Untitled

# Plain Data Frame

x<-data.frame(unit = "µg/l", stringsAsFactors = FALSE)  
knitr::kable(x)

|  |
| --- |
| unit |
| µg/l |

# Tibble

x<-dplyr::tbl\_df(data.frame(unit = "µg/l", stringsAsFactors = FALSE))  
knitr::kable(x, format = "markdown")

|  |
| --- |
| unit |
| µg/l |

# My stuff

source(here::here("R/functions.R"))

##   
## Attaching package: 'lubridate'

## The following object is masked from 'package:base':  
##   
## date

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:lubridate':  
##   
## intersect, setdiff, union

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

## here() starts at C:/Users/JHollist/OneDrive - Environmental Protection Agency (EPA)/projects/ri\_wq\_trends

##   
## Attaching package: 'here'

## The following object is masked from 'package:lubridate':  
##   
## here

## Loading required package: LAGOSNE

## Linking to GEOS 3.6.1, GDAL 2.2.3, PROJ 4.9.3

ww\_all<-read\_csv(here("data/ww\_lake\_trend\_data.csv"))

## Parsed with column specification:  
## cols(  
## station\_name = col\_character(),  
## year = col\_double(),  
## month = col\_integer(),  
## day = col\_integer(),  
## param = col\_character(),  
## location = col\_character(),  
## site\_descr = col\_character(),  
## mn\_measurement = col\_double(),  
## town = col\_character(),  
## county = col\_character(),  
## state = col\_character(),  
## lon\_dd = col\_double(),  
## lat\_dd = col\_double(),  
## huc\_12 = col\_character(),  
## huc\_10\_name = col\_character(),  
## huc\_12\_name = col\_character(),  
## measurement\_scale = col\_double(),  
## measurement\_anmly = col\_double(),  
## lt\_mean = col\_double()  
## )

ww\_param\_ranges <- ww\_all %>%  
 filter(param == "chla" |  
 param == "temp" |  
 param == "total\_n" |  
 param == "total\_p") %>%  
 mutate(param = factor(param,levels = c("temp", "total\_n", "total\_p", "chla"))) %>%  
 group\_by(param) %>%  
 summarize(min = round(min(mn\_measurement, na.rm = T), 2),  
 percentile\_25 = round(quantile(mn\_measurement, probs = 0.25, na.rm = T), 2),  
 mean = round(mean(mn\_measurement, na.rm = T), 2),  
 median = round(median(mn\_measurement, na.rm = T), 2),  
 percentile\_75 = round(quantile(mn\_measurement, probs = 0.75, na.rm = T), 2),  
 max = round(max(mn\_measurement, na.rm = T), 2),  
 sd = round(sd(mn\_measurement, na.rm = T), 2)) %>%  
 ungroup() %>%  
 mutate(units = c("celsius", "µg/l", "µg/l","µg/l")) %>%  
 select(Parameter = param, Units = units,   
 "25th Percentile" = percentile\_25,  
 Mean = mean, Median = median,   
 "75th Percentile" = percentile\_75,  
 Max = max, "Std. Dev" = sd )  
knitr::kable(ww\_param\_ranges, format = "markdown")

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | Units | 25th Percentile | Mean | Median | 75th Percentile | Max | Std. Dev |
| temp | celsius | 19.0 | 22.08 | 23.0 | 25.5 | 34.20 | 4.37 |
| total\_n | µg/l | 355.0 | 611.26 | 470.0 | 705.0 | 10280.00 | 501.82 |
| total\_p | µg/l | 10.0 | 24.27 | 15.0 | 24.0 | 899.00 | 36.49 |
| chla | µg/l | 1.8 | 10.08 | 3.7 | 9.3 | 618.96 | 20.31 |