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#Code to filter individual EAGLE-I files with MISO county data, and then combine into one dataset

# Filter each eaglei_outages_YYYY.csv by FIPS codes in miso_plus_counties.csv
# Outputs: eaglei_outages_YYYY_miso_fips_filtered.csv for YYYY = 2014:2024

library(data.table)

# Read overlap once (assumes integer fips_code)
overlap <- fread("miso_county_overlap_with_areas_calculated.csv")
fips_set <- unique(overlap$fips_code)

years <- 2014:2024
for (yr in years) {
  in_path  <- sprintf("eaglei_outages_%d.csv", yr)
  out_path <- sprintf("eaglei_outages_%d_miso_fips_filtered.csv", yr)

  if (!file.exists(in_path)) {
    warning(sprintf("Missing file: %s (skipping)", in_path))
    next
  }

  dt <- fread(in_path)  # keeps all original columns
  filtered <- dt[fips_code %in% fips_set]

  fwrite(filtered, out_path)
  cat(sprintf("Year %d: kept %d/%d rows -> %s\n",
              yr, nrow(filtered), nrow(dt), out_path))
}


data2014 <- read.csv("eaglei_outages_2014_miso_fips_filtered.csv")
data2015 <- read.csv("eaglei_outages_2015_miso_fips_filtered.csv")
data2016 <- read.csv("eaglei_outages_2016_miso_fips_filtered.csv")
data2017 <- read.csv("eaglei_outages_2017_miso_fips_filtered.csv")
data2018 <- read.csv("eaglei_outages_2018_miso_fips_filtered.csv")
data2019 <- read.csv("eaglei_outages_2019_miso_fips_filtered.csv")
data2020 <- read.csv("eaglei_outages_2020_miso_fips_filtered.csv")
data2021 <- read.csv("eaglei_outages_2021_miso_fips_filtered.csv")
data2022 <- read.csv("eaglei_outages_2022_miso_fips_filtered.csv")
data2023 <- read.csv("eaglei_outages_2023_miso_fips_filtered.csv")
data2024 <- read.csv("eaglei_outages_2024_miso_fips_filtered.csv")
data2024new <- data2024[,-6]
colnames(data2023)[4] <- "customers_out"
```

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combineddata <-
rbind(data2014,data2015,data2016,data2017,data2018,data2019,data2020,data2021,dat
a2022,data2023,data2024new)

write.csv(combineddata, "eaglei_outages_2014_2024_miso_filtered.csv")
```