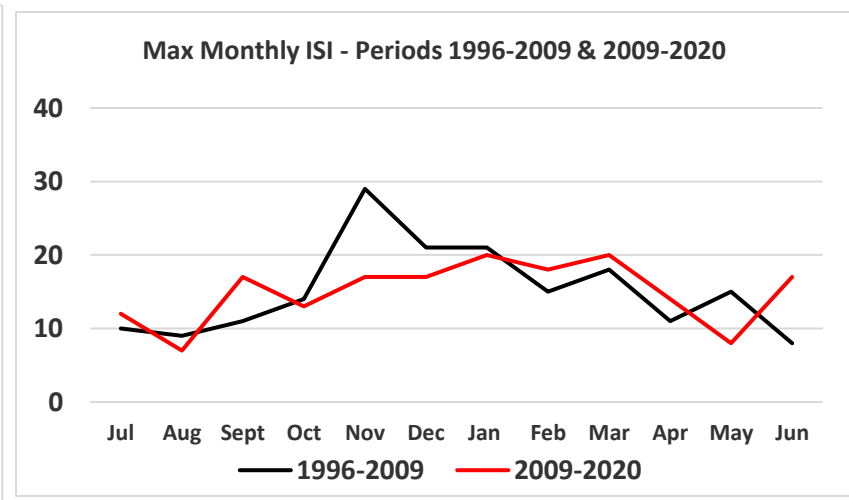
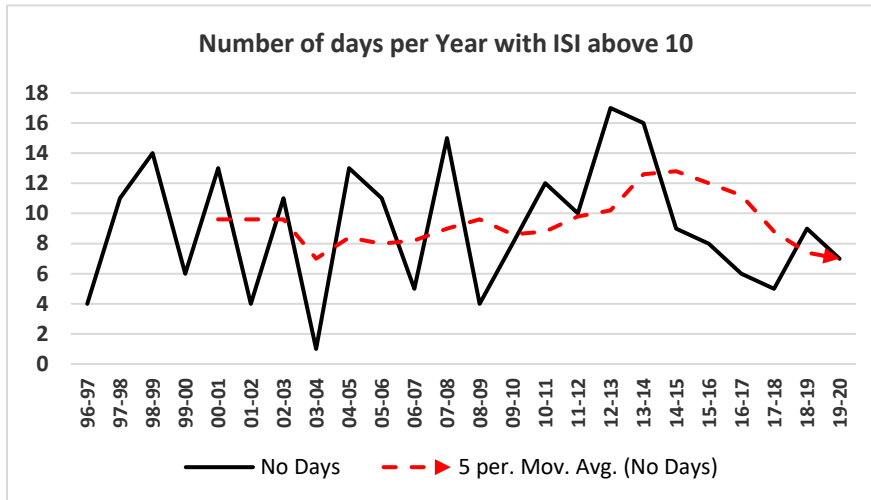
DC > 300	No Days
96-97	3
97-98	41
98-99	24
99-00	78
00-01	22
01-02	61
02-03	106
03-04	0
04-05	42
00-02	0
01-03	3
07-08	95
08-09	151
09-10	127
10-11	28
11-12	0
12-13	138
13-14	69
14-15	94
15-16	108
16-17	36
17-18	0
18-19	77
19-20	92

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1979-2000	199	156	66	133	188	253	398	483	576	587	449	271
01-02	37	17	49	106	107	119	136	303	391	428	324	204
02-03	26	28	31	40	157	156	275	444	447	379	397	214
03-04	26	51	41	44	118	104	200	116	134	203	131	64
04-05	13	29	31	25	84	157	293	365	442	300	305	137
05-06	63	19	40	40	165	228	204	117	176	134	20	11
06-07	15	18	40	68	66	127	140	249	310	218	162	164
07-08	50	21	35	62	207	241	439	530	566	489	108	69
08-09	10	12	28	45	148	222	355	414	427	491	504	402
09-10	225	67	48	16	152	315	441	362	451	444	430	226
10-11	30	27	18	76	219	337	421	210	231	62	20	18
11-12	15	31	49	53	174	216	131	226	161	158	141	31
12-13	15	17	26	50	172	289	479	558	684	689	406	60
13-14	52	81	53	50	70	136	289	397	485	360	278	250
14-15	123	122	65	63	127	256	462	443	407	360	221	110
15-16	51	11	18	117	154	300	307	336	424	458	482	292
16-17	144	40	28	66	124	240	366	446	202	80	21	26
17-18	17	13	11	79	121	218	258	265	180	215	111	13
18-19	9	10	46	108	166	139	189	342	378	373	314	219
19-20	204	56	25	31	143	168	285	448	465	413	372	236
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1979-2001	199	156	66	133	188	253	398	483	576	587	449	271
2001-2019	225	122	65	117	219	337	479	558	684	689	504	402



Initial Spread Index

ISI > 10	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	4	3	3	7	7	14	9	13	8	8	6	7	3
97-98	11	5	6	7	7	14	7	13	9	11	8	13	5
98-99	14	5	9	7	9	15	17	14	15	10	9	15	4
99-00	6	6	6	8	14	11	6	9	10	12	3	6	6
00-01	13	10	5	6	8	17	11	11	15	8	6	11	3
01-02	4	6	4	6	6	10	7	8	12	7	6	9	7
02-03	11	6	7	3	10	13	15	19	14	8	11	8	6
03-04	1	6	6	6	6	7	7	9	5	12	8	5	4
04-05	13	4	8	11	4	5	21	12	15	11	10	11	8
05-06	11	4	4	3	4	14	14	16	14	18	7	4	7
06-07	5	4	5	9	9	13	10	13	9	8	7	8	5
07-08	15	7	5	6	11	29	12	21	15	17	8	5	4
08-09	4	3	4	6	6	7	8	14	7	14	8	11	6
09-10	8	4	4	10	7	15	16	7	7	11	13	8	3
10-11	12	12	3	3	9	11	17	15	11	8	6	7	5
11-12	10	4	5	5	5	17	7	11	10	12	14	5	5
12-13	17	4	4	5	13	12	11	16	18	20	9	5	4
13-14	16	5	6	6	6	9	8	15	13	18	10	5	4
14-15	9	8	7	5	8	8	10	10	18	5	7	6	17
15-16	8	6	4	7	10	9	14	12	8	14	7	4	4
16-17	6	5	3	17	8	7	14	12	9	9	4	3	6
17-18	5	3	3	3	10	8	16	4	11	10	6	6	6
18-19	9	3	3	6	8	6	8	20	14	9	4	3	4
19-20	7	2	2	12	6	17	6	11	11	9	4	3	3
24 yrs													
1996-2006		10	9	11	14	29	21	21	15	18	11	15	8
2007-2019		12	7	17	13	17	17	20	18	20	14	8	17

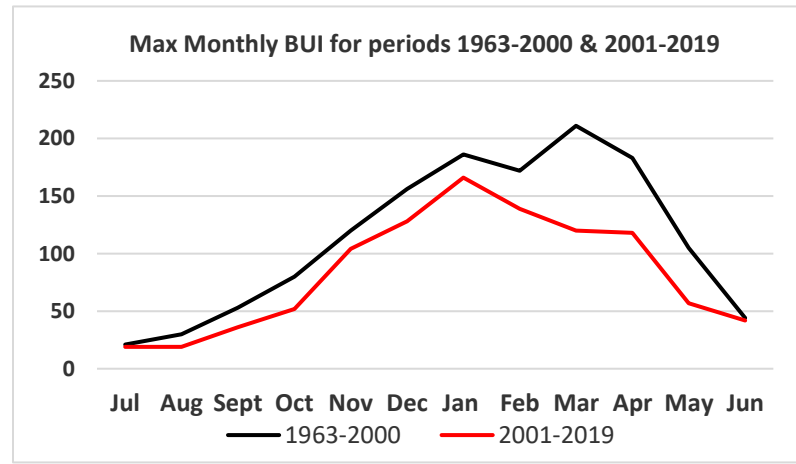
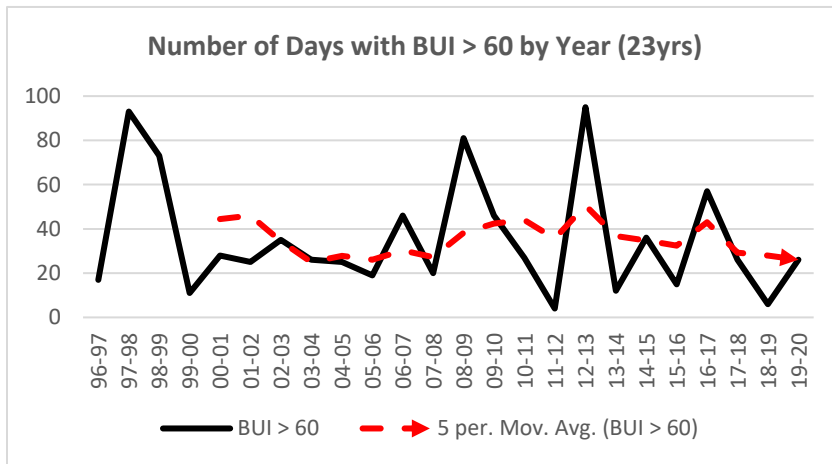


Gisborne Aero (56 yrs)

Build Up Index

No of Day BUI > 60	
96-97	17
97-98	93
98-99	73
99-00	11
00-01	28
01-02	25
02-03	35
03-04	26
04-05	25
05-06	19
06-07	46
07-08	20
08-09	81
09-10	46
10-11	27
11-12	4
12-13	95
13-14	12
14-15	36
15-16	15
16-17	57
17-18	26
18-19	6
19-20	26

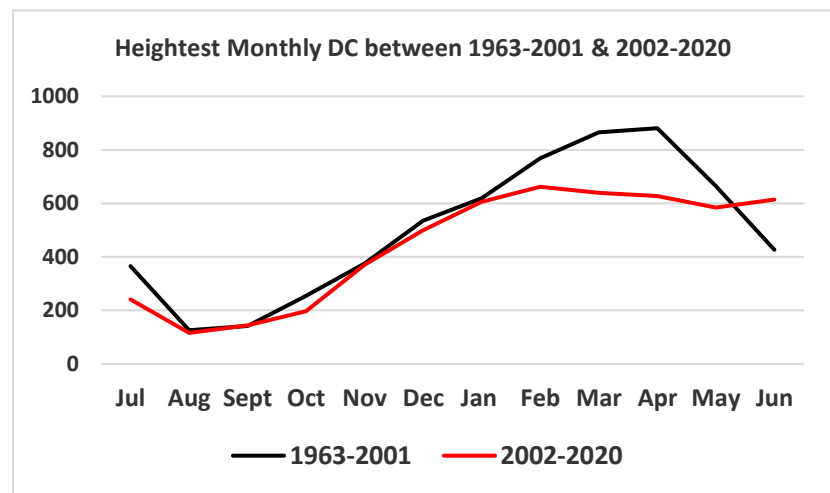
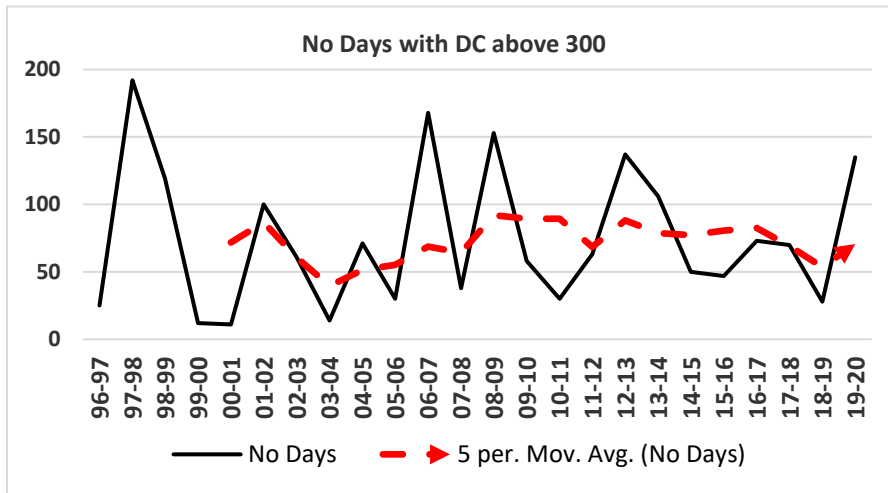
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	21	30	53	80	120	156	186	172	211	183	105	44
01-02	12	14	23	37	25	36	38	42	99	70	57	42
02-03	11	18	30	30	54	60	78	139	26	29	36	24
03-04	16	8	10	27	64	40	72	41	42	78	31	14
04-05	4	12	24	34	59	52	100	71	78	32	21	16
05-06	9	12	22	24	43	37	70	63	77	26	11	21
06-07	6	11	24	43	80	75	63	60	111	67	52	66
07-08	15	16	14	25	74	86	76	50	52	54	13	9
08-09	12	9	36	58	104	128	80	94	37	57	16	6
09-10	6	14	20	12	52	83	120	50	68	75	29	4
10-11	5	9	23	37	37	64	121	66	39	21	14	12
11-12	11	10	24	42	47	48	63	55	29	21	21	19
12-13	8	7	23	52	60	88	105	123	120	118	22	24
13-14	16	13	13	41	42	60	59	70	86	37	38	13
14-15	19	12	8	25	73	75	111	48	72	49	29	21
15-16	14	16	18	42	34	57	102	71	52	22	47	29
16-17	11	13	13	16	66	72	166	192	50	15	11	11
17-18	5	12	17	40	62	81	67	70	61	68	29	5
18-19	14	17	13	36	35	35	55	70	47	18	33	24
19-20	12	19	29	30	48	68	61	121	59	20	48	9
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	21	30	53	80	120	156	186	172	211	183	105	44
2001-2019	19	19	36	52	104	128	166	139	120	118	57	42



Drought Code

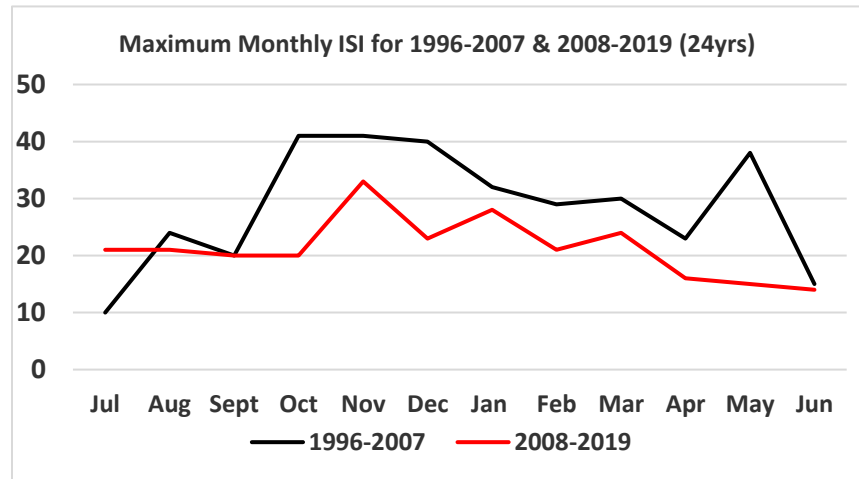
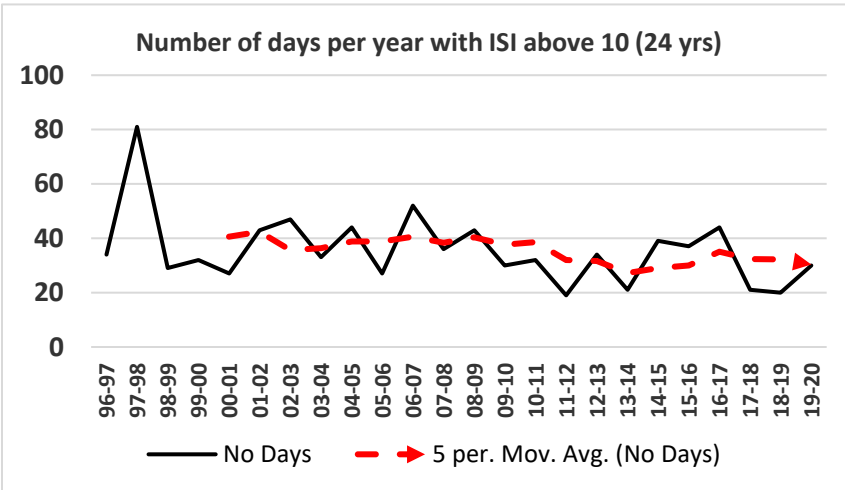
DC > 300	No Days
96-97	25
97-98	192
98-99	119
99-00	12
00-01	11
01-02	100
02-03	61
03-04	14
04-05	71
05-06	30
06-07	168
07-08	38
08-09	153
09-10	58
10-11	30
11-12	63
12-13	137
13-14	106
14-15	50
15-16	47
16-17	73
17-18	70
18-19	28
19-20	135

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	365	126	142	254	375	535	619	769	865	881	664	427
01-02	94	39	51	96	123	176	184	236	404	446	452	427
02-03	219	48	94	117	224	289	445	614	311	181	225	241
03-04	185	105	19	72	206	227	281	208	241	354	221	43
04-05	10	33	52	91	162	259	440	449	506	308	199	67
05-06	29	34	82	136	141	162	294	352	421	129	41	77
06-07	19	32	54	117	279	305	412	477	640	628	585	614
07-08	241	42	32	63	224	260	320	390	407	314	135	28
08-09	42	35	109	197	370	500	534	503	432	470	329	110
09-10	15	38	60	34	177	309	404	248	381	396	290	17
10-11	16	36	55	94	166	356	518	287	210	86	40	48
11-12	36	30	70	175	254	385	357	351	344	68	83	98
12-13	83	40	75	175	223	281	433	599	709	729	351	64
13-14	48	18	34	142	241	309	412	486	513	370	160	101
14-15	69	32	16	87	230	237	384	362	451	309	316	257
15-16	231	116	51	119	111	292	439	398	326	264	206	218
16-17	96	58	28	43	190	359	606	662	373	125	29	34
17-18	20	38	55	130	243	378	421	402	365	330	249	106
18-19	42	50	29	112	164	183	265	362	355	254	242	246
19-20	117	144	144	169	163	227	326	507	468	405	436	338
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	365	126	142	254	375	535	619	769	865	881	664	427
2002-2020	241	116	144	197	370	500	606	662	640	628	585	614



