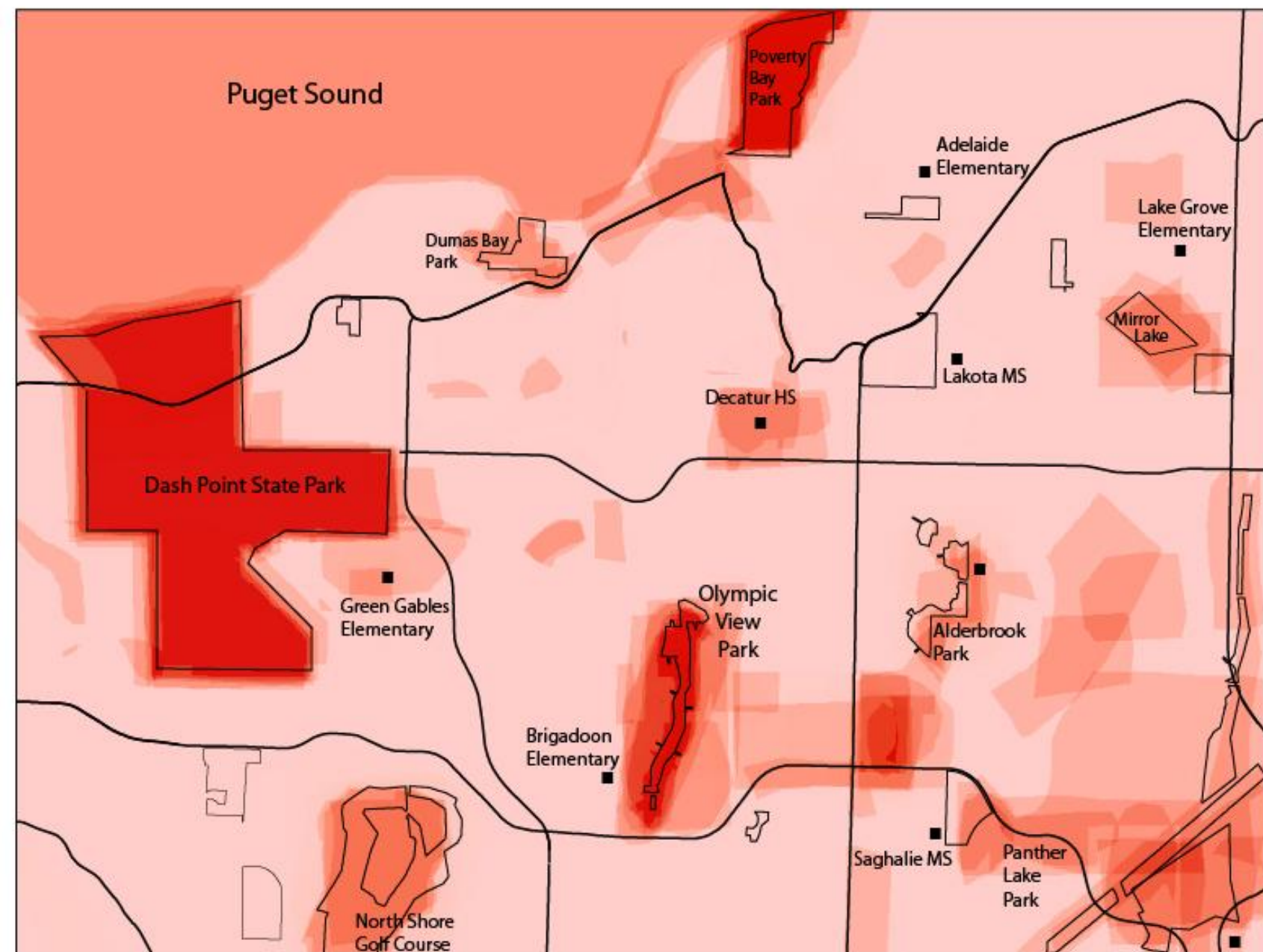


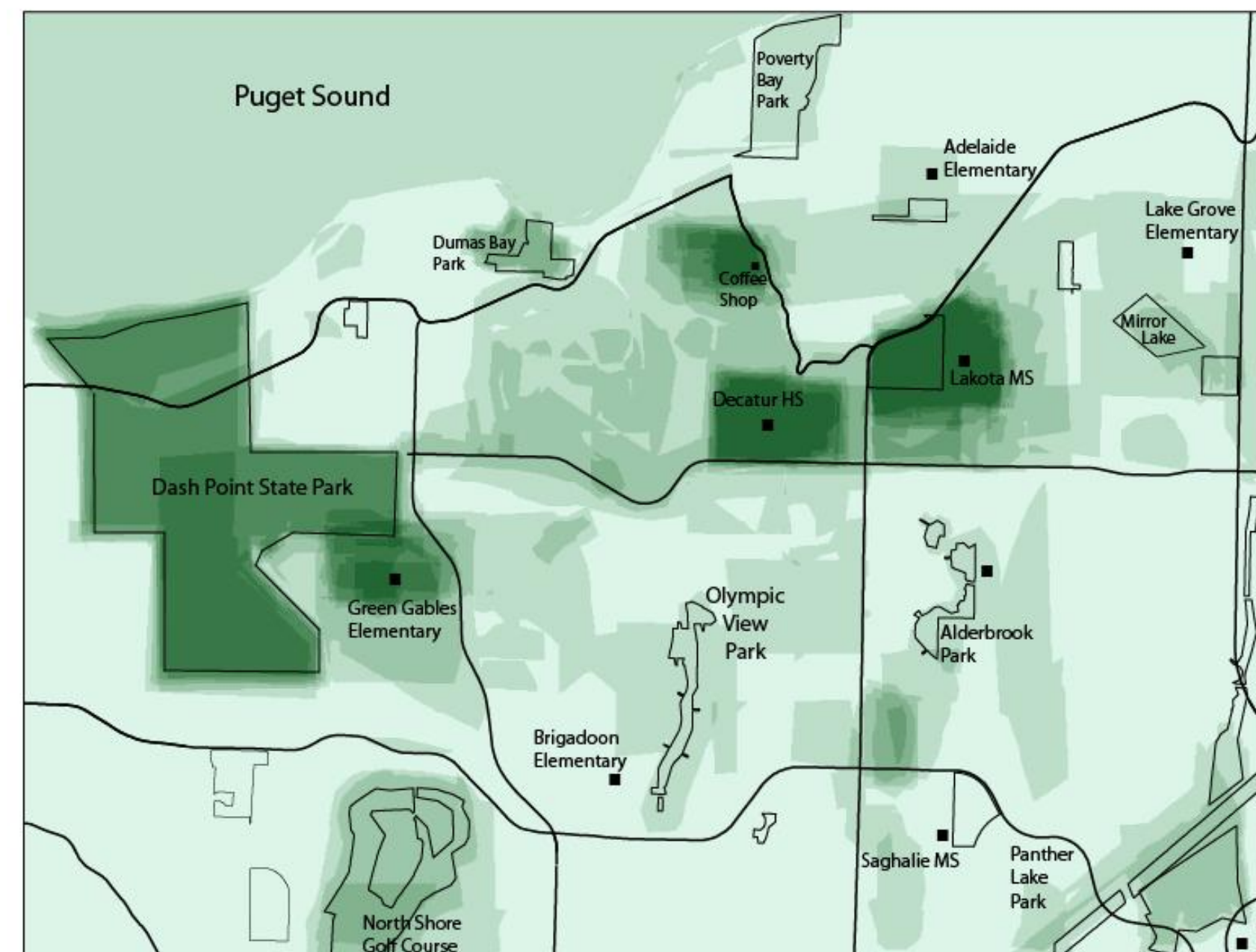
Participatory Geographic Information Systems: Using the Community's Knowledge

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Unsafe areas, as indicated by students through sketch maps.



Safe areas, as indicated by students through sketch maps.

