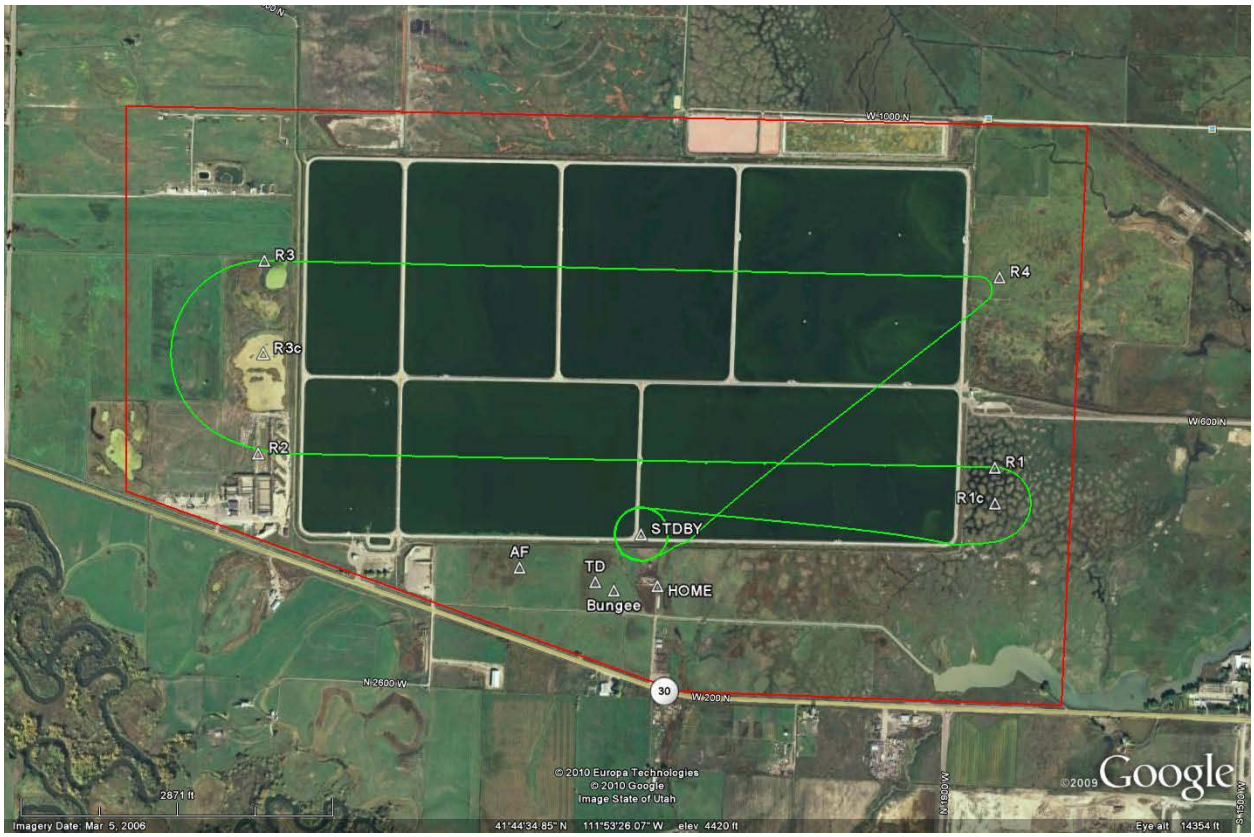

Figure 1: Flight Plan Map

Figure 1 shows the Logan City Wastewater Treatment Lagoons. They are planning to harvest the algae that grows there to make biofuels and will need aerial photos of the lagoons on a weekly basis (at most) to give them an idea of when to harvest. To make a final mosaic of all the images over the lagoons, the images must be taken at 3000 feet AGL. This is to ensure that each image captures at least three sides of every pool. Otherwise, there will not be enough features in each image to stitch them together.

The red polygon surrounding the lagoons is the flight area of the UA. If the UA flies out of this area at anytime, it will fly back to the home waypoint and circle above it at 650ft AGL. The green line is the flight path of the UA. The flight area, the flight path and all the waypoints from figure 1 can be observed in the kmz file attached to the flight operations.

Figure 2 is a map of the ground station and takeoff/landing area. The Home waypoint indicates where the ground station will be set up. From this point, the observer is always within 0.9 Nautical Miles of the UA during the flight. The owner of the field, where the Bungee, AF and TD waypoints are located, has agreed to let us use this area for takeoff and landing.

