EAST KERN COUNTY COMMUNITY FOUNDATION · BORON, CALIFORNIA

Boron Wind Findings March 1 to June 30, 2026

Hourly wind record from the nearest public instrument (KEDW, Edwards Air Force Base), with high-wind dates, duration counts, and the coded reports that support each figure.

Prepared September 13, 2026
Source: Iowa Environmental Mesonet archive of KEDW METAR observations
Times are Pacific local (PST/PDT). Wind speeds converted from knots at 1 kt = 1.150779 mph.

Bottom line

The factual wind findings in this report are based only on timestamped, coded METAR observations from KEDW at Edwards Air Force Base, archived by the Iowa Environmental Mesonet (IEM). KEDW is approximately 14.8 miles southwest of the Boron reference point used in this analysis. It is the closest suitable public instrument record identified for the period, but it is **not an on-site Boron measurement**.

The analysis covers every calendar date from March 1 through June 30, 2026. Of 2,927 physical hours in the period, 2,712 had an accepted representative wind observation (92.7% coverage). March 8 contains 23 physical hours because daylight saving time began.

47.2 mph

HIGHEST REPORTED GUST

April 2 (5:36 p.m.) and April 22 (2:53 p.m.)

34.5 mph

HIGHEST SUSTAINED WIND

April 2 at 5:12 p.m. PDT

21 hours

LONGEST RUN ≥ 15 MPH

May 26, 1:55 a.m. to 9:55 p.m. PDT

Key verified findings from the KEDW record

- **Highest accepted sustained wind:** 34.5 mph, April 2 at 5:12 p.m. PDT.
- **Highest reported gust or peak wind:** 47.2 mph, reported on both April 2 and April 22.
- **May 17:** maximum sustained wind 29.9 mph at 3:30 p.m. PDT; maximum reported peak wind 41.4 mph at 3:23 p.m. PDT; daily observation coverage 100%.
- **Longest sequence at or above the 15 mph analytical threshold:** 21 consecutive qualifying hourly observations on May 26, from 1:55 a.m. through 9:55 p.m. PDT (first-to-last span 20 hours).
- **Dominant wind-from sector** was southwest in every monthly summary. The derived downwind transport direction was generally **east to northeast**.

These results describe conditions at KEDW. Local wind at a particular Boron property may differ because of distance, terrain, structures, and small-scale weather variation.

Monthly summary

MONTH	OBS / EXP HRS	COVERAGE	MEAN MPH	MEDIAN MPH	MAX SUSTAINED	MAX GUST	WIND FROM	TRANSPORT TOWARD
March	675 / 743	90.8%	8.1	6.9	32.2 mph Mar. 7 8:55 a.m. PST	42.6 mph Mar. 7 9:43 a.m. PST	SW	E, 70° true
April	613 / 720	85.1%	12.3	11.5	34.5 mph Apr. 2 5:12 p.m. PDT	47.2 mph Apr. 2 5:36 p.m. PDT	SW	NE, 62° true

MONTH	OBS / EXP HRS	COVERAGE	MEAN MPH	MEDIAN MPH	MAX SUSTAINED	MAX GUST	WIND FROM	TRANSPORT TOWARD
May	717 / 744	96.4%	12.7	12.7	33.4 mph May 26 9:45 a.m. PDT	46.0 mph May 26 10:19 a.m. PDT	SW	NE, 57° true
June	707 / 720	98.2%	14.0	13.8	28.8 mph June 13 5:55 p.m. PDT	40.3 mph June 26 1:59 p.m. PDT	SW	NE, 49° true

Transport is the vector-derived direction air would move (opposite of wind-from). It is a screening indicator, not a dispersion model.

Observed-hour duration by threshold

Counts of accepted representative hourly observations meeting each threshold, and the longest run of consecutive qualifying observations ("Run"). These are not minute-by-minute continuous-duration measurements and are not regulatory thresholds.

