

Example of research paper on water pollution in america

[Environment](#), [Pollution](#)



\n[[toc title="Table of Contents"](#)]\n

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1. [What is water](#) \n \t
2. [Water pollution](#) \n \t
3. [Oil spillage as a factor of water pollution](#) \n \t
4. [Sewage pollution](#) \n \t
5. [Industrial waste as a human factor of water pollution](#) \n \t
6. [Actions against water pollution in the world](#) \n \t
7. [Education programs](#) \n \t
8. [Conclusions](#) \n

\n[/toc]\n \n

What is water

Water is one of the most important sources of our life. The human body consists of from 78% to 55% water, depending on body size. All living things need water even more than food; hence, water is very valuable resource.

Water covers over 70 percent of the earth, 96. 5% of all water in our planet is in oceans. But only 2% of all Earth's water is drinkable (ga. water. usgs. gov). In fact, people need water to drink, to wash our hands, to cook, in industrial use and many other things. Any changes in water quality adversely affect living organisms or make it unusable.

Water pollution

Water pollution is the contamination of water bodies, such as lakes, rivers, oceans, aquifers and groundwater. Most water pollutants are eventually

carried by rivers into oceans (zoology. muohio. edu). Water pollution occurs when pollutants are discharged directly or indirectly into water bodies without adequate treatment. Water pollution affects plants and organisms living in these bodies of water. Most of all, this effect is damaging not only to individual species and populations but also to the environment as a whole. the problem of human factor in water pollution

There are many opinions about how important is to take care about water. Unfortunately, not all understand the importance of this issue – sometimes human greed prevails over the common sense. A lot of companies want to save money, so they do not care about water. Nobody wants to lose his money and that's why these companies are ready to affect water for the sake of greater profits. Oil companies don't care about what they have done to water. In fact, they want to throw their trash without losing their money. This research is important because water pollution is becoming a large problem that people need to confront. As it was pointed out, water is our most valuable resource. In fact, water pollution is the most important thing that scientists care about. Although human species survival is dependent upon water, humans actually are one of the main causes of water pollution because of oil spillage, sewage, and industrial waste. While many people believe that water pollution will not affect their lives, these lives will be bad due to water pollution. People should know that water pollution greatly affects their lives. Even though there are several solutions for this problem, people still do not know what they should do to save water.

Oil spillage as a factor of water pollution

Oil spillage include any spill of crude oil or oil distilled products (e. g., gasoline, diesel fuels, jet fuels, kerosene, Stoddard solvent, hydraulic oils, lubricating oils) that may occur on land, in the subsurface, or in water environments. Many people cannot realize that millions of gallons of oil each year end up in the oceans, so oil spillage creates massive water pollution. Oil spillage is very bad for water because it is usually the most dangerous cause of water pollution. Oil spills create many problems throughout the world, including the United States. The impact on the ecosystem in the affected area may be severe. Many plants and animals suffer or die within a short time after the spill has occurred. There are much money and time must be spent to clean up the oil spillage. Scientists also spend their time and budget money trying to find different types of technology or effective methods that clean up oil spills. Of course, this creates a major impact on the United States economy. Oil spills are a lot worse than people usually think. Oil spillage decreases the clean water supplies, so people will not find clean water in the nearest future. Hence, the problem of water pollution can become a problem to national security in many countries, especially in United States of America. In fact, fishing has been affected by oil spillage. If oil enters from gills, fish will die soon. People have been fishing for millennium. Because people eat fish, people should take care about fish. In addition, oil spillage affects fish eggs. Light oils and petroleum products can cause acute toxicity in fish, but the toxic event is generally over fairly quickly. Heavier oils may not affect fish at all, or in the cases of fish in larval or spawning stages. However, these animals can be substantially affected in

some circumstances, especially when oil spills into shallow or confined waters because they frequently come in contact with the oil at the surface after a spill, so fish will have many diseases (response. restoration. noaa. gov). The affected fish is not edible and so the consumption of such fish may cause human diseases.

When oil is spilled in some area, many birds usually affected, because if birds drink oil, it significantly affects their internal organs. This emergency situation makes birds vulnerable to the health problems such as severe weight loss, anemia and dehydration Actually, this will affect humans because if birds die, the environment loses its balance, and people will be affected by the new kind of disease (bird-rescue. org).