Before going out to the site and setting up the ground station, the weather is checked to make sure the conditions are good for the UA and for acquiring the images. The UA will only be flown if the wind speed is less than 20 miles/hour and under sunny conditions.

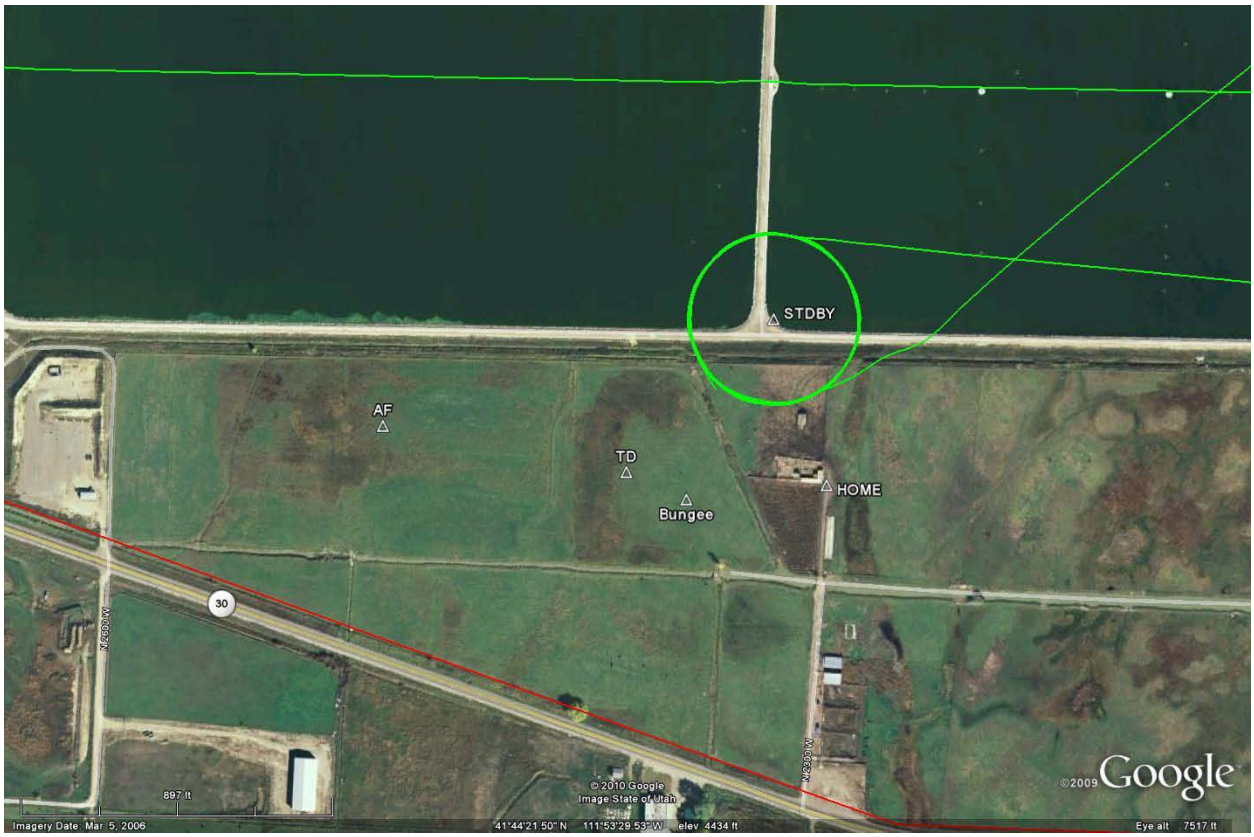

Figure 2: Ground Station and Takeoff/Landing Area

After the UA is launched from the Bungee waypoint, it will circle around the STDBY waypoint until it reaches 650ft AGL. At this point, the pilot will check flight performance and wind speed (estimated by the UA) before sending it to 3000ft AGL. The climb to 3000ft AGL will also be done around the STDBY waypoint. Once it reaches 3000ft AGL, the pilot checks flight performance and wind speed again before sending to map the lagoons. If at any point, the UA is not performing as expected and/or the wind speed is greater than the UA can handle, the pilot can bring it back down to 650ft AGL around the STDBY waypoint and land it (autonomously or manually). Once the UA is finished mapping the lagoons, it automatically comes back to the STDBY waypoint and starts its decent to 650ft AGL. Once it reaches 650ft AGL, the pilot lands the UA using the AF and TD waypoints. The whole flight will take 30 minutes (10 minutes to get to 3000ft AGL, 10 minutes to map lagoon and 10 minutes to descend back down to 650ft AGL).