Spatial Analysis Final Project

Goal:

To produce a professional quality bathymetric map of Lake Yosemite and its surroundings.

Reason: MID will use this information to potentially increase the amount of water stored by the lake in wet years.

Problem:

MID needs to know the difference in lake volume during between wet and dry days.

Provided Data:

Sonar measurements of the lake bottom

Tasks:

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| 1. Produce a terrain map of the lake floor and surrounding areas | Incomplete |
| 2. Calculate the volume of the lake under the two scenarios. (Use three separate 3D interpolation techniques: TIN, IDW, Kriging) | Incomplete |
| 3. Final deliverable should be created using model builder as contractor would like to use as they refine their data collecting in the future. | Incomplete |

Final Product Specifications:

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| 1. High quality bathymetric map | Incomplete |
| 2.Technical write up of history and background of Lake Yosemite and its roll in the District. | Incomplete |
| 3. Detailed explanations of the methods used | Incomplete |
| 4. Presentation of the results | Incomplete |
| 5. Discussion of the outcomes | Incomplete |
| 6. Suggestions for future implementation of data and interpolation techniques (when to use which) | Incomplete |
| 7. Display data of the volume estimates as a table | Incomplete |
| 8. Oblique 3d rendering of the lake depths | Incomplete |
| 9. A cross-section showing the difference in water surface elevation for the two scenarios | Incomplete |
| 10. Profile differences for the three different interpolation techniques | Incomplete |