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Modeling the Environment

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Group 2 Project – Strategies for Lake Conservation

Recently, there has been a dilemma in the city of Winter Haven, Florida regarding the issue of which 35 lakes to preserve, and which lakes to develop. The two State officials who have proposed plans on this topic are Senator Blowsmoke, and Representative Foghorn. Senator Blowsmoke’s proposed bill is called the “Big Lakes Bill,” where she plans to preserve the biggest 5 lakes measured in area in an undeveloped state, while the other 30 lakes will be permitted for development. Her opponent, Representative Foghorn has come up with a proposal of his own at the same time, the “Many Lakes Bill.” He suggests that the 5 biggest lakes measured in perimeter will be permitted for development, while the other 30 smaller states will remain in an undeveloped state. They both claim that their proposed bills will preserve over 50% of the lake habitat in this area. After some calculations, we see that both the politicians are true with their claims, as the “Big Lakes Bill” will preserve 58% of the areas lake habitat and develop 42%, while the “Many Lakes Bill” will preserve 62% of the lake habitat, and only developing 38%.

While both of the proposed bills will preserve close to 60% of the local lake habitat, it is very important to look at what type of the lake habitat will be preserved. Senator Blowsmoke’s bill looks to preserve the 5 biggest lakes in terms of area, and Foghorn wants to preserve the 30 smaller lakes according to perimeter. First let us look at what types of creatures inhibit these lakes: you have fish, birds, reptiles, insects, plants, etc. However, it is critical to note that you will get different types of species and organisms in the biggest sized area lakes, that you will in the smaller sized perimeter based lakes. Essentially, the bigger the lake in area means the more organisms that live there. You will most likely find bigger groups of fish, crocodiles, birds, plants along the shoreline, etc. Also, bigger lakes are more appealing than smaller lakes to humans, as they allow for more recreational use such as fishing, boating, swimming, lake houses, tourism, etc. However, this does not necessarily make it a more diverse ecosystem, as you will probably find a wider variety of organisms in the smaller perimeter measured lakes, due to the shoreline that attracts different organisms. These organisms include tiny insects, plants, and algae that play a pivotal role in the lake ecosystem in Florida. They are decomposers because they break down dead organic plant material, and turn it into carbon dioxide and nutrients, which then are released into the environment and are used by other plants like trees.

All in all, I feel that both of these proposed bills are both valid and will help preserve parts of the lake habitats in Winter Haven, Florida. Senator Blowsmoke’s bill to preserve the biggest 5 lakes will save about 58% of the total area of lakes in Winter Haven, while Representative Foghorn’s bill that preserves the smallest 30 lakes based on perimeter will preserve a little more at approximately 62%. I strongly feel that the bill proposed by Foghorn will be more beneficial and more important to the environment than that of Senator Blowesmoke’s. This is for one main reason: the shoreline of the smaller perimeter lakes is more diverse and is also very important to the ecosystem. If you develop the bigger lakes area wise, then you will lose a large quantity of animals, but it won’t be diverse as the smaller perimeter lakes. These lakes contain decomposers which are vital to the environment, and that is why I believe that preserving the smaller lakes is more important than the bigger lakes.