Socio-Economic Benefits to Rainwater Harvesting: Councils, Community and Individuals

There are many benefits that come from harvesting rainwater, benefits to individual home owners as well as to councils and government, communities and areas. This article will look at some of the socio-economic benefits to rainwater harvesting.

Benefits of Rainwater Harvesting

There are many benefits from rainwater harvesting, which forms just one element of a more integrated water cycle management approach. Michael Smit, who was part of a case study analytics the economic benefits of rainwater harvesting, details many of these benefits in the article, Rainwater Harvesting is an integrated policy solution:

- **Rainwater harvesting significantly reduces potable water use.** A well designed house will save about 90,000 litres of rainwater each year, particularly in the toilet and washing machine which are year round uses. This saving at a household level changes the long term demand for water across the city, smaller treatment plants, smaller pipes, smaller pumps and less pumping, smaller dams and if desalination plants are required they need only be half the size.

- **Rainwater harvesting reduces stormwater peak flows and total volume.** This improves water quality and waterway health. It reduces the cost of infrastructure to manage stormwater, the amount of land required for wetlands and reduces the cost of flooding. In a drought situation rainwater harvesting continues to provide water long after all runoff into dams ceases. Rainwater harvesting is therefore climate change resilient for both droughts and intense rain events.

- **Rainwater harvesting is a local solution that generates local jobs.** Australian companies dominate tank and pump construction, local builders and plumbers install rainwater harvesting systems and maintaining rainwater harvesting systems is a growing industry. A study in South East Queensland estimated an additional 800 jobs would come from rainwater harvesting on 90% of new buildings.

- **Rainwater harvesting delivers numerous other benefits at local and regional levels:**
  - making houses more affordable
  - keeping creeks and rivers flowing
  - reducing local flooding, especially in built-up areas
  - provides a reliable supply of water in drought
  - saves community funds managing sustainable water
A Case Study on Economic Benefits

A case study by P J Coombes et al., Resolving Boundary Conditions in Economic Analysis of Distributed Solutions for Water Cycle Management, with a focus upon South-East Queensland, examined what the cost savings to the community will be in 2050 if we continue implementing water efficient appliances and rainwater harvesting.

This study found that savings are had by householders paying for water, houses are made more affordable, whole costs to communities are greatly reduced. The reduction in demand for water reduces both operational and capital costs for water utilities. Michael Smit, an author of case study, notes:

the combined savings of an integrated water cycle solution incorporating rainwater harvesting in Melbourne will be $6 billion and a 40% reduction in greenhouse gas emissions by 2050. In South East Queensland the savings on household water bills are $2.5 billion and the nett community savings are $3.5 billion up to 2056.

Evidently, there are many socio-economic benefits to be had through property owners harvesting rainwater. It pays for communities, regional councils and governments to support initiatives that support such.

The most successful initiative in the BASIX system in NSW that has been operating now for 10 years, which aims to achieve water and energy savings for all new buildings. While rainwater harvesting isn’t made compulsory, developers can choose how to meet a water saving target, but most (over 90%) choose a rainwater tank.

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