

DATA CLEANING

FOR

KELOWNA WEATHER-CRASH PROJECT

Section 1

will have to combine kelowna with kelowna UBCO to get precip. amount

```
> test = read.csv('../weatherdata/en_climate_hourly_BC_1123939_01-2017_P1H.csv')
> summary(test)
```

Longitude..x.	Latitude..y.	Station.Name	Climate.ID
Min. : -119.4	Min. : 49.96	KELOWNA:744	Min. : 1123939
1st Qu.: -119.4	1st Qu.: 49.96		1st Qu.: 1123939
Median : -119.4	Median : 49.96		Median : 1123939
Mean : -119.4	Mean : 49.96		Mean : 1123939
3rd Qu.: -119.4	3rd Qu.: 49.96		3rd Qu.: 1123939
Max. : -119.4	Max. : 49.96		Max. : 1123939

Date.Time..LST.	Year	Month	Day	Time..LST.
2017-01-01 00:00: 1	Min. : 2017	Min. : 1	Min. : 1	00:00 : 31
2017-01-01 01:00: 1	1st Qu.: 2017	1st Qu.: 1	1st Qu.: 8	01:00 : 31
2017-01-01 02:00: 1	Median : 2017	Median : 1	Median : 16	02:00 : 31
2017-01-01 03:00: 1	Mean : 2017	Mean : 1	Mean : 16	03:00 : 31
2017-01-01 04:00: 1	3rd Qu.: 2017	3rd Qu.: 1	3rd Qu.: 24	04:00 : 31
2017-01-01 05:00: 1	Max. : 2017	Max. : 1	Max. : 31	05:00 : 31
(Other) : 738				(Other): 558

Temp...C.	Temp.Flag	Dew.Point.Temp...C.	Dew.Point.Temp.Flag
Min. : -24.600	Mode:logical	Min. : -26.700	Mode:logical
1st Qu.: -11.025	NA's:744	1st Qu.: -14.200	NA's:744
Median : -3.900		Median : -7.200	
Mean : -6.047		Mean : -8.566	
3rd Qu.: 0.100		3rd Qu.: -1.500	
Max. : 4.700		Max. : 0.800	

Rel.Hum....	Rel.Hum.Flag	Precip..Amount..mm.	Precip..Amount.Flag
Min. : 53.00	Mode:logical	Min. : 0.000000	Mode:logical
1st Qu.: 77.00	NA's:744	1st Qu.: 0.000000	NA's:744
Median : 84.00		Median : 0.000000	
Mean : 83.02		Mean : 0.003763	
3rd Qu.: 90.00		3rd Qu.: 0.000000	
Max. : 100.00		Max. : 1.000000	

Wind.Dir..10s.deg.	Wind.Dir.Flag	Wind.Spd..km.h.	Wind.Spd.Flag
Min. : 1.00	:663	Min. : 0.000	:740
1st Qu.: 6.00	M: 81	1st Qu.: 4.000	M: 4
Median : 15.00		Median : 5.000	
Mean : 16.45		Mean : 7.824	
3rd Qu.: 19.00		3rd Qu.: 11.000	
Max. : 36.00		Max. : 45.000	

NA's :211		NA's :4		
Visibility..km.	Visibility.Flag	Stn.Press..kPa.	Stn.Press.Flag	Hmdx
Min. : 0.80	Mode:logical	Min. :94.22	Mode:logical	Mode:logical
1st Qu.:16.10	NA's:744	1st Qu.:95.95	NA's:744	NA's:744
Median :16.10		Median :97.14		
Mean :14.69		Mean :96.90		
3rd Qu.:16.10		3rd Qu.:97.84		
Max. :16.10		Max. :98.86		

Hmdx.Flag	Wind.Chill	Wind.Chill.Flag	Weather
Mode:logical	Min. :-31.00	Mode:logical	Fog : 60
NA's:744	1st Qu.: -17.00	NA's:744	Snow : 60
	Median :-12.00		Rain : 8
	Mean :-12.66		Rain,Fog : 2
	3rd Qu.: -7.00		Freezing Fog: 1
	Max. : -1.00		(Other) : 2
	NA's :282		NA's :611

```
> head(test, 10)
```