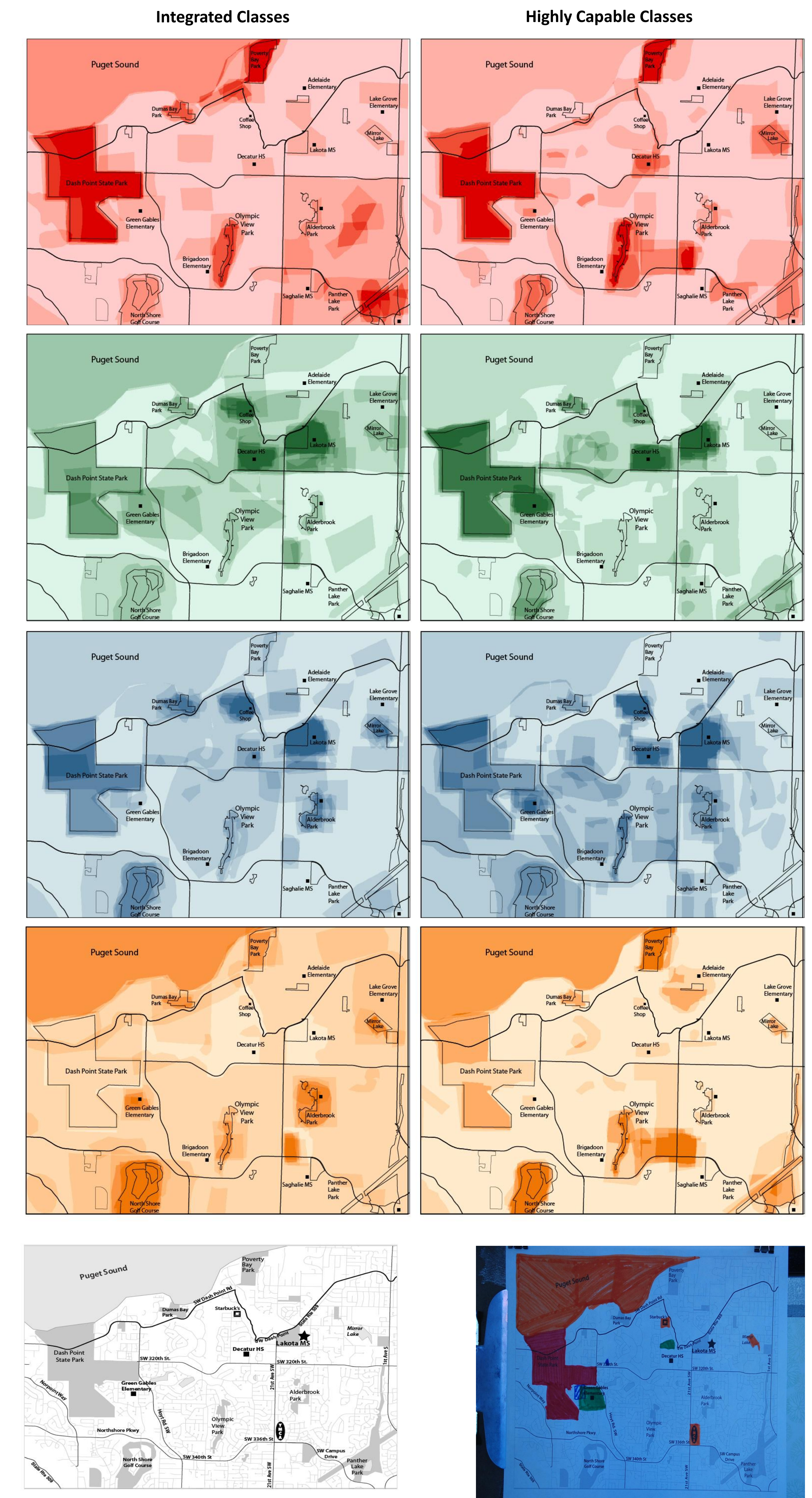


Purpose: The purpose of this project was to utilize participatory mapping methods to gain an understanding of how middle school students view their neighborhood and use their community spaces. My intention was to complete a project using methods that were person centered, had uses in various fields, and relied on first-hand knowledge, shared by individuals.

Objectives: My goals were to gather primary data from a group of teenagers that would allow me to see how they view their community. I collected data from two different classrooms at a middle school – one was an integrated classroom where students of all needs are taught, the other was a highly capable classroom. I wanted to gather this information through the use of sketch maps created by the students. I hypothesized that students would find parks to be a safe place, but my findings proved otherwise.

Results: My results were a series of maps that overlaid all of the data the students shared on their sketch maps. After doing raster calculations, I was able to see areas that students frequently labeled. The maps are all visualized using a gradient of colors – the lighter colors indicate fewer responses, and the darker colors indicate areas with higher frequency of responses. The results varied between classes, but generally all showed that students tend to stay away from parks and the water, which they do not view as safe. Also, many students indicated that they thought their school was safe, along with others in the neighborhood.

Side by side comparison of maps created in integrated and highly capable classrooms



A blank base map – the students filled in their maps according to how they view their neighborhoods (safe, unsafe, places they avoid, and places they spend time).

A completed sketch map with student responses.

