FEMA Hydration Documentation – Spring 2021

2/23/2021 Research SMD soldering and embedded systems

2/25/2021 Researched SMD soldering and embedded systems; brought inventory home to determine what needs to be ordered.

3/2/2021 Ordered voltage regulator, additional resistors, and USB port. Researched programming methods for custom-built embedded systems

3/3/2021 Met at Evans lab to begin assembling PCBs; got guidance on soldering procedure from Thomas Lum. Practiced with spare resistors on additional solid PCB

3/5/2021 Met at Evans lab for soldering; completed BTS PCB

3/6/2021 Began installation of MP Lab IDE, XC8 compiler; researched how to use

3/9/2021 Met at Evans lab for soldering

3/10/2021 Met at Evans lab for soldering; completed IAPO PCB

3/11/2021 Researched MP Lab, AVR MCU programming

3/12/2021 AVR programming

3/18/2021 Met at Evans lab; began soldering FVM PCB

3/19/2021 Met at Evans lab for soldering

3/24/2021 Met at Evans lab for soldering; found difference in package style for MCU in inventory and MCU intended for implementation in PCB

3/25/2021 Researched methods for QFN package soldering for proper MCU

4/2/2021 Met at Evans lab for soldering

4/5/2021 Began compiling necessary components for purchase

4/6/2021 Submitted order form for batteries and missing PCB components

4/7/2021 Met at Evans lab for soldering

4/12/2021 Soldered components at innovation lab; removed excessive solder from GPS module on FVM board

4/16/2021 Met at Evans lab for soldering

4/23/2021 Met at Evans lab for soldering

4/29/2021 Met with Martha over Zoom, discussed ordering extra components to assemble additional prototype systems

5/1/2021 Counted inventory

5/2/2021 Cross referenced inventory with required components, began compiling links for purchase

5/4/2021 Submitted order form for PCB components

5/5/2021 Found alternatives for items missing from order forms; submitted form for purchase

5/7/2021 Met with Martha to discuss standing of programming and assembly

5/8/2021 Researched programming methods for LoRa radio transceiver module