MONTH	≥10 HRS	RUN	≥15 HRS	RUN	≥20 HRS	RUN	≥25 HRS	RUN	≥30 HRS	RUN
March	242	24	92	13	45	10	12	3	2	2
April	376	40	204	17	102	9	30	5	1	1
May	468	69	236	21	129	17	48	10	5	2
June	542	63	273	15	120	7	28	4	0	0

Selected high-wind dates

Ordered by maximum reported gust. Times are Pacific local.

DATE	COVERAGE	MEAN SUSTAINED	MAX SUSTAINED	MAX REPORTED GUST	WIND FROM	HRS ≥15	RUN ≥15
April 2	75.0%	15.7 mph	34.5 mph at 5:12 p.m.	47.2 mph at 5:36 p.m.	SW/W	8	4
April 22	100.0%	15.9 mph	29.9 mph at 6:55 p.m.	47.2 mph at 2:53 p.m.	SW/W	11	7
May 26	100.0%	23.5 mph	33.4 mph at 9:45 a.m.	46.0 mph at 10:19 a.m.	SW	21	21
May 3	100.0%	16.3 mph	32.2 mph at 4:55 p.m.	44.9 mph at 4:08 p.m.	SW	12	11
May 13	100.0%	19.5 mph	28.8 mph at 1:55 p.m.	43.7 mph at 4:43 p.m.	SW	16	14
March 7	100.0%	16.7 mph	32.2 mph at 8:55 a.m.	42.6 mph at 9:43 a.m.	NE	13	13
May 17	100.0%	17.2 mph	29.9 mph at 3:30 p.m.	41.4 mph at 3:23 p.m.	W	12	11

DATE	COVERAGE	MEAN SUSTAINED	MAX SUSTAINED	MAX REPORTED GUST	WIND FROM	HRS ≥15	RUN ≥15
March 4	100.0%	12.9 mph	28.8 mph at 4:55 p.m.	41.4 mph at 11:17 p.m.	W	10	7
April 11	58.3%	18.7 mph	25.3 mph at 3:55 p.m.	41.4 mph at 4:10 p.m.	SW	11	5
April 21	95.8%	19.3 mph	31.1 mph at 10:55 a.m.	40.3 mph at 4:24 p.m.	W	17	10
April 25	70.8%	20.5 mph	29.9 mph at 2:55 p.m.	40.3 mph at 3:13 p.m.	SW	13	11
April 16	100.0%	19.7 mph	28.8 mph at 7:55 p.m.	40.3 mph at 7:00 p.m.	SW	18	17
April 26	66.7%	21.5 mph	28.8 mph at 4:55 p.m.	40.3 mph at 11:50 a.m.	SW	14	12
May 16	100.0%	19.5 mph	28.8 mph at 12:03 p.m.	40.3 mph at 6:38 p.m.	W	16	14
June 27	100.0%	18.6 mph	28.8 mph at 3:55 p.m.	40.3 mph at 4:58 p.m.	SW	15	9

Controlling coded reports for key findings

The raw coded METAR text was treated as controlling. Wind speed is reported in knots and converted using 1 knot = 1.150779448 mph. In a METAR, direction is the direction from which the wind came, measured clockwise from true north. `G` is the gust value. `PK WND` is a peak-wind remark.

April 2: 47.2 mph peak wind

```
KEDW 030055Z 28023G34KT 60SM FEW060 FEW290 17/02 A2982 RMK AO2A PK WND 28041/36 SLP089
T01740018
```

`PK WND 28041/36` means a peak wind from 280° true at 41 knots, occurring at minute 36 of the hour. Forty-one knots converts to 47.2 mph.