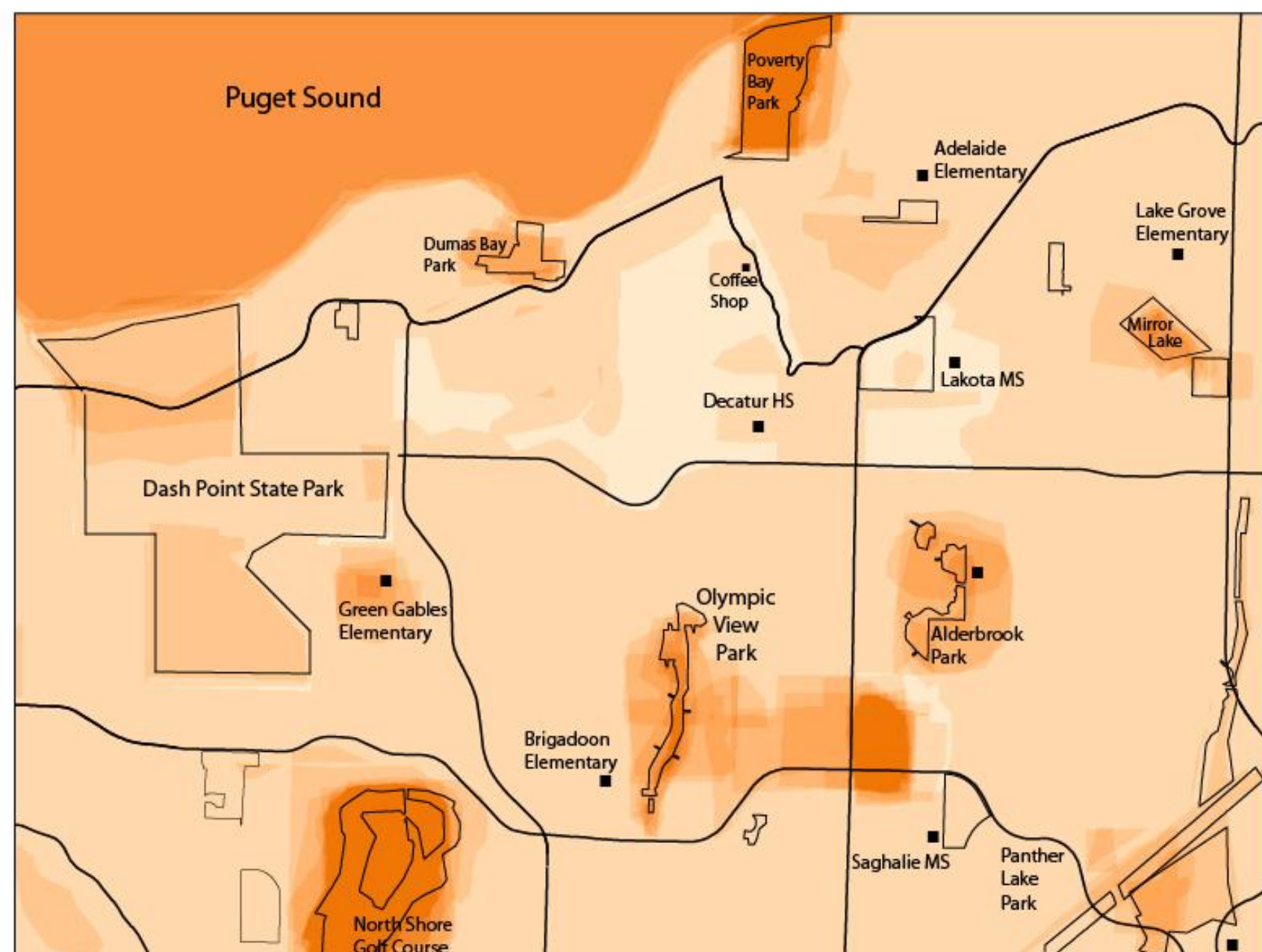


Photos of Olympic View Park – an area that was frequently labeled “unsafe”.

