

.30 WHITETAIL

EXPERIMENTAL RELOADING MANUAL

Compiled Community Data | Draft Edition | April 2026



For Informational Purposes Only — Reload at Your Own Risk

Cartridge: .30 Caliber Wildcat | Parent: 6mm BR Norma
Bullets: 110-120 gr Barnes TAC-TX / Hornady CX, V-Max, Varmageddon
Brass: Peterson (primary), Alpha, Lapua
Edition: April 2026 | Community-Submitted Data

NO SAAMI SPECIFICATION — EXPERIMENTAL DATA ONLY — START 10-15% BELOW LISTED CHARGES

CRITICAL SAFETY DISCLAIMER

EXPERIMENTAL DATA ONLY

This manual documents experimental data for the .30 Whitetail wildcat cartridge. There is NO SAAMI specification, NO manufacturer-published load data, and NO standardized pressure testing. All loads come from independent testers using different rifles, barrels, brass lots, chronographs, and conditions.

RELOADING IS DONE ENTIRELY AT YOUR OWN RISK.

Start at least 10-15% below the lowest charge listed for your specific components. Work up slowly in 0.2-0.5 grain increments watching for: heavy bolt lift, primer cratering or flattening, sticky extraction, case head expansion, extractor marks. Stop immediately at any pressure sign.

Note on UNVERIFIED entries:

Some load rows are marked UNVERIFIED where required fields (barrel length, brass, primer) were not recorded at time of testing. These loads are included for reference only. Confirm missing data with the original tester before use.

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WHAT IS THE .30 WHITETAIL?

The .30 Whitetail is a .30 caliber bottleneck wildcat cartridge developed specifically to comply with Illinois deer hunting regulations while delivering superior ballistic performance over other legal options. It was developed by H&W; Precision of Illinois.

Origins & Design

The parent cartridge is the 6mm BR Norma — one of the most accurate benchrest cartridges ever developed. The neck is opened up to .30 caliber (.308") and the case is shortened to 1.400" to meet Illinois bottle-neck cartridge length requirements. The shoulder is fire-formed to 40 degrees — an "Ackley Improved" modification that increases usable case capacity and reduces brass flow. The result is essentially a shortened .30 BRA (30 BR Ackley Improved), optimized for hunting performance.

The Illinois Law

Illinois prohibited rifle deer hunting for decades, limiting hunters to shotguns and muzzleloaders since 1957. In January 2023, the state passed HB 4386 allowing single-shot centerfire rifles chambered in legal calibers. Legal bottle-neck cartridges must be .30 caliber or larger with a case length not exceeding 1 and 2/5 inches (1.400"), must have a factory ammunition offering, and must show at least 500 ft-lbs of energy at the muzzle. The .30 Whitetail was designed to meet these exact requirements while outperforming every other legal option.

What It Offers

Paired with a 120 grain Barnes TAC-TX bullet at approximately 2,850 fps, the .30 Whitetail outperforms the 350 Legend from the muzzle and overtakes the 450 Bushmaster in delivered energy at roughly 125 yards — despite the .30 Whitetail firing a much lighter bullet. The advantage is the higher ballistic coefficient (.358 BC vs .215 for the 350 Legend and .21 for the 450 Bushmaster) — the bullet retains velocity and energy far more efficiently at distance. Rifles chambered in .30 Whitetail are shooting MOA accuracy out to 500 yards.

Industry Recognition

The cartridge is gaining traction with established industry manufacturers. Forster Products now offers Ultra Die Sets for the .30 Whitetail. Iron Door Guns offers .30 Whitetail barrels. Factory ammunition is available from H&W; Precision. As awareness of the cartridge grows in the Illinois hunting community and beyond, additional components and chamberings continue to emerge. See the Ballistic Comparison table in the General Observations section.

CARTRIDGE SPECIFICATIONS

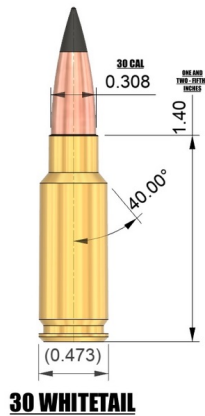


Figure 1: .30 Whitetail cartridge dimensions

Specification	Value	Notes
Parent Case	6mm BR Norma	Necked up to .308"
Max Case Length	1.400"	Trim-to: 1.390"
Shoulder Angle	40°	Fire-formed
Bullet Diameter	.308"	Standard .30 caliber
Typical Bullet Weight	110-120 gr	150 gr also tested
Typical Primers	CCI 41 / CCI 450	Small rifle magnum
Test Platform	50 Miller Proof / 30 BRA Miller	Single-shot
Barrel Lengths Tested	10" — 24"	Lapua, Alpha, proof barrels
Twist Rates Tested	1:9, 1:10, 1:11.25, 1:12	—
Neck Tension (test)	0.004"	May vary by setup
Intended Use	Deer hunting	Illinois compliance focus

BULLET RPM BY TWIST RATE

Rotations per minute at 2,950 fps muzzle velocity. Higher RPM improves stabilization but excessive spin can affect accuracy and terminal performance. The 1:10 twist is the primary test rate for this cartridge with 110-120 gr bullets.