April 22: second 47.2 mph peak wind

```
KEDW 222155Z 29014G18KT 90SM FEW060 FEW350 21/M03 A3001 RMK AO2A PK WND 24041/53 SLP153
T02051026
```

May 17: 41.4 mph peak wind

```
KEDW 172255Z 29021G30KT 40SM SCT320 26/M05 A2961 RMK AO2A PK WND 28036/23 SLP006 T02551050
```

Data quality and exclusions

- Raw reports in the period: 3,128.
- Accepted representative hourly observations with wind: 2,712 of 2,927 physical hours.
- Missing or rejected representative hours: 215.
- Sustained-speed convenience fields checked against the coded METAR body: 3,127, with zero mismatches.
- Peak-wind convenience values checked against coded `PK WND` remarks: 493, with zero mismatches.
- Body-gust convenience fields had one mismatch. Calculations used the coded report, not that convenience field.
- One malformed report was retained for audit but excluded from every numerical finding. The June 24, 7:55 p.m. PDT report says `26045G22KT`, a 45-knot sustained speed with a lower 22-knot gust, which is internally inconsistent:

```
KEDW 250255Z 26045G22KT 50SM CLR 28/4 A2995 RMK SLP114 T02830039 RVRNO
```

Method

1. Retrieve all KEDW routine and special METAR reports covering March 1, 12:00 a.m. PST through June 30, 11:59 p.m. PDT.
2. Parse wind direction, sustained speed, body gust, and `PK WND` values directly from each coded METAR.
3. Exclude internally malformed wind reports from numerical calculations while preserving them in the audit record.
4. Select one representative observation for each UTC hour, favoring a valid wind report nearest minute 55.
5. Convert knots to mph using 1.150779448.
6. Calculate daily and monthly coverage, descriptive values, direction sectors, threshold counts, and consecutive-observation sequences.

Direction duration is based on eight compass sectors plus variable/calm/unknown categories. The transport direction is a vector-derived direction toward which air would move, calculated as the opposite of the wind-from direction. It is a screening indicator, not a dispersion model, and not proof of where dust originated or landed.

Cameras, photographs, and other visual material

Verified source and date, but not a Boron wind measurement

Two dated NASA HLS Sentinel-2 S30 surface-reflectance images were located for April 22 and May 17. Their source and requested dates are verifiable through NASA GIBS. The geographic frame includes Boron and KEDW. These optical images do not measure wind speed or direction, do not establish continuous conditions, and do not prove that any visible feature is dust or identify its source.

A CIRA regional satellite-media page was also identified for a May 17 Nevada/California dust event ("Dust Storm Moving Through Nevada and California"). It is regional context only and is not a Boron-specific observation or proof of a Boron dust source.

Official current cameras: too distant to prove Boron conditions

No public live camera located in Boron, and no public historical Boron camera archive, was identified in this research.

- **Southern California Edison** weather and fire-detection cameras: nearest inventory point approximately 27.6 miles from Boron. Contextual only.
- **Caltrans** highway cameras: nearest identified camera SR-14 at Silver Queen Road, approximately 28.9 miles from Boron. No public historical archive identified.

Camera pages are live/current resources. A current image cannot establish conditions on a past 2026 date unless the operator supplies a timestamped archive.

Unverified lead: not factual evidence

A community Facebook video/post is included in the underlying research only as a lead because its claims and recording context were not independently verified. Nothing asserted in it is used as a factual finding in this report.

What this report can and cannot establish

It can establish what the accepted KEDW instrument reports said at their timestamps, how those coded observations were processed, and how much of the period is represented.

It cannot by itself establish the exact wind at a specific Boron property, continuous minute-by-minute duration, dust concentration, the presence of dust in an optical image, the source of dust, causation, regulatory noncompliance, property damage, or personal exposure. Those questions normally require on-site records, calibrated particulate monitoring, chain-of-custody evidence, site-specific analysis, and qualified expert interpretation.

Primary sources

- Iowa Environmental Mesonet ASOS/METAR download interface: mesonet.agron.iastate.edu/request/download.phtml (station KEDW, 2026-03-01 to 2026-06-30)
- National Weather Service METAR decoding key and ASOS User's Guide
- NWS Boron point forecast page (displays KEDW as the nearby observation)
- NOAA/NCEI station history file; Western Regional Climate Center RAWS directory
- NASA GIBS (HLS Sentinel-2 S30 imagery, April 22 and May 17, 2026); CIRA satellite media

Daily appendix

One row for every date in the period. "Hrs ≥15" and "Run ≥15" use the analytical 15 mph threshold described above. A dash in the gust column means no accepted gust or peak-wind value was available for that daily maximum field. Speeds in mph.

