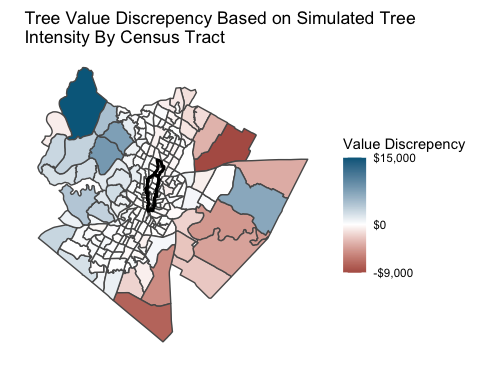
Urban Heat Island Visual Correlations

tree\_plot\_value = ggplot(tree\_value)+  
 geom\_sf(aes(fill = value\_disc))+  
 scale\_fill\_gradient2("Value Discrepency",low = "firebrick4", mid = "white", high = "deepskyblue4", breaks=c(min(tree\_value$value\_disc),0,max(tree\_value$value\_disc)),labels=c("-$9,000","$0","$15,000"))+  
 #scale\_colour\_brewer(palette = "PiYG")+  
 labs(x = "", y = "", title = "Tree Value Discrepency Based on Simulated Tree \nIntensity By Census Tract")+  
 geom\_sf(data = Wallercreek,   
 fill = "NA",   
 color = "black",   
 size = 1)+  
 theme\_minimal()+  
 coord\_sf(datum=NA)  
tree\_plot\_value



croppedcensus = st\_read(dsn = ".", layer = "treewallerclipped") %>%   
 st\_transform(crs = 4326)

## Reading layer `treewallerclipped' from data source `/Users/madelinegorchels/Desktop/UCSB/AustinAgua/AustinAgua/UHI/ForestCorrelations/Tree\_Planting\_Prioritization\_2014' using driver `ESRI Shapefile'  
## Simple feature collection with 24 features and 28 fields  
## geometry type: MULTIPOLYGON  
## dimension: XY  
## bbox: xmin: -97.74495 ymin: 30.25887 xmax: -97.70772 ymax: 30.35127  
## CRS: 4326

tree\_value\_waller = croppedcensus %>%  
 mutate(tree\_intensity = tree\_sum/shape\_area) %>%   
 mutate(tree\_disc=tree\_intensity-avg\_tree) %>%   
 mutate(tree\_disc\_num = tree\_disc\*shape\_area) %>%   
 mutate(value\_disc = tree\_disc\_num\*value\_per\_tree)

tree\_plot\_waller\_value = ggplot(tree\_value\_waller)+  
 geom\_sf(aes(fill = value\_disc))+  
 scale\_fill\_gradient2("Value Discrepency",low = "firebrick4", mid = "white", high = "deepskyblue4", breaks=c(min(tree\_value\_waller$value\_disc),0,max(tree\_value\_waller$value\_disc)),labels=c("-$550","$0","$400"))+  
 #scale\_colour\_brewer(palette = "PiYG")+  
 labs(x = "", y = "", title = "Tree Value Discrepency Based on Simulated Tree \nIntensity By Census Tract")+  
 geom\_sf(data = Wallercreek,   
 fill = "NA",   
 color = "black",   
 size = 1)+  
 theme\_minimal()+  
 coord\_sf(datum=NA)  
tree\_plot\_waller\_value

