

Final Project: California Protected Areas Near H.S.U.

BY: KENNY SAUVE, JOHN STOA, NOEL EATON

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Abstract

California has many protected areas. California protected areas come in many forms, they can be local parks, county parks, state parks, national parks, wildlife refuges, land trusts, or other forms of protection. Using GIS software we were able to create a map indicating these protected areas. There are 73 protected areas within 20 miles of Humboldt State University, all providing some kind of unique recreational opportunity.

Introduction

Humboldt County has a diverse landscape with many areas to explore. There are many popular locations in the county that students, recreationalists, tourists, and visitors could often go to. However many of the visitors may not realize the amount of locations that can offer outdoor recreation opportunities. There are many more protected areas to visit than one would expect. Giving the public the knowledge of where these areas are located could be a valuable tool. We, the Upstreamers, have created a map and table with access types, acreages, and distances to the locations of the protected areas within two (walking distance), five (biking distance), and twenty (driving distance) miles of Humboldt State University. In figure 1 you can see where Humboldt County is located.

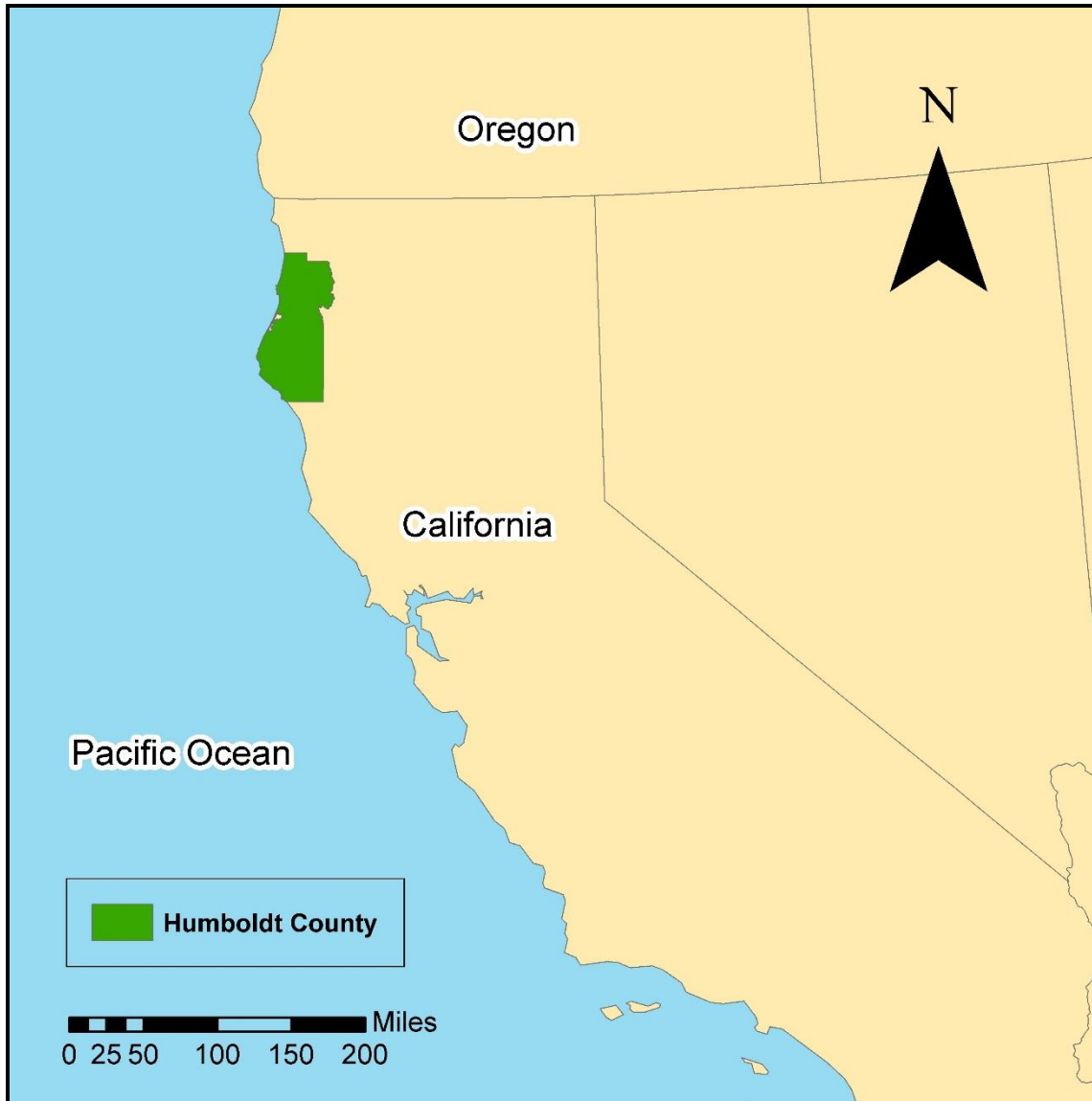


Figure 1. Humboldt County is located in northern California.

Methods

To start our project we had to find reliable and accurate data. After searching the web, we found a California protected area shapefile. The shapefile came from the California Protected Areas Database at GreenInfo.org. We completed a quality assurance quality control check to make sure the data we collected was reliable. The data we collected combined with data from Humboldt County's website and Humboldt State University's data hub allowed us to begin our analysis. First step in ArcMap was to create three buffers