

## **USBA Points Methodology**

The USBA points list posted on the website always raises questions as to how the points are developed, what is its purpose, what are the criteria, and about the value of numbers or the rankings. The USOC and USADA require a ranking of athletes be maintained for both informational purposes and to determine who shall be monitored for out-of-competition drug testing. The recent posting of the updated points is a good moment to also provide some additional background information on its purpose and development as well as the methodology behind the calculations.

The first points list occurred in 1978, which was a critical year of transition for biathlon world-wide. It was in that year that the UIPMB, the predecessor of the IBU made the decision to move from large caliber rifles to .22 caliber and 150 meters to 50 meters ranges. Like other nations, this change allowed the USA to widen its exposure and host races in many new locations. Prior to that year there were few places to hold races and there were usually only a few races a year that selected a team for the World Championships. In the years leading up to 1978 selection was normally done by calculating the percent back of each racer in a 3-of-4 race series.

The changes in 1978 led to a new plan by USMPBA, the predecessor of USBA to increase participation across the country by holding a series of 12 team selection trial races in the West, Midwest and ending in the East before going to the World Championships. The series, beginning in the West in December were to be scored by a new points system that was developed by Walter Williams. The basis and starting point of the system was the previous year's trials results percent back calculations. The main concept of the new scoring system was that racers would be evaluated by their performance against competitors which placed a value for each race by their points ranking. The average of the top five finisher's race times was multiplied by the average of their points ranking to create a "race base." That race base was divided by each racer's time and multiplied by 100 to create points for each competitor in that race. The system allowed a ranking of athletes who were not always competing against each other, but against common competitors.

There were some serious flaws in the original methodology, but over time, the USBA points system was gradually improved to its current form. The present scoring system is actually relatively simple, easy to calculate and reflective of the athletes actual improvement and/or decline in results. It is as follows:

### **A. General Definitions**

1. All races that can be scored will be scored. The minimum number of racers with base points is two. International races will be scored, but only Americans will be in the calculations.

2. Senior, Junior, Youth and Master Men will be scored together, as will Senior Junior, Youth and Master Women, if they ski in the same race. Same race shall mean the same course, the same distance on the same day at about the same time, even if

the results show a separation of classes. Only races following IBU and USBA rules and formats will be scored. For Pursuit races, the actual time on course, or “isolated time” will be used. For men, the first five finishers with previous highest points (from a previous points update) will form the base for these races. For women, the first three racers with the highest points will make up the base. Thus, it is possible for a youth, junior, or master skier to be part of the scoring base for a race.

## B. Race Point Calculation

1. The national points list from the end of the previous season (Fall Points) will be the source of base points for races scored during the first scoring period of the new (current) season. Subsequent point’s updates will be used as the season progresses. There will be two updates during a winter.

2. In senior male races, the best five finishers with the previous highest points are used for the base. This means five finishers with the highest points in the race regardless of their finish position in the race. If there are not five finishers with points, then the best four will be used. If four are not available, then the best three, and if three are not available, then the best two will be used. For junior races and female races, the best three racers with the highest previous points are used to calculate the base points. No event will be scored if there are fewer than two finishers with previous points. This applies to all races, male or female, youth, junior, senior or master.

3. The average race time of the base skiers will be multiplied by the corresponding average base points of these skiers to create a base time for the race. The formula is: (Average top 5 highest USBA Points X Average of those athlete’s finish time) X 100 = Race Base.

4. The time of each racer, is divided into the base to establish the racer's points. The formula is: (Race Base/Racer’s time) x 100 = Race Points. Below is an example for a 10 Km sprint race including Senior, Junior and Master men who raced in the same race:

Rank	Name	Time	Athlete Pts	USBA Pts
1	Sr Male 1	0:27:27.4	86.20	87.77
2	Sr Male 2	0:28:27.2	86.68	84.70
3	Sr Male 3	0:28:51.4	86.07	83.51
4	Sr Male 4	0:28:51.7	81.12	83.50
5	Sr Male 5	0:29:25.4	81.09	81.90
6	Sr Male 6	0:29:54.3	79.36	80.58
7	Sr Male 7	0:30:05.8	77.24	80.07
1	Sr Male 8	0:31:05.0	75.04	77.53
1	Jr Male 1	0:31:16.3	84.02	77.06
9	Sr Male 9	0:32:21.8	79.86	74.46
2	Jr Male 2	0:32:24.1	71.33	74.38
2	Jr Male 3	0:32:29.1	77.86	74.18
10	Sr Male 10	0:32:53.2	73.41	73.28
12	M Male 1	0:34:55.8	70.60	68.99
13	Jr Male 4	0:35:51.3	71.15	67.21

Calculations

Ave Top 5 USBA Pts	Ave of their Finish Time	Race Base
84.82	0:28:58.8	0:24:34.8

### C. Point List Updates

For each update, the competitor's best five (5) races to date (for the entire season) will be averaged to produce his/her new points. If a racer has only one race to date, that race will be averaged with his/her previous points to create his or her new points. This is the only case when previous points will be used in a new points calculation. If a racer has no races, his/her previous points will be carried forward to the new list. For the final update of the season, if racers on the beginning of the season points list have no races for the current season, they will be dropped from the points list. There are three update periods within a season; January 1<sup>st</sup>, February 1<sup>st</sup> and the End of Season Update. These periods correspond to the natural flow of the World Cup, IBU Cup and North American Cup competitions which usually begin in December with a break occurring for the holidays, and another prior to the World Championships. A season's final update becomes the next season's Fall Points and is readjusted so that the highest ranking athlete's points equal 100. The entire ranking list is also appropriately adjusted by mathematical equation. Although all racers will be calculated for points during the season, only USBA members will be listed in the Final Update and Fall Points.