

# Water cost problem in united states: expansion and solution



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## Introduction

Over the past one decade, there has been an immense increase in water usage in United States of America. This is as a result of increasing population, as well as advanced development in industries and settlements, among many other reasons. The steady rise of water usage has conversely increased the cost of water in a number of states, which is now being considered as a looming problem. According to latest research, there is an increased outcry from the public domain, regarding the ever-escalating prices of acquiring water. In respect to this, there should be quick solutions into the matter, or else the nation will be burden with outrageous costs of water. Moreover, it must be understood that increased costs of providing water, leads to adverse water shortage, since few people can only afford it. However, a closer look into this situation increases the puzzle on what is the main reason behind water shortages and pollution. (Grimm, et al, 2008)

## Causes of water shortage and pollution

There are a number of causes behind increased water shortage and pollutions; however below are some of the most substantial causes.

### 1. Increase production of farming and agriculture industry

Environmental experts claim that the lack of sustainable agriculture is the biggest challenge or threat to the environment. The increased farming production to counter the inefficient food production, consequentially leads to pollution, deforestation and water shortages. It is believed that agricultural industry wastes around 65% or 1450 trillion liters, of the 2500

trillion liters of water is uses per year. The poor agricultural practice is very harmful to the environment where it drains up rivers, lakes, as well as underground water sources. In return it increases soli salinity, hence degrading its quality. On the other hand, by washing pesticides and pollutants into rivers, the sources of water get polluted at the end of the day. A lot of fingers have been pointed towards leaky irrigation systems, which causes water shortages. Other processes which causes water shortage includes; the cultivation of thirsty crops; pollution by agro-chemicals, and lastly wasteful field application methods. However, it must be understood that the waste and pollution of water, is worsened by; poor public awareness of the crisis, misdirected subsidies, and irrational environmental legislation. (Grimm, et al, 2008)

## 2. Increase in regional heavy industry

Over the last decade, there has been an increase in manufacturing and production industries, in various states. This is in line with industrialization vision of America. However, these industries require a lot of water, in order to successfully operate. For instance, large volumes of water are required to cool off huge industrial machines, wash all sorts of raw materials, used as an industrial solvent, among many other uses. The sudden water demand in these industries, has conversely led to water shortage, since there was no enough water reserves to counter such challenges. Consequently, these industries are forced to scramble for the little available water, hence increasing the costs of water in return.

## 3. Expansion of major cities such as Los Angeles

Over the last five decades, the human population America has increased dramatically. This development has been coupled up with urbanizations, where people exploit virgin regions to build towns and settlements. Unfortunately, urbanization of places has negatively affected water ecosystems, resulting to a great loss of biodiversity. For instance, a lot of people are now living near river basins, which are subjected to water stress. With such scenarios, the concerns about water availability increases, while the use of freshwater carries on at unsustainable amounts. The increase in towns and cities, mean that there is an increase in clothing, shelter, and food which results to additional pressure on existing water sources, through the production of the products. Moreover, business and residential developments in these cities and towns puts a lot of pressure on water ecosystems, which in return does nothing but escalates water shortage levels. (Grimm, et al, 2008)

## Effects

### 1. Increased water prices in most cities

When water becomes scarce due to the aforementioned causes, the public will be forced to brace themselves for tough water prices. For instance, a region like California is experiencing excruciating water prices, due to the drought it is facing. (Seager, 2009) Since it will be costly to supply and fetch for more water due to the shortages, prices will conversely have to go up to cater for extra expenditures. Consequentially, water usage will decrease with the increase in water prices, hence being a serious challenge for America as a nation.

## 2. Unequal distribution of water resources

Water shortages can also be intensified by the unequal distribution of available water over time and space. On the other hand, putting more pressure on the reliable and safe water supply will lead to the government providing water resources unequally. In this case, water resources will have to be distributed in respect to priorities, in order to ensure water reaches more important sectors than others.

## 3. Major cities facing problem of adapting more urban residents

Urbanization normally requires increased water supply so that it can cater for residential purposes. However, the ever growing population in cities implies an increased demand for water, which puts an additional pressure on available fresh water. Since it is the responsibility of city authorities, to provide clean, safe and reliable water, it will be very strenuous to meet all these needs. This will imply that the cities will have trouble accommodating the ever-increasing city population. (Glennon, 2010)

## 4. Potential biohazard situation may happen in population condensed area

There is a possibility of a large population of people to be affected by biohazards, due to this whole situation. For instance, owing to the increasing urbanization and industrialization processes, most important sources of water, such as wetlands have been destroyed. Destruction of wetlands increases the possibilities of serious biohazards to occur and affect condensed populations. This is because wetlands, which are often known to offer a range of ecosystem services that benefit people, from storms, floods,

will have been otherwise destroyed, hence putting lives of many in jeopardy. In addition, water shortages will lead to a serious food shortage, which will lead to increased infant mortality, as well as decreased life expectancy for population-condensed areas.

## Conclusion

In many cases, it is always challenging to pin point the main cause of water shortage. Normally, various factors collectively cause this problem.

Nonetheless, one fact America is sure of, its economy cannot stand the increasing water shortages. (Glennon, 2010) Subsequently, in order to meet the supply and demand of water, there should be a greater focus on the causes and the solutions of water supply shortages. For instance, the available water resources should be well redistributed in various states. This will ensure that water shortage is cut down, by some extent, since unequal distribution of water normally leads to this menace. For example, regions which have large water demands should be allocated with, a relatively larger water resources, so that it would curb the whole problem. As for heavy industry, a new technology should be embraced, where it will greatly cut down the usage of water. For example, cooling down of industrial machines can be replaced by use of effective fans and other coolant systems, instead of using excessive water. This will immensely save water, which can be used to do other equally important activities. (Bouwer, 2002) Then again, the country should also embrace sustainable agricultural practices, which will reduce the usage of water in America. For example, excessive wastage of water, through leaking irrigation systems, can be corrected by using a more cost-effective and water-conserving systems. Those states that are still

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planting thirsty plants should transfer these farming practices to other alternative places, which will have no effect on the country's water volume.

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