

# Ways to Protect Groundwater for Environmental Conservation

## Abstract

Groundwater is the water present beneath earth's surface in soil pure spaces and in the fractures of rock formations. Groundwater gets recharged and eventually flows down from the surface naturally. Water that occurs below the ground is brought to the land surface by wells or springs, is referred to as ground water.

Ground water is a significant part of the hydrologic cycle, containing 21 percent of earth's fresh water that is not tied up ice in polar ice sheets, glaciers, and snow fields. This greatly exceeds the amount of water in streams, rivers and lakes. Ground water is a very valuable resource, and is in great demand. This study aims to discuss the ways to protect the ground water for environmental conservation. The main ways for the conservation behaviors identified in the study are to enhance people's educational level, make them aware of land, water and environmental value. Findings highlight the fact that there is still substantial potential to be harvested in India through ground water conservation measures. Water is essential for all life forms and connects every aspects of life; water is the driving force for nature. Ground water is one of the most important and crucial resources for humanity. Water scarcity is the most critical issue of our lifetime and future generations.

**Keywords:** Ground Water, Conservation, Environment Protection, Resources.

## Introduction

Life on earth without water is beyond the bounds of possibility; it is most important element for life to sustain anywhere. From drinking, washing clothes, irrigation of grains, cleaning to so many other uses in everyday life, that eliminating water would eliminate our species as we all depend on the necessity of water. This report will firstly present and express the importance of water before going about expounding the various ways in which water is being used. Water conservation is a growing problem today around the globe, and ground water is one of earth's most limited resources. Our population is going up every year and more people means more need for water. Everyone knows about the water cycle and it shows us that we have the same amount of water on earth at all times, the water cycle is continuously moving water all across the globe.

Conserving water is important because it keeps water pure and clean while protecting the environment. An approximate of only 3% of the earth's water is fresh water, which is found in rivers, lakes and stored in ice caps and glaciers. Rest 97% water is saltwater. So if we don't use this 3% fresh water judiciously, life on earth will soon be extinct.

## Review of Literature

Accounting to over the past few decades, we have learned the same important lessons.

For example – Ground water pollution is generally difficult and expensive to clean up. We have learned that it is much easier and less expensive to protect aquifers from pollution and harmful development than to find new water supplier or restore ground water quality after it has been contaminated. We have also learned that governments, industries, businesses, and individuals can also benefit from working together to protect this invaluable resource. In fact, ground water protection requires the active cooperation of all of the above. We will zero in on what we as individuals can do to protect our ground water resources. For starters, educating children and young adults, as this curriculum does is a critical step in the process. Once we all understand the value of our water resources, how the water resource system works, and how our actions can affect water quality, we can begin to work together to protect these resources now and for generations to come. As Margaret Mead said -

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"Never doubt that a small group of thoughtful, committed citizen can change the world, indeed it's the only thing that ever has". This article focuses on ways to protect ground water for environmental conservation.

#### **Few ways to protect groundwater**

##### **Go Native**

Use the seasonal and native plants in your yard. They look nice, and also require less water. Also wisely choose the grass variety that adapt to your area's climate, as it will reduce the need for extensive watering or fertilizer application. At the local level, the first step in developing any resource protection program is to form a community planning team.

##### **Reduce chemical use**

Avoid the use of chemicals and fertilizers for plants in your garden and yard. For those who use chemicals and fertilizers, they should make sure to dispose these harmful substances properly, and should not dump them in the ground. People can bring their old paint, oil, or other chemicals to be disposed-off properly. Your ultimate goal must be to have a ground water protection program that all town officials, community, activists, residents, businesses, water suppliers etc. show special interest in.

##### **Manage Waste**

The potentially toxic & harmful substances like unused chemicals, paint, pharmaceuticals, automotive oil, and other such substances should be disposed-off properly. Household hazardous elements and waste collection is done by many communities. You can go to your neighborhood or community leaders and ask them to sponsor a household hazardous waste collection day.

##### **Don't let it run**

Don't let the water run while brushing the teeth and shaving, it takes a minimal effort to close the tap. During summers the water in pipes become hot, so people often keep the taps open for 5-6 mins to allow the hot water get away. Instead that water can be collected and kept for sometime to cool down, instead of wasting it.

##### **Wash Smarter**

Showers are one of the most water consuming things in the home, along with toilet and washing machines. So you should limit to less than a five minute shower, and also advise your family members on the same. The dish washer and clothes washing machines show the most optimal usage of water when run at full load. So make sure in your home that these machines are always run at full load.

##### **Water Wisely**

Don't just water the plants at any time of the day, instead know about the plants in your lawn and water them only when they truly need it and during the coolest parts of the day. If there are watering restrictions imposed by the authorities during dry periods, make sure that you, your family, and your neighbors obey them.

##### **Reduce, Reuse and Recycle**

Reduce the usage of non-recyclable stuff and reuse whatever you can. Recycle whatever is possible, like from paper, cardboard, plastic, to aluminum, glass and other materials. Encourage your

friends and family to reduce, reuse and recycle. Recycling programs can reduce the amount of toxins that might end up in the landfills, incinerators, or backyards, or that might be flushed down sinks or toilets, where they can eventually leach into ground water and surface water.

##### **Nature Alternatives**

Whenever and wherever possible, use the natural household cleaners instead of chemical ones. Lemon juice, baking soda, and vinegar are some great cleaning products, inexpensive, and environmentally friendly also. You can conduct education programs and workshops to inform community residents about the natural alternations and importance of protecting ground water.

##### **Learn and do more**

Water education must be part of all courses. Each person should read about ground water and rain water conservation, and share the knowledge with others. Pick up litter in your neighborhood and from your school, society grounds. Encourage friends and family to purchase „green“ household cleaning alternatives and to limit their use of harmful chemicals like pesticides and fertilizers. Talk to your teacher at school about a ground water class project or school wide ground water education day. Go green at school. Going green can help conserve and protect ground water by using less energy, water, and other resource. Talk with your school principal and superintendent about certification as a ground water guardian green site.

##### **Conclusion**

With all the contamination threats to groundwater, what difference can one person make? A lot, it just takes one step toward groundwater conservation and that person can be you or me. Join a surface water monitoring club to test and track changes in a pond, stream, or lake near your home. Partner with your local NSS volunteers, scout and guides or other organization to host a public education event. Encourage friends and family to purchase green household cleaning alternation and to limit their use of harmful chemicals like pesticides and fertilizers. Design posters or flyer in your community that educate citizens on easy ways to conserve water.

Ideally, we should strive to protect all ground water and take precautions, whenever and wherever possible, to prevent pollution. In reality, however, we must often choose our battles, and direct our energies where the desired result will be most effective. In time, through education, our environmental conservation can be enhanced. While in the meantime, we must make choices. "Save water, and it will save you. Conserve water, conserve life. If we don't learn to conserve, we'll all be a fish out of water.

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