1.1.2 Wet Test Two

Date: June 09, 2018

Systems tested: Propulsion and Steering

Number of Divers: 3

The primary goals of the test were to push the submarine to see how it would hold up to more aggressive piloting and to observe the changes from previous tests. For this wet test, the submarine was lowered into the shallow end of the pool and it performed laps of the pool. One of the most important aspects of this test was that it was also the first public demonstration of the submarine for the year. Unfortunately, due to the constraints of the dimensions of the pool the submarine was tested in, some compromises had to be made. These compromises were that at higher speeds the submarine was not fully submerged and when testing the steering controls at depth the submarine had to be operating at lower speeds.

Propulsion: The submarine was able to do multiple laps of the pool with ease. The blades protruded out of the surface of the water for most of the testing. Furthermore, the new carbon fiber wrapped blades were used and were found to be quite strong and produce a noticeably large thrust. The pilot had no trouble clipping his shoes into the pedals and no trouble getting them unclipped. The system overall preformed very well with no noticeable deficiencies.

Steering: With the steering system assembled correctly, the control surfaces responded as expected and the submarine had good control. As the pilot brought the submarine up to speed he was able to turn toward the deep end and dive down to test the rudders and dive planes. The dive planes and rudders responded very well. Additionally, the pilot noted that it may be desirable to use the smaller control surfaces for future testing as the large ones provided ample turning and diving.