Initial Spread Index

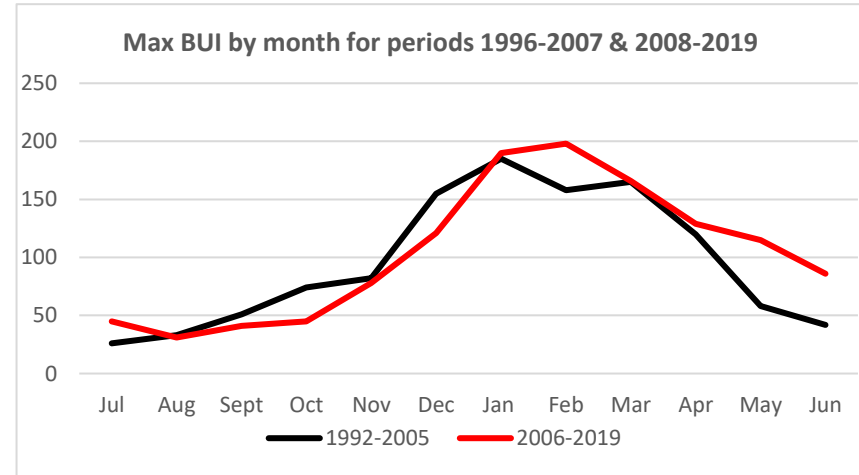
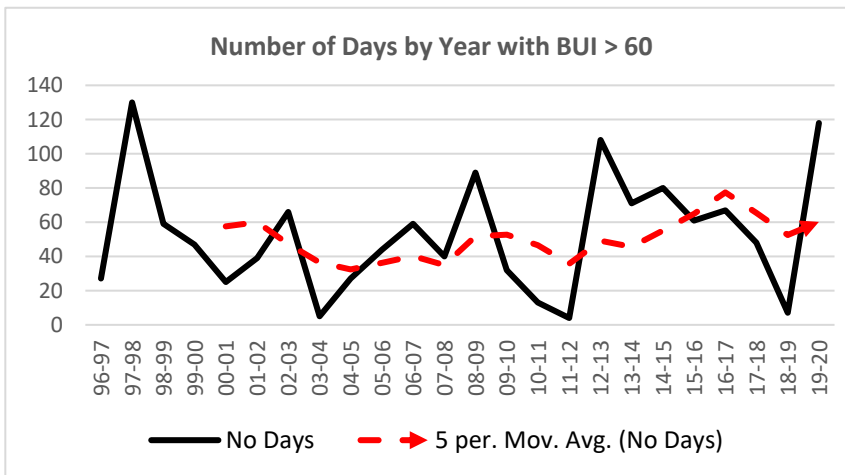
ISI > 10	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	34	3	15	13	26	41	21	22	17	14	13	8	4
97-98	81	5	17	14	13	28	33	28	29	22	23	38	12
98-99	29	7	11	11	33	14	15	17	19	29	17	8	3
99-00	32	9	10	12	18	21	19	12	17	11	7	11	12
00-01	27	8	11	12	18	9	30	14	9	17	12	12	7
01-02	43	6	10	12	14	11	21	21	11	30	13	18	13
02-03	47	6	15	16	23	33	40	23	15	5	5	13	7
03-04	33	7	6	16	13	19	26	28	17	10	9	11	14
04-05	44	4	24	15	18	16	20	16	18	15	13	8	6
05-06	27	7	7	10	41	15	15	32	12	17	21	6	8
06-07	52	5	10	12	41	22	15	11	17	31	17	11	15
07-08	36	10	12	20	36	16	10	12	24	12	6	7	11
08-09	43	21	13	17	17	22	23	27	20	10	16	12	5
09-10	30	12	21	11	8	14	21	27	15	22	12	4	5
10-11	32	3	5	12	11	11	17	20	21	12	6	11	4
11-12	19	14	9	11	15	15	9	18	9	8	11	6	10
12-13	34	4	6	16	19	16	21	23	20	19	12	6	7
13-14	21	9	6	15	11	9	10	13	14	17	13	11	8
14-15	39	15	12	6	20	24	12	13	20	24	10	11	14
15-16	37	8	15	12	17	33	10	18	15	14	5	14	7
16-17	44	9	13	20	11	22	16	25	18	11	7	8	9
17-18	21	8	9	20	14	10	10	10	18	16	12	15	7
18-19	20	10	10	20	10	22	10	10	8	11	11	8	5
19-20	30	7	11	13	12	25	19	28	20	8	8	12	5
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1996-2007		10	24	20	41	41	40	32	29	30	23	38	15
2008-2019		21	21	20	20	33	23	28	21	24	16	15	14



Napier

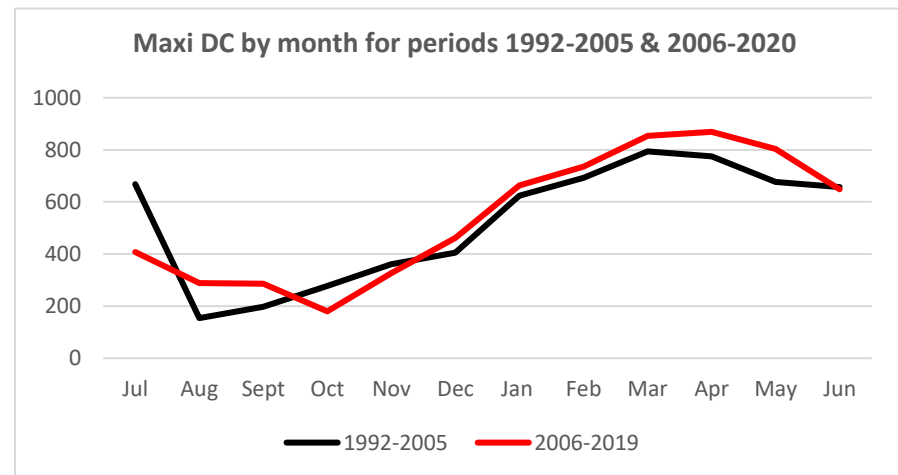
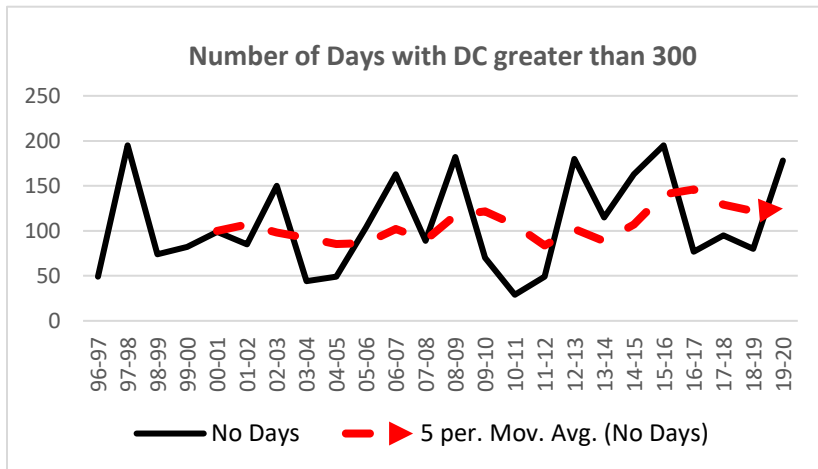
Build Up Index

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
BUI > 60												
No Days												
96-97	25	33	44	62	82	155	185	143	163	117	58	39
97-98	8	12	32	55	80	78	57	79	32	29	43	5
98-99	11	15	14	19	59	121	149	147	165	120	39	42
99-00	26	15	51	74	78	82	111	51	73	26	26	19
00-01	17	18	30	39	54	42	77	124	115	23	27	19
01-02	11	27	33	59	65	66	70	91	45	47	34	18
02-03	15	21	33	47	39	48	47	47	80	95	53	65
03-04	8	15	30	41	65	81	124	158	31	26	34	25
04-05	25	16	16	30	70	59	58	41	55	64	37	15
05-06	13	13	30	22	52	61	74	72	103	20	20	12
06-07	10	21	29	24	55	61	114	65	108	45	17	19
07-08	8	19	31	38	76	79	78	88	91	71	59	76
08-09	11	14	14	36	66	76	66	81	88	64	19	11
09-10	13	19	26	41	78	98	108	131	52	73	30	12
10-11	8	18	24	15	49	61	97	31	75	70	55	6
11-12	7	8	18	32	46	56	89	34	40	19	18	19
12-13	9	12	29	27	52	62	66	54	33	29	36	44
13-14	45	12	38	45	61	121	114	132	166	129	40	26
14-15	14	11	22	30	65	80	125	81	118	66	49	25
15-16	36	23	20	37	86	84	110	108	135	58	38	34
16-17	32	31	41	45	49	76	74	81	81	37	67	86
17-18	29	27	24	24	65	102	190	193	45	13	17	14
18-19	9	16	24	40	72	106	65	69	69	44	17	8
19-20	18	21	22	44	52	19	41	78	52	46	40	30
20-21	20	27	31	22	61	80	88	145	114	109	115	14
28yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1992-2005	26	33	51	74	82	155	185	158	165	120	58	42
2006-2019	45	31	41	45	78	121	190	198	166	129	115	86



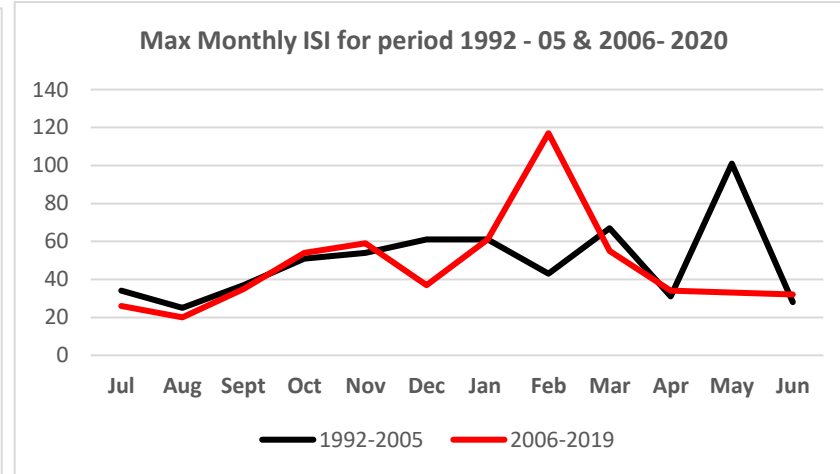
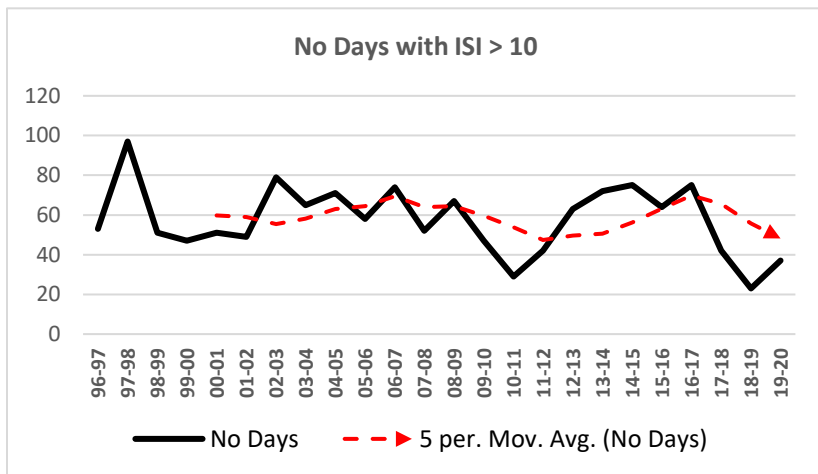
Drought Code

		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
DC > 300	No Days												
1992-01		360	154	198	226	327	554	624	693	794	775	677	657
96-97	49	29	27	80	181	328	357	324	438	240	156	213	19
97-98	195	27	35	38	48	170	390	536	690	796	770	680	702
98-99	74	668	95	168	278	361	405	504	257	319	248	130	127
99-00	82	61	70	99	154	230	183	346	550	575	450	181	135
00-01	99	104	77	122	154	179	315	398	475	403	411	266	242
01-02	85	225	137	101	140	143	191	158	214	334	410	403	435
02-03	150	181	40	74	105	189	345	542	640	504	508	421	171
03-04	44	127	115	27	103	236	229	267	276	306	388	342	145
04-05	49	41	30	71	77	195	240	341	431	515	169	136	44
05-06	104	30	87	126	126	182	259	401	411	527	358	85	76
06-07	163	21	48	72	128	247	304	494	534	620	637	621	649
07-08	89	237	56	35	120	271	305	439	525	542	414	217	50
08-09	182	34	52	88	164	327	452	636	727	435	512	444	217
09-10	70	25	55	68	43	190	264	336	196	369	367	384	19
10-11	29	24	29	45	84	189	347	494	193	228	159	57	88
11-12	49	33	46	88	135	274	393	274	309	361	126	145	182
12-13	180	186	38	105	180	288	462	625	736	853	869	595	65
13-14	115	107	35	54	116	257	332	493	544	626	524	293	286
14-15	163	229	197	115	104	258	312	431	589	655	417	388	323
15-16	195	327	286	286	123	185	364	424	495	538	459	528	583
16-17	77	408	289	93	95	229	414	663	683	271	190	66	43
17-18	95	28	50	72	117	280	404	469	514	456	293	163	126
18-19	80	56	68	76	167	248	159	165	279	328	367	400	392
19-20	178	228	174	182	160	201	315	420	610	702	794	804	506
28yrs													
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1992-2005		668	154	198	278	361	405	624	693	794	775	677	657
2006-2019		408	289	286	180	327	462	663	736	853	869	803	649



Initial Spread Index

		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
ISI > 10	No Days												
96-97	53	19	22	25	51	54	44	61	43	67	31	101	23
97-98	97	7	16	19	46	32	33	55	42	27	11	19	6
98-99	51	10	21	7	38	40	61	61	33	36	31	46	25
99-00	47	18	10	17	32	13	17	15	40	35	29	11	5
00-01	51	34	20	16	21	23	32	34	34	23	12	15	13
01-02	49	16	12	23	31	21	31	34	23	28	17	34	8
02-03	79	8	10	25	17	31	29	13	20	30	19	35	22
03-04	65	7	12	23	32	51	42	32	25	17	6	18	15
04-05	71	11	11	24	27	38	24	28	31	23	16	26	28
05-06	58	11	25	37	30	26	50	48	22	38	17	11	11
06-07	74	12	13	18	13	38	25	39	35	29	26	19	9
07-08	52	8	16	18	73	45	35	29	24	40	15	14	29
08-09	67	10	19	18	54	29	14	18	30	23	19	11	11
09-10	47	26	15	15	19	45	34	29	117	26	34	21	12
10-11	29	18	20	16	15	37	35	33	7	16	16	6	5
11-12	42	6	7	18	24	20	31	25	14	17	7	15	12
12-13	63	9	16	26	14	45	10	34	25	20	11	17	23
13-14	72	7	10	35	31	24	37	32	11	32	30	15	6
14-15	75	12	13	27	14	45	36	73	40	39	17	16	12
15-16	64	12	15	16	28	53	32	17	39	30	25	33	32
16-17	75	21	14	18	33	37	26	46	33	55	12	23	20
17-18	42	25	5	28	24	59	25	61	35	15	5	11	18
18-19	23	11	10	27	24	23	25	19	35	10	10	9	4
19-20	37	11	8	9	14	15	20	20	12	21	6	12	6
28yrs		8	10	11	8	14	17	27	14	12	15	9	6
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1992-2005		34	25	37	51	54	61	61	43	67	31	101	28
2006-2019		26	20	35	54	59	37	61	117	55	34	33	32

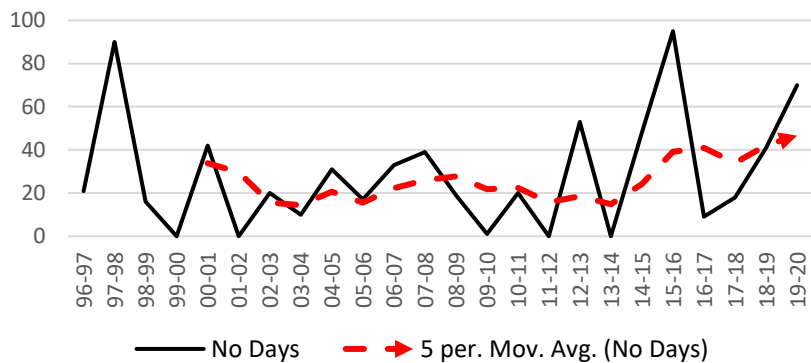


Masterton – Ngaumu

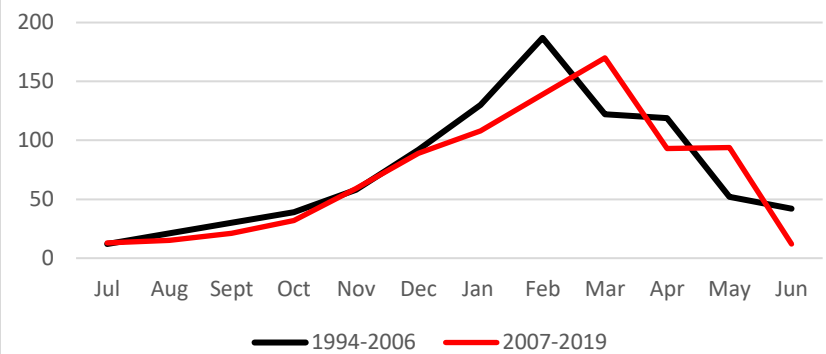
Build Up Index

BUI > 60	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1994-01		12	21	30	30	38	44	130	187	112	119	52	14
96-97	21	7	6	23	39	31	62	78	72	49	44	46	9
97-98	90	11	12	6	17	58	92	114	176	73	75	35	10
98-99	16	7	4	16	23	39	57	82	64	49	42	10	5
99-00	0	5	7	19	25	27	25	45	45	47	20	23	7
00-01	42	7	9	12	24	28	44	64	72	98	107	45	5
01-02	0	3	11	15	25	15	29	29	29	40	35	29	14
02-03	20	2	5	14	25	28	56	86	76	46	47	33	12
03-04	10	11	6	6	17	30	38	85	13	23	23	19	5
04-05	31	2	4	12	14	43	33	65	96	78	10	6	2
05-06	17	4	14	28	14	29	37	77	59	77	19	6	3
06-07	33	5	7	29	17	27	31	62	85	122	63	39	42
07-08	39	6	6	7	16	51	67	86	82	82	49	6	7
08-09	19	4	4	17	14	55	66	68	81	31	55	12	3
09-10	1	5	15	21	8	23	41	61	36	48	54	54	2
10-11	20	3	5	11	27	40	69	79	58	65	17	7	8
11-12	0	4	10	19	21	24	41	35	45	18	23	23	6
12-13	53	8	4	13	19	47	63	73	109	152	82	14	8
13-14	0	11	12	12	14	27	50	42	50	29	31	5	4
14-15	48	3	4	8	15	32	48	108	93	76	33	16	7
15-16	95	5	10	9	26	42	59	64	95	133	93	94	12
16-17	9	13	15	16	26	34	54	74	64	44	17	7	8
17-18	18	5	9	6	18	59	89	53	62	28	31	16	3
18-19	41	6	6	13	32	46	19	80	139	69	67	24	8
19-20	70	5	10	18	17	47	64	79	123	170	40	44	8
26yrs													
1994-2006		12	21	30	39	58	92	130	187	122	119	52	42
2007-2019		13	15	21	32	59	89	108	139	170	93	94	12

Number of Days with BUI greater than 60 by year

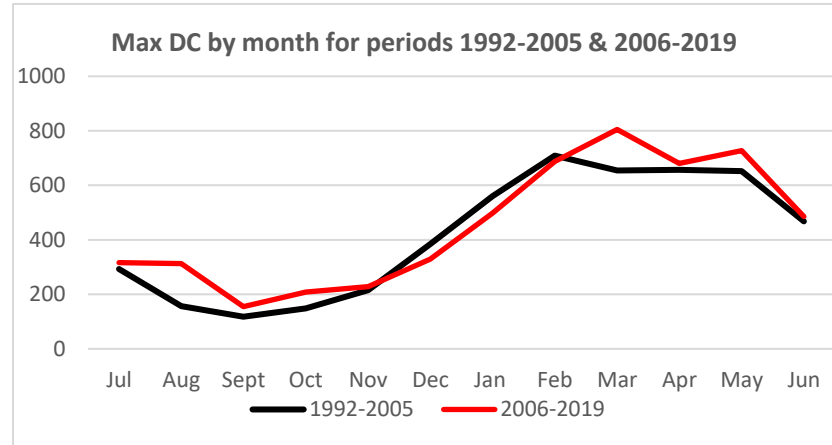
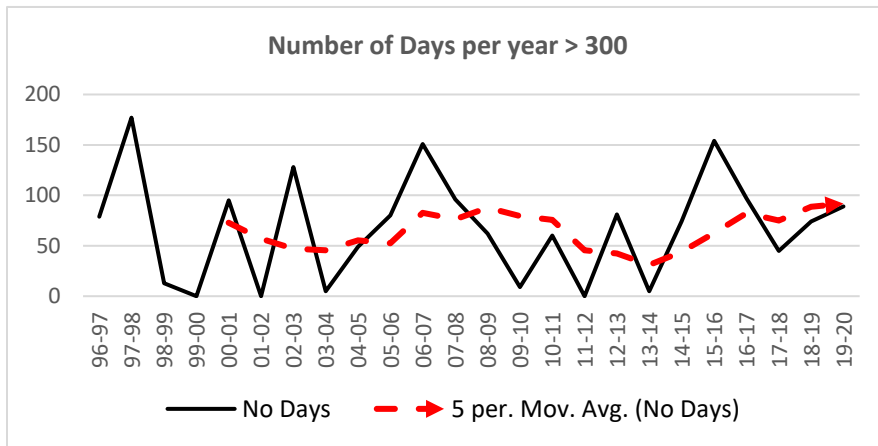


