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# Cleaning Up the Cities of Tomorrow

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## Cleaning Up The Cities of Tomorrow

Miguel Campos, Jack Chen, Alex Gaiovych, Fernando Lauer, Kaleb Swoverland, Anna Velikorerestkikh, Jason Yu

Figure 2: Municipal Solid Waste Over Time



PORTLAND STATE UNIVERSITY

### **PROBLEM**

A huge problem with current modernized and non modernized cities is the amount of trash being thrown away. There is a tremendous amount of recyclable material that is being thrown away with non recyclable waste into massive landfills. Even though we can not physically see the trash that we throw away on the street, it must still go somewhere. Some of that waste is toxic, other waste is made of non decomposable material. These massive waste disposal sites hurt animals, damage soil, and harm the health people living nearby.

In 2007, Americans threw out about 570 billion pounds of municipal solid waste. Compared to other nations, the United States has a record of generating waste at an alarming rate. Due largely to lack of governmental regulation on an evergrowing chemical industry; everyday products that are used and thrown away contain more dangerous and health-affecting chemicals than ever before. To sustain future life, a change must be made.

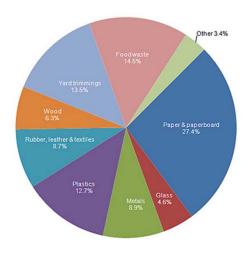
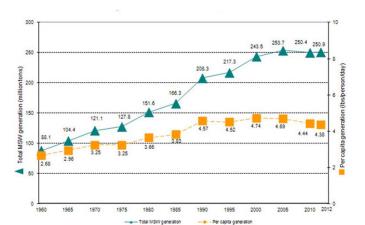


Figure 1: Types of Municipal Solid Waste



### **HUMAN IMPACT**

Future cities will come out to be magnificent works of engineering and architecture; yet these works of art can not be beautiful and inviting if the land is full of litter and waste. The state in which our cities are right now, full of litter, is dangerous for the future and for the present as well. Waste is unpleasant, has odor, and is a significant cause of spreading diseases. It creates an undesirable environment to live in for all wildlife and humans.

Waste has a huge impact on our future growing generation, by not cleaning the cities properly, they create an acceptance to the dirty environment that we live in, yet harm is being done. Our solution will improve the quality of our cities in making them cleaner, safer, and more desirable to live in. The youth will understand what an ideal environment would be by being aware of their surroundings. It would educate them in proper waste disposal methods, and would teach them, the health of the city is dependent on its citizens.

#### **SOLUTION**

The solution to the overflowing waste problem for the cities of tomorrow, is to educate the youth and to put them up to the responsibility of cleaning up for themselves. There will be a mandatory class or session in schools for the youth to do a community service program in which they clean up the community and are able to see the waste problem as a whole. This would allow students to gain more insight in the world and realize that cleaning up litter is their own responsibility.

By starting this program at a young age, students will be inclined to not litter in their adulthood. Fines will also be issued for littering to fund these sessions as well as enforcement of this law.



Figure 3: Trash In Landfill

In addition to creating more responsible adults through a community service program and mandatory class; waste being thrown in the oceans is a continuing problem. To solve this improper disposal of waste, a new biodegradable material will replace all non-disposable packaging that degrades when in contact with the salt water. Plastics degrade into smaller pieces, which are harmful for marine wildlife. With this new biodegradable material, no trace of plastic is to be left, therefore slowly cleaning our oceans of massive waste islands.