around Humboldt State University. The three buffers were a radius of two, five, and twenty miles. The two mile buffer is for California protected areas within a short walking distance. The five mile buffer is for California protected areas within bike riding distance. The 20 mile buffer is for California protected areas within a short drive. Once we had our buffers around Humboldt State we were able to start

our analysis. First we clipped our two mile buffer with the California protected area layer. This gave us all of the California protected area within two miles. Next we had to get the California protected areas within five miles without the protected areas within 2 miles. This was accomplished by clipping the 5 mile buffer with the protected areas layer, then running the Erase tool to erase the 2 mile buffer from within the 5 mile buffer. The 20 mile buffer received a similar treatment, being clipped to the protected areas then having the 5 mile buffer erased from within the 20 mile buffer. After our maps were created, we exported each attribute table of our final three layers into a comma-separated values file format. This enabled us to display our data in a table for our final presentation, showing name of protected area, access type, acreage, and distance in miles to Humboldt State University.

Results

There are 25 different protected areas in Humboldt County within two miles (Table.1), walking distance from Humboldt State University (HSU). There are a total of 15 protected areas within a five miles radius from HSU (Table 2), accessible by bike. 33 protected areas are within twenty miles from HSU, easily accessible by car. Depending on the name and managing agencies of the protected area, some areas are in more than one of the three distances analyzed. All of these protected areas are at least somewhat accessible to outdoor enthusiasts and the public to be explored for their enjoyment. Figure 2 is a map showing Humboldt State University as the center point for analysis.