Sewage pollution

Pollution caused by sewage water is one of the major problems in cities all over the world. Sewage water is drained off into rivers without treatment. Careless disposal of sewage water leads to the creation of a chain of problems like the spread of diseases, eutrophication, increase in Biological Oxygen Demand (BOD), etc. (S. K Agarwal 214) The water used for domestic, industrial and other purposes gets converted into waste water. It is termed as sewage water. In ideal conditions, sewage water is channeled or piped out of cities so that it can be recycled. Sewage contains organic wastes as well as chemicals. The pollution of water occurring from sewage is mainly observed in developing countries (220). Sewage water is not disposed in a proper manner in this countries. In developed nations, a network of sewage pipes is used to take sewage away from cities. Treatment of waste

minimizes the pollution resulting from it. However, even in developed countries, the older cities may have sewage systems that are leaky. (221) Pathogens present in sewage water are responsible for spreading different kinds of diseases. Stagnant water fosters the growth of mosquitoes, which in turn causes diseases like malaria. Another disease which originates from contaminated water is typhoid. Sewage water may also contain protozoans like Giardia. (Alley William M 383-385) These pathogens pose a great risk to human health. Therefore, polluted water acts as a host to several pathogenic microbes.

Industrial waste as a human factor of water pollution

Industrial waste is very harmful to the environment. It is one of the most often way of water pollution. Industrial waste affects people, plants, and many things. In 2004 North American industrial facilities generated over 5 million tones of toxic chemicals as production-related pollutants and waste. (cec. org) As it was said before, people are the main factor of water pollution. Most people think water pollution comes directly from a factory or other known source, but the biggest source of water pollution is people. People do not protect clean water, and clean water has been affected by people. Factories are controlled by people. In fact, people are the biggest enemy of their environment (watereducation. org). If people become more serious about solving this problem, they will be able to do it. For example, they should not throw litter into rivers, lakes or oceans.

Now we can see, that people must pay more attention on waste recycling. This is a very expensive procedure, but health has to be more expensive.

Actions against water pollution in the world

Fortunately, there are people who understand the importance of this problem. But single initiatives are not enough to solve the problem of water pollution. Laws are effective tools to prevent pollution, but sometimes it is difficult to achieve their implementation. Therefore, a new international initiative - "Those are paying, who are guilty in pollution" - has a perfect view, but rarely has an impact. The World Health Organization (WHO) has published guidelines on acceptable levels of water pollutin. For example, the content of cadmium in water should not exceed 3/1000 mg / l.

After 1970, the damage became more for water. In 1972, Congress reacted by enacting the Federal Water Pollution Control Act. According to this act, water should be clean enough for swimming and fishing (Wekesser C, 59). So the government should make new laws. Government has provided a large fines for those who affect water resources.

Education programs

Water education is necessary because water is a basic human need and vital to our existence. In fact, people should teach their children about the importance of water. Children should know how they can keep water clean. Schools should also take responsibility to educate people about water. If people have a good education, people will solve the water pollution problem. Because people know everything about water, they will solve it very easily. Education is the best way to solve this problem. In fact, because people have a good education, they skip a lot of problems in their life. People should teach their children how water is important.

A good example of water education is National Water Quality Program (NWQP). The goal of this program is to protect and improve the water resources quality throughout the U. S. and for all its territories, especially in agriculturally managed watersheds. According to this program, many universities are involved in water education. Their mission is to teach their students about most important problems in water pollution and how to take care about water and save it clean.

Water pollution laws in U. S. A.

Governments should come with some stricter laws for the dumping of these toxic materials as a part of a water pollution solution. Washington has had environmental laws in place since the early 1970s to regulate water pollution from construction sites, industries, and cities to help prevent or decrease the amount of pollutants in the water. Here are key federal statutes governing water resources in the United States (<http://water.epa.gov>):

- The Clean Water Act (CWA); 33 U. S. C. s/s 121 et seq. (1977). The Clean Water Act is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to waters of the United States.
- The Safe Drinking Water Act (SDWA); 42 U. S. C. s/s 300f et seq. (1974)
- Coastal Zone Management Act of 1972. Amended through the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 and P. L. 104-150, The Coastal Zone Protection Act of 1996
- Endangered Species Act. The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found.

- Rivers & Harbors Appropriation Act of 1899. Section 10 establishes a program to regulate activities affecting navigation in United States waters, including wetlands.
- National Environmental Policy Act. NEPA is the basic national charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy.

Conclusions

As we can see, the legislative regulation of this issue in United States of America is at a good level. But it is also important to monitor the implementation of these laws. The most important contribution in this case is the public awareness of the problem. Each person should understand that the public does not mean "no one's", it means "yours also". The care about natural resources must be no less than about personal things or people's own health. A bad care about water quality finally will impact on human health.

The United States of America has one of the safest water supplies in the world, so the United States of America should work especially hard to keep this national treasure safe.