Twist Rate	RPM at 2,950 fps	Notes
1:10	212,400	Primary test twist — 110-120 gr bullets
1:11.25	188,800	Tested
1:12	177,000	Tested
1:13	163,384	Reference
1:14	151,714	Reference

Formula: $RPM = (MV \times 720) / \text{twist rate in inches}$. Calculated at 2,950 fps.

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LOAD DATA — 110 GRAIN BULLETS

H110 — CCI 41 — 0.004" Neck Tension

Bullet	Powder	Charge	Vel fps	Barrel	Twist	Brass	COAL	X Fired	Pressure / Notes
110 CX	H110	28.8	3,080	10"	—	Lapua	—	—	Heavy bolt lift
110 TAC-TX	H110	28.8	3,052	10"	—	Lapua	—	—	Heavy bolt lift
110 Varmageddon	H110	28.8	3,004	10"	—	Lapua	—	—	Heavy bolt lift
110 V-Max	H110	28.8	2,999	10"	—	Lapua	—	—	Bolt lift 3/4 — 1" group
110 V-Max	H110	28.5	2,958	10"	—	Lapua	—	—	Slight lift — 1" group *
110 V-Max	H110	28.2	2,931	10"	—	Lapua	—	—	Clean — 1" group *
110 V-Max	H110	29.0	3,030	10"	—	Alpha	—	—	Pressure noted
110 V-Max	H110	28.5	2,945	10"	—	Alpha	—	—	—

* = Promising load

Other Powders — 110 gr V-Max — CCI 41

Bullet	Powder	Charge	Vel fps	Barrel	Twist	Brass	COAL	X Fired	Pressure / Notes
110 V-Max	Benchmark	35.5	2,775	10"	—	Lapua	—	—	Full case — 0.5" group *
110 V-Max	H335	38.0	2,920	10"	—	Lapua	—	—	0.5" group *

* = Promising load

CFE BLK — 110 gr — OVER PRESSURE and Community Submission

Rows 1-2: over pressure. Row 3: community submission — barrel/twist not recorded.

Bullet	Powder	Charge	Vel fps	Barrel	Twist	Brass	COAL	X Fired	Pressure / Notes
110 V-Max	CFE BLK	34.0	3,080	—	—	Alpha	—	—	OVER PRESSURE
110 CX	CFE BLK	33.5	3,090	—	—	—	—	—	OVER PRESSURE
110 Hornady CX	CFE BLK	32.6	2,917	—	—	Lapua	2.22"	—	No pressure — UNVERIFIED barrel/twist

115 gr Lehigh Maximum Expansion — Alpha Brass

H4198 charge not recorded — velocity range shown from target photo data.

Bullet	Powder	Charge	Vel fps	Barrel	Twist	Brass	COAL	X Fired	Pressure / Notes
115 Lehigh ME	H4198	not recorded	2,757–2,800	—	—	Alpha	2.096"	—	Good groups — bolt lift at top end
115 Lehigh ME	CFE BLK	32.0	—	—	—	Alpha	—	—	Groups: 2.021" – 2.080"

CFE BLK at 33.5+ gr with 110 gr bullets produced over-pressure — approach all CFE BLK charges cautiously.

LOAD DATA — 120 GRAIN BULLETS

120 gr Barnes TAC-TX — All Tests

AA2200 — Alpha brass | CCI 450 SRM | COAL -0.072" from lands

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
AA2200	34.6	2,866	9.9	21.0	-0.072"	24"	1:10	Alpha	—	—
AA2200	34.8	2,884	7.6	16.2	-0.072"	24"	1:10	Alpha	—	—
AA2200	35.0	2,906	2.2	5.5	-0.072"	24"	1:10	Alpha	—	Exceptional node *

