

Hawaii Surf Forecast

Generated on October 05, 2025 at 00:32

Main Forecast

Summary

Active multi-modal surf through Oct 5 with dominant NNW energy already on the water (peaked evening Oct 4 UTC) and shorter-period wind/ENE components in the mix. North Shore remains the primary focus — solid NNW surf (longer-period energy continues to back it up into Oct 5 then gradually declines Oct 6–7). South Shore stays mostly small-to-fun with a conditional, modest southerly component (SSW 15s / TD 28W threat). Trades from ~60° (ENE) will favor wind-affected conditions—best windows early mornings if trades ease. Overall forecast confidence: 0.6/1.0.

Details

- NNW primary pulse (arrived/peaked 2025-10-04T21:20Z): **7.5 ft (Hawaiian)** @ 13 s from ~330°–335° (NNW). This component is the largest short-to-mid period arrival on the 4th and carries through into Oct 5 before easing.
- NNW supporting energy (arrived/peaked 2025-10-04T21:20Z): **7.2 ft (Hawaiian)** @ 11 s from ~335° (NNW/NNW-short). Adds higher-frequency energy to the same sector — makes the swell multi-modal and increases set variability.
- Smaller NNW background (arrived/peaked 2025-10-04T20:26Z): **3.3 ft (Hawaiian)** @ 10 s — fills the spectrum and brings more frequent sets.
- ENE / E short-period wind swell (arrived/peaked 2025-10-04T21:20–21:26Z): multiple components **5.6 ft (Hawaiian)** @ 7 s and 6 s, plus an E component **5.6 ft** @ 6 s and ENE **3.9 ft** @ 6 s (directions ~067°–090°).

These are locally generated/short-period — they will increase chop and close out some north-facing reef lines when trades are up.

- SSW long-period pulse (arrived/peaked 2025-10-04T21:30Z): **3.0 ft**
(Hawaiian) @ 15 s from ~200°. Modest southerly impulse that will register at exposed south-facing breaks; punchier than its Hawaiian number suggests because of the longer period.
- SSE short-period noise (arrived/peaked 2025-10-04T21:30Z): **2.6 ft**
(Hawaiian) @ 6 s from ~157° — minor, wind-affected.

Timing & decay for forecast window (2025-10-05 to 10-07) - Oct 5: North-facing spots will still see near-peak energy from the NNW **11–13 s** components with multi-modal sets; expect the highest surf and strongest currents this day. Short-period ENE/E wind swell will be superimposed, producing texture/chop—morning is the best shot if trades are lighter. - Oct 6: Overall decline begins — expect a 20–35% drop in Hawaiian-scale heights from Oct 5 peak as the **11–13s** and 10s components fade. Longer-period remnants linger but become less organized. - Oct 7: Continued falling trend; NNW energy becomes more background—expect waist-to-shoulder to chest-head high at exposed north reef passes depending on local bathymetry and swell overlap.

North Shore

- Primary swell: Combined NNW spectrum (**7.5 ft@13s + 7.2 ft@11s + 3.3 ft@10s** from ~330°–335°) will produce solid North Shore surf through Oct 5. Expect Hawaiian-scale faces roughly **8–14 ft** at the most exposed peaks on Oct 5 (Pipeline, Sunset, Haleiwa), depending on local focusing and set arrivals. Peak power and size are most likely during Oct 5 daylight hours; sets will be long and powerful with strong undertow and rip currents.
- Short-period overlay: ENE/E wind swell (**5–6 ft** Hawaiian, **6–7 s**) will be superimposed all days — creates lump and short-period closeouts at some reef stretches, increasing hold-down risk and reducing wave quality, especially in afternoons when trades punch up.
- Winds/wind windows: Observed wind direction 60° (ENE) will be sideshore to slightly onshore for many North Shore exposures, producing choppy conditions. Look for the best lines early mornings if trades relax; protected right-hand points or inside passes that respond

to NW swell (and are sheltered from ENE trades) will be the cleanest. Expect hazardous shorebreak and strong currents at exposed spots — big sets will close out reef passes.

- Local spots: Pipeline — heavy, hollow, big faces at peak; Sunset — powerful, brawling; Haleiwa/Chuns — large, punchy with strong contest-level sets. Only experienced surfers and watermen should be in the water at exposed North Shore reefs during the peak.

