Below I summarize the results of my field surveys for federal-and-state-listed amphibians and reptiles on the Twin Pines Site. Aerial photos and topographic map figures of survey sites are shown in Figures 1 and 2, respectively.

FEDERALLY LISTED SPECIES

Frosted Flatwoods Salamander (*Ambystoma cingulatum*)

Background

The Frosted Flatwoods Salamander (*Ambystoma cingulatum*) is federally listed as Threatened and state listed by the Georgia Department of Natural Resources as Threatened. This salamander is endemic to mesic longleaf pine-wiregrass flatwoods and savannahs where it breeds in isolated, ephemeral depressional wetlands (Palis 1997; Jensen and Stevenson 2008). Optimal breeding habitats are kept open-canopied by occasional fire events and the basins of these wetlands are typically carpeted with graminaceous vegetation (Bishop and Haas 2005, Palis 1997; US FWS 1999). Adult salamanders spend over 90% of their lives in fire-maintained, mesic longleaf/slash pine−wiregrass flatwoods surrounding breeding sites (Palis and Means 2005). Late winter-early spring surveys for larvae are the most effective and efficient way to document the presence of this salamander (Bishop et al. 2006, Bevelhimer et al. 2008).

Since 2003, the frosted flatwoods salamander has been documented from only one site in Georgia−a breeding pond on Fort Stewart (Liberty County). There are no recent records (i.e., post-2000) for Charlton County, Georgia (John Jensen, Georgia Department of Natural Resources, pers. comm., 2019). The nearest (i.e., closest to the Twin Pines site) historic frosted flatwoods salamander records (with year date of most recent collection and distance from Twin Pines, in parenthesis) include: a) Chesser Island, on what is now the Okefenokee National Wildlife Refuge, Charlton County, Georgia (1922; ca. 17 km N of Twin Pines study area); b) a site in Duval County, Florida (1980; ca. 30 km SE of the study area); c) State Hwy. 177, SSE Waycross, Ware County, Georgia (1980; ca. 56 km N of the study area) (John Jensen, Georgia Department of Natural Resources, pers. comm., 2019; Kevin Enge, Florida Fish and Wildlife Conservation Commission, pers. comm., 2019).

Survey Methods

In December, 2018, I visited all wetlands on-site that could be considered potential breeding pond habitats for the frosted flatwoods salamander (i.e., isolated