DATE	OBS / EXP HRS	COVERAGE	MEAN MPH	MAX SUST.	MAX GUST	WIND FROM	HRS ≥15	RUN ≥15
2026-03-01	24 / 24	100.0%	8.9	18.4	29.9	W	1	1
2026-03-02	24 / 24	100.0%	12.7	23.0	29.9	W	7	3
2026-03-03	23 / 24	95.8%	3.2	8.1	none	W	0	0
2026-03-04	24 / 24	100.0%	12.9	28.8	41.4	W	10	7
2026-03-05	23 / 24	95.8%	11.5	27.6	38.0	W	4	4
2026-03-06	24 / 24	100.0%	5.1	15.0	18.4	NE	0	0
2026-03-07	24 / 24	100.0%	16.7	32.2	42.6	NE	13	13
2026-03-08	23 / 23	100.0%	5.2	11.5	none	NE	0	0
2026-03-09	23 / 24	95.8%	5.8	18.4	24.2	SW/W	1	1
2026-03-10	24 / 24	100.0%	14.4	27.6	40.3	SW	7	5
2026-03-11	24 / 24	100.0%	4.1	15.0	none	S	0	0
2026-03-12	24 / 24	100.0%	3.4	9.2	17.3	N	0	0
2026-03-13	19 / 24	79.2%	3.0	11.5	none	S	0	0
2026-03-14	23 / 24	95.8%	12.4	27.6	38.0	SW	6	6
2026-03-15	24 / 24	100.0%	3.4	8.1	none	S	0	0
2026-03-16	24 / 24	100.0%	3.2	9.2	none	NE	0	0
2026-03-17	22 / 24	91.7%	4.2	9.2	none	W	0	0
2026-03-18	24 / 24	100.0%	4.2	9.2	none	N/W	0	0
2026-03-19	22 / 24	91.7%	3.3	6.9	none	SW	0	0
2026-03-20	24 / 24	100.0%	3.8	15.0	none	SW	0	0
2026-03-21	24 / 24	100.0%	9.5	23.0	33.4	SW	5	4
2026-03-22	24 / 24	100.0%	6.6	13.8	none	SW	0	0
2026-03-23	24 / 24	100.0%	8.8	17.3	23.0	SW	2	2
2026-03-24	24 / 24	100.0%	7.8	18.4	none	SW	3	3
2026-03-25	24 / 24	100.0%	11.9	25.3	34.5	SW	8	6
2026-03-26	17 / 24	70.8%	9.7	18.4	34.5	SW	3	3
2026-03-27	13 / 24	54.2%	8.6	19.6	32.2	SW	2	2
2026-03-28	17 / 24	70.8%	12.5	20.7	28.8	SW	6	2

