Abstract

Asset management systems can save organizations time and money by enabling staff access to well-organized and easily retrievable information. Visualizing the physical and contextual locations of these assets in a geospatial application increases the understanding and efficiency of staff. Often times, Geographic Information Specialist (GIS) analysts create and maintain asset information using specialized software programs, however these software platforms are often not user-friendly to non-GIS practitioners. Consequently, comprehension and adoption of GIS technologies requires special training and hands-on experience. The benefits of managing this information in GIS may not be realized if others cannot access the data. This thesis presents two easy-to-use GIS web applications developed for non-GIS staff at the VA Palo Alto campus to visualize and better understand the geospatial context and data of their 93-acre campus facility. The applications focus on irrigation infrastructure and include: irrigation controllers, back flow valves, gate valves, and all of their respective areas. Users can quickly locate shut off locations of irrigation pipelines when an immediate need arises such as a line break or a required maintenance activity. The applications developed for this thesis provide a template for managing other utility assets through web applications for the VA Palo Alto campus.