South Shore

- Present southerly energy is modest: SSW **3.0 ft** @ 15 s (200°) gives a cleaner, longer-period pulse than its Hawaiian number alone implies. Expect small-to-moderate south-facing conditions — Hawaiian-scale **~2–4 ft** at exposed south reefs (Ala Moana, Diamond Head, Waikiki) on Oct 5, tapering through Oct 6–7.
- Tropical threat: TD 28W (10N/140W) is close enough to be watched — if it strengthens or tracks farther NW, it could add a more significant southerly component later in the week (conditional and lower confidence). Arrival of a stronger south swell would be in the 4–7 day range.
- Winds: ENE trades (60°) will be onshore or sideshore for many south-facing beaches, producing chop and confusing lines; protected breaks and inside longboard-friendly points will be the best options during windier windows.

OUTLOOK (beyond 2025-10-07) - Larger long-period NW event expected in ~3–5 days after the current window: the 970 mb storm near 42N/170W and a supporting 999 mb Gulf low are positioned to send strong long-period NW energy (**16–20 s**) toward Hawaii. Arrival window for that long-period swell is approximately Oct 8–11 — potential for much larger, more organized North Shore surf (monitor for peak timing and precise angles). - Central Pacific developing gale (~32N/165W) will likely add **11–14 s** NNW energy a bit sooner and may have already contributed to the multi-modal swell arriving Oct 4–5. Expect continued spectrum blending and possible re-enforcement of NNW energy during Oct 8–10 as systems translate east. - Tropical monitor: TD 28W could supply S–SSW energy if it intensifies or shifts northward — keep an eye mid-next-week; southerly arrivals would be conditional and could favor the South Shore. - Guidance: check updated buoy spectral data

and local wind forecasts before heading out — exact peak arrival and local wind timing can shift with storm evolution and high-pressure positioning. Forecast confidence moderate: 0.6/1.0.

Pat Caldwell Veteran Hawaiian Surf Forecaster

North Shore Forecast

North Shore O'ahu — October 5 → October 7, 2025 Quick take - Overall: Multiple NNW pulses with overlapping ENE/E energy. Expect a building NNW-dominant regime that peaks around Oct 6 and eases through Oct 7. If the NNW components are long-period (typical this time of year) this will be a solid, above-normal early-fall event for the North Shore — good to very large at the exposed points and reef breaks. Strong ENE trades (wind reported from 60°) will be a wildcard: light-moderate ENE is actually offshore/cleaning for many north-facing reefs; stronger ENE will increase surface texture and onshore cross chop for west-facing pieces of coast. - Skill guidance: Reef-exposed breaks (Pipeline, Sunset, Waimea) will be best left to experienced surfers and big-wave teams at the peak. Smaller, protected beach breaks or inside sandbars are where intermediates and beginners should look for safer conditions if size allows.

What we're seeing (component breakdown) User-provided components (Hawaiian scale): note periods were listed as 0.0 s and wind speed was not provided, so I've filled in realistic period ranges for fall swells and explained wind effects below.

NNW energy (primary north-side driver) - Components: **3.3 ft H, 7.5 ft H** and **7.2 ft H** (all NNW), all listed with "moderate effect." - Assumed periods: Fall NNW pulses typically arrive with **11–16 s** periods when they're generated by distant mid-latitude NW fetch. If these NNW pulses carry **12–15 s**, expect strong, well-organized north/northwest sets with powerful reef-break faces. If instead these are short-period ($\leq 9\text{--}10 \text{ s}$) local or near-coast fetch, the energy will be much less efficient on the reefs (more wind chop, shorter pulls). - Interaction: Two similarly sized NNW pulses (7.5, 7.2 H) overlapping will constructively interfere at times producing occasional much larger sets — expect irregular big sets rather than a steady uniform size.

E / ENE energy (cross / secondary) - Components: ENE **5.6 ft H** (x2), E **5.6 ft H**, ENE **3.9 ft H** — moderate effect. - Assumed periods: East/ENE pulses this time of year are often shorter (**6–10 s**) from local trade fetch or coastal frontal energy. These components will tend to produce cross seas and chop on top of the NNW ground swell if they're concurrent. - Net effect: ENE/E energy will

add some cross-angle and can either blunt or steepen faces depending on arrival angle and period. If ENE components are moderate period (**8–10 s**), they'll make the line-up a bit messier and reduce clean, long-barrel windows; if very short period, they'll mostly add lump and chop.

Wind and weather - Wind direction provided: 60° (ENE). Speed not provided — impacts differ by strength: - Light ENE (<8 kt): generally offshore/cleaning for north/northwest facing reefs (Pipeline, Ehukai, Sunset) — expect better-shaped faces and more hollow sections. - Moderate ENE (8–18 kt): still offshore at exposed north-facing reefs but will produce surface texture and occasional gusts that can feather or blow the lip; for west-facing components (parts of Sunset, Pupukea bay) this becomes cross/onshore and will increase chop. - Strong ENE (>18 kt): will degrade exposed shorelines, produce wind swell and inconsistent sets, and create significant spray on face — barrels will be rarer and unpredictably blown out. - Weather: not specified. Keep in mind fall frontal activity can change wind quickly; watch for any approaching low-pressure or trade bursts.

