Creating an Environmental Impact statement

**Background**: Limestone is a sedimentary rock that is found in Union County PA. A local mining company is interested in opening a quarry on LBG High School property (ok use your imagination here). It is your job as an environmental scientist to create and environmental impact statement. Your EIS will help inform policy makers, local citizens, and other stakeholders about potential environmental costs associated with this project.

**Assumptions**:

For this lab, assume 1 foot = 1,000 feet

Assume grass represents forest (trees), pavement / cement represents houses / stores,

anything NOT grass or pavement is farmland.

**Procedure**:

1. Measure and flag out a 100 square foot area of your choice (you can make 100 square feet however you wish but stick to a square or rectangle).
2. Draw a map of the proposed area. Your map should show: latitude, longitude, and elevation of all 4 corners.
3. There are 43,560square feet per acre. Label your map in total acres.
4. Take some photos of your study area. Photos should give viewer a real feel for what the area looks like both up close and as a whole.

**Creating your EIS / Report**

In addition to your map and photos your report should include:

1. Briefly explain the proposal (a quarry) and why it is needed.

2. Waste and environmental hazards that could come from a limestone quarry.

3. Alternatives to your proposal: (examples below)

Move project to other location, or limit area impacted-

Leave as is- Develop another source of benefit to the community

4. At least 10 Federal regulations that may relate to this project (use chapter 2)

5. Land use **now** and how a quarry will affect the future use

6. Noise levels now and after the project is completed-include the effects on the

environment and community

7. Reclamation possibilities- is it possible (costs and time)

8. Financial benefits to the community-long and short range (what is limestone worth a ton? How many tons could come from your area if they quarry the entire thing 100 feet deep?)

9. Heavy traffic and its effect on the environment-from mining equipment and

chemicals

9. Historical resources- what is the historical use of this area (go as far back as able)

10. Rivers, ponds, ground water and streams nearby (within 1 mile). Name them.

11. Wildlife usage in the area? any endangered species possible? (yes! So name at least 2)

12. Farmland- after reclamation can it be farmed or developed

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| --- | --- | --- | --- | --- |
|  | Exceeds  Expectations | Meets  Expectations | Does not meet  Expectations | Points earned |
|  | 3 | 2 | 1 or 0 |  |
|  |  |  |  |  |
| Document the physical area (map, photos, measurements) | Included lat, long, elev, photos, current measurements AND additional data that exceeded assignment | Included lat, long, elev, photos, current measurements | Missing all of some of lat, long, elev, photos, current measurements |  |
| Analyze the  **socioeconomic**  impact of  human  activities on a  community. | Many accurate  impacts based  on logical,  factual,  documented  evidence | Several  accurate  impacts based  somewhat on  opinion rather  than fact | Few impacts  based on opinion  or questionable  facts; little or no  evidence |  |
| Analyze the  **environmental**  impact of  human  activities  . | Many accurate  impacts based  on logical,  factual,  documented  evidence | Several  accurate  impacts based  somewhat on  opinion rather  than fact | Few impacts  based on opinion  or questionable  facts; little or no  evidence |  |
| Format of EIS / Professionalism of Report | Includes all aspects listed in assignment with accuracy and no mistakes. | Includes all aspects listed n assignment with minimal mistakes. | Missing various aspects of assignment or significant mistakes. |  |
|  |  |  | **Total Score:** |  |