Jack Burkhead, Natalia Medina & Kavin Shah 116 Elmwood RD Wellesley, MA, 02481 6/4/19

Brandon Schmitt Natural Resources Commission Director 525 Washington Street, Lower Level

Greetings, Wellesley Natural Resources Commission:

We are a group of three 5th graders from Katherine Lee Bates Elementary School. (our names are Jack Burkhead, Natalia Medina, and Kavin Shah.) We are students but not just any normal group of students. We are reaching out to you in hope of change. We recognize the issues in Boulder Brook, (a reservation near our school,) and other places that are contaminated with pesticides and fertilizers. We have been studying all about these vile products. We hope that you take our letter into consideration, and we have hope that we can help Boulder Brook get a bit healthier than its current state.

Firstly, let's get an idea of what pesticides and fertilizers look like. Fertilizers look like bird seeds—that is, if bird seeds contained crude and harmful chemicals. Certain ingredients inside of fertilizers can be used to help speed up the plants growth, and keep it healthy. Others ingredients hurt both the plant and Boulder Brook. The normal colors of synthetic fertilizers are tan, dark brown, and/or white. Organic fertilizer, on the other hand, contains natural, organic ingredients. Some ingredients may include peat moss, bone, seaweed, composted plant materials, and animal manure. Pesticides on the other hand, look very similar to a smoke-like substance, a spray that harms and/or kills pests, such as rats, weeds, insects, etc. A few ingredients that have been found in pesticides that are crucially harmful are, 2–D, 4-D, Dicamba, Glyphosate, and Permethrin. Some different kinds of pesticides are: Wood preservatives, which make wood resistant to insects, fungi, and other pests, rodenticides kill rodents, such as mice, and rats, and insecticides control insects, such as ants, spiders, and mosquitoes.

You might know what causes fertilizer but here is a quick review. Landowners near Boulder Brook use lots of fertilizer. Fertilizers are made by companies such as Scotts and Round-Up. Those companies manufacture demand. Scotts say their product kills weeds and helps grass, but their product has many flaws. We just hope that Wellesley abutters don't use as much fertilizer, because the outcome is it going into Boulder Brook Reservation and ruining the ecosystem.

Again, you likely know what causes use of pesticides, but we will provide a quick review. According to Journalist Ann Waters, pesticides are the most common pest killer. Pesticide companies say that pesticides harm your pests more than they harm the earth, in our case Boulder Brook. But, that isn't all through. Abutters have a huge chunk of the amount of pesticides used. They have chemicals harmful to

humans. Children are more sensitive to pesticides than adults. Pesticides harm over 67,000 pest species. Pests can harm us too, though. Mosquitos and ticks commit to giving us Vector-Borne diseases and cockroaches contribute to allergies and asthma. In the end, it seems like a lose-lose situation.

Fertilizers have many effects, most not to pleasant. But actually, Norman Borlaug, the founder of Green Revolution, argues that the use of fertilizers on farms could double, or even triple the production of food. That might seem amazing, but don't start thinking fertilizers are all good and perfect. lots of people disagree with Norman. Such as, Greg Elliott, a journalist. He makes a valid point, saying that fertilizers cause water pollution due to erosion carrying the fertilizers with sediment into bodies of water. This severely harms life in Boulder Brook. Fertilizers also lead to loss of oxygen in Boulder Brook due to the increase of bacteria. They also cause algae to overgrow, blocking waterways, which again harms sea life in Morses Pond, which Boulder Brook leads to.

Pesticides hurt pests, but that's not the only thing it hurts. First, some people argue that pesticides are super useful. They kill pests, and pests eat our food! They also argue that pests carry dangerous diseases such as malaria. But really, pesticides cause more bad than good. According to journalist Greg Elliot, pesticides harm many animals. The Wellesley board of health actually wrote that lawn pesticides are severely toxic to birds, and pets. That includes dogs and cats! You know how much people care about their cats and/or dogs. But most of all, pesticides can harm young children. That's right, according to the Wellesley Board of Health, due to young children's developing organs and low body weight, they are extremely vulnerable to dangerous chemicals in pesticides. Which would you rather have, safe food, or safe children?

Luckily, there are some solutions for us all. Fertilizer is mostly chemicals that are good for plants. So all we have to do is find some safe nutrients filled substances that are safer for Boulder Brook. Compost is a popular one. It's pretty simple as well. You put leftover food scraps in a large black container with holes, put it outside and wait. Then, you've got safe fertilizer. People could also use organic fertilizer in small amounts, though compost works best.

Now, for pesticides. Pesticides are the most toxic way to get rid of pests, but luckily there are quite a few alternatives. One possible solution is sticky walls. Set up a sticky board near some food, and the pests will get stuck. Of course, lots of people have pets or small children that could get stuck, so this isn't for anyone. Luckily, there are other alternatives, such as heat killing and plain old traps. Preferably the kind of traps that don't kill pests, so you can release them later. You could also use large fans for smaller pests. Also, there is a company called Pure Solutions that people can hire to use natural oils to get rid of pests (and we are not paid to say this). Lots of people have said that it is safe around pets, even really sensitive pets. Please help save Boulder Brook by trying these alternatives.

We have a few suggestions that may help with stopping the usage of harmful fertilizers and pesticides. The first idea that we have is reinforcing a law. It is the most difficult of the suggestions that we have, but we think that it will make a big difference on how people will think of fertilizers and pesticides. Perhaps the law could be a restricted amount of pesticides and/or fertilizers per house. Or better yet, ban it all together! Although, that would be extremely difficult. The next idea that we have is

raising awareness of how harmful pesticides and fertilizers are. It won't be as effective as making a law, but it would definitely be easier. We hope you will consider at least one of these ideas, and help save Boulder Brook. Thank you for taking the time to read our letter.

Sincerely,

Jack Burkhead Natalia Medina Kavin Shah