DATE	OBS / EXP HRS	COVERAGE	MEAN MPH	MAX SUST.	MAX GUST	WIND FROM	HRS ≥15	RUN ≥15
2026-03-29	5 / 24	20.8%	13.8	19.6	25.3	SW	1	1
2026-03-30	14 / 24	58.3%	12.7	23.0	34.5	SW	5	2
2026-03-31	23 / 24	95.8%	13.8	27.6	39.1	SW/W	8	4
2026-04-01	24 / 24	100.0%	15.8	27.6	36.8	SW	11	10
2026-04-02	18 / 24	75.0%	15.7	34.5	47.2	SW/W	8	4
2026-04-03	19 / 24	79.2%	10.5	20.7	28.8	NE	7	5
2026-04-04	18 / 24	75.0%	7.8	16.1	21.9	E	2	2
2026-04-05	19 / 24	79.2%	4.5	11.5	none	SW	0	0
2026-04-06	13 / 24	54.2%	11.2	17.3	29.9	SW	1	1
2026-04-07	15 / 24	62.5%	11.3	20.7	none	SW	4	3
2026-04-08	17 / 24	70.8%	10.6	20.7	26.5	SW/W	4	4
2026-04-09	19 / 24	79.2%	15.3	23.0	36.8	SW	9	9
2026-04-10	16 / 24	66.7%	17.4	23.0	35.7	SW	10	6
2026-04-11	14 / 24	58.3%	18.7	25.3	41.4	SW	11	5
2026-04-12	19 / 24	79.2%	16.7	28.8	39.1	SW	7	5
2026-04-13	20 / 24	83.3%	14.2	20.7	31.1	SW	8	6
2026-04-14	19 / 24	79.2%	10.9	23.0	25.3	SW	3	3
2026-04-15	21 / 24	87.5%	13.3	24.2	32.2	SW	8	8
2026-04-16	24 / 24	100.0%	19.7	28.8	40.3	SW	18	17
2026-04-17	22 / 24	91.7%	7.4	17.3	24.2	NE	0	0
2026-04-18	24 / 24	100.0%	6.1	13.8	none	N	0	0
2026-04-19	24 / 24	100.0%	6.4	17.3	24.2	SW	1	1
2026-04-20	24 / 24	100.0%	11.8	24.2	32.2	W	7	5
2026-04-21	23 / 24	95.8%	19.3	31.1	40.3	W	17	10
2026-04-22	24 / 24	100.0%	15.9	29.9	47.2	SW/W	11	7
2026-04-23	24 / 24	100.0%	6.3	15.0	21.9	S/SW	0	0
2026-04-24	24 / 24	100.0%	14.3	24.2	39.1	SW	12	11
2026-04-25	17 / 24	70.8%	20.5	29.9	40.3	SW	13	11
2026-04-26	16 / 24	66.7%	21.5	28.8	40.3	SW	14	12
2026-04-27	24 / 24	100.0%	15.4	20.7	34.5	SW	11	9
2026-04-28	24 / 24	100.0%	5.7	21.9	16.1	W	2	2
2026-04-29	24 / 24	100.0%	6.4	17.3	none	SW	3	3
2026-04-30	24 / 24	100.0%	7.2	17.3	17.3	SW	2	2
2026-05-01	24 / 24	100.0%	7.2	17.3	24.2	SW	1	1

DATE	OBS / EXP HRS	COVERAGE	MEAN MPH	MAX SUST.	MAX GUST	WIND FROM	HRS ≥15	RUN ≥15
2026-05-02	24 / 24	100.0%	9.5	17.3	26.5	SW	3	3
2026-05-03	24 / 24	100.0%	16.3	32.2	44.9	SW	12	11
2026-05-04	24 / 24	100.0%	20.2	27.6	40.3	SW	19	16
2026-05-05	24 / 24	100.0%	15.9	21.9	28.8	SW	12	5
2026-05-06	23 / 24	95.8%	7.2	15.0	none	SW	0	0
2026-05-07	24 / 24	100.0%	8.0	23.0	31.1	SW/W	4	4
2026-05-08	24 / 24	100.0%	11.2	23.0	34.5	SW	4	4
2026-05-09	24 / 24	100.0%	10.0	24.2	29.9	SW	5	5
2026-05-10	24 / 24	100.0%	8.1	23.0	29.9	SW	4	4
2026-05-11	23 / 24	95.8%	9.1	21.9	31.1	SW	6	6
2026-05-12	24 / 24	100.0%	10.1	24.2	38.0	SW	7	6
2026-05-13	24 / 24	100.0%	19.5	28.8	43.7	SW	16	14
2026-05-14	24 / 24	100.0%	12.3	25.3	33.4	SW	7	4
2026-05-15	24 / 24	100.0%	16.5	27.6	39.1	SW	10	10
2026-05-16	24 / 24	100.0%	19.5	28.8	40.3	W	16	14
2026-05-17	24 / 24	100.0%	17.2	29.9	41.4	W	12	11
2026-05-18	24 / 24	100.0%	10.2	23.0	35.7	NE	4	3
2026-05-19	23 / 24	95.8%	4.3	12.7	21.9	E	0	0
2026-05-20	22 / 24	91.7%	5.3	17.3	none	SW	2	2
2026-05-21	22 / 24	91.7%	10.4	24.2	32.2	SW	3	2
2026-05-22	24 / 24	100.0%	12.7	25.3	33.4	SW	6	6
2026-05-23	18 / 24	75.0%	11.1	25.3	32.2	SW	4	4
2026-05-24	14 / 24	58.3%	13.5	26.5	33.4	SW	5	4
2026-05-25	23 / 24	95.8%	16.2	26.5	35.7	SW	10	10
2026-05-26	24 / 24	100.0%	23.5	33.4	46.0	SW	21	21
2026-05-27	24 / 24	100.0%	18.0	27.6	35.7	SW	18	13
2026-05-28	24 / 24	100.0%	16.5	26.5	35.7	SW	11	8
2026-05-29	24 / 24	100.0%	15.7	28.8	39.1	SW	8	8
2026-05-30	23 / 24	95.8%	10.7	28.8	34.5	W	6	6
2026-05-31	22 / 24	91.7%	7.4	13.8	none	S/SW	0	0
2026-06-01	23 / 24	95.8%	9.6	25.3	33.4	SW	5	3
2026-06-02	24 / 24	100.0%	9.8	24.2	34.5	SW	5	5
2026-06-03	24 / 24	100.0%	10.2	23.0	35.7	SW	6	6
2026-06-04	24 / 24	100.0%	11.2	23.0	32.2	SW	7	7

