Kaitlyn Couch

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Physics

Environmental Engineering Project

 Early in the school year of 2012, a fire started behind the campus of North Mason High School. It ended up burning more than expected, and people evacuated their houses because of it. Behind the campus of North Mason, there are trees. There are a lot of trees, plants, and invasive species. These species burned, and the animals ran away. The climax community was thriving, but everything changed when the fire attacked. There are several invasive plant species that were burned, as well as many trees and small plants. The habitat was destroyed. Habitat restoration is an important and growing element of efforts to preserve our natural heritage and to protect and restore the critical "services" that the environment provides. Invasive species like scotchbroom were taking over the entire forest. Currently, reforestation is occurring in the space that burned in the fire. Reforestation includes the planting of native trees, shrubs, and grasses to restore a forest area. It is necessary after a natural disaster such as a forest fire. If animal species have vanished or suffered greatly reduced numbers from a forested area due to deforestation, reforestation projects may include attempts to re-introduce species into the wild. It is important that reforestation projects stick to recreating the natural balance of species, rather than importing exotic plants or animals into a new environment.

 The fire took Belfair by surprise. Over five acres of forest was scorched. Everyone, at the time, saw this as a horrible thing. They were worried about the safety of the community. Really though, it was a good thing. When the forest burned, it was giving a chance to start over. Burn all of the old, and then plant the new. The forest needs to start new. All of the burnt vegetation needs to be taken out. The soil needs to be replaced. Native plants need to once more grow in the place it was before. If it got to start over, it could be a healthy community for any plant or animal. If all of the plants are replanted, the plant community can start over, giving more hope for new life to someday thrive.

 In order to collect the data for this hypothesis, several people examined the area of and around the fire. It was done several times in order to give more accurate results It gave everyone an idea about how the climax community worked, and it helped show regrowth. Each species was counted and examined. They were all put into a spreadsheet so everyone working on it had a better idea of what was going on all around, because they were all given the information needed. Each student observed nature, and was put in a map to show where they observed. All of the items used were there to make the project easier and more accurate.

 A few different species were found. In plants, this included the invasive species scotchbroom, grass, and ferns. Most of the other vegetation was still making a slow attempt to grow back. The only animals seen were birds flying above. The birds have been slowly returning to the burn site, and more are heard each day. At least one American crow was found each day. Where the fire happened, everything looked dead. There weren’t as many animals seen there. They were still too afraid of the burnt trees and grass to move back into their home.

 I propose that every burnt piece of land should be restored. In order for the land to thrive and feed and be homes for animals, it needs to be rebuilt. Someone should clear all of the dead plants from the area. New soil that isn’t entirely ash is also necessary. After that, depending on the animals in the area, plants must be planted; mostly native plants. Research should be done about the kinds of plants that were in the area before the fire. Then, once the plants are planted, all they can do is wait. Someday, the land will recover from the fire and for now we will do all we can to help it.