Max BUI by month for periods 1994-2006 & 2007-2019



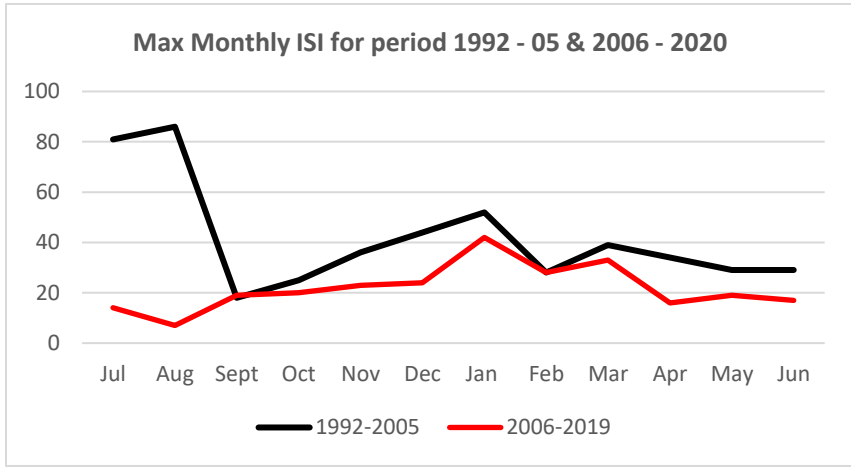
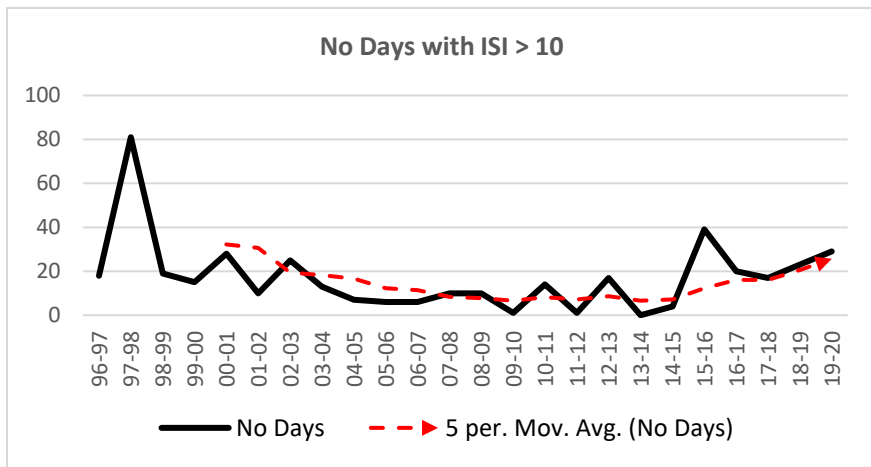
Drought Code

		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
DC > 300	No Days												
96-97	79	293	157	118	148	215	350	522	671	655	657	652	468
97-98	177	25	16	70	130	203	385	486	513	381	293	292	137
98-99	13	32	22	14	55	192	381	560	709	598	611	114	355
99-00	0	175	39	37	64	126	232	335	329	307	274	114	16
00-01	95	20	19	60	85	99	129	178	187	247	180	154	42
01-02	0	38	31	38	67	143	212	306	374	485	534	479	206
02-03	128	83	36	52	80	69	99	116	138	231	244	263	213
03-04	5	46	15	51	76	116	250	381	458	370	419	384	237
04-05	49	63	22	30	55	116	188	335	89	81	116	132	33
05-06	80	12	17	30	41	148	174	304	477	514	61	20	14
06-07	151	20	46	91	82	86	239	403	465	530	321	109	13
07-08	96	17	25	90	71	122	197	375	561	639	572	482	485
08-09	62	163	20	27	44	173	283	382	500	523	493	181	20
09-10	9	18	12	52	38	191	275	411	474	274	337	279	10
10-11	60	14	42	57	25	85	174	256	164	238	332	334	9
11-12	0	12	22	22	60	161	300	428	384	426	171	20	29
12-13	81	13	30	50	62	117	225	142	245	239	79	81	22
13-14	5	27	11	33	63	197	325	381	459	561	323	246	125
14-15	74	35	39	24	43	114	184	256	319	291	241	32	33
15-16	154	31	15	29	50	125	248	473	569	551	313	222	109
16-17	97	23	27	28	90	163	288	395	566	658	680	727	453
17-18	45	316	313	155	208	210	329	452	541	358	238	46	55
18-19	74	38	30	21	71	228	328	347	410	352	238	139	88
19-20	89	25	30	42	118	200	100	333	495	496	501	309	288
		105	93	89	75	184	301	498	687	805	195	205	104
28 yrs													
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1992-2005		293	157	118	148	215	385	560	709	655	657	652	468
2006-2019		316	313	155	208	228	329	498	687	805	680	727	485



Initial Spread Index

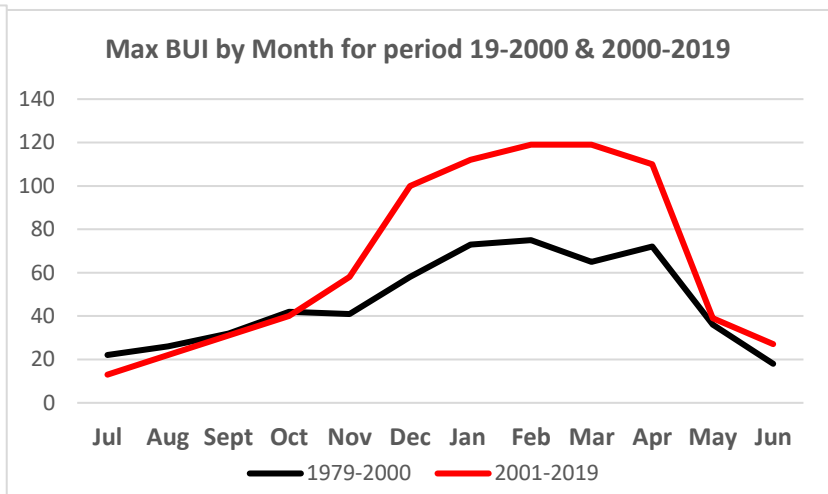
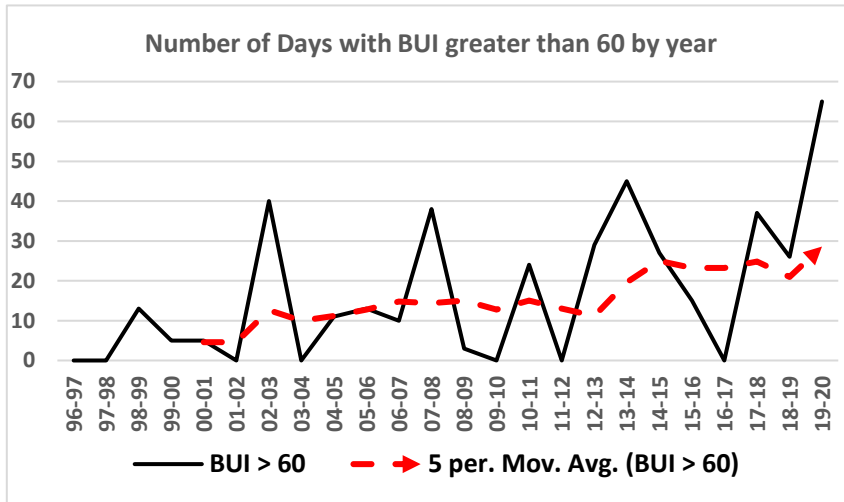
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
ISI > 10	No Days													
96-97	18													
97-98	81													
98-99	19													
99-00	15													
00-01	28													
01-02	10													
02-03	25													
03-04	13													
04-05	7													
05-06	6													
06-07	6													
07-08	10													
08-09	10													
09-10	1													
10-11	14													
11-12	1													
12-13	17													
13-14	0													
14-15	4													
15-16	39													
16-17	20													
17-18	17													
18-19	23													
19-20	29													
		1992-01	11	86	18	25	36	44	52	27	36	34	29	29
		96-97	1	7	10	21	14	7	7	13	13	12	10	5
		97-98	6	16	6	13	25	22	33	28	39	18	28	23
		98-99	81	8	8	9	31	10	14	13	29	13	8	3
		99-00	17	6	9	12	14	13	19	12	11	8	14	19
		00-01	5	10	10	16	14	20	21	14	31	18	5	6
		01-02	2	6	10	8	9	11	10	12	18	4	9	15
		02-03	7	6	14	13	13	22	14	18	8	4	10	6
		03-04	4	6	12	8	15	12	19	13	10	5	8	6
		04-05	3	7	6	5	8	8	14	13	11	4	3	2
		05-06	3	9	5	10	6	14	11	14	10	7	3	3
		06-07	3	7	13	8	23	7	11	15	11	11	7	5
		07-08	4	4	6	9	10	9	42	12	14	6	2	2
		08-09	2	3	7	7	11	6	14	20	10	12	4	2
		09-10	5	7	7	3	8	7	12	7	6	8	5	5
		10-11	2	5	12	9	6	19	23	17	19	12	7	7
		11-12	3	5	6	4	8	6	13	7	8	5	4	6
		12-13	3	4	5	8	10	22	20	11	10	6	3	3
		13-14	4	3	5	8	8	4	7	7	6	3	2	2
		14-15	2	2	4	3	8	5	10	7	10	8	6	4
		15-16	5	7	5	11	23	16	23	16	33	10	19	12
		16-17	12	5	19	20	15	16	21	16	10	9	2	17
		17-18	5	5	10	9	12	22	8	28	10	16	9	3
		18-19	14	4	7	11	17	11	17	13	18	12	15	3
		19-20	4	6	17	11	13	24	15	30	10	10	15	7
		28yrs												
			Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
		1963-2001	81	86	18	25	36	44	52	28	39	34	29	29
		2002-2019	14	7	19	20	23	24	42	28	33	16	19	17



Whanganui

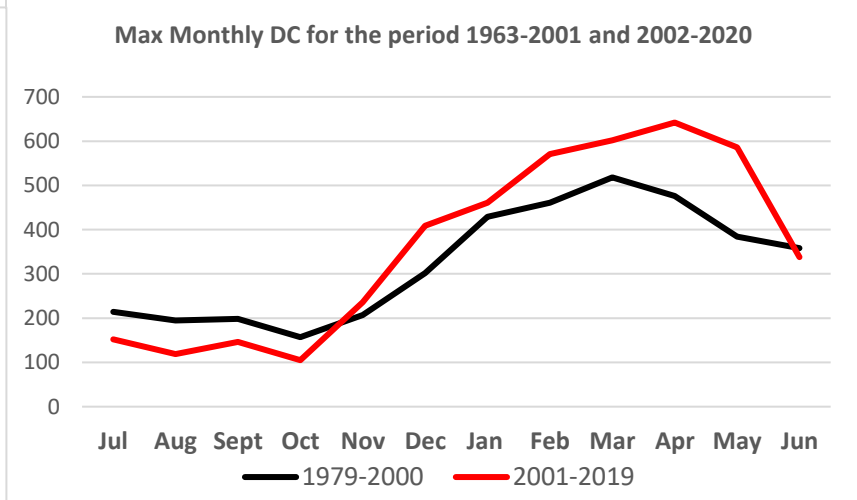
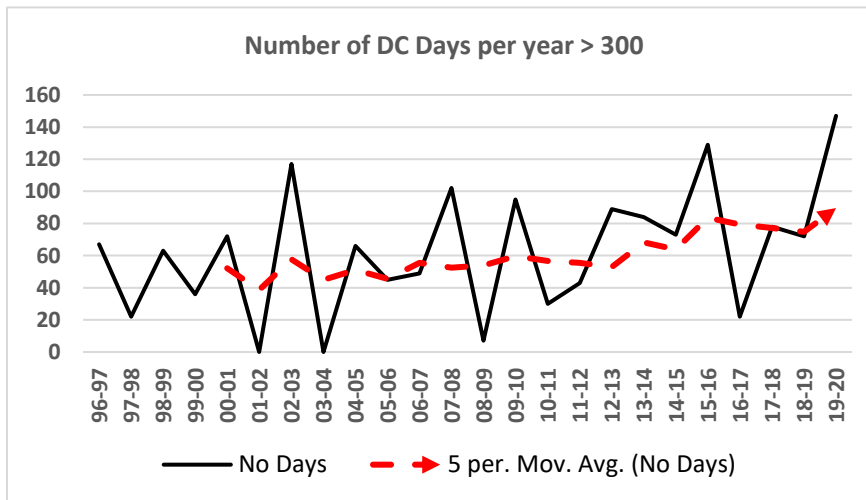
Build Up Index

	BUI > 60	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
96-97	0	1979-2000												
97-98	0	22	26	32	42	41	58	73	75	65	72	36	18	
98-99	13	12	8	31	40	15	20	30	38	39	32	34	9	
99-00	5	02-03	7	10	9	13	17	29	71	113	77	33	37	8
00-01	5	03-04	13	22	20	14	24	21	54	20	28	24	19	10
01-02	0	04-05	5	5	12	10	23	26	59	80	47	19	19	9
02-03	40	05-06	11	13	28	13	29	35	38	50	75	26	11	8
03-04	0	06-07	7	8	14	19	12	19	34	61	71	36	18	15
04-05	11	07-08	9	6	22	16	47	58	90	119	77	36	26	27
05-06	13	08-09	3	4	12	10	31	31	42	65	45	56	10	15
06-07	10	09-10	5	10	8	6	27	35	40	30	43	42	35	6
07-08	38	10-11	8	6	7	18	56	83	82	56	59	17	14	11
08-09	3	11-12	7	10	21	20	21	30	27	29	30	50	36	13
09-10	0	12-13	10	9	16	22	32	50	59	81	119	56	16	6
10-11	24	13-14	9	16	13	11	39	52	45	76	102	110	11	13
11-12	0	14-15	12	11	20	18	16	34	112	62	72	29	12	10
12-13	29	15-16	5	6	8	21	21	60	49	79	73	34	39	8
13-14	45	16-17	7	10	16	15	19	27	46	24	34	18	7	9
14-15	27	17-18	9	10	9	21	58	100	71	76	30	29	12	7
15-16	15	18-19	3	6	13	24	28	27	43	99	79	24	24	6
16-17	0	19-20	8	6	14	15	36	39	84	113	94	71	35	10
17-18	37	55 yrs	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
18-19	26	1979-2000	22	26	32	42	41	58	73	75	65	72	36	18
19-20	65	2001-2019	13	22	31	40	58	100	112	119	119	110	39	27



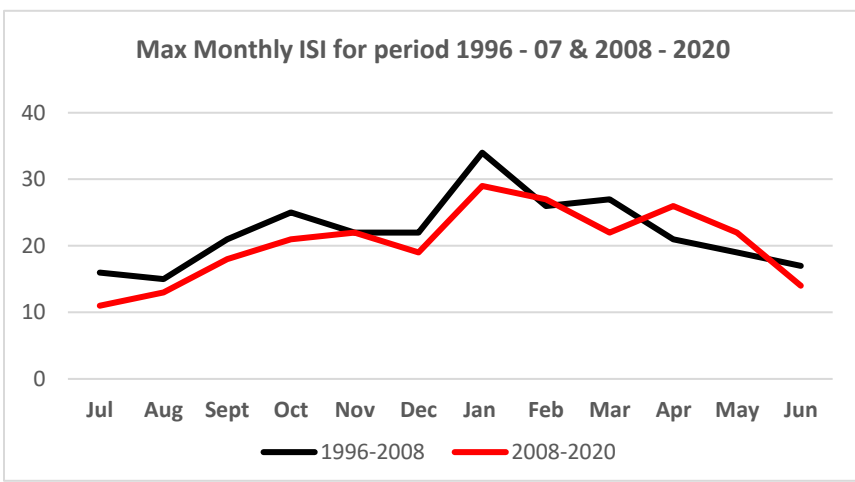
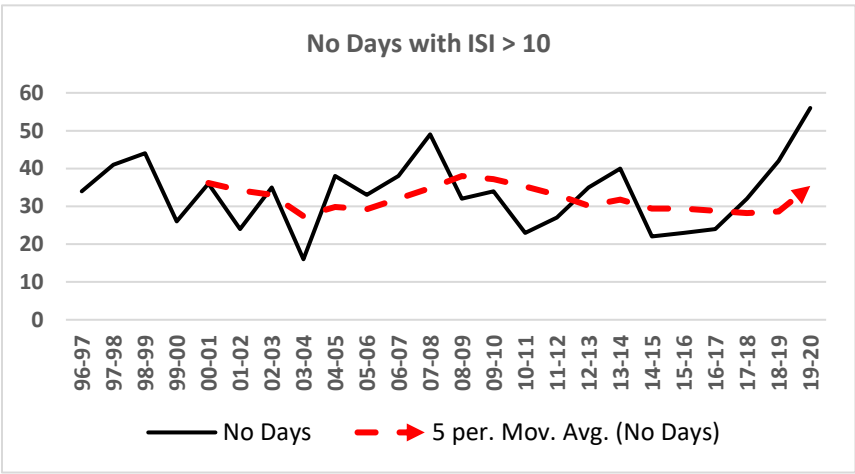
Drought Code

DC > 300	No Days	1979-2000											
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	67	214	195	198	157	207	302	429	461	518	476	384	358
97-98	22	70	18	79	105	48	79	131	186	213	221	249	165
98-99	63	33	29	26	57	123	159	342	470	537	482	473	284
99-00	36	87	119	122	48	140	140	278	189	130	151	121	112
00-01	72	33	16	33	44	131	154	250	381	409	320	284	215
01-02	0	152	111	146	60	157	184	243	316	414	363	232	112
02-03	117	21	24	44	74	46	105	212	322	390	331	319	282
03-04	0	113	66	65	46	158	240	400	478	489	430	211	153
04-05	66	11	14	35	30	131	206	286	349	249	286	200	136
05-06	45	40	25	27	19	105	153	259	323	382	383	376	131
06-07	49	64	66	21	73	236	338	461	287	299	231	119	76
07-08	102	38	28	71	68	86	130	126	227	305	353	358	222
08-09	7	151	95	52	90	178	308	367	406	504	397	304	194
09-10	95	93	95	72	35	146	226	289	433	572	601	283	175
10-11	30	52	25	53	69	79	168	402	390	419	404	47	15
11-12	43	24	19	23	87	126	323	365	485	550	576	386	116
12-13	89	70	28	64	69	93	206	331	315	325	319	24	48
13-14	84	58	26	27	84	216	409	433	471	370	300	168	93
14-15	73	38	25	37	84	133	180	313	467	498	399	235	65
15-16	129	47	28	45	76	166	222	438	571	602	642	586	338
16-17	22	55 yrs											
17-18	78												
18-19	72	214	195	198	157	207	302	429	461	518	476	384	358
19-20	147	152	119	146	105	236	409	461	571	602	642	586	338