* AA2200 35.0 gr — SD 2.2 / ES 5.5 — exceptional velocity node

AA2200 — prior test data

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
AA2200	34.5	2,885	—	—	—	—	—	Alpha	2x	Good bolt lift *
AA2200	34.8	2,905	—	—	—	—	—	Alpha	2x	Good bolt lift *
AA2200	35.4	2,931	—	—	—	—	—	Alpha	2x	Edge of pressure *
AA2200	35.7	2,973	—	—	—	—	—	Alpha	2x	Heavy bolt lift
AA2200	36.0	2,990	—	—	—	—	—	Alpha	2x	Heavy bolt lift

CFE BLK — Alpha brass | CCI 450 SRM | COAL -0.072" from lands

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
CFE BLK	32.0	2,889	3.8	8.8	-0.072"	24"	1:10	Alpha	—	—
CFE BLK	32.4	2,930	4.9	11.2	-0.072"	24"	1:10	Alpha	—	—
CFE BLK	32.8	2,951	8.6	19.6	-0.072"	24"	1:10	Alpha	—	—

CFE BLK — Community submission — UNVERIFIED barrel/twist

Primer: Federal 205 (probable — unconfirmed). No pressure noted.

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
CFE BLK	32.6	2,860	4.8	13.9	2.22"	—	—	Alpha	—	No pressure (UNVERIFIED barrel)
CFE BLK	32.6	2,878	8.6	24.3	2.22"	—	—	Lapua	—	No pressure (UNVERIFIED barrel)
CFE BLK	33.0	2,914	6.8	—	2.190"	24"	1:10	Peterson	—	Clean — different barrel setup

CFE BLK — OVER PRESSURE

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
CFE BLK	34.0	3,060	—	—	—	—	—	Alpha	—	OVER PRESSURE
CFE BLK	34.0	3,080	—	—	—	—	—	Alpha	—	OVER PRESSURE — 110 V-Max
CFE BLK	33.5	3,090	—	—	—	—	—	—	—	OVER PRESSURE — 110 CX

H322 — Alpha brass | CCI 450 SRM | COAL -0.072" from lands

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
H322	33.6	2,724	8.4	19.0	-0.072"	24"	1:10	Alpha	—	—
H322	33.8	2,730	2.1	3.0	-0.072"	24"	1:10	Alpha	—	Best ES on sheet *
H322	34.0	2,736	9.3	24.0	-0.072"	24"	1:10	Alpha	—	—

* H322 33.8 gr — SD 2.1 / ES 3.0 — best ES on target sheet

N120 — Alpha brass | CCI 450 SRM | COAL -0.072" from lands

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
N120	29.6	2,801	9.7	20.9	-0.072"	24"	1:10	Alpha	—	—
N120	29.8	2,821	8.5	20.7	-0.072"	24"	1:10	Alpha	—	HBL — Heavy Bolt Lift

N120 — prior test data

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
N120	29.5	2,831	—	—	—	—	—	Alpha	2x	Great 0.5" group *
N120	29.7	2,836	—	—	—	—	—	Alpha	2x	Good group *
N120	30.0	2,855	—	—	—	—	—	Alpha	2x	Slight bolt lift
N120	30.3	2,875	—	—	—	—	—	Alpha	2x	Bolt lift
N120	30.6	2,909	—	—	—	—	—	Alpha	2x	Heavy bolt lift
N120	30.9	2,928	—	—	—	—	—	Alpha	2x	Heavy bolt lift
N120	31.0	2,984	—	—	—	—	—	Alpha	2x	Pressure — HBL
N120	30.5	2,948	—	—	—	—	—	Alpha	2x	110 TAC-TX — great 0.5" group *

H110 — 120 gr TAC-TX

Rows 1-2: handwritten notes — brass and primer not recorded. UNVERIFIED.

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
H110	27.5	2,872	—	—	—	24"	1:10	UNVERIFIED	—	Potential *
H110	28.0	2,934	—	—	—	24"	1:10	UNVERIFIED	—	Decent swipe
H110	27.5	2,852	—	—	—	—	—	Alpha	—	Prior test entry
H110	27.5	2,872	—	—	—	—	—	Alpha	—	Prior test — potential *

H4198 — 120 gr TAC-TX

Rows 1-2: handwritten notes — brass and primer not recorded. UNVERIFIED.

