

Table S1. Pacific Crest Trail and protected areas.

Name	State	Acres	Hectares	Area (sq km)	Percentage
Sequoia-Kings Canyon Wilderness	CA	768350.59	29,845.46	298.45	4.24%
Yosemite National Park	CA	745900.80	23,339.38	233.39	3.31%
Yosemite Wilderness	CA	704243.78	22,706.66	227.07	3.22%
Kings Canyon National Park	CA	458964.02	21,379.95	213.80	3.03%
Alpine Lakes Wilderness	WA	415578.08	17,813.63	178.14	2.53%
John Muir Wilderness	CA	653407.69	16,962.40	169.62	2.41%
Glacier Peak Wilderness	WA	566467.33	15,399.47	153.99	2.19%
Three Sisters Wilderness	OR	283769.65	13,661.26	136.61	1.94%
Crater Lake National Park	OR	182552.46	12,388.54	123.89	1.76%
Sky Lakes Wilderness	OR	113834.90	11,092.74	110.93	1.57%
Mount Jefferson Wilderness	OR	108963.60	9,272.84	92.73	1.32%
Marble Mountain Wilderness	CA	225300.80	9,209.61	92.10	1.31%
Sequoia National Park	CA	406805.66	8,466.06	84.66	1.20%
Ansel Adams Wilderness	CA	231020.99	8,409.84	84.10	1.19%
Golden Trout Wilderness	CA	305388.95	7,687.48	76.87	1.09%
Goat Rocks Wilderness	WA	108183.68	7,520.72	75.21	1.07%
Diamond Peak Wilderness	OR	52458.92	6,560.49	65.60	0.93%
Henry M. Jackson Wilderness	WA	103223.96	6,543.27	65.43	0.93%
Mount Thielsen Wilderness	OR	55150.65	6,442.74	64.43	0.91%
Pasayten Wilderness	WA	531274.19	6,396.14	63.96	0.91%
Mark O. Hatfield Wilderness	OR	65517.88	6,315.80	63.16	0.90%
Owens Peak Wilderness	CA	76969.74	6,094.96	60.95	0.87%
San Jacinto Wilderness	CA	33178.74	6,074.19	60.74	0.86%
Desolation Wilderness	CA	64054.74	5,497.62	54.98	0.78%
William O. Douglas Wilderness	WA	169201.66	5,495.62	54.96	0.78%
South Sierra Wilderness	CA	60319.19	5,415.78	54.16	0.77%
Carson-Iceberg Wilderness	CA	159344.30	5,253.54	52.54	0.75%
Pleasant View Ridge Wilderness	CA	26975.09	5,174.55	51.75	0.73%
Lassen Volcanic National Park	CA	107509.27	5,068.39	50.68	0.72%
Stephen Mather Wilderness	WA	641458.09	4,776.70	47.77	0.68%
Trinity Alps Wilderness	CA	540085.22	4,504.06	45.04	0.64%

Mount Adams Wilderness	WA	47123.27	4,401.73	44.02	0.62%
San Geronio Wilderness	CA	54706.77	4,384.77	43.85	0.62%
North Cascades National Park	WA	501379.64	4,324.54	43.25	0.61%
Mount Hood Wilderness	OR	64741.21	4,223.19	42.23	0.60%
Kiavah Wilderness	CA	45245.25	4,097.81	40.98	0.58%
Bucks Lake Wilderness	CA	23776.48	4,066.19	40.66	0.58%
Lassen Volcanic Wilderness	CA	78566.88	3,694.19	36.94	0.52%
Norse Peak Wilderness	WA	52297.33	3,554.98	35.55	0.50%
Mount Washington Wilderness	OR	54451.86	3,490.77	34.91	0.50%
Indian Heaven Wilderness	WA	20783.52	3,343.66	33.44	0.47%
Mokelumne Wilderness	CA	104380.22	3,339.33	33.39	0.47%
Hoover Wilderness	CA	128173.17	2,704.64	27.05	0.38%
Castle Crags Wilderness	CA	11079.38	2,431.50	24.32	0.35%
Sheep Mountain Wilderness	CA	43334.15	2,205.56	22.06	0.31%
Granite Chief Wilderness	CA	25260.46	1,954.89	19.55	0.28%
San Geronio Wilderness	CA	58636.44	1,951.19	19.51	0.28%
Russian Wilderness	CA	12653.13	1,926.37	19.26	0.27%
Domeland Wilderness	CA	94412.51	1,917.76	19.18	0.27%
Soda Mountain Wilderness	OR	24725.44	1,622.16	16.22	0.23%
Mount Rainier National Park	WA	236437.40	1,580.50	15.80	0.22%
Mount Rainier Wilderness	WA	227088.21	1,454.42	14.54	0.21%
Domeland Wilderness	CA	40115.43	1,452.78	14.53	0.21%
Emigrant Wilderness	CA	112844.64	1,110.98	11.11	0.16%
Chimney Peak Wilderness	CA	13243.39	803.44	8.03	0.11%
San Gabriel Wilderness	CA	35738.18	678.28	6.78	0.10%
Kiavah Wilderness	CA	42609.13	602.73	6.03	0.09%
Sawtooth Mountains Wilderness	CA	33654.13	278.83	2.79	0.04%
Red Buttes Wilderness	CA-OR	20175.27	183.62	1.84	0.03%
Salmon-Huckleberry Wilderness	OR	62135.89	136.47	1.36	0.02%
Hauser Wilderness	CA	7197.27	113.21	1.13	0.02%
Magic Mountain Wilderness	CA	12241.37	88.01	0.88	0.01%
Beauty Mountain Wilderness	CA	15709.88	12.61	0.13	0.00%
Owens River Headwaters Wilderness	CA	14725.22	4.27	0.04	0.00%
Bright Star Wilderness	CA	8763.28	0.37	0.00	0.00%
					55.20%

