

Monthly MSL data download

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```
library(here)
library(readxl)
library(janitor)
library(dplyr)
```

```
in_path <- here::here("water_level", "input", "Sea Level Rise Rates.xlsx")
```

Read in SLR spreadsheet

```
slr_metadat <- read_excel(in_path)
dat <- slr_metadat %>%
  clean_names()
# get rid of any that don't have an NWLON station number
dat <- dat[!is.na(dat$nwlon_station_number), ]
```

Station Information

```
dat %>%
  select(-link) %>%
  knitr::kable()
```

reserve	nearest_nwlon_station	distance_to_nwlon_station	nwlon_station
APA	Apalachicola, Florida	NA	
CBV	Sewell's Point, Norfolk, VA	30km to Goodwin, 42 km to Catlett Islands	
DEL	Lewes, Delaware	NA	
GND	Dauphin Island, Alabama	NA	
PDB	Friday Harbor, Washington	35km	
SOS	Charleston, Oregon	1-8km (depending on site)	
WQB	Woods Hole, Massachusetts	14 km	
GRB	Boston, Massachusetts	77km (nothing closer with a recent record)	
WKB	Dauphin Island, Alabama	31km (Weeks Bay station no SLR trends)	
WEL	Portland, Maine	42-45km	
NAR	Newport, Rhode Island	15 km	
MAR	Rockport, TX	14-30 km (depending on site)	
GTM	Mayport, Jacksonville, FL	27.2-92km depending on station	
CBM	Solomons Island, MD	60km from MB...55km downriver from JB, nothing closer with sufficient data	
ELK	Monterey, California	NA	

Then loop through the station IDs - download data and save it.

```

for(i in seq_along(dat$reserve)){
  stn <- dat$nwlon_station_number[i]
  res <- dat$reserve[i]

  # get data from:
  url_path <- paste0("https://tidesandcurrents.noaa.gov/sltrends/data/", stn, "_meantrend.csv")

  # write file to:
  out_name <- paste0(res, "_", stn, ".csv")
  out_path <- here::here("water_level", "intermediate", out_name)

  # if that file doesn't already exist, download it and print a message
  # otherwise, print a message that it already exists
  if(!file.exists(out_path)){
    download.file(url = url_path, destfile = out_path)
    print_msg <- paste0("Downloaded ", res, " data from NWLON station ", stn)

  } else {
    print_msg <- paste0("File for ", res, " data from NWLON station ", stn, " already exists")
  }

  print(print_msg)
}

```

```

## [1] "File for APA data from NWLON station 8728690 already exists"
## [1] "File for CBV data from NWLON station 8638610 already exists"
## [1] "File for DEL data from NWLON station 8557380 already exists"
## [1] "File for GND data from NWLON station 8735180 already exists"
## [1] "File for PDB data from NWLON station 9449880 already exists"
## [1] "File for SOS data from NWLON station 9432780 already exists"
## [1] "File for WQB data from NWLON station 8447930 already exists"
## [1] "File for GRB data from NWLON station 8443970 already exists"
## [1] "File for WKB data from NWLON station 8735180 already exists"
## [1] "File for WEL data from NWLON station 8418150 already exists"
## [1] "File for NAR data from NWLON station 8452660 already exists"
## [1] "Downloaded MAR data from NWLON station 8774770"
## [1] "File for GTM data from NWLON station 8720218 already exists"
## [1] "File for CBM data from NWLON station 8577330 already exists"
## [1] "Downloaded ELK data from NWLON station 9413450"

```