**Humans: Creatures of the Coast**

**Environmental Science 350**

**PERSUASIVE SPEECH OUTLINE TEMPLATE**

I. Introduction

A. (show images of trash on a beach and a beach with no trash) “When you think of a beach, which image comes to mind?” “If we don’t start protecting beaches, a lot of them could look like the one on the left.”

B. We need more protected beaches to better protect the environment as well as marine life.

C. People are destroying beaches with litter and harmful practices and it is having huge impacts on the environment, the creatures that inhabit it, as well as it causes economic implications.

D. Preview Statements:

First, we will... discuss the environmental and marine life impacts human practices are causing to beaches.

Second, we will.... discuss the economic impacts human intervention causes to beaches.

And finally, we will.... analyze all data presented and conclude with how having protected beaches is the best solution.

II. Body

A. Main Point 1: We need more protected beaches because people are causing environmental problems to beaches, threatening marine life and producing many economic concerns.

1. First Problem: Beach environments are being mistreated by human intervention and causing many problems.

a. Beaches are alive and provide ecosystems for creatures and provide: sediment storage and transport; wave dissipation and associated buffering against extreme weather events; dynamic response to sea level rise; breakdown of organic materials and pollutants; water filtration; nutrient mineralization and recycling; storage of water in dune aquifers and groundwater discharge through beaches; maintenance of biodiversity and genetic resources; providing a nursery area for juvenile fishes; nesting sites or rookeries for turtles, shorebirds, and pinnipeds (Cartwright & Wilson, 2017).

b. “Beach Grooming”: removing seaweeds and debris from sandy beaches, typically involving large tractors with rakes attached (Beach Grooming).

c. Beach Grooming has many negative effects on beaches such as: removing seaweeds and seagrasses from beaches causing a loss in food chains for species of crabs, crustaceans, and shorebirds. It reduces biodiversity/biomass, reduces natural features such as coastal dunes and grasses. Lastly, it can cause problems with the reproductive issues with species, the process would destroy eggs laid by sea turtles, seabirds and forage fish (Beach Grooming).

d. Grunion Greeters group found that beach grooming destroyed grunion eggs and directly impacted grunion reproduction. The city of San Diego took this information and made a grunion grooming protocol, prohibiting grooming below the high tide line during the grunion spawning season (Cartwright & Wilson, 2017).

2. Second Problem: Human intervention and pollution of beaches cause many economic impacts.

a. Photo of coral reef that has become bleached (mention how money has to be spent in order to try to recover the reefs) and photo of trash on the beach (time and money has to be spent in order to do beach cleanups or remove trash from the ocean by boat).

b. “Imagine all of the money that would be saved each year if people did not have to do these things to help the ocean and beaches.”

c. “It costs trillions of dollars for the world to take care of coral reefs” (20 Economic Effects of Ocean Pollution).

 “Now I will talk about why having protected beaches could solve many of these problems.”

B. Main Point 2: Have more protected beaches because…

1. It is working in other places
2. Certain beaches in Oregon are being restricted to protect “Western snowy plover” birds and their nesting spots. (Oregon Coast Beach Connection staff)

ii. “We’re making great strides in reversing the downward slide of this species,” said Cindy Burns, Siuslaw National Forest wildlife biologist. “But it takes all of us, so we hope people will do their part to understand nesting season rules and to share the beach this spring and summer.” (Oregon Coast Beach Connection staff)

1. It is a practical solution
2. Many beaches around the world are eroding, partly due to human intervention.
3. “About 24 percent of sandy beaches worldwide are eroding…  about 16 percent of all beaches are eroding at rates designated "intense" or "extreme," (Merzdorf, J).
4. The benefits outweigh the costs (Environmentally, economically and socially)
5. Benefits: further protecting beach environments and creatures that inhabit them, not disturbing sand and grain levels (like how beach grooming does), making sure creatures food chains are not harmed or tampered with, preserving beaches for future generations (aesthetic and research purposes).
6. Costs: money to enforce people breaking the rules, might need beach monitors or employees, choosing which beaches (will have to pick and choose, will need to leave some beaches public for people to use), getting the publics support.

CONCLUSION

A. In conclusion we need more protected beaches BECAUSE:

1. Human intervention on beaches is disturbing the environment as well as the creatures that inhabit it.

2. Having to use money and resources to ‘clean up’ people’s impact on beaches creates economic issues.

B.: I want to end by saying that beaches are too important of a resource for people to continually neglect and take advantage of. I hope I have shown you why protected beaches are beneficial for the wellbeing of marine life, the environment and for the public. I hope you will advocate for more protected beaches or at least be more mindful of your actions when visiting beaches. Thank you.

References (in APA)

20 Economic Effects of Ocean Pollution. (n.d.). Retrieved from <https://deepoceanfacts.com/economic-effects-of-ocean-pollution>

Beach Grooming. (2015, June 8). Retrieved from <http://beachapedia.org/Beach_Grooming>

Cartwright, C., & Wilson, R. (2017, November 27). The State of Beach Ecology. Retrieved from <http://beachapedia.org/Beach_Ecology>.

Merzdorf, J. (2018, July 18). Global study of world's beaches shows threat to protected areas. Retrieved from <https://phys.org/news/2018-07-global-world-beaches-threat-areas.html>

Oregon Coast Beach Connection staff. (2017, March 19). Some Oregon Coast Beaches Under Restrictions to Protect Threatened Plover. Retrieved from <https://www.beachconnection.net/news/snowplov031917_623.php>