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
H4198	30.5	2,757	—	—	—	24"	1:10	UNVERIFIED	—	Some bolt lift
H4198	31.0	2,800	—	—	—	24"	1:10	UNVERIFIED	—	OVER PRESSURE / MAX — DO NOT EXCEED

H4198	30.5	2,757	—	—	—	—	—	Alpha	—	Bolt lift — prior test
H4198	31.0	2,800	—	—	—	—	—	Alpha	—	OVER PRESSURE / full case — prior test

IMR 4198 — Alpha brass | CCI 450 | OAL -0.02"

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
IMR 4198	29.5	2,781	—	—	-0.02"	—	—	Alpha	2x	Good group
IMR 4198	29.8	2,784	—	—	-0.02"	—	—	Alpha	2x	Good group
IMR 4198	30.3	2,852	—	—	-0.02"	—	—	Alpha	2x	Good group

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LOAD DATA — ADDITIONAL POWDERS

H335

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
H335	36.5	2,751	—	—	—	—	—	Alpha	—	Slight swipe + bolt lift *
H335	38.0	2,920	—	—	—	—	—	Lapua	—	110 V-Max — 0.5" group *

Other Powders

Powder	Charge	Vel fps	SD	ES	COAL	Barrel	Twist	Brass	X Fired	Pressure / Notes
X-Terminator	35.5	2,700	—	—	—	—	—	—	—	120 TAC-TX — full case
N130	31.5	2,797	—	—	—	—	—	—	—	120 TAC-TX
Tac	35.0	2,600	—	—	—	—	—	—	—	110 V-Max
Benchmark	35.5	2,775	—	—	—	—	—	Lapua	—	110 V-Max — full case — 0.5" group *

150 gr Speer — H110 — OVER PRESSURE

Bullet	Powder	Charge	Vel fps	Brass	X Fired	Notes
150 gr Speer	H110	26.0	2,698	—	—	OVER PRESSURE — DO NOT USE AS STARTING POINT

PROMISING LOADS SUMMARY

Loads below showed good groups and manageable bolt lift. These are reference starting points ONLY — always begin 10-15% below and work up carefully.

Bullet	Powder	Charge	Velocity	SD/ES	Notes
120 TAC-TX	AA2200	35.0 gr	2,906 fps	2.2/5.5	Exceptional SD node *
120 TAC-TX	H322	33.8 gr	2,730 fps	2.1/3.0	Best ES on sheet *
120 TAC-TX	CFE BLK	32.0 gr	2,889 fps	3.8/8.8	Solid SD/ES *
120 TAC-TX	CFE BLK (comm)	32.6 gr	2,860-2,878	4.8-8.6	No pressure — UNVERIFIED barrel
120 TAC-TX	N120	29.5-30.0 gr	2,831-2,855 fps	—	Multiple 0.5" groups
120 TAC-TX	AA2200	34.5-35.4 gr	2,885-2,931 fps	—	Wide safe window (prior)
120 TAC-TX	IMR 4198	29.5-30.3 gr	2,781-2,852 fps	—	Good groups — Alpha brass
110 V-Max	H110	28.2-28.5 gr	2,931-2,958 fps	—	~1" groups — Lapua brass
110 V-Max	H335	38.0 gr	2,920 fps	—	0.5" group
110 TAC-TX	N120	30.5 gr	2,948 fps	—	Great 0.5" group (prior)
115 Lehigh ME	H4198	not recorded	2,757-2,800 fps	—	Good groups — Alpha brass — needs confirmed charge
115 Lehigh ME	CFE BLK	32.0 gr	—	—	Groups 2.02"-2.08" — Alpha brass

* = Standout SD/ES node — April 2026, 24" barrel, 1:10 twist

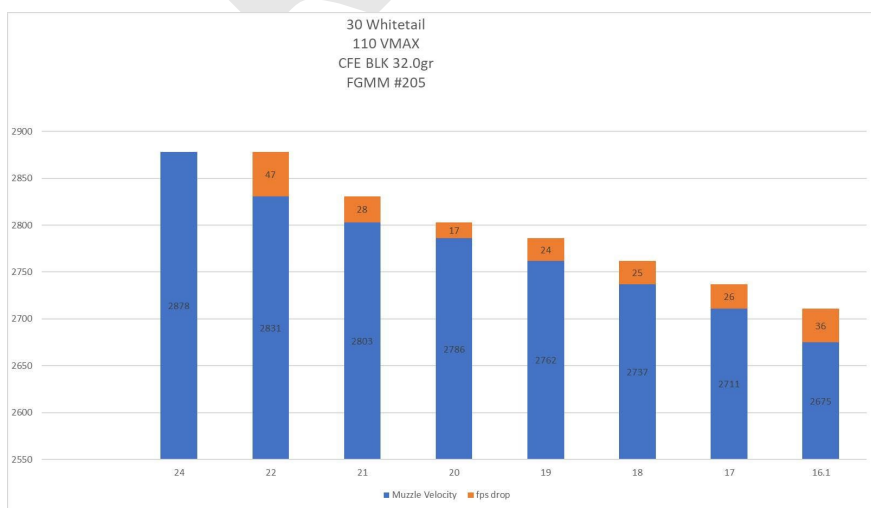


Figure 2: .30 Whitetail — 110 gr V-Max / CFE BLK — Velocity by barrel length

GENERAL OBSERVATIONS

AA2200 with 120 gr TAC-TX

Strong performer across two separate test sessions. The 35.0 gr charge produced an exceptional SD of 2.2 / ES of 5.5 — a clear velocity node. Wide safe window from 34.5-35.4 gr in prior testing. Top recommended powder for 120 TAC-TX development.

