University of Wisconsin-Madison Department of Civil and Environmental Engineering Radio-Controlled Airplane Use

Our research involves a proof-of-concept for using Unmanned Aerial Vehicles (UAVs) to collect thermal remote sensing data for mapping of groundwater discharge. We intend to obtain ultra-high resolution thermal images of streams from a thermal infrared camera attached to the payload of a small, unmanned aerial vehicle. The Federal Aviation Administration (FAA) requires that we undergo a permitting process because we qualify as a public aircraft. As part of their process, they require that we obtain permission from the Federal Communication Commission (FCC) to operate our UAV on the 2.4GHz frequency. Our Futaba radio-controlled product is a standard device used by many model and recreational aircraft users. The FAA would like us to have formalized FCC permission for the use of the 2.4 GHz frequencies for our research work in the State of Wisconsin. The goal of this application is to receive FCC permission so that we can go ahead with our study that aims help us to better understand water resources, groundwater-surface water interaction and ecosystem health.