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| Project Number: 0005 | Project Name: Organic Garden Automation |

## Document Revision

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| **Date** | **Revision** | **Primary Author(s)** | **Notes** |
| 05/23/18 | 00 | Joshua Williams |  |

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| **User Need** | **Engineering Specification** | **Notes** |
| Must turn on one valve sequentially every 15 minutes, other valves are shut off, only running during the day | Software program for raspberry pi must be developed that turns on one valve every 15 minutes, turn off the valves for remaining 45 minutes of the hour, only one valve on at a time, running from 7 am – 7 pm | Could write code so that every 15 minutes the sequential valve is turned on using if statements and counters |
| Measure dissolved oxygen levels and turn on a valve for a sprinkler system when it is too low, send a tweet to notify | Sensor measuring dissolved oxygen levels, when level is below 4 mg/L have the sprinklers turn on, when level is above 7 mg/L have the sprinklers turn off, send a tweet whenever sprinklers are turned on or off, controlled by raspberry pi and connected to GPIO | Could write code so that dissolved oxygen level is checked every time valves are modified |
| Measure water level in tank and turn on a valve or pump that fills the tank when it is too low, send a tweet to notify | Sensor that measures the water level, place sensor at appropriate level, when water level is above sensor have pump off, when water level is below sensor turn pump on, send a tweet whenever the pump is turned on or off | Could write code so that water level is checked every time valves are modified, raspberry pi not necessary for pump but necessary for tweet |