

WATERING SYSTEMS

QUEEN MARY ELEMENTARY SCHOOL

ISSUES

Water source:

- Currently, the water sources at Queen Mary Elementary (QME) school are too far from the gardens which makes watering inconvenient.

Watering systems:

- QME school staff would like to gain a better understanding of different watering systems that could be implemented for the school's indigenous gardens.

SIGNIFICANCE

Enables students to foster a closer connection with nature and the environment:

- Children who grow up playing in nature are more likely to care for the environment and show concern through activities such as energy conservation and recycling.^[2]

Water conservation:

- Efficient watering practices can have a substantial effect on reducing water waste.^[6]

METHODS

- Site visits to QME, John Norquay, and Carnarvon Elementary
- Phone interviews and emails with Fresh Roots, a UBC faculty member, and an irrigation specialist
- Literature reviews on pros and cons of different watering systems, and estimated prices for the three options
- Creation of garden diagrams to aid in estimation of prices
- PowerPoint presentation to QME
- Survey after presentation to QME

FINDINGS

OPTION 1. HOSE & REEL

Hand watering by hose connected to a nozzle. 200 ft of hoses will be held by a reel.

PRICE: \$330

Pricing from homedepot.ca

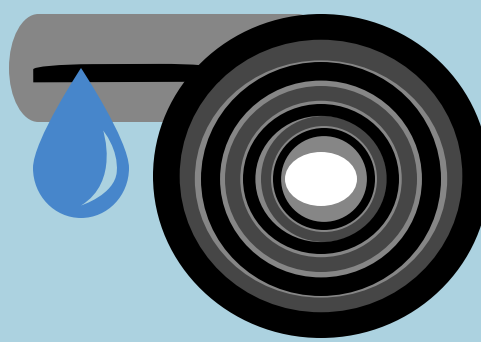


OPTION 2. DRIP TAPE

Drip tape is a thin-walled tube with emitters throughout that can be curled into different shapes.

PRICE: \$400

Pricing from DripWorks.com

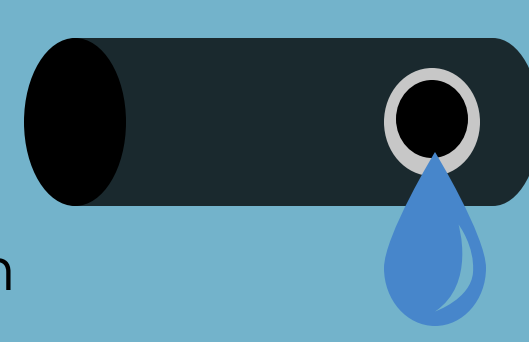


OPTION 3. DRIP LINE

Drip line is a thicker tube with emitters throughout which lasts longer than drip tape.

PRICE: \$670

Pricing from DripWorks.com



	1.	2.	3.
Durability ^{[1] [3]}		^[1]	^[3]
Water Efficiency ^{[1] [4] [5] [6] [7] [8]}	^[1]	^{[1] [4] [5] [6] [7] [8]}	^{[1] [4] [5] [6] [7] [8]}
Meeting Water Needs ^{[1] [6]}	^[1]		
Ease of Labour ^{[1] [6]}	^{[1] [6]}		
Ease of Implementation ^{[1] [3] [7] [8]}	^[7]	^{[1] [3]}	^{[1] [3] [4] [8]}
Ease of Storage ^{[3] [7]}	^[7]	^[3]	

Good Moderate Poor

TAKE-HOME MESSAGES

- Moving the water source(s) closer to the gardens is of high importance and each watering system option will benefit greatly from it.
- With the information provided, QME school staff will be able to consider and weigh the evidence (cost, labour, and efficiency) for each option to make a decision on which watering system to implement.
- Choosing to plant drought tolerant indigenous species will minimize the amount and frequency of watering.

References:

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Land and Food Systems