

**E-bike Data Collection Report  
March 2023**

**Scope of Survey**

This survey sought to identify the number of electric (e-bikes) and pedal bicycles in middle and high schools in Hermosa Beach, Manhattan Beach, and Redondo Beach. In addition, this research sought to categorize e-bikes based on their classification (Class 1, Class 2, or Class 3). The data was collected in March 2023 at the following schools: Adams Middle School Hermosa Valley School, Manhattan Middle School, Mira Costa High School, Parras Middle School, and Redondo Union High School.

**Methodology**

The data gathered in this survey was collected through observational measures on the campuses listed above.

All bikes on campus were individually counted and categorized as e-bikes or pedal bikes. The class of e-bike was identified by class decals on the bike itself. If an e-bike did not have a decal, it was deemed “Unable to Identify”. If a bicycle did not fit into the traditional industry model, it fell into the “Non-Classification” category. An example of this would be dirt e-bikes or pedal bikes that were customized and/or altered to operate as electric or motor bikes. Non-Classification bikes were not counted as e-bikes or pedal bikes but were included in the count of the total number of bikes.

The student enrollment numbers were provided by administrators at each respective school.

School	Student Enrollment	Total Bikes	Total Pedal Bikes	Total E-Bikes	E-Bike Class 1	E-Bike Class 2	E-Bike Class 3	Unable to Identify	Non-Classification
Adams Middle School	1066	155	104	51	0	33	0	18	0
Hermosa Valley School	609	68	31	37	1	26	0	10	0
Manhattan Beach Middle School	1195	67	10	56	0	25	0	31	1
Mira Costa High School	2500	160	19	140	0	61	4	75	1
Parras Middle School	1070	30	10	20	0	13	0	7	0
Redondo Union High School	2965	162	33	121	0	65	6	50	8
<b>Totals</b>	<b>9405</b>	<b>642</b>	<b>207</b>	<b>425</b>	<b>1</b>	<b>223</b>	<b>10</b>	<b>191</b>	<b>10</b>

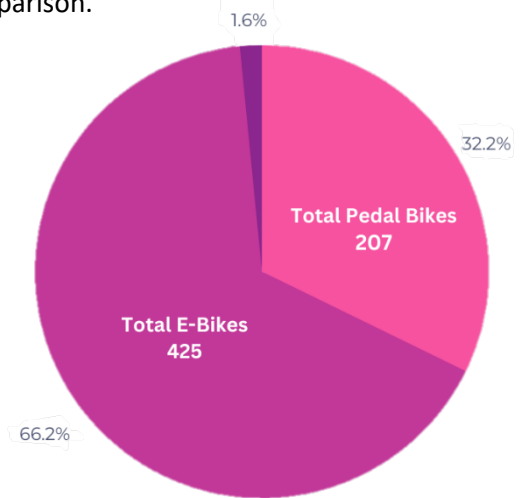
## Results

The main objective of this survey was to determine the number of e-bikes at schools in the Beach Cities. In addition, we included the number of pedal bikes as a point of comparison.

In total, we counted 642 total bicycles. 425 (66.2%) of these bikes were e-bikes, and 207 (32.2%) were pedal bikes. 1.6% fell into the “non-classification” category. In all schools, except for Adams Middle School, e-bikes outnumbered pedal bikes.

Of note, many school administrators believed the number of bikes observed on campus were less than average due to the inclement weather during the week of the bicycle counts.

Another objective we had in this survey was to break down the number of e-bikes and pedal bicycles as it pertains to individual campuses and by school district. This breakdown can be viewed in the tables below.



School	Total Bicycles	Total Pedal Bikes	Total E-Bikes	Percent of E-Bikes
Adams Middle School	155	104	51	<b>33%</b>
Hermosa Valley School	68	31	37	<b>54%</b>
Manhattan Beach Middle School	67	10	56	<b>84%</b>
Mira Costa High School	160	19	140	<b>88%</b>
Parras Middle School	30	10	20	<b>67%</b>
Redondo Union High School	162	33	121	<b>75%</b>
<b>Totals</b>	<b>642</b>	<b>207</b>	<b>425</b>	<b>66%</b>

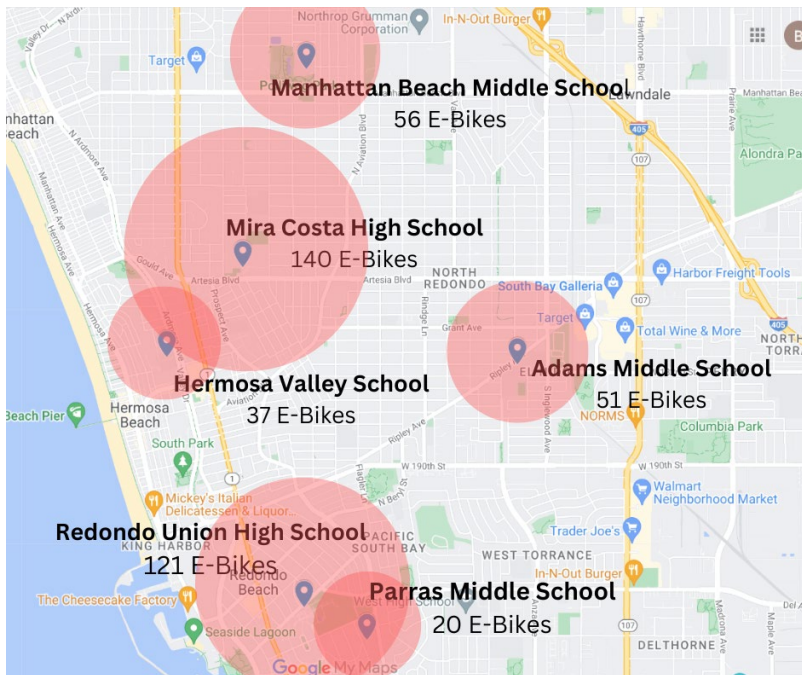
As we can see from the table above, e-bikes make up a large proportion of the total bicycles on campuses. On middle school campuses, 51.3% of the bikes on campus are e-bikes, and on high school campuses, that number jumps to 81.1%. This accounts for a 58% increase in the proportion of e-bikes on campus from middle schools to high schools.