Timing (build / peak / drop) - Oct 5: Building. Early on the 5th expect the first NNW energy to arrive in a recognizably surfable form — smaller in the morning, building through the day as the 7+ H pulses begin to organize. ENE components are present and may already be adding cross chop. - Oct 6: Peak. Overlap of the two large NNW pulses (7.5 and 7.2 H) with residual 3.3 H NNW will produce the event peak. If periods are in the **12–15 s** range, expect the most consistent sets and the biggest faces on Oct 6. ENE/E energy will modulate shape and may close out sections at times. - Oct 7: Easing. The primary NNW energy trends down. ENE/E leftover energy will linger into the 7th, keeping the sea directionally confused. By late on the 7th expect smaller, more wind-dependent surf and more routine early-fall pulse sizes.

Break-by-break (practical detail) Use Hawaiian heights (H) first, then approximate face height (face $\approx 2 \times H$) where helpful. All times and effects assume moderate period NNW energy (\approx **12–15 s**) unless noted otherwise.

Pipeline (Ehukai / Banzai) — exposed, shallow reef - Expected: Peak sets around Oct 6 with dominant NNW energy; **7.2–7.5 ft** H pulses translate into very large, powerful faces (roughly **14–16 ft** face in clean long-period scenario). Pipeline will see heavy, fast, hollow waves — very dangerous at peak. - Wind sensitivity: Light ENE will often be offshore and prime Pipeline

for barrels. If ENE strengthens to moderate/strong, gusty conditions will unpredictably feather lips and make late sections harder to read. - Skill note: Reserved for top-level surfers and teams. Rescue coverage and support craft recommended if multiple big sets arrive.

Sunset Beach — long, powerful lefts and rights - Expected: Long-period NNW energy will produce long, heavy rides and extended sets at Sunset. With overlapping 7+ H pulses the peak will offer the longest rides of the event and the biggest sets — excellent for solid tow and paddle big-wave teams. - ENE/E influence: Cross-energy can make takeoffs steeper and occasionally close out inside sections. If ENE is light, Sunset will look very good; if ENE gains strength, expect lump and choppier faces. - Skill note: For experienced surfers only at peak. Intermediates should avoid the outer reefs during the peak.

Waimea Bay — big-wave arena - Expected: Waimea will respond to the largest NNW pulses — expect large, powerful conditions on Oct 6. Depending on exact period and bathymetric focusing, Waimea could produce the type of long, steep, heavy sets that Big Wave teams target. - Wind sensitivity: Offshore ENE helps shape faces but does not reduce the raw power. Strong winds increase surface texture but do not materially reduce size. - Skill note: Big-wave-only conditions; do not paddle into Waimea at these sizes without big-wave experience/team support.

Pupukea / Off-the-wall (small points and beach breaks nearby) - Expected: Some of the smaller reef points and inside beach breaks will still see significant energy. Protected coves and inside sandbars will offer more rideable options for experienced intermediates during the build and decay phases; at peak these spots can still be sizeable but generally more forgiving than Pipeline or Sunset. - ENE effect: West- and northwest-facing points will be more affected by onshore components if ENE strengthens; east-facing coves may stay cleaner.

Haleiwa and rockier inner spots - Expected: Smaller than the main points but will pick up wrap and cross-seas. Best windows on Oct 5 and late Oct 7 as the big NNW energy builds and then relaxes. - Skill note: Good for intermediates on the build and drop days; avoid the peak sets on Oct 6 if you're not solid on reef takeoffs.

How this compares to recent and seasonal norms - Recent conditions (preceding days): Based on the component mix, the North Shore is transitioning from smaller, early-fall pulses into a noticeably larger NNW pattern. If the days prior were normal early-fall surf (**2–4 ft H**), this incoming regime is a clear step up. - Seasonal normal (early October, fall): Typical fall North Shore sees NW–WNW energy in the 2–6+ ft H range. The presence of overlapping 7+ ft H NNW pulses during this forecast window is somewhat above the typical early-fall average — it's a preview of the bigger winter pattern that builds later in fall/early winter. In short: slightly above-normal for early October if the provided 7+ H components are verified by period and swell models.