	Longitude..x.	Latitude..y.	Station.Name	Climate.ID	Date.Time..LST.	Year
1	-119.38	49.96	KELOWNA	1123939	2017-01-01 00:00	2017
2	-119.38	49.96	KELOWNA	1123939	2017-01-01 01:00	2017
3	-119.38	49.96	KELOWNA	1123939	2017-01-01 02:00	2017
4	-119.38	49.96	KELOWNA	1123939	2017-01-01 03:00	2017
5	-119.38	49.96	KELOWNA	1123939	2017-01-01 04:00	2017
6	-119.38	49.96	KELOWNA	1123939	2017-01-01 05:00	2017
7	-119.38	49.96	KELOWNA	1123939	2017-01-01 06:00	2017
8	-119.38	49.96	KELOWNA	1123939	2017-01-01 07:00	2017
9	-119.38	49.96	KELOWNA	1123939	2017-01-01 08:00	2017
10	-119.38	49.96	KELOWNA	1123939	2017-01-01 09:00	2017

	Month	Day	Time..LST.	Temp...C.	Temp.Flag	Dew.Point.Temp...C.
1	1	1	00:00	-5.1	NA	-5.6
2	1	1	01:00	-4.7	NA	-5.2
3	1	1	02:00	-4.0	NA	-4.8
4	1	1	03:00	-4.2	NA	-5.2
5	1	1	04:00	-4.5	NA	-5.7
6	1	1	05:00	-4.1	NA	-5.6
7	1	1	06:00	-3.8	NA	-5.5
8	1	1	07:00	-3.3	NA	-5.5
9	1	1	08:00	-3.5	NA	-5.4
10	1	1	09:00	-3.1	NA	-5.9

	Dew.Point.Temp.Flag	Rel.Hum....	Rel.Hum.Flag	Precip..Amount..mm.
1	NA	96	NA	0
2	NA	96	NA	0
3	NA	94	NA	0
4	NA	93	NA	0
5	NA	92	NA	0
6	NA	89	NA	0
7	NA	88	NA	0
8	NA	85	NA	0
9	NA	87	NA	0

10		NA	81	NA	0
	Precip..Amount.Flag	Wind.Dir..10s.deg.	Wind.Dir.Flag	Wind.Spd..km.h.	
1	NA	36		5	
2	NA	35		13	
3	NA	35		17	
4	NA	NA		0	
5	NA	4		5	
6	NA	3		8	
7	NA	4		11	
8	NA	4		15	
9	NA	1		21	
10	NA	3		15	
	Wind.Spd.Flag	Visibility..km.	Visibility.Flag	Stn.Press..kPa.	Stn.Press.Flag
1		3.2	NA	95.56	NA
2		3.2	NA	95.58	NA
3		8.1	NA	95.58	NA
4		8.1	NA	95.64	NA
5		4.8	NA	95.65	NA
6		16.1	NA	95.66	NA
7		16.1	NA	95.69	NA
8		16.1	NA	95.75	NA
9		8.1	NA	95.79	NA
10		16.1	NA	95.83	NA
	Hmdx	Hmdx.Flag	Wind.Chill	Wind.Chill.Flag	Weather
1	NA	NA	-7	NA	Snow
2	NA	NA	-10	NA	Snow
3	NA	NA	-10	NA	Snow
4	NA	NA	NA	NA	Snow
5	NA	NA	-7	NA	Snow
6	NA	NA	-8	NA	Snow
7	NA	NA	-8	NA	Snow
8	NA	NA	-8	NA	Snow
9	NA	NA	-10	NA	Snow
10	NA	NA	-8	NA	Snow

```
> #save(alldata, file = "../rda_files/all_data.rda")
```