CSEC LRP Wind Drift Estimator 2.0 for 7mm (.284) Caliber

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This sheet demonstrates the use of the **CSEC LRP Wind Drift Estimator 2.0** for all 7mm (.284) calibers.

WD = (CW/K) x R

Base K_{LR} =15
Base Alt = 0 feet, sea level
Base MV = 2700fps for all calibers.
Base BW = 162gr

Altitude correction: .00006 times altitude feet, or .06 for every 1000'
Bullet Weight correction: ±.01 per 1 grain above/below Base BW
Muzzle Velocity correction: ±.001 per 1 fps above/below 2700 fps MV

Scenario 1: You are on a Colorado Trophy Mule Deer hunt at 7200' with 162gr ELD-X 7mm bullet @ 2900 fps. The previous day the screen on your ballistic app got broken in your backpack and is unusable. Last night you calculated your corrected **K_{LR}** and **K_{HR}** to use for wind drift estimation and wrote it down along with your elevation dope on the eye scope cover.
Calculate Corrections:

- Altitude Correction: .43, BW Correction: None, MV Correction: .2
- **Total Correction: 0.63**

Calculate corrected K_{LR} = **K_{LR}** x (1 + .63) = 15 x 1.63 = **24.45 ~ 24**
Calculate K_{HR}:
K_{HR} = **K_{LR}** x 1.4 = 24 x 1.4 = **34**

Early next morning you see your Trophy Mule Deer buck at 675 yds the wind is howling from right to left and the scope mirage is straight line flat. You angle off 45º and the mirage is straight line boiling and at 60º off, the mirage is estimated to be close to 8 mph, you guess it is 7.5 and multiply by 2 to come up with a 15 mph crosswind.
You go to calculate your WD (675) = (15/24)x 675/100… **which is too complicated!**, so you round off numbers to:

WD = (15/25) x (700/100)x = 3/5 x 7 = 21/5 or ~ 4.2 MOA_R
Note: without rounding off, WD = (15/24) x 6.75 = 4.2 MOA_R

Compare with Hornady 4DOF ballistic calculator Total Wind Drift = 3.99 MOA_R
Compare with Bison ballistic calculator Total Wind Drift = 4.1 MOA_R

Scenario 2: That night with your trophy buck hanging on the meat pole, you discuss with your buddies about filling your bear tag. Next morning you head off down the mountain, but loaded with 160 gr Nosler Partition* bullets at 2900 fps. The bear hunt starts at 4500' elevation, so you quickly calculate the new corrected **K_{LR}**:

- Altitude Correction:.27, BW Correction: -.02, MV Correction: .2
- **Total Correction: .45**

Corrected K_{LR} = 15 x 1.45 = 21.75 ~ **22**
***Note: Only use K_{LR} with flat based Spire point bullets at ranges no farther than 450 yds.**

You see a nice Boar at 390 yds with left to right 11 mph crosswind. You quickly round off yardage and calculate:
WD = (11mph/K_{LR}22mph) x 4 = .5 x 4 = 2.0 MOA_L

Compare to Hornady Standard Ballistic calculator Total Wind Drift = 2.2 MOA_L
Compare to Bison ballistic calculator Total Wind Drift = 2.4 MOA_L

Scenario 3: After the hunt you are at CSEC LRP telling about your long shot on a trophy buck. Someone asks if you think you could hit Target J – 1135yd 18"x24" rectangle with the same load. Wind is 22 mph left to right 45º off gun-target line, for a .7 value of ~16 mph. You recalculate the corrected **K_{LR}** value for the LRP

- Altitude Correction: .32, BW Correction: None, MV Correction: .2
- **Total Correction: 0.52**

Corrected K_{LR} = 15 x 1.52 = 22.8 ~ **23**
WD(1135) = (16mph/K_{LR}23mph) x 11.35 = 7.9 ~ 8 MOA_L, add .6 MOA_L for spin drift and set windage turret to **8.5 ~ 8.75MOA_L**.
Your shot impacts the right side of the plate. You add .5 MOA_L for Total Wind Drift 9.25 MOA_L and next shot hits center mass.

Compare to Hornady 4DOF ballistic calculator Total Wind Drift = 9.6 MOA _L.
Compare to Bison ballistic calculator Total Wind Drift = 9.1 MOA_L