**Definition and Brief History of Highpointing**

Highpointing is the pursuit of reaching the highest elevation within a specified area. The formalization of highpointing each of the 50 U.S States is credited to the late Jack Longacre when back in 1986 he took notice of people mentioning their highpoint achievement in log books at the top of various summits, and from that went on to form the High Pointers Club. Jack became the seventh person to achieve standing on the summits of all 50 states, and as of year-end 2018 only about 300 more people have accomplished this task.

The US State highpoints range from landmarks as low as 345 feet to mountains as tall as 20,320 feet. Many have roads to the highpoint thus requiring little or no human-only effort, whereas others take days or even weeks to scale and should only be attempted by experienced mountaineers.

**Not a One to One Comparison**

Too often people incorrectly equate the effort of reaching one highpoint to that of reaching another; unconsciously assuming that since all are highpoints all amount to equal effort. However, with the highpoints having such a wide range of geographical makeup there are many factors which influence difficulty. Traits such as prominence, isolation, type of terrain, vertical gain required, weather, distance from a road, time required, gear required, natural dangers, and team size/dynamics all influence the struggle (or lack of struggle). As such difficulty/effort rankings tend to be (and rightly so) mostly a matter opinion, and personal experience. One highpointer might drive roads to the highpoints where available, hire guides to reach the most challenging summits, and/or only venture out in fair weather. Yet another might attempt the highpoints solo, or in the winter, and deem it unsporting to not hike at least some of the way to the top. Adding to the confusion the High Pointers Club offers no hard and fast rules for obtaining a highpoint and promotes “any route to the top” be it by horse, car, foot, helicopter, etc. - “the means of ascent is a personal choice”.

Furthermore one might also incorrectly assume that a list of the 50 US State high points ordered by elevation would suffice as a list of difficulty. Unfortunately, that too falls short. For example, Mt Marcy of New York stands shorter than Nebraska’s Panorama Point but the latter is a prairie requiring no uphill walking and the former is a mountain rising over 3000 feet from the trailhead.

**What is Difficulty?**

The dictionary defines difficulty as a thing that is hard to accomplish, deal with, or understand. Effort is defined as strenuous physical or mental exertion. For purposes of this article, and the Walter Scale, difficulty and effort should be considered alternative words.

For some the difficulty might be finding the time to pursue this effort, or coming up with the money needed. For others it might be very challenging to plan the logistics of a of highpointing trip. Others might have no interest in visiting landmarks, and their challenge is to find the motivation to do so.

It is impossible to know and to measure all the factors that make a challenge difficult, and so for the 50 US State highpoint challenge the Walter Scale has identified the measureable and the predictable variables which combined result in level of effort.

**Walter Scale Explained**

The goal of the Walter Scale is to explain how much human-only effort, on a scale from 0 to 1000, is necessary to reach a highpoint under one’s own foot-power only. In other words it is a measure of the walking, hiking, and/or climbing effort from the point where one steps out of the car, or plane, and makes his way, under only his own power, to the high point. The scale does not try to account for all the various routes or means that lead to a high point; nor all the things that might happen en route, rather it bases its results on the least technical standard route under predictable average weather.

The Walter Scale assigns effort points to each highpoint, with these points being a combination of total hiking mileage, vertical gain, terrain difficulty, nights required, and expected (predictable) cold weather days; all other factor are exogenous to it model, and for the sake of simplicity must be ignored.

**Walter Scale Methodology**

As the baseline, the Walter Scale assigns one point to each round-trip hiking mile. The Walter Scale equates vertical feet to horizontal miles by multiplying vertical gain in miles by a difficulty factor and adding that to the baseline. The vertical gain used is an estimate of all elevation gain, including gain related to rising and falling terrain.

The scale considers it to be 15 times more difficult to climb 1 mile then to walk 1 mile, and arrives at this number by comparing the distance a reasonably fit persons can walk in an hour to the distance the same person can climb in an hour. It is estimated that 3 miles can be walked in 1 hour, and likewise 1000 vertical feet (0.189394 miles) can be climbed in one hour. Truncating the ratio of 3/0.189394 the Walter Scale arrives at the multiplier of 15. As such the Walter Scale awards 1 point for each 352 feet of gain. Decimal places are carried through to the one and only final rounding.

To the round-trip and vertical gain points the scale next accounts for terrain difficulty by adding 6 points if a highpoint involves climbing with the use of both hands and feet, but not the protection of a rope, or 12 points if a highpoint involves roped rock climbing or roped glacier travel. Next 1 point for each night required is added in. For example, if the foot-power required in reaching a high point necessitates two days of travel, one point is added in for the over-night stay. As a means of accounting for weather, double points are awarded for each day where afternoon temperature can be expected to be around or below freezing. For example the average summer month temperature on the summit of Rainier is close to or below the 32 F freezing point. As such a 3 day trip up Rainier earns 2 weather points for the summit day when temperature likely will be at or below freezing. On Denali, everyday can remain below freezing so an 18 day trip earns 36 weather points.

Once the points, and any fractions thereof, are summed the results are rounded and then normalized to a 1 - 1000 scale, to allow easy comparisons.