Hectares, acreage, and square km represents the total area that the proposed buffer currently crosses Gap status 1 and 2 lands.

Table S2. Continental Divide Trail and protected areas

Name	State	Acres	Hectares	Area (Sq km)	Percentage
Glacier National Park	MT	1,008,097.37	35,473.31	354.73	4.21%
Bob Marshall Wilderness	MT	1,014,477.05	23,137.09	231.37	2.75%
Bridger Wilderness	WY	426,751.45	21,346.46	213.46	2.53%
Yellowstone National Park	WY	2,199,453.66	21,224.34	212.24	2.52%
Weminuche Wilderness	CO	500,270.73	20,764.12	207.64	2.46%
Anaconda Pintler Wilderness	MT	158,753.49	13,129.24	131.29	1.56%
Teton Wilderness	WY	584,785.95	11,735.50	117.36	1.39%
Scapegoat Wilderness	MT	243,283.97	10,313.77	103.14	1.22%
Rocky Mountain National Park	CO	267,038.86	9,108.66	91.09	1.08%
South San Juan Wilderness	CO	160,955.09	9,082.22	90.82	1.08%
Rocky Mountain Wilderness	CO	249,268.31	8,593.90	85.94	1.02%
Aldo Leopold Wilderness	NM	203,533.97	7,260.60	72.61	0.86%
Mount Zirkel Wilderness	CO	160,504.09	6,719.58	67.20	0.80%
La Garita Wilderness	CO	126,486.49	5,725.88	57.26	0.68%
Collegiate Peaks Wilderness	CO	166,224.02	4,130.02	41.30	0.49%
Huston Park Wilderness	WY	30,974.61	3,416.90	34.17	0.41%
Indian Peaks Wilderness	CO	75,219.91	3,207.95	32.08	0.38%
San Pedro Parks Wilderness	NM	41,305.19	3,195.75	31.96	0.38%
Gila Wilderness	NM	559,314.75	3,165.58	31.66	0.38%

James Peak Wilderness	CO	17,080.37	2,668.20	26.68	0.32%
Chama River Canyon Wilderness	NM	46,052.56	2,428.04	24.28	0.29%
West Malpais Wilderness	NM	39,951.65	2,149.02	21.49	0.26%
Never Summer Wilderness	CO	20,830.49	1,994.71	19.95	0.24%
Mount Massive Wilderness	CO	23,936.43	1,978.66	19.79	0.23%
Holy Cross Wilderness	CO	122,939.31	1,223.91	12.24	0.15%
Vasquez Peak Wilderness	CO	13,000.32	1,009.83	10.10	0.12%
Cruces Basin Wilderness	NM	18,876.03	704.81	7.05	0.08%
Mount Massive Wilderness	CO	2,553.38	347.76	3.48	0.04%
Eagles Nest Wilderness	CO	135,218.29	29.79	0.30	0.00%
Indian Peaks Wilderness	CO	2,911.68	5.59	0.06	0.00%
					27.93%

Hectares, acreage, and square km represents the total area that the proposed buffer currently crosses Gap status 1 and 2 lands.

Table S3. Largest GAP Status 3 land units along the Pacific Crest Trail and Continental Divide Trails corridors.

The Pacific Crest Trail	GAP Status 3 (Sqkm)
San Bernardino National Forest	251.85
Angeles National Forest	210.83
Lassen National Forest	204.52
Shasta-Trinity National Forest	121.00
Tahoe National Forest	104.00
Gifford Pinchot National Forest	101.02
Klamath National Forest	100.85
Mt. Hood National Forest	99.92
Plumas National Forest	92.56

Okanogan-Wenatchee National Forest	77.52
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The Continental Divide Trail	
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Gila National Forest	433.40
Beaverhead-Deerlodge National Forest	264.28
Carson National Forest	245.06
Medicine Bow-Routt National Forest	169.99
National Public Lands - Rawlins Field Office	168.83
West Big Hole Roadless Area	168.12
National Public Lands	167.99
Helena-Lewis and Clark National Forest	140.00
Italian Peak Roadless Area	136.84
White River National Forest	126.68
Cibola National Forest	118.07
