**Initial Conditions (Spring 2024):**

The garden area consists of the following areas:

* Tree orchard (east end-#6 on drawing)-no installed sprinkler system, watered manually by hand using a hose
* Pumpkin patch (northeast-#7 on drawing)-no installed sprinkler system, watered manually by hand using a hose
* Sunflower/tomato patch (southwest-#7 on drawing)-no sprinkler system installed, watered manually by hand using a hose
* Raspberry patch (southwest-#8 on drawing)-no sprinkler system installed, watered manually by hand using a hose
* Vineyard (south-#1 on drawing)-drip system installed, controlled manually by opening a valve tied into the non-potable water system
* Education garden (center-#5 on drawing)-drip system installed, controlled by two battery operated valve/timers
* Production garden (west-#3 on drawing)-drip system installed, controlled by a single 4 way (4 imbalanced zones) battery controlled valve/timer. System was poorly constructed of thin wall PVC tubing, requires continuous maintenance/repairs due to multiple failures caused by both construction and layout which provides little protection against nature and human interaction (e.g., stepping on).

**The Goal:**

Install a fully automated multi-zone system, powered by 120VAC (source provided by Brigit’s Village), that is well constructed (i.e., resistant to nature and human interaction, easy to maintain [e.g., easy to dismantle, accessible and drainable for winter], and modular to support potential future growth [e.g., additional zones] that will provide irrigation to the above areas, based on their distinct needs, within the garden. Major components (i.e., non-potable water source, in-line filter, solenoid operated valve {SOV} manifolds, programmable timer) will be located within a small metal enclosure to provide protection from the environment.

The various zones will be controlled by battery operated valve/timers in the interim until 120VAC power is available. Transition from battery to 120VAC will simply involve isolating the battery powered valves and removing the temporary supply hose(s), and placing the SOVs/programmable timer into service.

**Proposed Level-1 Schedule:**

* June: Ensure existing systems are functional. Install a drip system to the orchard/pumpkin with battery operated timer. Orchard/pumpkin patch is priority one as there is no water there currently.
* July-procure/layout main structural components (supply tubing/solenoid valves) in the Production and Education Gardens. These will be laid alongside the garden cells in a staged condition.
* August-finish Production Garden installation and functionally test system. Production garden is second priority due to fragility of the system.
* October-finish Education Garden system replacement and functionally test the system. Lowest priority as the existing watering system is our most robust.
* Other small areas (i.e., raspberry patch) will be addressed as resources allow.

**June 26, 2024 Status:**

Summary: Installation is slightly ahead of schedule with about $2000 spent to date.

* Tree orchard-new drip system has been installed; interim control provided by battery operated timer/valve using orchard non-potable riser as source, tubing has been routed to tie into SOV manifold location.
* Pumpkin patch-new drip system has been installed; interim control provided by battery operated timer/valve using orchard non-potable riser as source, tubing has been routed to tie into SOV manifold location.
* Sunflower/tomato patch-tubing routed to location but not yet connected
* Raspberry patch-no progress, tubing to be routed in June
* Vineyard-drip system installed; tubing routed from SOV manifold location (A on drawing) but not yet connected
* Education garden-new drip system installation to be completed in October
* Production garden-new drip system installation to be completed in August
* Conversion from battery power to 120VAC is TBD pending progress on Brigit’s Village

**Issues/Concerns:**

None