Initial Spread Index

ISI > 10	No Days		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	34	96-97	16	6	8	14	16	14	21	15	18	10	12	5
97-98	41	97-98	6	7	5	11	22	17	20	16	15	20	19	14
98-99	44	98-99	6	5	15	25	19	19	17	19	27	18	14	5
99-00	26	99-00	10	14	16	12	11	12	20	25	15	17	11	10
00-01	36	00-01	9	9	13	11	23	22	29	22	14	19	9	4
01-02	24	01-02	7	7	15	9	13	12	12	18	21	7	18	16
02-03	35	02-03	7	10	21	14	18	15	19	18	10	11	14	10
03-04	16	03-04	7	15	9	15	17	12	7	12	23	13	12	9
04-05	38	04-05	6	10	15	18	17	22	21	29	12	21	15	17
05-06	33	05-06	11	7	9	4	18	17	22	27	22	8	4	9
06-07	38	06-07	9	11	19	19	16	15	13	16	18	17	11	10
07-08	49	07-08	12	15	12	23	18	13	34	26	23	22	7	7
08-09	32	08-09	6	6	12	17	14	13	14	21	16	13	18	13
09-10	34	09-10	10	9	5	7	22	11	24	27	15	17	7	8
10-11	23	10-11	10	4	7	10	21	17	20	20	10	5	4	13
11-12	27	11-12	5	13	18	9	21	8	17	8	19	22	8	14
12-13	35	12-13	7	10	13	21	19	14	17	19	22	15	7	5
13-14	40	13-14	8	9	13	19	11	19	27	20	18	9	13	6
14-15	22	14-15	6	8	11	12	18	18	15	14	17	10	11	13
15-16	23	15-16	6	6	9	21	18	18	13	12	17	8	8	4
16-17	24	16-17	7	6	9	13	11	14	29	9	20	9	4	4
17-18	32	17-18	6	8	11	15	20	16	25	13	22	26	8	7
18-19	42	18-19	11	12	8	11	13	14	14	18	22	7	20	6
19-20	56	19-20	10	12	11	14	15	15	24	19	16	16	22	12
			Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
		1996-2008	16	15	21	25	22	22	34	26	27	21	19	17
		2008-2020	11	13	18	21	22	19	29	27	22	26	22	14

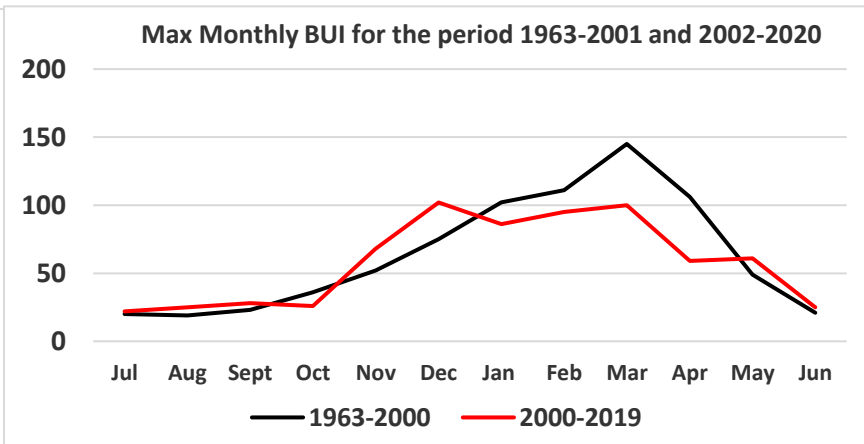
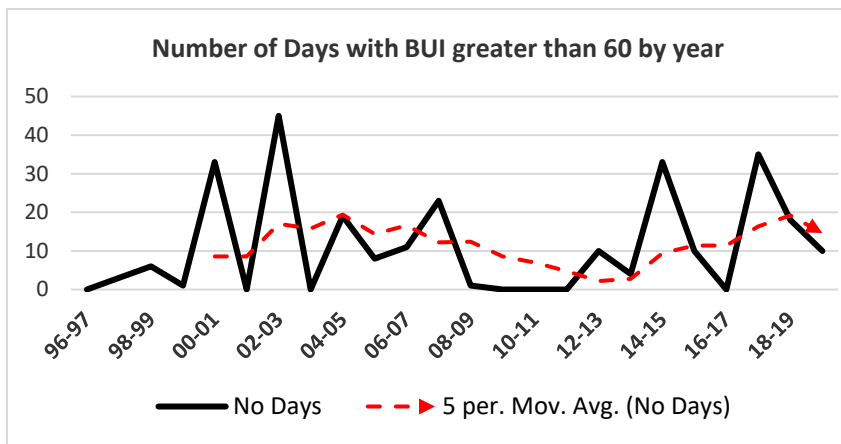


Paraparumu

Build Up Index

BUI > 60	No Days
96-97	0
97-98	3
98-99	6
99-00	1
00-01	33
01-02	0
02-03	45
03-04	0
04-05	19
05-06	8
06-07	11
07-08	23
08-09	1
09-10	0
10-11	0
11-12	0
12-13	10
13-14	4
14-15	33
15-16	10
16-17	0
17-18	35
18-19	18
19-20	10

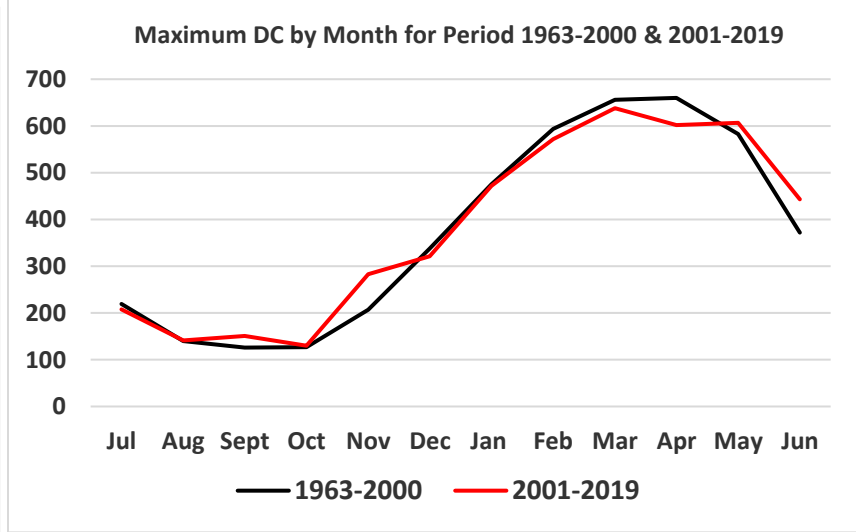
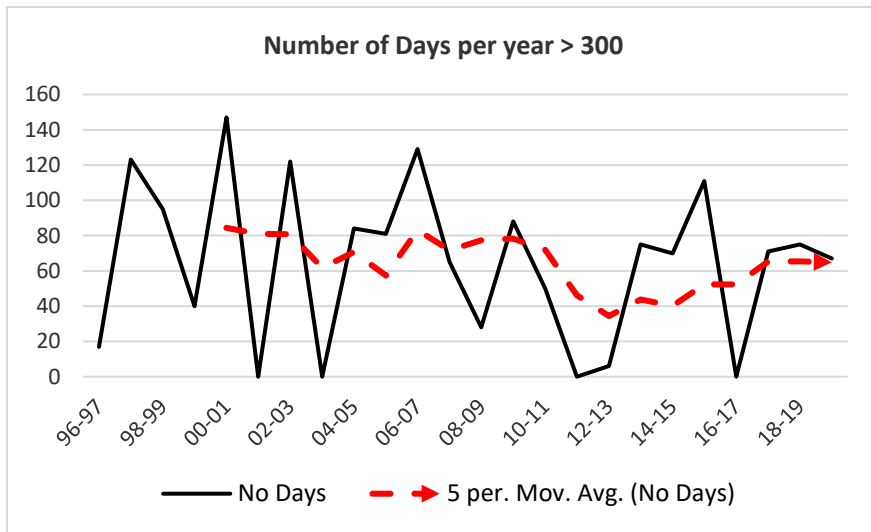
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	20	19	23	36	52	75	102	111	145	106	49	21
00-01	20	17	13	20	50	36	67	77	78	30	32	12
01-02	14	5	22	26	15	16	39	46	31	29	61	20
02-03	5	6	10	10	20	24	49	84	100	59	61	14
03-04	9	18	7	18	22	31	26	14	16	22	19	12
04-05	4	4	8	8	15	28	41	63	74	38	47	11
05-06	12	12	28	20	68	73	47	41	48	15	19	6
06-07	5	4	16	17	11	31	32	58	78	42	16	25
07-08	14	13	22	18	37	58	66	78	77	20	23	23
08-09	3	4	11	11	26	28	44	60	33	43	14	9
09-10	8	16	10	9	29	22	38	50	51	51	21	5
10-11	7	6	5	13	37	55	54	38	38	17	7	8
11-12	7	12	14	13	17	34	30	46	24	32	20	16
12-13	10	5	12	14	28	30	30	51	75	43	11	8
13-14	22	25	10	14	38	47	35	58	67	59	8	9
14-15	9	10	21	22	28	23	86	89	98	35	14	7
15-16	7	6	6	20	23	47	49	73	64	51	42	7
16-17	9	6	7	7	16	27	26	21	38	13	6	14
17-18	13	5	5	24	59	102	84	47	36	21	14	7
18-19	4	5	13	19	12	27	55	95	48	11	14	6
19-20	8	6	13	12	21	26	52	78	41	23	29	11
57 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	20	19	23	36	52	75	102	111	145	106	49	21
2000-2019	22	25	28	26	68	102	86	95	100	59	61	25



Drought Code

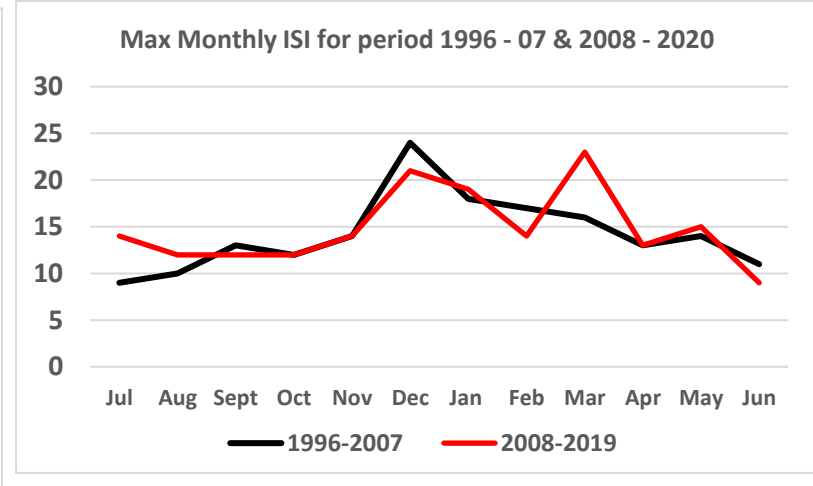
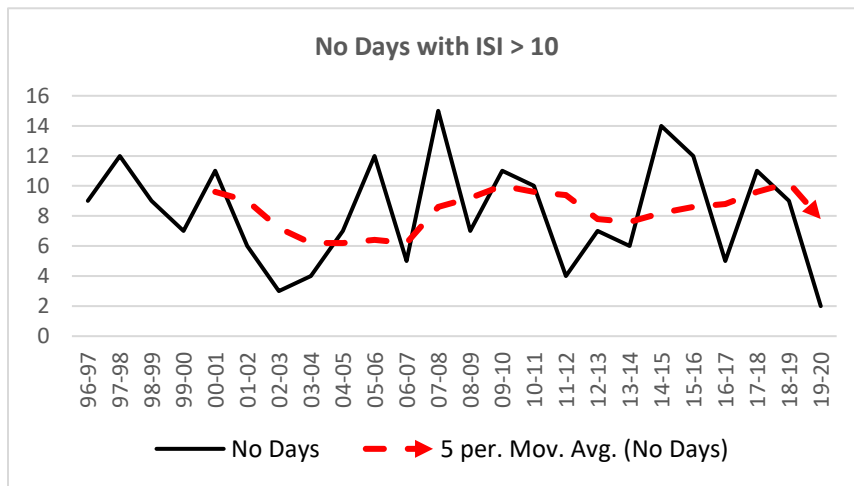
DC > 300	No Days
96-97	17
97-98	123
98-99	95
99-00	40
00-01	147
01-02	0
02-03	122
03-04	0
04-05	84
05-06	81
06-07	129
07-08	65
08-09	28
09-10	88
10-11	50
11-12	0
12-13	6
13-14	75
14-15	70
15-16	111
16-17	0
17-18	71
18-19	75
19-20	67

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	219	140	126	127	207	338	475	594	656	660	583	372
00-01	73	85	81	62	202	308	472	572	638	451	464	301
01-02	171	28	65	89	55	80	178	203	201	214	262	181
02-03	16	22	29	46	137	176	358	499	620	602	607	265
03-04	37	57	41	55	128	230	246	199	76	100	85	92
04-05	16	13	20	28	54	151	173	323	416	328	402	225
05-06	196	117	151	130	283	321	424	421	365	328	248	114
06-07	18	13	44	82	60	161	295	351	416	451	441	443
07-08	208	141	97	78	137	262	325	464	470	263	131	132
08-09	17	12	38	46	129	169	264	334	294	344	266	143
09-10	134	96	24	30	117	112	216	339	451	473	334	172
10-11	41	32	14	44	179	264	300	380	399	321	147	42
11-12	32	41	43	48	83	167	175	285	193	249	251	156
12-13	39	16	32	41	137	209	204	237	328	209	152	45
13-14	56	67	43	37	125	271	278	414	457	488	256	65
14-15	39	41	58	75	133	162	332	467	496	445	68	29
15-16	21	20	15	76	120	280	347	456	452	457	413	24
16-17	31	25	27	33	70	171	250	252	283	138	19	55
17-18	57	15	15	86	223	396	431	446	236	171	70	36
18-19	13	17	41	90	78	174	355	500	508	316	241	132
19-20	104	22	43	46	86	106	274	383	396	326	321	91
57 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	219	140	126	127	207	338	475	594	656	660	583	372
2001-2019	208	141	151	130	283	321	472	572	638	602	607	443



Initial Spread Index

ISI > 10	No Days		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	9	96-97	5	5	6	12	12	7	17	10	10	7	9	7
97-98	12	97-98	6	5	8	6	14	10	9	7	16	13	13	4
98-99	9	98-99	6	7	7	10	14	15	13	8	12	9	9	5
99-00	7	99-00	8	5	9	9	7	8	7	10	11	7	8	7
00-01	11	00-01	8	7	13	8	13	11	15	16	8	7	9	4
01-02	6	01-02	4	5	8	8	10	8	7	11	10	10	8	11
02-03	3	02-03	6	6	9	7	9	9	16	17	9	9	11	6
03-04	4	03-04	5	6	10	11	8	10	8	7	8	6	10	5
04-05	7	04-05	9	7	13	7	7	12	9	16	12	6	14	9
05-06	12	05-06	5	6	7	5	11	24	18	15	12	5	6	6
06-07	5	06-07	4	10	10	9	13	8	8	9	10	6	6	7
07-08	15	07-08	6	5	12	12	11	17	14	11	14	7	6	6
08-09	7	08-09	14	4	9	6	7	7	13	13	11	9	5	4
09-10	11	09-10	7	12	8	7	10	8	13	10	11	9	7	4
10-11	10	10-11	6	6	7	8	11	11	16	11	9	8	7	5
11-12	4	11-12	5	6	6	8	7	8	11	10	8	13	8	9
12-13	7	12-13	7	6	8	11	14	9	11	10	9	7	7	5
13-14	6	13-14	6	6	8	10	7	11	13	9	23	6	15	6
14-15	14	14-15	11	5	8	10	10	8	19	14	11	9	7	8
15-16	12	15-16	8	7	12	12	8	11	9	9	15	8	6	5
16-17	5	16-17	7	6	5	4	10	7	10	10	12	7	5	6
17-18	11	17-18	6	9	5	7	13	21	10	13	9	10	5	6
18-19	9	18-19	7	5	6	7	7	10	19	13	6	3	3	4
19-20	2	19-20	3	6	10	4	6	7	12	7	8	5	9	4
		24 yrs												
			Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
		1996-2007	9	10	13	12	14	24	18	17	16	13	14	11
		2008-2019	14	12	12	12	14	21	19	14	23	13	15	9



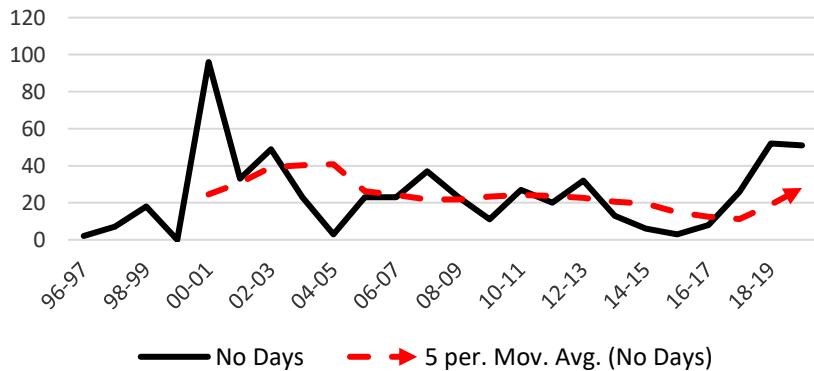
Nelson

Build Up Index

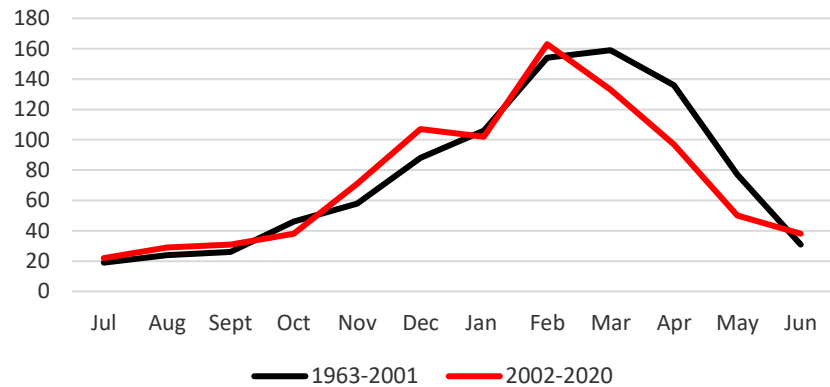
BUI > 60	No Days
96-97	2
97-98	7
98-99	18
99-00	0
00-01	96
01-02	33
02-03	49
03-04	23
04-05	3
05-06	23
06-07	23
07-08	37
08-09	23
09-10	11
10-11	27
11-12	20
12-13	32
13-14	13
14-15	6
15-16	3
16-17	8
17-18	26
18-19	52
19-20	51

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	19	24	26	46	58	88	106	154	159	136	77	31
01-02	19	25	26	33	18	16	30	55	90	97	35	18
02-03	19	20	12	22	35	37	57	104	109	41	42	16
03-04	13	16	12	17	49	80	82	25	36	42	8	7
04-05	5	8	10	9	26	56	42	65	51	47	50	11
05-06	11	7	22	34	50	47	77	61	114	74	19	6
06-07	12	11	25	33	23	48	41	77	102	63	22	26
07-08	16	18	22	25	80	101	71	73	60	40	26	38
08-09	7	6	13	19	28	25	67	90	36	66	22	27
09-10	14	10	14	10	41	49	48	53	60	72	26	4
10-11	13	6	6	41	71	71	49	80	72	48	15	7
11-12	7	22	31	15	34	36	60	82	33	50	28	26
12-13	9	6	9	25	67	76	41	73	107	28	14	6
13-14	22	29	19	12	36	62	44	60	74	46	10	8
14-15	10	16	26	31	57	56	69	60	43	36	17	17
15-16	12	8	16	38	49	46	37	48	64	39	42	6
16-17	9	8	12	10	19	42	60	53	74	16	13	13
17-18	8	6	6	28	46	107	75	26	37	23	11	12
18-19	3	5	14	24	27	25	102	163	133	26	19	6
19-20	9	9	11	19	33	30	91	128	80	56	24	12
57 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	19	24	26	46	58	88	106	154	159	136	77	31
2002-2020	22	29	31	38	71	107	102	163	133	97	50	38