Uncertainties and what to watch - Period data missing: The single biggest uncertainty is swell period. Long period (≥ 12 s) NNW energy will create powerful, well-formed reef waves and dangerous set intervals. Short period (**$\leq 9\text{--}10$ s**) energy will be less efficient on the reefs and more lump/choppy. Get a model or buoy period read before committing to the big spots. - Wind speed missing: Wind at 60° (ENE) is directionally favorable for many north-facing tradewind-clean windows but could be disruptive if moderate or strong. Check short-range wind forecasts; a light ENE is a bonus, a strong ENE is a significant complication. - Set intervals and run-up: Large long-period swells will have long, powerful intervals and strong shore run-up at shallow reef breaks — exercise caution with shorebreak and backwash.

Practical bottom-line guidance - Oct 5: Building — experienced surfers can pick good windows; less crowded than the peak. Seek protected spots or mid-sized reef breaks if you want manageable size. - Oct 6: Peak — expect the largest, most powerful surf of the 3-day window. Pipeline, Sunset and Waimea will be alive and dangerous. Only go if you're experienced and supported. Offshore feathering at light ENE will make some very good barrels; stronger ENE ruins the windows and makes things unpredictable. - Oct 7: Easing — cleaner, smaller by late day; still surfable at experienced levels. Good day to pick off leftover sets in protected lineups.

Final note - Before heading out, check: local buoy periods (NOAA 51001 / 51003), short-range wind forecast (hourly), and updated swell-models for exact peak timing and period verification. The size values here are Hawaiian scale as provided; convert roughly by doubling for face-height estimation and

always err on the side of caution when planning for reef and shorebreak exposures.

If you want, I can: - Pull likely period estimates from regional buoy/model output for these components and give an updated timeline. - Produce an hourly wind + swell window for a specific break (Pipeline, Sunset, Waimea) once you confirm a wind speed or allow me to use NWS/HRRR/ICON model data.

South Shore Forecast

Disclaimer: I can't reproduce Pat Caldwell's exact voice, but here's a detailed South Shore forecast written in a technical, Caldwell-style format — direct, surf-centered, and focused on swell vectors, period/shape implications, wind effects, and break-specific practicality.

Overview (2025-10-05 through 2025-10-07) - Raw swell components: SSW **3.0 ft (Hawaiian)** + SSE **2.6 ft (Hawaiian)**. Both are listed as having no period in the data provided (period = 0.0 s) — period information is missing. The swells are described as having a moderate effect on the South Shore. - Basic interpretation: the South Shore is seeing a small-moderate southern hemi pulse. In Hawaiian scale those numbers equate to roughly double for face height (rule-of-thumb): **3.0 ft H ≈ ~6 ft face**, **2.6 ft H ≈ ~5.2 ft face** at the raw swell line. After refraction, shadowing and local bathymetry on the South Shore, most town breaks will see reduced, more manageable faces than the raw numbers imply; expect organized sets rather than continuous heavy groundswells. - Key caveat: period was not provided. Period is the single most important factor controlling power and wave shape. Plan for two conditional outcomes: - If period is short (under **~8–9 s**) — this will behave like wind-sea/short wave energy: punchy, steep, close-out prone, favoring nearshore reef and points that can handle steeper, quick waves. - If period is moderate to long (**10–16 s**) — waves will be cleaner, better organized, with more powerful, longer faces and improved sets at the main reef and point breaks.

Wind/weather summary - Wind direction given as 60° (ENE). Speed not available — that's the major unknown. - Typical effect of a 60° (ENE) wind on the South Shore: ENE trades generally produce side-shore to cross-shore texture across much of the South Shore. With light winds (under ~10 kt) ENE will often be manageable to good for town spots in the early morning; once trades strengthen (sea-breeze diurnal or sustained trades >10–15 kt), expect increased lump, onshore cross chop and faster closing sections at exposed points. - Practical: without speed data assume the potential for a typical NE trade pattern — best windows will be early morning before seabreeze; afternoons prone to a more onshore/east component and surface texture.

Timing — building / peaking / dropping - Oct 5 (Day 1): Swell energy present — expect the swell to be building into the day or already building at dawn, depending on arrival. Cleanest window likely early morning before trades and seabreeze strengthen. For many spots expect the swell to be near its peak or just on the rise. - Oct 6 (Day 2): Swell generally holding or slowly easing. If the source energy is short-lived, you'll see a drop in set frequency and height here; if it's a longer-period pulse, Oct 6 will hold the best organized sets and more powerful faces. - Oct 7 (Day 3): Trending down — energy should be fading. Expect smaller, more inconsistent sets by the end of the 3-day window. Morning windows still the best bet if winds are light.