DATE	OBS / EXP HRS	COVERAGE	MEAN MPH	MAX SUST.	MAX GUST	WIND FROM	HRS ≥15	RUN ≥15
2026-06-05	24 / 24	100.0%	14.7	25.3	34.5	SW	11	10
2026-06-06	24 / 24	100.0%	17.3	26.5	38.0	SW	15	14
2026-06-07	24 / 24	100.0%	17.1	27.6	38.0	SW	13	7
2026-06-08	24 / 24	100.0%	14.9	26.5	33.4	SW	7	6
2026-06-09	23 / 24	95.8%	16.6	27.6	34.5	SW/W	14	8
2026-06-10	23 / 24	95.8%	8.6	23.0	35.7	SW	3	3
2026-06-11	24 / 24	100.0%	10.8	23.0	29.9	SW	6	4
2026-06-12	24 / 24	100.0%	12.5	23.0	32.2	SW	6	4
2026-06-13	24 / 24	100.0%	16.1	28.8	35.7	SW	10	9
2026-06-14	24 / 24	100.0%	16.6	24.2	33.4	SW	13	12
2026-06-15	24 / 24	100.0%	13.5	18.4	24.2	SW	7	6
2026-06-16	24 / 24	100.0%	11.0	23.0	34.5	SW	5	5
2026-06-17	24 / 24	100.0%	15.9	26.5	36.8	SW	10	9
2026-06-18	24 / 24	100.0%	14.1	24.2	35.7	SW	6	6
2026-06-19	24 / 24	100.0%	16.3	27.6	36.8	SW	13	9
2026-06-20	24 / 24	100.0%	18.1	26.5	36.8	SW	17	13
2026-06-21	24 / 24	100.0%	14.0	23.0	32.2	SW	7	5
2026-06-22	24 / 24	100.0%	10.1	21.9	29.9	SW	4	2
2026-06-23	23 / 24	95.8%	8.3	18.4	none	SW	4	4
2026-06-24	21 / 24	87.5%	14.2	26.5	32.2	SW	7	6
2026-06-25	20 / 24	83.3%	17.1	27.6	38.0	SW	13	12
2026-06-26	23 / 24	95.8%	18.2	27.6	40.3	SW	14	10
2026-06-27	24 / 24	100.0%	18.6	28.8	40.3	SW	15	9
2026-06-28	24 / 24	100.0%	18.3	27.6	39.1	SW	14	5
2026-06-29	23 / 24	95.8%	11.3	27.6	35.7	SW	7	4
2026-06-30	24 / 24	100.0%	14.9	25.3	36.8	SW	9	9