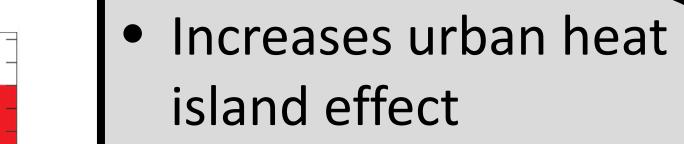


# GREEN INFRASTRUCTURE IN WORCESTER

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### Problem

Too many impervious surfaces within
Worcester cause the water table to be unstable



 Has large temperature fluxes



 Water from impervious surfaces is directed to combined sewer system

 Large rain events cause sewer to overflow



- 1. Space
- 2. Ability to be constructed and maintained
- 3. Overall cost
- 4. High traffic
- 5. Winter weather

#### Goal:

Minimize the effect of extreme weather using green infrastructure

List the pros and cons of each green infrastructure

2023

Identify the locations where green roofs will be most effective

70

Determine the best way to finance the green roofs

Aesthetically pleasing

Tatnuck Magnet School

Extends life of roof

Reduces noise pollution

Pays for itself over time

Reduces air pollution

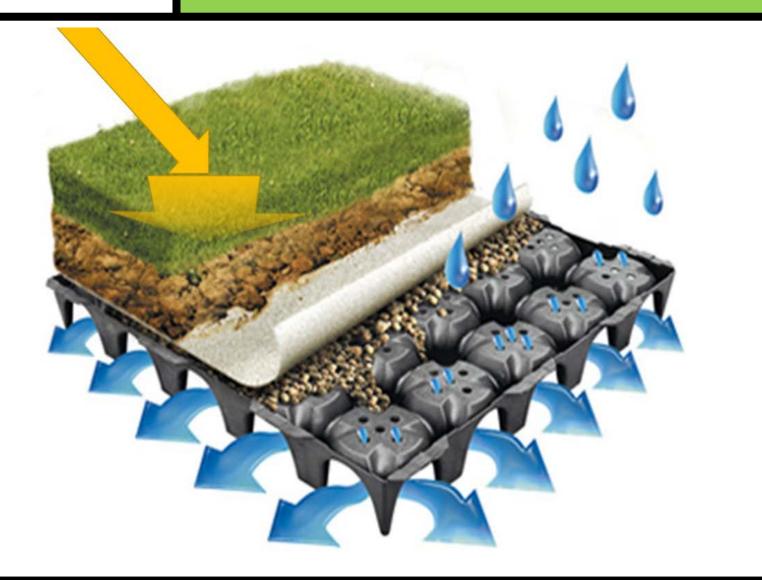
## Acknowledgements

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GreenRool

Insulates building



### Holds storm water

- Slows down runoff, reducing first flush
- Can reduce immediate runoff by 50-90%

Minimal space required

### References

http://www.clipartpanda.com/categories/rainclouds-clipart

http://www.wallbarn.com/products/roofstructural-drainage/protecto-drain-60p/ https://upload.wikimedia.org/wikipedia/commons/d/d 3/Tatnuck\_School%2C\_Tatnuck\_MA.jpg http://burgler.wikispaces.com/4th+grade+unit+3