Number of Days with BUI greater than 60



Max Monthly BUI for the period 1963-2001 and 2002-2020

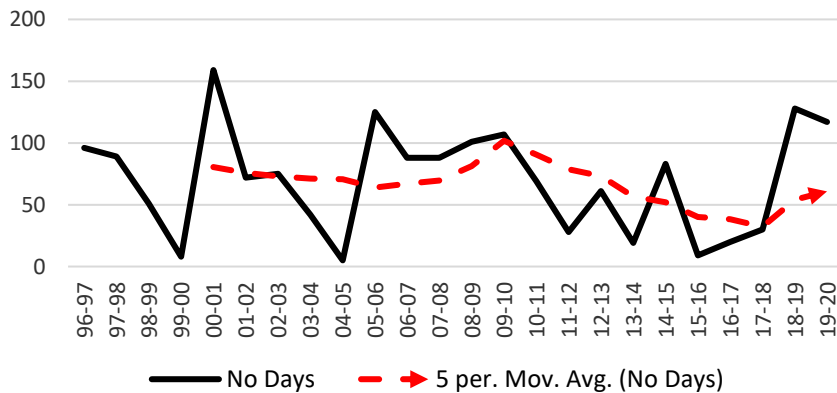


Drought Code

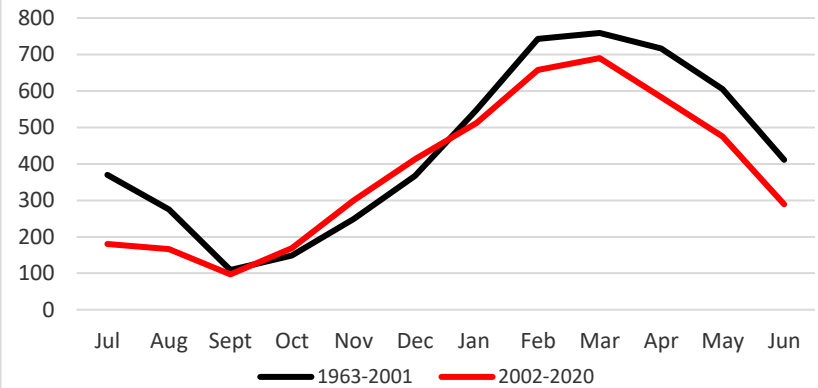
DC > 300	No Days
96-97	96
97-98	89
98-99	51
99-00	8
00-01	159
01-02	72
02-03	75
03-04	42
04-05	5
05-06	125
06-07	88
07-08	88
08-09	101
09-10	107
10-11	69
11-12	28
12-13	61
13-14	19
14-15	83
15-16	9
16-17	20
17-18	30
18-19	128
19-20	117

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	370	275	109	149	249	367	548	743	759	716	605	411
01-02	155	166	79	103	62	96	161	242	399	418	379	278
02-03	108	109	59	83	173	209	293	483	565	451	318	243
03-04	43	58	49	56	165	324	512	245	201	217	63	30
04-05	19	14	23	31	96	171	173	255	321	231	262	153
05-06	97	56	97	169	300	344	484	381	516	521	162	16
06-07	37	30	68	113	115	266	131	458	526	583	402	114
07-08	61	54	77	65	237	327	369	431	402	372	166	153
08-09	94	15	36	71	137	104	296	375	339	433	340	345
09-10	180	132	66	28	155	290	348	376	457	538	458	132
10-11	38	19	16	122	253	345	210	391	432	444	275	20
11-12	30	69	93	97	133	154	222	346	278	343	274	280
12-13	25	14	20	70	228	365	372	382	470	301	128	24
13-14	56	77	70	39	153	281	250	314	369	227	34	28
14-15	27	58	86	113	265	309	398	460	462	375	150	147
15-16	41	25	33	116	235	338	310	277	244	114	126	21
16-17	28	17	34	28	76	170	280	356	411	259	44	61
17-18	22	22	16	85	212	413	421	119	137	87	60	40
18-19	17	16	43	81	165	265	492	658	690	410	361	145
19-20	130	33	33	55	97	95	317	465	531	566	475	289
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	370	275	109	149	249	367	548	743	759	716	605	411
2002-2020	180	166	97	169	300	413	512	658	690	583	475	289

No Days with DC above 300

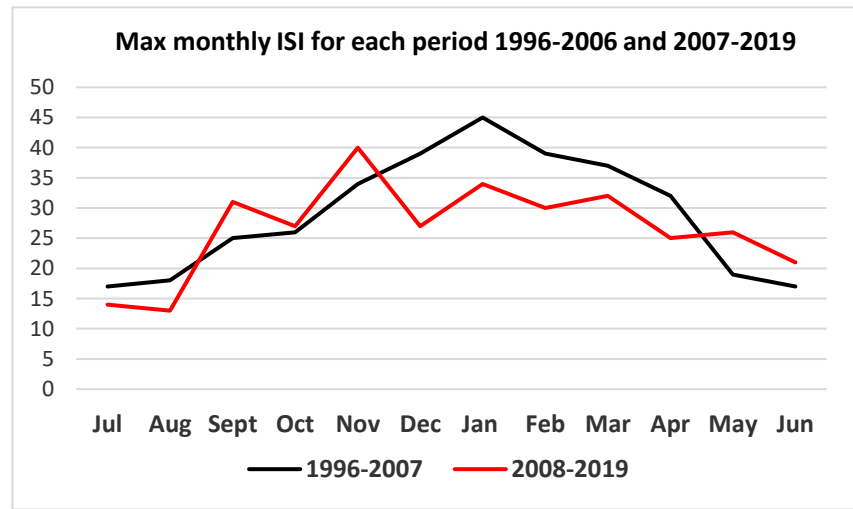
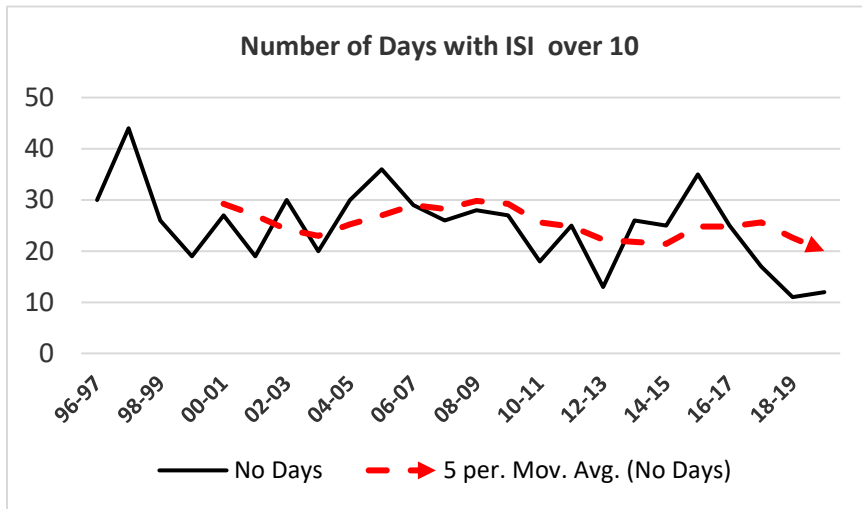


Max Monthly DC between 1963-2001 & 2002-2020



Initial Spread Index

ISI > 10	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	30	11	8	5	15	24	20	41	24	31	10	18	10
97-98	44	12	11	11	35	34	15	45	9	18	17	17	6
98-99	26	3	13	25	20	16	21	14	11	37	14	13	2
99-00	19	10	15	18	24	14	16	9	16	8	6	19	10
00-01	27	4	4	8	10	20	39	26	17	22	32	7	3
01-02	19	6	13	16	8	7	25	6	13	27	14	17	13
02-03	30	11	9	16	22	15	30	24	15	8	10	11	10
03-04	20	6	8	6	8	18	14	22	30	15	14	8	9
04-05	30	3	6	17	23	33	27	28	17	16	12	10	13
05-06	36	17	4	8	9	18	32	21	39	27	5	4	13
06-07	29	15	17	17	18	19	15	21	21	23	10	17	9
07-08	26	9	18	7	26	20	11	22	10	20	24	4	17
08-09	28	3	12	7	17	10	13	19	16	21	10	26	12
09-10	27	8	9	7	9	48	19	25	12	26	25	10	2
10-11	18	6	4	6	16	10	22	25	12	9	16	12	11
11-12	25	10	13	20	20	40	6	34	17	19	11	12	7
12-13	13	5	3	4	17	20	11	24	13	12	7	10	7
13-14	26	14	4	14	10	11	23	33	18	11	5	8	5
14-15	25	12	6	31	27	12	10	17	9	7	7	21	21
15-16	35	9	3	20	19	28	27	17	30	27	14	7	6
16-17	25	13	4	6	11	25	26	17	16	32	4	4	17
17-18	17	8	3	15	26	10	12	13	9	9	10	5	5
18-19	11	1	4	6	7	9	4	21	16	10	6	6	5
19-20	12	5	8	9	10	14	12	20	18	12	5	8	5
24 yrs													
1996-2007		17	18	25	26	34	39	45	39	37	32	19	17
2008-2019		14	13	31	27	40	27	34	30	32	25	26	21

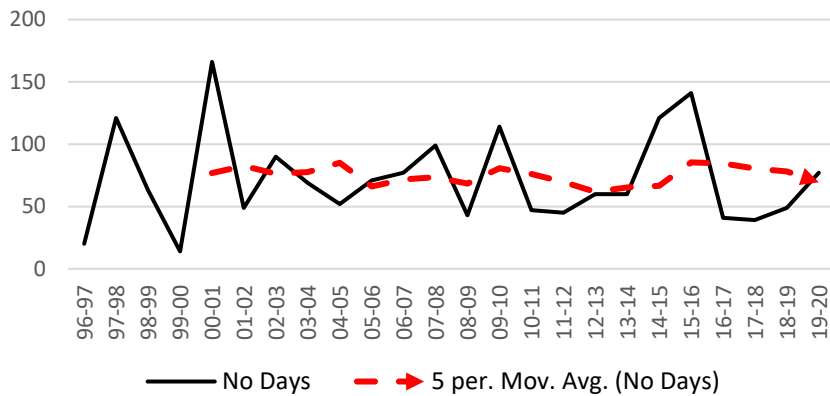


Marlborough (27 yrs)

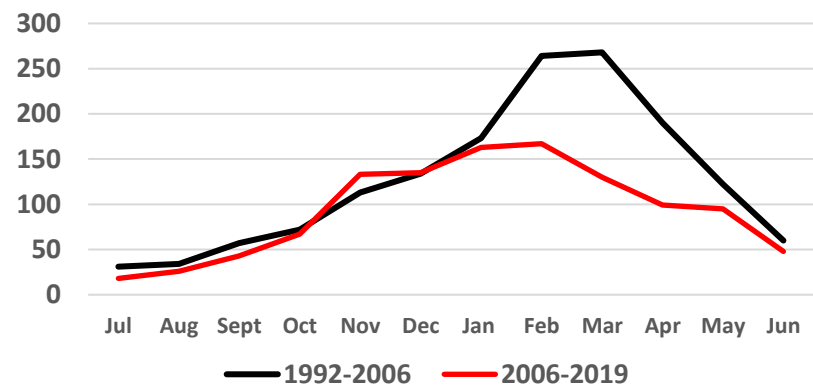
Build Up Index

BUI > 60	No Days	1992-01	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
96-97	20	1992-01	28	28	57	72	97	35	172	263	267	190	122	60
97-98	121	96-97	5	10	23	24	41	60	51	78	84	51	50	21
98-99	63	97-98	18	25	22	45	113	134	136	158	76	54	34	19
99-00	14	98-99	5	8	15	20	31	62	96	120	93	58	51	16
00-01	166	99-00	16	14	21	30	35	44	54	59	82	63	29	17
01-02	49	00-01	14	20	25	36	69	126	173	264	268	189	118	60
02-03	90	01-02	18	28	55	72	23	34	51	66	89	73	78	40
03-04	69	02-03	23	27	27	55	69	59	115	159	111	63	69	20
04-05	52	03-04	27	34	27	34	65	128	109	53	60	69	29	20
05-06	71	04-05	18	19	21	21	34	61	77	109	95	54	58	20
06-07	77	05-06	31	24	47	49	89	75	123	78	134	54	19	11
07-08	99	06-07	14	24	52	52	41	62	89	85	121	126	28	37
08-09	43	07-08	16	26	43	40	94	122	120	95	102	58	30	48
09-10	114	08-09	18	7	16	28	37	45	75	88	56	77	17	24
10-11	47	09-10	10	12	30	14	40	86	120	99	115	99	92	4
11-12	45	10-11	9	7	12	31	71	86	53	74	76	78	20	10
12-13	60	11-12	12	20	28	17	41	50	68	114	67	71	42	20
13-14	60	12-13	8	7	17	29	65	85	56	87	126	51	15	13
14-15	121	13-14	11	17	18	22	50	100	67	98	107	87	28	28
15-16	141	14-15	16	26	34	67	90	104	163	167	130	95	31	30
16-17	41	15-16	17	15	18	66	133	135	123	96	130	88	95	28
17-18	39	16-17	14	14	20	32	28	61	108	76	79	38	40	28
18-19	49	17-18	9	11	16	34	64	103	89	62	40	29	15	6
19-20	77	18-19	7	7	14	35	38	20	103	170	125	24	23	14
		19-20	16	9	21	27	46	48	101	130	137	65	58	11
		27yrs												
			Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
		1963-2001	31	34	57	72	113	134	173	264	268	190	122	60
		2002-2019	18	26	43	67	133	135	163	167	130	99	95	48

Number of Days with BUI greater than 60 by year

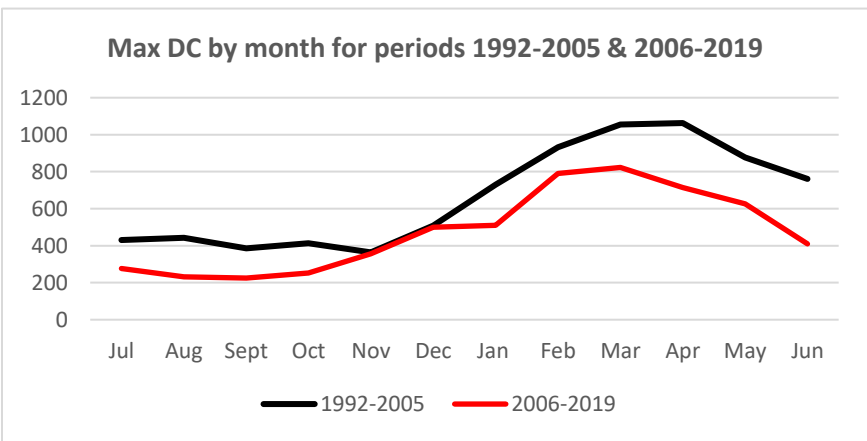
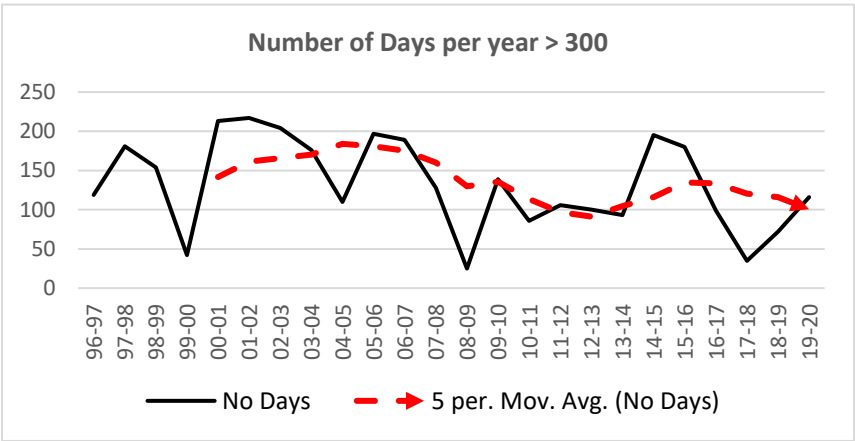


Max BUI by month for periods 1963-2006 & 2007-2019



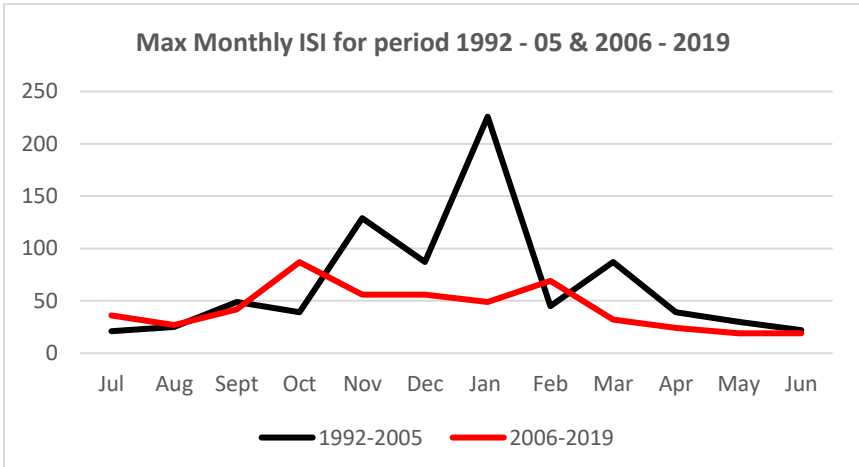
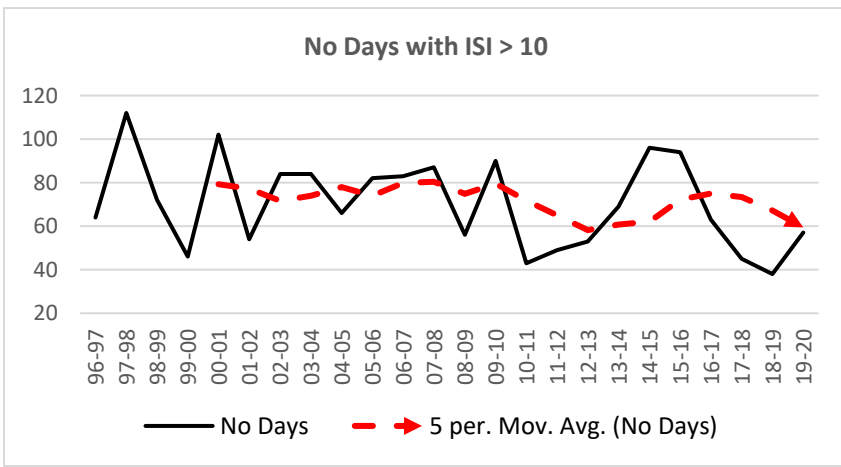
Drought Code

DC > 300	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1992-01		430	442	385	413	327	503	724	927	1049	1058	876	759
96-97	119	10	22	47	61	134	260	264	361	408	397	385	323
97-98	181	171	171	154	181	364	506	697	798	600	405	367	277
98-99	154	138	21	30	41	180	233	425	544	533	452	498	454
99-00	42	259	60	90	144	161	167	293	322	419	425	254	168
00-01	213	183	160	102	163	304	508	730	933	1055	1063	863	761
01-02	217	422	434	376	404	113	168	239	339	419	463	520	422
02-03	204	155	171	178	231	322	370	490	592	672	584	608	426
03-04	176	267	281	247	141	255	448	608	558	421	450	386	305
04-05	110	229	104	83	90	170	270	305	439	541	437	412	235
05-06	197	261	150	204	236	364	470	607	493	606	547	375	293
06-07	189	212	202	228	252	239	362	460	542	679	697	504	347
07-08	128	276	232	225	187	296	421	511	646	651	474	192	233
08-09	25	204	15	35	86	118	180	274	353	258	342	167	125
09-10	139	47	30	59	33	131	310	388	527	589	616	626	68
10-11	86	25	24	31	92	208	319	250	408	455	467	333	101
11-12	106	45	53	59	53	143	265	314	458	383	384	387	305
12-13	100	97	20	35	72	216	366	391	413	509	408	162	63
13-14	93	36	58	47	56	170	348	327	462	523	519	187	204
14-15	195	89	112	151	219	356	457	670	791	823	715	462	409
15-16	180	179	161	78	173	349	499	507	489	596	408	422	175
16-17	99	102	70	93	133	136	280	430	505	510	483	205	130
17-18	35	82	42	41	87	225	377	409	403	159	135	104	27
18-19	72	20	23	48	114	193	166	368	539	559	314	217	178
19-20	116	182	20	40	83	144	151	311	494	607	614	561	257
28yrs		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1992-2005		430	442	385	413	364	508	730	933	1055	1063	876	761
2006-2019		276	232	225	252	356	499	511	791	823	715	626	409



