ID	Risk Item (Nontechnical)	Effect	Cause	Likelihood	Severity	Importance	Action to Minimize Risk	Owner
1	Project scope too large	Project does not get completed	Tasks are larger than originally planned	3	3	9	Focusing on the deliverables instead of extras	Andrew Sullivan, Group
2	Parts are ordered too late	Assembly is delayed	Didn't identify correct lead times	2	3	6	Identify long lead time parts early	Heather Hussain
3	Device does not comply to cultural limitations	Target consumer cannot utilize the product	Improper/insufficient research of culture	1	3	3	Research culture and customs, communicate with customer/user	Andrew Baglio Heather Hussain
4	Design does not meet budget requirements	need redesign to reach production	Overdesigned	2	2	4	Focus on meeting core design requirements	Andrew Sullivan, Group
			Unforeseen costs	2	2	4	Plan ahead to understand the scope of a proposed design	
5	Misplace parts	Project not completed within time span or within budget	Neglect, theft, delivered to wrong place	1	2	2	Take care to place parts in a secure location	Heather Hussain
6	Necessary technology not available for budget allocated	Unit is not designed in the best/most efficient way possible	Higher cost of newer technologies	3	1	3	Create a design that fully utilizes current, cheaper technologies	Andrew Sullivan, Group
7	Unit Errors/Inconsistencies	Unit fails to meet power requirements or size restrictions	Improper measuring or converting of units	1	2	2	Label units to ensure consistency between group members	Daniel Lopez Robert Zwecker
8	Final cost of device does not meet customers' requirements	Device must be redesigned or cannot reach as many users	Overdesigned or not designed for manufacture	2	2	4	Plan for budget restrictions early on and design product accordingly	Andrew Sullivan, Group
9	Device is subject to theft	Product cannot be used by customer	Theft deterrent measures are not built in	2	3	6	Provide means of theft deterrence	Robert Zwecker, Group
10	Inability to contact the customer or guide	Final product fails to meet customer needs	Poor relationship with customer	2	2	4	Create positive relationship with customer to ensure cooperation	Andrew Sullivan, Group
			No means of contacting customer	2	2	4	Find a representative that can accurately relate to end user	

ID	Risk Item (Technical)	Effect	Cause	Likelihood	Severity	Importance	Action to Minimize Risk	Owner
11	Does not meet design safety features	Untreated water flows from system	Control system malfunction	2	3	6	Extensive testing to ensure safeguards are functional	Robert Zwecker Daniel Lopez
			Solenoid malfunction/short-circuit	1	3	3	Use of a 'power-open' solenoid and durable circuitry	
12	Device does not provide auxiliary power	Diminishes customer incentive	Auxiliary power system requires too much power	1	2	2	Ensure the auxiliary power system that is implemented efficiently utilizes the unit's surplus power	Daniel Lopez, Group
13	Device does not produce treated water that meets standards	Potential to harm end user	UV bulb is not producing specified intensity	2	3	6	Provide user with a method to know when bulb needs to be replaced due to age	Andrew Sullivan, Group
			Water is flowing too quickly through system	2	3	6	Restrict water flow through system	
14	B9 device does not meet power output requirements	Treatment system fails to operate	Improperly designed user input	1	3	3	Design the system to exceed the power requirements	Daniel Lopez, Group
15	B9 requires too much energy to operate	Device will be difficult to use and not provide user sufficient water	Poorly designed/implemented user interface	2	2	4	Provide design with significant mechanical advantage	Daniel Lopez, Group
16	Design is not durable	Device is not in service for intended lifespan	Low factor of safety and inadequate testing	1	3	3	Identify potential weaknesses, test and fortify design	Robert Zwecker Andrew Baglio Heather Hussain
			Poorly understood market	1	3	3	Research the unit's intended environment	
17	Water does not flow through system	System is unusable	Electronics or solenoid failure	1	2	2	Properly design and test electronic components	Robert Zwecker Andrew Baglio Heather Hussain
18	Components do not fit in enclosure	Unit is unprotected from environment	Improperly designed enclosure	1	3	3	Design enclosure after the unit's internals are finalized	Andrew Baglio Robert Zwecker
19	Enclosure is not sealed to the environment	Reduced lifespan of in-field unit	Enclosure is not resistant to environmental effects	1	3	3	Understand what environmental forces unit will encounter	Robert Zwecker Heather Hussain Andrew Baglio
			Enclosure allows environment to effect internal components	1	3	3	Test enclosure to ensure it meets intended performance	
20	Parts must be reworked	Project falls behind schedule	Error in creating or reading drawings	1	2	2	Check for consistency in drawings and allow for extra time to accommodate	Robert Zwecker Andrew Baglio Heather Hussain
21	Parts need to be sent out for machining	Project falls behind schedule	Parts cannot be made in-house or can be done cheaper elsewhere	1	2	2	Allow for necessary lead time	Robert Zwecker Andrew Baglio Heather Hussain