The equation is as follows: Points = [mileage + 15\*(vertical distance in miles) + difficulty + nights + 2\*temperature)/(Largest Of The High Point Scores] \* 1000

**Table 1: The Walter Scale**

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| --- | --- | --- | --- | --- |
| **Walter Scale** | **State** | **HP** | **Vertical Feet** | **Mileage** |
| 1000 | Alaska | Denali | 19000 | 39 |
| 506 | Wyoming | Gannett Peak | 8650 | 40.4 |
| 368 | Montana | Granite Peak | 7700 | 22.2 |
| 366 | Washington | Mount Rainier | 9100 | 16 |
| 291 | Utah | Kings Peak | 5350 | 28.8 |
| 263 | California | Mount Whitney | 6750 | 21.4 |
| 222 | Oregon | Mount Hood | 5300 | 8 |
| 181 | Idaho | Borah Peak | 5550 | 6.8 |
| 151 | New York | Mount Marcy | 3200 | 14.8 |
| 147 | Colorado | Mount Elbert | 5000 | 9 |
| 141 | Maine | Katahdin | 4200 | 10.4 |
| 126 | Nevada | Boundary Peak | 4400 | 7.4 |
| 120 | Arizona | Humphreys Peak | 3500 | 9 |
| 106 | Texas | Guadalupe Peak | 2950 | 8.4 |
| 98 | New Mexico | Wheeler Peak | 3250 | 6.2 |
| 81 | Virginia | Mount Rogers | 1500 | 8.6 |
| 64 | South Dakota | Black Elk Peak | 1500 | 5.8 |
| 55 | Minnesota | Eagle Mountain | 600 | 7 |
| 31 | Connecticut | Mount Frissell-South Slope | 450 | 3.6 |
| 28 | Vermont | Mount Mansfield | 550 | 2.8 |
| 27 | Maryland | Backbone Mountain | 750 | 2.2 |
| 12 | Tennessee | Clingmans Dome | 330 | 1 |
| 10 | Arkansas | Magazine Mountain | 225 | 1 |
| 7 | Hawaii | Mauna Kea | 230 | 0.4 |
| 3 | Missouri | Taum Sauk Mountain | 30 | 0.4 |
| 3 | North Carolina | Mount Mitchell | 100 | 0.2 |
| 2 | West Virginia | Spruce Knob | 20 | 0.3 |
| 1 | Kentucky | Black Mountain | 0 | 0.1 |
| 1 | Massachusetts | Mount Greylock | 20 | 0.1 |
| 1 | South Carolina | Sassafras Mountain | 0 | 0.1 |
| 0 | Alabama | Cheaha Mountain | 0 | 0 |
| 0 | Georgia | Brasstown Bald | 0 | 0 |
| 0 | New Hampshire | Mount Washington | 20 | 0 |
| 1 | Rhode Island | Jerimoth Hill | 0 | 0.2 |
| 0 | Delaware | Ebright Azimuth | 0 | 0 |
| 0 | Florida | Britton Hill | 0 | 0 |
| 0 | Indiana | Hoosier Hill | 0 | 0 |
| 0 | Iowa | Hawkeye Point | 0 | 0 |
| 0 | Kansas | Mount Sunflower | 0 | 0 |
| 0 | Nebraska | Panorama Point | 0 | 0 |
| 68 | Oklahoma | Black Mesa | 775 | 8.6 |
| 21 | Illinois | Charles Mound | 275 | 2.5 |
| 20 | North Dakota | White Butte | 400 | 2 |
| 14 | Louisiana | Driskill Mountain | 150 | 1.8 |
| 5 | Wisconsin | Timms Hill | 120 | 0.4 |
| 2 | New Jersey | High Point | 40 | 0.2 |
| 0 | Michigan | Mount Arvon | 10 | 0 |
| 0 | Mississippi | Woodall Mountain | 0 | 0 |
| 0 | Ohio | Campbell Hill | 0 | 0 |
| 0 | Pennsylvania | Mount Davis | 0 | 0 |

Denali, Gannett Peak, Mount Hood, and Mount Rainier each earn 12 terrain points as they require roped glacier travel. Granite Peak also earns 12 terrain points as it requires roped rock climbing. Borah Peak earns 6 terrain points as it involves unroped scrambling using both hands and feet.

Mount Rainier, Granite Peak, and Kings Peak each earn 2 night points as a typical trip to their respective summits involve staying over for two nights. Mount Whitney earns 1 night point. Gannett Peak earns 3 night points. Denali earns 17 night points.

Denali earns 18 temperature points, and Mount Rainer 1.

**Conclusions**

The Walter Scale reflects the Pareto Principle which states that for most tasks roughly 80% of the results come from 20% of the effort. According to the Walter Scale reaching 39 of the 50 highpoints (aka 78%) requires only 19.96% of the effort. The remaining 11 highpoints (aka remaining 22%) requires 80.04% of the effort. Denali alone requires 22.01% of the total effort.

Denali has a score basically twice as big as any of the other mountains. If fact it requires the next two highest ranking mountains plus one other to come close to its score, and the seven highest single day highpoints combined only barely exceed its score. The average score is less than 91, whereas the highest 10 average 350 points (or 251 without Denali). Remove Denali and the average score drops to 72.

Highpoints can be classified as Mountains, Hills, and Landmarks. The Walter Scale considers 33 of the 50 to be mountains and they require 97.12% of the effort. Another 10 are Hills requiring 2.86% of the effort. The remaining 7 are grouped as Landmarks requiring only 0.02% of the physical effort.

The 29 highpoints I have reached, between May 2001 and October 2019 account for 96.28% of the physical effort. That said my remaining 21 highpoints might be physically easier, but they are typically more difficult to plan for due to distance and cost.