Initial Spread Index

ISI > 10	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
92-00		21	25	49	38	49	87	226	45	87	39	34	22
96-97	64	1	12	14	31	45	56	129	25	47	22	18	6
97-98	112	9	24	10	27	129	56	58	44	49	22	29	18
98-99	72	8	14	34	32	19	32	54	29	54	17	10	7
99-00	46	4	25	18	36	20	13	24	19	29	17	14	21
00-01	102	7	21	22	21	33	84	40	44	36	36	22	18
01-02	54	11	14	43	18	22	36	31	22	33	21	30	15
02-03	84	16	16	31	22	34	25	56	42	30	14	13	11
03-04	84	12	5	21	16	39	40	48	32	32	20	12	11
04-05	66	6	12	23	18	33	49	35	22	30	15	14	21
05-06	82	12	14	14	39	53	32	32	18	31	18	3	8
06-07	83	9	11	42	87	30	19	33	31	32	13	15	13
07-08	87	11	27	26	34	43	23	30	24	32	14	4	16
08-09	56	3	14	22	36	33	29	32	43	16	19	12	8
09-10	90	17	14	16	19	21	56	45	28	29	24	16	3
10-11	43	4	4	21	19	23	29	28	27	17	15	8	12
11-12	49	10	17	26	15	26	20	29	20	22	18	5	19
12-13	53	6	11	23	39	24	20	25	11	15	9	7	7
13-14	69	8	11	37	19	29	36	49	35	26	10	15	8
14-15	96	36	10	18	62	56	27	33	69	32	21	10	13
15-16	94	8	11	13	37	37	27	26	18	23	14	19	6
16-17	63	14	9	15	23	36	45	37	31	17	11	10	13
17-18	45	6	11	19	25	36	32	15	21	9	10	7	4
18-19	38	5	4	9	15	18	19	21	24	25	8	10	3
19-20	57	4	16	19	16	34	16	28	25	17	15	6	3
28 yrs													
1992-2005		21	25	49	39	129	87	226	45	87	39	30	22
2006-2019		36	27	42	87	56	56	49	69	32	24	19	19

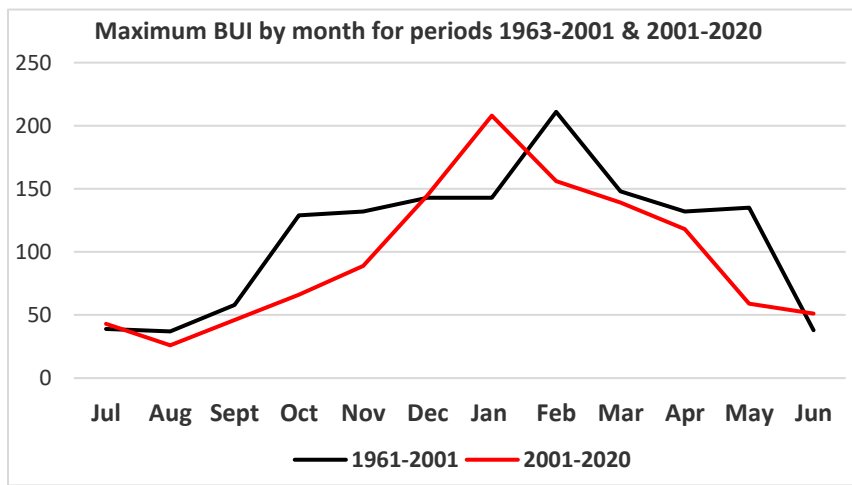
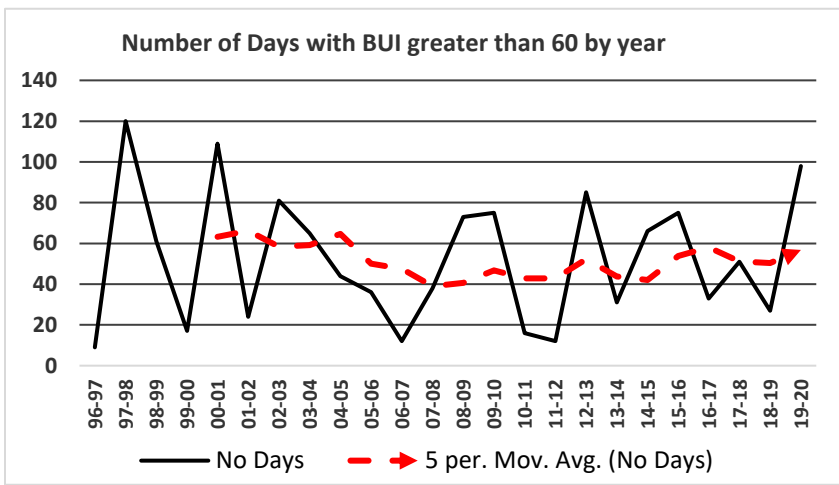


Christchurch Aero

Build Up Index

BUI > 60	No Days
96-97	9
97-98	120
98-99	61
99-00	17
00-01	109
01-02	24
02-03	81
03-04	65
04-05	44
05-06	36
06-07	12
07-08	38
08-09	73
09-10	75
10-11	16
11-12	12
12-13	85
13-14	31
14-15	66
15-16	75
16-17	33
17-18	51
18-19	27
19-20	98

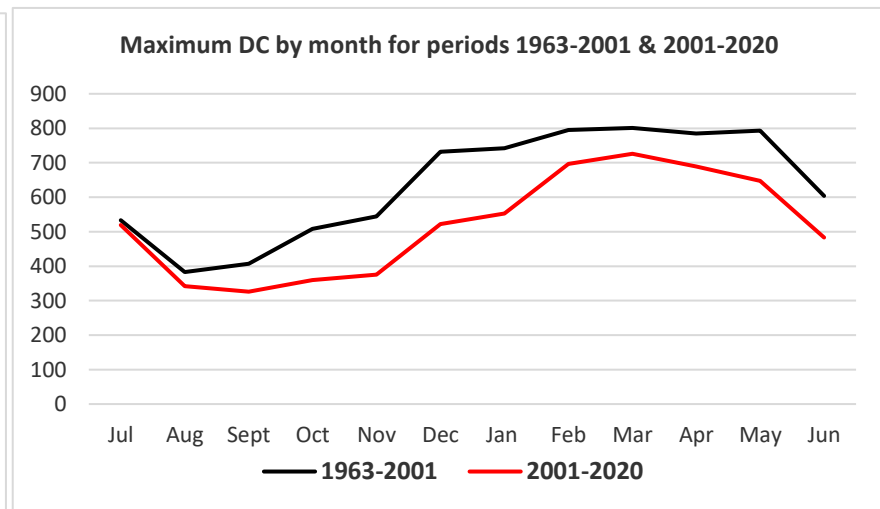
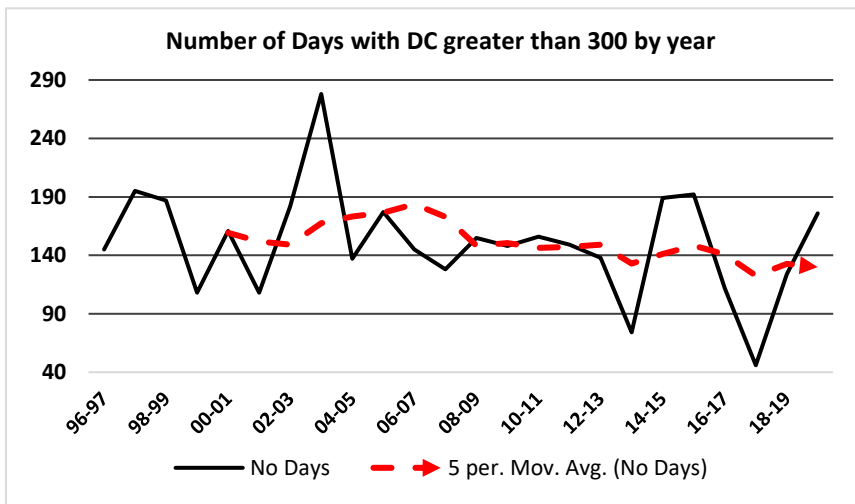
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1961-2001	39	37	58	129	132	143	143	211	148	132	135	38
01-02	15	21	46	66	48	75	39	39	79	39	29	28
02-03	9	17	39	38	60	82	105	89	139	25	28	45
03-04	24	20	25	30	67	145	208	74	56	56	35	38
04-05	43	13	27	31	59	48	90	115	95	41	17	16
05-06	16	26	36	39	73	59	90	97	59	64	9	8
06-07	6	10	39	40	35	42	43	72	71	58	41	51
07-08	11	19	24	37	53	62	100	114	63	66	37	17
08-09	5	4	20	51	82	104	100	118	68	84	19	8
09-10	13	24	38	17	53	56	75	73	97	112	73	4
10-11	4	7	21	41	50	88	73	57	48	30	22	17
11-12	13	19	30	36	36	46	75	57	34	49	44	44
12-13	15	9	24	29	37	67	89	102	137	118	14	14
13-14	22	23	16	41	59	58	85	80	34	23	12	14
14-15	7	18	29	45	62	53	97	96	104	68	40	34
15-16	13	18	26	71	89	101	49	82	99	60	79	16
16-17	20	17	22	30	48	58	68	115	75	20	14	10
17-18	9	9	14	24	84	126	81	71	41	50	16	6
18-19	11	20	26	41	26	28	60	120	67	51	25	19
19-20	23	21	26	27	49	87	142	156	91	51	59	21
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1961-2001	39	37	58	129	132	143	143	211	148	132	135	38
2001-2020	43	26	46	66	89	145	208	156	139	118	59	51



Drought Code

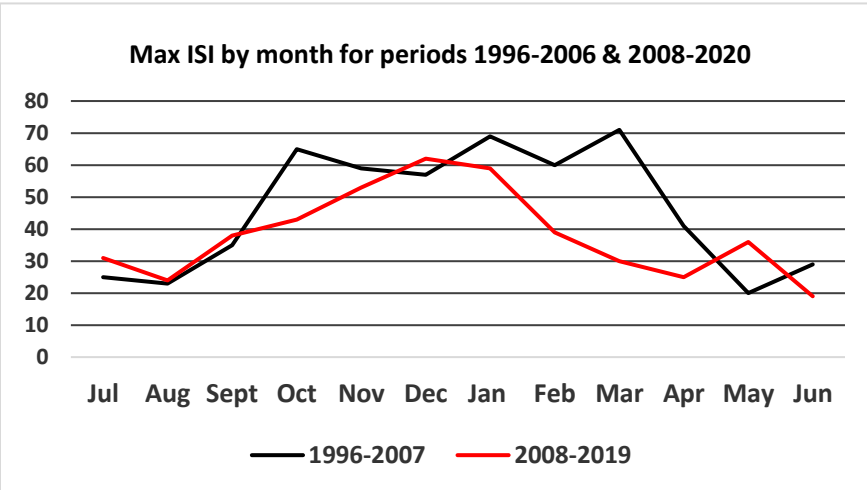
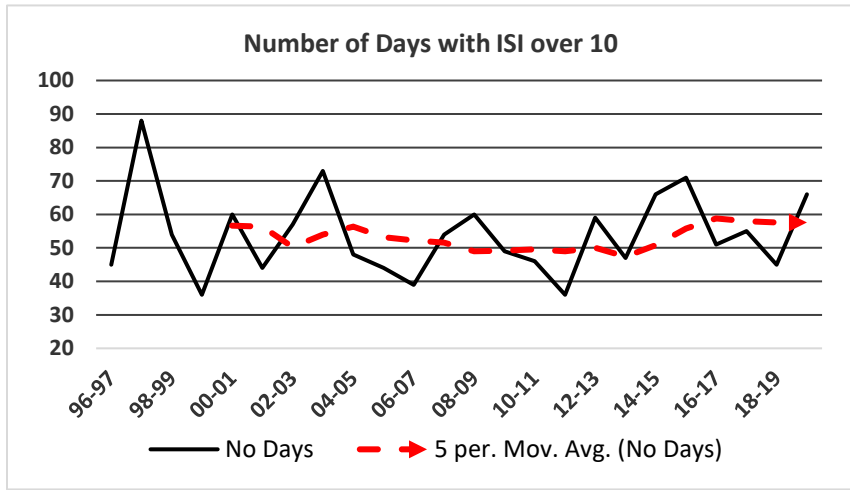
DC > 300	No Days
96-97	145
97-98	195
98-99	187
99-00	108
00-01	161
01-02	108
02-03	182
03-04	278
04-05	137
05-06	177
06-07	145
07-08	128
08-09	155
09-10	148
10-11	156
11-12	149
12-13	138
13-14	74
14-15	189
15-16	192
16-17	112
17-18	46
18-19	124
19-20	176

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	533	383	407	508	544	732	742	795	801	785	793	604
01-02	519	302	326	360	287	389	388	273	400	334	249	230
02-03	102	126	179	188	248	308	410	563	707	461	387	432
03-04	381	342	315	196	302	522	721	633	429	448	390	371
04-05	380	265	96	124	241	254	378	469	528	516	399	251
05-06	255	253	282	243	337	431	544	587	571	583	366	167
06-07	40	24	86	92	139	104	285	411	476	499	381	404
07-08	242	143	113	118	224	315	519	594	367	429	423	323
08-09	153	11	48	131	264	364	520	595	545	573	458	137
09-10	117	134	131	124	203	312	436	562	630	689	647	107
10-11	20	22	35	121	195	365	438	458	499	428	358	302
11-12	248	247	175	187	163	239	371	431	373	398	419	429
12-13	132	62	52	79	167	289	421	521	610	644	447	301
13-14	55	77	60	121	243	332	461	548	501	262	41	49
14-15	30	67	91	185	290	404	553	697	726	675	478	483
15-16	272	212	193	240	375	450	451	453	510	470	506	265
16-17	258	262	241	137	280	346	414	560	561	391	119	98
17-18	103	23	35	77	247	400	421	337	269	304	134	83
18-19	53	95	98	135	114	162	331	497	480	493	461	246
19-20	261	126	135	138	172	299	531	627	702	400	448	379
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2001	533	383	407	508	544	732	742	795	801	785	793	604
2001-2020	519	342	326	360	375	522	553	697	726	689	647	483



Initial Spread Index (24 yrs)

ISI > 10	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
96-97	45	3	6	15	18	41	50	62	15	42	11	18	4	
97-98	88	4	23	12	36	59	57	69	60	60	29	9	7	
98-99	54	17	11	35	19	16	55	25	32	13	13	17	4	
99-00	36	25	4	7	23	24	19	21	44	22	8	15	29	
00-01	60	6	18	25	22	33	46	41	22	20	41	20	10	
01-02	44	4	7	17	17	23	19	28	13	47	6	17	14	
02-03	57	7	19	27	37	48	32	61	42	47	10	7	12	
03-04	73	5	11	34	13	50	54	50	41	42	40	13	10	
04-05	48	10	19	21	30	23	50	43	12	71	14	12	7	
05-06	44	4	11	13	19	28	30	67	24	19	18	11	4	
06-07	39	6	18	17	65	47	30	31	20	25	9	19	8	
07-08	54	10	6	21	45	45	21	55	29	22	15	13	10	
08-09	60	11	16	30	36	52	39	39	22	19	24	11	6	
09-10	49	8	24	25	12	15	62	31	24	19	25	27	3	
10-11	46	4	14	38	17	13	56	59	26	27	11	18	5	
11-12	36	11	14	10	18	20	16	27	10	15	14	20	13	
12-13	59	4	12	30	17	22	35	51	14	19	10	18	19	
13-14	47	31	5	12	27	14	30	33	19	12	4	16	6	
14-15	66	10	19	13	16	53	35	25	29	30	16	36	6	
15-16	71	12	12	23	43	40	24	45	28	18	10	19	17	
16-17	51	14	10	13	29	41	28	39	21	12	9	5	6	
17-18	55	3	7	16	11	30	36	17	39	19	22	7	5	
18-19	45	11	5	12	26	22	13	37	19	25	18	7	8	
19-20	66	8	8	12	13	28	25	24	27	18	17	12	6	
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
		1996-2007	25	23	35	65	59	57	69	60	71	41	20	29
		2008-2019	31	24	38	43	53	62	59	39	30	25	36	19



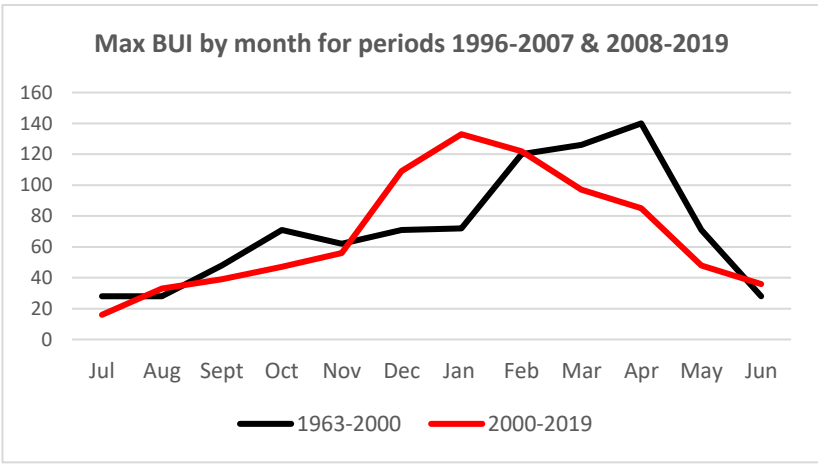
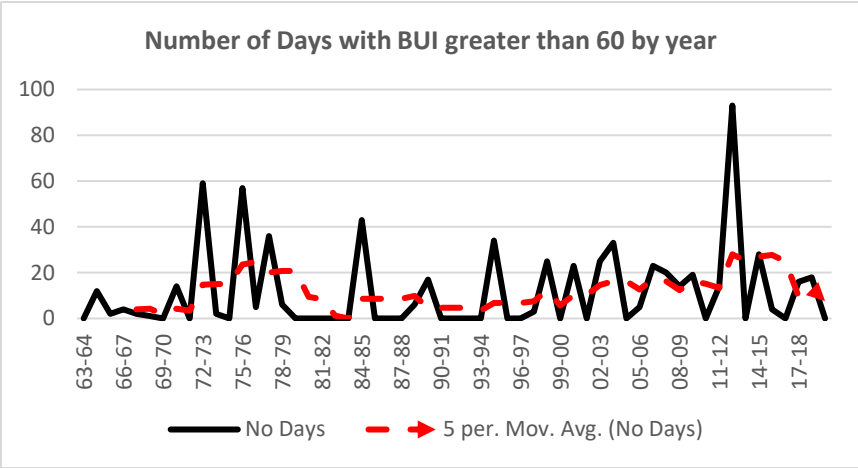
Dunedin (41 yrs)

Number of days with BUI Greater than 60 per year

BUI > 60	No Days	77-78	36	98-99	25
63-64	0	78-79	6	99-00	0
64-65	12	79-80	0	00-01	23
65-66	2	80-81	0	01-02	0
66-67	4	81-82	0	02-03	25
67-68	2	82-83	0	03-04	33
68-69	1	83-84	0	04-05	0
69-70	0	84-85	43	05-06	5
70-71	14	85-86	0	06-07	23
71-72	0	86-87	0	07-08	20
72-73	59	87-88	0	08-09	14
73-74	2	88-89	6	09-10	19
74-75	0	89-90	17	10-11	0
75-76	57	90-91	0	11-12	14
76-77	5	91-92	0	12-13	93
		92-93	0	13-14	0
		93-94	0	14-15	28
		94-95	34	15-16	4
		95-96	0	16-17	0
		96-97	0	17-18	16
				18-19	18
				19-20	0

