Working Topic

My topic is the benefits of saving the Salton Sea. This paper will mainly focus on the advantages of replenishing the shrinking lake through a thorough assessment of its current state and the possible hazards that might occur if it were to continue shrinking, and some possible solutions.

I will focus on the current state of the lake which includes the salt levels, pollutants present, rate of shrinkage, and the possible health effects that will result with the disappearance of the lake. It is important to note that neglecting this matter within the next few years would cause a greater problem since the shrinkage rates are expected to grow and the pollutant levels will indefinitely increase. Hence, finding an appropriate solution is needed.

Neglecting the problem and allowing the lake to shrink further may be the cheaper alternative, however it will significantly affect the quality of the air of the region, the surrounding wildlife, and may have possible health effects. Nonetheless, it is important to note that finding an adequate solution will be difficult due to the geographic location of the lake.

Brief Introduction

This topic is of great interest to me because it tackles an environmental problem that is yet to be addressed more commonly. I have always been interested in geography and various environmental matters; however, this topic caught my attention as I have never heard of it before. Reading more about it, I realized that it is a serious problem that needs immediate action.

The Salton Sea is a saline lake accidentally formed after floodwater breached an irrigation canal and ended up filling the Salton Sink. Ever since, the lake has been maintained by the irrigation runoff from surrounding agricultural lands. The lake soon developed its own ecosystem, providing habitats for migratory and endangered species of birds. However, as years

passed, the quality of water decreased since it is a terminal lake with no outflow leaving it with increased salt levels, algal blooms, temperature extremes, and accumulation of toxic material from agricultural runoff.

This topic is appropriate for the course as it is relatively old hence enough resources would be available for research purposes.

Research Questions and Methods

My research question is "is saving the Salton Sea beneficial?" and my secondary questions are "in what ways is the shrinkage of the Salton Sea affecting the surrounding environment?" "how effective is saving the Salton Sea?", "what are the estimated costs of the project?". To answer these questions, I will research: the current state of the lake, its salt levels and overall pollution, the possible harms that can develop if it was kept the way it is, and finally the solutions presented and their overall assessments. I will be using databases such as Science Direct, ProQuest Central, and JSTOR to gather appropriate evidence to support my thesis.

References

Biddle, T. A., Li, Q., Maltz, M. R., Tandel, P. N., Chakraborty, R., Yisrael, K., Drover, R., Cocker, D. R., & Lo, D. D. (2021). Salton sea aerosol exposure in mice induces a pulmonary response distinct from allergic inflammation. *Science of The Total Environment, 792*. https://doi.org/10.1016/j.scitotenv.2021.148450

This journal article is aimed at determining the effects of the Salton sea aerosol exposure in mice. This will showcase the possible health effects that will result if the Salton sea waters evaporated leaving behind exposed lakebed.

Parajuli, S. P., & Zender, C. S. (2018). Projected changes in dust emissions and regional air quality due to the shrinking Salton Sea. *Aeolian Research, 33,* 82–92. https://doi.org/10.1016/j.aeolia.2018.05.004

This journal article discusses how the shrinkage of the Salton Sea affects the quality of the air. It also emphasizes the significance of the shrinkage as it will affect a fairly large region due to the overall topography. Both of these sources will be used as evidence to prove the importance of saving the saline lake.

Planning

I am currently enrolled in 4 other courses along with Eng 204 and they are: linear algebra (MTH221), principles of chemical engineering 1 (CHE205), principles of microeconomics (ECO201), and general chemistry 2 (CHM102). To make sure that I meet all my courses' expectations, I made the following plan:

Week 4-5:

Eng204: more focused research will be conducted (about 30 minutes daily)

Reviewing the research proposal template+ start working on it

MTH221: quiz on week 4

ECO201: problem sets 2 and 3 due

Week 6:

ECO201: midterm 1

MTH221: midterm 1

ENG204: research proposal due. Will make sure it is done BEFORE start of week 6 to avoid clashes with other midterms

Week 7:

CHM102: midterm 1

MTH221: quiz

ECO201: problem set

ENG204: understand the template of the working draft, work min 30 min on either research or writing something

CHE205: midterm 1

Weeks 8-9:

Eng204: working draft due, start working on progress report. At least 30 minutes per day

MTH221 quiz

ECO201: problem set

CHE205: quiz+ homework

Weeks 10-14:

Eng204: edit final draft daily for at least 30 minutes per day.

CHM102: midterms 2 and 3 (must be prepared at least 3 days before each midterm)

CHE205: midterm 2

MTH221: weekly quizzes and midterm 2 (at least 30 minutes per day to prepare for midterm 2)

ECO201: problem sets, and midterm 2 (make sure ALL notes are prepared from before)