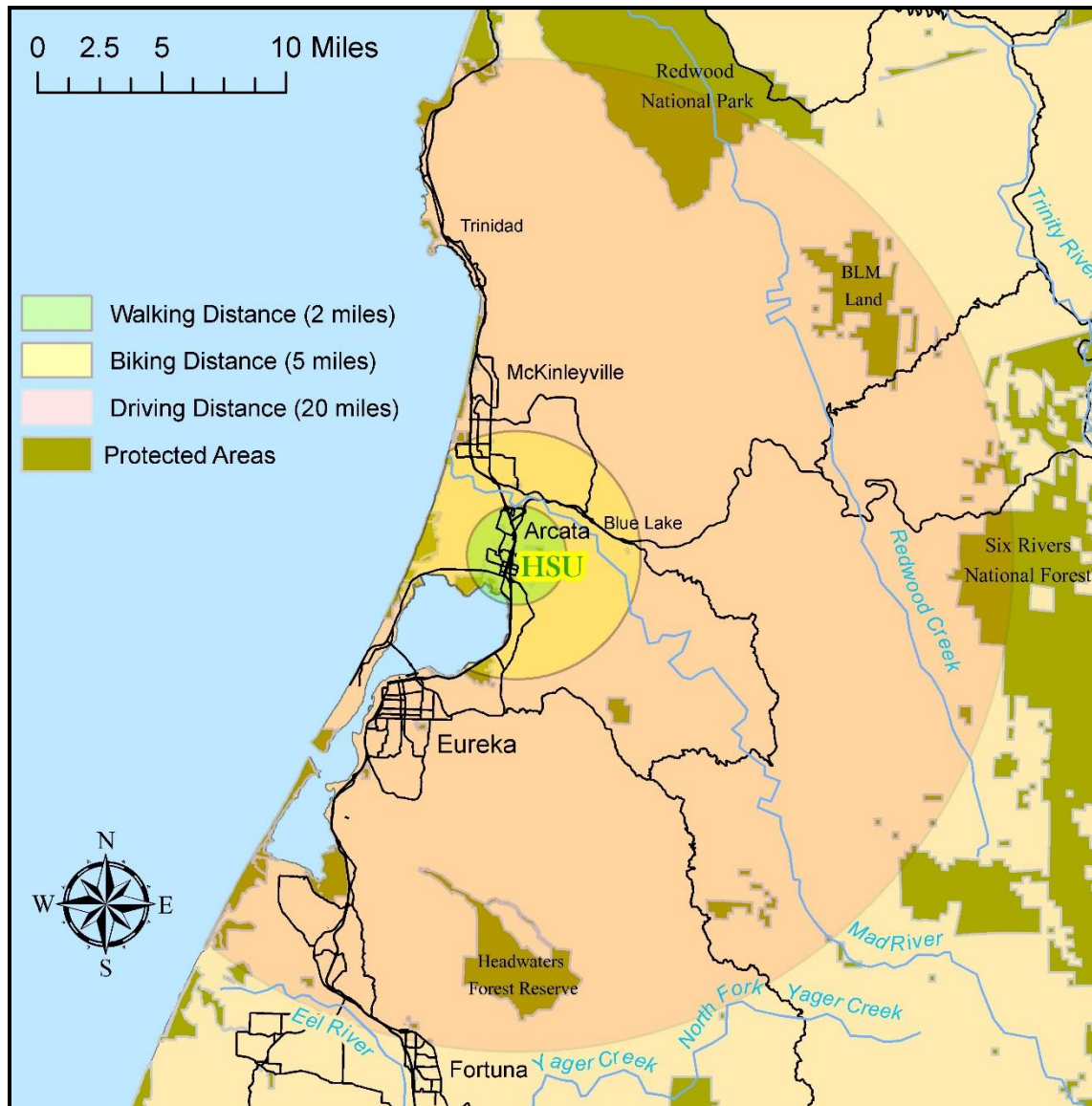


Figure 2. Humboldt State University provides the center point of analysis for California protected areas within 2, 5, and 20 miles. The map's spatial reference is North American Datum 1983 Universal Transverse Mercator Zone 10 North.

Table 1. California protected areas between 0 and 2 miles of H.S.U.

Protected Areas Within Two Miles			
Name	Access	Acres	Distance (miles)
Mad River Slough Wildlife Area	Restricted Access	564.74	1.35
Humboldt Bay National Wildlife Refuge	Open Access	2674.52	1.93
Valley West Park	Open Access	3.59	1.54
Pacific Union Park	Open Access	4.15	1.25
Chevret-Vaissade Park	Open Access	1.47	1.17
Cahill Park	Open Access	0.73	0.55
Ennes Park	Open Access	0.21	1.01
Westwood Manor Park	Open Access	1.71	0.76
Shay Park	Open Access	4.27	0.57
Larson Park	Open Access	2.18	0.31
Bloomfield Park	Open Access	0.23	1.02
Greeniview Park	Open Access	0.36	1.23
Mountain View Park	Open Access	0.26	1.34
Windsong Park	Open Access	1.76	1.35
Stewart Park	Open Access	1.29	0.51
Vinum Park	Open Access	0.09	0.38
Arcata Ball Park	Open Access	4.15	0.69
D Street Linear Park	Open Access	0.94	0.44
Sunny Brae Park	Open Access	2.92	1.13
Bayside Park	Open Access	4.72	1.57
Arcata Marsh & Wildlife Sanctuary	Open Access	189.46	1.28
Redwood Park	Open Access	2.69	0.43
Rotary Park	Open Access	0.18	1.15
Arcata Community Park	Open Access	30.36	0.80
Arcata Community Forest	Open Access	633.93	0.42

Table 2. California protected areas between 2 and 5 miles of H.S.U.