Monthly Build Up Index

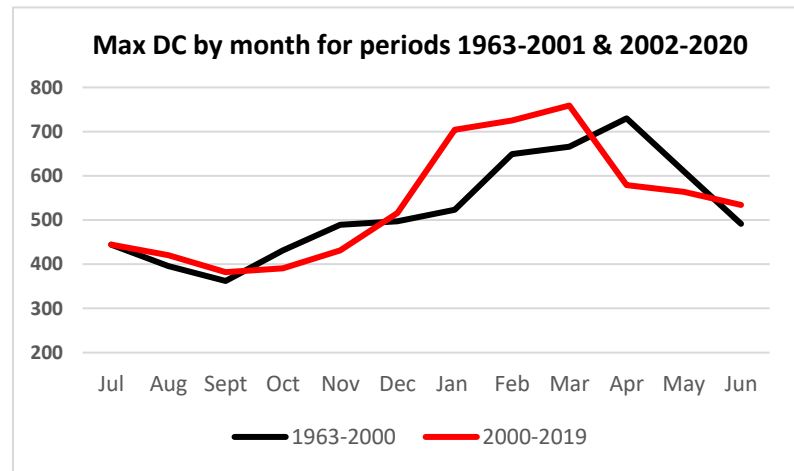
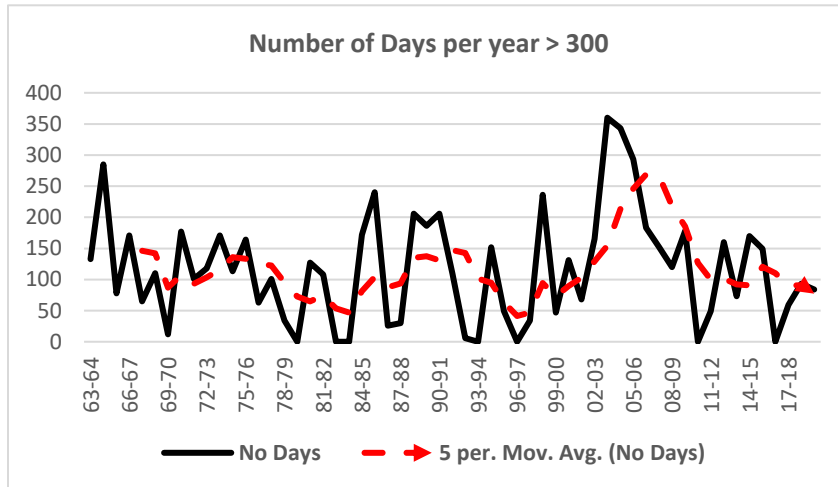
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-00	28	28	48	71	62	71	72	120	126	140	71	28
00-01	6	18	17	23	34	63	26	40	88	85	52	9
01-02	10	8	26	38	18	38	29	35	52	28	11	8
02-03	5	12	23	26	19	56	67	69	84	52	39	12
03-04	8	16	34	44	28	94	101	36	32	23	13	10
04-05	16	19	30	38	56	22	33	49	53	33	20	19
05-06	16	33	32	41	51	44	52	68	37	54	17	9
06-07	10	13	39	47	42	41	25	58	81	78	48	29
07-08	10	17	30	20	51	78	82	63	40	30	7	7
08-09	9	5	22	33	46	58	67	84	24	37	22	7
09-10	6	16	38	23	53	67	41	67	68	48	16	2
10-11	5	8	7	20	30	53	30	21	26	16	16	14
11-12	11	12	22	41	24	70	83	53	19	40	22	8
12-13	8	11	23	29	48	109	133	122	97	67	15	5
13-14	8	15	17	17	47	55	32	52	19	19	5	14
14-15	14	14	28	21	27	77	98	80	43	35	26	13
15-16	11	11	16	28	36	52	65	62	47	55	45	11
16-17	9	15	21	24	16	44	49	35	47	23	10	3
17-18	3	9	15	40	57	93	72	58	38	33	13	4
18-19	11	11	27	27	19	37	51	69	76	53	16	10
19-20	16	13	38	19	31	38	56	38	47	38	39	36
41yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	28	28	48	71	62	71	72	120	126	140	71	28
2000-2019	16	33	39	47	56	109	133	122	97	85	48	36



Number of days with DC Greater than 300 per year

Monthly Drought Code

DC > 300	No Days	76-77	63	98-99	236		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
63-64	133	77-78	101	99-00	47	1963-00	444	396	362	431	489	497	523	649	666	730	610	491
64-65	285	78-79	34	00-01	131	00-01	127	148	44	56	126	238	226	321	474	501	529	478
65-66	78	79-80	0	01-02	68	01-02	444	47	98	123	170	247	270	314	413	344	168	89
66-67	171	80-81	127	02-03	165	02-03	23	41	63	110	155	286	334	429	485	451	489	441
67-68	65	81-82	108	03-04	360	03-04	409	420	364	370	340	447	553	528	517	526	466	441
68-69	110	82-83	0	04-05	343	04-05	400	408	339	365	389	258	359	403	402	368	360	345
69-70	12	83-84	0	05-06	293	05-06	349	366	382	391	431	428	375	504	505	537	112	116
70-71	177	84-85	172	06-07	183	06-07	129	137	161	242	325	321	348	450	527	537	564	534
71-72	101	85-86	240	07-08	152	07-08	342	143	160	140	233	309	422	523	439	417	325	199
72-73	118	86-87	26	08-09	120	08-09	170	19	40	123	236	315	433	492	340	390	364	70
73-74	171	87-88	30	09-10	178	09-10	71	104	147	175	309	448	457	518	554	565	419	16
74-75	113	88-89	206	10-11	0	10-11	30	31	16	91	186	278	220	229	198	201	206	131
75-76	164	89-90	186	11-12	49	11-12	153	154	161	219	113	290	373	405	211	279	264	249
		90-91	206	12-13	160	12-13	210	161	133	196	314	516	704	725	759	693	541	206
		91-92	109	13-14	73	13-14	31	73	78	112	260	338	312	381	326	335	267	167
		92-93	6	14-15	170	14-15	190	197	213	207	245	420	520	542	556	579	434	355
		93-94	0	15-16	149	15-16	66	67	69	109	198	332	386	473	483	526	542	168
		94-95	152	16-17	0	16-17	174	107	92	116	98	188	263	240	291	267	211	166
		95-96	49	17-18	59	17-18	134	36	48	145	254	370	495	485	263	233	85	73
		96-97	0	18-19	93	18-19	88	76	105	130	122	176	230	390	495	508	384	258
				19-20	84	19-20	255	235	269	271	174	165	275	273	274	353	383	386
						41yrs												
							Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
						1963-2000	444	396	362	431	489	497	523	649	666	730	610	491
						2000-2019	444	420	382	391	431	516	704	725	759	579	564	534



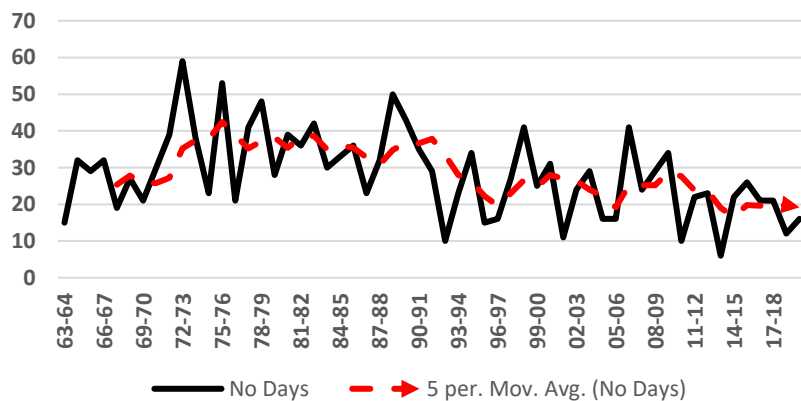
Number of days with ISI Greater than 10 per year

ISI > 10	No Days	88-89	50	14-15	22
63-64	15	89-90	43	15-16	26
64-65	32	90-91	35	16-17	21
65-66	29	91-92	29	17-18	21
66-67	32	92-93	10	18-19	12
67-68	19	93-94	23	19-20	16
68-69	27	94-95	34		
69-70	21	95-96	15		
70-71	30	96-97	16		
71-72	39	97-98	27		
72-73	59	98-99	41		
73-74	38	99-00	25		
74-75	23	00-01	31		
75-76	53	01-02	11		
76-77	21	02-03	24		
77-78	41	03-04	29		
78-79	48	04-05	16		
79-80	28	05-06	16		
80-81	39	06-07	41		
81-82	36	07-08	24		
82-83	42	08-09	29		
83-84	30	09-10	34		
84-85	33	10-11	10		
85-86	36	11-12	22		
86-87	23	12-13	23		
87-88	32	13-14	6		

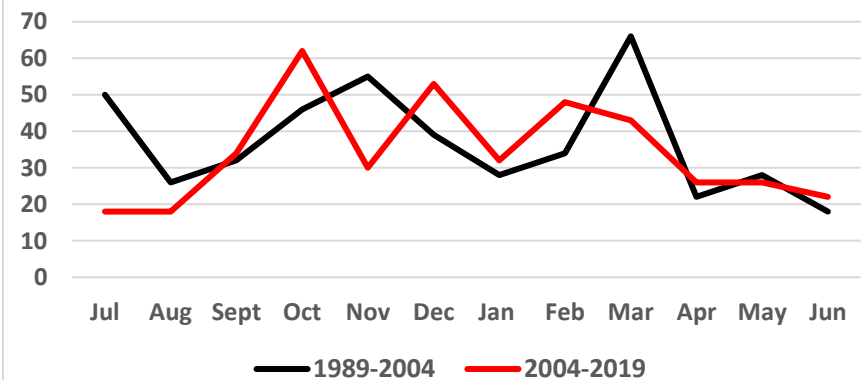
Monthly Max Initial Spread Index

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
89-90	5	7	11	16	18	23	26	20	19	13	23	12
90-91	9	10	21	18	10	35	12	18	22	8	27	14
91-92	10	23	8	25	31	18	12	16	26	9	15	5
92-93	15	17	6	15	8	15	10	9	13	7	6	9
93-94	4	14	23	21	24	11	20	5	14	22	8	3
94-95	6	26	13	18	55	50	15	76	12	11	9	17
95-96	10	9	11	20	23	9	10	18	8	13	18	3
96-97	5	6	16	8	41	19	13	18	8	13	12	10
97-98	5	8	5	42	29	8	28	18	20	11	6	6
98-99	6	18	17	46	14	17	15	29	19	12	28	8
99-00	50	10	11	13	26	22	6	17	10	14	9	3
00-01	5	13	15	28	12	32	24	32	15	17	6	18
01-02	11	11	11	8	12	11	9	9	38	6	14	9
02-03	6	10	27	24	23	39	13	13	66	11	8	2
03-04	7	3	32	12	25	21	20	34	20	12	5	6
04-05	11	4	9	32	17	8	13	8	22	19	6	11
05-06	8	14	7	19	22	11	17	15	9	12	5	11
06-07	12	10	21	52	27	18	13	22	18	10	20	2
07-08	8	17	26	12	27	11	16	14	15	6	5	21
08-09	4	5	34	16	30	38	32	48	15	11	2	4
09-10	6	10	19	11	20	16	16	16	20	26	11	3
10-11	4	6	13	9	9	53	15	8	43	9	24	6
11-12	5	5	15	14	29	26	24	11	8	5	6	12
12-13	5	7	24	31	14	25	18	9	17	9	3	5
13-14	16	7	27	13	27	8	8	9	7	7	8	8
14-15	15	18	7	12	18	14	28	11	10	7	19	10
15-16	14	4	17	62	14	22	17	18	8	24	9	22
16-17	18	14	6	11	16	39	27	5	12	17	4	6
17-18	3	4	33	15	13	14	21	4	29	15	26	4
18-19	12	4	16	23	9	9	18	16	12	13	6	5
19-20	5	11	12	14	24	10	8	10	17	9	5	3
31yrs												
1989-2004	50	26	32	46	55	39	28	34	66	22	28	18
2004-2019	18	18	34	62	30	53	32	48	43	26	26	22

No Days with ISI > 10



Max Monthly ISI for period 1989 - 04 & 2004 - 2020

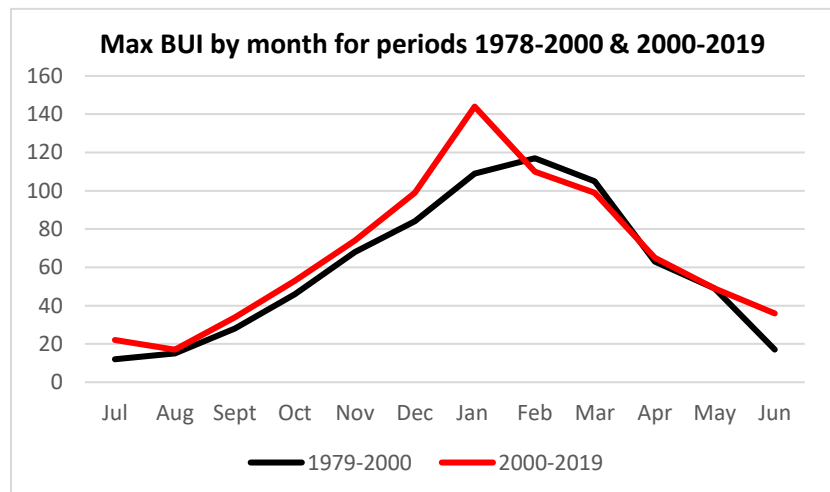
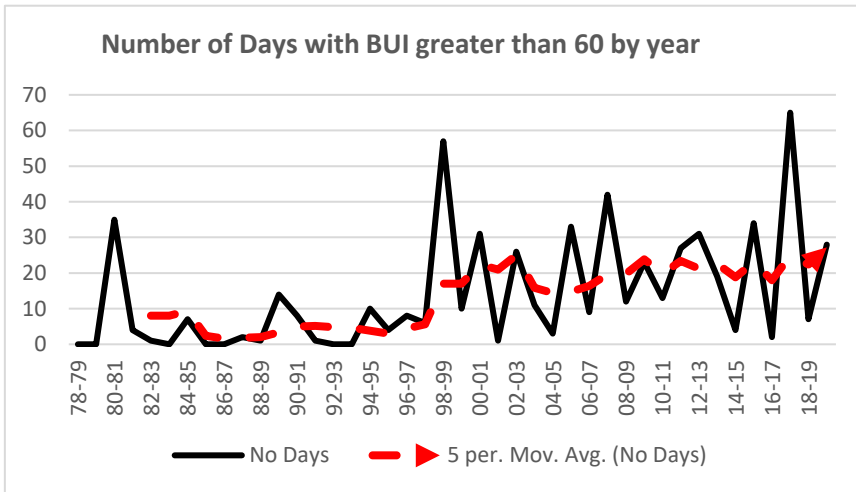


Queenstown

Build Up Index

BUI > 60	No Days		
78-79	0	99-00	10
79-80	0	00-01	31
80-81	35	01-02	1
81-82	4	02-03	26
82-83	1	03-04	11
83-84	0	04-05	3
84-85	7	05-06	33
85-86	0	06-07	9
86-87	0	07-08	42
87-88	2	08-09	12
88-89	1	09-10	23
89-90	14	10-11	13
90-91	8	11-12	27
91-92	1	12-13	31
92-93	0	13-14	19
93-94	0	14-15	4
94-95	10	15-16	34
95-96	4	16-17	2
96-97	8	17-18	65
97-98	6	18-19	7
98-99	57	19-20	28

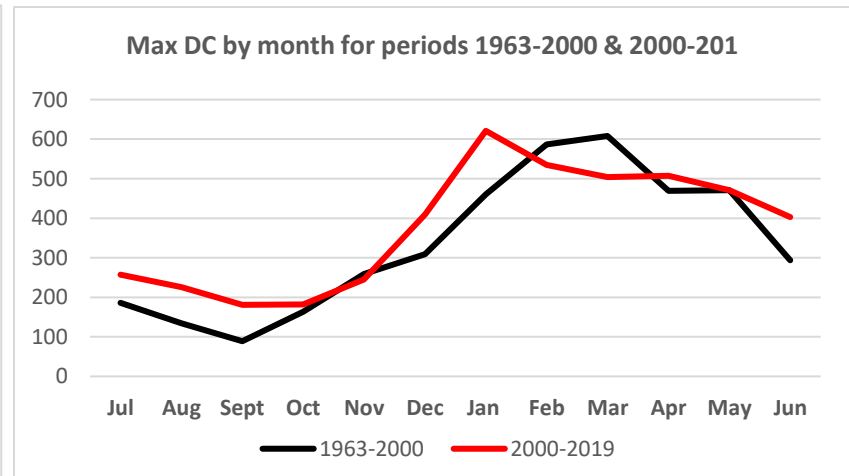
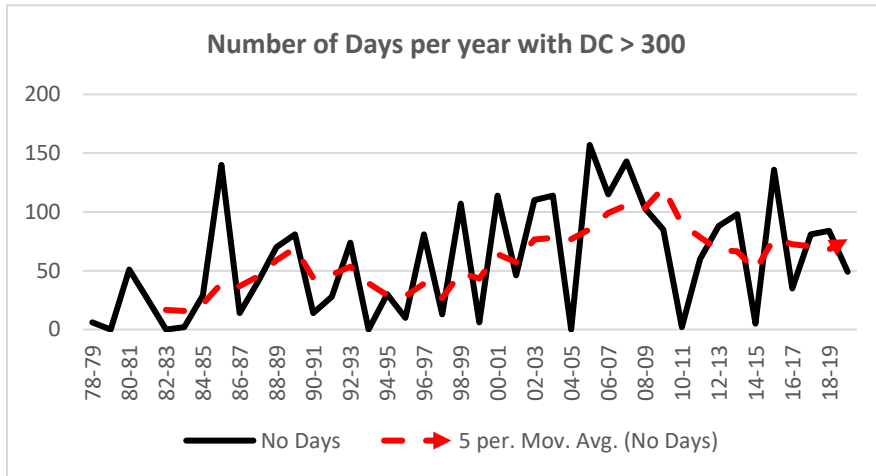
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1978-2000	12	15	28	46	68	84	109	117	105	63	49	17
00-01	5	7	11	21	65	84	35	79	71	50	49	5
01-02	4	5	22	36	26	27	52	61	42	40	26	23
02-03	8	9	11	18	34	36	64	81	80	65	29	19
03-04	6	16	11	23	34	50	75	41	36	37	48	36
04-05	3	5	9	21	41	31	50	65	36	30	16	5
05-06	5	17	30	39	47	60	81	98	50	48	21	12
06-07	8	14	34	31	30	36	45	63	80	57	25	11
07-08	5	12	21	11	70	99	100	49	58	58	22	10
08-09	6	6	10	23	42	40	55	79	70	47	14	8
09-10	13	5	26	28	74	54	42	73	77	42	8	2
10-11	5	3	4	19	59	81	41	33	24	28	28	20
11-12	22	9	16	31	29	92	127	58	24	48	26	6
12-13	9	13	13	13	33	70	57	68	99	58	19	3
13-14	8	12	13	25	62	57	36	82	44	38	16	5
14-15	5	7	17	20	21	67	60	38	43	45	12	4
15-16	5	5	13	22	51	83	120	89	48	25	27	3
16-17	9	12	19	20	27	40	64	35	56	47	17	8
17-18	4	13	18	53	62	92	144	67	41	31	11	4
18-19	5	10	18	27	21	64	81	57	57	24	13	6
19-20	9	8	16	17	26	29	108	110	66	62	18	13
42 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1979-2000	12	15	28	46	68	84	109	117	105	63	49	17
2000-2019	22	17	34	53	74	99	144	110	99	65	49	36