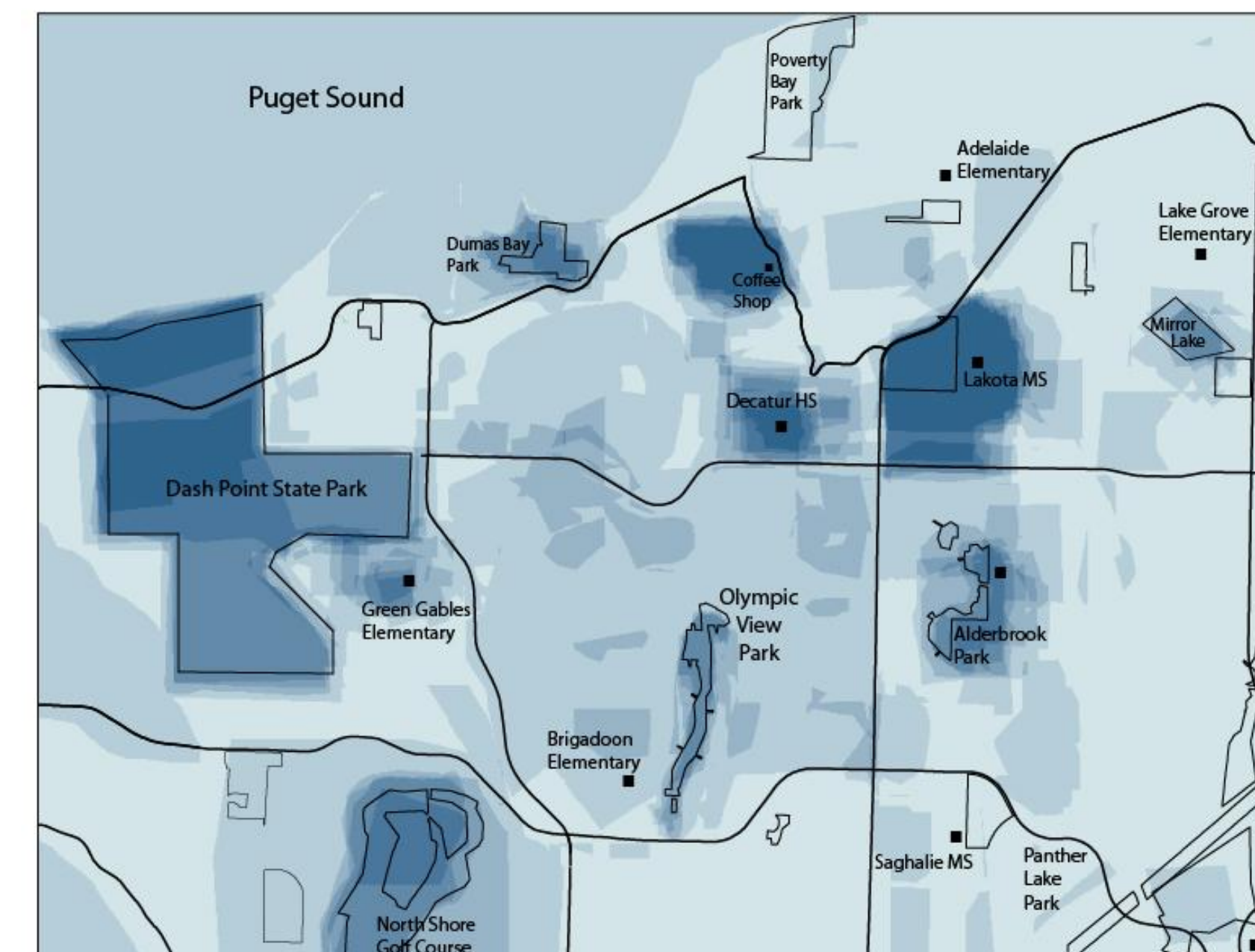


Photos of Decatur and Lakota – frequently labeled as “safe”.

Areas students avoid, as indicated through sketch maps.



Areas students spend time, as indicated through sketch maps.



Photos of the old YMCA site and North Shore Golf Course – areas that students avoid



Photos of Starbucks and Alderbrook Park – areas that students frequently spend time after school.

Methods: Students were given a blank map of their school boundary area. It had limited locators, but there were some streets, parks, schools, etc., so students could locate where they were on the map. They were asked to indicate where they felt safe, where they felt unsafe, where they spent time, and where they avoided on their maps. From here, I took pictures of all the maps, put them in a coordinate system, and created shape files from all of the features they students drew. After changing the shape files back into rasters, I used the raster calculator to find areas of high concentration based off of the four categories (safe, unsafe, areas to avoid, and where they spend time). The result was many maps that illustrated the student's information.

Citations: Dennis Jr., S.F., Gaulocher, S., Carpiano, R.M., & Brown, D. (2009). Participatory photo mapping (ppm): exploring an integrated method for health and place research with young people. *Health & Place*, 15, 466-473.

Acknowledgments: Thank you to the students and staff at Lakota Middle School for your participation.