data-chapter-figures

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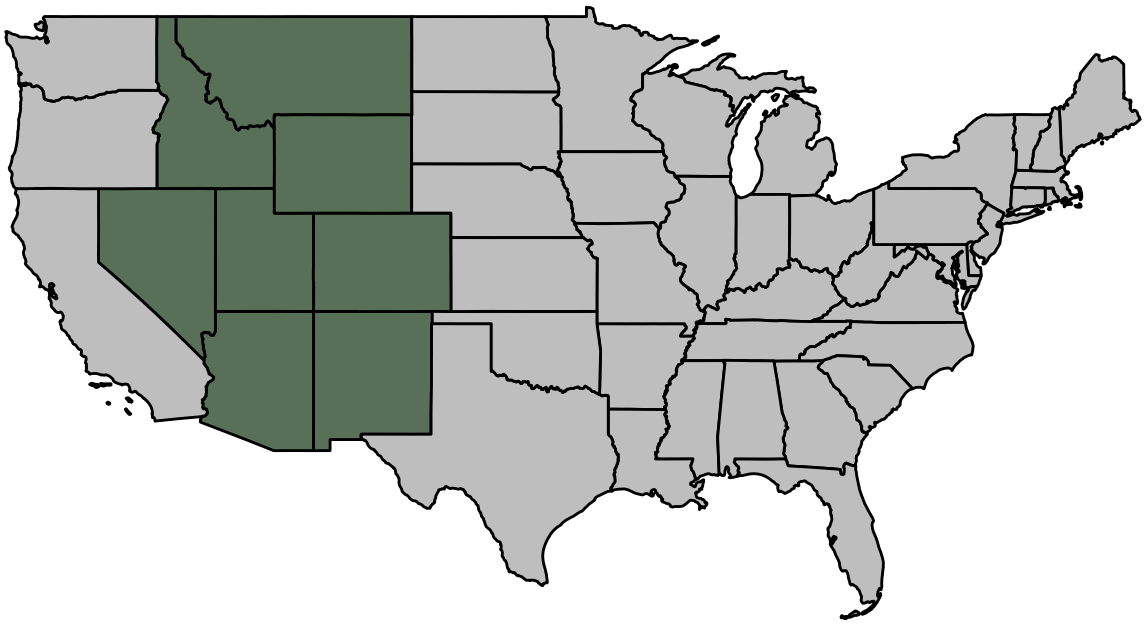
This document includes the R code needed to create the figures in the data chapter.

```
# R Code for generating the int west on USA
ggplot() +
  geom_sf(data = us_boundaries(type = "state",
                               states = interior_west),
          fill = "#597058",
          color = "black") +
  geom_sf(data = us_boundaries(type = "state",
                               states = states),
          fill = "grey",
          color = "black") +
  theme_void()
```



```r
# R Code for creating the summary stat maps
subsections <- st_read("../data/SA_eco_subsection/SA_eco_subsection.shp", quiet = TRUE)

subsections1 <- subsections %>%
  filter(SUBSECT %in% dat_small$subsection)

int_west_sf <- us_boundaries(type = "state",
                          states = interior_west)

intersection <- st_intersection(int_west_sf, subsections1)

dat_summary <- dat_small %>%
  group_by(subsection) %>%
  summarize(mean_bio = mean(BIOLIVE_TPA),
            mean_cnt = mean(CNTLIVE_TPA),
            mean_vol = mean(VOLNLIVE_TPA),
            mean_bas = mean(BALIVE_TPA))

intersection <- left_join(intersection, dat_summary, by = c("SUBSECT" = "subsection"))

plot1 <- ggplot() +
  geom_sf(data = intersection,
          mapping = aes(fill = mean_bio)) +
  geom_sf(data = us_boundaries(type = "state",
                               states = interior_west),
          color = "black",
          alpha = 0,
          size = 0.25) +
  scale_fill_viridis_c() +
  theme_void() +
  labs(fill = "Average Biomass")

plot2 <- ggplot() +
  geom_sf(data = intersection,
          mapping = aes(fill = mean_cnt)) +
  geom_sf(data = us_boundaries(type = "state",
                               states = interior_west),
          color = "black",
          alpha = 0,
          size = 0.25) +
  scale_fill_viridis_c() +
  theme_void() +
  labs(fill = "Average Tree Count")

plot3 <- ggplot() +
  geom_sf(data = intersection,
          mapping = aes(fill = mean_vol)) +
  geom_sf(data = us_boundaries(type = "state",
                               states = interior_west),
          color = "black",
          alpha = 0,
          size = 0.25) +
  scale_fill_viridis_c() +
```

```
  theme_void() +
  labs(fill = "Average Volume")

plot4 <- ggplot() +
  geom_sf(data = intersection,
          mapping = aes(fill = mean_bas)) +
  geom_sf(data = us_boundaries(type = "state",
                               states = interior_west),
          color = "black",
          alpha = 0,
          size = 0.25) +
  scale_fill_viridis_c() +
  theme_void() +
  labs(fill = "Average Basal Area")
```