CSEC LRP Wind Drift Estimator 2.0 for .338 Caliber

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This sheet demonstrates the use of the **CSEC LRP Wind Drift Estimator 2.0** for all .**338** calibers.

WD = (CW/K) x R

Base K_{LR} = 15
Base Alt = 0 feet, sea level
Base MV = 2700fps for all calibers.
Base BW = 250gr

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 target shooting at 5300' altitude with .338 Lapua Mag 285gr ELD-M @ 2750 fps MV, target is 1000 yards, 4mph crosswind left to right.

Calculate Corrections:

- Altitude Correction: .32, Bullet Weight Correction: .35, Muzzle Velocity Correction: .05
- **Total Correction: 0.72**

Calculate corrected K_{LR} = Base K_{LR} x (1 + 0.72) = 15 x 1.72 = 25.8 ~ 26

Calculate **WD(1000) = (4mph/K_{LR}26mph) x 10 = 1.53 MOA, add .5 MOA_L for spin drift for Total Wind Drift = 2.0 MOA_L**

Compare to Hornady 4DOF ballistic calculator Total Wind Drift = **2.02 MOA_L**
The RSO calls IMPACT!

Scenario 2: After successfully hitting the 1000yd target, you decide to go for the Mile, 1760 yds. Crosswind is still 4 mph left to right.

Calculate K_{ELR}:
K_{ELR} = **K_{LR}** x .75 = 26 x .75 = 19.5 ~ **20**

Calculate WD(1760) = (4mph/K_{ELR}20mph) x 18 = .2 x 18 = 3.6 MOA_L, then add 1.25 MOA_L for Spin Drift,
Total Wind Drift = 4.85 MOA_L
Note: without rounding off, WD(1760) = (4mph/19.5mph) x 17.6 = 3.6 MOA_L

Compare to Hornady 4DOF Total Wind Drift = 4.6 MOA_L.

Scenario 3: You now switch to your favorite Elk rifle and cartridge, a .338 Win Mag 230gr ELD-X at 2930 fps muzzle velocity and calculate a corrected **K_{LR}** and **K_{HR}** value for the hunt coming up in several weeks. You expect to be hunting at about 9,200' elevation.
Calculate Corrections:

- Altitude Correction: .55, BW Correction: -.2, MV Correction: .23
- **Total Correction = 0.58**

Calculate corrected K_{LR} and K_{HR}:
K_{LR} = 15 x 1.58 = 23.6, and since you expect conditions to be very cold (heavier air) you round down to **K_{LR} = 23**
K_{HR} = **K_{LR}** x 1.4 = 23 x 1.4 = **32**

Three weeks later on the last day of the season, you get your chance to fill a Cow Tag, the shot is 425 yds with a 14 mph right to left crosswind with light snow. You dial Elevation and calculate the wind drift:

WD(425) = (14mph/K_{HR}32mph) x 4.25 = 1.86 MOA_R … **but this is too complicated and takes too long**, so you round-off:

WD = (14mph/32mph ~ 7/16 ~ .5) x 4 = 2.0 MOA_R

Compare to Bison Ballistic calculator Total Wind Drift$^{30°F}$ = 2.2 MOA_R
Compare to Hornady 4DOF ballistic calculator Total Wind Drift$^{30°F}$ = 1.99 MOA_R