H322 with 120 gr TAC-TX

The 33.8 gr charge produced SD 2.1 / ES 3.0 — the best extreme spread on the April 2026 target sheet. Worth continued development. Velocity is lower than AA2200 and CFE BLK but consistency is outstanding.

CFE BLK with 120 gr TAC-TX

Good performance at 32.0-32.4 gr with solid SD/ES in the April 2026 session. Community submission confirms no pressure at 32.6 gr across both Lapua and Alpha brass (UNVERIFIED barrel). NOTE: Prior testing at 33.5-34.0 gr across multiple bullets produced over-pressure signs — do not exceed 32.8 gr without careful monitoring. CFE BLK is the most pressure-sensitive powder in this data set.

N120 with 120 gr TAC-TX

Prior testing showed multiple 0.5" groups in the 29.5-30.0 gr range. April 2026 session confirms 29.6 gr as safe. N120 29.8 gr produced HBL — do not exceed 29.6 gr without verifying in your specific setup.

H110 with 110 gr Bullets

Produced 2,931-3,080 fps across all 110 gr bullets at 28.8 gr. Pressure rises quickly — heavy bolt lift reported at 28.8 gr on CX, TAC-TX, and Varmageddon. The 28.2-28.5 gr range with V-Max produced clean 1" groups and is the most manageable H110 window. For 120 gr TAC-TX, H110 at 27.5-28.0 gr shows potential but brass and primer were not recorded — treat as UNVERIFIED.

115 gr Lehigh Maximum Expansion

Target photo data shows good groups with H4198 in Alpha brass at 2,757-2,800 fps (charge not recorded — bolt lift noted at top end). CFE BLK at 32.0 gr produced groups of 2.021"-2.080". Promising bullet for further development — additional confirmed data needed before recommending charges.

H4198 with 120 gr TAC-TX

31.0 gr is MAX with over-pressure signs in both test sessions. 30.5 gr shows bolt lift. Begin significantly below these charges and work up cautiously.

Unverified Entries

Several loads are marked UNVERIFIED where barrel length, brass, or primer were not recorded at time of testing. Preserved for reference only. Confirm missing data with the original tester before use.

Ballistic Comparison (100 yard zero)

Barrel Specs : 24" 1:10 CRB M24

Cartridge	350 Legend	.30 Whitetail	450 Bushmaster
Bullet	Hornady FTX	Barnes TAC-TX	Hornady FTX
Bullet Weight	165 grain	120 grain	250 grain
Bullet BC	0.215	0.358	0.21
Muzzle Velocity (fps)	2200	2850	2200
Muzzle Energy	1773	2164	2687
100 yard data			
Drop in inches	0	0	0
Velocity (fps)	1839	2607	1832
Energy (ft/lbs)	1240	1811	1863
200 yard data			
Drop in inches	8"	3"	8"
Velocity (fps)	1529	2380	1515
Energy (ft/lbs)	856	1508	1274
300 yard data			
Drop in inches	32"	12"	32"
Velocity (fps)	1290	2177	1276
Energy (ft/lbs)	609	1269	903
500 yard data			
Drop in inches	151"	55"	151"
Velocity (fps)	1000	1786	988
Energy (ft/lbs)	365	855	542

Source: H&W; Precision — Ballistic Comparison, 100 yard zero, 24" 1:10 CRB M24

TARGET GALLERY

Add target group sheets here. Annotate each with COAL, load details, velocity string, date, temperature, and barrel information.



CONTRIBUTE YOUR DATA

Use the .30 Whitetail Data Compiler tool to submit photos of your targets, chronograph data, and load notes. The tool extracts the data and emails it directly for inclusion in the next edition. This is a living document.

Required Fields	Helpful Additions
Barrel length and twist rate	Target photos (annotated)
Brass brand and number of firings	Chronograph screen/data photos
Bullet brand, model, and weight	Group size at distance
Powder brand and charge weight	Temperature at time of test
Primer brand, model, size, type	Case measurements before/after
Velocity strings (3+ shots)	Comparison to previous loads
Pressure observations	Photos of primer condition

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