Protected Areas Within Five Miles			
Name	Access	Acres	Distance (miles)
Bureau of Land Management	Open Access	87748.7	4.06
Mad River Slough Wildlife Area	Restricted Access	8	
Humboldt Bay National Wildlife Refuge	Open Access	564.74	1.35
Fay Slough Wildlife Area	Restricted Access	2674.52	1.93
Azalea State Natural Reserve	Open Access	502.80	4.19
Hiller Park Playground and Picnic Area	Open Access	34.17	2.67
Pierson Park	Open Access	172.25	4.90
Gymkhana Field	Open Access	1.92	4.64
Humboldt Bay National Wildlife Refuge	Open Access	2.64	4.45
Mad River County Park	Restricted Access	784.82	3.16
Manila Dunes Recreation Area	Open Access	116.31	4.17
Manila Community Park	Open Access	264.78	4.39
Humboldt Coastal Nature Center	Open Access	15.02	4.56
Bair addition to Lanphere Dunes, Humboldt Bay NWR	Restricted Access	19.44	4.58
Blue Lake holding 1	Unknown Access	95.27	3.45
	Open Access	5.60	4.37

Table 3. California protected areas between 5 and 20 miles of H.S.U.

Protected Areas Within Twenty Miles			
Name	Access	Acres	Distance (miles)
Harry A. Merlo State Recreation Area	Open Access	974.99	18.96
Humboldt Lagoons State Park	Open Access	2210.44	19.94
Little River State Beach	Open Access	132.87	9.09
Patrick's Point State Park	Open Access	689.88	17.65
Trinidad State Beach	Open Access	180.64	12.99
Bureau of Land Management	Open Access	87748.78	4.06
Elk River Wildlife Area	Restricted Access	100.35	10.27
Luffenholtz Creek Fishing Access	Restricted Access	6.72	11.22
Samoa Peninsula Public Access	Restricted Access	6.52	10.01
South Spit Wildlife Area	Restricted Access	609.29	11.69
Table Bluff Ecological Reserve	Restricted Access	164.23	15.83
Redwood National Park	Open Access	70070.95	15.36
Humboldt Bay National Wildlife Refuge	Open Access	2674.52	1.93
Fort Humboldt State Historic Park	Open Access	15.91	8.89
Fay Slough Wildlife Area	Restricted Access	502.80	4.19
		338266.8	17.36
Six Rivers National Forest	Open Access	3	
Larissa Park	Open Access	0.32	5.49
Hiller Park Playground and Picnic Area	Open Access	172.25	4.90
20-30 Park and Playground	Open Access	2.69	8.09
Eel River Wildlife Area	Restricted Access	1905.99	16.19
Big Lagoon Wildlife Area	Restricted Access	1429.39	19.39
Arcata Community Forest	Open Access	519.54	6.81
Sequoia Park	Open Access	63.95	7.69
Newburg Park	Open Access	20.15	19.80
Headwaters Forest Ecological Reserve	Restricted Access	7608.65	13.11
Rohner Park	Open Access	70.37	19.08
Coastal Access	Open Access	12.64	12.56
Moonstone Beach County Park	Open Access	7.61	10.61
Clam Beach County Park	Open Access	399.67	5.92
Manila Dunes Recreation Area	Open Access	264.78	4.39
Jacob-Haney Ball field	Open Access	1.17	8.14
Hammond Park	Open Access	1.22	7.29
Trinidad holding 1	Open Access	45.97	12.59

Conclusion

California protected areas are a great source for outdoor recreation. Using spatial analysis to locate protected areas for recreational purposes, makes protected areas more accessible to the public. There are many protected areas within 20 miles of Humboldt State University for outdoor recreation. People may be unaware of all of the recreational opportunities that exist in the area. Having the name, location, accessibility, and distances to all the California protected areas within 20 miles enables people to visit these places. Using G.I.S. we make it easier for people to locate and enjoy California protected areas.