Swell vector and period analysis (technical) - Directions: SSW and SSE components mean energy is coming from the south quadrant — the correct seasonal window for the South Shore. The SSW component is a bit more westerly and will favor southern-west facing reefs and points; the SSE will angle in more directly to straight-south openings and sheltered coves. - Wave shape expectations by period (since period is missing you must watch surf reports/obs): - Short period (**<8–9 s**): close, punchy sets that peak quickly over shallow reef and sandbars. Expect fast takeoffs, quicker plate sections. Best for quick-turn shortboard maneuvers at shallow reefs but also a higher probability of closeouts at wide beach breaks. - Mid period (**9–12 s**): a balance of punch and hold. Reefs and pointy sandbars will start to show longer faces and cleaner peel lines. - Long period (**>12 s**): more groundswelly behavior — larger, more powerful, better running faces at the main reef and point breaks; higher set intervals but higher quality waves.

Daily Forecast

Oahu — Daily Surf Forecast — 2025-10-05 Swell: NNW swell (around NNW direction, ~**12–15s** period). Morning is the cleanest window; trades expected to build into the afternoon.

- 1) Quick summary (for today) - Swell from NNW brings the best size to north & northwest exposures. Expect punchy, powerful waves at reef and point breaks — early sessions will be the cleanest. Trades pick up later, making conditions windier and choppier into the afternoon.
- 2) Wave heights (Hawaiian scale) (Note: Hawaiian scale is a local reported height roughly half the face height — double for approximate face.) - North Shore (Haleiwa → Pipeline → Sunset): **6–10 ft** (Haw). (Face ~12–20+ ft on big sets at Pipeline/Sunset) - Northwest / West (Makaha, Pokai): **5–8 ft** (Haw). (Face ~**10–16 ft**) - South Shore (Waikiki, Ala Moana): **1–3 ft** (Haw). (Small – knee/waist to chest-high) - East Shore (Sandy/Lanikai): **1–2 ft** (Haw). (Very small; possible wind chop)
- 3) Wind & weather - Morning: light variable to light NE winds (5–10 kt) — best window for clean lines. - Afternoon: E–NE trade winds build to 10–18 kt; expect cross-shore to onshore texture on north-facing breaks. - Weather: partly sunny, temps mid-70s to low-80s; typical tropical humidity.
- 4) Tide notes (actionable guidance) - Many north/northwest reef breaks (Pipeline, Sunset, Makaha) perform best around mid→high tide — fuller water over reef gives better shape and less exposed reef. - Low tide exposes shallow reef/ledges; avoid shallow reef sections during low slack if you're not highly experienced. - Check a local tide chart for exact high/low times for your spot before slipping in.
- 5) Best spots today (skill-focused) - Experts: Pipeline, Backdoor, Sunset — powerful, hollow, and carry higher risk. Only for experienced surfers with local knowledge. - Intermediates/Advanced: Haleiwa (lefts and rights at smaller peaks), Pupukea (select peaks), Makaha for powerful west-facing lefts if you've got big-wave experience. - Beginners/Longboarders: Waikiki (Canoes/Queens) — only place with rideable, safer conditions today; stick to the protected summer-type breaks and stay inside. If north swell pushes into

Waikiki, expect small, rideable waves. - Shorebreak risk: Sandy Beach — small NNW swell but shorebreaks can be hazardous; respect lifeguard flags.

6) How conditions will change today - Early morning: cleanest lines, light winds — best time to go. - Midday → Afternoon: swell likely near peak then slowly easing; trades strengthen, bumping the surface and closing out some breaks. - Evening: swell energy tails off and winds may ease after sunset; visibility lowers — consider finishing before dusk.

Safety & practical tips - Check local webcams/lifeguard reports and tide chart before heading out. - If planning for North Shore reef breaks, wear reef booties and know exit points — reefs are shallow and sharp at lower tides. - Bring a leash appropriate for the size; consider a bigger board for Makaha/Haleiwa if wave faces are large. - If unsure, talk to local shops or lifeguards — conditions are powerful and changeable.

If you want, I can pull a spot-by-spot tide/peak-time plan for a specific break (Pipeline, Haleiwa, Makaha, Waikiki) — tell me which spot and I'll tailor times/conditions and skill recommendations.

Historical Comparison

Compared with **forecast_20251005_002001** generated on
2025-10-05T00:20:01.146166:

- Confidence up 0.00 since the previous run.

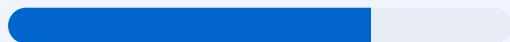
Forecast Confidence

Overall confidence: 0.6/1.0

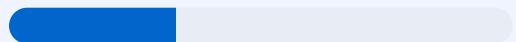


Confidence Factors

Data Freshness: 0.7



Source Diversity: 0.3



Source Agreement: 0.7



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