Individual Power Budget

Team Number:	101
Project Name:	**Moisture sesning Sprinkler**
Team Member Names:	**Myles W, Ragul R, Isiah L, Liam M**
Version:	

A. List ALL major components (active devices, integrated circuits, etc.) except for power sources, voltage regulators,

All Major Components	Component Name	Part Number	yVoltageRar	#	Absolute	alCurrent(mA	Unit
	Curiosity Nano	PIC18F57Q43	5	1	50	50	mA
	Op-Amp	MCP6001	5	1	0.1	0.1	mA
	Buzzer	CMT-1209-590T	5	1	30	30	mA
				1	0	0	mA
	5V regulator	(full part numb	+5V - 35V	1	1000	1000	mA
				1	0	350	mA

B. Assign each major component above to ONE power rail below. Try to minimize the number of different power rails in

+5V Power Rail	Component Name	Part Number	yVoltageRar	#	aximumCurre	alCurrent(mA	Unit
	Curiosity Nano	PIC18F57Q43	5V	1	50	50	mA
	Opamp	MCP6001	5V	1	0.1	0.1	mA
	Buzzer	CMT--1209-590	5 V	1	30	30	mA
						0	mA
						0	mA
					Subtotal	80.1	mA
					Safety Margin	20%	
					Total Current Required on +5V Rail	100.1	mA
c2. Regulator or Source Ch	Custom +5V Regulator		5V	1	600	600	mA
					Total Remaining Current Available on +5V Rail	499.9	mA

	Unit
	mA
	mA
	mA
	mA
	mA
	mA
	mA
	mA
	mA

C. For each power rail above, select a specific voltage regulator using the same process as for major component

D. Select a specific external power source (wall supply or battery) for your system, and confirm that it can supply all of

External Power Source 1	Component Name	Part Number	Supply	Outpu	aximumCurre	Total	Unit
Power Source 1 Selection	Plug-in Wall Supply	930	110VAC	+9V	3000	3000	mA
							mA
Power Rails Connected to External Power Source 1	Custom +5V Regulator		5V	5V	600	600	mA
						0	mA
					Total Remaining Current Available on External Power Source 1	2400	mA

E. Calculate Battery Life (if applicable). For each battery, also check the worst-case lifetime of the

Component Name	Part Number	yVoltageRange	Capacity(mAh	redByRegulators	
			Battery Life		hours

Notes

All component operate from a single 5V rail supplied by a 9V 3A adapter through a custom 5V regulator. Total subsytem draw is

If you have multiple units in your design (e.g., a base unit and remote unit) then you need a separate power budget for each unit