Drought Code

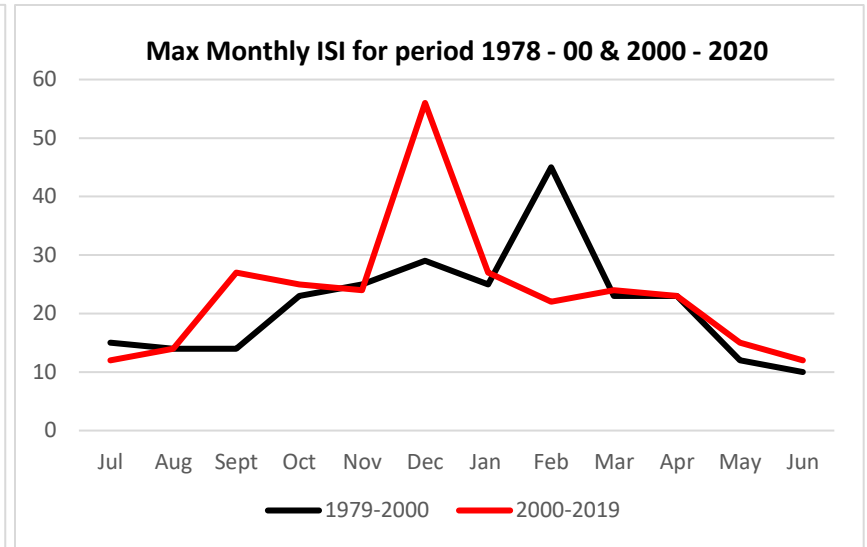
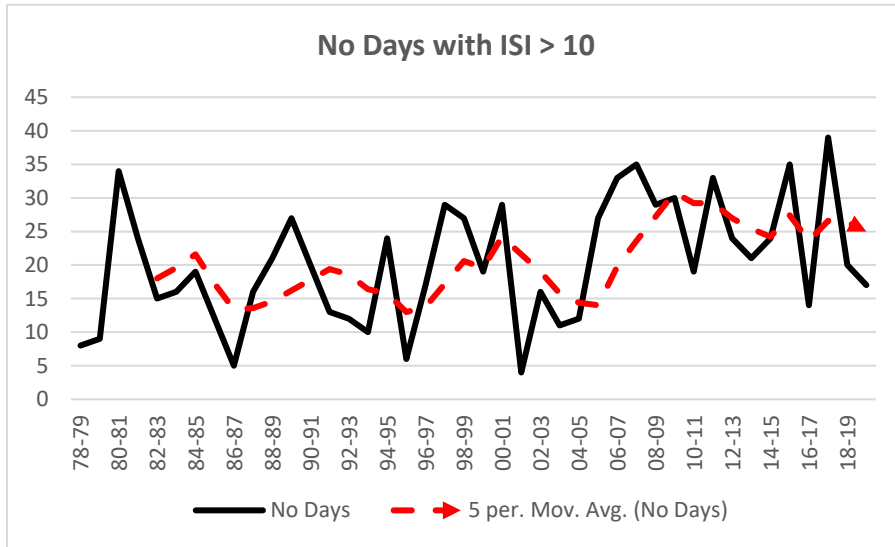
DC > 300	No Days		
78-79	6	99-00	6
79-80	0	00-01	114
80-81	51	01-02	46
81-82	26	02-03	110
82-83	0	03-04	114
83-84	2	04-05	0
84-85	29	05-06	157
85-86	140	06-07	115
86-87	14	07-08	143
87-88	41	08-09	103
88-89	70	09-10	85
89-90	81	10-11	2
90-91	14	11-12	60
91-92	28	12-13	88
92-93	74	13-14	98
93-94	0	14-15	5
94-95	30	15-16	136
95-96	10	16-17	35
96-97	81	17-18	81
97-98	13	18-19	84
98-99	107	19-20	49

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1979-00	186	134	89	163	259	309	460	587	608	469	471	294
00-01	20	14	24	52	165	281	300	397	475	469	471	287
01-02	165	121	83	163	176	173	209	340	349	345	296	298
02-03	81	73	35	42	120	178	312	377	476	507	460	302
03-04	142	117	84	92	143	238	398	398	304	367	397	403
04-05	124	112	18	49	116	153	187	246	242	279	214	190
05-06	176	151	147	182	245	350	351	483	470	459	356	352
06-07	257	226	181	138	184	142	278	409	442	437	425	211
07-08	164	134	102	28	184	335	442	376	391	427	359	285
08-09	222	159	123	68	146	200	297	392	504	479	397	82
09-10	91	16	45	87	229	286	303	428	474	398	103	20
10-11	12	10	15	53	208	307	177	189	227	254	261	211
11-12	175	61	69	104	124	332	421	398	258	307	266	205
12-13	103	45	39	31	91	251	240	303	384	413	374	275
13-14	75	35	25	72	210	309	326	483	465	405	306	72
14-15	31	18	38	57	78	262	313	185	281	307	174	45
15-16	12	16	27	66	173	326	415	535	442	432	373	77
16-17	84	32	42	65	92	214	288	233	338	354	304	230
17-18	176	164	117	152	215	409	621	404	328	294	137	38
18-19	30	26	46	68	81	271	340	394	461	355	190	32
19-20	37	26	40	74	106	114	328	341	355	397	295	163
41yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1963-2000	186	134	89	163	259	309	460	587	608	469	471	294
2000-2019	257	226	181	182	245	409	621	535	504	507	471	403



Initial Spread Index

ISI > 10	No Days	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
78-79	8							21	9	10	5	4	3
79-80	9	11	6	10	11	15	9	9	15	7	8	3	5
80-81	34	2	4	6	12	10	17	19	25	7	11	4	4
81-82	24	2	9	11	19	17	11	19	22	11	9	7	4
82-83	15	7	10	9	10	16	12	18	11	17	11	9	4
83-84	16	6	10	4	13	13	16	21	31	6	16	9	10
84-85	19	3	9	6	11	23	15	12	16	13	4	2	3
85-86	12	8	7	12	23	14	9	11	17	11	8	7	10
86-87	5	8	5	6	12	9	10	8	13	5	22	4	3
87-88	16	15	3	7	14	9	31	15	14	15	15	7	5
88-89	21	6	12	12	14	16	15	12	10	22	13	5	4
89-90	27	7	8	10	12	22	20	14	45	14	16	6	2
90-91	20	3	6	10	10	17	29	13	7	13	11	10	7
91-92	13	2	3	7	13	17	15	12	13	20	8	9	4
92-93	12	3	2	9	16	24	14	25	11	23	8	7	3
93-94	10	2	12	14	12	25	12	10	8	4	23	2	3
94-95	24	4	6	4	13	14	20	15	18	14	20	11	5
95-96	6	5	7	4	17	10	12	9	21	8	3	4	3
96-97	17	9	3	10	9	10	18	17	16	12	18	11	5
97-98	29	6	4	9	15	10	23	21	12	17	8	10	3
98-99	27	5	14	13	16	11	12	16	27	19	5	12	2
99-00	19	12	9	14	12	8	17	8	18	11	17	11	1
00-01	29	2	14	11	12	14	22	14	18	10	11	4	2
01-02	4	2	2	8	11	13	7	9	13	9	5	8	12
02-03	16	8	3	13	9	13	21	13	14	15	13	9	2
03-04	11	3	4	5	10	13	20	12	14	9	9	9	4
04-05	12	2	4	8	10	14	56	13	15	6	14	6	3
05-06	27	5	6	27	12	14	17	28	22	24	15	6	5
06-07	33	12	10	14	25	18	12	12	21	11	7	15	9
07-08	35	3	9	9	13	16	16	19	15	27	18	3	6
08-09	29	5	4	16	13	26	15	16	19	22	9	3	6
09-10	30	9	3	31	11	20	19	17	16	19	15	2	2
10-11	19	3	3	3	10	12	16	19	15	7	8	12	7
11-12	33	4	7	9	11	24	19	23	8	6	12	5	7
12-13	24	4	9	6	11	17	23	16	20	17	10	4	4
13-14	21	8	10	9	10	11	15	21	18	8	11	3	9
14-15	24	5	8	18	13	19	15	20	15	11	5	7	3
15-16	35	12	4	14	11	23	16	26	16	11	7	2	2
16-17	14	4	7	7	11	14	13	12	12	20	23	2	4
17-18	39	4	4	8	18	11	19	19	11	12	23	6	2
18-19	20	9	10	11	17	10	22	21	18	22	4	5	3
19-20	17	5	5	8	6	16	14	27	18	14	8	5	7
29 yrs													
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1979-2000		15	14	14	23	25	29	25	45	23	23	12	10
2000-2019		12	14	27	25	24	56	27	22	24	23	15	12



Invercargill (58 Yrs)

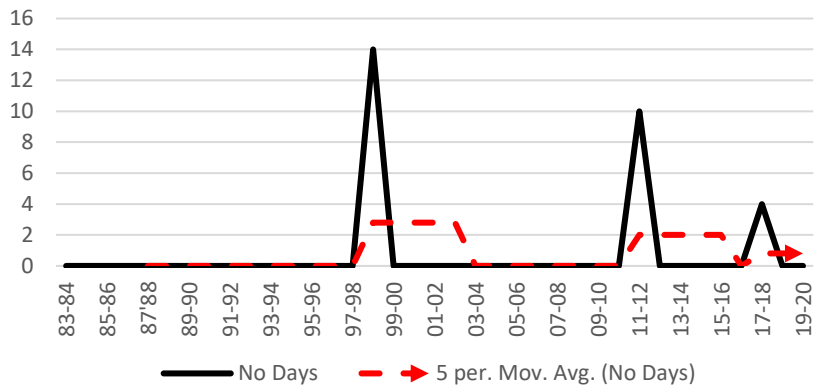
No BUI Days per year over 60

BUI > 60	No Days	98-99	14
83-84	0	99-00	0
84-85	0	00-01	0
85-86	0	01-02	0
86-87	0	02-03	0
87-88	0	03-04	0
88-89	0	04-05	0
89-90	0	05-06	0
90-91	0	06-07	0
91-92	0	07-08	0
92-93	0	08-09	0
93-94	0	09-10	0
94-95	0	10-11	0
95-96	0	11-12	10
96-97	0	12-13	0
97-98	0	13-14	0
		14-15	0
		15-16	0
		16-17	0
		17-18	4
		18-19	0
		19-20	0

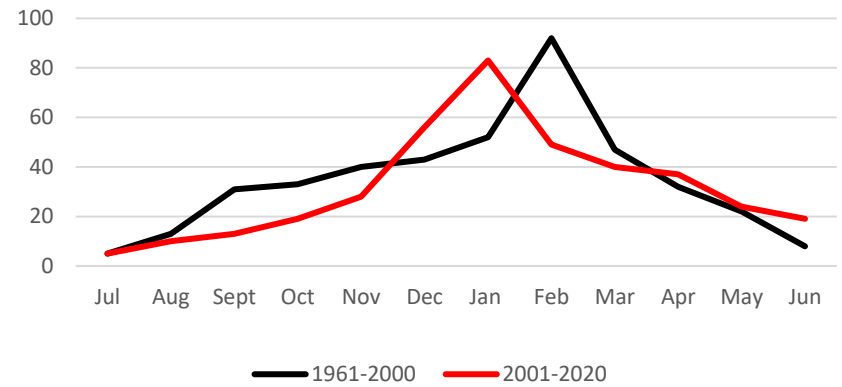
Max Monthly BUI

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1961-2000	5	13	31	33	40	43	52	92	47	32	22	8
00-01	5	3	8	12	20	35	16	20	38	13	8	2
01-02	2	3	13	17	15	27	42	36	14	11	10	1
02-03	3	3	5	7	11	22	25	28	34	37	11	4
03-04	1	6	6	19	12	29	33	12	13	6	13	2
04-05	2	4	6	16	27	8	18	24	11	13	4	1
05-06	2	5	12	18	19	29	23	25	20	23	7	1
06-07	2	5	7	11	13	16	24	25	35	17	11	4
07-08	1	2	11	8	19	29	26	49	26	26	3	3
08-09	3	4	6	7	13	29	30	19	15	22	24	2
09-10	1	8	8	8	8	18	15	23	11	8	3	2
10-11	4	5	5	11	23	38	23	17	20	9	6	3
11-12	2	3	4	15	9	56	83	22	13	35	12	2
12-13	4	10	12	6	18	33	24	32	40	23	5	2
13-14	5	7	7	11	18	25	16	34	17	19	4	3
14-15	2	4	9	9	11	24	39	28	15	9	4	4
15-16	4	2	10	12	14	24	27	30	17	10	8	2
16-17	3	10	12	13	17	22	11	20	24	20	7	3
17-18	2	7	7	16	28	43	64	21	17	6	3	3
18-19	5	4	12	9	13	36	33	39	31	10	5	2
19-20	4	3	6	8	9	11	27	26	24	18	17	19
24 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1961-2000	5	13	31	33	40	43	52	92	47	32	22	8
2001-2020	5	10	13	19	28	56	83	49	40	37	24	19

Number of Days with BUI greater than 60 by year

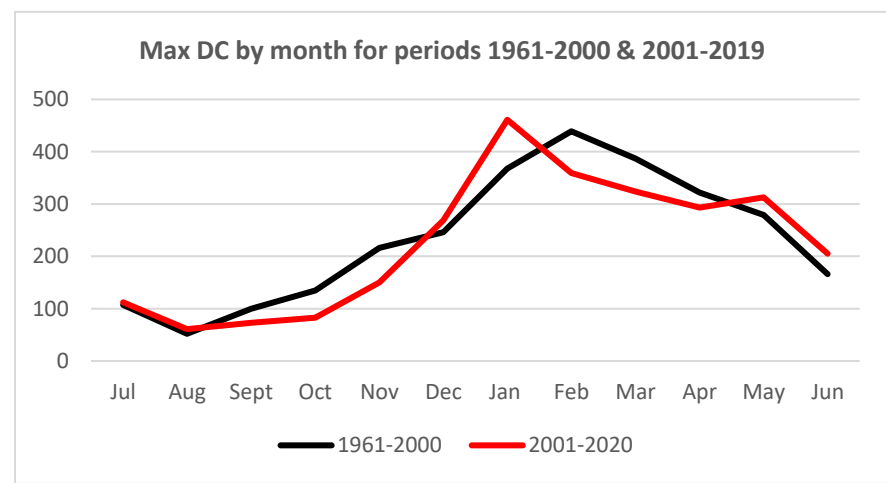
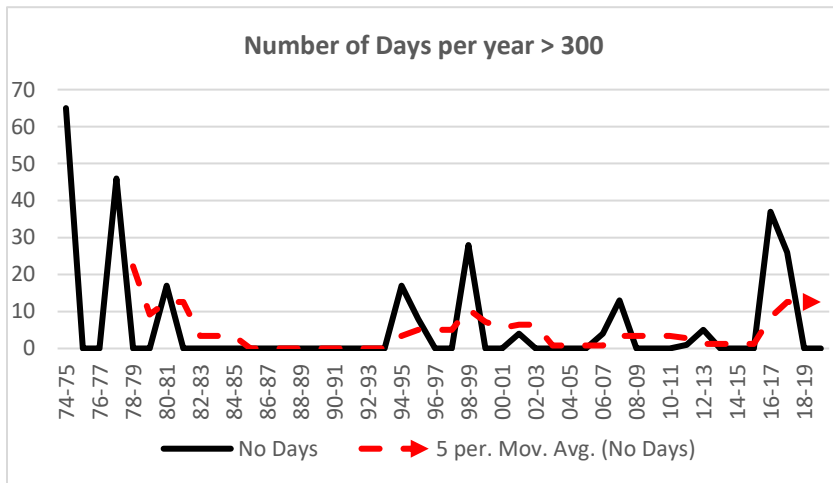


Max BUI by month for periods 1996-2007 & 2008-2019



Drought Code (58 yrs)

DC > 300	No Days	98-99	28		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
74-75	65	99-00			1961-2000	107	52	100	135	216	246	368	439	387	322	279	166
75-76		00-01			00-01	27	17	28	35	86	158	116	184	298	223	123	9
76-77		01-02	4		01-02	7	12	43	53	101	143	301	313	181	162	55	5
77-78	46	02-03			02-03	11	15	16	23	47	103	153	165	235	248	244	16
78-79		03-04			03-04	7	27	23	63	75	170	299	281	178	101	69	40
79-80		04-05			04-05	9	14	18	57	121	57	95	135	86	70	34	12
80-81	17	05-06			05-06	10	22	49	73	97	203	88	181	102	117	78	16
81-82		06-07	4		06-07	10	18	18	39	65	115	193	286	319	151	139	98
82-83		07-08	13		07-08	8	9	42	40	76	180	240	359	274	285	229	119
83-84		08-09			08-09	25	15	21	20	53	154	160	190	192	223	234	22
84-85		09-10			09-10	14	33	28	52	66	79	116	192	187	108	20	18
85-86		10-11			10-11	18	17	18	29	133	266	225	117	156	49	46	15
86-87		11-12	1		11-12	18	16	10	49	41	223	307	253	213	242	168	36
87-88		12-13	5		12-13	25	61	66	20	80	138	97	210	324	293	186	46
88-89		13-14			13-14	19	30	29	50	89	182	158	237	264	271	145	18
89-90		14-15			14-15	8	18	35	25	54	117	246	260	207	216	117	82
90-91		15-16			15-16	14	9	30	41	65	124	182	206	194	205	109	18
91-92		16-17	37		16-17	21	35	45	50	77	162	202	216	312	248	313	205
92-93		17-18	26		17-18	112	61	73	83	150	269	461	299	235	165	33	15
93-94		18-19			18-19	17	19	29	29	48	176	210	233	289	251	167	22
94-95	17	19-20			19-20	25	13	19	30	45	90	186	207	239	192	137	142
95-96	8				24 yrs												
96-97						Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
97-98					1961-2000	107	52	100	135	216	246	368	439	387	322	279	166
					2001-2020	112	61	73	83	150	269	461	359	324	293	313	205



Initial Spread Index (58 yrs)

ISI > 60	No Days	98-99	22
74-75	22	99-00	15
75-76	19	00-01	10
76-77	12	01-02	5
77-78	25	02-03	15
78-79	20	03-04	17
79-80	22	04-05	6
80-81	19	05-06	7
81-82	10	06-07	11
82-83	14	07-08	11
83-84	15	08-09	11
84-85	20	09-10	3
85-86	12	10-11	9
86-87	14	11-12	11
87-88	19	12-13	9
88-89	17	13-14	5
89-90	19	14-15	7
90-91	15	15-16	14
91-92	17	16-17	5
92-93	5	17-18	7
93-94	12	18-19	9
94-95	24	19-20	5
95-96	9		
96-97	14		
97-98	18		

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1961-2000	29	32	61	101	124	77	50	67	34	43	54	19
00-01	4	8	19	8	8	7	17	18	22	7	5	5
01-02	3	6	13	10	6	8	23	7	17	7	8	2
02-03	6	3	14	11	17	27	13	20	34	10	4	3
03-04	5	6	7	13	11	25	20	9	8	8	11	2
04-05	5	3	6	13	8	14	15	12	5	12	6	1
05-06	2	5	9	24	15	10	14	24	9	8	4	2
06-07	5	13	16	24	17	12	14	17	17	6	12	1
07-08	2	7	13	8	12	21	42	23	16	6	2	3
08-09	3	5	23	17	6	13	9	14	10	20	3	1
09-10	2	5	6	6	9	8	14	13	5	8	4	3
10-11	2	8	7	18	13	17	13	6	19	5	7	4
11-12	4	9	7	24	8	21	31	3	13	8	4	2
12-13	12	8	11	14	10	13	10	9	17	9	8	2
13-14	12	5	5	14	5	7	17	8	6	7	5	5
14-15	3	3	13	6	17	10	21	7	6	8	4	8
15-16	5	3	11	16	12	15	20	14	6	5	3	3
16-17	5	5	6	11	10	12	17	11	8	9	3	2
17-18	2	3	4	10	7	14	12	13	7	3	4	3
18-19	4	3	10	6	15	10	14	22	13	9	5	4
19-20	2	2	4	8	13	7	18	9	11	6	11	3
24 yrs												
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1961-2000	29	32	61	101	124	77	50	67	34	43	54	19
2001-2020	12	13	23	24	17	27	31	24	34	20	12	8