School District	Total Bicycles	Total Pedal Bikes	Total E-Bikes	Percent of E-Bikes
Hermosa Beach City School District	68	31	37	<b>54%</b>
Manhattan Beach Unified School District	227	29	196	<b>86%</b>
Redondo Beach Unified School District	347	147	192	<b>55%</b>

This table presents the numbers by school district. Hermosa Beach City School District made up of Hermosa Valley School (grades 5 – 8). Manhattan Beach Unified School District consists of Manhattan Beach Middle School and Mira Costa High School. Redondo Beach Unified School District consist of Adams Middle School, Parras Middle School and Redondo Union High School. We see proportions of e-bikes much higher in Manhattan Beach Unified School District than the other two school districts.

Below on the map, we can see how this looks scaled to the number of e-bikes per school. This serves as a visualization of the areas where e-bikes can be found most as well as areas where there can potential be overlapping.

The two high schools, Mira Costa and Redondo Union easily stand out. The middle schools have relatively similar concentrations.

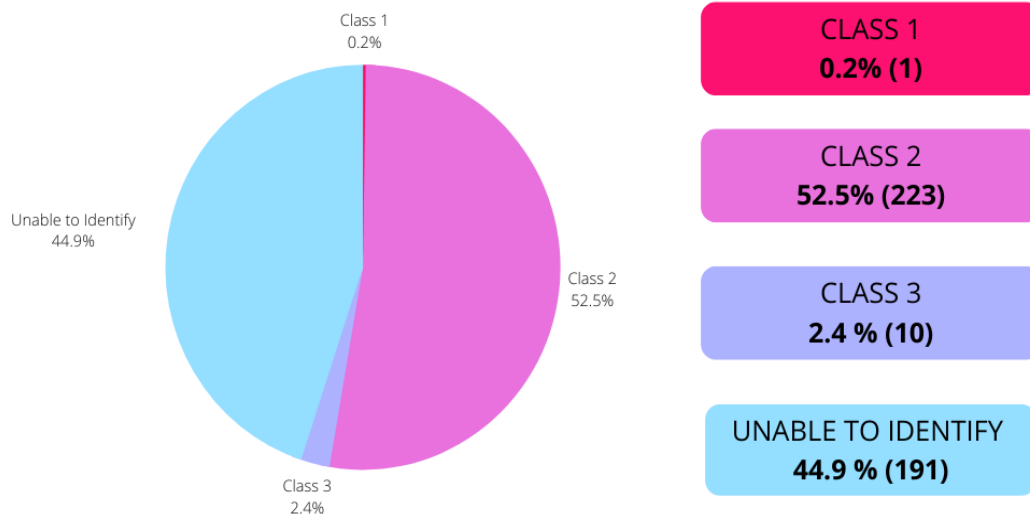


*Photos: Adams Middle School on the top right and Mira Costa High School on the bottom right.*

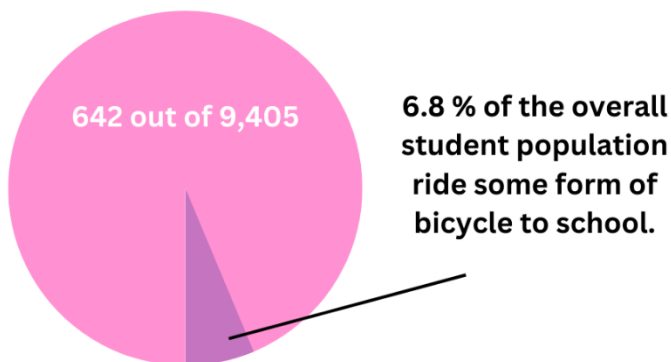
Another intention of the survey was to break down the classes of e-bikes student are using. There are three different classes of e-bikes. Class 1 are pedal-assisted e-bikes that provides assistance only when the rider is pedaling and can go up to 20 miles per hour. Class 2 are throttle-assisted e-bikes that can reach up to 20 miles per hour, and can propel the bicycle without the rider having to pedal. Class 3 are pedal-assisted e-bikes that can go up to 28 miles per hour. According to law, operators of Class 3 e-bikes must be 16 or older and wear a helmet.

The pie-chart below breaks the data down by type. The most common type of electric bicycle was the Class 2 at 223 (52.5%). It is important to note that we were unable to identify the class of more than 40% of the e-bikes observed. The Class 3 e-bikes were found in the high schools.

## E-Bikes By Class



To illustrate a broader perspective, when we look at the high and middle school student population surveyed, 642 students are using some form of bicycle to get to and from school, accounting for 6.8% of the overall student population.



We hope this study has provided an idea/estimate of the use of electric bikes among school aged riders in the Beach Cities. Understanding the amount and the class of electric bikes are being used may assist schools and other organizations with the planning and implementation of safety measures and initiatives.

We hope to expand and build on this survey in the future. If you have any questions please reach out to Ruben Terrazas at [ruben.terrazas@bchd.org](mailto:ruben.terrazas@bchd.org).